`Ethereal` User's Guide

V1.1 for Ethereal 0.8.19

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Ethereal User's Guide: V1.1 for Ethereal 0.8.19
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Foreword

Ethereal is one of those packages that many network managers would love to be able to use, but they are often prevented from getting what they would like from Ethereal because of the lack of documentation.

This document is part of an effort on the part of the Ethereal team to improve the accessibility of Ethereal.

We hope that you find it useful, and look forward to your comments.

Acknowledgments

I would like to thank the whole Ethereal team for their assistance. In particular, I would like to thank:

- Gerald Combs, for initiating the Ethereal project and funding me to do this documentation.
- Guy Harris, for many helpful hints and a great deal of patience in reviewing this document.
- Gilbert Ramirez, for general encouragement and helpful hints along the way.

I would also like to thank the following people for their helpful feedback on this document:

- Pat Eyler, for his suggestions on improving the example on generating a **backtrace**.

I would like to acknowledge those man page and README authors for the ethereal project from who sections of this document borrow heavily:

- Scott Renfro from whose **mergecap** man page the section called *Merging multiple capture files into a single capture file with **mergecap*** in Chapter 5 derived.
- Ashok Narayanan from whose **text2pcap** man page the section called *Converting ASCII hexdumps to network captures with **text2pcap*** in Chapter 5 derived.
- Frank Singleton from whose README.idl2eth the section called *Creating dissectors from Corba IDL files with **idl2eth*** in Chapter 5 derived.

Acknowledgments

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Chapter 1. Introduction

About this manual

This manual was originally developed by Richard Sharpe[1] with funds provided from the Ethereal Fund. More recently, it was updated by Ed Warnicke[2].

It is written in DocBook/SGML for the moment.

What is `Ethereal?`

Every network manager at some time or other needs a tool that can capture packets off the network and analyze them. In the past, such tools were either very expensive, propietary, or both. However, with the advent of Ethereal, all that has changed.

`Ethereal` is perhaps one the best open source packet sniffers available today. The following are some of the features Ethereal provides:

- Available for UNIX and Windows.
- Capture and display packets from any interface on a UNIX system.
- Display packets captured under a number of other capture programs:
  - tcpdump
  - Network Associates Sniffer and Sniffer Pro
  - NetXray
  - LANalyzer
  - Shomiti
  - AIX's iptrace
  - RADCOM's WAN/LAN Analyzer
  - Lucent/Ascend access products
  - HP-UX's nettl
  - Toshiba's ISDN routers
  - ISDN4BSD *i4btrace* utility
  - Microsoft Network Monitor
  - Sun snoop
- Save captures to a number of formats:
  - libpcap (tcpdump)
  - Sun snoop
  - Microsoft Network Monitor
  - Network Associates Sniffer
- Filter packets on many criteria.

- Search for packets using filters.
- Colorize packet display based on filters

However, to really appreciate its power, you have to start using it.

Figure 1-1 shows `Ethereal` having captured some packets and waiting for you to examine the packets.
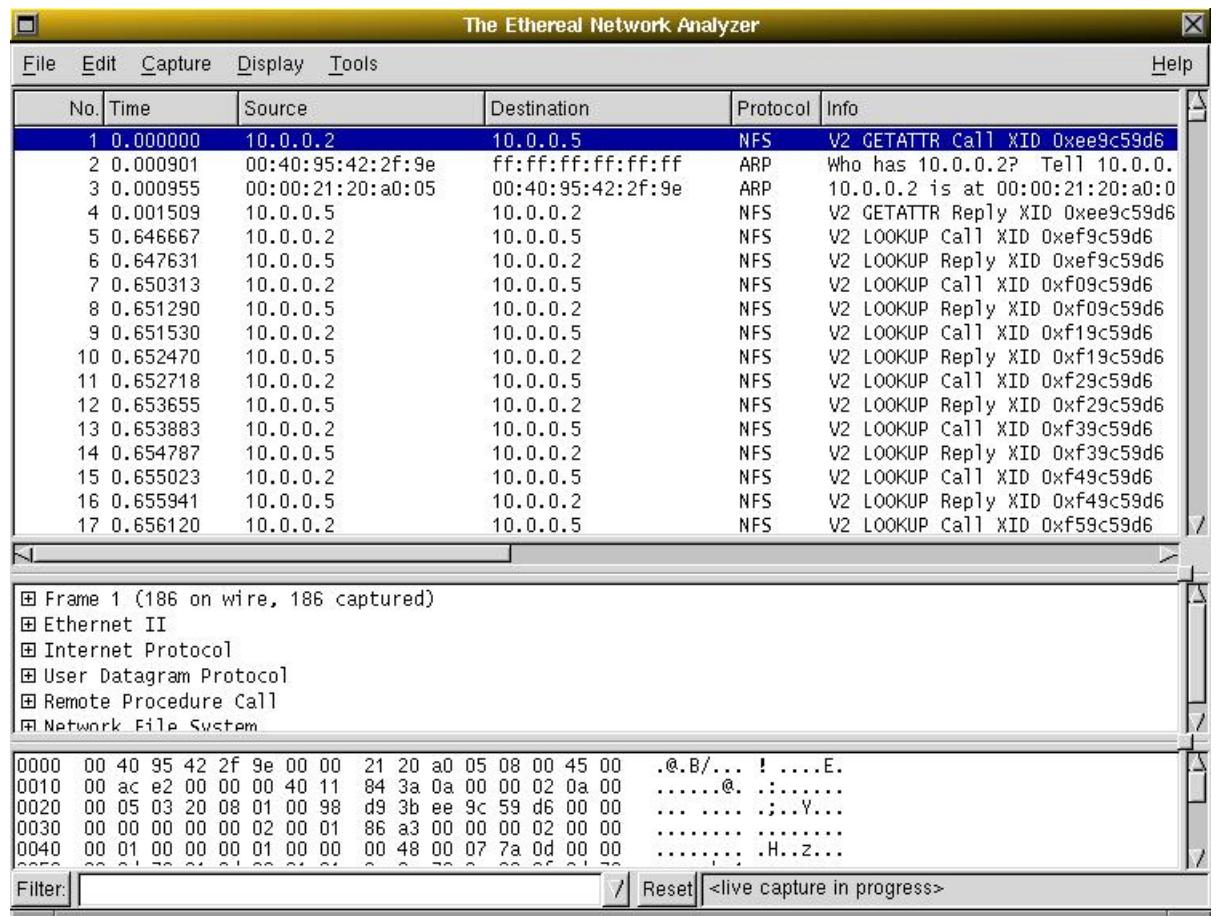
Figure 1-1. `Ethereal` captures packets and allows you to examine their content.

In addition, because all the source code for Ethereal is freely available, it is very easy for people to add new protocols to Ethereal, either as modules, or built into the source.

There are currently protocol decoders (or dissectors, as they are known in Ethereal), for a great many protocols, including:

- 802.1q Virtual LAN
- 802.1x Authentication
- AOL Instant Messenger
- ATM
- ATM LAN Emulation
- Ad hoc On-demand Distance Vector Routing Protocol
- Ad hoc On-demand Distance Vector Routing Protocol v6
- Address Resolution Protocol
- Aggregate Server Access Protocol
- Andrew File System (AFS)
- Apache JServ Protocol v1.3
- AppleTalk Filing Protocol
- AppleTalk Session Protocol
- AppleTalk Transaction Protocol packet
- Appletalk Address Resolution Protocol
- Async data over ISDN (V.120)
- Authentication Header
- BACnet Virtual Link Control
- Banyan Vines
- Banyan Vines Fragmentation Protocol
- Banyan Vines SPP
- Blocks Extensible Exchange Protocol
- Boot Parameters
- Bootstrap Protocol
- Border Gateway Protocol
- Building Automation and Control Network APDU
- Building Automation and Control Network NPDU
- Checkpoint FW-1
- Cisco Auto-RP
- Cisco Discovery Protocol
- Cisco Group Management Protocol
- Cisco HDLC
- Cisco Hot Standby Router Protocol
- Cisco ISL
- Cisco Interior Gateway Routing Protocol
- Cisco SLARP
- CoSine IPNOS L2 debug output

- Common Open Policy Service
- Common Unix Printing System (CUPS) Browsing Protocol
- DCE RPC
- DCE/RPC Conversation Manager
- DCE/RPC Endpoint Mapper
- DCE/RPC Remote Management
- DCOM OXID Resolver
- DCOM Remote Activation
- DEC Spanning Tree Protocol
- DHCPv6
- Data
- Data Link SWitching
- Data Stream Interface
- Datagram Delivery Protocol
- Diameter Protocol
- Distance Vector Multicast Routing Protocol
- Distributed Checksum Clearinghouse Prototocl
- Domain Name Service
- Dynamic DNS Tools Protocol
- Encapsulating Security Payload
- Enhanced Interior Gateway Routing Protocol
- Ethernet
- Extensible Authentication Protocol
- FTP Data
- Fiber Distributed Data Interface
- File Transfer Protocol (FTP)
- Frame
- Frame Relay
- GARP Multicast Registration Protocol
- GARP VLAN Registration Protocol
- GPRS Tunneling Protocol
- GPRS Tunnelling Protocol v0
- GPRS Tunnelling Protocol v1
- General Inter-ORB Protocol
- Generic Routing Encapsulation
- Gnutella Protocol
- Hummingbird NFS Daemon

- Hypertext Transfer Protocol
- ICQ Protocol
- IEEE 802.11 wireless LAN
- IEEE 802.11 wireless LAN management frame
- ILMI
- IP Payload Compression
- IPX Message
- IPX Routing Information Protocol
- ISDN Q.921-User Adaptation Layer
- ISDN User Part
- ISO 10589 ISIS InTRA Domain Routeing Information Exchange Protocol
- ISO 8073 COTP Connection-Oriented Transport Protocol
- ISO 8473 CLNP ConnectionLess Network Protocol
- ISO 8602 CLTP ConnectionLess Transport Protocol
- ISO 9542 ESIS Routeing Information Exchange Protocol
- ITU-T Recommendation H.261
- Inter-Access-Point Protocol
- Internet Cache Protocol
- Internet Content Adaptation Protocol
- Internet Control Message Protocol
- Internet Control Message Protocol v6
- Internet Group Management Protocol
- Internet Message Access Protocol
- Internet Printing Protocol
- Internet Protocol
- Internet Protocol Version 6
- Internet Relay Chat
- Internet Security Association and Key Management Protocol
- Internetwork Packet eXchange
- Java RMI
- Java Serialization
- Kerberos
- Kernel Lock Manager
- Label Distribution Protocol
- Layer 2 Tunneling Protocol
- Lightweight Directory Access Protocol
- Line Printer Daemon Protocol

- Link Access Procedure Balanced (LAPB)
- Link Access Procedure Balanced Ethernet (LAPBETHER)
- Link Access Procedure, Channel D (LAPD)
- Link Aggregation Control Protocol
- Link Management Protocol (LMP)
- Linux cooked-mode capture
- Local Management Interface
- LocalTalk Link Access Protocol
- Logical-Link Control
- Lucent/Ascend debug output
- MMS Message Encapsulation
- MS Proxy Protocol
- MSNIP: Multicast Source Notification of Interest Protocol
- MTP 2 Transparent Proxy
- MTP 2 User Adaptation Layer
- MTP 3 User Adaptation Layer
- MTP2 Peer Adaptation Layer
- Malformed Packet
- Message Transfer Part Level 2
- Message Transfer Part Level 3
- Microsoft Distributed File System
- Microsoft Exchange MAPI
- Microsoft Local Security Architecture
- Microsoft Network Logon
- Microsoft Registry
- Microsoft Security Account Manager
- Microsoft Server Service
- Microsoft Spool Subsystem
- Microsoft Telephony API Service
- Microsoft Windows Browser Protocol
- Microsoft Windows Lanman Remote API Protocol
- Microsoft Windows Logon Protocol
- Microsoft Workstation Service
- Mobile IP
- Modbus/TCP
- Mount Service
- MultiProtocol Label Switching Header

- Multicast Router DISCovery protocol
- Multicast Source Discovery Protocol
- NFSACL
- NFSAUTH
- NIS+
- NIS+ Callback
- NSPI
- NTLM Secure Service Provider
- Name Binding Protocol
- Name Management Protocol over IPX
- NetBIOS
- NetBIOS Datagram Service
- NetBIOS Name Service
- NetBIOS Session Service
- NetBIOS over IPX
- NetWare Core Protocol
- Network Data Management Protocol
- Network File System
- Network Lock Manager Protocol
- Network News Transfer Protocol
- Network Status Monitor CallBack Protocol
- Network Status Monitor Protocol
- Network Time Protocol
- Null/Loopback
- Open Shortest Path First
- OpenBSD Packet Filter log file
- PC NFS
- PPP Bandwidth Allocation Control Protocol
- PPP Bandwidth Allocation Protocol
- PPP Callback Control Protocol
- PPP Challenge Handshake Authentication Protocol
- PPP Compressed Datagram
- PPP Compression Control Protocol
- PPP IP Control Protocol
- PPP Link Control Protocol
- PPP Multilink Protocol
- PPP Multiplexing

- PPP Password Authentication Protocol
- PPP VJ Compression
- PPP-over-Ethernet Discovery
- PPP-over-Ethernet Session
- PPPMux Control Protocol
- Point-to-Point Protocol
- Point-to-Point Tunnelling Protocol
- Portmap
- Post Office Protocol
- Pragmatic General Multicast
- Prism
- Protocol Independent Multicast
- Q.2931
- Q.931
- Quake II Network Protocol
- Quake III Arena Network Protocol
- Quake Network Protocol
- QuakeWorld Network Protocol
- Qualified Logical Link Control
- RFC 2250 MPEG1
- RIPng
- RPC Browser
- RSTAT
- RX Protocol
- Radio Access Network Application Part
- Radius Protocol
- Raw packet data
- Real Time Streaming Protocol
- Real-Time Transport Protocol
- Real-time Transport Control Protocol
- Remote Procedure Call
- Remote Quota
- Remote Shell
- Remote Wall protocol
- Resource ReserVation Protocol (RSVP)
- Rlogin Protocol
- Routing Information Protocol

- Routing Table Maintenance Protocol
- SADMIND
- SCSI
- SMB (Server Message Block Protocol)
- SMB MailSlot Protocol
- SMB Pipe Protocol
- SNA-over-Ethernet
- SNMP Multiplex Protocol
- SPRAY
- SS7 SCCP-User Adaptation Layer
- SSCOP
- Secure Socket Layer
- Sequenced Packet eXchange
- Service Advertisement Protocol
- Service Location Protocol
- Session Announcement Protocol
- Session Description Protocol
- Session Initiation Protocol
- Short Frame
- Short Message Peer to Peer
- Signalling Connection Control Part
- Simple Mail Transfer Protocol
- Simple Network Management Protocol
- Sinec H1 Protocol
- Skinny Client Control Protocol
- SliMP3 Communication Protocol
- Socks Protocol
- Spanning Tree Protocol
- Stream Control Transmission Protocol
- Syslog message
- Systems Network Architecture
- TACACS
- TACACS+
- TPKT
- Telnet
- Time Protocol
- Time Synchronization Protocol

- Token-Ring
- Token-Ring Media Access Control
- Transmission Control Protocol
- Transparent Network Substrate Protocol
- Trivial File Transfer Protocol
- Universal Computer Protocol
- Unreassembled Fragmented Packet
- User Datagram Protocol
- Virtual Router Redundancy Protocol
- Virtual Trunking Protocol
- Web Cache Coordination Protocol
- Wellfleet Compression
- Who
- Wireless Session Protocol
- Wireless Transaction Protocol
- Wireless Transport Layer Security
- X Display Manager Control Protocol
- X.25
- X.25 over TCP
- X11
- Xyplex
- Yahoo Messenger Protocol
- Yellow Pages Bind
- Yellow Pages Passwd
- Yellow Pages Service
- Yellow Pages Transfer
- Zebra Protocol
- Zone Information Protocol
- iSCSI

The status of Ethereal

Ethereal is an open source software project, and is released under the Gnu Public Licence[3] (GPL). All source code is freely available under the GPL. You are welcome to modify Ethereal to suit your own needs, and it would be appreciated if you contribute your improvements back to the Ethereal team.

You gain two benefits by contributing your improvements back to the community:

- Other people who find your contributions useful will appreciate them, and you will know that you have helped people in the same way that the developers of Ethereal have helped people

- The maintainers and developers of Ethereal will maintain your code as well, fixing it when API changes or other changes are made, and generally keeping it in tune with what is happening with Ethereal.

The Ethereal source code and binary kits for some platforms are all available on the Ethereal website: http://www.ethereal.com[4].

Development and maintenance of `Ethereal`

Ethereal was initially developed by Gerald Combs. Ongoing development and maintenance of Ethereal is handled by the Ethereal team, a loose group of individuals who fix bugs and provide new functionality.

There have also been a large number of people who have contributed protocol dissectors to Ethereal, and it is expected that this will continue. You can find a list of the people who have contributed code to Ethereal at the authors[5] link on the web site.

A rose by any other name

William Shakespeare wrote: *"A rose by any other name would smell as sweet."* And so it is with Ethereal, as there appears to be two different ways that people pronounce the name.

Some people pronounce it ether-real, while others pronounce it e-the-real, as in ghostly, insubstantial, etc.

You are welcome to call it what you like, as long as you find it useful.

A brief history of Ethereal

In late 1997, Gerald Combs needed a tool for tracking down networking problems and wanted to learn more about networking, so he started writing Ethereal as a way to solve both problems.

Ethereal was initially released, after several pauses in development, in July 1998 as version 0.2.0. Within days, patches, bug reports, and words of encouragement started arriving, so Ethereal was on its way to success.

Not long after that Gilbert Ramirez saw its potential and contributed a low-level dissector to it.

In October, 1998, Guy Harris, of NetApp was looking for something better than TCPview, so he started applying patches and contributing dissectors to Ethereal.

In late 1998, Richard Sharpe, who was giving TCP/IP courses, saw its potential on such courses, started looking at it to see if it supported the protocols he needed. While it didn't at that point, new protocols could be easily added. So he started contributing dissectors and contributing patches.

The list of people who have contributed to Ethereal is long, and almost all of them started with a protocol that they needed that Ethereal did not already handle, so they copied an existing dissector and contributed the code back to the team. You can get a list of the people who have contributed by checking the man pages for ethereal, or from the website (http://www.ethereal.com[6]).

Platforms Ethereal runs on

Ethereal currently runs on most UNIX platforms and the various Windows platforms. It requires GTK+, GLIB and libpcap in order to run.

Binary packages are available for at least the following platforms:

- AIX
- Tru64 UNIX (formerly Digital UNIX)
- Debian GNU/Linux
- Slackware Linux
- Red Hat Linux
- FreeBSD
- NetBSD
- OpenBSD
- HP/UX
- Sparc/Solaris 8
- Windows 2000, Windows NT and Windows Me/98/95

If a binary package is not available for your platform, you should download the source and try to build it.

Where to get Ethereal

You can get the latest copy of the Ethereal from the Ethereal Website: http://www.ethereal.com[7]. The website allows you to choose from among several mirrors for downloading.

Reporting problems and getting help

If you have problems, or need help with Ethereal, there are several mailing lists that may be of interest to you:

Ethereal Users

This list is for users of Ethereal. People post with questions about building and using Ethereal. Others provide answers.

Ethereal Announce

> This list is for people wanting to receive announcements about Ethereal.

Ethereal Dev

> This list is for Ethereal developers. If you want to start developing a protocol dissector, join this list.

You can subscribe to each of these from the Ethereal web site: http://www.ethereal.com[8]. Simply select the **mailing lists** link on the left hand side of the site. The lists are archived at the Ethereal web site as well.

When reporting crashes with Ethereal, it is helpful if you supply the following information:

1. The version number of Ethereal you found the problem with, eg Ethereal 0.8.10.

2. The version number of the other software linked with Ethereal, eg GTK+, etc. You can obtain this with the command **ethereal -v**.

3. A traceback if Ethereal crashed. You can obtain this with the following commands:

```
$ gdb `whereis ethereal | cut -f2 -d: | cut -f` ` -d2` core >& backtrace.tx
backtrace
^D
$
```

Note: Type the characters in the first line verbatim! Those are back-tics there!

Note: backtrace is a **gdb** command. You should enter it verbatim after the first line shown above. The ^D (Control-D, that is, press the Control key and the D key together) will cause **gdb** to exit. This will leave you with a file called `backtrace.txt` in the current directory. Include the file with your bug report.

Note: If you do not have **gdb** available, you will have to check out your operating system's debugger. Windows users might not be able to get a traceback.

> You should mail the traceback to the **ethereal-dev** mailing list.

Where to get the latest copy of this document

The latest copy of this documentation can always be found at: http://www.ns.aus.com/ethereal/user-guide/book1.html[9]; and at: http://www.ethereal.com/docs/user-guide/ [10].

In addition, you can find a PDF version of the guide at: http://www.ns.aus.com/ethereal/user-guide/user-guide-a4.pdf [11] in A4 and http://www.ns.aus.com/ethereal/user-guide/user-guide-usletter.pdf [12] in US Letter.

Providing feedback

Should you have any feedback about this document, please send them to the author at rsharpe@ns.aus.com[13].

Notes

1. mailto:rsharpe@ns.aus.com
2. mailto:hagbard@physics.rutgers.edu
3. http://www.gnu.org/copyleft/gpl.html
4. http://www.ethereal.com
5. http://www.ethereal.com/introduction.html#authors
6. http://www.ethereal.com
7. http://www.ethereal.com
8. http://www.ethereal.com
9. http://www.ns.aus.com/ethereal/user-guide/book1.html
10. http://www.ethereal.com
11. http://www.ns.aus.com/ethereal/user-guide/user-guide-a4.pdf
12. http://www.ns.aus.com/ethereal/user-guide/user-guide-usletter.pdf
13. mailto:rsharpe@ns.aus.com

Chapter 2. Building and Installing Ethereal

Introduction

As with all things, there must be a beginning, and so it is with Ethereal. To use Ethereal, you must:

- Obtain a binary package for your operating system, or
- Obtain the source and build Ethereal for your operating system.

Currently, only two or three Linux Distributions ship ethereal, and they are commonly shipping an out-of-date version. No other versions of UNIX ship Ethereal so far, and Microsoft does not ship it with any version of Windows. For that reason, you will need to know where to get the latest version of Ethereal and how to install it. The current version of Ethereal is 0.8.19.

This chapter shows you how to obtain source and binary packages, and how to build Ethereal from source, should you choose to do so.

The following are the general steps you would use:

1. Download the relevant package for your needs, eg, source or binary distribution.

2. Build the source into a binary, if you have downloaded the source.

   This may involve building and/or installing any other necessary packages.

3. Install the binaries in their final destinations.

Obtaining the source and binary distributions

You can obtain both source and binary distributions from the Ethereal web site: http://www.ethereal.com[1]. Simply select the download link, and then select either the source package or binary package of your choice from the mirror site closest to you.

Download all the needed files: In general, unless you have already downloaded Ethereal before, you will most likely need to down load several source packages if you are building Ethereal from source. This is covered in more detail below.

Once you have downloaded the relevant files, you can go on to the next step.

Note: While you will find a number of binary packages available on the Ethereal web site, you might not find one for your platform, and they often tend to be several versions behind

the current released version, as they are contributed by people who have the platforms they are built for.

For this reason, you might want to pull down the source distribution and build it, as the process is relatively simple.

Before you build `Ethereal`

Before you build Ethereal from sources, or install a binary package, you must ensure that you have the following other packages installed:

- GTK+, The GIMP Tool Kit.

  You will also need Glib. Both can be obtained from www.gtk.org[2]

- libpcap, the packet capture software that Ethereal uses.

  You can obtain libpcap from www.tcpdump.org[3]

Depending on your system, you may be able to install these from binaries, eg RPMs, or you may need to obtain them in source code form and build them.

If you have downloaded the source for GTK+, the instructions shown in Example 2-1 may provide some help in building it:

Example 2-1. Building GTK+ from source

```
gzip -dc gtk+-1.2.8.tar.gz | tar xvf -
<much output removed>
cd gtk+-1.2.8
./configure
<much output removed>
make
<much output removed>
make install
<much output removed>
```

Note!: You may need to change the version number of gtk+ in Example 2-1 to match the version of GTK+ you have downloaded. The directory you change to will change if the version of GTK+ changes, and in all cases, **tar xvf -** will show you the name of the directory you should change to.

Note!: If you use Linux, or have GNU **tar** installed, you can use **tar zxvf gtk+-1.2.8.tar.gz**. It is also possible to use **gunzip -c** or **gzcat** rather than **gzip -dc** on many UNIX systems.

> **Note!:** If you downloaded gtk+ or any other tar file using Windows, you may find your file called gtk+-1_2_8_tar.gz.

You should consult the GTK+ web site if any errors occur in carrying out the instructions in Example 2-1.

If you have downloaded the source to libpcap, the general instructions shown in Example 2-2 will assist in building it. Also, if your operating system does not support **tcpdump**, you might also want to download it from the tcpdump[4] web site and install it.

Example 2-2. Building and installing libpcap

```
gzip -dc libpcap-0.5.tar.Z | tar xvf –
<much output removed>
cd libpcap_0_5rel2
./configure
<much output removed>
make
<much output removed>
make install
<much output removed>
make install-incl
<much output removed>
```

> **Note!:** The directory you should change to will depend on the version of libpcap you have downloaded. In all cases, **tar xvf -** will show you the name of the directory that has been unpacked.

When installing the include files, you might get the error shown in Example 2-3 when you submit the command **make install-incl**.

Example 2-3. Errors while installing the libpcap include files

/usr/local/include/pcap.h
/usr/bin/install -c -m 444 -o bin -g bin ./pcap-namedb.h \
/usr/local/include/pcap-namedb.h
/usr/bin/install -c -m 444 -o bin -g bin ./net/bpf.h \
/usr/local/include/net/bpf.h
/usr/bin/install: cannot create regular file \
'/usr/local/include/net/bpf.h': No such file or directory
make: *** [install-incl] Error 1

If you do, simply create the missing directory with the following command:

```
mkdir /usr/local/include/net
```

and rerun the command **make install-incl**.

Under RedHat 6.x and beyond (and distributions based on it, like Mandrake) you can simply install each of the packages you need from RPMs. Most Linux systems will install GTK+ and Glib in anycase, however, you will probably need to install the devel versions of each of these packages. The commands shown in Example 2-4 will install all the needed RPMs if they are not already installed.

Example 2-4. Installing required RPMs under RedHat Linux 6.2 and beyond

```
cd /mnt/cdrom/RedHat/RPMS
rpm -ivh glib-1.2.6-3.i386.rpm
rpm -ivh glib-devel-1.2.6-3.i386.rpm
rpm -ivh gtk+-1.2.6-7.i386.rpm
rpm -ivh gtk+-devel-1.2.6-7.i386.rpm
rpm -ivh libpcap-0.4-19.i386.rpm
```

> **Note:** If you are using a version of RedHat later than 6.2, the required RPMs have most likely changed. Simply use the correct RPMs from your distribution.

Under Debian you can install ethereal using apt-get. apt-get will handle any dependency issues for you. Example 2-5 shows how to do this.

Example 2-5. Installing debs under Debian

```
apt-get install ethereal
```

Building from Source under UNIX

Use the following general steps if you are building Ethereal from source under a UNIX operating system:

1. Unpack the source from its **gzip**'d **tar** file. If you are using Linux, or your version of UNIX uses GNU **tar**, you can use the following command:

    ```
    tar zxvf ethereal-0.8.19-tar.gz
    ```

For other versions of UNIX, You will want to use the following commands:

```
gzip -d ethereal-0.8.19-tar.gz
tar xvf ethereal-0.8.19-tar
```

Note!: The pipeline **gzip -dc ethereal-0.8.19-tar.gz | tar xvf -** will work here as well.

Note!: If you have downloaded the Ethereal tarball under Windows, you may find that your browser has created a file with underscores rather than periods in its file name.

2. Change directory to the ethereal source directory.
3. Configure your source so it will build correctly for your version of UNIX. You can do this with the following command:

```
./configure
```

If this step fails, you will have to rectify the problems and rerun **configure**. Troubleshooting hints are provided in the section called *Troubleshooting during the install*.

4. Build the sources into a binary, with the **make** command. For example:

```
make
```

5. Install the software in its final destination, using the command:

```
make install
```

Once you have installed Ethereal with **make install** above, you should be able to run it by entering **ethereal**.

Installing the binaries under UNIX

In general, installing the binary under your version of UNIX will be specific to the installation methods used with your version of UNIX. For example, under AIX, you would use **smit** to install the Ethereal binary package, while under Tru64 UNIX (formerly Digital UNIX) you would use **setld**.

Installing from RPMs under Linux

Use the following command to install the Ethereal RPM that you have downloaded from the Ethereal web site:

```
rpm -ivh ethereal-0.8.10-1.i386.rpm
```

If the above step fails because of missing dependencies, install the dependencies first, and then retry the step above. See Example 2-4 for information on what RPMs you will need to have installed.

Installing from debs under Debian

Use the following command to install Ethereal under Debian:

```
apt-get install ethereal
```

apt-get should take care of all of the dependency issues for you.

Building from source under Windows

Unfortunately the current revisor of this document has never built Ethereal under Windows and is thus not competent to write this section. Hopefully this will be remedied in the future.

Installing Ethereal under Windows

In this section we explore installing Ethereal under Windows from the binary packages. You must follow two steps:

1. Install WinPcap. There are instructions at the WinPcap web site for installing it under Windows 9X, Windows NT and Windows 2000. These are located at: http://netgroup-serv.polito.it/winpcap/install/Default.htm [5].

2. Install Ethereal. You may acquire a binary installable of Ethereal at http://www.ethereal.com/download.html#binaries [6]. Download the installer (after installing WinPcap) and execute it.

Troubleshooting during the install

A number of errors can occur during the installation process. Some hints on solving these are provided here.

If the **configure** stage fails, you will need to find out why. You can check the file `config.log` in the source directory to find out what failed. The last few lines of this file should help in determining the problems.

The standard problems are that you do not have GTK+ on your system, or you do not have a recent enough version of GTK+. The **configure** will also fail if you do not have libpcap (at least the required include files) on your system.

Another common problem is for the final compile and link stage to terminate with a complaint of: Output to long. This is likely being caused by an antiquated **sed** (like that shipped with Solaris). Since **sed** is used by the **libtool** script to construct the final link command, this leads to mysterious problems. This can be resolved by downloading sed from http://www.gnu.org/directory/sed.html [7].

If you cannot determine what the problems are, send mail to the **ethereal-dev** mailing list explaining your problem, and including the output from `config.log` and anything else you think is relevant, like a trace of the **make** stage.

Notes

1. http://www.ethereal.com
2. http://www.gtk.org
3. http://www.tcpdump.org
4. http://www.tcpdump.org
5. http://netgroup-serv.polito.it/winpcap/install/Default.htm
6. http://www.ethereal.com/download.html#binaries
7. http://www.gnu.org/directory/sed.html

Chapter 3. Using `Ethereal`

Introduction

By now you have installed `Ethereal` and are most likely keen to get started capturing your first packets. In this chapter we explore:

- How to start `Ethereal`
- How to capture packets in `Ethereal`
- How to view packets `Ethereal`
- How to filter packets in `Ethereal`

In fact, most of the functionality of Ethereal is explored in this chapter.

Starting `Ethereal`

You can start `Ethereal` from the command line under UNIX, but it can also be started from most Window managers as well. In this section we will look at starting it from the command line.

Before looking at the command line parameters Ethereal understands, lets look at Ethereal itself. Figure 3-1 shows Ethereal as you would usually see it.

```
┌─────────────────────────────────────────────────────────────────────────────┐
│ ■                      The Ethereal Network Analyzer                      ✕ │
├─────────────────────────────────────────────────────────────────────────────┤
│ File   Edit   Capture   Display   Tools                              Help  │
├─────────────────────────────────────────────────────────────────────────────┤
│ No. Time        Source              Destination          Protocol  Info     │
│   1 0.000000    10.0.0.2            10.0.0.5             NFS   V2 GETATTR Call XID 0xee9c59d6 │
│   2 0.000901    00:40:95:42:2f:9e   ff:ff:ff:ff:ff:ff    ARP   Who has 10.0.0.2? Tell 10.0.0. │
│   3 0.000955    00:00:21:20:a0:05   00:40:95:42:2f:9e    ARP   10.0.0.2 is at 00:00:21:20:a0:0 │
│   4 0.001509    10.0.0.5            10.0.0.2             NFS   V2 GETATTR Reply XID 0xee9c59d6 │
│   5 0.646667    10.0.0.2            10.0.0.5             NFS   V2 LOOKUP Call XID 0xef9c59d6 │
│   6 0.647631    10.0.0.5            10.0.0.2             NFS   V2 LOOKUP Reply XID 0xef9c59d6 │
│   7 0.650313    10.0.0.2            10.0.0.5             NFS   V2 LOOKUP Call XID 0xf09c59d6 │
│   8 0.651290    10.0.0.5            10.0.0.2             NFS   V2 LOOKUP Reply XID 0xf09c59d6 │
│   9 0.651530    10.0.0.2            10.0.0.5             NFS   V2 LOOKUP Call XID 0xf19c59d6 │
│  10 0.652470    10.0.0.5            10.0.0.2             NFS   V2 LOOKUP Reply XID 0xf19c59d6 │
│  11 0.652718    10.0.0.2            10.0.0.5             NFS   V2 LOOKUP Call XID 0xf29c59d6 │
│  12 0.653655    10.0.0.5            10.0.0.2             NFS   V2 LOOKUP Reply XID 0xf29c59d6 │
│  13 0.653883    10.0.0.2            10.0.0.5             NFS   V2 LOOKUP Call XID 0xf39c59d6 │
│  14 0.654787    10.0.0.5            10.0.0.2             NFS   V2 LOOKUP Reply XID 0xf39c59d6 │
│  15 0.655023    10.0.0.2            10.0.0.5             NFS   V2 LOOKUP Call XID 0xf49c59d6 │
│  16 0.655941    10.0.0.5            10.0.0.2             NFS   V2 LOOKUP Reply XID 0xf49c59d6 │
│  17 0.656120    10.0.0.2            10.0.0.5             NFS   V2 LOOKUP Call XID 0xf59c59d6 │
├─────────────────────────────────────────────────────────────────────────────┤
│ ⊞ Frame 1 (186 on wire, 186 captured)                                       │
│ ⊞ Ethernet II                                                               │
│ ⊞ Internet Protocol                                                         │
│ ⊞ User Datagram Protocol                                                    │
│ ⊞ Remote Procedure Call                                                     │
│ ⊞ Network File System                                                       │
├─────────────────────────────────────────────────────────────────────────────┤
│ 0000  00 40 95 42 2f 9e 00 00  21 20 a0 05 08 00 45 00   .@.B/... ! ....E.  │
│ 0010  00 ac e2 00 00 00 40 11  84 3a 0a 00 00 02 0a 00   ......@. .:......  │
│ 0020  00 05 03 20 08 01 00 98  d9 3b ee 9c 59 d6 00 00   ... .... .;..Y...  │
│ 0030  00 00 00 00 00 02 00 01  86 a3 00 00 00 02 00 00   ........ ........  │
│ 0040  00 01 00 00 00 01 00 00  00 48 00 07 7a 0d 00 00   ........ .H..z...  │
├─────────────────────────────────────────────────────────────────────────────┤
│ Filter:│                                           │ /│ Reset│ <live capture in progress> │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 3-1. `Ethereal` is comprised of three main windows

Ethereal is comprised of three main windows, or panes.

1. The top pane is the packet list pane. It displays a summary of each packet captured. By clicking on packets in this pane your control what is displayed in the other two panes.

2. The middle pane is the tree view pane. It displays the packet selected in the top pane in more detail.

3. The bottom pane is the data view pane. It displays the data from the packet selected in the top pane, and highlights the field selected in the tree view pane.

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In addition to the three main panes, there are four elements of interest on the bottom of the Ethereal main window.

A. The lower leftmost button labeled "Filter:" can be clicked to bring up the filter construction dialog.

B. The left middle text box provides an area to enter or edit filter strings. This is also where the current filter in effect it displayed. You can click on the pull down arrow to select past filter string from a list. More information on display filter strings is available in the section called *Filtering packets while viewing*

C. The right middle button labeled "Reset" clears the current filter.

D. The right text box displays informational messages. These message may indicate whether or not you are capturing, what file you have read into the packet list pane if you are not capturing. If you have selected a protocol field from the tree view pane and it is possible to filter on that field then the filter label for that protocol field will be displayed.

`Ethereal` supports a large number of command line parameters. To see what they are, simply enter the command **ethereal -h** and the help information shown in Example 3-1 should be printed.

Example 3-1. Help information available from Ethereal

```
    This is GNU ethereal 0.8.19, compiled with GTK+ 1.2.10, with GLib 1.2.10, with lib
cap 0.6, with libz 1.1.3, with UCD SNMP 4.2.1
    ethereal [ -vh ] [ -klpQS ] [ -B <byte view height> ] [ -c <count> ]
    [ -f <capture filter> ] [ -i <interface> ] [ -m <medium font> ]
    [ -n ] [ -N <resolving> ]
    [ -o <preference setting> ] ... [ -P <packet list height> ]
    [ -r <infile> ] [ -R <read filter> ] [ -s <snaplen> ]
    [ -t <time stamp format> ] [ -T <tree view height> ] [ -w <savefile> ]
```

We will examine each of these possible command line options in turn.

The first thing to notice is that issuing the command **ethereal** by itself will bring up `Ethereal`. However, you can include as many of the command line parameters as you like. Their meanings are as follows (in alphabetical order):

-B <**byte view height**>

This option sets the initial height of the byte view pane. This pane is the bottom pane in the Ethereal display.

-c <**count**>

This option specifies the number of packets to capture when capturing live data. It would be used in conjunction with the **-k** option.

-b <**bold font**>

This option sets the name of the bold font that Ethereal uses for data in the byte view pane when it is highlighted (ie, selected in the protocol pane

-D

> This option changes the way Ethereal deals with the original IPv4 TOS field, so that rather than treating it as the Differentiated Services Field, it is treated as a Type of Service field.

-f <**capture filter>**

> This option sets the initial capture filter expression to be used when capturing packets.

-h

> The **-h** option requests Ethereal to print its version and usage instructions and exit.

-i <**interface>**

> The **-i** option allows you to specify, from the command line, which interface packet capture should occur on if capturing packets.

> An example would be: **ethereal -i eth0**.

> To get a listing of all the interfaces you can capture on, use the command **ifconfig -a** or **netstat -i**. Unfortunately, some versions of UNIX do not support **ifconfig -a**, so you will have to use **netstat -i** in these cases.

-k

> The **-k** option specifies that Ethereal should start capturing packets immediately. This option requires the use of the **-i** parameter to specify the interface that packet capture will occur from.

-l

> This option turns on automatic scrolling if the packet list pane is being updated automatically as packets arrive during a capture (as specified by the **-S** flag).

-m <**medium font>**

> This option sets the name of the font used for most text displayed by Ethereal.

-n

> This option specifies that Ethereal not perform address to name translation nor to translate TCP and UDP ports into names.

-N <**resolving>**

> Turns on name resolving for particular types of addresses and port numbers; the argument is a string that may contain the letters **m** to enable MAC address resolution, **n** to enable network address resolution, and **t** to enable transport-layer port number resolution. This overrides **-n** if both **-N** and **-n** are present.

-o <**preference settings>**

> Sets a preference value, overriding the default value and any value read from a preference file. The argument to the flag is a string of the form prefname:value, where prefname is the name of the preference (which is the same name that

would appear in the preference file), and value is the value to which it should be set. Multiple instances of **-o** <**preference settings**> can be given on a single command line.

An example of setting a single preference would be:

ethereal -o mgcp.display_dissect_tree:TRUE

An example of setting multiple preferences would be:

ethereal -o mgcp.display_dissect_tree:TRUE -o mgcp.udp.callagent_port:2627

-p

Don't put the interface into promiscuous mode. Note that the interface might be in promiscuous mode for some other reason; hence, -p cannot be used to ensure that the only traffic that is captured is traffic sent to or from the machine on which Ethereal is running, broadcast traffic, and multicast traffic to addresses received by that machine.

-P <**packet list height**>

This option sets the initial height of the packet list pane, ie, the top pane.

-Q

This option forces Ethereal to exit when capturing is complete. It can be used with the **-c** option. It must be used in conjunction with the **-i** and **-w** options.

-r <**infile**>

This option provides the name of a capture file for Ethereal to read and display. This capture file can be in one of the formats Ethereal understands, including:

- libpcap

- Net Mon

- Snoop

- NetXray

For a complete list, see the Ethereal man pages (**man ethereal**).

-R <**read filter**>

This option specifies a capture filter to be applied when reading packets from a capture file. The syntax of this filter is that of the display filters discussed in the section called *Filtering packets while viewing*. Packets not matching the filter are discarded.

-s <**snaplen**>

This option specifies the snapshot length to use when capturing packets. Ethereal will only capture <**snaplen**> bytes of data for each packet.

-S

> This option specifies that Ethereal will display packets as it captures them. This is done by capturing in one process and displaying them in a separate process.

-t <**time stamp format>**

> This option sets the format of packet timestamps that are displayed in the packet list window. The format can be one of:
>
> - **r**, which specifies timestamps are displayed relative to the first packet captured.
> - **a**, which specifies that actual dates and times be displayed for all packets.
> - **d**, which specifies that timestamps are relative to the previous packet.

-T <**tree view height>**

> This option sets the initial height of the tree view pane.

-v

> The **-v** option requests Ethereal to print out its version information and exit.

-w <**savefile>**

> This option sets the name of the **savefile** to be used when saving a capture file.

The Ethereal menus

The Ethereal menu sits across the top of the Ethereal window. An example is shown in Figure 3-2.

Figure 3-2. The Ethereal Menu

It contains the following items:

File

> This menu contains menu-items to open and reread capture files, save capture files, print capture files, print packets, and to quit from Ethereal.

Edit

This menu contains menu-items to find a frame and goto a frame,mark one or more frames, set your preferences, create filters, and enable or disable the dissection of protocols (cut, copy, and paste are not presently implemented).

Capture

This menu allows you to start and stop captures.

Display

This menu contains menu-items to modify display options, match selected frames, colorize frames, expand all frames, collapse all frames, show a packet in a separate window, and configure user specified decodes.

Tools

This menu contains menu-items to display loaded plugins, follow a TCP stream, obtain a summary of the packets that have been captured, and display protocol hierarchy statistics.

Help

This menu contains the About Ethereal... menu item and access to some basic Help.

Each of these are described in more detail in the sections that follow.

The Ethereal File menu

The Ethereal file menu contains the fields shown in Table 3-1.
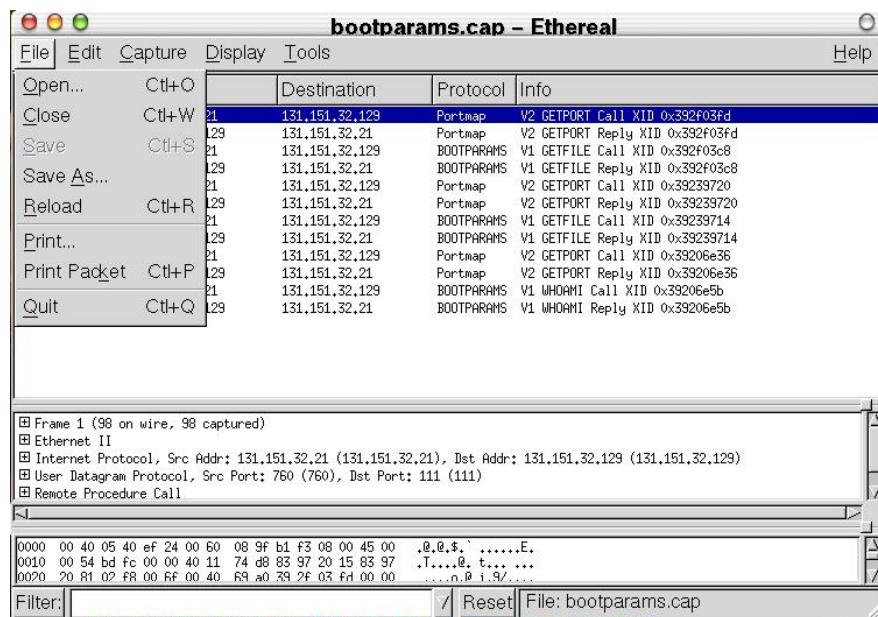
Figure 3-3. Ethereal File Menu

Table 3-1. File menu

Menu Item	Accelerator	Description
Open...	Ctrl-O	This menu item brings up the file open dialog box that allows you to load a capture file for viewing. It is discussed in more detail in the section called *The File Open dialog box*.
Close	Ctrl-W	This menu item closes the current capture. If you have not saved the capture, it is lost.
Save	Ctrl-S	This menu item saves the current capture. If you have not set a default capture file name (perhaps with the -w <capfile> option), Ethereal pops up the Save Capture File As dialog box (which is discussed further in the section called *The Save Capture File As dialog box*). **Note!:** If you have already saved the current capture, this menu will be greyed out. **Note!:** You cannot save a live capture while it is in progress. You must stop the capture in order to save.

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Menu Item	Accelerator	Description
Save As...		This menu item allows you to save the current capture file to whatever file you would like. It pops up the Save Capture File As dialog box (which is discussed further in the section called *The Save Capture File As dialog box*).
Reload	Ctrl-R	This menu item allows you to reload the current capture file. This menu item is no longer needed, and may be removed in future releases of Ethereal
Print...		This menu item allows you to print all the packets in the capture file. It pops up the Ethereal Print dialog box (which is discussed further in the section called *Printing packets*).
Print Packet	Ctrl-P	This menu item allows you to print the current packet.
Quit	Ctrl-Q	This menu item allows you to quit from Ethereal. In the current release of Ethereal (0.8.19), Ethereal silently exits even if you have not saved the current capture file. This may be changed in a future release of Ethereal.

The Ethereal Edit menu

The Ethereal Edit menu contains the fields shown in Table 3-2.
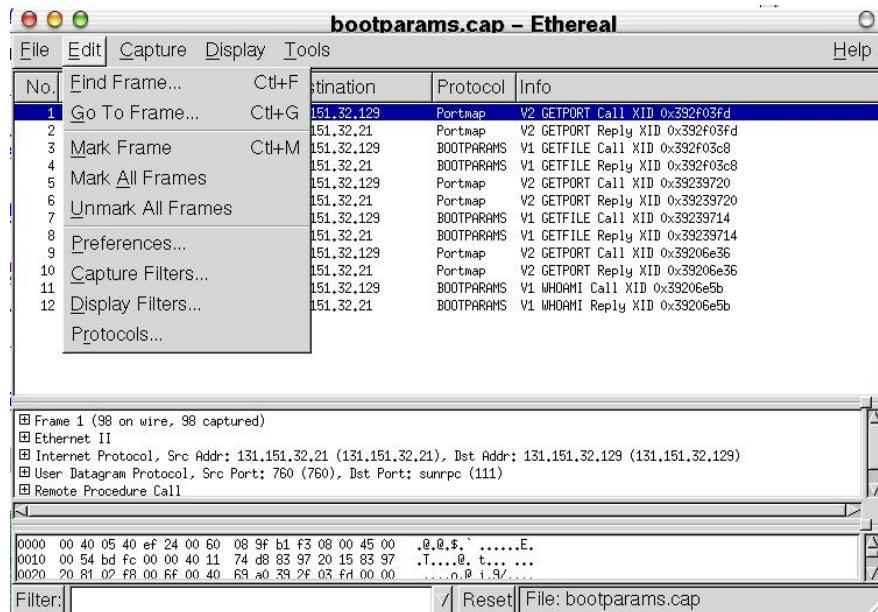
Figure 3-4. Ethereal Edit Menu

Table 3-2. Edit menu

Menu Item	Accelerator	Description
Find Frame...	Ctrl-F	This menu item brings up a dialog box that allows you to find a frame by entering an Ethereal display filter. There is further information on finding frames in the section called *Finding frames*.
Go to Frame...	Ctrl-G	This menu item brings up a dialog box that allows you to specify a frame to goto by frame number.
Mark Frame	Ctrl-M	This menu item "marks" the currently selected frame. See the section called *The Save Capture File As dialog box* for more information about saving marked frames.
Mark All Frames		This menu item "marks" all frames. See the section called *The Save Capture File As dialog box* for more information about saving marked frames.
Unmark All Frames		This menu item "unmarks" all marked frames.

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Menu Item	Accelerator	Description
Preferences...		This menu item brings up a dialog box that allows you to set preferences for many parameters that control Ethereal. You can also save your preferences so Ethereal will use them the next time you start it. More detail is provided in the section called *Ethereal preferences*
Capture Filters...		This menu item brings up a dialog box that allows you to create and edit capture filters. You can name filters, and you can save them for future use. More detail on this subject is provided in the section called *Defining and saving filters*
Display Filters...		This menu item brings up a dialog box that allows you to create and edit display filters. You can name filters, and you can save them for future use. More detail on this subject is provided in the section called *Defining and saving filters*
Protocols...		This menu item brings up a dialog box that allows you to enable or disable the dissection of individual protocols edit.

The Ethereal Capture menu

The Ethereal Capture menu contains the fields shown in Table 3-3.
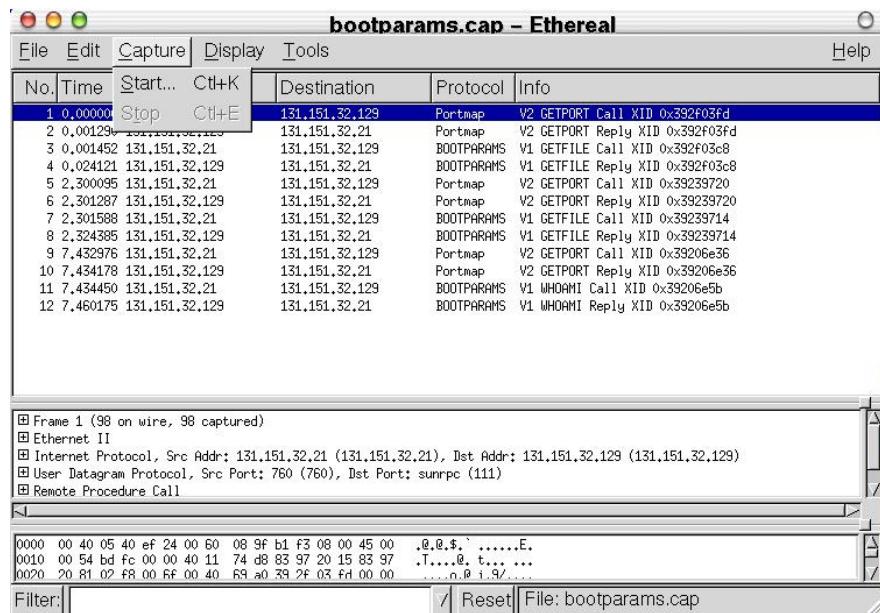
Figure 3-5. Ethereal Capture Menu

Table 3-3. Capture menu

Menu Item	Accelerator	Description
Start...	Ctrl-K	This menu item brings up the Capture Preferences dialog box (discussed further in the section called *Capturing packets with* `Ethereal`) and allows you to start capturing packets.
Stop	Ctrl-E	This menu item stops the currently running capture.

The Ethereal Display menu

The Ethereal Display menu contains the fields shown in Table 3-4.

www.manaraa.com
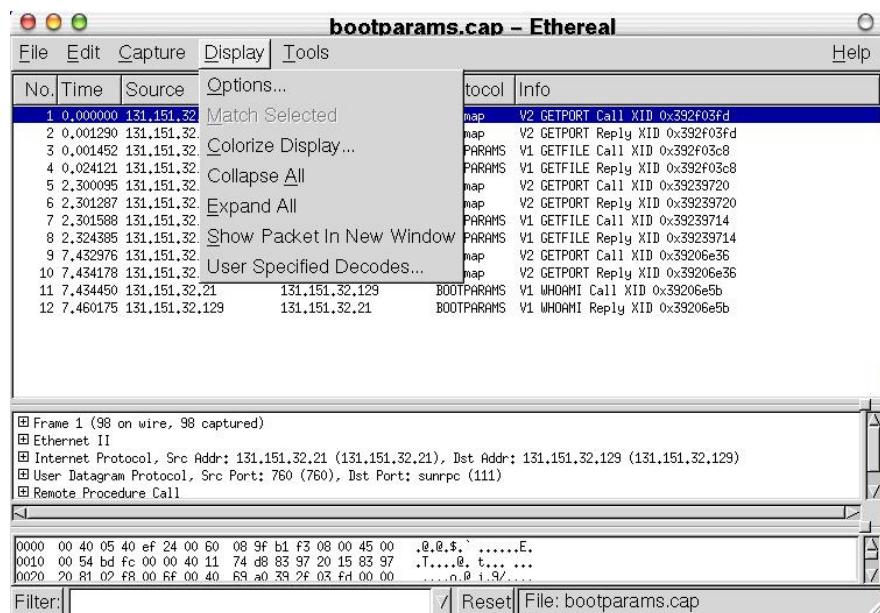
Figure 3-6. Ethereal Display Menu

Table 3-4. Display menu

Menu Item	Accelerator	Description
Options...		This menu item brings up a dialog box that controls the way that Ethereal displays some information about packets. Examples include the way timestamps are handled, whether addresses and other numbers are translated, and so forth. This is further discussed in the section called *Display Options*.
Match Selected		This menu item allows you to select all packets that have a matching value in the field selected in the tree view pane (middle pane).
Colorize Display		This menu item brings up a dialog box that allows you color packets in the packet list pane according to filter expressions you choose. It can be very useful for spotting certain types of packets.
Collapse All		Ethereal keeps a list of all the protocol subtrees that are expanded, and uses it to ensure that the correct subtrees are expanded when you display a packet. This menu item collapses the tree view of all packets in the capture list.

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Menu Item	Accelerator	Description
Expand All		This menu item expands all subtrees in all packets in the capture.
Show Packet in New Window		This menu item brings up the selected packet in a separate window. The separate window shows only the tree view and byte view panes.
User Specified Decodes...		This menu item allows the user to force ethereal to decode certain packets as a particular protocol.

The Ethereal Tools menu

The Ethereal Tools menu contains the fields shown in Table 3-5.
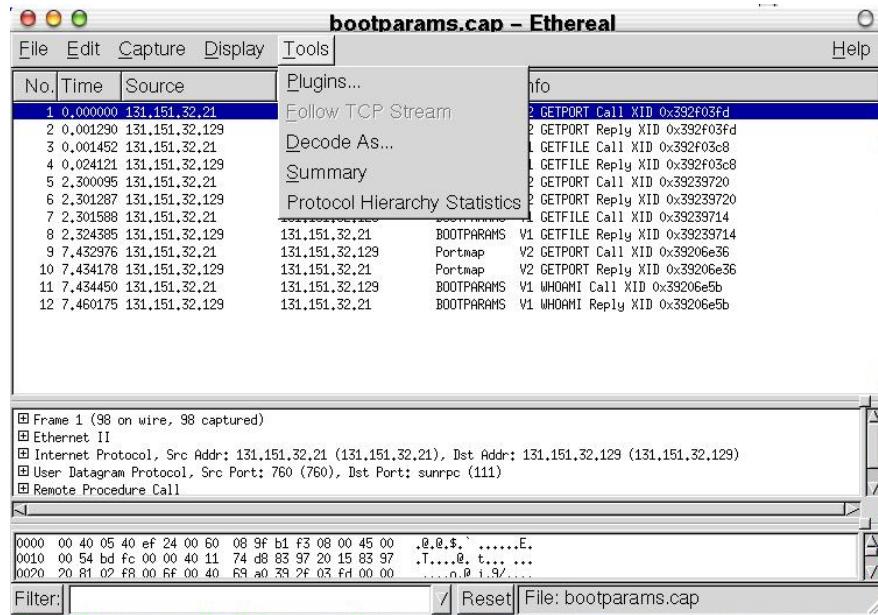
Figure 3-7. Ethereal Tools Menu

Table 3-5. Tools menu

Menu Item	Accelerator	Description
Plugins...		This menu item brings up a dialog box that allows you to manage Ethereal plugins. There are very few plugins todate.

Menu Item	Accelerator	Description
Follow TCP Stream		This menu item brings up a separate window and displays all the TCP segments captured that are on the same TCP connection as a selected packet. The data in the TCP stream is sorted into order, with duplicate segments removed, and it is then displayed in ascii. You can change the format is you desire.
Decode As...		This menu item allows the user to force ethereal to decode certain packets as a particular protocol.
Summary		This menu item brings up a statistics window that shows information about the packets captured.
Protocol Hierarchy Statistics		This menu item displays a hierarchical tree of packet statistics.

The Ethereal Help menu

The Ethereal Help menu contains the fields shown in Table 3-6.
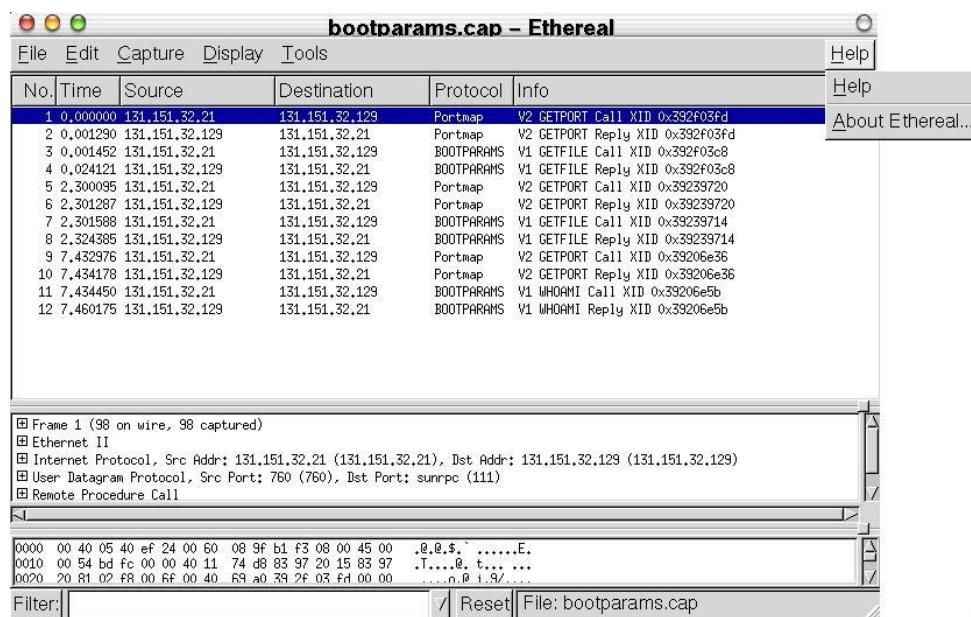
Figure 3-8. Ethereal Help Menu

Table 3-6. Help menu

Menu Item	Accelerator	Description
Help		This menu item brings up a basic help system.
About Ethereal...		This menu item brings up an information window that provides some simple information on Ethereal.

Capturing packets with `Ethereal`

There are two methods you can use to capture packets with Ethereal:

1. From the command line using the following:

   ```
   ethereal -i eth0 -k
   ```

2. By starting Ethereal and then selecting Start... from the Capture menu. This brings up the Capture Preferences dialog box and will be dealt with in more detail in the section called *The Capture Preferences dialog box*.

The Capture Preferences dialog box

When you select Start... from the Capture menu, Ethereal pops up the Capture Preferences dialog box as shown in Figure 3-9.
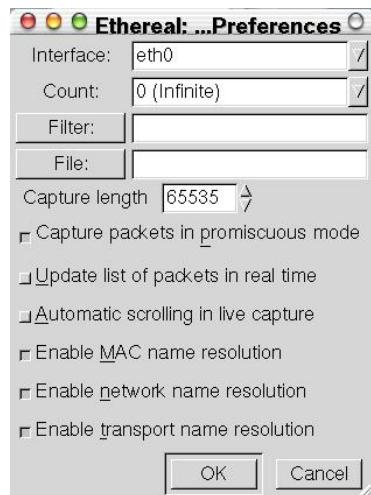
Figure 3-9. The Capture Preferences dialog box

You can set the following fields in this dialog box:

Interface

 This field specifies the interface you want to capture on. You can only capture on one interface, and you can only capture on interfaces that the Ethereal has found on the system. It is a drop-down list, so simply click on the button on the right hand side and select the interface you want. It defaults to the first non-loopback interface that supports capturing, and if there are none, the first loopback interface. On some systems, loopback interfaces cannot be used for capturing.

 This field performs the same function as the **-i** <**interface>** command line option.

Count

 This field specifies the number of packets that you want to capture. It defaults to 0, which means do not stop capturing. Enter the value that you want in here, or leave it blank.

Filter

 This field allows you to specify a capture filter. Capture filters are discussed in more details in the section called *Filtering while capturing*. It defaults to empty, or no filter.

 You can also click on the Filter button/label, and Ethereal will bring up the Filters dialog box and allow you to create and/or select a filter. Please see the section called *Defining and saving filters*

File

This field allows you to specify the file name that will be used for the capture when you later choose Save... or Save As... from the Ethereal File menu. There is no default for this value.

Capture length

This field allows you to specify the maximum amount of data that will be captured for each packet, and is sometimes referred to as the **snaplen**. The default is 65535, which will be sufficient for most protocols. It should be at least the MTU for the interface you are capturing on.

Capture packets in promiscuous mode

This radio button allows you to specify that Ethereal should set the interface in promiscuous mode when capturing. If you do not specify this, Ethereal will only capture the packets going to or from your computer (not all packets going by your interface).

> **Note:** If some other process has put the interface in promiscuous mode you may be capturing in promiscous mode even if you turn off this option

Update list of packets in real time

This radio button allows you to specify that Ethereal should update the packet list pane in real time. If you do not specify this, Ethereal does not display any packets until you cancel the capture. When you click on this radio button, Ethereal captures in a separate process and feeds the captures to the display process. [Is this true for Windows?]

Automatic scrolling in live capture

This radio button allows you to specify that Ethereal should scroll the packet list pane as new packets come in, so you are always looking at the last packet. If you do not specify this, Ethereal simply adds new packets onto the end of the list, but does not scroll the packet list pane.

Enable MAC name resolution

This radio button allows you to control whether or not Ethereal translates the first three octets of a MAC addresses into the name of the manufacturer to whom that prefix has been assigned by the IETF.

Enable network name resolution

This radio button allows you to control whether or not Ethereal translates IP addresses into DNS domain names. By clicking on this radio button, the packet list pane will have more useful information, but you will also cause name lookup requests to occur, which might disturb the capture.

> **Note:** If you cannot reach the name server, you may find that Ethereal takes a long time in updating the packet list pane as it waits for name translation to time out.

Enable transport name resolution

> This radio button allows you to control whether or not Ethereal translates port numbers into protocols.

Once you have set the values you desire and have selected the radio buttons you need, simply click on OK to commence the capture, or Cancel to cancel the capture.

If you start a capture, Ethereal pops up a dialog box that shows you the progress of the capture and allows you to stop capturing when you have enough packets captured.

Filtering while capturing

Ethereal uses the libpcap filter language for capture filters. This is explained in the tcpdump man page. If you can understand it, you are a better man that I am, Gunga Din!

You enter the capture filter into the Filter field of the Ethereal Capture Preferences dialog box, as shown in Figure 3-9. The following is an outline of the syntax of the **tcpdump** capture filter language.

A capture filter takes the form of a series of primitive expressions connected by conjuctions (**and/or**) and optionally preceeded by **not**:

```
[not] primitive [and|or [not] primitive ...]
```

An example is shown in Example 3-2.

Example 3-2. A capture filter for telnet than captures traffic to and from a particular host

```
tcp port 23 and host 10.0.0.5
```

This example captures telnet traffic to and from the host 10.0.0.5, and shows how to use two primitives and the **and** conjunction. Another example is shown in Example 3-3, and shows how to capture all telnet traffic except that from 10.0.0.5.

Example 3-3. Capturing all telnet traffic not from 10.0.0.5

```
tcp port 23 and not host 10.0.0.5
```

A primitive is simply one of the following:

[src | dst] host <**host>**

 This primitive allows you to filter on a host IP address or name. You can op-tionally preceed the primitive with the keyword **src | dst** to specify that you are only interested in source or destination addresses. If these are not present, pack-ets where the specified address appears as either the source or the destination address will be selected.

ether [src | dst] host <**ehost>**

 This primitive allows you to filter on Ethernet host addresses. You can option-ally includethe keyword **src | dst** between the keywords **ether** and **host** to spec-ify that you are only interested in source or destination addresses. If these are not present, packets where the specified address appears in either the source or destination address will be selected.

gateway host <**host>**

 This primitive allows you to filter on packets that used **host** as a gateway. That is, where the Ethernet source or destination was **host** but neither the source nor destination IP address was **host**.

[src | dst] net <**net>** [{**mask** <**mask>**} | {**len** <**len>**}]

 This primitive allows you to filter on network numbers. You can optionally pre-ceed this primitive with the keyword **src | dst** to specify that you are only inter-ested in a source or destination network. If neither of these are present, packets will be selected that have the specified network in either the source or destina-tion address. In addition, you can specify either the netmask or the CIDR prefix for the network if they are different from your own.

[tcp | udp] [src | dst] port <**port>**

 This primitive allows you to filter on TCP and UDP port numbers. You can op-tionally preceed this primitive with the keywords **src | dst** and **tcp | udp** which allow you to specify that you are only interested in source or destination ports and TCP or UDP packets respectively. The keywords **tcp | udp** must appear be-fore **src | dst**.

 If these are not specified, packets will be selected for both the TCP and UDP pro-tocols and when the specified address appears in either the source or destination port field.

less | greater <**length>**

 This primitive allows you to filter on packets whose length was less than or equal to the specified length, or greater than or equal to the specified length, respectively.

ip | ether proto <**protocol>**

 This primitive allows you to filter on the specified protocol at either the Ethernet layer or the IP layer.

ether | ip broadcast | multicast

This primitive allows you to filter on either Ethernet or IP broadcasts or multi-casts.

<**expr> relop** <**expr>**

This primitive allows you to create complex filter expressions that select bytes or ranges of bytes in packets. Please see the tcpdump man pages for more details.

Viewing packets you have captured

Once you have captured some packets, or you have opened a previously saved capture file, you can view the packets that are displayed in the packet list pane by simply clicking on that packet in the packet list pane, which will bring up the selected packet in the tree view and byte view panes.

You can then expand any part of the tree view by clicking on the **plus** sign to the left of that part of the payload, and you can select individual fields by clicking on them in the tree view pane. An example with a TCP segment selected is shown in Figure 3-10. It also has the Acknowledgment number in the TCP header selected, which shows up in the byte view as the selected bytes.
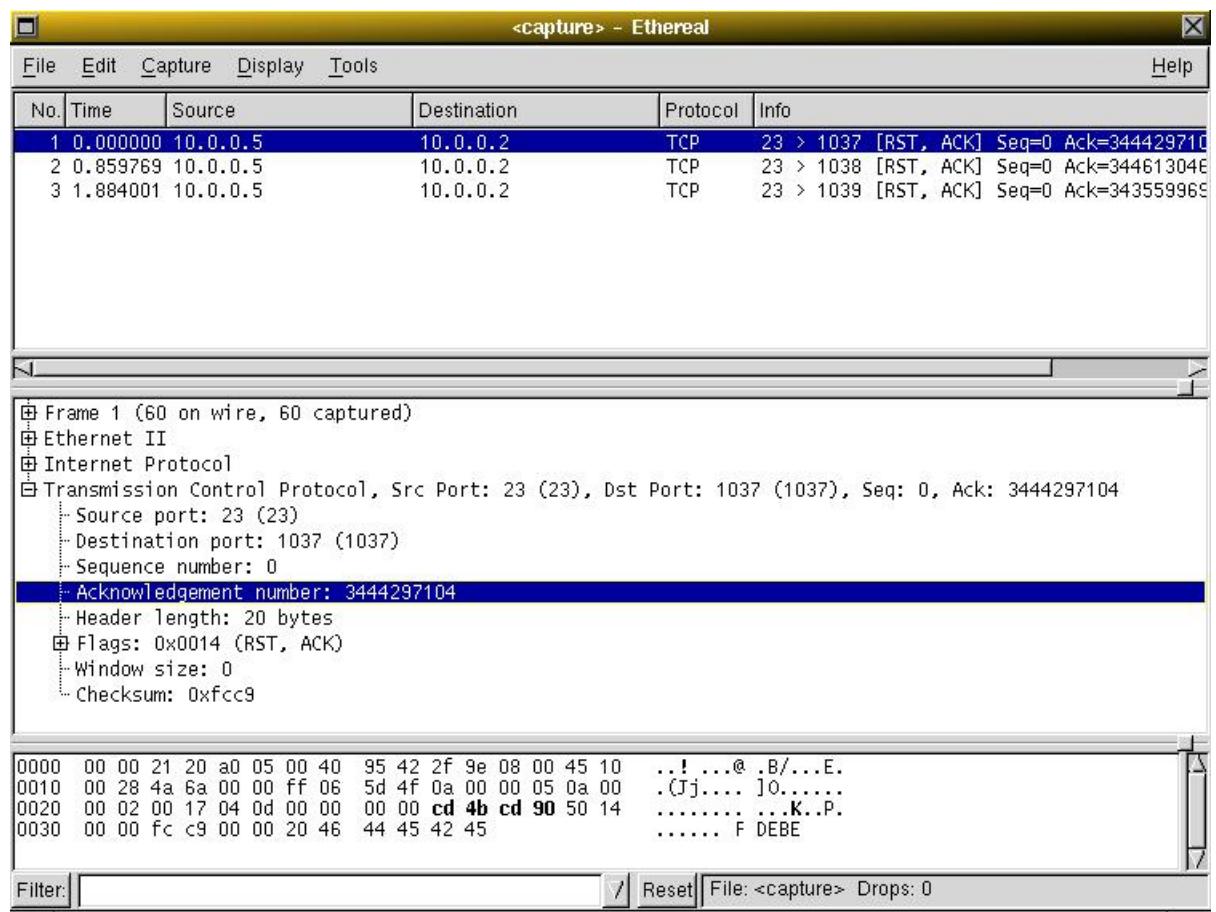
Figure 3-10. Ethereal with a TCP segment selected for viewing

You can also select and view packets when Ethereal is capturing if you selected "Update list of packets in real time" in the Ethereal Capture Preferences dialog box.

In addition, you can view individual packets in a separate window as shown in Figure 3-11. Do this by selecting the packet you are interested in in the packet list pane, and then select "Show Packet in New Windows" from the Display menu. This allows you to easily compare two or more packets.

```
2 0.859769 10.0.0.5 10.0.0.2 TCP 23 > 1038 [RST, ACK] Seq=0 Ack=3446130462 Win=0 Len=0    ✕

⊞ Frame 2 (60 on wire, 60 captured)
⊞ Ethernet II
⊞ Internet Protocol
⊟ Transmission Control Protocol, Src Port: 23 (23), Dst Port: 1038 (1038), Seq: 0, Ack: 3446130462
    ⊢ Source port: 23 (23)
    ⊢ Destination port: 1038 (1038)
    ⊢ Sequence number: 0
    ⊢ Acknowledgement number: 3446130462
    ⊢ Header length: 20 bytes
    ⊞ Flags: 0x0014 (RST, ACK)
    ⊢ Window size: 0
    ⊢ Checksum: 0x031f


0000   00 00 21 20 a0 05 00 40   95 42 2f 9e 08 00 45 10    ..! ...@ .B/...E.
0010   00 28 4a 6b 00 00 ff 06   5d 4e 0a 00 00 05 0a 00    .(Jk.... ]N......
0020   00 02 00 17 04 0e 00 00   00 00 cd 67 c7 1e 50 14    ........ ...g..P.
0030   00 00 03 1f 00 00 20 46   44 45 42 45                ...... F DEBE
```

Figure 3-11. Viewing a packet in a separate window

Finally, you can bring up a pop-up menu over either the packet list pane or the tree view pane by clicking your right mouse button. The menus that is popped up contains the following items:
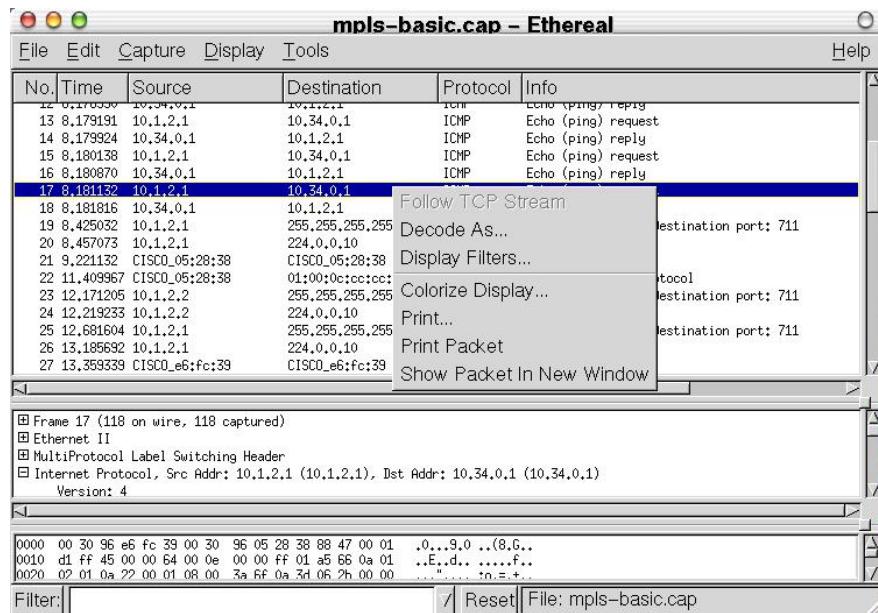
Figure 3-12. Packet Pane pop-up menu

Follow TCP Stream

This menu item is the same as the Display menu item of the same name. It allows you to view all the data on a TCP stream between a pair of nodes.

Decode As...

This menu item is the same as the Display menu item of the same name.

Display Filters...

This menu item is the same as the Edit menu item of the same name. It allows you to specify and manage filters.

Colorize Display...

This menu item is the same as the Display menu item of the same name. It allows you to colorize packets in the packet list pane.

Print...

This menu item is the same as the File menu item of the same name. It allows you to print packets.

Print Packet

This menu item is the same as the File menu item of the same name. It allows you to print the currently selected packet.

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Show Packet in New Window

This menu item is the same as the Display menu item of the same name. It allows you to display the selected packet in another window.
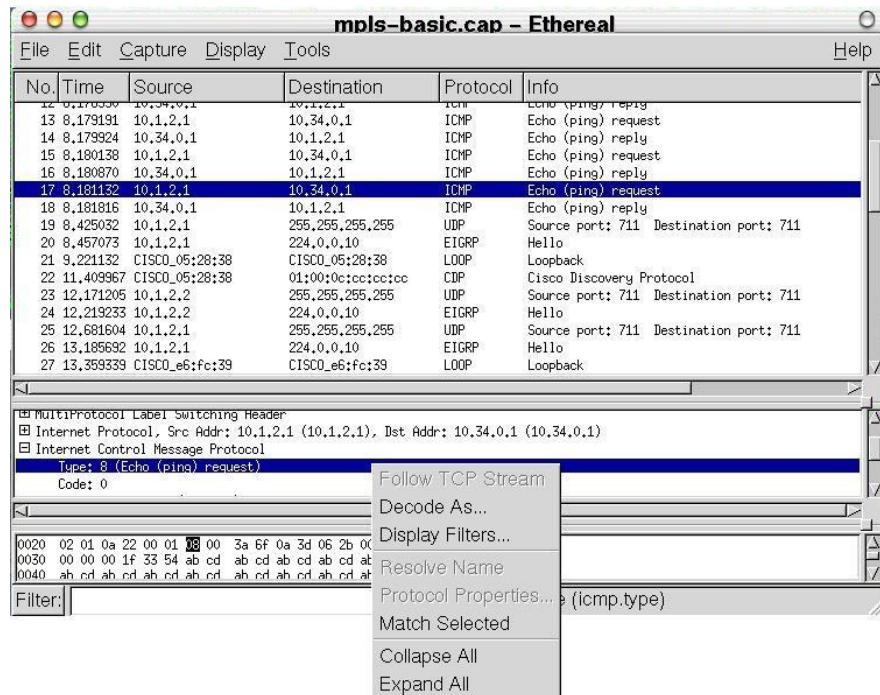
Figure 3-13. Treeview Pane pop-up menu

Follow TCP Stream

This menu item is the same as the Display menu item of the same name. It allows you to view all the data on a TCP stream between a pair of nodes.

Decode As...

This menu item is the same as the Display menu item of the same name.

Display Filters...

This menu item is the same as the Edit menu item of the same name. It allows you to specify and manage filters.

Resolve Name

This menu item causes name resolution to be performed for the selected packet, but NOT every packet in the capture.

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Protocol Properties...

> The menu item takes you to the protocol properties dialog if there are properties associated with the highlighted fields. More information on preferences can be found in Figure 3-29.

Match Selected

> This menu item allows you to select all packets that have a matching value in the field selected in the tree view pane (middle pane).

Collapse All

> Ethereal keeps a list of all the protocol subtrees that are expanded, and uses it to ensure that the correct subtrees are expanded when you display a packet. This menu item collapses the tree view of all packets in the capture list.

Expand All

> This menu item expands all subtrees in all packets in the capture.

Display Options

You can control the way that Ethereal displays a number of items. You manage these by selecting the **Options** menu item from the **Display** menu. When you do this, Ethereal pops up the **Display Options** dialog box, as shown in Figure 3-14.
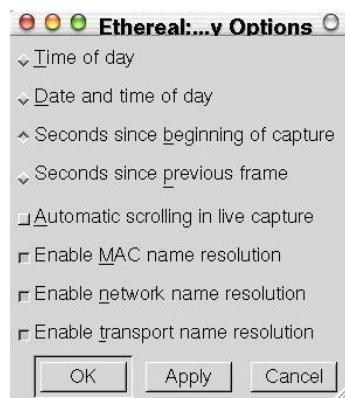
Figure 3-14. Ethereal Display Options dialog box

The following are the items on this dialog box and their meanings:

Time of day

Selecting this radio button tells Ethereal to display time stamps in time of day format. This field, Date and time of day, Seconds since beginning of capture and Seconds since previous frame are mutually exclusive.

Date and time of day

Selecting this radia button tells Ethereal to display the time stamps in date and time of day format. Time of day, this field, Seconds since beginning of capture and Seconds since previous frame are mutually exclusive.

Seconds since beginning of capture

Selecting this radio button tells Ethereal to display time stamps in seconds since beginning of capture format. Time of day, Date and time of day, this field, and Seconds since previous frame are mutually exclusive.

Seconds since previous frame

This radio button tells Ethereal to display time stamps in seconds since previous frame format. Time of day, Date and time of day, Seconds since beginning of capture and this field are mutually exclusive.

Automatic scrolling in live capture

This field, when selected, tells Ethereal to scroll the packet list pane when new packets are captured.

Enable MAC name resolution

This field, when selected, tells Ethereal to translate the first three octets of MAC addresses (the vendor identifier) into names (where it can) when displaying packets.

Enable network name resolution

This field, when selected, tells Ethereal to translate ip addresses into domain names (where it can) when displaying packets.

> **Note:** If you select this option and your DNS server is unavailable then ethereal will be very slow as it times out waiting for responses from your DNS server.

Enable transport name resolution

This field, when selected, tells Ethereal to translate the transport layer addresses (TCP/UDP port numbers) into well known service names (where it can) when displaying packets.

Saving captured packets

You can save captured packets simply by using the Save As... menu item from the File menu under Ethereal. You can choose to save all packets that were captured or only the packets currently being displayed.

The Save Capture File As dialog box

The Ethereal Save Capture File As dialog box allows you to save the current capture to a file. Figure 3-15 shows an example of this dialog box.
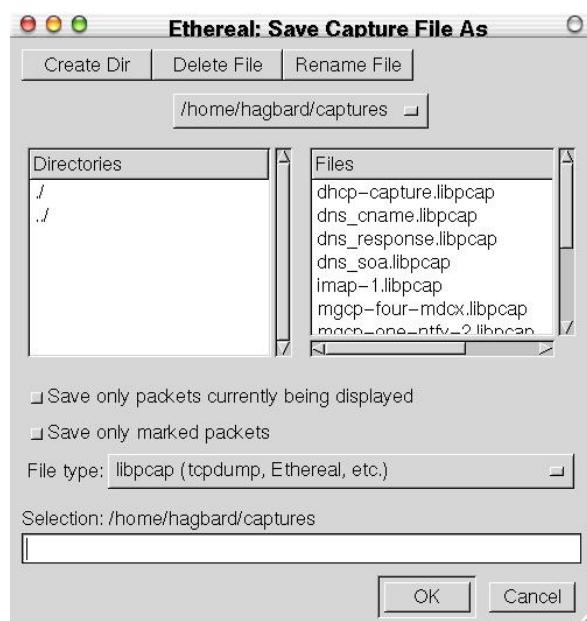
Figure 3-15. The Ethereal Save Capture File As dialog box

With this dialog box, you can perform the following actions:

1. Create directories with the **Create Dir** button.
2. Delete files with the **Delete File** button.
3. Rename files with the **Rename File** button.
4. Select files and directories with the directories and files list boxes and the file system heirarchy drop down box.
5. Save only the packets currently being displayed (as apposed to all the packets captured) by clicking on the "Save only packets currently being displayed" radio button.

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6. Save only the marked packets (as apposed to all the packets captured) by clicking on the "Save only marked packets" radio button. More on Marking packets can be found in the section called *The Ethereal Edit menu*.

7. Specify the format of the saved capture file by clicking on the File type drop down box. You can choose from among the following types:

     a. libpcap (tcpdump, Ethereal, etc.)

     b. modified libpcap (tcpdump)

     c. RedHat Linux libpcap (tcpdump)

     d. Network Associates Sniffer (DOS based)

     e. Sun Snoop

     f. Microsoft Network Monitor 1.x

     g. Network Associates Sniffer (Windows based) 1.1

Note!: Some capture formats may not be available, depending on the frame types captured.

Note!: You can convert capture files from one format to another by reading in a capture file and writing it out using a different format.

8. Type in the name of the file you wish to save the captured packets in, as a standard file name in your file system.

9. Click on OK to accept your selected file and save to it. If Ethereal has a problem saving the captured packets to the file you specified, it will display an error dialog box. After clicking OK, you can try another file.

10. Click on Cancel to go back to Ethereal and not save the captured packets.

Reading capture files

Ethereal can read in previously saved capture files, and in addition, because it is built with a subroutine library called **libwiretap**, it can read capture files from a number of other packet capture programs as well. The following is the list of capture formats it understands:

- tcpdump and Ethereal
- snoop (including Shomiti) and atmsnoop
- LanAlyzer
- Sniffer (compressed or uncompressed)

- Microsoft Network Monitor
- AIX's iptrace
- NetXray
- Sniffer Pro
- RADCOM's WAN/LAN analyzer
- Lucent/Ascend router debug output
- HP-UX's nettl
- the dump output from Toshiba's ISDN routers
- i4btrace from the ISDN4BSD project

You only need to get these files onto your system and Ethereal can read them. To read them, simply select the **Open** menu item from the **File** menu. Ethereal will then pop up the File Open dialog box, which is discussed in more detail in the section called *The File Open dialog box*

The File Open dialog box

The Ethereal File Open dialog box allows you to search for a capture file containing previously captured packets for display in Ethereal. Figure 3-16 shows an example of the Ethereal Open File Dialog box.
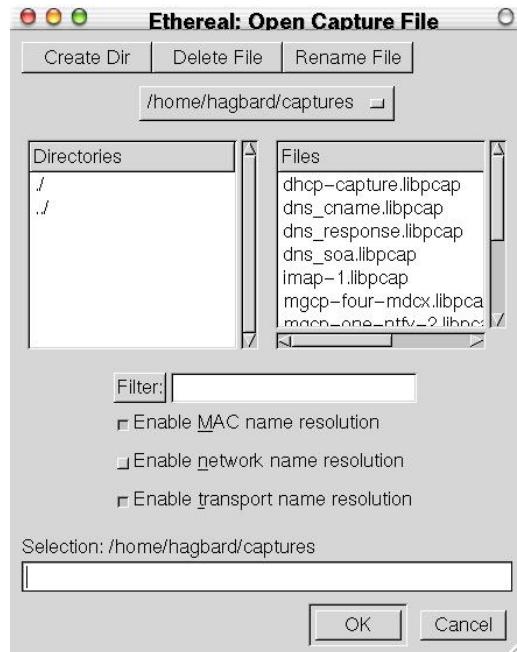
Figure 3-16. The Ethereal Open File Dialog box

With this dialog box, you can perform the following actions:

1. Create directories with the **Create Dir** button.
2. Delete files with the **Delete File** button.
3. Rename files with the **Rename File** button.
4. Select files and directories with the directories and files list boxes and the file system heirarchy drop down box.
5. Specify a display filter with the Filter button and filter field. Clicking on the Filter button causes Ethereal to pop up the Filters dialog box (while is discussed further in the section called *Filtering packets while viewing*).
6. Specify that MAC name resolution is to be performed for all MAC addresses in packets by clicking on the "Enable MAC name resolution" check button.
7. Specify that DNS name resolution is to be performed for all ip addresses in packets by clicking on the "Enable network name resolution" check button.

> **Note:** Enabling network name resolution when your DNS server is unavailable may significantly slow ethereal while it waits for all of the DNS requests to time out

8. Specify that transport name resolution is to be performed for all transport (TCP/UDP port) addresses in packets by clicking on the "Enable transport name resolution" check button.

9. Type in the name of the capture file you wish to open, as a standard file name in your file system.

10. Click on OK to accept your selected file and open it. If Ethereal recognizes the capture format, it will display the packets read from the capture file in the packet list pane. If it does not recognize the capture format, it will display an error dialog box. After clicking OK, you can try another file.

11. Click on Cancel to go back to Ethereal and not load a capture file.

Filtering packets while viewing

Ethereal has two filtering languages: One used when capturing packets, and one used when displaying packets. In this section we explore that second type of filters: Display filters. The first one has already been dealt with in the section called *Filtering while capturing*.

Display filters allow you to concentrate on the packets you are interested in. They allow you to select packets by:

• Protocol

• The presence of a field

• The values of fields

• A comparison between fields

To select packets based on protocol type, simply type the protocol you are interested in in the **Filter:** field on the bottom left hand corner of the Ethereal window and press enter to initiate the filter. Figure 3-17 shown an example of what happens when you type **smb** in the filter field.

> **Note!:** All filter expressions are entered in lowercase. Also, don't forget to press enter after entering the filter expression.
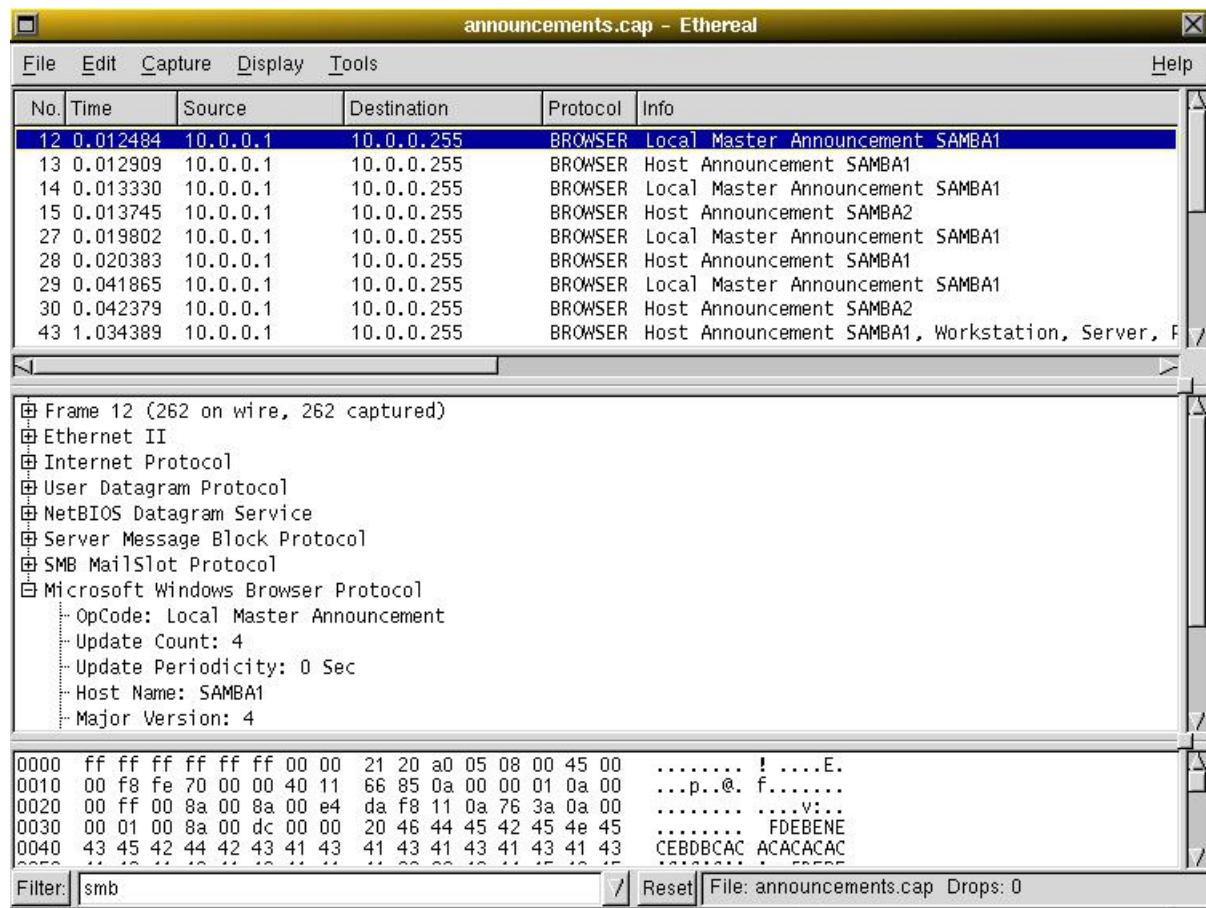
Figure 3-17. Filtering on the SMB protocol

> **Note!:** The packets selected in Figure 3-17 all show up as **BROWSER** packets but they are carried in SMB packets.

You can filter on any protocol that Ethereal understands. However, you can also filter on any field that a dissector adds to the tree view, but only if the dissector has added an abbreviation for the field. A list of such fields is available in the Ethereal in the **Add Expression...** dialog box. You can find more information on the **Add Expression...** dialog box in the section called *The Add Expression Dialog*. You may also find a list of the fields in Appendix A

For example, to narrow the packet list pane down to only those packets to or from 10.0.0.5, use **ip.addr==10.0.0.5.**

> **Note!:** To remove the filter, click on the **Reset** button to the right of the filter field.

Building filter expressions

Ethereal provides a simple display filter language that you can build quite complex filter expressions with. You can compare values in packets as well as combine expressions into more specific expressions. The following sections provide more information on doing this.

Comparing values

You can build display filters that compare values using a number of different comparison operators. They are shown in Table 3-7.

Table 3-7. Display filter comparison operators

English	C-like	Description and example
eq	==	**Equal** `ip.addr==10.0.0.5`
ne	!=	**Not equal** `ip.addr!=10.0.0.5`
gt	>	**Greater than** `frame.pkt_len > 10`
lt	<	**Less than** `frame.pkt_len < 128`
ge	>=	**Greater than or equal to** `frame.pkt_len ge 0x100`
le	<=	**Less than or equal to** `frame.pkt_len <= 0x20`

In addition, all protocol fields are typed. Table 3-8 provides a list of the types and example of how to express them.

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Table 3-8. Field Types

Type	Example
Unsigned integer (8-bit, 16-bit, 24-bit, 32-bit)	You can express integers in decimal, octal, or hexadecimal. The following display filters are equivalent: `ip.len le 1500` `ip.len le 02734` `ip.len le 0x436`
Signed integer (8-bit, 16-bit, 24-bit, 32-bit)	
Boolean	A boolean field is present in the protocol decode only if its value is true. For example, **tcp.flags.syn** is present, and thus true, only if the SYN flag is present in a TCP segment header. Thus the filter expression **tcp.flags.syn** will select only those packets for which this flag exists, that is, TCP segments where the segment header contains the SYN flag. Similarly, to find source-routed token ring packets, use a filter expression of **tr.sr**.
Ethernet address (6 bytes)	
IPv4 address	
IPv6 address	
IPX network number	
String (text)	
Double-precision floating point number	

Combining expressions

You can combine filter expressions in Ethereal using the logical operators shown in Table 3-9

Table 3-9. Display Filter Logical Operations

English	C-like	Description and example

English	C-like	Description and example
and	&&	**Logical AND** `ip.addr==10.0.0.5 and tcp.flags.fin`
or	||	**Logical OR** `ip.addr==10.0.0.5 or ip.addr==192.1.1.1`
xor	^^	**Logical XOR** `tr.dst[0:3] == 0.6.29 xor tr.src[0:3] ==`
not	!	**Logical NOT** `not llc`

English	C-like	Description and example

[...]		**Substring Operator**
		Ethereal will allow you to select subsequences of a sequence in rather elaborate ways. After a label you can place a pair of brackes [] containing a comma separated list of range specifiers.
		
		`eth.src[0:3] == 00:00:83`
		
		The example above uses the n:m format to specify a single range. In this case n is the beginning offset and m is the length of the range being specified.
		
		`eth.src[1-2] == 00:83`
		
		The example above uses the n-m format to specify a single range. In this case n is the beginning offset and m is the ending offset.
		
		`eth.src[:4] == 00:00:83:00`
		
		The example above uses the :m format, which takes everything from the beginning of a sequence to offset m. It is equivalent to 0:m
		
		`eth.src[4:] == 20:20`
		
		The example above uses the n: format, which takes everything from offset n to the end of the sequence.
		
		`eth.src[2] == 83`
		
		The example above uses the n format to specify a single range. In this case the element in the sequence at offset n is selected. This is equivalent to n:1.
		
		`eth.src[0:3,1-2,:4,4:] == 00:00:83:00:`

English	C-like	Description and example

Packet colorization

A very useful mechanism available in Ethereal is packet colorization. You can set Ethereal up so that it colorizes packets according to a filter. This allows you to emphasize the packets you are interested in.

To colorize packets, select the Colorize Display... menu item from the Display menu, and Ethereal will pop up the Add Color to Protocols dialog box as shown in Figure 3-18.
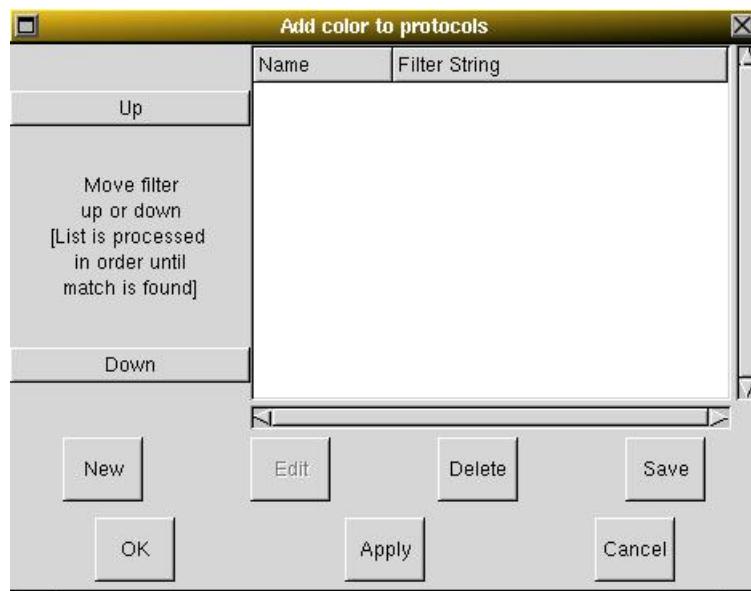
Figure 3-18. The Ethereal Add Color to Protocols dialog box

Once the Add Color to Protocol dialog box is up, there are a number of buttons you can use, depending on whether or not you have any color filters installed already. If this is the first time you have used Add Color to Protocol, click on New which will bring up the Edit color filter dialog box as shown in Figure 3-19.
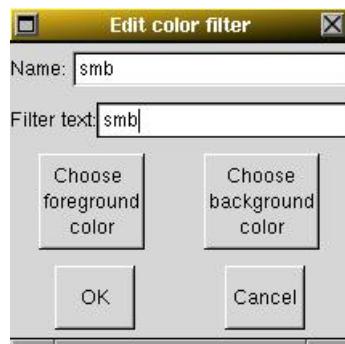
Figure 3-19. The Ethereal Edit color filter dialog box

In the Edit Color dialog box, simply enter a name for the color filter, and enter a filter sting in the Filter text field. Figure 3-19 shows the values **smb** and **smb** which means that the name of the color filter is **smb** and the filter will select protocols of type **smb**. Once you have entered these values, you can choose a background and foreground color for packets that match the filter expression. Click on **Choose background color** or **Choose foreground color** to do achieve this and Ethereal will pop up the Choose foreground/background color for protocol dialog box as shown in Figure 3-20.
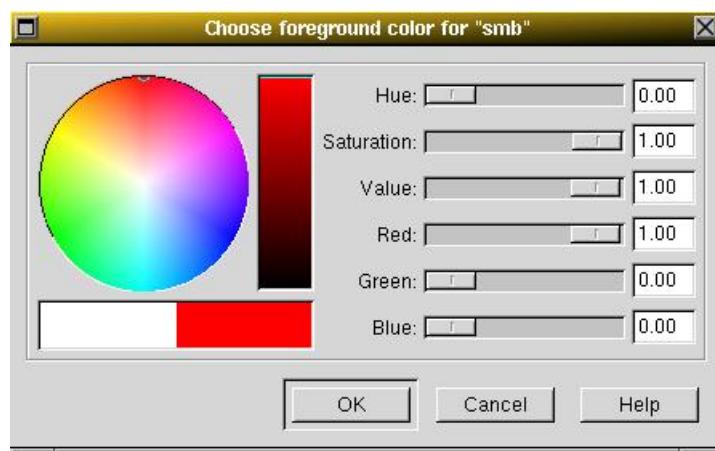
Figure 3-20. Ethereal Choose color dialog box

Select the color you desire for the selected packets and click on OK.

> **Note!:** You must select a color in the colorbar next to the colorwheel to load values into the RGB sliders. Alternatively, you can use the sliders to select the color you want.

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You will need to carefully select the order that filters are listed (and thus applied) as they are applied in order. So, more specific filters need to be listed before more general filters. For example, if you have a color filter for UDP before the one for DNS, the color filter for DNS will never be applied.

Figure 3-21 shows an example of several color filters being used in Ethereal. You may not like the color choices, however, so feel free to choose your own.
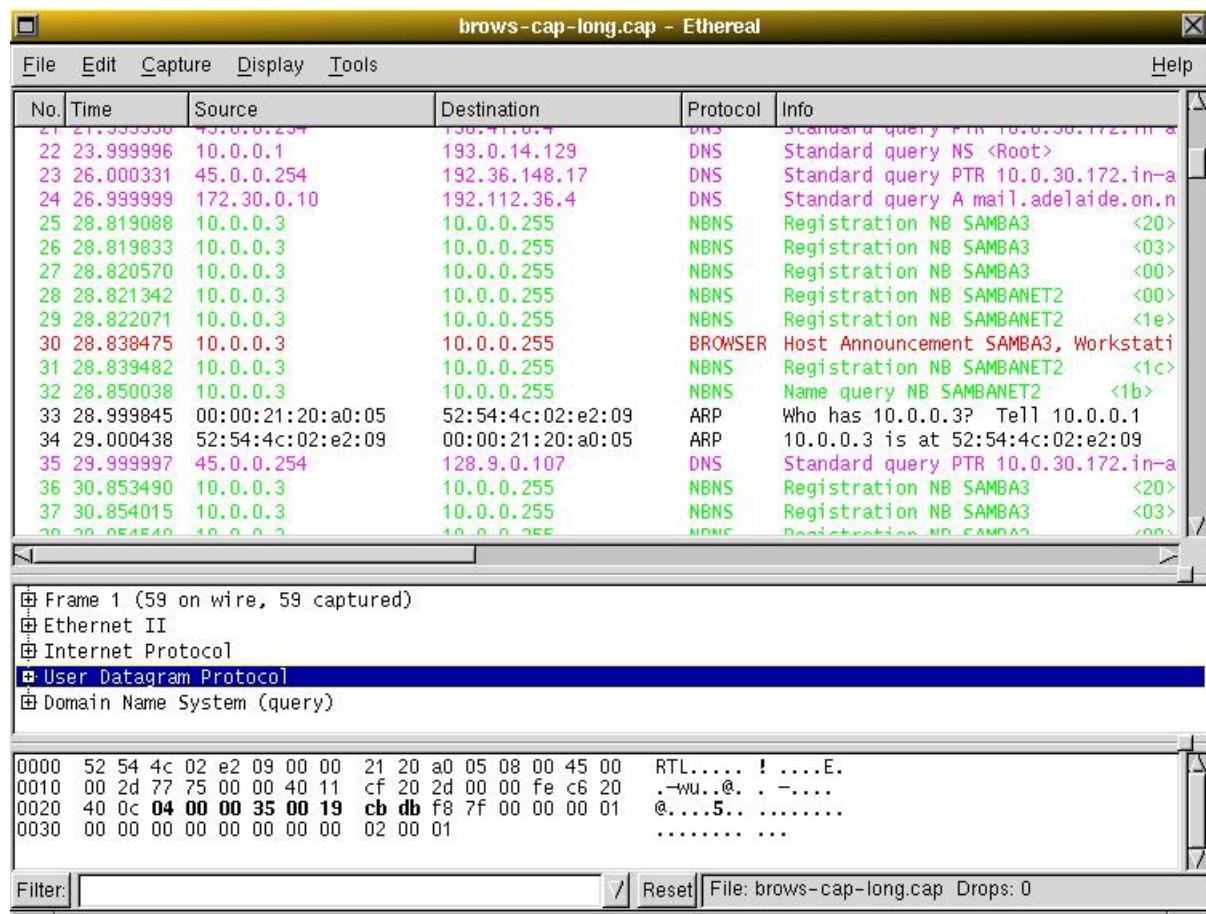
Figure 3-21. Using color filters with Ethereal

Finding frames

You can easily find frames once you have captured some packets or have read in a previously saved capture file. Simply select the **Find Frame…** menu item from the **Edit** menu. Ethereal will pop up the dialog box shown in Figure 3-22.

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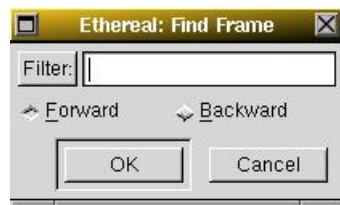
Figure 3-22. The Ethereal Find Frame dialog box

Simply enter a display filter string into the **Filter:** field, select a direction, and click on OK.

For example, to find the three way handshake for a connection from host 10.0.0.5, use the following filter string:

```
ip.addr==10.0.0.5 and tcp.flags.syn
```

For more details on display filters, see the section called *Filtering packets while viewing*

Following TCP streams

There will be occasions when you would like to see the data on a TCP session in the order that the application layer would see it. Perhaps you are looking for passwords in a Telnet stream, or perhaps you are trying to make sense of a data stream. If so, Ethereal's ability to follow a TCP stream will be useful to you.

Simply select a TCP segment on the stream/connection you are interested in and then select the Follow TCP Stream menu item from the Ethereal Tools menu. Ethereal will pop up a separate window with all the data from the TCP stream layed out in order, as shown in Figure 3-23.
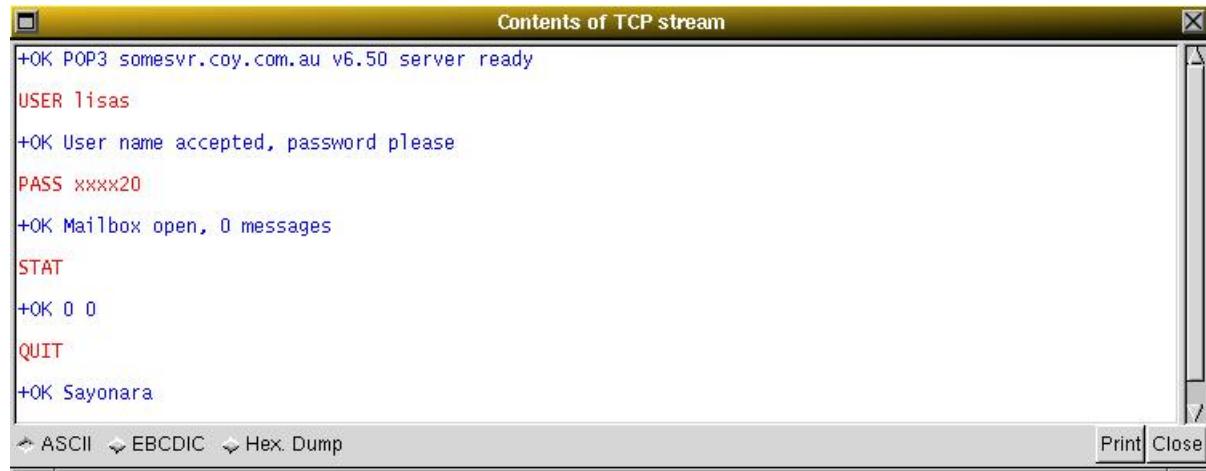
Figure 3-23. Following a TCP Stream

You can then select to view the data in one of three formats:

1. **ASCII**. In this view you see the data from each end in ASCII, but alternating according to when each end sent data. Unfortunately, non-printing characters do not print.
2. **EBCDIC**. For the big-iron freaks out there.
3. **HEX Dump**. This allows you to see all the data, but you lose the ability to read it in ASCII.

Note!: It is worthwhile noting that Follow TCP Stream installs a filter to select all the packets on the TCP stream you have selected.

Defining and saving filters

You can define filters with Ethereal and give them labels for later use. This can save time in remembering and retyping some of the more complex filters you use.

To define a new filter or edit an existing filter, select the Filters... menu item from the Edit menu. Ethereal will then pop up the Filters dialog as shown in Figure 3-24.
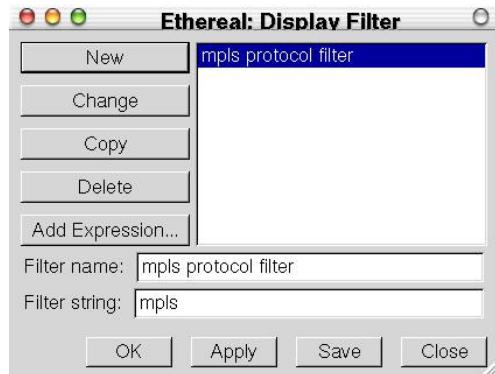
Figure 3-24. The Ethereal Filters dialog box

You would enter a filter name in the Filter name field, and a filter string in the Filter string field. However, for most other actions, you would select a filter from the list box (which will fill in the name and sting in the fields down the bottom of the dialog box), and make what ever changes you want to. Then you should choose one of the buttons down the left hand side of the dialog box. The buttons have the following meanings:

New

> This button adds the filter string entered in the Filter string field with the name supplied in the Filter name field.

> > **Note!:** You can add multiple filters with the same name. This is not very useful.

Change

> This button changes the filter named in the Filter name string by replacing its filter string with the string in the Filter string field.

Copy

> This button copies the selected filter and calls it "Copy of <orig>", where <orig> is the name of the original filter.

Delete

> This button deletes the selected filter.

Apply

> This button applies the selected filter to the current display.

Add Expression...

 This button brings up the Add Expression dialog box which assists in building filter strings. You can find more information about the Add Expression dialog in the section called *The Add Expression Dialog*

The Add Expression Dialog

When you are accustomed to Ethereal's filtering system and know what labels you wish to use in your filters it can be very quick to simply type a filter string. However if you are new to Ethereal or are working with a slightly unfamiliar protocol it can be very confusing to try to figure out what to type. The Add Expression dialog box helps with this.
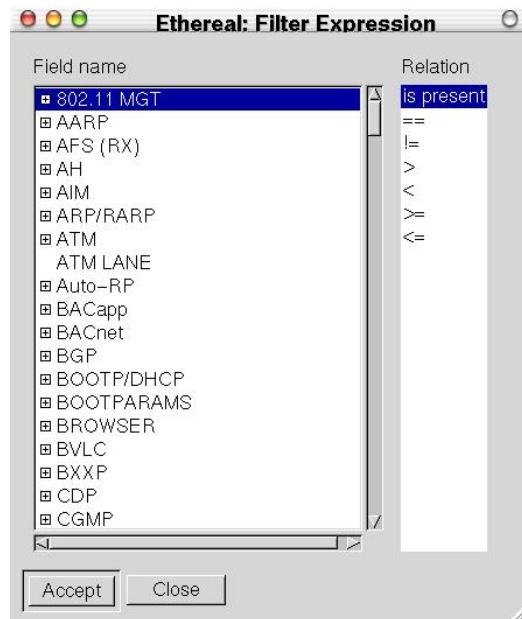
Figure 3-25. The Ethereal Add Expression dialog box, view 1

When you first bring up the Add Expression dialog box you are shown a tree list of field names, organized by protocol, and a box for selecting a relation.

Field Name

 Select a protocols field from the protocol field tree. Every protocol with filterable fields is listed at the top level. By clicking on the "+" next to a protocol name you can get a list of the field names available for filtering for that protocol.

Relation

Select a relation from the list of available relation. The **is present** is a unary relation which is true if the selected field is present in a packet. All other listed relations are binary relations require additional data (ie a **Value** to match) to complete.
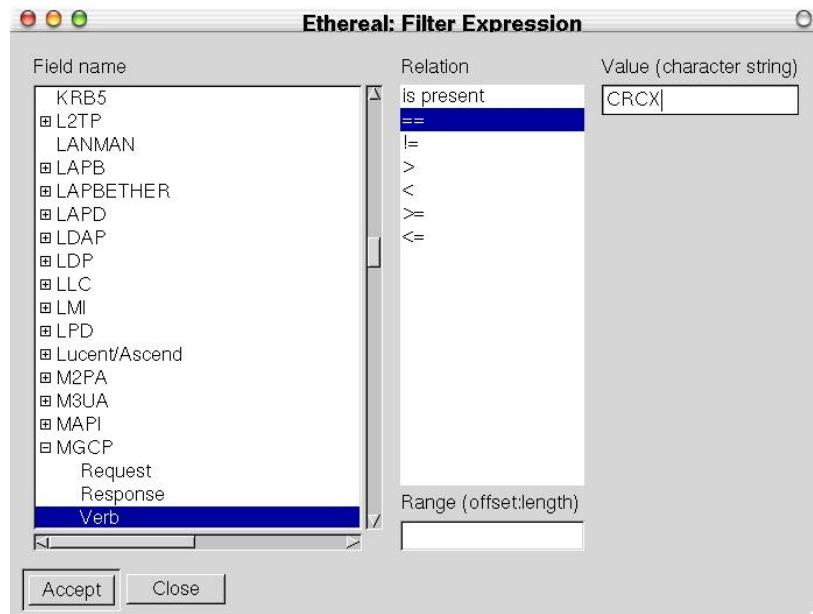
Figure 3-26. The Ethereal Add Expression dialog box, view 2

When you select a field from the field name list and select a binary relation (like the equality relation ==) you will be given the opportunity to enter a value, and possible some range information.

Value

You may enter an appropriate value in the **Value** text box. The **Value** will also indicate the type of value for the **field name** you have selected (like character string).

Accept

When you have built a satisfactory expression click **Accept** and a filter string will be built for you.

Close

You can leave the **Add Expression...** dialog box without any effect by clicking the **Close**
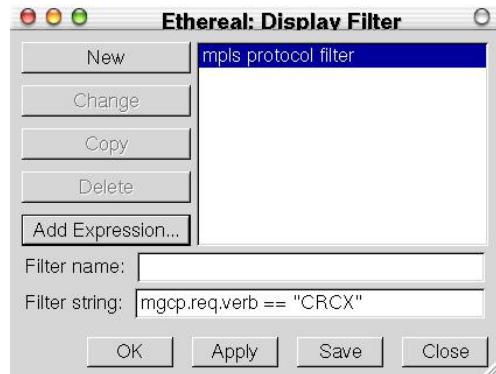
Figure 3-27. The result of building a filter string using the Add Expression dialog box.

The Add Expression dialog box is an excellent way to learn to write Ethereal display filter strings.

Printing packets

Ethereal provides two methods for printing packets:

1. Select the Print... menu item from the File menu. When you do this, Ethereal pops up the Print dialog box as shown in Figure 3-28.

2. Select the Print Packet menu item from the File menu (or type Ctrl-P) and Ethereal will print the currently selected packet.

We present more detail on the Print dialog box below.
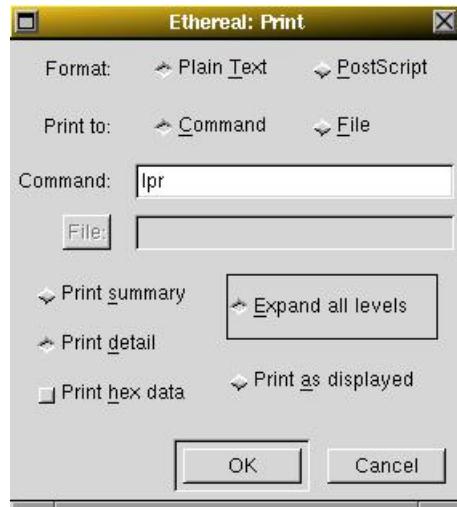
Figure 3-28. The Ethereal Print dialog box

> **Note:** Currently, there is no simple way with the Print dialog box to print only a range of packets, or to print a single packet. To do this, first select a range of packets with a display filter, then select Print... from the File menu. You could even select a single packet with something like **frame.number == 10** or a range by frame number with something like **frame.number >= 10 && frame.number <= 20**.

The following fields are available in the Print dialog box:

Format

This field contains a pair of mutually exclusive radio buttons:

- **Plain Text**, which specifies that the packet print should be in plain text.

- **PostScipt**, which specifies that the packet print process should use Postscript to generate a better print.

Print to

This field contains another pair of mutually exclusive radio buttons:

- **Command**, which specifies that a command be used for printing.

- **File**, which specifies that printing be done to a file.

Command

This field specifies the command to use for printing. It is typically **lpr**. You would change it to specify a particular queue if you need to print to a queue other than the default. An example might be:

```
lpr -Pmypostscript
```

This field is greyed out if **Command** is not specified above.

File

This field is where you enter the **file** to print to if you have selected Print to a file. It is greyed out if Print to a file is not selected.

Print summary and Print detail

This pair of mutually exclusive radio boxes select whether or not Ethereal prints a summary or the detail for each packet printed.

Expand all details and Print as displayed

This pair of mutially exclusive radio boxes select whether or not Ethereal expands all details for all packets printed, or prints them as displayed (ie, with only the currently expanded protocol trees expanded.

Print hex data

This radio box controls whether or not Ethereal prints the hex data for each packet selected.

Ethereal preferences

There are a number of preferences you can set from one place. Simply select the Preferences... menu item from the Edit menu, and Ethereal will pop up the Preferences dialog box as shown in Figure 3-29.
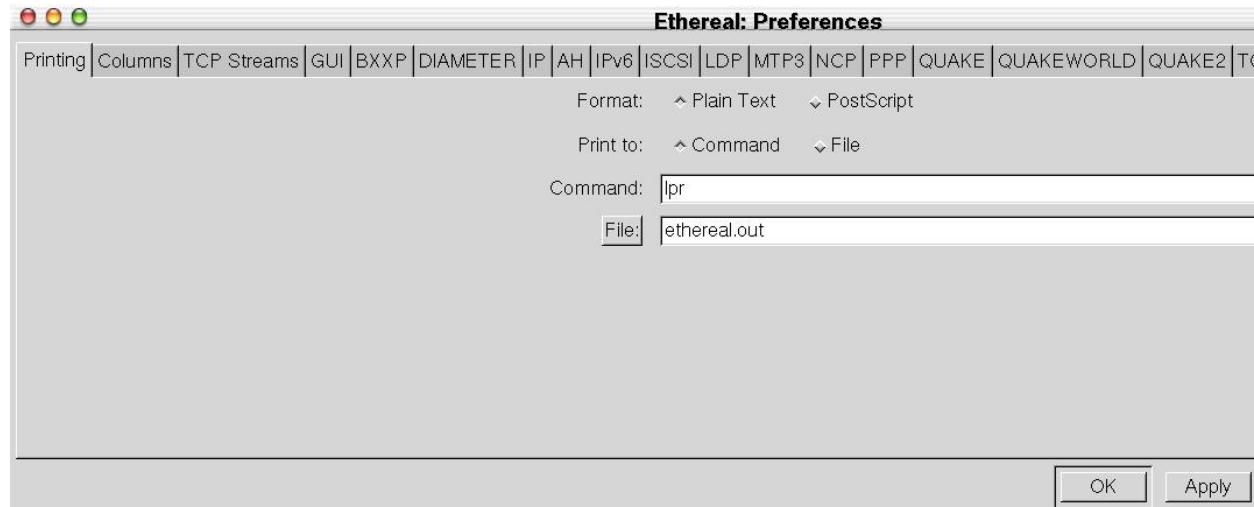
Figure 3-29. The Ethereal Preferences dialog box

The Ethereal Preferences dialog box is a tabbed dialog box that allows you to set preferences for each of the following elements:

Printing

This tab allows you to define the default printing command that Ethereal will use as well as the default output file name when you print to a file. These are discussed in more detail in the section called *Printing packets*

Columns

This tab allows you to select which columns appear in the Packet List Pane.

TCP Streams

This tab allows you to change the foreground and background colors used by the **Follow TCP Stream** described in the section called *The Ethereal Tools menu*.

GUI

This tab allows you to configure various characteristics of the GUI.

Other tabs

The remaining tabs allow you to configure various preferences for the dissection of various network protocols.

Files used by Ethereal

Ethereal uses a number of files while it is running. Some of these reside in $HOME/.ethereal and are used to maintain information between runs of Ethereal, while some of them are maintained in system areas.

The following are some of the files accessed by Ethereal:

$HOME/.ethereal/preferences

This file contains all your Ethereal preferences, including defaults for capturing and displaying packets. It is a simple text file containing statements of the form **variable: value**.

$HOME/.ethereal/filters

This file contains all the filters that you have defined and saved. It consists of one or more lines, where each line has the following format:

```
"<filter name>" <filter string>
```

$HOME/.ethereal/colorfilters

This file contains all the color filters that you have defined and saved. It consists of one or more lines, where each line has the following format:

```
@<filter name>@<filter string>@[<bg RGB(16-bit)>][<fg RGB(16-bit)>]
```

**/usr/share/ethereal/plugins,   /usr/local/share/ethereals/plugins,
$HOME/.ethereal/plugins**

Ethereal searches for plugins in the directories listed above. They are searched in the order listed.

/etc/ethers, $HOME/.ethereal/ethers

When Ethereal is trying to translate Ethernet hardware addresses to names, it consunts the files listed above in the order listed. If an address is not found in /etc/ethers, Etherereal looks in $HOME/.ethereal/etheres

Each line in these files consists of one hardware address and name separated by whitespace. The digits of hardware addressses are spearated by colons (:), dashes (-) or periods(.). The following are some examples:

```
ff-ff-ff-ff-ff-ff      Broadcast
c0-00-ff-ff-ff-ff      TR_broadcast
00.2b.08.93.4b.a1      Freds_machine
```

/usr/local/etc/manuf

Ethereal uses the file listed above to translate the first three bytes of an Ethernet address into a manufacturers name. This file has the same format as the ethers file, except addresses are three bytes long.

$HOME/.ethereal/ipxnets

Ethereal uses the above file to translate IPX network numbers into names.

An example is:

```
C0.A8.2C.00      HR
c0-a8-1c-00      CEO
00:00:BE:EF      IT_Server1
110f             FileServer3
```

Chapter 4. Troubleshooting with `Ethereal`

An approach to troubleshooting with Ethereal

Ethereal is a very useful tool for network troubleshooting, since it contains a number of features that allow you to quickly focus on problems in your networkfor several reasons:

- It allows you to focus in on specific packets and protocols, as you can see a large amount of detail associated with various protocols.
- It supports a large number of protocols, and the list of protocols supported is growing as more people contribute dissectors
- By giving you a visual view of traffic in parts of your network, and providing tools to filter and colorize that information, you can get a better feel for your network traffic, and can understand your network better.

The following general approach is suggested:

- Determine that the problem looks like a networking problem. There is no point in capturing packets if the problem is not networking related.
- Figure out where to capture packets. You will have to capture packets from a part of the network where you can actually get network traffic related to the problem. This is especially important in the presence of switches and routers. See the section called *Capturing in the presence of switches and routers* for more details.

  Because Ethereal can read many capture file formats, you can capture using any conventient tool. One useful approach is to use **tcpdump** to capture on remote systems and then copy the capture file to your system for later analysis. For more details on capturing with **tcpdump**, see the section called *Capturing with tcpdump for viewing with Ethereal* in Chapter 5.

- Once you have captured packets that you think relate to the problem, load them into Ethereal and look for your problem. Using Ethereal's filtering and colorization capabilities, you can quickly narrow down the capture to the area of interest.
- Examine the appropriate fields within the packets where the problem appears to be. These can often help to reveal the problem.

Capturing in the presence of switches and routers

Many vendor's switches support a feature known as "port spanning" or "port mirroring" in which all of the traffic to and from port A are also sent out port B. An excellent reference on the "port spanning" feature of Cisco switches can be found at Configuring the Catalyst Switched Port Analyzer (SPAN) Feature [1]

Examples of troubleshooting

Troubleshooting often requires a reasonable knowledge of the protocols in question, however, you can often get a good idea of what might be going wrong simply by looking in the packets being exchanged.

Notes

1. http://www.cisco.com/warp/public/473/41.html

Chapter 5. Related tools

Capturing with tcpdump for viewing with Ethereal

There are occasions when you want to capture packets using **tcpdump** rather than **ethereal**, especially when you want to do a remote capture and do not want the network load associated with running Ethereal remotely (not to mention all the X traffic polluting your capture).

However, the default **tcpdump** parameters result in a capture file where each packet is truncated, because **tcpdump**, by default, does not capture full packets.

To ensure that you capture complete packets, use the following command:

```
tcpdump -i <interface> -s 1500 -w <some-file>
```

You will have to specify the correct **interface** and the name of a **file** to save into. In addition, you will have to terminate the capture with ^C when you believe you have captured enough packets.

Tethereal, for terminal-based capturing

Tethereal is a terminal oriented version of ethereal designed for capturing and displaying packets when you do not have a graphical environment available. It supports the same option set that **ethereal** does. For more information on **tethereal**, see the manual pages (**man tethereal**).

Using editcap

Included with Ethereal is a small utility called **editcap**, which is a command-line utility for working with capture files. Its main function is to remove packets from capture file, but it can also be used to convert capture files from one format to another, as well as print information about capture files.

editcap has the following format:

editcap [-r] [-h] [-v] [-T {encap type}] [-F {capture type}] {infile} {outfile} [record# [-] [record#] ...]

Where each option has the following meaning:

-r

This option specifies that the frames listed should be kept, not deleted. The default is to delete the listed frames.

-h

This option provides help.

-v

> This option specifies verbose operation. The default is silent operation.

-T {encap type}

> This option specifies the frame encapsulation type to use. It can take one of the following values:
>
> - ether - Ethernet
> - tr - Token Ring
> - slip - SLIP
> - ppp - PPP
> - fddi - FDDI
> - fddi-swapped - FDDI with bit-swapped MAC addresses
> - rawip - Raw IP
> - arcnet - ARCNET
> - atm-rfc1483 - RFC 1483 ATM
> - linux-atm-clip - Linux ATM CLIP
> - lapb - LAPB
> - atm-sniffer - ATM Sniffer
> - null - NULL
> - ascend - Lucent/Ascend access equipment
> - lapd - LAPD
> - v120 - V.120
>
> It is mainly for converting funny captures to something that Ethereal can deal with. The default frame encapsulation type is the same as the input encapsulation.

-F {capture type}

> This option specifies the capture file format to write the output file in. You can choose from the following values:
>
> - libpcap - libpcap (tcpdump, Ethereal, etc.)
> - modlibpcap - modified libpcap (tcpdump)
> - rh6_1libpcap - Red Hat Linux 6.1 libpcap (tcpdump)
> - ngsniffer - Network Associates Sniffer (DOS-based)
> - snoop - Sun snoop
> - netmon1 - Microsoft Network Monitor 1.x
> - ngwsniffer_1_1 - Network Associates Sniffer (Windows-based) 1.1
>
> The default is libpcap format.

{infile}

> This parameter specifies the input file to use. It must be present.

{outfile}

> This parameter specifies the output file to use. It must be present.

[record#[-][record# ...]]

> This optional parameter specifies the records to include or exclude (depending on the **-r** option. You can specify individual records or a range of records.

Merging multiple capture files into a single capture file with mergecap

Mergecap is a program that combines multiple saved capture files into a single output file specified by the -w argument. Mergecap knows how to read libpcap capture files, including those of tcpdump. In addition, Mergecap can read capture files from snoop (including Shomiti) and atmsnoop, LanAlyzer, Sniffer (compressed or uncompressed), Microsoft Network Monitor, AIX's iptrace, NetXray, Sniffer Pro, RADCOM's WAN/LAN analyzer, Lucent/Ascend router debug output, HP-UX's nettl, and the dump output from Toshiba's ISDN routers. There is no need to tell Mergecap what type of file you are reading; it will determine the file type by itself. Mergecap is also capable of reading any of these file formats if they are compressed using gzip. Mergecap recognizes this directly from the file; the '.gz' extension is not required for this purpose.

By default, it writes the capture file in libpcap format, and writes all of the packets in both input capture files to the output file. The -F flag can be used to specify the format in which to write the capture file; it can write the file in libpcap format (standard libpcap format, a modified format used by some patched versions of libpcap, the format used by Red Hat Linux 6.1, or the format used by SuSE Linux 6.3), snoop format, uncompressed Sniffer format, Microsoft Network Monitor 1.x format, and the format used by Windows-based versions of the Sniffer software.

Packets from the input files are merged in chronological order based on each frame's timestamp, unless the -a flag is specified. Mergecap assumes that frames within a single capture file are already stored in chronological order. When the -a flag is specified, packets are copied directly from each input file to the output file, independent of each frame's timestamp.

If the -s flag is used to specify a snapshot length, frames in the input file with more captured data than the specified snapshot length will have only the amount of data specified by the snapshot length written to the output file. This may be useful if the program that is to read the output file cannot handle packets larger than a certain size (for example, the versions of snoop in Solaris 2.5.1 and Solaris 2.6 appear to reject Ethernet frames larger than the standard Ethernet MTU, making them incapable of handling gigabit Ethernet captures if jumbo frames were used).

If the -T flag is used to specify an encapsulation type, the encapsulation type of the output capture file will be forced to the specified type, rather than being the type appropriate to the encapsulation type of the input capture file. Note that this merely forces the encapsulation type of the output file to be the specified type; the packet headers of the packets will not be translated from the encapsulation type of the input capture file to the specified encapsulation type (for example, it will not translate an

Ethernet capture to an FDDI capture if an Ethernet capture is read and '-T fddi' is specified).

Example 5-1. Help information available from mergecap

```
hagbard@hagbard:~/build/src/ethereal/doc$ mergecap -h
mergecap version 0.8.19
Usage: mergecap [-h] [-v] [-a] [-s <snaplen>] [-T <encap type>]
[-F <capture type>] -w <outfile> <infile> [...]

where -h produces this help listing.
        -v verbose operation, default is silent
        -a files should be concatenated, not merged
Default merges based on frame timestamps
        -s <snaplen>: truncate packets to <snaplen> bytes of data
        -w <outfile>: sets output filename to <outfile>
        -T <encap type> encapsulation type to use:
ether - Ethernet
tr - Token Ring
slip - SLIP
ppp - PPP
fddi - FDDI
fddi-swapped - FDDI with bit-swapped MAC addresses
rawip - Raw IP
arcnet - ARCNET
atm-rfc1483 - RFC 1483 ATM
linux-atm-clip - Linux ATM CLIP
lapb - LAPB
atm-sniffer - ATM Sniffer
null - NULL
ascend - Lucent/Ascend access equipment
lapd - LAPD
v120 - V.120
ppp-with-direction - PPP with Directional Info
ieee-802-11 - IEEE 802.11 Wireless LAN
linux-sll - Linux cooked-mode capture
frelay - Frame Relay
chdlc - Cisco HDLC
default is the same as the first input file
        -F <capture type> capture file type to write:
libpcap - libpcap (tcpdump, Ethereal, etc.)
rh6_1libpcap - Red Hat Linux 6.1 libpcap (tcpdump)
suse6_3libpcap - SuSE Linux 6.3 libpcap (tcpdump)
modlibpcap - modified libpcap (tcpdump)
nokialibpcap - Nokia libpcap (tcpdump)
ngsniffer - Network Associates Sniffer (DOS-based)
snoop - Sun snoop
netmon1 - Microsoft Network Monitor 1.x
netmon2 - Microsoft Network Monitor 2.x
ngwsniffer_1_1 - Network Associates Sniffer (Windows-based) 1.1
default is libpcap
```

-h

  Prints the version and options and exits.

-v

> Causes **mergecap** to print a number of messages while it's working.

-a

> Causes the frame timestamps to be ignored, writing all packets from the first input file followed by all packets from the second input file. By default, when **-a** is not specified, the contents of the input files are merged in chronological order based on each frame's timestamp. Note: when merging, mergecap assumes that packets within a capture file are already in chronological order.

-s

> Sets the snapshot length to use when writing the data.

-w

> Sets the output filename.

-T

> Sets the packet encapsulation type of the output capture file.

-F

> Sets the file format of the output capture file.

A simple example merging `dhcp-capture.libpcap` and `imap-1.libpcap` into `outfile.libpcap` is shown below.

Example 5-2. Simple example of using mergecap

```
 hagbard@hagbard:~/captures$ mergecap -w outfile.libpcap dhcp-capture.libpcap imap-
1.libpcap
```

Converting ASCII hexdumps to network captures with text2pcap

There may be some occasions when you wish to convert a hex dump of some network traffic into a libpcap file.

Text2pcap is a program that reads in an ASCII hex dump and writes the data described into a libpcap-style capture file. text2pcap can read hexdumps withmultiple packets in them, and build a capture file of multiple packets. text2pcap is also capable of generating dummy Ethernet, IP and UDP headers, in order to build fully processable packet dumps from hexdumps of application-level data only.

Text2pcap understands a hexdump of the form generated by od -t x1. In other words, each byte is individually displayed and surrounded with a space. Each line begins with an offset describing the position in the file. The offset is a hex number (can also be octal - see -o), of more than two hex digits. Here is a sample dump that text2pcap can recognize:

```
000000 00 e0 1e a7 05 6f 00 10 ........
000008 5a a0 b9 12 08 00 46 00 ........
000010 03 68 00 00 00 00 0a 2e ........
```

```
000018 ee 33 0f 19 08 7f 0f 19 .......
000020 03 80 94 04 00 00 10 01 .......
000028 16 a2 0a 00 03 50 00 0c .......
000030 01 01 0f 19 03 80 11 01 .......
```

There is no limit on the width or number of bytes per line. Also the text dump at the end of the line is ignored. Bytes/hex numbers can be uppercase or lowercase. Any text before the offset is ignored, including email forwarding characters '>'. Any lines of text between the bytestring lines is ignored. The offsets are used to track the bytes, so offsets must be correct. Any line which has only bytes without a leading offset is ignored. An offset is recognized as being a hex number longer than two characters. Any text after the bytes is ignored (e.g. the character dump). Any hex numbers in this text are also ignored. An offset of zero is indicative of starting a new packet, so a single text file with a series of hexdumps can be converted into a packet capture with multiple packets. Multiple packets are read in with timestamps differing by one second each. In general, short of these restrictions, text2pcap is pretty liberal about reading in hexdumps and has been tested with a variety of mangled outputs (including being forwarded through email multiple times, with limited line wrap etc.)

There are a couple of other special features to note. Any line where the first non-whitespace character is '#' will be ignored as a comment. Any line beginning with #TEXT2PCAP is a directive and options can be inserted after this command to be processed by text2pcap. Currently there are no directives implemented; in the future, these may be used to give more fine grained control on the dump and the way it should be processed e.g. timestamps, encapsulation type etc.

Text2pcap also allows the user to read in dumps of application-level data, by inserting dummy L2, L3 and L4 headers before each packet. The user can elect to insert Ethernet headers, Ethernet and IP, or Ethernet, IP and UDP headers before each packet. This allows Ethereal or any other full-packet decoder to handle these dumps.

Example 5-3. Help information available for text2pcap

```
hagbard@hagbard:~/build/src/ethereal/doc$ text2pcap -h
text2pcap: invalid option -- h

Usage: text2pcap [-d] [-q] [-o h|o] [-l typenum] [-e l3pid] [-i proto]
[-u srcp destp] <input-filename> <output-filename>

where <input-filename> specifies input filename (use - for standard input)
<output-filename> specifies output filename (use - for standard output)

[options] are one or more of the following

-w filename  : Write capfile to <filename>. Default is standard output
-h           : Display this help message
-d           : Generate detailed debug of parser states
-o hex|oct   : Parse offsets as (h)ex or (o)ctal. Default is hex
-l typenum   : Specify link-layer type number. Default is 1 (Ethernet).
See net/bpf.h for list of numbers.
-q           : Generate no output at all (automatically turns off -d)
-e l3pid     : Prepend dummy Ethernet II header with specified L3PID (in HEX)
Example: -e 0x800
-i proto     : Prepend dummy IP header with specified IP protocol (in DEC-
IMAL).
```

```
Automatically prepends Ethernet header as well. Example: -i 46
-u srcp destp: Prepend dummy UDP header with specified dest and source ports (in DECIM
Automatically prepends Ethernet and IP headers as well
Example: -u 30 40
```

-w <**filename**>

Write the capture file generated by **text2pcap** to <filename>. The default is to write to standard output.

-h

Display the help message

-d

Displays debugging information during the process. Can be used multiple times to generate more debugging information.

-q

Be completely quiet during the process.

-o hex|oct

Specify the radix for the offsets (hex or octal). Defaults to hex. This corresponds to the **-A** option for od.

-l

Specify the link-layer type of this packet. Default is Ethernet(1). See net/bpf.h for the complete list of possible encapsulations. Note that this option should be used if your dump is a complete hex dump of an encapsulated packet and you wish to specify the exact type of encapsulation. Example: -l 7 for ARCNet packets.

-e l3pid

Include a dummy Ethernet header before each packet. Specify the L3PID for the Ethernet header in hex. Use this option if your dump has Layer 3 header and payload (e.g. IP header), but no Layer 2 encapsulation. Example: -e 0x806 to specify an ARP packet.

For IP packets, instead of generating a fake Ethernet header you can also use -l 12 to indicate a raw IP packet to Ethereal. Note that -l 12 does not work for any non-IP Layer 3 packet (e.g. ARP), whereas generating a dummy Ethernet header with -e works for any sort of L3 packet.

-u srcport destport

Include dummy UDP headers before each packet. Specify the source and destination UDP ports for the packet in decimal. Use this option if your dump is the UDP payload of a packet but does not include any UDP, IP or Ethernet headers. Note that this automatically includes appropriate Ethernet and IP headers with each packet. Example: -u 1000 69 to make the packets look like TFTP/UDP packets.

Creating dissectors from Corba IDL files with idl2eth

In an ideal world idl2eth would be mentioned in the users guide in passing and documented in the developers guide. As the developers guide has not yet been completed it will be documented here.

What is it?

As you have probably guessed from the name, **idl2eth** takes a user specified IDL file and attempts to build a dissector that can decode the IDL traffic over GIOP. The resulting file is "C" code, that should compile okay as an ethereal dissector.

idl2ethbasically parses the data struct given to it by the omniidl compiler, and using the GIOP API available in packet-giop.[ch], generates get_CDR_xxx calls to decode the CORBA traffic on the wire.

It consists of 4 main files.

`README.idl2eth`

> This document

`ethereal_be.py`

> The main compiler backend

`ethereal_gen.py`

> A helper class, that generates the C code.

`idl2eth`

> A simple shell script wrapper that the end user should use to generate the dissector from the IDL file(s).

Why do this?

It is important to understand how CORBA traffic looks like over GIOP/IIOP, and to help build a tool that can assist in troubleshooting CORBA interworking. This was especially the case after seeing a lot of discussions about how particular IDL types are represented inside an octet stream.

I have also had comments/feedback that this tool would be good for say a CORBA class when teaching students how CORBA traffic looks like "on the wire".

It is also COOL to work on a great Open Source project such as the case with "Ethereal" (http://www.ethereal.com [1])

How to use idl2eth

To use the idl2eth to generate ethereal dissectors, you need the following:

Prerequisites to using idl2eth

1. Python must be installed. See http://python.org/ [2]

2. omniidl from the the omniORB package must be available.
http://www.uk.research.att.com/omniORB/omniORB.html [3]

3. Of course you need ethereal installed to compile the code an tweak it if required. idl2eth is part of the standard Ethereal distribution

To use idl2eth to generate an ethereal dissector from an idl file use the following proceedure:

Proceedure for converting a Corba idl file into an ethereal dissector

1. To write the C code to stdout.

```
idl2eth  <your file.idl>
```

eg:

```
idl2eth echo.idl
```

2. To write to a file, just redirect the output.

```
idl2eth echo.idl > packet-test-idl.c
```

You may wish to comment out the register_giop_user_module() code and that will leave you with heuristic dissection.

If you dont want to use the shell script wrapper, then try steps 3 or 4 instead.

3. To write the C code to stdout.

```
Usage: omniidl  -p ./ -b ethereal_be <your file.idl>
```

eg:

```
omniidl  -p ./ -b ethereal_be echo.idl
```

4. To write to a file, just redirect the output.

```
omniidl  -p ./ -b ethereal_be echo.idl > packet-test-idl.c
```

You may wish to comment out the register_giop_user_module() code and that will leave you with heuristic dissection.

5. Copy the resulting C code to your ethereal src directory, edit the 2 make files to include the packet-test-idl.c

```
        cp packet-test-idl.c /dir/where/ethereal/lives/
        edit Makefile.am
        edit Makefile.nmake
```

6. Run configure

```
./configure (or ./autogen.sh)
```

7. Compile the code

```
make
```

8. Good Luck !!

TODO

1. Exception code not generated (yet), but can be added manually.
2. Enums not converted to symbolic values (yet), but can be added manually.
3. Add command line options etc
4. More I am sure :-)

Limitations

See the TODO list inside `packet-giop.c`

Notes

1. The "-p ./" option passed to omniidl indicates that the ethereal_be.py and ethereal_gen.py are residing in the current directory. This may need tweaking if you place these files somewhere else.
2. If it complains about being unable to find some modules (eg tempfile.py), you may want to check if PYTHONPATH is set correctly. On my Linux box, it is PYTHONPATH=/usr/lib/python1.5/

Notes

1. http://www.ethereal.com
2. http://python.org/
3. http://www.uk.research.att.com/omniORB/omniORB.html

Appendix A. Ethereal Display Filter Fields

802.1q Virtual LAN (vlan)

Table A-1. 802.1q Virtual LAN (vlan)

Field	Field Name	Type
vlan.cfi	CFI	Unsigned 16-bit integer
vlan.etype	Type	Unsigned 16-bit integer
vlan.id	ID	Unsigned 16-bit integer
vlan.len	Length	Unsigned 16-bit integer
vlan.priority	Priority	Unsigned 16-bit integer
vlan.trailer	Trailer	Byte array

802.1x Authentication (eapol)

Table A-2. 802.1x Authentication (eapol)

Field	Field Name	Type
eapol.keydes.index.indexnum	Index Number	Unsigned 8-bit integer
eapol.keydes.index.keytype	Key Type	Boolean
eapol.keydes.key	Key	Byte array
eapol.keydes.key_iv	Key IV	Byte array
eapol.keydes.key_signature	Key Signature	Byte array
eapol.keydes.keylen	Key Length	Unsigned 16-bit integer
eapol.keydes.replay_counter	Replay Counter	
eapol.keydes.type	Descriptor Type	Unsigned 8-bit integer
eapol.len	Length	Unsigned 16-bit integer
eapol.type	Type	Unsigned 8-bit integer
eapol.version	Version	Unsigned 8-bit integer

AOL Instant Messenger (aim)

Table A-3. AOL Instant Messenger (aim)

Field	Field Name	Type
aim.channel	Channel ID	Unsigned 8-bit integer
aim.cmd_start	Command Start	Unsigned 8-bit integer
aim.datalen	Data Field Length	Unsigned 16-bit integer
aim.fnac.family	FNAC Family ID	Unsigned 16-bit integer
aim.fnac.subtype	FNAC Subtype ID	Unsigned 16-bit integer
aim.seqno	Sequence Number	Unsigned 16-bit integer

ATM (atm)

Table A-4. ATM (atm)

Field	Field Name	Type
atm.vci	VCI	Unsigned 16-bit integer
atm.vpi	VPI	Unsigned 8-bit integer

ATM LAN Emulation (lane)

Table A-5. ATM LAN Emulation (lane)

Field	Field Name	Type

Ad hoc On-demand Distance Vector Routing Protocol (aodv)

Table A-6. Ad hoc On-demand Distance Vector Routing Protocol (aodv)

Field	Field Name	Type
aodv.dest_ip	Destination IP	IPv4 address
aodv.dest_seqno	Destination Sequence Number	Unsigned 32-bit integer
aodv.destcount	Destination Count	Unsigned 8-bit integer
aodv.flags	Flags	Unsigned 16-bit integer

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Field	Field Name	Type
aodv.flags.rerr_nodelete	RERR No Delete	Boolean
aodv.flags.rrep_ack	RREP Acknowledgement	Boolean
aodv.flags.rrep_repair	RREP Repair	Boolean
aodv.flags.rreq_gratuitous	RREQ Gratuitous	Boolean
aodv.flags.rreq_join	RREQ Join	Boolean
aodv.flags.rreq_repair	RREQ Repair	Boolean
aodv.hopcount	Hop Count	Unsigned 8-bit integer
aodv.lifetime	Lifetime	Unsigned 32-bit integer
aodv.orig_ip	Originator IP	IPv4 address
aodv.orig_seqno	Originator Sequence Number	Unsigned 32-bit integer
aodv.rreq_id	RREQ Id	Unsigned 32-bit integer
aodv.type	Type	Unsigned 8-bit integer
aodv.unreach_dest_ip	Unreachable Destination IP	IPv4 address
aodv.unreach_dest_seqno	Unreachable Destination Sequence Number	Unsigned 32-bit integer

Ad hoc On-demand Distance Vector Routing Protocol v6 (aodv6)

Table A-7. Ad hoc On-demand Distance Vector Routing Protocol v6 (aodv6)

Field	Field Name	Type
aodv6.dest_ip	Destination IP	IPv6 address
aodv6.dest_seqno	Destination Sequence Number	Unsigned 32-bit integer
aodv6.destcount	Destination Count	Unsigned 8-bit integer
aodv6.ext_length	Extension Length	Unsigned 8-bit integer
aodv6.ext_type	Extension Type	Unsigned 8-bit integer
aodv6.flags	Flags	Unsigned 16-bit integer
aodv6.flags.rerr_nodelete	RERR No Delete	Boolean
aodv6.flags.rrep_ack	RREP Acknowledgment	Boolean
aodv6.flags.rrep_repair	RREP Repair	Boolean
aodv6.flags.rreq_gratuitous	RREQ Gratuitous	Boolean
aodv6.flags.rreq_join	RREQ Join	Boolean
aodv6.flags.rreq_repair	RREQ Repair	Boolean

Field	Field Name	Type
aodv6.hello_interval	Hello Interval	Unsigned 32-bit integer
aodv6.hopcount	Hop Count	Unsigned 8-bit integer
aodv6.lifetime	Lifetime	Unsigned 32-bit integer
aodv6.orig_ip	Originator IP	IPv6 address
aodv6.orig_seqno	Originator Sequence Number	Unsigned 32-bit integer
aodv6.rreq_id	RREQ ID	Unsigned 32-bit integer
aodv6.timestamp	Timestamp	
aodv6.type	Type	Unsigned 8-bit integer
aodv6.unreach_dest_ip	Unreachable Destination IP	IPv6 address
aodv6.unreach_dest_seqno	Unreachable Destination Sequence Number	Unsigned 32-bit integer

Address Resolution Protocol (arp)

Table A-8. Address Resolution Protocol (arp)

Field	Field Name	Type
arp.dst.atm_num_e164	Target ATM number (E.164)	String
arp.dst.atm_num_nsap	Target ATM number (NSAP)	Byte array
arp.dst.atm_subaddr	Target ATM subaddress	Byte array
arp.dst.hlen	Target ATM number length	Unsigned 8-bit integer
arp.dst.htype	Target ATM number type	Boolean
arp.dst.hw	Target hardware address	Byte array
arp.dst.hw_mac	Target MAC address	6-byte Hardware (MAC) Address
arp.dst.pln	Target protocol size	Unsigned 8-bit integer
arp.dst.proto	Target protocol address	Byte array
arp.dst.proto_ipv4	Target IP address	IPv4 address
arp.dst.slen	Target ATM subaddress length	Unsigned 8-bit integer
arp.dst.stype	Target ATM subaddress type	Boolean
arp.hw.size	Hardware size	Unsigned 8-bit integer

Field	Field Name	Type
arp.hw.type	Hardware type	Unsigned 16-bit integer
arp.opcode	Opcode	Unsigned 16-bit integer
arp.proto.size	Protocol size	Unsigned 8-bit integer
arp.proto.type	Protocol type	Unsigned 16-bit integer
arp.src.atm_num_e164	Sender ATM number (E.164)	String
arp.src.atm_num_nsap	Sender ATM number (NSAP)	Byte array
arp.src.atm_subaddr	Sender ATM subaddress	Byte array
arp.src.hlen	Sender ATM number length	Unsigned 8-bit integer
arp.src.htype	Sender ATM number type	Boolean
arp.src.hw	Sender hardware address	Byte array
arp.src.hw_mac	Sender MAC address	6-byte Hardware (MAC) Address
arp.src.pln	Sender protocol size	Unsigned 8-bit integer
arp.src.proto	Sender protocol address	Byte array
arp.src.proto_ipv4	Sender IP address	IPv4 address
arp.src.slen	Sender ATM subaddress length	Unsigned 8-bit integer
arp.src.stype	Sender ATM subaddress type	Boolean

Aggregate Server Access Protocol (asap)

Table A-9. Aggregate Server Access Protocol (asap)

Field	Field Name	Type
asap.cause.code	Cause code	Unsigned 16-bit integer
asap.cause.info	Cause info	Byte array
asap.cause.length	Cause length	Unsigned 16-bit integer
asap.cause.padding	Padding	Byte array
asap.cookie.cookie	Cookie	Byte array
asap.ipv4_address.ipv4_address	IPVersion 4 address	IPv4 address
asap.ipv6_address.ipv6_address	IPVersion 6 address	IPv6 address
asap.message_flags	Flags	Unsigned 8-bit integer

Field	Field Name	Type
asap.message_length	Length	Unsigned 16-bit integer
asap.message_type	Type	Unsigned 8-bit integer
asap.parameter.length	Parameter length	Unsigned 16-bit integer
asap.parameter.padding	Padding	Byte array
asap.parameter.type	Parameter Type	Unsigned 16-bit integer
asap.parameter.value	Parameter value	Byte array
asap.pe_identifier.pe_identifier	PE identifier	Unsigned 32-bit integer
asap.pool_element.home_enrp_server_identifier	Home ENRP server identifier	Unsigned 32-bit integer
asap.pool_element.pe_identifier	PE identifier	Unsigned 32-bit integer
asap.pool_element.registration_life	Registration life	Signed 32-bit integer
asap.pool_handle.pool_handle	Pool handle	Byte array
asap.pool_member_slection_policy.type	Policy type	Unsigned 8-bit integer
asap.pool_member_slection_policy.value	Policy value	Signed 24-bit integer
asap.sctp_transport.port	Port	Unsigned 16-bit integer
asap.sctp_transport.reserved	Reserved	Unsigned 16-bit integer
asap.server_information.m_bit	M-Bit	Boolean
asap.server_information.reserved	Reserved	Unsigned 32-bit integer
asap.server_information.server_identifier	Server identifier	Unsigned 32-bit integer
asap.tcp_transport.port	Port	Unsigned 16-bit integer
asap.tcp_transport.reserved	Reserved	Unsigned 16-bit integer
asap.udp_transport.port	Port	Unsigned 16-bit integer
asap.udp_transport.reserved	Reserved	Unsigned 16-bit integer

Andrew File System (AFS) (afs)

Table A-10. Andrew File System (AFS) (afs)

Field	Field Name	Type
afs.backup	Backup	Boolean
afs.backup.errcode	Error Code	Unsigned 32-bit integer
afs.backup.opcode	Operation	Unsigned 32-bit integer
afs.bos	BOS	Boolean
afs.bos.baktime	Backup Time	Date/Time stamp
afs.bos.cell	Cell	String
afs.bos.cmd	Command	String
afs.bos.content	Content	String
afs.bos.data	Data	Byte array
afs.bos.date	Date	Unsigned 32-bit integer
afs.bos.errcode	Error Code	Unsigned 32-bit integer
afs.bos.error	Error	String
afs.bos.file	File	String
afs.bos.flags	Flags	Unsigned 32-bit integer
afs.bos.host	Host	String
afs.bos.instance	Instance	String
afs.bos.key	Key	Byte array
afs.bos.keychecksum	Key Checksum	Unsigned 32-bit integer
afs.bos.keymodtime	Key Modification Time	Date/Time stamp
afs.bos.keyspare2	Key Spare 2	Unsigned 32-bit integer
afs.bos.kvno	Key Version Number	Unsigned 32-bit integer
afs.bos.newtime	New Time	Date/Time stamp
afs.bos.number	Number	Unsigned 32-bit integer
afs.bos.oldtime	Old Time	Date/Time stamp
afs.bos.opcode	Operation	Unsigned 32-bit integer
afs.bos.parm	Parm	String
afs.bos.path	Path	String
afs.bos.size	Size	Unsigned 32-bit integer
afs.bos.spare1	Spare1	String
afs.bos.spare2	Spare2	String
afs.bos.spare3	Spare3	String
afs.bos.status	Status	Signed 32-bit integer

Field	Field Name	Type
afs.bos.statusdesc	Status Description	String
afs.bos.type	Type	String
afs.bos.user	User	String
afs.cb	Callback	Boolean
afs.cb.callback.expires	Expires	Date/Time stamp
afs.cb.callback.type	Type	Unsigned 32-bit integer
afs.cb.callback.version	Version	Unsigned 32-bit integer
afs.cb.errcode	Error Code	Unsigned 32-bit integer
afs.cb.fid.uniq	FileID (Uniqifier)	Unsigned 32-bit integer
afs.cb.fid.vnode	FileID (VNode)	Unsigned 32-bit integer
afs.cb.fid.volume	FileID (Volume)	Unsigned 32-bit integer
afs.cb.opcode	Operation	Unsigned 32-bit integer
afs.error	Error	Boolean
afs.error.opcode	Operation	Unsigned 32-bit integer
afs.fs	File Server	Boolean
afs.fs.acl.a	_A_dminister	Boolean
afs.fs.acl.count.negative	ACL Count (Negative)	Unsigned 32-bit integer
afs.fs.acl.count.positive	ACL Count (Positive)	Unsigned 32-bit integer
afs.fs.acl.d	_D_elete	Boolean
afs.fs.acl.datasize	ACL Size	Unsigned 32-bit integer
afs.fs.acl.entity	Entity (User/Group)	String
afs.fs.acl.i	_I_nsert	Boolean
afs.fs.acl.k	_L_ock	Boolean
afs.fs.acl.l	_L_ookup	Boolean
afs.fs.acl.r	_R_ead	Boolean
afs.fs.acl.w	_W_rite	Boolean
afs.fs.callback.expires	Expires	Date/Time stamp
afs.fs.callback.type	Type	Unsigned 32-bit integer
afs.fs.callback.version	Version	Unsigned 32-bit integer
afs.fs.cps.spare1	CPS Spare1	Unsigned 32-bit integer
afs.fs.cps.spare2	CPS Spare2	Unsigned 32-bit integer
afs.fs.cps.spare3	CPS Spare3	Unsigned 32-bit integer
afs.fs.data	Data	Byte array
afs.fs.errcode	Error Code	Unsigned 32-bit integer
afs.fs.fid.uniq	FileID (Uniqifier)	Unsigned 32-bit integer
afs.fs.fid.vnode	FileID (VNode)	Unsigned 32-bit integer

Field	Field Name	Type
afs.fs.fid.volume	FileID (Volume)	Unsigned 32-bit integer
afs.fs.flength	FLength	Unsigned 32-bit integer
afs.fs.ipaddr	IP Address	IPv4 address
afs.fs.length	Length	Unsigned 32-bit integer
afs.fs.motd	Message of the Day	String
afs.fs.name	Name	String
afs.fs.newname	New Name	String
afs.fs.offlinemsg	Offline Message	String
afs.fs.offset	Offset	Unsigned 32-bit integer
afs.fs.oldname	Old Name	String
afs.fs.opcode	Operation	Unsigned 32-bit integer
afs.fs.status.anonymousaccess	Anonymous Access	Unsigned 32-bit integer
afs.fs.status.author	Author	Unsigned 32-bit integer
afs.fs.status.calleraccess	Caller Access	Unsigned 32-bit integer
afs.fs.status.clientmodtime	Client Modification Time	Date/Time stamp
afs.fs.status.dataversion	Data Version	Unsigned 32-bit integer
afs.fs.status.dataversionhigh	Data Version (High)	Unsigned 32-bit integer
afs.fs.status.filetype	File Type	Unsigned 32-bit integer
afs.fs.status.group	Group	Unsigned 32-bit integer
afs.fs.status.interfaceversion	Interface Version	Unsigned 32-bit integer
afs.fs.status.length	Length	Unsigned 32-bit integer
afs.fs.status.linkcount	Link Count	Unsigned 32-bit integer
afs.fs.status.mask	Mask	Unsigned 32-bit integer
afs.fs.status.mask.fsync	FSync	Boolean
afs.fs.status.mask.setgroup	Set Group	Boolean
afs.fs.status.mask.setmode	Set Mode	Boolean
afs.fs.status.mask.setmodtime	Set Modification Time	Boolean
afs.fs.status.mask.setowner	Set Owner	Boolean
afs.fs.status.mask.setsegsize	Set Segment Size	Boolean
afs.fs.status.mode	Unix Mode	Unsigned 32-bit integer
afs.fs.status.owner	Owner	Unsigned 32-bit integer

Field	Field Name	Type
afs.fs.status.parentunique	Parent Unique	Unsigned 32-bit integer
afs.fs.status.parentvnode	Parent VNode	Unsigned 32-bit integer
afs.fs.status.segsize	Segment Size	Unsigned 32-bit integer
afs.fs.status.servermodtime	Server Modification Time	Date/Time stamp
afs.fs.status.spare2	Spare 2	Unsigned 32-bit integer
afs.fs.status.spare3	Spare 3	Unsigned 32-bit integer
afs.fs.status.spare4	Spare 4	Unsigned 32-bit integer
afs.fs.status.synccounter	Sync Counter	Unsigned 32-bit integer
afs.fs.symlink.content	Symlink Content	String
afs.fs.symlink.name	Symlink Name	String
afs.fs.timestamp	Timestamp	Date/Time stamp
afs.fs.token	Token	Byte array
afs.fs.viceid	Vice ID	Unsigned 32-bit integer
afs.fs.vicelocktype	Vice Lock Type	Unsigned 32-bit integer
afs.fs.volid	Volume ID	Unsigned 32-bit integer
afs.fs.volname	Volume Name	String
afs.fs.volsync.spare1	Volume Creation Timestamp	Date/Time stamp
afs.fs.volsync.spare2	Spare 2	Unsigned 32-bit integer
afs.fs.volsync.spare3	Spare 3	Unsigned 32-bit integer
afs.fs.volsync.spare4	Spare 4	Unsigned 32-bit integer
afs.fs.volsync.spare5	Spare 5	Unsigned 32-bit integer
afs.fs.volsync.spare6	Spare 6	Unsigned 32-bit integer
afs.fs.xstats.clientversion	Client Version	Unsigned 32-bit integer
afs.fs.xstats.collnumber	Collection Number	Unsigned 32-bit integer
afs.fs.xstats.timestamp	XStats Timestamp	Unsigned 32-bit integer
afs.fs.xstats.version	XStats Version	Unsigned 32-bit integer
afs.kauth	KAuth	Boolean
afs.kauth.data	Data	Byte array
afs.kauth.domain	Domain	String
afs.kauth.errcode	Error Code	Unsigned 32-bit integer
afs.kauth.kvno	Key Version Number	Unsigned 32-bit integer
afs.kauth.name	Name	String
afs.kauth.opcode	Operation	Unsigned 32-bit integer
afs.kauth.princ	Principal	String

Field	Field Name	Type
afs.kauth.realm	Realm	String
afs.prot	Protection	Boolean
afs.prot.count	Count	Unsigned 32-bit integer
afs.prot.errcode	Error Code	Unsigned 32-bit integer
afs.prot.flag	Flag	Unsigned 32-bit integer
afs.prot.gid	Group ID	Unsigned 32-bit integer
afs.prot.id	ID	Unsigned 32-bit integer
afs.prot.maxgid	Maximum Group ID	Unsigned 32-bit integer
afs.prot.maxuid	Maximum User ID	Unsigned 32-bit integer
afs.prot.name	Name	String
afs.prot.newid	New ID	Unsigned 32-bit integer
afs.prot.oldid	Old ID	Unsigned 32-bit integer
afs.prot.opcode	Operation	Unsigned 32-bit integer
afs.prot.pos	Position	Unsigned 32-bit integer
afs.prot.uid	User ID	Unsigned 32-bit integer
afs.rmtsys	Rmtsys	Boolean
afs.rmtsys.opcode	Operation	Unsigned 32-bit integer
afs.ubik	Ubik	Boolean
afs.ubik.activewrite	Active Write	Unsigned 32-bit integer
afs.ubik.addr	Address	IPv4 address
afs.ubik.amsyncsite	Am Sync Site	Unsigned 32-bit integer
afs.ubik.anyreadlocks	Any Read Locks	Unsigned 32-bit integer
afs.ubik.anywritelocks	Any Write Locks	Unsigned 32-bit integer
afs.ubik.beaconsincedown	Beacon Since Down	Unsigned 32-bit integer
afs.ubik.currentdb	Current DB	Unsigned 32-bit integer
afs.ubik.currenttran	Current Transaction	Unsigned 32-bit integer
afs.ubik.epochtime	Epoch Time	Date/Time stamp
afs.ubik.errcode	Error Code	Unsigned 32-bit integer
afs.ubik.file	File	Unsigned 32-bit integer
afs.ubik.interface	Interface Address	IPv4 address
afs.ubik.isclone	Is Clone	Unsigned 32-bit integer
afs.ubik.lastbeaconsent	Last Beacon Sent	Date/Time stamp
afs.ubik.lastvote	Last Vote	Unsigned 32-bit integer
afs.ubik.lastvotetime	Last Vote Time	Date/Time stamp
afs.ubik.lastyesclaim	Last Yes Claim	Date/Time stamp
afs.ubik.lastyeshost	Last Yes Host	IPv4 address

Field	Field Name	Type
afs.ubik.lastyesstate	Last Yes State	Unsigned 32-bit integer
afs.ubik.lastyesttime	Last Yes Time	Date/Time stamp
afs.ubik.length	Length	Unsigned 32-bit integer
afs.ubik.lockedpages	Locked Pages	Unsigned 32-bit integer
afs.ubik.locktype	Lock Type	Unsigned 32-bit integer
afs.ubik.lowesthost	Lowest Host	IPv4 address
afs.ubik.lowesttime	Lowest Time	Date/Time stamp
afs.ubik.now	Now	Date/Time stamp
afs.ubik.nservers	Number of Servers	Unsigned 32-bit integer
afs.ubik.opcode	Operation	Unsigned 32-bit integer
afs.ubik.position	Position	Unsigned 32-bit integer
afs.ubik.recoverystate	Recovery State	Unsigned 32-bit integer
afs.ubik.site	Site	IPv4 address
afs.ubik.state	State	Unsigned 32-bit integer
afs.ubik.synchost	Sync Host	IPv4 address
afs.ubik.syncsiteuntil	Sync Site Until	Date/Time stamp
afs.ubik.synctime	Sync Time	Date/Time stamp
afs.ubik.tidcounter	TID Counter	Unsigned 32-bit integer
afs.ubik.up	Up	Unsigned 32-bit integer
afs.ubik.version.counter	Counter	Unsigned 32-bit integer
afs.ubik.version.epoch	Epoch	Date/Time stamp
afs.ubik.voteend	Vote Ends	Date/Time stamp
afs.ubik.votestart	Vote Started	Date/Time stamp
afs.ubik.votetype	Vote Type	Unsigned 32-bit integer
afs.ubik.writelockedpages	Write Locked Pages	Unsigned 32-bit integer
afs.ubik.writetran	Write Transaction	Unsigned 32-bit integer
afs.update	Update	Boolean
afs.update.opcode	Operation	Unsigned 32-bit integer
afs.vldb	VLDB	Boolean
afs.vldb.bkvol	Backup Volume ID	Unsigned 32-bit integer
afs.vldb.bump	Bumped Volume ID	Unsigned 32-bit integer
afs.vldb.clonevol	Clone Volume ID	Unsigned 32-bit integer
afs.vldb.count	Volume Count	Unsigned 32-bit integer
afs.vldb.errcode	Error Code	Unsigned 32-bit integer
afs.vldb.flags	Flags	Unsigned 32-bit integer
afs.vldb.flags.bkexists	Backup Exists	Boolean

Field	Field Name	Type
afs.vldb.flags.dfsfileset	DFS Fileset	Boolean
afs.vldb.flags.roexists	Read-Only Exists	Boolean
afs.vldb.flags.rwexists	Read/Write Exists	Boolean
afs.vldb.id	Volume ID	Unsigned 32-bit integer
afs.vldb.index	Volume Index	Unsigned 32-bit integer
afs.vldb.name	Volume Name	String
afs.vldb.nextindex	Next Volume Index	Unsigned 32-bit integer
afs.vldb.numservers	Number of Servers	Unsigned 32-bit integer
afs.vldb.opcode	Operation	Unsigned 32-bit integer
afs.vldb.partition	Partition	String
afs.vldb.rovol	Read-Only Volume ID	Unsigned 32-bit integer
afs.vldb.rwvol	Read-Write Volume ID	Unsigned 32-bit integer
afs.vldb.server	Server	IPv4 address
afs.vldb.serverflags	Server Flags	Unsigned 32-bit integer
afs.vldb.serverip	Server IP	IPv4 address
afs.vldb.serveruniq	Server Unique Address	Unsigned 32-bit integer
afs.vldb.serveruuid	Server UUID	Byte array
afs.vldb.spare1	Spare 1	Unsigned 32-bit integer
afs.vldb.spare2	Spare 2	Unsigned 32-bit integer
afs.vldb.spare3	Spare 3	Unsigned 32-bit integer
afs.vldb.spare4	Spare 4	Unsigned 32-bit integer
afs.vldb.spare5	Spare 5	Unsigned 32-bit integer
afs.vldb.spare6	Spare 6	Unsigned 32-bit integer
afs.vldb.spare7	Spare 7	Unsigned 32-bit integer
afs.vldb.spare8	Spare 8	Unsigned 32-bit integer
afs.vldb.spare9	Spare 9	Unsigned 32-bit integer
afs.vldb.type	Volume Type	Unsigned 32-bit integer
afs.vol	Volume Server	Boolean
afs.vol.count	Volume Count	Unsigned 32-bit integer
afs.vol.errcode	Error Code	Unsigned 32-bit integer
afs.vol.id	Volume ID	Unsigned 32-bit integer
afs.vol.name	Volume Name	String
afs.vol.opcode	Operation	Unsigned 32-bit integer

Apache JServ Protocol v1.3 (ajp13)

Table A-11. Apache JServ Protocol v1.3 (ajp13)

Field	Field Name	Type
ajp13.code	Code	String
ajp13.data	Data	String
ajp13.hname	HNAME	String
ajp13.hval	HVAL	String
ajp13.len	Length	Unsigned 16-bit integer
ajp13.magic	Magic	Byte array
ajp13.method	Method	String
ajp13.nhdr	NHDR	Unsigned 16-bit integer
ajp13.port	PORT	Unsigned 16-bit integer
ajp13.raddr	RADDR	String
ajp13.reusep	REUSEP	Unsigned 8-bit integer
ajp13.rhost	RHOST	String
ajp13.rlen	RLEN	Unsigned 16-bit integer
ajp13.rmsg	RSMSG	String
ajp13.rstatus	RSTATUS	Unsigned 16-bit integer
ajp13.srv	SRV	String
ajp13.sslp	SSLP	Unsigned 8-bit integer
ajp13.uri	URI	String
ajp13.ver	Version	String

AppleTalk Filing Protocol (afp)

Table A-12. AppleTalk Filing Protocol (afp)

Field	Field Name	Type
afp.AFPVersion	AFP Version	
afp.UAM	UAM	
afp.access	Access mode	Unsigned 8-bit integer
afp.access.deny_read	Deny read	Boolean
afp.access.deny_write	Deny write	Boolean
afp.access.read	Read	Boolean
afp.access.write	Write	Boolean

Field	Field Name	Type
afp.actual_count	Count	Signed 32-bit integer
afp.appl_index	Index	Unsigned 16-bit integer
afp.appl_tag	Tag	Unsigned 32-bit integer
afp.backup_date	Backup date	Date/Time stamp
afp.cat_count	Cat count	Unsigned 32-bit integer
afp.cat_position	Position	Byte array
afp.cat_req_matches	Max answers	Signed 32-bit integer
afp.command	Command	Unsigned 8-bit integer
afp.comment	Comment	
afp.create_flag	Hard create	Boolean
afp.creation_date	Creation date	Date/Time stamp
afp.data_fork_len	Data fork size	Unsigned 32-bit integer
afp.did	DID	Unsigned 32-bit integer
afp.dir_ar	Access rights	Unsigned 32-bit integer
afp.dir_ar.blank	Blank access right	Boolean
afp.dir_ar.e_read	Everyone has read access	Boolean
afp.dir_ar.e_search	Everyone has search access	Boolean
afp.dir_ar.e_write	Everyone has write access	Boolean
afp.dir_ar.g_read	Group has read access	Boolean
afp.dir_ar.g_search	Group has search access	Boolean
afp.dir_ar.g_write	Group has write access	Boolean
afp.dir_ar.o_read	Owner has read access	Boolean
afp.dir_ar.o_search	Owner has search access	Boolean
afp.dir_ar.o_write	Owner has write access	Boolean
afp.dir_ar.u_owner	User is the owner	Boolean
afp.dir_ar.u_read	User has read access	Boolean
afp.dir_ar.u_search	User has search access	Boolean
afp.dir_ar.u_write	User has write access	Boolean
afp.dir_attribute.backup_needed	Backup needed	Boolean
afp.dir_attribute.delete_inhibit	Delete inhibit	Boolean
afp.dir_attribute.in_exported_folder	Shared area	Boolean
afp.dir_attribute.invisible	Invisible	Boolean
afp.dir_attribute.mounted	Mounted	Boolean

Field	Field Name	Type
afp.dir_attribute.rename_inhibit	Rename inhibit	Boolean
afp.dir_attribute.set_clear	Set	Boolean
afp.dir_attribute.share	Share point	Boolean
afp.dir_attribute.system	System	Boolean
afp.dir_bitmap	Directory bitmap	Unsigned 16-bit integer
afp.dir_bitmap.UTF8_name	UTF-8 name	Boolean
afp.dir_bitmap.access_rights	Access rights	Boolean
afp.dir_bitmap.attributes	Attributes	Boolean
afp.dir_bitmap.backup_date	Backup date	Boolean
afp.dir_bitmap.create_date	Creation date	Boolean
afp.dir_bitmap.did	DID	Boolean
afp.dir_bitmap.fid	File ID	Boolean
afp.dir_bitmap.finder_info	Finder info	Boolean
afp.dir_bitmap.group_id	Group id	Boolean
afp.dir_bitmap.long_name	Long name	Boolean
afp.dir_bitmap.mod_date	Modification date	Boolean
afp.dir_bitmap.offspring_count	Offspring count	Boolean
afp.dir_bitmap.owner_id	Owner id	Boolean
afp.dir_bitmap.short_name	Short name	Boolean
afp.dir_bitmap.unix_privs	UNIX privileges	Boolean
afp.dir_group_id	Group ID	Signed 32-bit integer
afp.dir_offspring	Offspring	Unsigned 16-bit integer
afp.dir_owner_id	Owner ID	Signed 32-bit integer
afp.dt_ref	DT ref	Unsigned 16-bit integer
afp.ext_data_fork_len	Extended data fork size	
afp.ext_resource_fork_len	Extended resource fork size	
afp.file_attribute.backup_needed	Backup needed	Boolean
afp.file_attribute.copy_protect	Copy protect	Boolean

Field	Field Name	Type
afp.file_attribute.delete_inhibit	Delete inhibit	Boolean
afp.file_attribute.df_open	Data fork open	Boolean
afp.file_attribute.invisible	Invisible	Boolean
afp.file_attribute.multi_user	Multi user	Boolean
afp.file_attribute.rename_inhibit	Rename inhibit	Boolean
afp.file_attribute.rf_open	Resource fork open	Boolean
afp.file_attribute.set_clear	Set	Boolean
afp.file_attribute.system	System	Boolean
afp.file_attribute.write_inhibit	Write inhibit	Boolean
afp.file_bitmap	File bitmap	Unsigned 16-bit integer
afp.file_bitmap.UTF8_name	UTF-8 name	Boolean
afp.file_bitmap.attributes	Attributes	Boolean
afp.file_bitmap.backup_date	Backup date	Boolean
afp.file_bitmap.create_date	Creation date	Boolean
afp.file_bitmap.data_fork_len	Data fork size	Boolean
afp.file_bitmap.did	DID	Boolean
afp.file_bitmap.ex_data_fork_len	Extended data fork size	Boolean
afp.file_bitmap.ex_resource_fork_len	Extended resource fork size	Boolean
afp.file_bitmap.fid	File ID	Boolean
afp.file_bitmap.finder_info	Finder info	Boolean
afp.file_bitmap.launch_limit	Launch limit	Boolean
afp.file_bitmap.long_name	Long name	Boolean
afp.file_bitmap.mod_date	Modification date	Boolean
afp.file_bitmap.resource_fork_len	Resource fork size	Boolean
afp.file_bitmap.short_name	Short name	Boolean

Field	Field Name	Type
afp.file_bitmap.unix_privs	UNIX privileges	Boolean
afp.file_creator	File creator	String
afp.file_flag	Dir	Boolean
afp.file_id	File ID	Unsigned 32-bit integer
afp.file_type	File type	String
afp.finder_info	Finder info	Byte array
afp.flag	From	Unsigned 8-bit integer
afp.fork_type	Resource fork	Boolean
afp.group_ID	Group ID	Unsigned 32-bit integer
afp.icon_index	Index	Unsigned 16-bit integer
afp.icon_length	Size	Unsigned 16-bit integer
afp.icon_tag	Tag	Unsigned 32-bit integer
afp.icon_type	Icon type	Unsigned 8-bit integer
afp.last_written	Last written	Unsigned 32-bit integer
afp.last_written64	Last written	
afp.lock_from	End	Boolean
afp.lock_len	Length	Signed 32-bit integer
afp.lock_len64	Length	
afp.lock_offset	Offset	Signed 32-bit integer
afp.lock_offset64	Offset	
afp.lock_op	unlock	Boolean
afp.lock_range_start	Start	Signed 32-bit integer
afp.lock_range_start64	Start	
afp.long_name_offset	Long name offset	Unsigned 16-bit integer
afp.map_id	ID	Unsigned 32-bit integer
afp.map_id_type	Type	Unsigned 8-bit integer
afp.map_name	Name	
afp.map_name_type	Type	Unsigned 8-bit integer
afp.modification_date	Modification date	Date/Time stamp
afp.newline_char	Newline char	Unsigned 8-bit integer
afp.newline_mask	Newline mask	Unsigned 8-bit integer
afp.offset	Offset	Signed 32-bit integer
afp.offset64	Offset	
afp.ofork	Fork	Unsigned 16-bit integer
afp.ofork_len	New length	Signed 32-bit integer
afp.pad	Pad	No value

Field	Field Name	Type
afp.passwd	Password	String
afp.path_len	Len	Unsigned 8-bit integer
afp.path_name	Name	String
afp.path_type	Type	Unsigned 8-bit integer
afp.reply_size	Reply size	Unsigned 16-bit integer
afp.req_count	Req count	Unsigned 16-bit integer
afp.reserved	Reserved	Byte array
afp.resource_fork_len	Resource fork size	Unsigned 32-bit integer
afp.rw_count	Count	Signed 32-bit integer
afp.rw_count64	Count	
afp.server_time	Server time	Date/Time stamp
afp.session_token	Token	Byte array
afp.session_token_len	Len	Unsigned 32-bit integer
afp.session_token_type	Type	Unsigned 16-bit integer
afp.short_name_offset	Short name offset	Unsigned 16-bit integer
afp.start_index	Start index	Unsigned 16-bit integer
afp.struct_size	Struct size	Unsigned 8-bit integer
afp.unicode_name_offset	Unicode name offset	Unsigned 16-bit integer
afp.unix_privs.gid	GID	Unsigned 32-bit integer
afp.unix_privs.permissions	Permissions	Unsigned 32-bit integer
afp.unix_privs.ua_permissions	User's access rights	Unsigned 32-bit integer
afp.unix_privs.uid	UID	Unsigned 32-bit integer
afp.user	User	
afp.user_ID	User ID	Unsigned 32-bit integer
afp.user_bitmap	Bitmap	Unsigned 16-bit integer
afp.user_bitmap.GID	Primary group ID	Boolean
afp.user_bitmap.UID	User ID	Boolean
afp.user_flag	Flag	Unsigned 8-bit integer
afp.vol_attribute.blank_access_priv	Blank access privileges	Boolean
afp.vol_attribute.cat_search	Catalog search	Boolean
afp.vol_attribute.fileIDs	File IDs	Boolean
afp.vol_attribute.passwd	Volume password	Boolean

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Field	Field Name	Type
afp.vol_attribute.read_only	Read only	Boolean
afp.vol_attribute.unix_privs	UNIX access privileges	Boolean
afp.vol_attribute.utf8_names	UTF-8 names	Boolean
afp.vol_attributes	Attributes	Unsigned 16-bit integer
afp.vol_backup_date	Backup date	Date/Time stamp
afp.vol_bitmap	Bitmap	Unsigned 16-bit integer
afp.vol_bitmap.attributes	Attributes	Boolean
afp.vol_bitmap.backup_date	Backup date	Boolean
afp.vol_bitmap.block_size	Block size	Boolean
afp.vol_bitmap.bytes_free	Bytes free	Boolean
afp.vol_bitmap.bytes_total	Bytes total	Boolean
afp.vol_bitmap.create_date	Creation date	Boolean
afp.vol_bitmap.ex_bytes_free	Extended bytes free	Boolean
afp.vol_bitmap.ex_bytes_total	Extended bytes total	Boolean
afp.vol_bitmap.id	ID	Boolean
afp.vol_bitmap.mod_date	Modification date	Boolean
afp.vol_bitmap.name	Name	Boolean
afp.vol_bitmap.signature	Signature	Boolean
afp.vol_block_size	Block size	Unsigned 32-bit integer
afp.vol_bytes_free	Bytes free	Unsigned 32-bit integer
afp.vol_bytes_total	Bytes total	Unsigned 32-bit integer
afp.vol_creation_date	Creation date	Date/Time stamp
afp.vol_ex_bytes_free	Extended bytes free	
afp.vol_ex_bytes_total	Extended bytes total	
afp.vol_flag_passwd	Password	Boolean
afp.vol_flag_unix_priv	Unix privs	Boolean
afp.vol_id	Volume id	Unsigned 16-bit integer
afp.vol_modification_date	Modification date	Date/Time stamp
afp.vol_name	Volume	
afp.vol_name_offset	Volume name offset	Unsigned 16-bit integer
afp.vol_signature	Signature	Unsigned 16-bit integer

AppleTalk Session Protocol (asp)

Table A-13. AppleTalk Session Protocol (asp)

Field	Field Name	Type
asp.attn_code	Attn code	Unsigned 16-bit integer
asp.error	asp error	Signed 32-bit integer
asp.function	asp function	Unsigned 8-bit integer
asp.init_error	Error	Unsigned 16-bit integer
asp.seq	Sequence	Unsigned 16-bit integer
asp.server_addr.len	Length	Unsigned 8-bit integer
asp.server_addr.type	Type	Unsigned 8-bit integer
asp.server_addr.value	Value	Byte array
asp.server_directory	Directory service	
asp.server_flag	Flag	Unsigned 16-bit integer
asp.server_flag.copyfile	Support copyfile	Boolean
asp.server_flag.directory	Support directory services	Boolean
asp.server_flag.fast_copy	Support fast copy	Boolean
asp.server_flag.no_save_passwd	Don't allow save password	Boolean
asp.server_flag.notify	Support server notifications	Boolean
asp.server_flag.passwd	Support change password	Boolean
asp.server_flag.reconnect	Support server reconnect	Boolean
asp.server_flag.srv_msg	Support server message	Boolean
asp.server_flag.srv_sig	Support server signature	Boolean
asp.server_flag.tcpip	Support TCP/IP	Boolean
asp.server_icon	Icon bitmap	Byte array
asp.server_name	Server name	
asp.server_signature	Server signature	Byte array
asp.server_type	Server type	
asp.server_uams	UAM	
asp.server_vers	AFP version	
asp.session_id	Session ID	Unsigned 8-bit integer
asp.size	size	Unsigned 16-bit integer
asp.socket	Socket	Unsigned 8-bit integer
asp.version	Version	Unsigned 16-bit integer
asp.zero_value	Pad (0)	Byte array

AppleTalk Transaction Protocol packet (atp)

Table A-14. AppleTalk Transaction Protocol packet (atp)

Field	Field Name	Type
atp.bitmap	Bitmap	Unsigned 8-bit integer
atp.ctrlinfo	Control info	Unsigned 8-bit integer
atp.eom	EOM	Boolean
atp.fragment	ATP Fragment	No value
atp.fragments	ATP Fragments	No value
atp.function	Function	Unsigned 8-bit integer
atp.segment.error	Desegmentation error	No value
atp.segment.multipletails	Multiple tail segments found	Boolean
atp.segment.overlap	Segment overlap	Boolean
atp.segment.overlap.conflict	Conflicting data in seagment overlap	Boolean
atp.segment.toolongsegment	Segment too long	Boolean
atp.sts	STS	Boolean
atp.tid	TID	Unsigned 16-bit integer
atp.treltimer	TRel timer	Unsigned 8-bit integer
atp.user_bytes	User bytes	Unsigned 32-bit integer
atp.xo	XO	Boolean

Appletalk Address Resolution Protocol (aarp)

Table A-15. Appletalk Address Resolution Protocol (aarp)

Field	Field Name	Type
aarp.dst.hw	Target hardware address	Byte array
aarp.dst.hw_mac	Target MAC address	6-byte Hardware (MAC) Address
aarp.dst.proto	Target protocol address	Byte array
aarp.dst.proto_id	Target ID	Byte array
aarp.hard.size	Hardware size	Unsigned 8-bit integer
aarp.hard.type	Hardware type	Unsigned 16-bit integer
aarp.opcode	Opcode	Unsigned 16-bit integer

Field	Field Name	Type
aarp.proto.size	Protocol size	Unsigned 8-bit integer
aarp.proto.type	Protocol type	Unsigned 16-bit integer
aarp.src.hw	Sender hardware address	Byte array
aarp.src.hw_mac	Sender MAC address	6-byte Hardware (MAC) Address
aarp.src.proto	Sender protocol address	Byte array
aarp.src.proto_id	Sender ID	Byte array

Async data over ISDN (V.120) (v120)

Table A-16. Async data over ISDN (V.120) (v120)

Field	Field Name	Type
v120.address	Link Address	Unsigned 16-bit integer
v120.control	Control Field	Unsigned 16-bit integer
v120.header	Header Field	String

Authentication Header (ah)

Table A-17. Authentication Header (ah)

Field	Field Name	Type
ah.sequence	Sequence	Unsigned 32-bit integer
ah.spi	SPI	Unsigned 32-bit integer

BACnet Virtual Link Control (bvlc)

Table A-18. BACnet Virtual Link Control (bvlc)

Field	Field Name	Type
bvlc.bdt_ip	IP	IPv4 address
bvlc.bdt_mask	Mask	Byte array
bvlc.bdt_port	Port	Unsigned 16-bit integer
bvlc.fdt_ip	IP	IPv4 address
bvlc.fdt_port	Port	Unsigned 16-bit integer
bvlc.fdt_timeout	Timeout	Unsigned 16-bit integer

Field	Field Name	Type
bvlc.fdt_ttl	TTL	Unsigned 16-bit integer
bvlc.function	Function	Unsigned 8-bit integer
bvlc.fwd_ip	IP	IPv4 address
bvlc.fwd_port	Port	Unsigned 16-bit integer
bvlc.length	Length	Unsigned 16-bit integer
bvlc.reg_ttl	TTL	Unsigned 16-bit integer
bvlc.result	Result	Unsigned 16-bit integer
bvlc.type	Type	Unsigned 8-bit integer

Banyan Vines (vines)

Table A-19. Banyan Vines (vines)

Field	Field Name	Type
vines.protocol	Protocol	Unsigned 8-bit integer

Banyan Vines Fragmentation Protocol (vines_frp)

Table A-20. Banyan Vines Fragmentation Protocol (vines_frp)

Field	Field Name	Type

Banyan Vines SPP (vines_spp)

Table A-21. Banyan Vines SPP (vines_spp)

Field	Field Name	Type

Blocks Extensible Exchange Protocol (beep)

Table A-22. Blocks Extensible Exchange Protocol (beep)

Field	Field Name	Type

Field	Field Name	Type
beep.ansno	Ansno	Unsigned 32-bit integer
beep.channel	Channel	Unsigned 32-bit integer
beep.end	End	Boolean
beep.more.complete	Complete	Boolean
beep.more.intermediate	Intermediate	Boolean
beep.msgno	Msgno	Unsigned 32-bit integer
beep.req	Request	Boolean
beep.req.channel	Request Channel Number	Unsigned 32-bit integer
beep.rsp	Response	Boolean
beep.rsp.channel	Response Channel Number	Unsigned 32-bit integer
beep.seq	Sequence	Boolean
beep.seq.ackno	Ackno	Unsigned 32-bit integer
beep.seq.channel	Sequence Channel Number	Unsigned 32-bit integer
beep.seq.window	Window	Unsigned 32-bit integer
beep.seqno	Seqno	Unsigned 32-bit integer
beep.size	Size	Unsigned 32-bit integer
beep.status.negative	Negative	Boolean
beep.status.positive	Positive	Boolean
beep.violation	Protocol Violation	Boolean

Boot Parameters (bootparams)

Table A-23. Boot Parameters (bootparams)

Field	Field Name	Type
bootparams.domain	Client Domain	String
bootparams.fileid	File ID	String
bootparams.filepath	File Path	String
bootparams.host	Client Host	String
bootparams.hostaddr	Client Address	IPv4 address
bootparams.routeraddr	Router Address	IPv4 address
bootparams.type	Address Type	Unsigned 32-bit integer

Bootstrap Protocol (bootp)

Table A-24. Bootstrap Protocol (bootp)

Field	Field Name	Type
bootp.cookie	Magic cookie	IPv4 address
bootp.dhcp	Frame is DHCP	Boolean
bootp.file	Boot file name	String
bootp.flags	Bootp flags	Unsigned 16-bit integer
bootp.flags.bc	Broadcast flag	Boolean
bootp.flags.reserved	Reserved flags	Unsigned 16-bit integer
bootp.hops	Hops	Unsigned 8-bit integer
bootp.hw.addr	Client hardware address	Byte array
bootp.hw.len	Hardware address length	Unsigned 8-bit integer
bootp.hw.type	Hardware type	Unsigned 8-bit integer
bootp.id	Transaction ID	Unsigned 32-bit integer
bootp.ip.client	Client IP address	IPv4 address
bootp.ip.relay	Relay agent IP address	IPv4 address
bootp.ip.server	Next server IP address	IPv4 address
bootp.ip.your	Your (client) IP address	IPv4 address
bootp.secs	Seconds elapsed	Unsigned 16-bit integer
bootp.server	Server host name	String
bootp.type	Message type	Unsigned 8-bit integer
bootp.vendor	Bootp Vendor Options	Byte array

Border Gateway Protocol (bgp)

Table A-25. Border Gateway Protocol (bgp)

Field	Field Name	Type
bgp.type	BGP message type	Unsigned 8-bit integer

Building Automation and Control Network APDU (bacapp)

Table A-26. Building Automation and Control Network APDU (bacapp)

Field	Field Name	Type

Field	Field Name	Type
bacapp.bacapp_type	APDU Type	Unsigned 8-bit integer

Building Automation and Control Network NPDU (bacnet)

Table A-27. Building Automation and Control Network NPDU (bacnet)

Field	Field Name	Type
bacnet.control	Control	Unsigned 8-bit integer
bacnet.control_dest	Destination Specifier	Boolean
bacnet.control_expect	Expecting Reply	Boolean
bacnet.control_net	NSDU contains	Boolean
bacnet.control_prio_high	Priority	Boolean
bacnet.control_prio_low	Priority	Boolean
bacnet.control_res1	Reserved	Boolean
bacnet.control_res2	Reserved	Boolean
bacnet.control_src	Source specifier	Boolean
bacnet.dadr_eth	Destination ISO 8802-3 MAC Address	6-byte Hardware (MAC) Address
bacnet.dadr_tmp	Unknown Destination MAC	Byte array
bacnet.dlen	Destination MAC Layer Address Length	Unsigned 8-bit integer
bacnet.dnet	Destination Network Address	Unsigned 16-bit integer
bacnet.hopc	Hop Count	Unsigned 8-bit integer
bacnet.mesgtyp	Message Type	Unsigned 8-bit integer
bacnet.perf	Performance Index	Unsigned 8-bit integer
bacnet.pinfo	Port Info	Unsigned 8-bit integer
bacnet.pinfolen	Port Info Length	Unsigned 8-bit integer
bacnet.portid	Port ID	Unsigned 8-bit integer
bacnet.rejectreason	Reject Reason	Unsigned 8-bit integer
bacnet.rportnum	Number of Port Mappings	Unsigned 8-bit integer
bacnet.sadr_eth	SADR	6-byte Hardware (MAC) Address
bacnet.sadr_tmp	Unknown Source MAC	Byte array
bacnet.slen	Source MAC Layer Address Length	Unsigned 8-bit integer

Field	Field Name	Type
bacnet.snet	Source Network Address	Unsigned 16-bit integer
bacnet.vendor	Vendor ID	Unsigned 16-bit integer
bacnet.version	Version	Unsigned 8-bit integer

Checkpoint FW-1 (fw1)

Table A-28. Checkpoint FW-1 (fw1)

Field	Field Name	Type
fw1.direction	Direction	String
fw1.interface	Interface	String
fw1.type	Type	Unsigned 16-bit integer

Cisco Auto-RP (auto_rp)

Table A-29. Cisco Auto-RP (auto_rp)

Field	Field Name	Type
auto_rp.group_prefix	Prefix	IPv4 address
auto_rp.holdtime	Holdtime	Unsigned 16-bit integer
auto_rp.mask_len	Mask length	Unsigned 8-bit integer
auto_rp.pim_ver	Version	Unsigned 8-bit integer
auto_rp.prefix_sign	Sign	Unsigned 8-bit integer
auto_rp.rp_addr	RP address	IPv4 address
auto_rp.rp_count	RP count	Unsigned 8-bit integer
auto_rp.type	Packet type	Unsigned 8-bit integer
auto_rp.version	Protocol version	Unsigned 8-bit integer

Cisco Discovery Protocol (cdp)

Table A-30. Cisco Discovery Protocol (cdp)

Field	Field Name	Type
cdp.checksum	Checksum	Unsigned 16-bit integer
cdp.tlv.len	Length	Unsigned 16-bit integer

Field	Field Name	Type
cdp.tlv.type	Type	Unsigned 16-bit integer
cdp.ttl	TTL	Unsigned 16-bit integer
cdp.version	Version	Unsigned 8-bit integer

Cisco Group Management Protocol (cgmp)

Table A-31. Cisco Group Management Protocol (cgmp)

Field	Field Name	Type
cgmp.count	Count	Unsigned 8-bit integer
cgmp.gda	Group Destination Address	6-byte Hardware (MAC) Address
cgmp.type	Type	Unsigned 8-bit integer
cgmp.usa	Unicast Source Address	6-byte Hardware (MAC) Address
cgmp.version	Version	Unsigned 8-bit integer

Cisco HDLC (chdlc)

Table A-32. Cisco HDLC (chdlc)

Field	Field Name	Type
chdlc.address	Address	Unsigned 8-bit integer
chdlc.protocol	Protocol	Unsigned 16-bit integer

Cisco Hot Standby Router Protocol (hsrp)

Table A-33. Cisco Hot Standby Router Protocol (hsrp)

Field	Field Name	Type
hsrp.auth_data	Authentication Data	String
hsrp.group	Group	Unsigned 8-bit integer
hsrp.hellotime	Hellotime	Unsigned 8-bit integer
hsrp.holdtime	Holdtime	Unsigned 8-bit integer
hsrp.opcode	Op Code	Unsigned 8-bit integer
hsrp.priority	Priority	Unsigned 8-bit integer

Field	Field Name	Type
hsrp.reserved	Reserved	Unsigned 8-bit integer
hsrp.state	State	Unsigned 8-bit integer
hsrp.version	Version	Unsigned 8-bit integer
hsrp.virt_ip	Virtual IP Address	IPv4 address

Cisco ISL (isl)

Table A-34. Cisco ISL (isl)

Field	Field Name	Type
isl.addr	Source or Destination Address	6-byte Hardware (MAC) Address
isl.bpdu	BPDU	Boolean
isl.crc	CRC	Unsigned 32-bit integer
isl.dst	Destination	6-byte Hardware (MAC) Address
isl.dst_route_desc	Destination route descriptor	Unsigned 16-bit integer
isl.esize	Esize	Unsigned 8-bit integer
isl.explorer	Explorer	Boolean
isl.fcs_not_incl	FCS Not Included	Boolean
isl.hsa	HSA	Unsigned 24-bit integer
isl.index	Index	Unsigned 16-bit integer
isl.len	Length	Unsigned 16-bit integer
isl.src	Source	6-byte Hardware (MAC) Address
isl.src_route_desc	Source-route descriptor	Unsigned 16-bit integer
isl.src_vlan_id	Source VLAN ID	Unsigned 16-bit integer
isl.type	Type	Unsigned 8-bit integer
isl.user	User	Unsigned 8-bit integer
isl.user_eth	User	Unsigned 8-bit integer
isl.vlan_id	VLAN ID	Unsigned 16-bit integer

Cisco Interior Gateway Routing Protocol (igrp)

Table A-35. Cisco Interior Gateway Routing Protocol (igrp)

Field	Field Name	Type
igrp.as	Autonomous System	Unsigned 16-bit integer
igrp.update	Update Release	Unsigned 8-bit integer

Cisco SLARP (slarp)

Table A-36. Cisco SLARP (slarp)

Field	Field Name	Type
slarp.address	Address	IPv4 address
slarp.mysequence	Outgoing sequence number	Unsigned 32-bit integer
slarp.ptype	Packet type	Unsigned 32-bit integer
slarp.yoursequence	Returned sequence number	Unsigned 32-bit integer

CoSine IPNOS L2 debug output (cosine)

Table A-37. CoSine IPNOS L2 debug output (cosine)

Field	Field Name	Type
cosine.code1	Code1	Unsigned 32-bit integer
cosine.code2	Code2	Unsigned 32-bit integer
cosine.err	Err	Unsigned 32-bit integer
cosine.off	Pro	Unsigned 32-bit integer
cosine.pri	Pri	Unsigned 32-bit integer
cosine.pro	Pro	Unsigned 32-bit integer
cosine.rm	RM	Unsigned 32-bit integer

Common Open Policy Service (cops)

Table A-38. Common Open Policy Service (cops)

Field	Field Name	Type
cops.accttimer.value	Contents: ACCT Timer Value	Unsigned 16-bit integer
cops.c_num	C-Num	Unsigned 8-bit integer

Field	Field Name	Type
cops.c_type	C-Type	Unsigned 8-bit integer
cops.client_type	Client Type	Unsigned 16-bit integer
cops.context.m_type	M-Type	Unsigned 16-bit integer
cops.context.r_type	R-Type	Unsigned 16-bit integer
cops.cperror	Error	Unsigned 16-bit integer
cops.cperror_sub	Error Sub-code	Unsigned 16-bit integer
cops.decision.cmd	Command-Code	Unsigned 16-bit integer
cops.decision.flags	Flags	Unsigned 16-bit integer
cops.error	Error	Unsigned 16-bit integer
cops.error_sub	Error Sub-code	Unsigned 16-bit integer
cops.flags	Flags	Unsigned 8-bit integer
cops.gperror	Error	Unsigned 16-bit integer
cops.gperror_sub	Error Sub-code	Unsigned 16-bit integer
cops.in-int.ipv4	IPv4 address	IPv4 address
cops.in-int.ipv6	IPv6 address	IPv6 address
cops.in-out-int.ifindex	ifIndex	Unsigned 32-bit integer
cops.integrity.key_id	Contents: Key ID	Unsigned 32-bit integer
cops.integrity.seq_num	Contents: Sequence Number	Unsigned 32-bit integer
cops.katimer.value	Contents: KA Timer Value	Unsigned 16-bit integer
cops.lastpdpaddr.ipv4	IPv4 address	IPv4 address
cops.lastpdpaddr.ipv6	IPv6 address	IPv6 address
cops.msg_len	Message Length	Unsigned 32-bit integer
cops.obj.len	Object Length	Unsigned 32-bit integer
cops.op_code	Op Code	Unsigned 8-bit integer
cops.out-int.ipv4	IPv4 address	IPv4 address
cops.out-int.ipv6	IPv6 address	IPv6 address
cops.pdp.tcp_port	TCP Port Number	Unsigned 32-bit integer
cops.pdprediraddr.ipv4	IPv4 address	IPv4 address
cops.pdprediraddr.ipv6	IPv6 address	IPv6 address
cops.pepid.id	Contents: PEP Id	String
cops.reason	Reason	Unsigned 16-bit integer
cops.reason_sub	Reason Sub-code	Unsigned 16-bit integer
cops.report_type	Contents: Report-Type	Unsigned 16-bit integer
cops.s_num	S-Num	Unsigned 8-bit integer
cops.s_type	S-Type	Unsigned 8-bit integer

Field	Field Name	Type
cops.ver_flags	Version and Flags	Unsigned 8-bit integer
cops.version	Version	Unsigned 8-bit integer

Common Unix Printing System (CUPS) Browsing Protocol (cups)

Table A-39. Common Unix Printing System (CUPS) Browsing Protocol (cups)

Field	Field Name	Type
cups.ptype	Type	Unsigned 32-bit integer
cups.state	State	Unsigned 8-bit integer

DCE RPC (dcerpc)

Table A-40. DCE RPC (dcerpc)

Field	Field Name	Type
dcerpc.array.actual_count	Actual Count	Unsigned 32-bit integer
dcerpc.array.max_count	Max Count	Unsigned 32-bit integer
dcerpc.array.offset	Offset	Unsigned 32-bit integer
dcerpc.auth_ctx_id	Auth Context ID	Unsigned 32-bit integer
dcerpc.auth_level	Auth level	Unsigned 8-bit integer
dcerpc.auth_pad_len	Auth pad len	Unsigned 8-bit integer
dcerpc.auth_rsrvd	Auth Rsrvd	Unsigned 8-bit integer
dcerpc.auth_type	Auth type	Unsigned 8-bit integer
dcerpc.cn_ack_reason	Ack reason	Unsigned 16-bit integer
dcerpc.cn_ack_result	Ack result	Unsigned 16-bit integer
dcerpc.cn_ack_trans_id	Transfer Syntax	String
dcerpc.cn_ack_trans_ver	Syntax ver	Unsigned 32-bit integer
dcerpc.cn_alloc_hint	Alloc hint	Unsigned 32-bit integer
dcerpc.cn_assoc_group	Assoc Group	Unsigned 32-bit integer
dcerpc.cn_auth_len	Auth Length	Unsigned 16-bit integer
dcerpc.cn_bind_if_ver	Interface Ver	Unsigned 16-bit integer
dcerpc.cn_bind_if_ver_minor	Interface Ver Minor	Unsigned 16-bit integer
dcerpc.cn_bind_to_uuid	Interface UUID	String
dcerpc.cn_bind_trans_id	Transfer Syntax	String

Field	Field Name	Type
dcerpc.cn_bind_trans_ver	Syntax ver	Unsigned 32-bit integer
dcerpc.cn_call_id	Call ID	Unsigned 32-bit integer
dcerpc.cn_cancel_count	Cancel count	Unsigned 8-bit integer
dcerpc.cn_ctx_id	Context ID	Unsigned 16-bit integer
dcerpc.cn_flags	Packet Flags	Unsigned 8-bit integer
dcerpc.cn_flags.cancel_pending	Cancel Pending	Boolean
dcerpc.cn_flags.dne	Did Not Execute	Boolean
dcerpc.cn_flags.first_frag	First Frag	Boolean
dcerpc.cn_flags.last_frag	Last Frag	Boolean
dcerpc.cn_flags.maybe	Maybe	Boolean
dcerpc.cn_flags.mpx	Multiplex	Boolean
dcerpc.cn_flags.object	Object	Boolean
dcerpc.cn_flags.reserved	Reserved	Boolean
dcerpc.cn_frag_len	Frag Length	Unsigned 16-bit integer
dcerpc.cn_max_recv	Max Recv Frag	Unsigned 16-bit integer
dcerpc.cn_max_xmit	Max Xmit Frag	Unsigned 16-bit integer
dcerpc.cn_num_ctx_items	Num Ctx Items	Unsigned 8-bit integer
dcerpc.cn_num_protocols	Number of protocols	Unsigned 8-bit integer
dcerpc.cn_num_results	Num results	Unsigned 8-bit integer
dcerpc.cn_num_trans_items	Num Trans Items	Unsigned 16-bit integer
dcerpc.cn_protocol_ver_major	Protocol major version	Unsigned 8-bit integer
dcerpc.cn_protocol_ver_minor	Protocol minor version	Unsigned 8-bit integer
dcerpc.cn_reject_reason	Reject reason	Unsigned 16-bit integer
dcerpc.cn_sec_addr	Scndry Addr	String
dcerpc.cn_sec_addr_len	Scndry Addr len	Unsigned 16-bit integer
dcerpc.cn_status	Status	Unsigned 32-bit integer
dcerpc.dg_act_id	Activitiy	String
dcerpc.dg_ahint	Activity Hint	Unsigned 16-bit integer
dcerpc.dg_auth_proto	Auth proto	Unsigned 8-bit integer
dcerpc.dg_cancel_id	Cancel ID	Unsigned 32-bit integer
dcerpc.dg_cancel_vers	Cancel Version	Unsigned 32-bit integer
dcerpc.dg_flags1	Flags1	Unsigned 8-bit integer

Field	Field Name	Type
dcerpc.dg_flags1_broadcast	Broadcast	Boolean
dcerpc.dg_flags1_frag	Fragment	Boolean
dcerpc.dg_flags1_idempotent	Idempotent	Boolean
dcerpc.dg_flags1_last_frag	Last Fragment	Boolean
dcerpc.dg_flags1_maybe	Maybe	Boolean
dcerpc.dg_flags1_nofack	No Fack	Boolean
dcerpc.dg_flags1_rsrvd_01	Reserved	Boolean
dcerpc.dg_flags1_rsrvd_80	Reserved	Boolean
dcerpc.dg_flags2	Flags2	Unsigned 8-bit integer
dcerpc.dg_flags2_cancel_pending	Cancel Pending	Boolean
dcerpc.dg_flags2_rsrvd_01	Reserved	Boolean
dcerpc.dg_flags2_rsrvd_04	Reserved	Boolean
dcerpc.dg_flags2_rsrvd_08	Reserved	Boolean
dcerpc.dg_flags2_rsrvd_10	Reserved	Boolean
dcerpc.dg_flags2_rsrvd_20	Reserved	Boolean
dcerpc.dg_flags2_rsrvd_40	Reserved	Boolean
dcerpc.dg_flags2_rsrvd_80	Reserved	Boolean
dcerpc.dg_frag_len	Fragment len	Unsigned 16-bit integer
dcerpc.dg_frag_num	Fragment num	Unsigned 16-bit integer
dcerpc.dg_if_id	Interface	String
dcerpc.dg_if_ver	Interface Ver	Unsigned 32-bit integer
dcerpc.dg_ihint	Interface Hint	Unsigned 16-bit integer
dcerpc.dg_seqnum	Sequence num	Unsigned 32-bit integer
dcerpc.dg_serial_hi	Serial High	Unsigned 8-bit integer
dcerpc.dg_serial_lo	Serial Low	Unsigned 8-bit integer
dcerpc.dg_server_boot	Server boot time	Unsigned 32-bit integer
dcerpc.dg_status	Status	Unsigned 32-bit integer
dcerpc.drep	Data Representation	Byte array
dcerpc.drep.byteorder	Byte order	Unsigned 8-bit integer
dcerpc.drep.character	Character	Unsigned 8-bit integer
dcerpc.drep.fp	Floating-point	Unsigned 8-bit integer
dcerpc.fack_max_frag_size	Max Frag Size	Unsigned 32-bit integer
dcerpc.fack_max_tsdu	Max TSDU	Unsigned 32-bit integer

Field	Field Name	Type
dcerpc.fack_selack	Selective ACK	Unsigned 32-bit integer
dcerpc.fack_selack_len	Selective ACK Len	Unsigned 16-bit integer
dcerpc.fack_serial_num	Serial Num	Unsigned 16-bit integer
dcerpc.fack_vers	FACK Version	Unsigned 8-bit integer
dcerpc.fack_window size	Window Size	Unsigned 16-bit integer
dcerpc.fragment	DCE/RPC Fragment	No value
dcerpc.fragment.error	Defragmentation error	No value
dcerpc.fragment.multipletails	Multiple tail fragments found	Boolean
dcerpc.fragment.overlap	Fragment overlap	Boolean
dcerpc.fragment.overlap.conflict	Conflicting data in fragment overlap	Boolean
dcerpc.fragment.toolongfragment	Fragment too long	Boolean
dcerpc.fragments	DCE/RPC Fragments	No value
dcerpc.obj_id	Object	String
dcerpc.op	Operation	Unsigned 16-bit integer
dcerpc.opnum	Opnum	Unsigned 16-bit integer
dcerpc.pkt_type	Packet type	Unsigned 8-bit integer
dcerpc.referent_id	Referent ID	Unsigned 32-bit integer
dcerpc.request_in	Request in	Unsigned 32-bit integer
dcerpc.response_in	Response in	Unsigned 32-bit integer
dcerpc.server_accepting_cancels	Server accepting cancels	Boolean
dcerpc.ver	Version	Unsigned 8-bit integer
dcerpc.ver_minor	Version (minor)	Unsigned 8-bit integer

DCE/RPC Conversation Manager (conv)

Table A-41. DCE/RPC Conversation Manager (conv)

Field	Field Name	Type

DCE/RPC Endpoint Mapper (epm)

Table A-42. DCE/RPC Endpoint Mapper (epm)

Field	Field Name	Type
epm.hnd	Handle	Byte array
epm.if_id	Interface	String
epm.if_id_p	Interface pointer	Unsigned 32-bit integer
epm.inq_type	Inquiry type	Unsigned 32-bit integer
epm.max_ents	Max entries	Unsigned 32-bit integer
epm.max_towers	Max Towers	Unsigned 32-bit integer
epm.num_ents	Num entries	Unsigned 32-bit integer
epm.num_towers	Num Towers	Unsigned 32-bit integer
epm.object	Object	String
epm.object_p	Object pointer	Unsigned 32-bit integer
epm.opnum	Operation	Unsigned 16-bit integer
epm.rc	Return code	Unsigned 32-bit integer
epm.tower	Tower	Byte array
epm.tower.len	Length	Unsigned 32-bit integer
epm.tower.lhs.len	LHS Length	Unsigned 16-bit integer
epm.tower.num_floors	Number of floors	Unsigned 16-bit integer
epm.tower.proto_id	Protocol	Unsigned 8-bit integer
epm.tower.rhs.len	RHS Length	Unsigned 16-bit integer
epm.uuid	UUID	String
epm.ver_maj	Version Major	Unsigned 16-bit integer
epm.ver_min	Version Minor	Unsigned 16-bit integer
epm.ver_opt	Version Option	Unsigned 32-bit integer

DCE/RPC Remote Management (mgmt)

Table A-43. DCE/RPC Remote Management (mgmt)

Field	Field Name	Type

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DCOM OXID Resolver (oxid)

Table A-44. DCOM OXID Resolver (oxid)

Field	Field Name	Type

DCOM Remote Activation (remact)

Table A-45. DCOM Remote Activation (remact)

Field	Field Name	Type

DEC Spanning Tree Protocol (dec_stp)

Table A-46. DEC Spanning Tree Protocol (dec_stp)

Field	Field Name	Type
dec_stp.bridge.mac	Bridge MAC	6-byte Hardware (MAC) Address
dec_stp.bridge.pri	Bridge Priority	Unsigned 16-bit integer
dec_stp.flags	BPDU flags	Unsigned 8-bit integer
dec_stp.flags.short_timers	Use short timers	Boolean
dec_stp.flags.tc	Topology Change	Boolean
dec_stp.flags.tcack	Topology Change Acknowledgment	Boolean
dec_stp.forward	Forward Delay	Unsigned 8-bit integer
dec_stp.hello	Hello Time	Unsigned 8-bit integer
dec_stp.max_age	Max Age	Unsigned 8-bit integer
dec_stp.msg_age	Message Age	Unsigned 8-bit integer
dec_stp.port	Port identifier	Unsigned 8-bit integer
dec_stp.protocol	Protocol Identifier	Unsigned 8-bit integer
dec_stp.root.cost	Root Path Cost	Unsigned 16-bit integer
dec_stp.root.mac	Root MAC	6-byte Hardware (MAC) Address
dec_stp.root.pri	Root Priority	Unsigned 16-bit integer
dec_stp.type	BPDU Type	Unsigned 8-bit integer

Field	Field Name	Type
dec_stp.version	BPDU Version	Unsigned 8-bit integer

DHCPv6 (dhcpv6)

Table A-47. DHCPv6 (dhcpv6)

Field	Field Name	Type
dhcpv6.msgtype	Message type	Unsigned 8-bit integer

Data (data)

Table A-48. Data (data)

Field	Field Name	Type

Data Link SWitching (dlsw)

Table A-49. Data Link SWitching (dlsw)

Field	Field Name	Type

Data Stream Interface (dsi)

Table A-50. Data Stream Interface (dsi)

Field	Field Name	Type
dsi.attn_flag	Flags	Unsigned 16-bit integer
dsi.attn_flag.crash	Crash	Boolean
dsi.attn_flag.msg	Message	Boolean
dsi.attn_flag.reconnect	Don't reconnect	Boolean
dsi.attn_flag.shutdown	Shutdown	Boolean
dsi.attn_flag.time	Minutes	Unsigned 16-bit integer
dsi.command	Command	Unsigned 8-bit integer

Field	Field Name	Type
dsi.data_offset	Data offset	Signed 32-bit integer
dsi.error_code	Error code	Signed 32-bit integer
dsi.flags	Flags	Unsigned 8-bit integer
dsi.length	Length	Unsigned 32-bit integer
dsi.open_len	Length	Unsigned 8-bit integer
dsi.open_option	Option	Byte array
dsi.open_quantum	Quantum	Unsigned 32-bit integer
dsi.open_type	Flags	Unsigned 8-bit integer
dsi.requestid	Request ID	Unsigned 16-bit integer
dsi.reserved	Reserved	Unsigned 32-bit integer
dsi.server_addr.len	Length	Unsigned 8-bit integer
dsi.server_addr.type	Type	Unsigned 8-bit integer
dsi.server_addr.value	Value	Byte array
dsi.server_directory	Directory service	
dsi.server_flag	Flag	Unsigned 16-bit integer
dsi.server_flag.copyfile	Support copyfile	Boolean
dsi.server_flag.directory	Support directory services	Boolean
dsi.server_flag.fast_copy	Support fast copy	Boolean
dsi.server_flag.no_save_passwd	Don't allow save password	Boolean
dsi.server_flag.notify	Support server notifications	Boolean
dsi.server_flag.passwd	Support change password	Boolean
dsi.server_flag.reconnect	Support server reconnect	Boolean
dsi.server_flag.srv_msg	Support server message	Boolean
dsi.server_flag.srv_sig	Support server signature	Boolean
dsi.server_flag.tcpip	Support TCP/IP	Boolean
dsi.server_icon	Icon bitmap	Byte array
dsi.server_name	Server name	
dsi.server_signature	Server signature	Byte array
dsi.server_type	Server type	
dsi.server_uams	UAM	
dsi.server_vers	AFP version	

Datagram Delivery Protocol (ddp)

Table A-51. Datagram Delivery Protocol (ddp)

Field	Field Name	Type
ddp.checksum	Checksum	Unsigned 16-bit integer
ddp.dst	Destination address	String
ddp.dst.net	Destination Net	Unsigned 16-bit integer
ddp.dst.node	Destination Node	Unsigned 8-bit integer
ddp.dst_socket	Destination Socket	Unsigned 8-bit integer
ddp.hopcount	Hop count	Unsigned 8-bit integer
ddp.len	Datagram length	Unsigned 16-bit integer
ddp.src	Source address	String
ddp.src.net	Source Net	Unsigned 16-bit integer
ddp.src.node	Source Node	Unsigned 8-bit integer
ddp.src_socket	Source Socket	Unsigned 8-bit integer
ddp.type	Protocol type	Unsigned 8-bit integer

Diameter Protocol (diameter)

Table A-52. Diameter Protocol (diameter)

Field	Field Name	Type
diameter.avp.code	AVP Code	Unsigned 32-bit integer
diameter.avp.data.bytes	Value	Byte array
diameter.avp.data.int32	Value	Signed 32-bit integer
diameter.avp.data.int64	Value	
diameter.avp.data.string	Value	String
diameter.avp.data.time	Time	Date/Time stamp
diameter.avp.data.uint32	Value	Unsigned 32-bit integer
diameter.avp.data.uint64	Value	
diameter.avp.data.v4addr	IPv4 Address	IPv4 address
diameter.avp.data.v6addr	IPv6 Address	IPv6 address
diameter.avp.flags	AVP Flags	Unsigned 8-bit integer
diameter.avp.flags.protected	Protected	Boolean
diameter.avp.flags.reserved3	Reserved	Boolean

Field	Field Name	Type
diameter.avp.flags.reserved4	Reserved	Boolean
diameter.avp.flags.reserved5	Reserved	Boolean
diameter.avp.flags.reserved6	Reserved	Boolean
diameter.avp.flags.reserved7	Reserved	Boolean
diameter.avp.length	AVP Length	Unsigned 24-bit integer
diameter.avp.vendorId	AVP Vendor Id	Unsigned 32-bit integer
diameter.code	Command Code	Unsigned 24-bit integer
diameter.endtoendid	End-to-End Identifier	Unsigned 32-bit integer
diameter.flags	Flags	Unsigned 8-bit integer
diameter.flags.error	Error	Boolean
diameter.flags.mandatory	Mandatory	Boolean
diameter.flags.proxyable	Proxyable	Boolean
diameter.flags.request	Request	Boolean
diameter.flags.reserved3	Reserved	Boolean
diameter.flags.reserved4	Reserved	Boolean
diameter.flags.reserved5	Reserved	Boolean
diameter.flags.reserved6	Reserved	Boolean
diameter.flags.reserved7	Reserved	Boolean
diameter.flags.vendorspecific	Vendor-Specific	Boolean
diameter.hopbyhopid	Hop-by-Hop Identifier	Unsigned 32-bit integer
diameter.length	Length	Unsigned 24-bit integer
diameter.vendorId	VendorId	Unsigned 32-bit integer
diameter.version	Version	Unsigned 8-bit integer

Distance Vector Multicast Routing Protocol (dvmrp)

Table A-53. Distance Vector Multicast Routing Protocol (dvmrp)

Field	Field Name	Type
dvmrp.afi	Address Family	Unsigned 8-bit integer
dvmrp.cap.genid	Genid	Boolean
dvmrp.cap.leaf	Leaf	Boolean

Field	Field Name	Type
dvmrp.cap.mtrace	Mtrace	Boolean
dvmrp.cap.netmask	Netmask	Boolean
dvmrp.cap.prune	Prune	Boolean
dvmrp.cap.snmp	SNMP	Boolean
dvmrp.capabilities	Capabilities	No value
dvmrp.checksum	Checksum	Unsigned 16-bit integer
dvmrp.checksum_bad	Bad Checksum	Boolean
dvmrp.command	Command	Unsigned 8-bit integer
dvmrp.commands	Commands	No value
dvmrp.count	Count	Unsigned 8-bit integer
dvmrp.dest_unreach	Destination Unreachable	Boolean
dvmrp.genid	Generation ID	Unsigned 32-bit integer
dvmrp.hold	Hold Time	Unsigned 32-bit integer
dvmrp.infinity	Infinity	Unsigned 8-bit integer
dvmrp.lifetime	Prune lifetime	Unsigned 32-bit integer
dvmrp.maj_ver	Major Version	Unsigned 8-bit integer
dvmrp.metric	Metric	Unsigned 8-bit integer
dvmrp.min_ver	Minor Version	Unsigned 8-bit integer
dvmrp.route	Route	No value
dvmrp.split_horiz	Split Horizon	Boolean
dvmrp.type	Type	Unsigned 8-bit integer
dvmrp.v1.code	Code	Unsigned 8-bit integer
dvmrp.v3.code	Code	Unsigned 8-bit integer
dvmrp.version	DVMRP Version	Unsigned 8-bit integer
igmp.daddr	Dest Addr	IPv4 address
igmp.maddr	Multicast Addr	IPv4 address
igmp.neighbor	Neighbor Addr	IPv4 address
igmp.netmask	Netmask	IPv4 address
igmp.saddr	Source Addr	IPv4 address

Distributed Checksum Clearinghouse Prototocl (dccp)

Table A-54. Distributed Checksum Clearinghouse Prototocl (dccp)

Field	Field Name	Type

Field	Field Name	Type
dccp.adminop	Admin Op	Unsigned 8-bit integer
dccp.adminval	Admin Value	Unsigned 32-bit integer
dccp.brand	Server Brand	String
dccp.checksum.length	Length	Unsigned 8-bit integer
dccp.checksum.sum	Sum	Byte array
dccp.checksum.type	Type	Unsigned 8-bit integer
dccp.clientid	Client ID	Unsigned 32-bit integer
dccp.date	Date	Date/Time stamp
dccp.floodop	Flood Control Operation	Unsigned 32-bit integer
dccp.len	Packet Length	Unsigned 16-bit integer
dccp.max_pkt_vers	Maximum Packet Version	Unsigned 8-bit integer
dccp.op	Operation Type	Unsigned 8-bit integer
dccp.opnums.host	Host	IPv4 address
dccp.opnums.pid	Process ID	Unsigned 32-bit integer
dccp.opnums.report	Report	Unsigned 32-bit integer
dccp.opnums.retrans	Retransmission	Unsigned 32-bit integer
dccp.pkt_vers	Packet Version	Unsigned 16-bit integer
dccp.qdelay_ms	Client Delay	Unsigned 16-bit integer
dccp.signature	Signature	Byte array
dccp.target	Target	Unsigned 32-bit integer
dccp.trace	Trace Bits	Unsigned 32-bit integer
dccp.trace.admin	Admin Requests	Unsigned 32-bit integer
dccp.trace.anon	Anonymous Requests	Unsigned 32-bit integer
dccp.trace.client	Authenticated Client Requests	Unsigned 32-bit integer
dccp.trace.flood	Input/Output Flooding	Unsigned 32-bit integer
dccp.trace.query	Queries and Reports	Unsigned 32-bit integer
dccp.trace.ridc	RID Cache Messages	Unsigned 32-bit integer
dccp.trace.rlim	Rate-Limited Requests	Unsigned 32-bit integer

Domain Name Service (dns)

Table A-55. Domain Name Service (dns)

Field	Field Name	Type
dns.count.add_rr	Additional RRs	Unsigned 16-bit integer

Field	Field Name	Type
dns.count.answers	Answer RRs	Unsigned 16-bit integer
dns.count.auth_rr	Authority RRs	Unsigned 16-bit integer
dns.count.queries	Questions	Unsigned 16-bit integer
dns.flags	Flags	Unsigned 16-bit integer
dns.flags.authenticated	Answer authenticated	Boolean
dns.flags.authoritative	Authoritative	Boolean
dns.flags.checkdisable	Non-authenticated data OK	Boolean
dns.flags.opcode	Opcode	Unsigned 16-bit integer
dns.flags.rcode	Reply code	Unsigned 16-bit integer
dns.flags.recavail	Recursion available	Boolean
dns.flags.recdesired	Recursion desired	Boolean
dns.flags.response	Response	Boolean
dns.flags.truncated	Truncated	Boolean
dns.id	Transaction ID	Unsigned 16-bit integer
dns.length	Length	Unsigned 16-bit integer

Dynamic DNS Tools Protocol (ddtp)

Table A-56. Dynamic DNS Tools Protocol (ddtp)

Field	Field Name	Type
ddtp.encrypt	Encryption	Unsigned 32-bit integer
ddtp.hostid	Hostid	Unsigned 32-bit integer
ddtp.ipaddr	IP address	IPv4 address
ddtp.msgtype	Message type	Unsigned 32-bit integer
ddtp.opcode	Opcode	Unsigned 32-bit integer
ddtp.status	Status	Unsigned 32-bit integer
ddtp.version	Version	Unsigned 32-bit integer

Encapsulating Security Payload (esp)

Table A-57. Encapsulating Security Payload (esp)

Field	Field Name	Type
esp.sequence	Sequence	Unsigned 32-bit integer

Field	Field Name	Type
esp.spi	SPI	Unsigned 32-bit integer

Enhanced Interior Gateway Routing Protocol (eigrp)

Table A-58. Enhanced Interior Gateway Routing Protocol (eigrp)

Field	Field Name	Type
eigrp.as	Autonomous System	Unsigned 16-bit integer
eigrp.opcode	Opcode	Unsigned 8-bit integer
eigrp.tlv	Entry	Unsigned 16-bit integer

Ethernet (eth)

Table A-59. Ethernet (eth)

Field	Field Name	Type
eth.addr	Source or Destination Address	6-byte Hardware (MAC) Address
eth.dst	Destination	6-byte Hardware (MAC) Address
eth.len	Length	Unsigned 16-bit integer
eth.src	Source	6-byte Hardware (MAC) Address
eth.trailer	Trailer	Byte array
eth.type	Type	Unsigned 16-bit integer

Extensible Authentication Protocol (eap)

Table A-60. Extensible Authentication Protocol (eap)

Field	Field Name	Type
eap.code	Code	Unsigned 8-bit integer
eap.id	Id	Unsigned 8-bit integer
eap.len	Length	Unsigned 16-bit integer
eap.type	Type	Unsigned 8-bit integer
eaptls.fragment	EAP-TLS Fragment	No value

Field	Field Name	Type
eaptls.fragment.error	Defragmentation error	No value
eaptls.fragment.multipletails	Multiple tail fragments found	Boolean
eaptls.fragment.overlap	Fragment overlap	Boolean
eaptls.fragment.overlap.conflict	Conflicting data in fragment overlap	Boolean
eaptls.fragment.toolongfragment	Fragment too long	Boolean
eaptls.fragments	EAP-TLS Fragments	No value

FTP Data (ftp-data)

Table A-61. FTP Data (ftp-data)

Field	Field Name	Type

Fiber Distributed Data Interface (fddi)

Table A-62. Fiber Distributed Data Interface (fddi)

Field	Field Name	Type
fddi.addr	Source or Destination Address	6-byte Hardware (MAC) Address
fddi.dst	Destination	6-byte Hardware (MAC) Address
fddi.fc	Frame Control	Unsigned 8-bit integer
fddi.fc.clf	Class/Length/Format	Unsigned 8-bit integer
fddi.fc.mac_subtype	MAC Subtype	Unsigned 8-bit integer
fddi.fc.prio	Priority	Unsigned 8-bit integer
fddi.fc.smt_subtype	SMT Subtype	Unsigned 8-bit integer
fddi.src	Source	6-byte Hardware (MAC) Address

File Transfer Protocol (FTP) (ftp)

Table A-63. File Transfer Protocol (FTP) (ftp)

Field	Field Name	Type
ftp.request	Request	Boolean
ftp.request.arg	Request arg	String
ftp.request.command	Request command	String
ftp.response	Response	Boolean
ftp.response.arg	Response arg	String
ftp.response.code	Response code	Unsigned 32-bit integer

Frame (frame)

Table A-64. Frame (frame)

Field	Field Name	Type
frame.cap_len	Capture Frame Length	Unsigned 32-bit integer
frame.file_off	File Offset	Signed 32-bit integer
frame.marked	Frame is marked	Boolean
frame.number	Frame Number	Unsigned 32-bit integer
frame.p2p_dir	Point-to-Point Direction	Unsigned 8-bit integer
frame.pkt_len	Total Frame Length	Unsigned 32-bit integer
frame.time	Arrival Time	Date/Time stamp
frame.time_delta	Time delta from previous packet	Time duration
frame.time_relative	Time relative to first packet	Time duration

Frame Relay (fr)

Table A-65. Frame Relay (fr)

Field	Field Name	Type
fr.becn	BECN	Boolean
fr.chdlctype	Type	Unsigned 16-bit integer
fr.cr	CR	Boolean
fr.dc	DC	Boolean

Field	Field Name	Type
fr.de	DE	Boolean
fr.dlci	DLCI	Unsigned 16-bit integer
fr.ea	EA	Boolean
fr.fecn	FECN	Boolean
fr.nlpid	NLPID	Unsigned 8-bit integer
fr.snap.oui	Organization Code	Unsigned 24-bit integer
fr.snap.pid	Protocol ID	Unsigned 16-bit integer
fr.snaptype	Type	Unsigned 16-bit integer

GARP Multicast Registration Protocol (gmrp)

Table A-66. GARP Multicast Registration Protocol (gmrp)

Field	Field Name	Type
garp.attribute_event	Event	Unsigned 8-bit integer
garp.attribute_length	Length	Unsigned 8-bit integer
garp.attribute_type	Type	Unsigned 8-bit integer
garp.attribute_value_group_membership	Value	6-byte Hardware (MAC) Address
garp.attribute_value_service_requirement	Value	Unsigned 8-bit integer
garp.protocol_id	Protocol ID	Unsigned 16-bit integer

GARP VLAN Registration Protocol (gvrp)

Table A-67. GARP VLAN Registration Protocol (gvrp)

Field	Field Name	Type
garp.attribute_value	Value	Unsigned 16-bit integer

GPRS Tunneling Protocol (gtp)

Table A-68. GPRS Tunneling Protocol (gtp)

Field	Field Name	Type

GPRS Tunnelling Protocol v0 (gtpv0)

Table A-69. GPRS Tunnelling Protocol v0 (gtpv0)

Field	Field Name	Type
gtpv0.apn	APN	String
gtpv0.cause	Cause	Unsigned 8-bit integer
gtpv0.chrg_id	Charging ID	Unsigned 32-bit integer
gtpv0.chrg_ipv4	CG address IPv4	IPv4 address
gtpv0.chrg_ipv6	CG address IPv6	IPv6 address
gtpv0.ext_flow_label	Flow Label Data I	Unsigned 16-bit integer
gtpv0.ext_id	Extension identifier	Unsigned 16-bit integer
gtpv0.ext_val	Extension value	String
gtpv0.flags	Flags	Unsigned 8-bit integer
gtpv0.flags.payload	Protocol type	Unsigned 8-bit integer
gtpv0.flags.reserved	Reserved	Unsigned 8-bit integer
gtpv0.flags.snn	Is SNDCP N-PDU included?	Boolean
gtpv0.flags.version	Version	Unsigned 8-bit integer
gtpv0.flow_ii	Flow Label Data II	Unsigned 16-bit integer
gtpv0.flow_label	Flow label	Unsigned 16-bit integer
gtpv0.flow_sig	Flow label Signalling	Unsigned 16-bit integer
gtpv0.gsn_addr_len	GSN address length	Unsigned 8-bit integer
gtpv0.gsn_addr_type	GSN address type	Unsigned 8-bit integer
gtpv0.gsn_ipv4	GSN address IPv4	IPv4 address
gtpv0.gsn_ipv6	GSN address IPv6	IPv6 address
gtpv0.imsi	IMSI	String
gtpv0.lac	LAC	Unsigned 16-bit integer
gtpv0.length	Length	Unsigned 16-bit integer
gtpv0.map_cause	MAP cause	Unsigned 8-bit integer
gtpv0.mcc	MCC	Unsigned 16-bit integer
gtpv0.message	Message type	Unsigned 8-bit integer
gtpv0.mnc	MNC	Unsigned 8-bit integer
gtpv0.ms_reason	MS not reachable reason	Unsigned 8-bit integer
gtpv0.ms_valid	MS validated	Boolean
gtpv0.msisdn	MSISDN	String
gtpv0.node_ipv4	Node address IPv4	IPv4 address
gtpv0.node_ipv6	Node address IPv6	IPv6 address

Field	Field Name	Type
gtpv0.nsapi	NSAPI	Unsigned 8-bit integer
gtpv0.ptmsi	P-TMSI	Unsigned 32-bit integer
gtpv0.ptmsi_sig	P-TMSI signature	Unsigned 24-bit integer
gtpv0.qos_delay	QoS delay	Unsigned 8-bit integer
gtpv0.qos_mean	QoS mean	Unsigned 8-bit integer
gtpv0.qos_peak	QoS peak	Unsigned 8-bit integer
gtpv0.qos_precedence	QoS precedence	Unsigned 8-bit integer
gtpv0.qos_reliabilty	QoS reliability	Unsigned 8-bit integer
gtpv0.qos_spare1	Spare	Unsigned 8-bit integer
gtpv0.qos_spare2	Spare	Unsigned 8-bit integer
gtpv0.qos_spare3	Spare	Unsigned 8-bit integer
gtpv0.rac	RAC	Unsigned 8-bit integer
gtpv0.recovery	Recovery	Unsigned 8-bit integer
gtpv0.reorder	Reordering required	Boolean
gtpv0.sel_mode	Selection mode	Unsigned 8-bit integer
gtpv0.seq_number	Sequence number	Unsigned 16-bit integer
gtpv0.sndcp_number	SNDCP N-PDU LLC Number	Unsigned 8-bit integer
gtpv0.tid	TID	String
gtpv0.tlli	TLLI	Unsigned 32-bit integer
gtpv0.tr_comm	Packet transfer command	Unsigned 8-bit integer
gtpv0.unknown	Unknown data (length)	Unsigned 16-bit integer
gtpv0.user_addr_pdp_org	PDP type organization	Unsigned 8-bit integer
gtpv0.user_addr_pdp_type	PDP type number	Unsigned 8-bit integer
gtpv0.user_ipv4	End user address IPv4	IPv4 address
gtpv0.user_ipv6	End user address IPv6	IPv6 address

GPRS Tunnelling Protocol v1 (gtpv1)

Table A-70. GPRS Tunnelling Protocol v1 (gtpv1)

Field	Field Name	Type
gtpv1.apn	APN	String
gtpv1.cause	Cause	Unsigned 8-bit integer
gtpv1.chrg_char_f	Flat rate charging	Unsigned 8-bit integer

Field	Field Name	Type
gtpv1.chrg_char_h	Hot billing charging	Unsigned 8-bit integer
gtpv1.chrg_char_n	Normal charging	Unsigned 8-bit integer
gtpv1.chrg_char_p	Prepaid charging	Unsigned 8-bit integer
gtpv1.chrg_char_r	Reserved	Unsigned 8-bit integer
gtpv1.chrg_char_s	Spare	Unsigned 8-bit integer
gtpv1.chrg_id	Charging ID	Unsigned 32-bit integer
gtpv1.chrg_ipv4	CG address IPv4	IPv4 address
gtpv1.chrg_ipv6	CG address IPv6	IPv6 address
gtpv1.ext_id	Extensio Identifier	Unsigned 16-bit integer
gtpv1.ext_val	Extension Value	String
gtpv1.flags	Flags	Unsigned 8-bit integer
gtpv1.flags.e	Is Next Extension Header present?	Boolean
gtpv1.flags.payload_type	Protocol type	Unsigned 8-bit integer
gtpv1.flags.pn	Is N-PDU number present?	Boolean
gtpv1.flags.s	Is Sequence Number present?	Boolean
gtpv1.flags.spare	Spare bit	Unsigned 8-bit integer
gtpv1.flags.version	Version	Unsigned 8-bit integer
gtpv1.gsn_addr_len	GSN Address Length	Unsigned 8-bit integer
gtpv1.gsn_addr_type	GSN Address Type	Unsigned 8-bit integer
gtpv1.gsn_ipv4	GSN address IPv4	IPv4 address
gtpv1.gsn_ipv6	GSN address IPv6	IPv6 address
gtpv1.imsi	IMSI	String
gtpv1.lac	LAC	Unsigned 16-bit integer
gtpv1.length	Length	Unsigned 16-bit integer
gtpv1.map_cause	MAP cause	Unsigned 8-bit integer
gtpv1.mcc	MCC	Unsigned 16-bit integer
gtpv1.message	Message Type	Unsigned 8-bit integer
gtpv1.mnc	MNC	Unsigned 8-bit integer
gtpv1.ms_reason	MS not reachable reason	Unsigned 8-bit integer
gtpv1.ms_valid	MS validated	Boolean
gtpv1.msisdn	MSISDN	String
gtpv1.next	Next extension header type	Unsigned 8-bit integer
gtpv1.node_ipv4	Node address IPv4	IPv4 address

Field	Field Name	Type
gtpv1.node_ipv6	Node address IPv6	IPv6 address
gtpv1.npdu_number	N-PDU Number	Unsigned 8-bit integer
gtpv1.nsapi	NSAPI	Unsigned 8-bit integer
gtpv1.pkt_flow_id	Packet Flow ID	Unsigned 8-bit integer
gtpv1.ptmsi	P-TMSI	Unsigned 32-bit integer
gtpv1.ptmsi_sig	P-TMSI Signature	Unsigned 24-bit integer
gtpv1.qos_al_ret_priority	Allocation/Retention priority	Unsigned 8-bit integer
gtpv1.qos_del_err_sdu	Delivery of erroneous SDU	Unsigned 8-bit integer
gtpv1.qos_del_order	Delivery order	Unsigned 8-bit integer
gtpv1.qos_delay	QoS Delay	Unsigned 8-bit integer
gtpv1.qos_guar_dl	Guaranteed bit rate for downlink	Unsigned 8-bit integer
gtpv1.qos_guar_ul	Guaranteed bit rate for uplink	Unsigned 8-bit integer
gtpv1.qos_max_dl	Maximum bit rate for downlink	Unsigned 8-bit integer
gtpv1.qos_max_sdu_size	Maximum SDU size	Unsigned 8-bit integer
gtpv1.qos_max_ul	Maximum bit rate for uplink	Unsigned 8-bit integer
gtpv1.qos_mean	QoS Mean	Unsigned 8-bit integer
gtpv1.qos_peak	QoS Peak	Unsigned 8-bit integer
gtpv1.qos_precedence	QoS Precedence	Unsigned 8-bit integer
gtpv1.qos_reliabilty	QoS Reliability	Unsigned 8-bit integer
gtpv1.qos_res_ber	Residual BER	Unsigned 8-bit integer
gtpv1.qos_sdu_err_ratio	SDU Error ratio	Unsigned 8-bit integer
gtpv1.qos_spare1	Spare	Unsigned 8-bit integer
gtpv1.qos_spare2	Spare	Unsigned 8-bit integer
gtpv1.qos_spare3	Spare	Unsigned 8-bit integer
gtpv1.qos_traf_class	Traffic class	Unsigned 8-bit integer
gtpv1.qos_traf_handl_prio	Traffic handling priority	Unsigned 8-bit integer
gtpv1.qos_trans_delay	Transfer delay	Unsigned 8-bit integer
gtpv1.rab_gtp_dn	Downlink GTP-U seq number	Unsigned 16-bit integer
gtpv1.rab_gtp_up	Uplink GTP-U seq number	Unsigned 16-bit integer
gtpv1.rab_pdu_dn	Downlink next PDCP-PDU seq number	Unsigned 8-bit integer

Field	Field Name	Type
gtpv1.rab_pdu_up	Uplink next PDCP-PDU seq number	Unsigned 8-bit integer
gtpv1.rac	RAC	Unsigned 8-bit integer
gtpv1.ranap_cause	RANAP cause	Unsigned 8-bit integer
gtpv1.recovery	Recovery	Unsigned 8-bit integer
gtpv1.reorder	Reordering required	Boolean
gtpv1.rnc_ipv4	RNC address IPv4	IPv4 address
gtpv1.rnc_ipv6	RNC address IPv6	IPv6 address
gtpv1.rp	Radio Priority	Unsigned 8-bit integer
gtpv1.rp_nsapi	NSAPI in Radio Priority	Unsigned 8-bit integer
gtpv1.rp_sms	Radio Priority SMS	Unsigned 8-bit integer
gtpv1.rp_spare	Reserved	Unsigned 8-bit integer
gtpv1.sel_mode	Selection Mode	Unsigned 8-bit integer
gtpv1.seq_number	Sequence Number	Unsigned 16-bit integer
gtpv1.tear_ind	Teardown indication	Boolean
gtpv1.teid	TEID	Unsigned 32-bit integer
gtpv1.teid_cp	TEID Control Plane	Unsigned 32-bit integer
gtpv1.teid_data	TEID Data I	Unsigned 32-bit integer
gtpv1.teid_ii	TEID Data II	Unsigned 32-bit integer
gtpv1.tft_code	TFT operation code	Unsigned 8-bit integer
gtpv1.tft_eval	Evaluation precedence	Unsigned 8-bit integer
gtpv1.tft_number	Number of packet filters	Unsigned 8-bit integer
gtpv1.tft_spare	TFT spare bit	Unsigned 8-bit integer
gtpv1.tlli	TLLI	Unsigned 32-bit integer
gtpv1.tr_comm	Packet transfer command	Unsigned 8-bit integer
gtpv1.trace_ref	Trace reference	Unsigned 16-bit integer
gtpv1.trace_type	Trace type	Unsigned 16-bit integer
gtpv1.unknown	Unknown data (length)	Unsigned 16-bit integer
gtpv1.user_addr_pdp_org	PDP type organization	Unsigned 8-bit integer
gtpv1.user_addr_pdp_type	PDP type number	Unsigned 8-bit integer
gtpv1.user_ipv4	End user address IPv4	IPv4 address
gtpv1.user_ipv6	End user address IPv6	IPv6 address

General Inter-ORB Protocol (giop)

Table A-71. General Inter-ORB Protocol (giop)

Field	Field Name	Type
giop.TCKind	TypeCode enum	Unsigned 32-bit integer
giop.endianess	Endianess	Unsigned 8-bit integer
giop.iiop.host	IIOP::Profile_host	String
giop.iiop.port	IIOP::Profile_port	Unsigned 16-bit integer
giop.iiop.scid	SCID	Unsigned 32-bit integer
giop.iiop.vscid	VSCID	Unsigned 32-bit integer
giop.iiop_vmaj	IIOP Major Version	Unsigned 8-bit integer
giop.iiop_vmin	IIOP Minor Version	Unsigned 8-bit integer
giop.iioptag	IIOP Component TAG	Unsigned 32-bit integer
giop.iortag	IOR Profile TAG	Unsigned 8-bit integer
giop.len	Message size	Unsigned 32-bit integer
giop.profid	Profile ID	Unsigned 32-bit integer
giop.repoid	Repository ID	String
giop.seqlen	Sequence Length	Unsigned 32-bit integer
giop.strlen	String Length	Unsigned 32-bit integer
giop.tcValueModifier	ValueModifier	Signed 16-bit integer
giop.tcVisibility	Visibility	Signed 16-bit integer
giop.tcboolean	TypeCode boolean data	Boolean
giop.tcchar	TypeCode char data	Unsigned 8-bit integer
giop.tccount	TypeCode count	Unsigned 32-bit integer
giop.tcdefault_used	default_used	Signed 32-bit integer
giop.tcdigits	Digits	Unsigned 16-bit integer
giop.tcdouble	TypeCode double data	Double-precision floating point
giop.tcenumdata	TypeCode enum data	Unsigned 32-bit integer
giop.tcfloat	TypeCode float data	Double-precision floating point
giop.tclength	Length	Unsigned 32-bit integer
giop.tclongdata	TypeCode long data	Signed 32-bit integer
giop.tcmaxlen	Maximum length	Unsigned 32-bit integer
giop.tcmemname	TypeCode member name	String
giop.tcname	TypeCode name	String
giop.tcoctet	TypeCode octet data	Unsigned 8-bit integer

Field	Field Name	Type
giop.tcscale	Scale	Signed 16-bit integer
giop.tcshortdata	TypeCode short data	Signed 16-bit integer
giop.tcstring	TypeCode string data	String
giop.tculongdata	TypeCode ulong data	Unsigned 32-bit integer
giop.tcushortdata	TypeCode ushort data	Unsigned 16-bit integer
giop.type	Message type	Unsigned 8-bit integer
giop.typeid	IOR::type_id	String

Generic Routing Encapsulation (gre)

Table A-72. Generic Routing Encapsulation (gre)

Field	Field Name	Type
gre.proto	Protocol Type	Unsigned 16-bit integer

Gnutella Protocol (gnutella)

Table A-73. Gnutella Protocol (gnutella)

Field	Field Name	Type
gnutella.header	Descriptor Header	No value
gnutella.header.hops	Hops	Unsigned 8-bit integer
gnutella.header.id	ID	Byte array
gnutella.header.payload	Payload	Unsigned 8-bit integer
gnutella.header.size	Length	Unsigned 8-bit integer
gnutella.header.ttl	TTL	Unsigned 8-bit integer
gnutella.pong.files	Files Shared	Unsigned 32-bit integer
gnutella.pong.ip	IP	IPv4 address
gnutella.pong.kbytes	KBytes Shared	Unsigned 32-bit integer
gnutella.pong.payload	Pong	No value
gnutella.pong.port	Port	Unsigned 16-bit integer
gnutella.push.index	Index	Unsigned 32-bit integer
gnutella.push.ip	IP	IPv4 address
gnutella.push.payload	Push	No value
gnutella.push.port	Port	Unsigned 16-bit integer

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Field	Field Name	Type
gnutella.push.servent_id	Servent ID	Byte array
gnutella.query.min_speed	Min Speed	Unsigned 32-bit integer
gnutella.query.payload	Query	No value
gnutella.query.search	Search	String
gnutella.queryhit.count	Count	Unsigned 8-bit integer
gnutella.queryhit.extra	Extra	Byte array
gnutella.queryhit.hit	Hit	No value
gnutella.queryhit.hit.extra	Extra	Byte array
gnutella.queryhit.hit.index	Index	Unsigned 32-bit integer
gnutella.queryhit.hit.name	Name	String
gnutella.queryhit.hit.size	Size	Unsigned 32-bit integer
gnutella.queryhit.ip	IP	IPv4 address
gnutella.queryhit.payload	QueryHit	No value
gnutella.queryhit.port	Port	Unsigned 16-bit integer
gnutella.queryhit.servent_id	Servent ID	Byte array
gnutella.queryhit.speed	Speed	Unsigned 32-bit integer
gnutella.stream	Gnutella Upload / Download Stream	No value
gnutella.truncated	Truncated Frame	No value

Hummingbird NFS Daemon (hclnfsd)

Table A-74. Hummingbird NFS Daemon (hclnfsd)

Field	Field Name	Type
hclnfsd.access	Access	Unsigned 32-bit integer
hclnfsd.authorize.ident.obscure	Obscure Ident	String
hclnfsd.cookie	Cookie	Unsigned 32-bit integer
hclnfsd.copies	Copies	Unsigned 32-bit integer
hclnfsd.device	Device	String
hclnfsd.exclusive	Exclusive	Unsigned 32-bit integer
hclnfsd.fileext	File Extension	Unsigned 32-bit integer
hclnfsd.filename	Filename	String
hclnfsd.gid	GID	Unsigned 32-bit integer

Field	Field Name	Type
hclnfsd.group	Group	String
hclnfsd.host_ip	Host IP	IPv4 address
hclnfsd.hostname	Hostname	String
hclnfsd.jobstatus	Job Status	Unsigned 32-bit integer
hclnfsd.length	Length	Unsigned 32-bit integer
hclnfsd.lockname	Lockname	String
hclnfsd.lockowner	Lockowner	Byte array
hclnfsd.logintext	Login Text	String
hclnfsd.mode	Mode	Unsigned 32-bit integer
hclnfsd.npp	Number of Physical Printers	Unsigned 32-bit integer
hclnfsd.offset	Offset	Unsigned 32-bit integer
hclnfsd.pqn	Print Queue Number	Unsigned 32-bit integer
hclnfsd.printername	Printer Name	String
hclnfsd.printparameters	Print Parameters	String
hclnfsd.printqueuecomment	Comment	String
hclnfsd.printqueuename	Name	String
hclnfsd.queuestatus	Queue Status	Unsigned 32-bit integer
hclnfsd.request_type	Request Type	Unsigned 32-bit integer
hclnfsd.sequence	Sequence	Unsigned 32-bit integer
hclnfsd.server_ip	Server IP	IPv4 address
hclnfsd.size	Size	Unsigned 32-bit integer
hclnfsd.status	Status	Unsigned 32-bit integer
hclnfsd.timesubmitted	Time Submitted	Unsigned 32-bit integer
hclnfsd.uid	UID	Unsigned 32-bit integer
hclnfsd.unknown_data	Unknown	Byte array
hclnfsd.username	Username	String

Hypertext Transfer Protocol (http)

Table A-75. Hypertext Transfer Protocol (http)

Field	Field Name	Type
http.notification	Notification	Boolean
http.request	Request	Boolean

Field	Field Name	Type
http.response	Response	Boolean

ICQ Protocol (icq)

Table A-76. ICQ Protocol (icq)

Field	Field Name	Type
icq.checkcode	Checkcode	Unsigned 32-bit integer
icq.client_cmd	Client command	Unsigned 16-bit integer
icq.decode	Decode	String
icq.server_cmd	Server command	Unsigned 16-bit integer
icq.sessionid	Session ID	Unsigned 32-bit integer
icq.type	Type	Unsigned 16-bit integer
icq.uin	UIN	Unsigned 32-bit integer

IEEE 802.11 wireless LAN (wlan)

Table A-77. IEEE 802.11 wireless LAN (wlan)

Field	Field Name	Type
wlan.addr	Source or Destination address	6-byte Hardware (MAC) Address
wlan.aid	Association ID	Unsigned 16-bit integer
wlan.bssid	BSS Id	6-byte Hardware (MAC) Address
wlan.channel	Channel	Unsigned 8-bit integer
wlan.da	Destination address	6-byte Hardware (MAC) Address
wlan.data_rate	Data Rate	Unsigned 8-bit integer
wlan.duration	Duration	Unsigned 16-bit integer
wlan.fc	Frame Control Field	Unsigned 16-bit integer
wlan.fc.ds	DS status	Unsigned 8-bit integer
wlan.fc.frag	More Fragments	Boolean
wlan.fc.fromds	From DS	Boolean
wlan.fc.moredata	More Data	Boolean
wlan.fc.order	Order flag	Boolean

Field	Field Name	Type
wlan.fc.pwrmgt	PWR MGT	Boolean
wlan.fc.retry	Retry	Boolean
wlan.fc.subtype	Subtype	Unsigned 8-bit integer
wlan.fc.tods	To DS	Boolean
wlan.fc.type	Type	Unsigned 8-bit integer
wlan.fc.type_subtype	Type/Subtype	Unsigned 16-bit integer
wlan.fc.version	Version	Unsigned 8-bit integer
wlan.fc.wep	WEP flag	Boolean
wlan.fcs	Frame check sequence	Unsigned 32-bit integer
wlan.flags	Protocol Flags	Unsigned 8-bit integer
wlan.frag	Fragment number	Unsigned 16-bit integer
wlan.fragment	802.11 Fragment	No value
wlan.fragment.error	Defragmentation error	No value
wlan.fragment.multipletails	Multiple tail fragments found	Boolean
wlan.fragment.overlap	Fragment overlap	Boolean
wlan.fragment.overlap.conflict	Conflicting data in fragment overlap	Boolean
wlan.fragment.toolongfragment	Fragment too long	Boolean
wlan.fragments	802.11 Fragments	No value
wlan.ra	Receiver address	6-byte Hardware (MAC) Address
wlan.sa	Source address	6-byte Hardware (MAC) Address
wlan.seq	Sequence number	Unsigned 16-bit integer
wlan.signal_strength	Signal Strength	Unsigned 8-bit integer
wlan.ta	Transmitter address	6-byte Hardware (MAC) Address
wlan.wep.icv	WEP ICV (not verified)	Unsigned 32-bit integer
wlan.wep.iv	Initialization Vector	Unsigned 24-bit integer
wlan.wep.key	Key	Unsigned 8-bit integer

IEEE 802.11 wireless LAN management frame (wlan_mgt)

Table A-78. IEEE 802.11 wireless LAN management frame (wlan_mgt)

Field	Field Name	Type
wlan_mgt.fixed.aid	Association ID	Unsigned 16-bit integer
wlan_mgt.fixed.all	Fixed parameters	Unsigned 16-bit integer
wlan_mgt.fixed.auth.alg	Authentication Algorithm	Unsigned 16-bit integer
wlan_mgt.fixed.auth_seq	Authentication SEQ	Unsigned 16-bit integer
wlan_mgt.fixed.beacon	Beacon Interval	Double-precision floating point
wlan_mgt.fixed.capabilities	Capabilities	Unsigned 16-bit integer
wlan_mgt.fixed.capabilities.agility	Channel Agility	Boolean
wlan_mgt.fixed.capabilities.cfpoll.ap	CFP participation capabilities	Unsigned 16-bit integer
wlan_mgt.fixed.capabilities.cfpoll.sta	CFP participation capabilities	Unsigned 16-bit integer
wlan_mgt.fixed.capabilities.ess	ESS capabilities	Boolean
wlan_mgt.fixed.capabilities.ibss	IBSS status	Boolean
wlan_mgt.fixed.capabilities.pbcc	PBCC	Boolean
wlan_mgt.fixed.capabilities.short_preamble	Short Preamble	Boolean
wlan_mgt.fixed.capabilities.priv	Privacy	Boolean
wlan_mgt.fixed.current_ap	Current AP	6-byte Hardware (MAC) Address
wlan_mgt.fixed.listen_ival	Listen Interval	Unsigned 16-bit integer
wlan_mgt.fixed.reason_code	Reason code	Unsigned 16-bit integer
wlan_mgt.fixed.status_code	Status code	Unsigned 16-bit integer
wlan_mgt.fixed.timestamp	Timestamp	String
wlan_mgt.tag.interpretation	Tag interpretation	String
wlan_mgt.tag.length	Tag length	Unsigned 16-bit integer
wlan_mgt.tag.number	Tag	Unsigned 16-bit integer
wlan_mgt.tagged.all	Tagged parameters	Unsigned 16-bit integer

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ILMI (ilmi)

Table A-79. ILMI (ilmi)

Field	Field Name	Type

IP Payload Compression (ipcomp)

Table A-80. IP Payload Compression (ipcomp)

Field	Field Name	Type
ipcomp.cpi	CPI	Unsigned 16-bit integer
ipcomp.flags	Flags	Unsigned 8-bit integer

IPX Message (ipxmsg)

Table A-81. IPX Message (ipxmsg)

Field	Field Name	Type
ipxmsg.conn	Connection Number	Unsigned 8-bit integer
ipxmsg.sigchar	Signature Char	Unsigned 8-bit integer

IPX Routing Information Protocol (ipxrip)

Table A-82. IPX Routing Information Protocol (ipxrip)

Field	Field Name	Type
ipxrip.request	Request	Boolean
ipxrip.response	Response	Boolean

ISDN Q.921-User Adaptation Layer (iua)

Table A-83. ISDN Q.921-User Adaptation Layer (iua)

Field	Field Name	Type
iua.asp_identifier	ASP identifier	Unsigned 32-bit integer

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Field	Field Name	Type
iua.asp_reason	Reason	Unsigned 32-bit integer
iua.diagnostic_information	Diagnostic information	Byte array
iua.dlci_one_bit	One bit	Boolean
iua.dlci_sapi	SAPI	Unsigned 8-bit integer
iua.dlci_spare	Spare	Unsigned 16-bit integer
iua.dlci_spare_bit	Spare bit	Boolean
iua.dlci_tei	TEI	Unsigned 8-bit integer
iua.dlci_zero_bit	Zero bit	Boolean
iua.error_code	Error code	Unsigned 32-bit integer
iua.heartbeat_data	Heartbeat data	Byte array
iua.info_string	Info string	String
iua.int_interface_identifier	Integer interface identifier	Signed 32-bit integer
iua.interface_range_end	End	Unsigned 32-bit integer
iua.interface_range_start	Start	Unsigned 32-bit integer
iua.message_class	Message class	Unsigned 8-bit integer
iua.message_length	Message length	Unsigned 32-bit integer
iua.message_type	Message Type	Unsigned 8-bit integer
iua.parameter_length	Parameter length	Unsigned 16-bit integer
iua.parameter_padding	Parameter padding	Byte array
iua.parameter_tag	Parameter Tag	Unsigned 16-bit integer
iua.parameter_value	Parameter value	Byte array
iua.release_reason	Reason	Unsigned 32-bit integer
iua.reserved	Reserved	Unsigned 8-bit integer
iua.status_identification	Status identification	Unsigned 16-bit integer
iua.status_type	Status type	Unsigned 16-bit integer
iua.tei_status	TEI status	Unsigned 32-bit integer
iua.text_interface_identifier	Text interface identifier	String
iua.traffic_mode_type	Traffic mode type	Unsigned 32-bit integer
iua.version	Version	Unsigned 8-bit integer

ISDN User Part (isup)

Table A-84. ISDN User Part (isup)

Field	Field Name	Type
isup.access_delivery_ind	Access delivery indicator	Boolean
isup.address_presentation_restricted_indicator	Address presentation restricted indicator	Unsigned 8-bit integer
isup.automatic_congestion_level	Automatic congestion level	Unsigned 8-bit integer
isup.backw_call_echo_control_device_indicator	Echo Control Device Indicator	Boolean
isup.backw_call_end_to_end_information_indicator	End to end information indicator	Boolean
isup.backw_call_end_to_end_method_indicator	End to end method indicator	Unsigned 16-bit integer
isup.backw_call_holding_indicator	Holding indicator	Boolean
isup.backw_call_interworking_indicator	Interworking indicator	Boolean
isup.backw_call_isdn_access_indicator	ISDN access indicator	Boolean
isup.backw_call_isdn_user_part_indicator	ISDN user part indicator	Boolean
isup.backw_call_sccp_method_indicator	SCCP method indicator	Unsigned 16-bit integer
isup.call_diversion_may_occur_indicator	Call diversion may occur indicator	Boolean
isup.call_processing_state	Call processing state	Unsigned 8-bit integer
isup.call_to_be_diverted_ind	Call to be diverted indicator	Unsigned 8-bit integer
isup.call_to_be_offered_ind	Call to be offered indicator	Unsigned 8-bit integer
isup.called_party_even_address_signal_digit	Address signal digit	Unsigned 8-bit integer
isup.called_party_nature_of_address_indicator	Nature of address indicator	Unsigned 8-bit integer
isup.called_party_odd_address_signal_digit	Address signal digit	Unsigned 8-bit integer
isup.called_partys_category	Called party's category indicator	Unsigned 16-bit integer
isup.called_partys_status_indicator	Called party's status indicator	Unsigned 16-bit integer
isup.calling_party_address_request_indicator	Calling party address request indicator	Boolean
isup.calling_party_address_response_indicator	Calling party address response indicator	Unsigned 16-bit integer

Field	Field Name	Type
isup.calling_party_even_address_signal_digit	Address signal digit	Unsigned 8-bit integer
isup.calling_party_nature_of_address	Nature of address indicator	Unsigned 8-bit integer
isup.calling_party_odd_address_signal_digit	Address signal digit	Unsigned 8-bit integer
isup.calling_partys_category	Calling Party's category	Unsigned 8-bit integer
isup.calling_partys_category_request_indicator	Calling party's category request indicator	Boolean
isup.calling_partys_category_response_indicator	Calling party's category response indicator	Boolean
isup.cgs_message_type	Circuit group supervision message type	Unsigned 8-bit integer
isup.charge_indicator	Charge indicator	Unsigned 16-bit integer
isup.charge_information_request_indicator	Charge information request indicator	Boolean
isup.charge_information_response_indicator	Charge information response indicator	Boolean
isup.cic	CIC	Unsigned 16-bit integer
isup.clg_call_ind	Closed user group call indicator	Unsigned 8-bit integer
isup.conference_acceptance_ind	Conference acceptance indicator	Unsigned 8-bit integer
isup.connected_line_identity_request_indicator	Connected line identity request indicator	Boolean
isup.continuity_check_indicator	Continuity Check Indicator	Unsigned 8-bit integer
isup.continuity_indicator	Continuity indicator	Boolean
isup.echo_control_device_indicator	Echo Control Device Indicator	Boolean
isup.event_ind	Event indicator	Unsigned 8-bit integer
isup.event_presentatiation_restr_ind	Event presentation restricted indicator	Boolean
isup.extension_ind	Extension indicator	Boolean
isup.forw_call_end_to_end_info_indicator	End-to-end information indicator	Boolean
isup.forw_call_end_to_end_method_indicator	End-to-end method indicator	Unsigned 16-bit integer
isup.forw_call_interworking_indicator	Interworking indicator	Boolean

Field	Field Name	Type
isup.forw_call_isdn_access_indicator	ISDN access indicator	Boolean
isup.forw_call_isdn_user_part_ind	ISDN user part indicator	Boolean
isup.forw_call_natnl_inatnl_call_ind	National/international call indicator	Boolean
isup.forw_call_preferences_ind	ISDN user part preference indicator	Unsigned 16-bit integer
isup.forw_call_sccp_method_ind	SCCP method indicator	Unsigned 16-bit integer
isup.hold_provided_indicator	Hold provided indicator	Boolean
isup.hw_blocking_state	HW blocking state	Unsigned 8-bit integer
isup.inband_information_ind	In-band information indicator	Boolean
isup.info_req_holding_indicator	Holding indicator	Boolean
isup.inn_indicator	INN indicator	Boolean
isup.isdn_odd_even_indicator	Odd/even indicator	Boolean
isup.loop_prevention_response_ind	Response indicator	Unsigned 8-bit integer
isup.malicious_call_ident_request_ind	Malicious call identification request indicator (ISUP'88)	Boolean
isup.mandatory_variable_parameter_pointer	Pointer to Parameter	Unsigned 8-bit integer
isup.map_type	Map Type	Unsigned 8-bit integer
isup.message_type	Message Type	Unsigned 8-bit integer
isup.mlpp_user	MLPP user indicator	Boolean
isup.mtc_blocking_state	Maintenance blocking state	Unsigned 8-bit integer
isup.network_identification_plan	Network identification plan	Unsigned 8-bit integer
isup.ni_indicator	NI indicator	Boolean
isup.numbering_plan_indicator	Numbering plan indicator	Unsigned 8-bit integer
isup.optional_parameter_part_pointer	Pointer to optional parameter part	Unsigned 8-bit integer
isup.original_redirection_reason	Original redirection reason	Unsigned 16-bit integer

Field	Field Name	Type
isup.parameter_length	Parameter Length	Unsigned 8-bit integer
isup.parameter_type	Parameter Type	Unsigned 8-bit integer
isup.range_indicator	Range indicator	Unsigned 8-bit integer
isup.redirecting_ind	Redirection indicator	Unsigned 16-bit integer
isup.redirection_counter	Redirection counter	Unsigned 16-bit integer
isup.redirection_reason	Redirection reason	Unsigned 16-bit integer
isup.satellite_indicator	Satellite Indicator	Unsigned 8-bit integer
isup.screening_indicator	Screening indicator	Unsigned 8-bit integer
isup.screening_indicator_enhanced	Screening indicator	Unsigned 8-bit integer
isup.simple_segmentation_ind	Simple segmentation indicator	Boolean
isup.solicided_indicator	Solicited indicator	Boolean
isup.suspend_resume_indicator	Suspend/Resume indicator	Boolean
isup.temporary_alternative_routing_ind	Temporary alternative routing indicator	Boolean
isup.transmission_medium_requirement	Transmission medium requirement	Unsigned 8-bit integer
isup.transmission_medium_prime	Transmission medium requirement prime	Unsigned 8-bit integer
isup.type_of_network_identification	Type of network identification	Unsigned 8-bit integer

ISO 10589 ISIS InTRA Domain Routeing Information Exchange Protocol (isis)

Table A-85. ISO 10589 ISIS InTRA Domain Routeing Information Exchange Protocol (isis)

Field	Field Name	Type
isis.csnp.pdu_length	PDU length	Unsigned 16-bit integer
isis.hello.circuit_type	Circuit type	Unsigned 8-bit integer
isis.hello.clv_ipv4_int_addr	IPv4 interface address	IPv4 address
isis.hello.clv_ipv6_int_addr	IPv6 interface address	IPv6 address
isis.hello.clv_mt	MT-ID	Unsigned 16-bit integer
isis.hello.clv_ptp_adj	Point-to-point Adjacency	Unsigned 8-bit integer

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Field	Field Name	Type
isis.hello.holding_timer	Holding timer	Unsigned 16-bit integer
isis.hello.lan_id	SystemID{ Designated IS }	Byte array
isis.hello.local_circuit_id	Local circuit ID	Unsigned 8-bit integer
isis.hello.pdu_length	PDU length	Unsigned 16-bit integer
isis.hello.priority	Priority	Unsigned 8-bit integer
isis.hello.source_id	SystemID{ Sender of PDU }	Byte array
isis.irpd	Intra Domain Routing Protocol Discriminator	Unsigned 8-bit integer
isis.len	PDU Header Length	Unsigned 8-bit integer
isis.lsp.checksum	Checksum	Unsigned 16-bit integer
isis.lsp.clv_ipv4_int_addr	IPv4 interface address	IPv4 address
isis.lsp.clv_ipv6_int_addr	IPv6 interface address	IPv6 address
isis.lsp.clv_mt	MT-ID	Unsigned 16-bit integer
isis.lsp.clv_te_router_id	Traffic Engineering Router ID	IPv4 address
isis.lsp.pdu_length	PDU length	Unsigned 16-bit integer
isis.lsp.remaining_life	Remaining lifetime	Unsigned 16-bit integer
isis.lsp.sequence_number	Sequence number	Unsigned 32-bit integer
isis.max_area_adr	Max.AREAs: (0==3)	Unsigned 8-bit integer
isis.psnp.pdu_length	PDU length	Unsigned 16-bit integer
isis.reserved	Reserved (==0)	Unsigned 8-bit integer
isis.sysid_len	System ID Length	Unsigned 8-bit integer
isis.type	PDU Type	Unsigned 8-bit integer
isis.version	Version (==1)	Unsigned 8-bit integer
isis.version2	Version2 (==1)	Unsigned 8-bit integer

ISO 8073 COTP Connection-Oriented Transport Protocol (cotp)

Table A-86. ISO 8073 COTP Connection-Oriented Transport Protocol (cotp)

Field	Field Name	Type

ISO 8473 CLNP ConnectionLess Network Protocol (clnp)

Table A-87. ISO 8473 CLNP ConnectionLess Network Protocol (clnp)

Field	Field Name	Type
clnp.checksum	Checksum	Unsigned 16-bit integer
clnp.dsap	DA	Byte array
clnp.dsap.len	DAL	Unsigned 8-bit integer
clnp.len	HDR Length	Unsigned 8-bit integer
clnp.nlpi	Network Layer Protocol Identifier	Unsigned 8-bit integer
clnp.pdu.len	PDU length	Unsigned 16-bit integer
clnp.segment	CLNP Segment	No value
clnp.segment.error	Reassembly error	No value
clnp.segment.multipletails	Multiple tail segments found	Boolean
clnp.segment.overlap	Segment overlap	Boolean
clnp.segment.overlap.conflict	Conflicting data in segment overlap	Boolean
clnp.segment.toolongsegment	Segment too long	Boolean
clnp.segments	CLNP Segments	No value
clnp.ssap	SA	Byte array
clnp.ssap.len	SAL	Unsigned 8-bit integer
clnp.ttl	Holding Time	Unsigned 8-bit integer
clnp.type	PDU Type	Unsigned 8-bit integer
clnp.version	Version	Unsigned 8-bit integer

ISO 8602 CLTP ConnectionLess Transport Protocol (cltp)

Table A-88. ISO 8602 CLTP ConnectionLess Transport Protocol (cltp)

Field	Field Name	Type

ISO 9542 ESIS Routeing Information Exchange Protocol (esis)

Table A-89. ISO 9542 ESIS Routeing Information Exchange Protocol (esis)

Field	Field Name	Type
esis.chksum	Checksum	Unsigned 16-bit integer
esis.htime	Holding Time	Unsigned 16-bit integer
esis.length	PDU Length	Unsigned 8-bit integer
esis.nlpi	Network Layer Protocol Identifier	Unsigned 8-bit integer
esis.res	Reserved(==0)	Unsigned 8-bit integer
esis.type	PDU Type	Unsigned 8-bit integer
esis.ver	Version (==1)	Unsigned 8-bit integer

ITU-T Recommendation H.261 (h261)

Table A-90. ITU-T Recommendation H.261 (h261)

Field	Field Name	Type
h261.ebit	End bit position	Unsigned 8-bit integer
h261.gobn	GOB Number	Unsigned 8-bit integer
h261.hmvd	Horizontal motion vector data	Unsigned 8-bit integer
h261.i	Intra frame encoded data flag	Boolean
h261.mbap	Macroblock address predictor	Unsigned 8-bit integer
h261.quant	Quantizer	Unsigned 8-bit integer
h261.sbit	Start bit position	Unsigned 8-bit integer
h261.stream	H.261 stream	Byte array
h261.v	Motion vector flag	Boolean
h261.vmvd	Vertical motion vector data	Unsigned 8-bit integer

Inter-Access-Point Protocol (iapp)

Table A-91. Inter-Access-Point Protocol (iapp)

Field	Field Name	Type

Field	Field Name	Type
iapp.type	type	Unsigned 8-bit integer
iapp.version	Version	Unsigned 8-bit integer

Internet Cache Protocol (icp)

Table A-92. Internet Cache Protocol (icp)

Field	Field Name	Type
icp.length	Length	Unsigned 16-bit integer
icp.nr	Request Number	Unsigned 32-bit integer
icp.opcode	Opcode	Unsigned 8-bit integer
icp.version	Version	Unsigned 8-bit integer

Internet Content Adaptation Protocol (icap)

Table A-93. Internet Content Adaptation Protocol (icap)

Field	Field Name	Type
icap.options	Options	Boolean
icap.other	Other	Boolean
icap.reqmod	Reqmod	Boolean
icap.respmod	Respmod	Boolean
icap.response	Response	Boolean

Internet Control Message Protocol (icmp)

Table A-94. Internet Control Message Protocol (icmp)

Field	Field Name	Type
icmp.checksum	Checksum	Unsigned 16-bit integer
icmp.checksum_bad	Bad Checksum	Boolean
icmp.code	Code	Unsigned 8-bit integer
icmp.mip.b	Busy	Boolean
icmp.mip.challenge	Challenge	Byte array
icmp.mip.coa	Care-Of-Address	IPv4 address

Field	Field Name	Type
icmp.mip.f	Foreign Agent	Boolean
icmp.mip.flags	Flags	Unsigned 8-bit integer
icmp.mip.g	GRE	Boolean
icmp.mip.h	Home Agent	Boolean
icmp.mip.length	Length	Unsigned 8-bit integer
icmp.mip.life	Registration Lifetime	Unsigned 16-bit integer
icmp.mip.m	Minimal Encapsulation	Boolean
icmp.mip.prefixlength	Prefix Length	Unsigned 8-bit integer
icmp.mip.r	Registration Required	Boolean
icmp.mip.res	Reserved	Boolean
icmp.mip.reserved	Reserved	Unsigned 8-bit integer
icmp.mip.seq	Sequence Number	Unsigned 16-bit integer
icmp.mip.type	Extension Type	Unsigned 8-bit integer
icmp.mip.v	VJ Comp	Boolean
icmp.type	Type	Unsigned 8-bit integer

Internet Control Message Protocol v6 (icmpv6)

Table A-95. Internet Control Message Protocol v6 (icmpv6)

Field	Field Name	Type
icmpv6.checksum	Checksum	Unsigned 16-bit integer
icmpv6.checksum_bad	Bad Checksum	Boolean
icmpv6.code	Code	Unsigned 8-bit integer
icmpv6.type	Type	Unsigned 8-bit integer

Internet Group Management Protocol (igmp)

Table A-96. Internet Group Management Protocol (igmp)

Field	Field Name	Type
igmp.access_key	Access Key	Byte array
igmp.aux_data	Aux Data	Byte array
igmp.aux_data_len	Aux Data Len	Unsigned 8-bit integer
igmp.checksum	Checksum	Unsigned 16-bit integer

Field	Field Name	Type
igmp.checksum_bad	Bad Checksum	Boolean
igmp.group_type	Type Of Group	Unsigned 8-bit integer
igmp.identifier	Identifier	Unsigned 32-bit integer
igmp.max_resp	Max Resp Time	Unsigned 8-bit integer
igmp.max_resp.exp	Exponent	Unsigned 8-bit integer
igmp.max_resp.mant	Mantissa	Unsigned 8-bit integer
igmp.mtrace.max_hops	# hops	Unsigned 8-bit integer
igmp.mtrace.q_arrival	Query Arrival	Unsigned 32-bit integer
igmp.mtrace.q_fwd_code	Forwarding Code	Unsigned 8-bit integer
igmp.mtrace.q_fwd_ttl	FwdTTL	Unsigned 8-bit integer
igmp.mtrace.q_id	Query ID	Unsigned 24-bit integer
igmp.mtrace.q_inaddr	In itf addr	IPv4 address
igmp.mtrace.q_inpkt	In pkts	Unsigned 32-bit integer
igmp.mtrace.q_mbz	MBZ	Unsigned 8-bit integer
igmp.mtrace.q_outaddr	Out itf addr	IPv4 address
igmp.mtrace.q_outpkt	Out pkts	Unsigned 32-bit integer
igmp.mtrace.q_prevrtr	Previous rtr addr	IPv4 address
igmp.mtrace.q_rtg_proto	Rtg Protocol	Unsigned 8-bit integer
igmp.mtrace.q_s	S	Unsigned 8-bit integer
igmp.mtrace.q_src_mask	Src Mask	Unsigned 8-bit integer
igmp.mtrace.q_total	S,G pkt count	Unsigned 32-bit integer
igmp.mtrace.raddr	Receiver Address	IPv4 address
igmp.mtrace.resp_ttl	Response TTL	Unsigned 8-bit integer
igmp.mtrace.rspaddr	Response Address	IPv4 address
igmp.mtrace.saddr	Source Address	IPv4 address
igmp.num_grp_recs	Num Group Records	Unsigned 16-bit integer
igmp.num_src	Num Src	Unsigned 16-bit integer
igmp.qqic	QQIC	Unsigned 8-bit integer
igmp.qrv	QRV	Unsigned 8-bit integer
igmp.record_type	Record Type	Unsigned 8-bit integer
igmp.reply	Reply	Unsigned 8-bit integer
igmp.reply.pending	Reply Pending	Unsigned 8-bit integer
igmp.s	S	Boolean
igmp.type	Type	Unsigned 8-bit integer
igmp.version	IGMP Version	Unsigned 8-bit integer

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Internet Message Access Protocol (imap)

Table A-97. Internet Message Access Protocol (imap)

Field	Field Name	Type
imap.request	Request	Boolean
imap.response	Response	Boolean

Internet Printing Protocol (ipp)

Table A-98. Internet Printing Protocol (ipp)

Field	Field Name	Type

Internet Protocol (ip)

Table A-99. Internet Protocol (ip)

Field	Field Name	Type
ip.addr	Source or Destination Address	IPv4 address
ip.checksum	Header checksum	Unsigned 16-bit integer
ip.checksum_bad	Bad Header checksum	Boolean
ip.dsfield	Differentiated Services field	Unsigned 8-bit integer
ip.dsfield.ce	ECN-CE	Unsigned 8-bit integer
ip.dsfield.dscp	Differentiated Services Codepoint	Unsigned 8-bit integer
ip.dsfield.ect	ECN-Capable Transport (ECT)	Unsigned 8-bit integer
ip.dst	Destination	IPv4 address
ip.flags	Flags	Unsigned 8-bit integer
ip.flags.df	Don't fragment	Boolean
ip.flags.mf	More fragments	Boolean
ip.frag_offset	Fragment offset	Unsigned 16-bit integer
ip.fragment	IP Fragment	No value
ip.fragment.error	Defragmentation error	No value

Field	Field Name	Type
ip.fragment.multipletails	Multiple tail fragments found	Boolean
ip.fragment.overlap	Fragment overlap	Boolean
ip.fragment.overlap.conflict	Conflicting data in fragment overlap	Boolean
ip.fragment.toolongfragment	Fragment too long	Boolean
ip.fragments	IP Fragments	No value
ip.hdr_len	Header Length	Unsigned 8-bit integer
ip.id	Identification	Unsigned 16-bit integer
ip.len	Total Length	Unsigned 16-bit integer
ip.proto	Protocol	Unsigned 8-bit integer
ip.src	Source	IPv4 address
ip.tos	Type of Service	Unsigned 8-bit integer
ip.tos.cost	Cost	Boolean
ip.tos.delay	Delay	Boolean
ip.tos.precedence	Precedence	Unsigned 8-bit integer
ip.tos.reliability	Reliability	Boolean
ip.tos.throughput	Throughput	Boolean
ip.ttl	Time to live	Unsigned 8-bit integer
ip.version	Version	Unsigned 8-bit integer

Internet Protocol Version 6 (ipv6)

Table A-100. Internet Protocol Version 6 (ipv6)

Field	Field Name	Type
ipv6.addr	Address	IPv6 address
ipv6.class	Traffic class	Unsigned 8-bit integer
ipv6.dst	Destination	IPv6 address
ipv6.flow	Flowlabel	Unsigned 32-bit integer
ipv6.fragment	IPv6 Fragment	No value
ipv6.fragment.error	Defragmentation error	No value
ipv6.fragment.multipletails	Multiple tail fragments found	Boolean
ipv6.fragment.overlap	Fragment overlap	Boolean

Field	Field Name	Type
ipv6.fragment.overlap.conflict	Conflicting data in fragment overlap	Boolean
ipv6.fragment.toolongfragment	Fragment too long	Boolean
ipv6.fragments	IPv6 Fragments	No value
ipv6.hlim	Hop limit	Unsigned 8-bit integer
ipv6.mipv6_a_flag	Acknowledge (A)	Boolean
ipv6.mipv6_b_flag	Bicasting all (B)	Boolean
ipv6.mipv6_d_flag	Duplicate Address Detection (D)	Boolean
ipv6.mipv6_h_flag	Home Registration (H)	Boolean
ipv6.mipv6_home_address	Home Address	IPv6 address
ipv6.mipv6_length	Option Length	Unsigned 8-bit integer
ipv6.mipv6_life_time	Life Time	Unsigned 32-bit integer
ipv6.mipv6_m_flag	MAP Registration (M)	Boolean
ipv6.mipv6_prefix_length	Prefix Length	Unsigned 8-bit integer
ipv6.mipv6_r_flag	Router (R)	Boolean
ipv6.mipv6_refresh	Refresh	Unsigned 32-bit integer
ipv6.mipv6_sequence_number	Sequence Number	Unsigned 16-bit integer
ipv6.mipv6_status	Status	Unsigned 8-bit integer
ipv6.mipv6_sub_alternative_CoA	Alternative Care of Address	IPv6 address
ipv6.mipv6_sub_length	Sub-Option Length	Unsigned 8-bit integer
ipv6.mipv6_sub_type	Sub-Option Type	Unsigned 8-bit integer
ipv6.mipv6_sub_unique_ID	Unique Identifier	Unsigned 16-bit integer
ipv6.mipv6_type	Option Type	Unsigned 8-bit integer
ipv6.nxt	Next header	Unsigned 8-bit integer
ipv6.plen	Payload length	Unsigned 16-bit integer
ipv6.src	Source	IPv6 address
ipv6.version	Version	Unsigned 8-bit integer

Internet Relay Chat (irc)

Table A-101. Internet Relay Chat (irc)

Field	Field Name	Type
irc.command	Command	String
irc.request	Request	Boolean
irc.response	Response	Boolean

Internet Security Association and Key Management Protocol (isakmp)

Table A-102. Internet Security Association and Key Management Protocol (isakmp)

Field	Field Name	Type

Internetwork Packet eXchange (ipx)

Table A-103. Internetwork Packet eXchange (ipx)

Field	Field Name	Type
ipx.checksum	Checksum	Unsigned 16-bit integer
ipx.dst.net	Destination Network	IPX network or server name
ipx.dst.node	Destination Node	6-byte Hardware (MAC) Address
ipx.dst.socket	Destination Socket	Unsigned 16-bit integer
ipx.hops	Transport Control (Hops)	Unsigned 8-bit integer
ipx.len	Length	Unsigned 16-bit integer
ipx.packet_type	Packet Type	Unsigned 8-bit integer
ipx.src.net	Source Network	IPX network or server name
ipx.src.node	Source Node	6-byte Hardware (MAC) Address
ipx.src.socket	Source Socket	Unsigned 16-bit integer

Java RMI (rmi)

Table A-104. Java RMI (rmi)

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Field	Field Name	Type
rmi.endpoint_id.hostname	Hostname	String
rmi.endpoint_id.length	Length	Unsigned 16-bit integer
rmi.endpoint_id.port	Port	Unsigned 16-bit integer
rmi.inputstream.message	Input Stream Message	String
rmi.magic	Magic	Unsigned 32-bit integer
rmi.outputstream.message	Output Stream Message	String
rmi.protocol	Protocol	String
rmi.ser.magic	Magic	Unsigned 16-bit integer
rmi.ser.version	Version	Unsigned 16-bit integer
rmi.version	Version	Unsigned 16-bit integer

Java Serialization (serialization)

Table A-105. Java Serialization (serialization)

Field	Field Name	Type

Kerberos (kerberos)

Table A-106. Kerberos (kerberos)

Field	Field Name	Type

Kernel Lock Manager (klm)

Table A-107. Kernel Lock Manager (klm)

Field	Field Name	Type
klm.block	block	Boolean
klm.exclusive	exclusive	Boolean
klm.holder	holder	No value
klm.len	length	Unsigned 32-bit integer
klm.lock	lock	No value

Field	Field Name	Type
klm.offset	offset	Unsigned 32-bit integer
klm.pid	pid	Unsigned 32-bit integer
klm.servername	server name	String
klm.stats	stats	Unsigned 32-bit integer

Label Distribution Protocol (ldp)

Table A-108. Label Distribution Protocol (ldp)

Field	Field Name	Type
ldp,msg.tlv.hello.requested	Hello Requested	Boolean
ldp.hdr.ldpid.lsid	Label Space ID	Unsigned 16-bit integer
ldp.hdr.ldpid.lsr	LSR ID	IPv4 address
ldp.hdr.pdu_len	PDU Length	Unsigned 16-bit integer
ldp.hdr.version	Version	Unsigned 16-bit integer
ldp.msg.experiment.id	Experiment ID	Unsigned 32-bit integer
ldp.msg.id	Message ID	Unsigned 32-bit integer
ldp.msg.len	Message Length	Unsigned 16-bit integer
ldp.msg.tlv.addrl.addr	Address	String
ldp.msg.tlv.addrl.addr_family	Address Family	Unsigned 16-bit integer
ldp.msg.tlv.atm.label.vbits	V-bits	Unsigned 8-bit integer
ldp.msg.tlv.atm.label.vci	VCI	Unsigned 16-bit integer
ldp.msg.tlv.atm.label.vpi	VPI	Unsigned 16-bit integer
ldp.msg.tlv.cbs	CBS	Double-precision floating point
ldp.msg.tlv.cdr	CDR	Double-precision floating point
ldp.msg.tlv.ebs	EBS	Double-precision floating point
ldp.msg.tlv.er_hop.as	AS Number	Unsigned 16-bit integer
ldp.msg.tlv.er_hop.locallspid	Local CR-LSP ID	Unsigned 16-bit integer
ldp.msg.tlv.er_hop.loose	Loose route bit	Unsigned 24-bit integer
ldp.msg.tlv.er_hop.lsrid	Local CR-LSP ID	IPv4 address
ldp.msg.tlv.er_hop.prefix4	IPv4 Address	IPv4 address

Field	Field Name	Type
ldp.msg.tlv.er_hop.prefix6	IPv6 Address	IPv6 address
ldp.msg.tlv.er_hop.prefixlen	Prefix length	Unsigned 8-bit integer
ldp.msg.tlv.experiment_id	Experiment ID	Unsigned 32-bit integer
ldp.msg.tlv.extstatus.data	Extended Status Data	Unsigned 32-bit integer
ldp.msg.tlv.fec.af	FEC Element Address Type	Unsigned 16-bit integer
ldp.msg.tlv.fec.hoval	FEC Element Host Address Value	String
ldp.msg.tlv.fec.len	FEC Element Length	Unsigned 8-bit integer
ldp.msg.tlv.fec.pfval	FEC Element Prefix Value	String
ldp.msg.tlv.fec.type	FEC Element Type	Unsigned 8-bit integer
ldp.msg.tlv.fec.vc.controlword	C-bit	Boolean
ldp.msg.tlv.fec.vc.groupid	Group ID	Unsigned 32-bit integer
ldp.msg.tlv.fec.vc.infolength	VC Info Length	Unsigned 8-bit integer
ldp.msg.tlv.fec.vc.intparam.payload	Payload Bytes	Unsigned 16-bit integer
ldp.msg.tlv.fec.vc.intparam.desc	Description	String
ldp.msg.tlv.fec.vc.intparam.id	ID	Unsigned 8-bit integer
ldp.msg.tlv.fec.vc.intparam.length	Length	Unsigned 8-bit integer
ldp.msg.tlv.fec.vc.intparam.maxcells	Number of Cells	Unsigned 16-bit integer
ldp.msg.tlv.fec.vc.intparam.mtu	MTU	Unsigned 16-bit integer
ldp.msg.tlv.fec.vc.vcid	VC ID	Unsigned 32-bit integer
ldp.msg.tlv.fec.vc.vctype	VC Type	Unsigned 16-bit integer
ldp.msg.tlv.flags_cbs	CBS	Boolean
ldp.msg.tlv.flags_cdr	CDR	Boolean
ldp.msg.tlv.flags_ebs	EBS	Boolean
ldp.msg.tlv.flags_pbs	PBS	Boolean
ldp.msg.tlv.flags_pdr	PDR	Boolean
ldp.msg.tlv.flags_reserv	Reserved	Unsigned 8-bit integer
ldp.msg.tlv.flags_weight	Weight	Boolean
ldp.msg.tlv.fr.label.dlci	DLCI	Unsigned 24-bit integer

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Field	Field Name	Type
ldp.msg.tlv.fr.label.len	Number of DLCI bits	Unsigned 16-bit integer
ldp.msg.tlv.frequency	Frequency	Unsigned 8-bit integer
ldp.msg.tlv.generic.label	Generic Label	Unsigned 32-bit integer
ldp.msg.tlv.hc.value	Hop Count Value	Unsigned 8-bit integer
ldp.msg.tlv.hello.cnf_seqno	Configuration Sequence Number	Unsigned 32-bit integer
ldp.msg.tlv.hello.hold	Hold Time	Unsigned 16-bit integer
ldp.msg.tlv.hello.res	Reserved	Unsigned 16-bit integer
ldp.msg.tlv.hello.targeted	Targeted Hello	Boolean
ldp.msg.tlv.hold_prio	Hold Prio	Unsigned 8-bit integer
ldp.msg.tlv.ipv4.taddr	IPv4 Transport Address	IPv4 address
ldp.msg.tlv.ipv6.taddr	IPv6 Transport Address	IPv6 address
ldp.msg.tlv.len	TLV Length	Unsigned 16-bit integer
ldp.msg.tlv.lspid.actflg	Action Indicator Flag	Unsigned 16-bit integer
ldp.msg.tlv.lspid.locallspid	Local CR-LSP ID	Unsigned 16-bit integer
ldp.msg.tlv.lspid.lsrid	Ingress LSR Router ID	IPv4 address
ldp.msg.tlv.pbs	PBS	Double-precision floating point
ldp.msg.tlv.pdr	PDR	Double-precision floating point
ldp.msg.tlv.pv.lsrid	LSR Id	IPv4 address
ldp.msg.tlv.resource_class	Resource Class	Unsigned 32-bit integer
ldp.msg.tlv.returned.ldpid.lsr	Returned PDU Label Space ID	Unsigned 16-bit integer
ldp.msg.tlv.returned.ldpid.lsr	Returned PDU LSR ID	IPv4 address
ldp.msg.tlv.returned.msg.id	Returned Message ID	Unsigned 32-bit integer
ldp.msg.tlv.returned.msg.len	Returned Message Length	Unsigned 16-bit integer
ldp.msg.tlv.returned.msg.type	Returned Message Type	Unsigned 16-bit integer
ldp.msg.tlv.returned.msg.ubit	Returned Message Unknown bit	Unsigned 8-bit integer
ldp.msg.tlv.returned.pdu_len	Returned PDU Length	Unsigned 16-bit integer
ldp.msg.tlv.returned.version	Returned PDU Version	Unsigned 16-bit integer

Field	Field Name	Type
ldp.msg.tlv.route_pinning	Route Pinning	Unsigned 32-bit integer
ldp.msg.tlv.sess.advbit	Session Label Advertisement Discipline	Boolean
ldp.msg.tlv.sess.atm.dir	Directionality	Boolean
ldp.msg.tlv.sess.atm.lr	Number of ATM Label Ranges	Unsigned 8-bit integer
ldp.msg.tlv.sess.atm.maxvci	Maximum VCI	Unsigned 16-bit integer
ldp.msg.tlv.sess.atm.maxvpi	Maximum VPI	Unsigned 16-bit integer
ldp.msg.tlv.sess.atm.merge	Session ATM Merge Parameter	Unsigned 8-bit integer
ldp.msg.tlv.sess.atm.minvci	Minimum VCI	Unsigned 16-bit integer
ldp.msg.tlv.sess.atm.minvpi	Minimum VPI	Unsigned 16-bit integer
ldp.msg.tlv.sess.fr.dir	Directionality	Boolean
ldp.msg.tlv.sess.fr.len	Number of DLCI bits	Unsigned 16-bit integer
ldp.msg.tlv.sess.fr.lr	Number of Frame Relay Label Ranges	Unsigned 8-bit integer
ldp.msg.tlv.sess.fr.maxdlci	Maximum DLCI	Unsigned 24-bit integer
ldp.msg.tlv.sess.fr.merge	Session Frame Relay Merge Parameter	Unsigned 8-bit integer
ldp.msg.tlv.sess.fr.mindlci	Minimum DLCI	Unsigned 24-bit integer
ldp.msg.tlv.sess.ka	Session KeepAlive Time	Unsigned 16-bit integer
ldp.msg.tlv.sess.ldetbit	Session Loop Detection	Boolean
ldp.msg.tlv.sess.mxpdu	Session Max PDU Length	Unsigned 16-bit integer
ldp.msg.tlv.sess.pvlim	Session Path Vector Limit	Unsigned 8-bit integer
ldp.msg.tlv.sess.rxlsr	Session Receiver LSR Identifier	IPv4 address
ldp.msg.tlv.sess.ver	Session Protocol Version	Unsigned 16-bit integer
ldp.msg.tlv.set_prio	Set Prio	Unsigned 8-bit integer
ldp.msg.tlv.status.data	Status Data	Unsigned 32-bit integer
ldp.msg.tlv.status.ebit	E Bit	Boolean
ldp.msg.tlv.status.fbit	F Bit	Boolean
ldp.msg.tlv.status.msg.id	Message ID	Unsigned 32-bit integer
ldp.msg.tlv.status.msg.type	Message Type	Unsigned 16-bit integer
ldp.msg.tlv.type	TLV Type	Unsigned 16-bit integer

Field	Field Name	Type
ldp.msg.tlv.unknown	TLV Unknown bits	Unsigned 8-bit integer
ldp.msg.tlv.value	TLV Value	Byte array
ldp.msg.tlv.vendor_id	Vendor ID	Unsigned 32-bit integer
ldp.msg.tlv.weight	Weight	Unsigned 8-bit integer
ldp.msg.type	Message Type	Unsigned 16-bit integer
ldp.msg.ubit	U bit	Boolean
ldp.msg.vendor.id	Vendor ID	Unsigned 32-bit integer
ldp.req	Request	Boolean
ldp.rsp	Response	Boolean
ldp.tlv.lbl_req_msg_id	Label Request Message ID	Unsigned 32-bit integer

Layer 2 Tunneling Protocol (l2tp)

Table A-109. Layer 2 Tunneling Protocol (l2tp)

Field	Field Name	Type
l2tp.Nr	Nr	Unsigned 16-bit integer
l2tp.Ns	Ns	Unsigned 16-bit integer
l2tp.avp.hidden	Hidden	Boolean
l2tp.avp.length	Length	Unsigned 16-bit integer
l2tp.avp.mandatory	Mandatory	Boolean
l2tp.avp.type	Type	Unsigned 16-bit integer
l2tp.avp.vendor_id	Vendor ID	Unsigned 16-bit integer
l2tp.length	Length	Unsigned 16-bit integer
l2tp.length_bit	Length Bit	Boolean
l2tp.offset	Offset	Unsigned 16-bit integer
l2tp.offset_bit	Offset bit	Boolean
l2tp.priority	Priority	Boolean
l2tp.seq_bit	Sequence Bit	Boolean
l2tp.session	Session ID	Unsigned 16-bit integer
l2tp.tie_breaker	Tie Breaker	
l2tp.tunnel	Tunnel ID	Unsigned 16-bit integer
l2tp.type	Type	Unsigned 16-bit integer
l2tp.version	Version	Unsigned 16-bit integer

Lightweight Directory Access Protocol (ldap)

Table A-110. Lightweight Directory Access Protocol (ldap)

Field	Field Name	Type
ldap.abandon.msgid	Abandon Msg Id	Unsigned 32-bit integer
ldap.attribute	Attribute	String
ldap.bind.auth_type	Auth Type	Unsigned 8-bit integer
ldap.bind.dn	DN	String
ldap.bind.password	Password	String
ldap.bind.version	Version	Unsigned 32-bit integer
ldap.compare.test	Test	String
ldap.dn	Distinguished Name	String
ldap.length	Length	Unsigned 32-bit integer
ldap.message_id	Message Id	Unsigned 32-bit integer
ldap.message_length	Message Length	Unsigned 32-bit integer
ldap.message_type	Message Type	Unsigned 8-bit integer
ldap.modify.add	Add	String
ldap.modify.delete	Delete	String
ldap.modify.replace	Replace	String
ldap.modrdn.delete	Delete Values	Boolean
ldap.modrdn.name	New Name	String
ldap.modrdn.superior	New Location	String
ldap.result.code	Result Code	Unsigned 8-bit integer
ldap.result.errormsg	Error Message	String
ldap.result.matcheddn	Matched DN	String
ldap.result.referral	Referral	String
ldap.search.basedn	Base DN	String
ldap.search.dereference	Dereference	Unsigned 8-bit integer
ldap.search.filter	Filter	String
ldap.search.scope	Scope	Unsigned 8-bit integer
ldap.search.sizelimit	Size Limit	Unsigned 32-bit integer
ldap.search.timelimit	Time Limit	Unsigned 32-bit integer
ldap.search.typesonly	Attributes Only	Boolean
ldap.value	Value	String

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Line Printer Daemon Protocol (lpd)

Table A-111. Line Printer Daemon Protocol (lpd)

Field	Field Name	Type
lpd.request	Request	Boolean
lpd.response	Response	Boolean

Link Access Procedure Balanced (LAPB) (lapb)

Table A-112. Link Access Procedure Balanced (LAPB) (lapb)

Field	Field Name	Type
lapb.address	Address Field	Unsigned 8-bit integer
lapb.control	Control Field	Unsigned 8-bit integer

Link Access Procedure Balanced Ethernet (LAPBETHER) (lapbether)

Table A-113. Link Access Procedure Balanced Ethernet (LAPBETHER) (lapbether)

Field	Field Name	Type
lapbether.length	Length Field	Unsigned 16-bit integer

Link Access Procedure, Channel D (LAPD) (lapd)

Table A-114. Link Access Procedure, Channel D (LAPD) (lapd)

Field	Field Name	Type
lapd.address	Address Field	Unsigned 16-bit integer
lapd.control	Control Field	Unsigned 16-bit integer
lapd.cr	C/R	Unsigned 16-bit integer
lapd.ea1	EA1	Unsigned 16-bit integer
lapd.ea2	EA2	Unsigned 16-bit integer
lapd.sapi	SAPI	Unsigned 16-bit integer
lapd.tei	TEI	Unsigned 16-bit integer

Link Aggregation Control Protocol (lacp)

Table A-115. Link Aggregation Control Protocol (lacp)

Field	Field Name	Type
lacp.actorInfo	Actor Information	Unsigned 8-bit integer
lacp.actorInfoLen	Actor Information Length	Unsigned 8-bit integer
lacp.actorKey	Actor Key	Unsigned 16-bit integer
lacp.actorPort	Actor Port	Unsigned 16-bit integer
lacp.actorPortPriority	Actor Port Priority	Unsigned 16-bit integer
lacp.actorState	Actor State	Unsigned 8-bit integer
lacp.actorState.activity	LACP Activity	Boolean
lacp.actorState.aggregation	Aggregation	Boolean
lacp.actorState.collecting	Collecting	Boolean
lacp.actorState.defaulted	Defaulted	Boolean
lacp.actorState.distributing	Distributing	Boolean
lacp.actorState.expired	Expired	Boolean
lacp.actorState.synchronization	Synchronization	Boolean
lacp.actorState.timeout	LACP Timeout	Boolean
lacp.actorSysPriority	Actor System Priority	Unsigned 16-bit integer
lacp.actorSystem	Actor System	6-byte Hardware (MAC) Address
lacp.collectorInfo	Collector Information	Unsigned 8-bit integer
lacp.collectorInfoLen	Collector Information Length	Unsigned 8-bit integer
lacp.collectorMaxDelay	Collector Max Delay	Unsigned 16-bit integer
lacp.partnerInfo	Partner Information	Unsigned 8-bit integer
lacp.partnerInfoLen	Partner Information Length	Unsigned 8-bit integer
lacp.partnerKey	Partner Key	Unsigned 16-bit integer
lacp.partnerPort	Partner Port	Unsigned 16-bit integer
lacp.partnerPortPriority	Partner Port Priority	Unsigned 16-bit integer
lacp.partnerState	Partner State	Unsigned 8-bit integer
lacp.partnerState.activity	LACP Activity	Boolean
lacp.partnerState.aggregation	Aggregation	Boolean

Field	Field Name	Type
lacp.partnerState.collecting	Collecting	Boolean
lacp.partnerState.defaulted	Defaulted	Boolean
lacp.partnerState.distributing	Distributing	Boolean
lacp.partnerState.expired	Expired	Boolean
lacp.partnerState.synchronization	Synchronization	Boolean
lacp.partnerState.timeout	LACP Timeout	Boolean
lacp.partnerSysPriority	Partner System Priority	Unsigned 16-bit integer
lacp.partnerSystem	Partner System	6-byte Hardware (MAC) Address
lacp.reserved	Reserved	Byte array
lacp.subtype	Subtype	Unsigned 8-bit integer
lacp.termInfo	Terminator Information	Unsigned 8-bit integer
lacp.termLen	Terminator Length	Unsigned 8-bit integer
lacp.version	LACP Version Number	Unsigned 8-bit integer

Link Management Protocol (LMP) (lmp)

Table A-116. Link Management Protocol (LMP) (lmp)

Field	Field Name	Type
lmp.begin_verify.all_links	Verify All Links	Boolean
lmp.begin_verify.enctype	Encoding Type	Unsigned 8-bit integer
lmp.begin_verify.flags	Flags	Unsigned 16-bit integer
lmp.begin_verify.link_type	Data Link Type	Boolean
lmp.data_link.link_verify	Data-Link is Allocated	Boolean
lmp.data_link.local_ipv4	Data-Link Local ID - IPv4	IPv4 address
lmp.data_link.local_unnum	Data-Link Local ID - Unnumbered	Unsigned 32-bit integer
lmp.data_link.port	Data-Link is Individual Port	Boolean
lmp.data_link.remote_ipv4	Data-Link Remote ID - IPv4	IPv4 address
lmp.data_link.remote_unnum	Data-Link Remote ID - Unnumbered	Unsigned 32-bit integer

Field	Field Name	Type
lmp.data_link_encoding	LSP Encoding Type	Unsigned 8-bit integer
lmp.data_link_flags	Data-Link Flags	Unsigned 8-bit integer
lmp.data_link_subobj	Subobject	No value
lmp.data_link_switching	Interface Switching Capability	Unsigned 8-bit integer
lmp.error	Error Code	Unsigned 32-bit integer
lmp.error.config_bad_ccid	Config - Bad CC ID	Boolean
lmp.error.config_bad_param	Config - Unacceptable non-negotiable parameters	Boolean
lmp.error.config_renegotiate	Config - Renegotiate Parametere	Boolean
lmp.error.summary_bad_data_link	Summary - Bad Data Link Object	Boolean
lmp.error.summary_bad_params	Summary - Unacceptable non-negotiable parameters	Boolean
lmp.error.summary_bad_remote_linkid	Summary - Bad Remote Link ID	Boolean
lmp.error.summary_bad_te_link	Summary - Bad TE Link Object	Boolean
lmp.error.summary_renegotiate	Summary - Renegotiate Parametere	Boolean
lmp.error.verify_te_link_id	Verification - TE Link ID Configuration Error	Boolean
lmp.error.verify_unsupported_link	Verification - Unsupported for this TE-Link	Boolean
lmp.error.verify_unsupported_transport	Verification - Transport Unsupported	Boolean
lmp.error.verify_unwilling	Verification - Unwilling to Verify at this time	Boolean
lmp.hdr.auth	Authentication	Boolean
lmp.hdr.ccdown	ControlChannelDown	Boolean
lmp.hdr.dwdm	DWDM Node	Boolean
lmp.hdr.flags	LMP Header - Flags	Unsigned 8-bit integer
lmp.hdr.reboot	Reboot	Boolean
lmp.hellodeadinterval	HelloDeadInterval	Unsigned 32-bit integer
lmp.hellointerval	HelloInterval	Unsigned 32-bit integer
lmp.local_ccid	Local CCID Value	Unsigned 32-bit integer
lmp.local_interfaceid_ipv4	Local Interface ID - IPv4	IPv4 address
lmp.local_interfaceid_unnumbered	Local Interface ID - Unnumbered	Unsigned 32-bit integer

Field	Field Name	Type
lmp.local_linkid_ipv4	Local Link ID - IPv4	IPv4 address
lmp.local_linkid_unnum	Local Link ID - Unnumbered	Unsigned 32-bit integer
lmp.local_nodeid	Local Node ID Value	IPv4 address
lmp.messageid	Message-ID Value	Unsigned 32-bit integer
lmp.messageid_ack	Message-ID Ack Value	Unsigned 32-bit integer
lmp.msg	Message Type	Unsigned 8-bit integer
lmp.msg.beginverify	BeginVerify Message	Boolean
lmp.msg.beginverifyack	BeginVerifyAck Message	Boolean
lmp.msg.beginverifynack	BeginVerifyNack Message	Boolean
lmp.msg.channelfail	ChannelFail Message	Boolean
lmp.msg.channelfailack	ChannelFailAck Message	Boolean
lmp.msg.channelfailnack	ChannelFailNack Message	Boolean
lmp.msg.channelstatus	ChannelStatus Message	Boolean
lmp.msg.channelstatusack	ChannelStatusAck Message	Boolean
lmp.msg.channelstatusrequest	ChannelStatusRequest Message	Boolean
lmp.msg.channelstatusresponse	ChannelStatusResponse Message	Boolean
lmp.msg.config	Config Message	Boolean
lmp.msg.configack	ConfigAck Message	Boolean
lmp.msg.confignack	ConfigNack Message	Boolean
lmp.msg.endverify	EndVerify Message	Boolean
lmp.msg.hello	HELLO Message	Boolean
lmp.msg.linksummary	LinkSummary Message	Boolean
lmp.msg.linksummaryack	LinkSummaryAck Message	Boolean
lmp.msg.linksummarynack	LinkSummaryNack Message	Boolean
lmp.msg.test	Test Message	Boolean
lmp.msg.teststatusack	TestStatusAck Message	Boolean
lmp.msg.teststatusfailure	TestStatusFailure Message	Boolean
lmp.msg.teststatussuccess	TestStatusSuccess Message	Boolean
lmp.obj.begin_verify	BEGIN_VERIFY	No value
lmp.obj.begin_verify_ack	BEGIN_VERIFY_ACK	No value
lmp.obj.channel_status	CHANNEL_STATUS	No value

Field	Field Name	Type
lmp.obj.channel_status_request	CHANNEL_STATUS_REQUEST	No value
lmp.obj.config	CONFIG	No value
lmp.obj.ctype	Object C-Type	Unsigned 8-bit integer
lmp.obj.data_link	DATA_LINK	No value
lmp.obj.error	ERROR	No value
lmp.obj.hello	HELLO	No value
lmp.obj.local_ccid	LOCAL_CCID	No value
lmp.obj.local_interfaceid	LOCAL_INTERFACE_ID	No value
lmp.obj.local_linkid	LOCAL_LINK_ID	No value
lmp.obj.local_nodeid	LOCAL_NODE_ID	No value
lmp.obj.messageid	MESSAGE_ID	No value
lmp.obj.messageid_ack	MESSAGE_ID_ACK	No value
lmp.obj.remote_ccid	REMOTE_CCID	No value
lmp.obj.remote_interfaceid	REMOTE_INTERFACE_ID	No value
lmp.obj.remote_linkid	REMOTE_LINK_ID	No value
lmp.obj.remote_nodeid	REMOTE_NODE_ID	No value
lmp.obj.te_link	TE_LINK	No value
lmp.obj.verifyid	VERIFY_ID	No value
lmp.object	LOCAL_CCID	Unsigned 8-bit integer
lmp.remote_ccid	Remote CCID Value	Unsigned 32-bit integer
lmp.remote_interfaceid_ipv4	Remote Interface ID - IPv4	IPv4 address
lmp.remote_interfaceid_unnum	Remote Interface ID - Unnumbered	Unsigned 32-bit integer
lmp.remote_linkid_ipv4	Remote Link ID - IPv4	Unsigned 32-bit integer
lmp.remote_linkid_unnum	Remote Link ID - Unnumbered	Unsigned 32-bit integer
lmp.remote_nodeid	Remote Node ID Value	IPv4 address
lmp.rxseqnum	RxSeqNum	Unsigned 32-bit integer
lmp.te_link.fault_mgmt	Fault Management Supported	Boolean
lmp.te_link.link_verify	Link Verification Supported	Boolean
lmp.te_link.local_ipv4	TE-Link Local ID - IPv4	IPv4 address
lmp.te_link.local_unnum	TE-Link Local ID - Unnumbered	Unsigned 32-bit integer

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Field	Field Name	Type
lmp.te_link.remote_ipv4	TE-Link Remote ID - IPv4	IPv4 address
lmp.te_link.remote_unnum	TE-Link Remote ID - Unnumbered	Unsigned 32-bit integer
lmp.te_link_flags	TE-Link Flags	Unsigned 8-bit integer
lmp.txseqnum	TxSeqNum	Unsigned 32-bit integer
lmp.verifyid	Verify-ID	Unsigned 32-bit integer

Linux cooked-mode capture (sll)

Table A-117. Linux cooked-mode capture (sll)

Field	Field Name	Type
sll.etype	Protocol	Unsigned 16-bit integer
sll.halen	Link-layer address length	Unsigned 16-bit integer
sll.hatype	Link-layer address type	Unsigned 16-bit integer
sll.ltype	Protocol	Unsigned 16-bit integer
sll.pkttype	Packet type	Unsigned 16-bit integer
sll.src.eth	Source	6-byte Hardware (MAC) Address
sll.src.other	Source	Byte array
sll.trailer	Trailer	Byte array

Local Management Interface (lmi)

Table A-118. Local Management Interface (lmi)

Field	Field Name	Type
lmi.cmd	Call reference	Unsigned 8-bit integer
lmi.dlci_act	DLCI Active	Unsigned 8-bit integer
lmi.dlci_hi	DLCI High	Unsigned 8-bit integer
lmi.dlci_low	DLCI Low	Unsigned 8-bit integer
lmi.dlci_new	DLCI New	Unsigned 8-bit integer
lmi.ele_rcd_type	Record Type	Unsigned 8-bit integer
lmi.inf_ele	Information Element	Unsigned 8-bit integer
lmi.inf_ele_len	Length	Unsigned 8-bit integer
lmi.inf_ele_type	Type	Unsigned 8-bit integer

Field	Field Name	Type
lmi.msg_type	Message Type	Unsigned 8-bit integer
lmi.recv_seq	Recv Seq	Unsigned 8-bit integer
lmi.send_seq	Send Seq	Unsigned 8-bit integer

LocalTalk Link Access Protocol (llap)

Table A-119. LocalTalk Link Access Protocol (llap)

Field	Field Name	Type
llap.dst	Destination Node	Unsigned 8-bit integer
llap.src	Source Node	Unsigned 8-bit integer
llap.type	Type	Unsigned 8-bit integer

Logical-Link Control (llc)

Table A-120. Logical-Link Control (llc)

Field	Field Name	Type
llc.control	Control	Unsigned 16-bit integer
llc.dsap	DSAP	Unsigned 8-bit integer
llc.dsap.ig	IG Bit	Boolean
llc.oui	Organization Code	Unsigned 24-bit integer
llc.pid	Protocol ID	Unsigned 16-bit integer
llc.ssap	SSAP	Unsigned 8-bit integer
llc.ssap.cr	CR Bit	Boolean
llc.type	Type	Unsigned 16-bit integer

Lucent/Ascend debug output (ascend)

Table A-121. Lucent/Ascend debug output (ascend)

Field	Field Name	Type
ascend.chunk	WDD Chunk	Unsigned 32-bit integer
ascend.number	Called number	String
ascend.sess	Session ID	Unsigned 32-bit integer

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Field	Field Name	Type
ascend.task	Task	Unsigned 32-bit integer
ascend.type	Link type	Unsigned 32-bit integer
ascend.user	User name	String

MMS Message Encapsulation (mmse)

Table A-122. MMS Message Encapsulation (mmse)

Field	Field Name	Type
mmse.bcc	Bcc	String
mmse.cc	Cc	String
mmse.content_location	Content-Location	String
mmse.content_type	Data	No value
mmse.date	Date	Date/Time stamp
mmse.delivery_report	Delivery-Report	Unsigned 8-bit integer
mmse.delivery_time.abs	Delivery-Time	Date/Time stamp
mmse.delivery_time.rel	Delivery-Time	Time duration
mmse.expiry.abs	Expiry	Date/Time stamp
mmse.expiry.rel	Expiry	Time duration
mmse.ffheader	Free format (not encoded) header	String
mmse.from	From	String
mmse.message_class.id	Message-Class	Unsigned 8-bit integer
mmse.message_class.str	Message-Class	String
mmse.message_id	Message-Id	String
mmse.message_size	Message-Size	Unsigned 32-bit integer
mmse.message_type	Message-Type	Unsigned 8-bit integer
mmse.mms_version	MMS-Version	String
mmse.priority	Priority	Unsigned 8-bit integer
mmse.read_reply	Read-Reply	Unsigned 8-bit integer
mmse.report_allowed	Report-Allowed	Unsigned 8-bit integer
mmse.response_status	Response-Status	Unsigned 8-bit integer
mmse.response_text	Response-Text	String
mmse.sender_visibility	Sender-Visibility	Unsigned 8-bit integer
mmse.status	Status	Unsigned 8-bit integer
mmse.subject	Subject	String

Field	Field Name	Type
mmse.to	To	String
mmse.transaction_id	Transaction-ID	String

MS Proxy Protocol (msproxy)

Table A-123. MS Proxy Protocol (msproxy)

Field	Field Name	Type
msproxy.bindaddr	Destination	IPv4 address
msproxy.bindid	Bound Port Id	Unsigned 32-bit integer
msproxy.bindport	Bind Port	Unsigned 16-bit integer
msproxy.boundport	Bound Port	Unsigned 16-bit integer
msproxy.clntport	Client Port	Unsigned 16-bit integer
msproxy.command	Command	Unsigned 16-bit integer
msproxy.dstaddr	Destination Address	IPv4 address
msproxy.dstport	Destination Port	Unsigned 16-bit integer
msproxy.resolvaddr	Address	IPv4 address
msproxy.server_ext_addr	Server External Address	IPv4 address
msproxy.server_ext_port	Server External Port	Unsigned 16-bit integer
msproxy.server_int_addr	Server Internal Address	IPv4 address
msproxy.server_int_port	Server Internal Port	Unsigned 16-bit integer
msproxy.serveraddr	Server Address	IPv4 address
msproxy.serverport	Server Port	Unsigned 16-bit integer
msproxy.srcport	Source Port	Unsigned 16-bit integer

MSNIP: Multicast Source Notification of Interest Protocol (msnip)

Table A-124. MSNIP: Multicast Source Notification of Interest Protocol (msnip)

Field	Field Name	Type
msnip.checksum	Checksum	Unsigned 16-bit integer
msnip.checksum_bad	Bad Checksum	Boolean
msnip.count	Count	Unsigned 8-bit integer
msnip.genid	Generation ID	Unsigned 16-bit integer
msnip.groups	Groups	No value

Field	Field Name	Type
msnip.holdtime	Holdtime	Unsigned 32-bit integer
msnip.holdtime16	Holdtime	Unsigned 16-bit integer
msnip.maddr	Multicast group	IPv4 address
msnip.netmask	Netmask	Unsigned 8-bit integer
msnip.rec_type	Record Type	Unsigned 8-bit integer
msnip.type	Type	Unsigned 8-bit integer

MTP 2 Transparent Proxy (m2tp)

Table A-125. MTP 2 Transparent Proxy (m2tp)

Field	Field Name	Type
m2tp.diagnostic_info	Diagnostic information	Byte array
m2tp.error_code	Error code	Unsigned 32-bit integer
m2tp.heartbeat_data	Heartbeat data	Byte array
m2tp.info_string	Info string	String
m2tp.interface_identifier	Interface Identifier	Unsigned 32-bit integer
m2tp.master_slave	Master Slave Indicator	Unsigned 32-bit integer
m2tp.message_class	Message class	Unsigned 8-bit integer
m2tp.message_length	Message length	Unsigned 32-bit integer
m2tp.message_type	Message Type	Unsigned 8-bit integer
m2tp.parameter_length	Parameter length	Unsigned 16-bit integer
m2tp.parameter_padding	Padding	Byte array
m2tp.parameter_tag	Parameter Tag	Unsigned 16-bit integer
m2tp.parameter_value	Parameter Value	Byte array
m2tp.reason	Reason	Unsigned 32-bit integer
m2tp.reserved	Reserved	Unsigned 8-bit integer
m2tp.user_identifier	M2tp User Identifier	Unsigned 32-bit integer
m2tp.version	Version	Unsigned 8-bit integer

MTP 2 User Adaptation Layer (m2ua)

Table A-126. MTP 2 User Adaptation Layer (m2ua)

Field	Field Name	Type

Field	Field Name	Type
m2ua.action	Actions	Unsigned 32-bit integer
m2ua.asp_identifier	ASP identifier	Unsigned 32-bit integer
m2ua.congestion_status	Congestion status	Unsigned 32-bit integer
m2ua.correlation identifier	Correlation identifier	Unsigned 32-bit integer
m2ua.data_2_li	Length indicator	Unsigned 8-bit integer
m2ua.deregistration_status	Deregistration status	Unsigned 32-bit integer
m2ua.diagnostic_information	Diagnostic information	Byte array
m2ua.discard_status	Discard status	Unsigned 32-bit integer
m2ua.error_code	Error code	Unsigned 32-bit integer
m2ua.event	Event	Unsigned 32-bit integer
m2ua.heartbeat_data	Heartbeat data	Byte array
m2ua.info_string	Info string	String
m2ua.interface_identifier_int	Interface Identifier (integer)	Unsigned 32-bit integer
m2ua.interface_identifier_start	Interface Identifier (start)	Unsigned 32-bit integer
m2ua.interface_identifier_stop	Interface Identifier (stop)	Unsigned 32-bit integer
m2ua.interface_identifier_text	Interface identifier (text)	String
m2ua.local_lk_identifier	Local LK identifier	Unsigned 32-bit integer
m2ua.message_class	Message class	Unsigned 8-bit integer
m2ua.message_length	Message length	Unsigned 32-bit integer
m2ua.message_type	Message Type	Unsigned 8-bit integer
m2ua.parameter_length	Parameter length	Unsigned 16-bit integer
m2ua.parameter_padding	Padding	Byte array
m2ua.parameter_tag	Parameter Tag	Unsigned 16-bit integer
m2ua.parameter_value	Parameter value	Byte array
m2ua.registration_status	Registration status	Unsigned 32-bit integer
m2ua.reserved	Reserved	Unsigned 8-bit integer
m2ua.retrieval_result	Retrieval result	Unsigned 32-bit integer
m2ua.sdl_identifier	SDL identifier	Unsigned 16-bit integer
m2ua.sdl_reserved	Reserved	Unsigned 16-bit integer
m2ua.sdt_identifier	SDT identifier	Unsigned 16-bit integer
m2ua.sdt_reserved	Reserved	Unsigned 16-bit integer

Field	Field Name	Type
m2ua.sequence_number	Sequence number	Unsigned 32-bit integer
m2ua.state	State	Unsigned 32-bit integer
m2ua.status_info	Status info	Unsigned 16-bit integer
m2ua.status_type	Status type	Unsigned 16-bit integer
m2ua.traffic_mode_type	Traffic mode Type	Unsigned 32-bit integer
m2ua.version	Version	Unsigned 8-bit integer

MTP 3 User Adaptation Layer (m3ua)

Table A-127. MTP 3 User Adaptation Layer (m3ua)

Field	Field Name	Type
m3ua.affected_point_code_mask	Mask	Unsigned 8-bit integer
m3ua.affected_point_code_pc	Affected point code	Unsigned 24-bit integer
m3ua.asp_identifier	ASP identifier	Unsigned 32-bit integer
m3ua.cic_range_lower	Lower CIC value	Unsigned 16-bit integer
m3ua.cic_range_mask	Mask	Unsigned 8-bit integer
m3ua.cic_range_pc	Originating point code	Unsigned 24-bit integer
m3ua.cic_range_upper	Upper CIC value	Unsigned 16-bit integer
m3ua.concerned_dpc	Concerned DPC	Unsigned 24-bit integer
m3ua.concerned_reserved	Reserved	Byte array
m3ua.congestion_level	Congestion level	Unsigned 8-bit integer
m3ua.congestion_reserved	Reserved	Byte array
m3ua.correlation_identifier	Correlation Identifier	Unsigned 32-bit integer
m3ua.deregistration_result_rc	Routing context	Unsigned 32-bit integer
m3ua.deregistration_results_status	Deregistration status	Unsigned 32-bit integer
m3ua.deregistration_status	Deregistration status	Unsigned 32-bit integer
m3ua.diagnostic_information	Diagnostic information	Byte array
m3ua.dpc_mask	Mask	Unsigned 8-bit integer
m3ua.dpc_pc	Destination point code	Unsigned 24-bit integer
m3ua.error_code	Error code	Unsigned 32-bit integer

Field	Field Name	Type
m3ua.heartbeat_data	Heartbeat data	Byte array
m3ua.info_string	Info string	String
m3ua.local_rk_identifier	Local routing key identifier	Unsigned 32-bit integer
m3ua.message_class	Message class	Unsigned 8-bit integer
m3ua.message_length	Message length	Unsigned 32-bit integer
m3ua.message_type	Message Type	Unsigned 8-bit integer
m3ua.network_appearance	Network appearance	Unsigned 32-bit integer
m3ua.opc_list_mask	Mask	Unsigned 8-bit integer
m3ua.opc_list_pc	Originating point code	Unsigned 24-bit integer
m3ua.parameter_length	Parameter length	Unsigned 16-bit integer
m3ua.parameter_padding	Padding	Byte array
m3ua.parameter_tag	Parameter Tag	Unsigned 16-bit integer
m3ua.parameter_value	Parameter value	Byte array
m3ua.protocol_data_2_li	Length indicator	Unsigned 8-bit integer
m3ua.protocol_data_dpc	DPC	Unsigned 32-bit integer
m3ua.protocol_data_mp	MP	Unsigned 8-bit integer
m3ua.protocol_data_ni	NI	Unsigned 8-bit integer
m3ua.protocol_data_opc	OPC	Unsigned 32-bit integer
m3ua.protocol_data_si	SI	Unsigned 8-bit integer
m3ua.protocol_data_sls	SLS	Unsigned 8-bit integer
m3ua.registration_result_identifier	Local-RK-identifier value	Unsigned 32-bit integer
m3ua.registration_result_routing_context	Routing context	Unsigned 32-bit integer
m3ua.registration_results_status	Registration status	Unsigned 32-bit integer
m3ua.registration_status	Registration status	Unsigned 32-bit integer
m3ua.reserved	Reserved	Unsigned 8-bit integer
m3ua.routing_context	Routing context	Unsigned 32-bit integer
m3ua.status_info	Status info	Unsigned 16-bit integer
m3ua.status_type	Status type	Unsigned 16-bit integer
m3ua.traffic_mode_type	Traffic mode Type	Unsigned 32-bit integer
m3ua.unavailability_cause	Unavailability cause	Unsigned 16-bit integer
m3ua.user_identity	User Identity	Unsigned 16-bit integer
m3ua.version	Version	Unsigned 8-bit integer

Field	Field Name	Type
m3ua_reason	Reason	Unsigned 32-bit integer
m3ua_si	Service indicator	Unsigned 8-bit integer
m3ua_ssn	Subsystem number	Unsigned 8-bit integer

MTP2 Peer Adaptation Layer (m2pa)

Table A-128. MTP2 Peer Adaptation Layer (m2pa)

Field	Field Name	Type
m2pa.bsn	BSN	Unsigned 16-bit integer
m2pa.class	Message Class	Unsigned 8-bit integer
m2pa.filler	Filler	Byte array
m2pa.fsn	FSN	Unsigned 16-bit integer
m2pa.length	Message length	Unsigned 32-bit integer
m2pa.li_priority	Priority	Unsigned 8-bit integer
m2pa.li_spare	Spare	Unsigned 8-bit integer
m2pa.spare	Spare	Unsigned 8-bit integer
m2pa.status	Link Status Status	Unsigned 32-bit integer
m2pa.type	Message Type	Unsigned 8-bit integer
m2pa.unknown_data	Unknown Data	Byte array
m2pa.version	Version	Unsigned 8-bit integer

Malformed Packet (malformed)

Table A-129. Malformed Packet (malformed)

Field	Field Name	Type

Message Transfer Part Level 2 (mtp2)

Table A-130. Message Transfer Part Level 2 (mtp2)

Field	Field Name	Type
mtp2.bib	Backward indicator bit	Unsigned 8-bit integer

Field	Field Name	Type
mtp2.bsn	Backward sequence number	Unsigned 8-bit integer
mtp2.fib	Forward indicator bit	Unsigned 8-bit integer
mtp2.fsn	Forward sequence number	Unsigned 8-bit integer
mtp2.li	Length Indicator	Unsigned 8-bit integer
mtp2.long_sf	Status field	Unsigned 16-bit integer
mtp2.sf	Status field	Unsigned 8-bit integer
mtp2.spare	Spare	Unsigned 8-bit integer

Message Transfer Part Level 3 (mtp3)

Table A-131. Message Transfer Part Level 3 (mtp3)

Field	Field Name	Type
mtp3.dpc	DPC	Unsigned 32-bit integer
mtp3.dpc.cluster	DPC Cluster	Unsigned 24-bit integer
mtp3.dpc.member	DPC Member	Unsigned 24-bit integer
mtp3.dpc.network	DPC Network	Unsigned 24-bit integer
mtp3.network_indicator	Network indicator	Unsigned 8-bit integer
mtp3.opc	OPC	Unsigned 32-bit integer
mtp3.opc.cluster	OPC Cluster	Unsigned 24-bit integer
mtp3.opc.member	OPC Member	Unsigned 24-bit integer
mtp3.opc.network	OPC Network	Unsigned 24-bit integer
mtp3.priority	Priority	Unsigned 8-bit integer
mtp3.service_indicator	Service indicator	Unsigned 8-bit integer
mtp3.sls	Signalling Link Selector	Unsigned 32-bit integer
mtp3.spare	Spare	Unsigned 8-bit integer

Microsoft Distributed File System (dfs)

Table A-132. Microsoft Distributed File System (dfs)

Field	Field Name	Type
dfs.opnum	Operation	Unsigned 16-bit integer

Microsoft Exchange MAPI (mapi)

Table A-133. Microsoft Exchange MAPI (mapi)

Field	Field Name	Type
mapi.decrypted.data	Decrypted data	Byte array
mapi.decrypted.data.len	Length	Unsigned 32-bit integer
mapi.decrypted.data.maxlen	Max Length	Unsigned 32-bit integer
mapi.decrypted.data.offset	Offset	Unsigned 32-bit integer
mapi.encap_len	Length	Unsigned 16-bit integer
mapi.hnd	Context Handle	Byte array
mapi.pdu.extra_trailer	unknown	Byte array
mapi.pdu.len	Length	Unsigned 16-bit integer
mapi.pdu.trailer	Trailer	Unsigned 32-bit integer
mapi.rc	Return code	Unsigned 32-bit integer
mapi.unknown_data	unknown encrypted data	Byte array
mapi.unknown_short	Unknown short	Unsigned 16-bit integer
mapi.unknown_string	Unknown string	String

Microsoft Local Security Architecture (lsa)

Table A-134. Microsoft Local Security Architecture (lsa)

Field	Field Name	Type
lsa.access_mask	Access Mask	Unsigned 32-bit integer
lsa.acct	Account	String
lsa.attr	Attr	
lsa.auth.blob	Auth blob	Byte array
lsa.auth.len	Auth Len	Unsigned 32-bit integer
lsa.auth.type	Auth Type	Unsigned 32-bit integer
lsa.auth.update	Update	
lsa.controller	Controller	String
lsa.count	Count	Unsigned 32-bit integer
lsa.cur.mtime	Current MTime	Date/Time stamp
lsa.domain	Domain	String
lsa.flat_name	Flat Name	String

Field	Field Name	Type
lsa.forest	Forest	String
lsa.hnd	Context Handle	Byte array
lsa.index	Index	Unsigned 32-bit integer
lsa.info.level	Level	Unsigned 16-bit integer
lsa.info_type	Info Type	Unsigned 32-bit integer
lsa.key	Key	Byte array
lsa.max_count	Max Count	Unsigned 32-bit integer
lsa.mod.mtime	MTime	Date/Time stamp
lsa.mod.seq_no	Seq No	
lsa.name	Name	String
lsa.new_pwd	New Password	Byte array
lsa.num_mapped	Num Mapped	Unsigned 32-bit integer
lsa.obj_attr	Attributes	Unsigned 32-bit integer
lsa.obj_attr.len	Length	Unsigned 32-bit integer
lsa.obj_attr.name	Name	String
lsa.old.mtime	Old MTime	Date/Time stamp
lsa.old_pwd	Old Password	Byte array
lsa.opnum	Operation	Unsigned 16-bit integer
lsa.paei.enabled	Enabled	Unsigned 8-bit integer
lsa.paei.settings	Settings	Unsigned 32-bit integer
lsa.pali.log_size	Log Size	Unsigned 32-bit integer
lsa.pali.next_audit_record	Next Audit Record	Unsigned 32-bit integer
lsa.pali.percent_full	Percent Full	Unsigned 32-bit integer
lsa.pali.retention_period	Retention Period	Time duration
lsa.pali.shutdown_in_progress	Shutdown in progress	Unsigned 8-bit integer
lsa.pali.time_to_shutdown	Time to shutdown	Time duration
lsa.policy.info	Info Class	Unsigned 16-bit integer
lsa.privilege.name	Name	String
lsa.qos.effective_only	Effective only	Unsigned 8-bit integer
lsa.qos.imp_lev	Impersonation level	Unsigned 16-bit integer
lsa.qos.len	Length	Unsigned 32-bit integer
lsa.qos.track_ctx	Context Tracking	Unsigned 8-bit integer
lsa.quota.max_wss	Max WSS	Unsigned 32-bit integer
lsa.quota.min_wss	Min WSS	Unsigned 32-bit integer
lsa.quota.non_paged_pool	Non Paged Pool	Unsigned 32-bit integer

Field	Field Name	Type
lsa.quota.paged_pool	Paged Pool	Unsigned 32-bit integer
lsa.quota.pagefile	Pagefile	Unsigned 32-bit integer
lsa.rc	Return code	Unsigned 32-bit integer
lsa.remove_all	Remove All	Unsigned 8-bit integer
lsa.resume_handle	Resume Handle	Unsigned 32-bit integer
lsa.rid	RID	Unsigned 32-bit integer
lsa.rid.offset	RID Offset	Unsigned 32-bit integer
lsa.rights	Rights	String
lsa.sd_size	Size	Unsigned 32-bit integer
lsa.secret	LSA Secret	Byte array
lsa.server	Server	String
lsa.server_role	Role	Unsigned 16-bit integer
lsa.sid_type	SID Type	Unsigned 16-bit integer
lsa.size	Size	Unsigned 32-bit integer
lsa.size_needed	Size Needed	Unsigned 16-bit integer
lsa.source	Source	String
lsa.trust.attr	Trust Attr	Unsigned 32-bit integer
lsa.trust.attr.non_trans	Non Transitive	Boolean
lsa.trust.attr.tree_parent	Tree Parent	Boolean
lsa.trust.attr.tree_root	Tree Root	Boolean
lsa.trust.attr.uplevel_only	Upleve only	Boolean
lsa.trust.direction	Trust Direction	Unsigned 32-bit integer
lsa.trust.type	Trust Type	Unsigned 32-bit integer
lsa.trusted.info_level	Info Level	Unsigned 16-bit integer
lsa.unknown.char	Unknown char	Unsigned 8-bit integer
lsa.unknown.hyper	Unknown hyper	
lsa.unknown.long	Unknown long	Unsigned 32-bit integer
lsa.unknown.short	Unknown short	Unsigned 16-bit integer
lsa.unknown_string	Unknown string	String
nt.luid.high	High	Unsigned 32-bit integer
nt.luid.low	Low	Unsigned 32-bit integer

Microsoft Network Logon (rpc_netlogon)

Table A-135. Microsoft Network Logon (rpc_netlogon)

Field	Field Name	Type
netlogon.acct.expiry_time	Acct Expiry Time	Date/Time stamp
netlogon.acct_desc	Acct Desc	String
netlogon.acct_name	Acct Name	String
netlogon.alias_name	Alias Name	String
netlogon.alias_rid	Alias RID	Unsigned 32-bit integer
netlogon.attrs	Attributes	Unsigned 32-bit integer
netlogon.audit_retention_period	Audit Retention Period	Time duration
netlogon.auditing_mode	Auditing Mode	Unsigned 8-bit integer
netlogon.auth.data	Auth Data	Byte array
netlogon.auth.size	Auth Size	Unsigned 32-bit integer
netlogon.auth_flags	Auth Flags	Unsigned 32-bit integer
netlogon.authoritative	Authoritative	Unsigned 8-bit integer
netlogon.bad_pw_count	Bad PW Count	Unsigned 32-bit integer
netlogon.bad_pw_count16	Bad PW Count	Unsigned 16-bit integer
netlogon.blob	BLOB	Byte array
netlogon.blob.size	Size	Unsigned 32-bit integer
netlogon.challenge	Challenge	Byte array
netlogon.change_log_size	Change Log Entry Size	Unsigned 32-bit integer
netlogon.cipher_current_data	Cipher Current Data	Byte array
netlogon.cipher_current_set_time	Cipher Current Set Time	Date/Time stamp
netlogon.cipher_len	Cipher Len	Unsigned 32-bit integer
netlogon.cipher_maxlen	Cipher Max Len	Unsigned 32-bit integer
netlogon.cipher_old_data	Cipher Old Data	Byte array
netlogon.cipher_old_set_time	Cipher Old Set Time	Date/Time stamp
netlogon.client.name	Client Name	String
netlogon.client.site_name	Client Site Name	String
netlogon.code	Code	Unsigned 32-bit integer
netlogon.codepage	Codepage	Unsigned 16-bit integer
netlogon.comment	Comment	String
netlogon.computer_name	Computer Name	String

Field	Field Name	Type
netlogon.count	Count	Unsigned 32-bit integer
netlogon.country	Country	Unsigned 16-bit integer
netlogon.credential	Credential	Byte array
netlogon.database_id	Database Id	Unsigned 32-bit integer
netlogon.db_create_time	DB Create Time	Date/Time stamp
netlogon.db_modify_time	DB Modify Time	Date/Time stamp
netlogon.dc.address	DC Address	String
netlogon.dc.address_type	DC Address Type	Unsigned 32-bit integer
netlogon.dc.name	DC Name	String
netlogon.dc.site_name	DC Site Name	String
netlogon.delta_type	Delta Type	Unsigned 16-bit integer
netlogon.dir_drive	Dir Drive	String
netlogon.dns.forest_name	DNS Forest Name	String
netlogon.dns_host	DNS Host	String
netlogon.domain	Domain	String
netlogon.domain_create_time	Domain Create Time	Date/Time stamp
netlogon.domain_modify_time	Domain Modify Time	Date/Time stamp
netlogon.dummy	Dummy	String
netlogon.entries	Entries	Unsigned 32-bit integer
netlogon.event_audit_option	Event Audit Option	Unsigned 32-bit integer
netlogon.flags	Flags	Unsigned 32-bit integer
netlogon.full_name	Full Name	String
netlogon.group_desc	Group Desc	String
netlogon.group_name	Group Name	String
netlogon.group_rid	Group RID	Unsigned 32-bit integer
netlogon.handle	Handle	String
netlogon.home_dir	Home Dir	String
netlogon.kickoff_time	Kickoff Time	Date/Time stamp
netlogon.last_logoff	Last Logoff	Unsigned 32-bit integer
netlogon.last_logon	Last Logon	Unsigned 32-bit integer
netlogon.len	Len	Unsigned 32-bit integer
netlogon.level	Level	Unsigned 32-bit integer
netlogon.level16	Level	Unsigned 16-bit integer
netlogon.lm_chal_resp	LM Chal resp	Byte array

Field	Field Name	Type
netlogon.lm_owf_pwd	LM Pwd	Byte array
netlogon.lm_owf_pwd.encrypted	Encrypted LM Pwd	Byte array
netlogon.lm_pwd_present	LM PWD Present	Unsigned 8-bit integer
netlogon.logoff_time	Logoff Time	Date/Time stamp
netlogon.logon_attempts	Logon Attempts	Unsigned 32-bit integer
netlogon.logon_count	Logon Count	Unsigned 32-bit integer
netlogon.logon_count16	Logon Count	Unsigned 16-bit integer
netlogon.logon_id	Logon ID	
netlogon.logon_script	Logon Script	String
netlogon.logon_time	Logon Time	Date/Time stamp
netlogon.max_audit_event_count	Max Audit Event Count	Unsigned 32-bit integer
netlogon.max_log_size	Max Log Size	Unsigned 32-bit integer
netlogon.max_size	Max Size	Unsigned 32-bit integer
netlogon.max_working_set_size	Max Working Set Size	Unsigned 32-bit integer
netlogon.min_passwd_len	Min Password Len	Unsigned 16-bit integer
netlogon.min_working_set_size	Min Working Set Size	Unsigned 32-bit integer
netlogon.modify_count	Modify Count	
netlogon.neg_flags	Neg Flags	Unsigned 32-bit integer
netlogon.next_reference	Next Reference	Unsigned 32-bit integer
netlogon.nonpaged_pool_limit	Non-Paged Pool Limit	Unsigned 32-bit integer
netlogon.nt_chal_resp	NT Chal resp	Byte array
netlogon.nt_owf_pwd	NT Pwd	Byte array
netlogon.nt_pwd_present	NT PWD Present	Unsigned 8-bit integer
netlogon.num_dc	Num DCs	Unsigned 32-bit integer
netlogon.num_deltas	Num Deltas	Unsigned 32-bit integer
netlogon.num_other_groups	Num Other Groups	Unsigned 32-bit integer
netlogon.num_pwd_pairs	Num PWD Pairs	Unsigned 8-bit integer
netlogon.num_rids	Num RIDs	Unsigned 32-bit integer
netlogon.oem_info	OEM Info	String
netlogon.opnum	Operation	Unsigned 16-bit integer
netlogon.pac.data	Pac Data	Byte array

Field	Field Name	Type
netlogon.pac.size	Pac Size	Unsigned 32-bit integer
netlogon.page_file_limit	Page File Limit	Unsigned 32-bit integer
netlogon.paged_pool_limit	Paged Pool Limit	Unsigned 32-bit integer
netlogon.param_ctrl	Param Ctrl	Unsigned 32-bit integer
netlogon.parameters	Parameters	String
netlogon.passwd_history_len	Passwd History Len	Unsigned 16-bit integer
netlogon.pdc_connection_status	PDC Connection Status	Unsigned 32-bit integer
netlogon.principal	Principal	String
netlogon.priv	Priv	Unsigned 32-bit integer
netlogon.privilege_control	Privilege Control	Unsigned 32-bit integer
netlogon.privilege_entries	Privilege Entries	Unsigned 32-bit integer
netlogon.privilege_name	Privilege Name	String
netlogon.profile_path	Profile Path	String
netlogon.pwd_can_change_time	PWD Can Change	Date/Time stamp
netlogon.pwd_expired	PWD Expired	Unsigned 8-bit integer
netlogon.pwd_last_set_time	PWD Last Set	Date/Time stamp
netlogon.pwd_must_change_time	PWD Must Change	Date/Time stamp
netlogon.rc	Return code	Unsigned 32-bit integer
netlogon.reference	Reference	Unsigned 32-bit integer
netlogon.reserved	Reserved	Unsigned 32-bit integer
netlogon.restart_state	Restart State	Unsigned 16-bit integer
netlogon.rid	User RID	Unsigned 32-bit integer
netlogon.sec_chn_type	Sec Chn Type	Unsigned 16-bit integer
netlogon.security_information	Security Information	Unsigned 32-bit integer
netlogon.sensitive_data	Data	Byte array
netlogon.sensitive_data_flag	Sensitive Data	Unsigned 8-bit integer
netlogon.sensitive_data_len	Length	Unsigned 32-bit integer
netlogon.serial_number	Serial Number	Unsigned 32-bit integer
netlogon.server	Server	String

Field	Field Name	Type
netlogon.site_name	Site Name	String
netlogon.sync_context	Sync Context	Unsigned 32-bit integer
netlogon.system_flags	System Flags	Unsigned 32-bit integer
netlogon.tc_connection_status	TC Connection Status	Unsigned 32-bit integer
netlogon.time_limit	Time Limit	Time duration
netlogon.timestamp	Timestamp	Date/Time stamp
netlogon.trusted_dc	Trusted DC	String
netlogon.trusted_domain	Trusted Domain	String
netlogon.unknown.char	Unknown char	Unsigned 8-bit integer
netlogon.unknown.long	Unknown long	Unsigned 32-bit integer
netlogon.unknown.short	Unknown short	Unsigned 16-bit integer
netlogon.unknown.time	Unknown time	Date/Time stamp
netlogon.unknown_string	Unknown string	String
netlogon.user_flags	User Flags	Unsigned 32-bit integer
netlogon.user_session_key	User Session Key	Byte array
netlogon.validation_level	Validation Level	Unsigned 16-bit integer
netlogon.wkst.fqdn	Wkst FQDN	String
netlogon.wkst.name	Wkst Name	String
netlogon.wkst.os	Wkst OS	String
netlogon.wkst.site_name	Wkst Site Name	String
netlogon.wksts	Workstations	String

Microsoft Registry (winreg)

Table A-136. Microsoft Registry (winreg)

Field	Field Name	Type
reg.access_mask	Access mask	Unsigned 32-bit integer
reg.hnd	Context handle	Byte array
reg.keyname	Key name	String
reg.openentry.unknown1	Unknown 1	Unsigned 32-bit integer
reg.openhklm.unknown1	Unknown 1	Unsigned 16-bit integer
reg.openhklm.unknown2	Unknown 2	Unsigned 16-bit integer
reg.opnum	Operation	Unsigned 16-bit integer
reg.querykey.class	Class	String

Field	Field Name	Type
reg.querykey.max_subkey_len	Max subkey len	Unsigned 32-bit integer
reg.querykey.max_valbuf_size	Max valbuf size	Unsigned 32-bit integer
reg.querykey.max_valname_len	Max valnum len	Unsigned 32-bit integer
reg.querykey.modtime	Mod time	Date/Time stamp
reg.querykey.num_subkeys	Num subkeys	Unsigned 32-bit integer
reg.querykey.num_values	Num values	Unsigned 32-bit integer
reg.querykey.reserved	Reserved	Unsigned 32-bit integer
reg.querykey.secdesc	Secdesc	Unsigned 32-bit integer
reg.rc	Return code	Unsigned 32-bit integer
reg.unknown1A.unknown1	Unknown 1	Unsigned 32-bit integer

Microsoft Security Account Manager (samr)

Table A-137. Microsoft Security Account Manager (samr)

Field	Field Name	Type
nt.acct_ctrl	Acct Ctrl	Unsigned 32-bit integer
nt.str.len	Length	Unsigned 32-bit integer
nt.str.max_len	Max Length	Unsigned 32-bit integer
nt.str.offset	Offset	Unsigned 32-bit integer
nt.string.length	Length	Unsigned 16-bit integer
nt.string.size	Size	Unsigned 16-bit integer
samr.access	Access Mask	Unsigned 32-bit integer
samr.acct_desc	Account Desc	String
samr.acct_expiry_time	Acct Expiry	Date/Time stamp
samr.acct_name	Account Name	String
samr.alias	Alias	Unsigned 32-bit integer
samr.alias_name	Alias Name	String
samr.attr	Attributes	Unsigned 32-bit integer
samr.bad_pwd_count	Bad Pwd Count	Unsigned 16-bit integer
samr.codepage	Codepage	Unsigned 16-bit integer
samr.comment	Comment	String

Field	Field Name	Type
samr.count	Count	Unsigned 32-bit integer
samr.country	Country	Unsigned 16-bit integer
samr.crypt_hash	Hash	Byte array
samr.crypt_password	Password	Byte array
samr.dc	DC	String
samr.divisions	Divisions	Unsigned 16-bit integer
samr.domain	Domain	String
samr.entries	Entries	Unsigned 32-bit integer
samr.full_name	Full Name	String
samr.group	Group	Unsigned 32-bit integer
samr.group_name	Group Name	String
samr.hnd	Context Handle	Byte array
samr.home	Home	String
samr.home_drive	Home Drive	String
samr.index	Index	Unsigned 32-bit integer
samr.info_type	Info Type	Unsigned 32-bit integer
samr.kickoff_time	Kickoff Time	Date/Time stamp
samr.level	Level	Unsigned 16-bit integer
samr.lm_change	LM Change	Unsigned 8-bit integer
samr.lm_pwd_set	LM Pwd Set	Unsigned 8-bit integer
samr.logoff_time	Logoff Time	Date/Time stamp
samr.logon_count	Logon Count	Unsigned 16-bit integer
samr.logon_time	Logon Time	Date/Time stamp
samr.mask	Mask	Unsigned 32-bit integer
samr.max_entries	Max Entries	Unsigned 32-bit integer
samr.max_pwd_age	Max Pwd Age	Time duration
samr.min_pwd_age	Min Pwd Age	Time duration
samr.min_pwd_len	Min Pwd Len	Unsigned 16-bit integer
samr.nt_pwd_set	NT Pwd Set	Unsigned 8-bit integer
samr.num_aliases	Num Aliases	Unsigned 32-bit integer
samr.num_groups	Num Groups	Unsigned 32-bit integer
samr.num_users	Num Users	Unsigned 32-bit integer
samr.opnum	Operation	Unsigned 16-bit integer
samr.parameters	Parameters	String
samr.pref_maxsize	Pref MaxSize	Unsigned 32-bit integer
samr.profile	Profile	String

Field	Field Name	Type
samr.pwd_Expired	Expired flag	Unsigned 8-bit integer
samr.pwd_can_change_time	PWD Can Change	Date/Time stamp
samr.pwd_history_len	Pwd History Len	Unsigned 16-bit integer
samr.pwd_last_set_time	PWD Last Set	Date/Time stamp
samr.pwd_must_change_time	PWD Must Change	Date/Time stamp
samr.rc	Return code	Unsigned 32-bit integer
samr.resume_hnd	Resume Hnd	Unsigned 32-bit integer
samr.ret_size	Returned Size	Unsigned 32-bit integer
samr.revision	Revision	
samr.rid	Rid	Unsigned 32-bit integer
samr.rid.attrib	Rid Attrib	Unsigned 32-bit integer
samr.script	Script	String
samr.server	Server	String
samr.start_idx	Start Idx	Unsigned 32-bit integer
samr.total_size	Total Size	Unsigned 32-bit integer
samr.type	Type	Unsigned 32-bit integer
samr.unknown.char	Unknown char	Unsigned 8-bit integer
samr.unknown.hyper	Unknown hyper	
samr.unknown.long	Unknown long	Unsigned 32-bit integer
samr.unknown.short	Unknown short	Unsigned 16-bit integer
samr.unknown_string	Unknown string	String
samr.unknown_time	Unknown time	Date/Time stamp
samr.workstations	Workstations	String

Microsoft Server Service (srvsvc)

Table A-138. Microsoft Server Service (srvsvc)

Field	Field Name	Type
srvsvc.	Max Raw Buf Len	Unsigned 32-bit integer
srvsvc.acceptdownlevelapis	Accept Downlevel APIs	Unsigned 32-bit integer
srvsvc.accessalert	Access Alerts	Unsigned 32-bit integer
srvsvc.activelocks	Active Locks	Unsigned 32-bit integer

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Field	Field Name	Type
srvsvc.alerts	Alerts	String
srvsvc.alertsched	Alert Sched	Unsigned 32-bit integer
srvsvc.alist_mtime	Alist mtime	Unsigned 32-bit integer
srvsvc.ann_delta	Announce Delta	Unsigned 32-bit integer
srvsvc.announce	Announce	Unsigned 32-bit integer
srvsvc.auditedevents	Audited Events	Unsigned 32-bit integer
srvsvc.auditprofile	Audit Profile	Unsigned 32-bit integer
srvsvc.autopath	Autopath	String
srvsvc.chdevjobs	Char Dev Jobs	Unsigned 32-bit integer
srvsvc.chdevqs	Char Devqs	Unsigned 32-bit integer
srvsvc.chdevs	Char Devs	Unsigned 32-bit integer
srvsvc.chrdev	Char Device	String
srvsvc.chrdev_opcode	Opcode	Unsigned 32-bit integer
srvsvc.chrdev_status	Status	Unsigned 32-bit integer
srvsvc.chrdev_time	Time	Unsigned 32-bit integer
srvsvc.chrdevq	Device Queue	String
srvsvc.chrqdev_numahead	Num Ahead	Unsigned 32-bit integer
srvsvc.chrqdev_numusers	Num Users	Unsigned 32-bit integer
srvsvc.chrqdev_pri	Priority	Unsigned 32-bit integer
srvsvc.client.type	Client Type	String
srvsvc.comment	Comment	String
srvsvc.computer	Computer	String
srvsvc.con_id	Connection ID	Unsigned 32-bit integer
srvsvc.con_num_opens	Num Opens	Unsigned 32-bit integer
srvsvc.con_time	Connection Time	Unsigned 32-bit integer
srvsvc.con_type	Connection Type	Unsigned 32-bit integer
srvsvc.connections	Connections	Unsigned 32-bit integer
srvsvc.cur_uses	Current Uses	Unsigned 32-bit integer
srvsvc.disc	Disc	Unsigned 32-bit integer
srvsvc.disk_name	Disk Name	String
srvsvc.disk_name_len	Disk Name Length	Unsigned 32-bit integer
srvsvc.diskalert	Disk Alerts	Unsigned 32-bit integer
srvsvc.diskspacetreshold	Diskspace Treshold	Unsigned 32-bit integer
srvsvc.domain	Domain	String
srvsvc.emulated_server	Emulated Server	String

Field	Field Name	Type
srvsvc.enablefcbopens	Enable FCB Opens	Unsigned 32-bit integer
srvsvc.enableforcedlogoff	Enable Forced Logoff	Unsigned 32-bit integer
srvsvc.enableoplockforceclose	Enable Oplock Force Close	Unsigned 32-bit integer
srvsvc.enableoplocks	Enable Oplocks	Unsigned 32-bit integer
srvsvc.enableraw	Enable RAW	Unsigned 32-bit integer
srvsvc.enablesharednetdrives	Enable Shared Net Drives	Unsigned 32-bit integer
srvsvc.enablesoftcompat	Enable Soft Compat	Unsigned 32-bit integer
srvsvc.enum_hnd	Enumeration handle	Byte array
srvsvc.erroralert	Error Alerts	Unsigned 32-bit integer
srvsvc.errortreshold	Error Treshold	Unsigned 32-bit integer
srvsvc.file_id	File ID	Unsigned 32-bit integer
srvsvc.file_num_locks	Num Locks	Unsigned 32-bit integer
srvsvc.glist_mtime	Glist mtime	Unsigned 32-bit integer
srvsvc.guest	Guest Account	String
srvsvc.hidden	Hidden	Unsigned 32-bit integer
srvsvc.hnd	Context Handle	Byte array
srvsvc.info.platform_id	Platform ID	Unsigned 32-bit integer
srvsvc.initconntable	Init Connection Table	Unsigned 32-bit integer
srvsvc.initfiletable	Init File Table	Unsigned 32-bit integer
srvsvc.initsearchtable	Init Search Table	Unsigned 32-bit integer
srvsvc.initsesstable	Init Session Table	Unsigned 32-bit integer
srvsvc.initworkitems	Init Workitems	Unsigned 32-bit integer
srvsvc.irpstacksize	Irp Stack Size	Unsigned 32-bit integer
srvsvc.lanmask	LANMask	Unsigned 32-bit integer
srvsvc.licences	Licences	Unsigned 32-bit integer
srvsvc.linkinfovalidtime	Link Info Valid Time	Unsigned 32-bit integer
srvsvc.lmannounce	LM Announce	Unsigned 32-bit integer
srvsvc.logonalert	Logon Alerts	Unsigned 32-bit integer
srvsvc.max_uses	Max Uses	Unsigned 32-bit integer
srvsvc.maxaudits	Max Audits	Unsigned 32-bit integer
srvsvc.maxcopyreadlen	Max Copy Read Len	Unsigned 32-bit integer
srvsvc.maxcopywritelen	Max Copy Write Len	Unsigned 32-bit integer
srvsvc.maxfreeconnections	Max Free Conenctions	Unsigned 32-bit integer

Field	Field Name	Type
srvsvc.maxkeepcomplsearch	Max Keep Compl Search	Unsigned 32-bit integer
srvsvc.maxkeepsearch	Max Keep Search	Unsigned 32-bit integer
srvsvc.maxlinkdelay	Max Link Delay	Unsigned 32-bit integer
srvsvc.maxmpxct	MaxMpxCt	Unsigned 32-bit integer
srvsvc.maxnonpagedmemoryusage	Max Non-Paged Memory Usage	Unsigned 32-bit integer
srvsvc.maxpagedmemoryusage	Max Paged Memory Usage	Unsigned 32-bit integer
srvsvc.maxworkitemidletime	Max Workitem Idle Time	Unsigned 32-bit integer
srvsvc.maxworkitems	Max Workitems	Unsigned 32-bit integer
srvsvc.minfreeconnections	Min Free Conenctions	Unsigned 32-bit integer
srvsvc.minfreeworkitems	Min Free Workitems	Unsigned 32-bit integer
srvsvc.minkeepcomplsearch	Min Keep Compl Search	Unsigned 32-bit integer
srvsvc.minkeepsearch	Min Keep Search	Unsigned 32-bit integer
srvsvc.minlinkthroughput	Min Link Throughput	Unsigned 32-bit integer
srvsvc.minrcvqueue	Min Rcv Queue	Unsigned 32-bit integer
srvsvc.netioalert	Net I/O Alerts	Unsigned 32-bit integer
srvsvc.networkerrortreshold	Network Error Treshold	Unsigned 32-bit integer
srvsvc.num_admins	Num Admins	Unsigned 32-bit integer
srvsvc.numbigbufs	Num Big Bufs	Unsigned 32-bit integer
srvsvc.numblockthreads	Num Block Threads	Unsigned 32-bit integer
srvsvc.numfiletasks	Num Filetasks	Unsigned 32-bit integer
srvsvc.openfiles	Open Files	Unsigned 32-bit integer
srvsvc.opensearch	Open Search	Unsigned 32-bit integer
srvsvc.oplockbreakresponsewait	Oplock Break Response wait	Unsigned 32-bit integer
srvsvc.oplockbreakwait	Oplock Break Wait	Unsigned 32-bit integer
srvsvc.opnum	Operation	Unsigned 16-bit integer
srvsvc.outbuflen	OutBufLen	Unsigned 32-bit integer
srvsvc.parm_error	Parameter Error	Unsigned 32-bit integer
srvsvc.path	Path	String
srvsvc.path_flags	Flags	Unsigned 32-bit integer
srvsvc.path_len	Len	Unsigned 32-bit integer
srvsvc.path_type	Type	Unsigned 32-bit integer

Field	Field Name	Type
srvsvc.perm	Permissions	Unsigned 32-bit integer
srvsvc.preferred_len	Preferred length	Unsigned 32-bit integer
srvsvc.prefix	Prefix	String
srvsvc.qualifier	Qualifier	String
srvsvc.rawworkitems	Raw Workitems	Unsigned 32-bit integer
srvsvc.rc	Return code	Unsigned 32-bit integer
srvsvc.reserved	Reserved	Unsigned 32-bit integer
srvsvc.scavqosinfoupdatetime	Scav QoS Info Update Time	Unsigned 32-bit integer
srvsvc.scavtimeout	Scav Timeout	Unsigned 32-bit integer
srvsvc.security	Security	Unsigned 32-bit integer
srvsvc.server	Server	String
srvsvc.server.type	Server Type	Unsigned 32-bit integer
srvsvc.server_stat.avresponse	Avresponse	Unsigned 32-bit integer
srvsvc.server_stat.bigbufneed	Big Buf Need	Unsigned 32-bit integer
srvsvc.server_stat.bytesrcvd	Bytes Rcvd	
srvsvc.server_stat.bytessent	Bytes Sent	
srvsvc.server_stat.devopens	Devopens	Unsigned 32-bit integer
srvsvc.server_stat.fopens	Fopens	Unsigned 32-bit integer
srvsvc.server_stat.jobsqueued	Jobs Queued	Unsigned 32-bit integer
srvsvc.server_stat.permerrors	Permerrors	Unsigned 32-bit integer
srvsvc.server_stat.pwerrors	Pwerrors	Unsigned 32-bit integer
srvsvc.server_stat.reqbufneed	Req Buf Need	Unsigned 32-bit integer
srvsvc.server_stat.serrorout	Serrorout	Unsigned 32-bit integer
srvsvc.server_stat.sopens	Sopens	Unsigned 32-bit integer
srvsvc.server_stat.start	Start	Unsigned 32-bit integer
srvsvc.server_stat.stimeouts	stimeouts	Unsigned 32-bit integer
srvsvc.server_stat.syserrors	Syserrors	Unsigned 32-bit integer

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Field	Field Name	Type
srvsvc.service	Service	String
srvsvc.service_bits	Service Bits	Unsigned 32-bit integer
srvsvc.service_bits_of_interest	Service Bits Of Interest	Unsigned 32-bit integer
srvsvc.service_options	Options	Unsigned 32-bit integer
srvsvc.session	Session	String
srvsvc.session.idle_time	Idle Time	Unsigned 32-bit integer
srvsvc.session.num_opens	Num Opens	Unsigned 32-bit integer
srvsvc.session.time	Time	Unsigned 32-bit integer
srvsvc.session.user_flags	User Flags	Unsigned 32-bit integer
srvsvc.sessopens	Sessions Open	Unsigned 32-bit integer
srvsvc.sessreqs	Sessions Reqs	Unsigned 32-bit integer
srvsvc.sessvcs	Sessions VCs	Unsigned 32-bit integer
srvsvc.share	Share	String
srvsvc.share.num_entries	Number of entries	Unsigned 32-bit integer
srvsvc.share_passwd	Share Passwd	String
srvsvc.share_type	Share Type	Unsigned 32-bit integer
srvsvc.shares	Shares	Unsigned 32-bit integer
srvsvc.sizreqbufs	Siz Req Bufs	Unsigned 32-bit integer
srvsvc.srvheuristics	Server Heuristics	String
srvsvc.threadcountadd	Thread Count Add	Unsigned 32-bit integer
srvsvc.threadpriority	Thread Priority	Unsigned 32-bit integer
srvsvc.timesource	Timesource	Unsigned 32-bit integer
srvsvc.tod.day	Day	Unsigned 32-bit integer
srvsvc.tod.elapsed	Elapsed	Unsigned 32-bit integer
srvsvc.tod.hours	Hours	Unsigned 32-bit integer
srvsvc.tod.hunds	Hunds	Unsigned 32-bit integer
srvsvc.tod.mins	Mins	Unsigned 32-bit integer
srvsvc.tod.month	Month	Unsigned 32-bit integer
srvsvc.tod.msecs	msecs	Unsigned 32-bit integer
srvsvc.tod.secs	Secs	Unsigned 32-bit integer
srvsvc.tod.timezone	Timezone	Unsigned 32-bit integer
srvsvc.tod.tinterval	Tinterval	Unsigned 32-bit integer
srvsvc.tod.weekday	Weekday	Unsigned 32-bit integer
srvsvc.tod.year	Year	Unsigned 32-bit integer
srvsvc.transport	Transport	String

Field	Field Name	Type
srvsvc.transport.address	Address	Byte array
srvsvc.transport.addresslen	Address Len	Unsigned 32-bit integer
srvsvc.transport.name	Name	String
srvsvc.transport.networkaddress	Network Address	String
srvsvc.transport.num_vcs	VCs	Unsigned 32-bit integer
srvsvc.ulist_mtime	Ulist mtime	Unsigned 32-bit integer
srvsvc.update_immediately	Update Immediately	Unsigned 32-bit integer
srvsvc.user	User	String
srvsvc.user_path	User Path	String
srvsvc.users	Users	Unsigned 32-bit integer
srvsvc.version.major	Major Version	Unsigned 32-bit integer
srvsvc.version.minor	Minor Version	Unsigned 32-bit integer
srvsvc.xactmemsize	Xact Mem Size	Unsigned 32-bit integer
svrsvc.info_level	Info Level	Unsigned 32-bit integer

Microsoft Spool Subsystem (spoolss)

Table A-139. Microsoft Spool Subsystem (spoolss)

Field	Field Name	Type
spoolss.Datatype	Datatype	String
spoolss.addform.level	Level	Unsigned 32-bit integer
spoolss.architecture	Architecture name	String
spoolss.buffer.data	Buffer data	Byte array
spoolss.buffer.size	Buffer size	Unsigned 32-bit integer
spoolss.clientmajorversion	Client major version	Unsigned 32-bit integer
spoolss.clientminorversion	Client minor version	Unsigned 32-bit integer
spoolss.configfile	Config file	String
spoolss.datafile	Data file	String
spoolss.defaultdatatype	Default data type	String
spoolss.dependentfiles	Dependent files	String
spoolss.document	Document name	String
spoolss.drivername	Driver name	String

Field	Field Name	Type
spoolss.driverpath	Driver path	String
spoolss.driverversion	Driver version	Unsigned 32-bit integer
spoolss.enumforms.num	Num	Unsigned 32-bit integer
spoolss.enumjobs.firstjob	First job	Unsigned 32-bit integer
spoolss.enumjobs.level	Info level	Unsigned 32-bit integer
spoolss.enumjobs.numjobs	Num jobs	Unsigned 32-bit integer
spoolss.enumprinterdata.data_needed	Data size needed	Unsigned 32-bit integer
spoolss.enumprinterdata.data_offered	Data size offered	Unsigned 32-bit integer
spoolss.enumprinterdata.index	Enum index	Unsigned 32-bit integer
spoolss.enumprinterdata.value_needed	Value size needed	Unsigned 32-bit integer
spoolss.enumprinterdata.value_offered	Value size offered	Unsigned 32-bit integer
spoolss.form.flags	Flags	Unsigned 32-bit integer
spoolss.form.height	Height	Unsigned 32-bit integer
spoolss.form.horiz	Horizontal	Unsigned 32-bit integer
spoolss.form.left	Left margin	Unsigned 32-bit integer
spoolss.form.level	Level	Unsigned 32-bit integer
spoolss.form.name	Name	String
spoolss.form.top	Top	Unsigned 32-bit integer
spoolss.form.unknown	Unknown	Unsigned 32-bit integer
spoolss.form.vert	Vertical	Unsigned 32-bit integer
spoolss.form.width	Width	Unsigned 32-bit integer
spoolss.getform.level	Level	Unsigned 32-bit integer
spoolss.helpfile	Help file	String
spoolss.hnd	Context handle	Byte array
spoolss.job.id	Job ID	Unsigned 32-bit integer
spoolss.job.pagesprinted	Job pages printed	Unsigned 32-bit integer
spoolss.job.position	Job position	Unsigned 32-bit integer
spoolss.job.priority	Job priority	Unsigned 32-bit integer
spoolss.job.status	Job status	Unsigned 32-bit integer
spoolss.job.status.blocked	Blocked	Boolean
spoolss.job.status.deleted	Deleted	Boolean

Field	Field Name	Type
spoolss.job.status.deleting	Deleting	Boolean
spoolss.job.status.error	Error	Boolean
spoolss.job.status.offline	Offline	Boolean
spoolss.job.status.paperout	Paperout	Boolean
spoolss.job.status.paused	Paused	Boolean
spoolss.job.status.printed	Printed	Boolean
spoolss.job.status.printing	Printing	Boolean
spoolss.job.status.spooling	Spooling	Boolean
spoolss.job.status.user_intervention	User intervention	Boolean
spoolss.job.totalpages	Job total pages	Unsigned 32-bit integer
spoolss.monitorname	Monitor name	String
spoolss.needed	Needed	Unsigned 32-bit integer
spoolss.notify_field	Field	Unsigned 16-bit integer
spoolss.notify_info.count	Count	Unsigned 32-bit integer
spoolss.notify_info.flags	Flags	Unsigned 32-bit integer
spoolss.notify_info.version	Version	Unsigned 32-bit integer
spoolss.notify_info_data.buffer	Buffer	Unsigned 32-bit integer
spoolss.notify_info_data.buffer_data	Buffer data	Byte array
spoolss.notify_info_data.buffer_len	Buffer length	Unsigned 32-bit integer
spoolss.notify_info_data.buffer_size	Buffer size	Unsigned 32-bit integer
spoolss.notify_info_data.count	Count	Unsigned 32-bit integer
spoolss.notify_info_data.jobid	Job Id	Unsigned 32-bit integer
spoolss.notify_info_data.type	Type	Unsigned 16-bit integer
spoolss.notify_info_data.value1	Value1	Unsigned 32-bit integer
spoolss.notify_info_data.value2	Value2	Unsigned 32-bit integer
spoolss.notify_option.count	Count	Unsigned 32-bit integer

Field	Field Name	Type
spoolss.notify_option.reserved1	Reserved1	Unsigned 16-bit integer
spoolss.notify_option.reserved2	Reserved2	Unsigned 32-bit integer
spoolss.notify_option.reserved3	Reserved3	Unsigned 32-bit integer
spoolss.notify_option.type	Type	Unsigned 16-bit integer
spoolss.notify_option_data.count	Count	Unsigned 32-bit integer
spoolss.notify_options.count	Count	Unsigned 32-bit integer
spoolss.notify_options.flags	Flags	Unsigned 32-bit integer
spoolss.notify_options.version	Version	Unsigned 32-bit integer
spoolss.offered	Offered	Unsigned 32-bit integer
spoolss.opnum	Operation	Unsigned 16-bit integer
spoolss.outputfile	Output file	String
spoolss.printer_attributes	Attributes	Unsigned 32-bit integer
spoolss.printer_attributes.default	Default (9x/ME only)	Boolean
spoolss.printer_attributes.direct	Direct	Boolean
spoolss.printer_attributes.do_complete_first	Do_complete_first	Boolean
spoolss.printer_attributes.enable_bidi	Enable_bidi (9x/ME only)	Boolean
spoolss.printer_attributes.enable_devq	Enable_devq	Boolean
spoolss.printer_attributes.hidden	Hidden	Boolean
spoolss.printer_attributes.keep_printed_jobs	Keep_printed_jobs	Boolean
spoolss.printer_attributes.local	Local	Boolean
spoolss.printer_attributes.network	Network	Boolean
spoolss.printer_attributes.published	Published	Boolean
spoolss.printer_attributes.queued	Queued	Boolean

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Field	Field Name	Type
spoolss.printer_attributes.raw_only	Read only	Boolean
spoolss.printer_attributes.shared	Shared	Boolean
spoolss.printer_attributes.work_offline	Work offline (9x/ME only)	Boolean
spoolss.printer_local	Printer local	Unsigned 32-bit integer
spoolss.printer_status	Status	Unsigned 32-bit integer
spoolss.printerdata.data	Data	Byte array
spoolss.printerdata.size	Size	Unsigned 32-bit integer
spoolss.printerdata.type	Printer data type	Unsigned 32-bit integer
spoolss.printerdata.value	Printer data value	String
spoolss.printername	Printer name	String
spoolss.rc	Return code	Unsigned 32-bit integer
spoolss.relstr.offset	Relative string offset	Unsigned 32-bit integer
spoolss.replyopenprinter.unknown0	Unknown 0	Unsigned 32-bit integer
spoolss.replyopenprinter.unknown1	Unknown 1	Unsigned 32-bit integer
spoolss.returned	Returned	Unsigned 32-bit integer
spoolss.rffpcnex.flags	RFFPCNEX flags	Unsigned 32-bit integer
spoolss.rffpcnex.flags.add_driver	Add driver	Boolean
spoolss.rffpcnex.flags.add_form	Add form	Boolean
spoolss.rffpcnex.flags.add_job	Add job	Boolean
spoolss.rffpcnex.flags.add_port	Add port	Boolean
spoolss.rffpcnex.flags.add_printer	Add printer	Boolean
spoolss.rffpcnex.flags.add_print_processor	Add print processor	Boolean
spoolss.rffpcnex.flags.configure_port	Configure port	Boolean
spoolss.rffpcnex.flags.delete_driver	Delete driver	Boolean
spoolss.rffpcnex.flags.delete_form	Delete form	Boolean

Field	Field Name	Type
spoolss.rffpcnex.flags.delete_job	Delete job	Boolean
spoolss.rffpcnex.flags.delete_port	Delete port	Boolean
spoolss.rffpcnex.flags.delete_printer	Delete printer	Boolean
spoolss.rffpcnex.flags.delete_processor	Delete processor	Boolean
spoolss.rffpcnex.flags.failed_printer_connection	Failed printer connection	Boolean
spoolss.rffpcnex.flags.set_driver	Set driver	Boolean
spoolss.rffpcnex.flags.set_form	Set form	Boolean
spoolss.rffpcnex.flags.set_job	Set job	Boolean
spoolss.rffpcnex.flags.set_printer	Set printer	Boolean
spoolss.rffpcnex.flags.timeout	Timeout	Boolean
spoolss.rffpcnex.flags.write_job	Write job	Boolean
spoolss.rffpcnex.options	Options	Unsigned 32-bit integer
spoolss.routerreplyprinter.changeid	Change id	Unsigned 32-bit integer
spoolss.routerreplyprinter.condition	Condition	Unsigned 32-bit integer
spoolss.routerreplyprinter.unknown1	Unknown1	Unsigned 32-bit integer
spoolss.rrpcn.changehigh	Change high	Unsigned 32-bit integer
spoolss.rrpcn.changelow	Change low	Unsigned 32-bit integer
spoolss.rrpcn.unk0	Unknown 0	Unsigned 32-bit integer
spoolss.rrpcn.unk1	Unknown 1	Unsigned 32-bit integer
spoolss.servermajorversion	Server major version	Unsigned 32-bit integer
spoolss.serverminorversion	Server minor version	Unsigned 32-bit integer
spoolss.servername	Server name	String
spoolss.setform.level	Level	Unsigned 32-bit integer
spoolss.setjob.cmd	Set job command	Unsigned 32-bit integer
spoolss.setprinter_cmd	Command	Unsigned 32-bit integer

Field	Field Name	Type
spoolss.textstatus	Text status	String
spoolss.time.day	Day	Unsigned 32-bit integer
spoolss.time.dow	Day of week	Unsigned 32-bit integer
spoolss.time.hour	Hour	Unsigned 32-bit integer
spoolss.time.minute	Minute	Unsigned 32-bit integer
spoolss.time.month	Month	Unsigned 32-bit integer
spoolss.time.msec	Millisecond	Unsigned 32-bit integer
spoolss.time.second	Second	Unsigned 32-bit integer
spoolss.time.year	Year	Unsigned 32-bit integer
spoolss.username	User name	String
spoolss.writeprinter.numwritten	Num written	Unsigned 32-bit integer

Microsoft Telephony API Service (tapi)

Table A-140. Microsoft Telephony API Service (tapi)

Field	Field Name	Type
tapi.hnd	Context Handle	Byte array
tapi.rc	Return code	Unsigned 32-bit integer
tapi.unknown.bytes	Unknown bytes	Byte array
tapi.unknown.long	Unknown long	Unsigned 32-bit integer
tapi.unknown.string	Unknown string	String

Microsoft Windows Browser Protocol (browser)

Table A-141. Microsoft Windows Browser Protocol (browser)

Field	Field Name	Type
browser.backup.count	Backup List Requested Count	Unsigned 8-bit integer
browser.backup.server	Backup Server	String
browser.backup.token	Backup Request Token	Unsigned 32-bit integer
browser.browser_to_promote	Browser to Promote	String
browser.command	Command	Unsigned 8-bit integer

Field	Field Name	Type
browser.comment	Host Comment	String
browser.election.criteria	Election Criteria	Unsigned 32-bit integer
browser.election.desire	Election Desire	Unsigned 8-bit integer
browser.election.desire.backup	Backup	Boolean
browser.election.desire.domainmaster	Domain Master	Boolean
browser.election.desire.master	Master	Boolean
browser.election.desire.nt	NT	Boolean
browser.election.desire.standby	Standby	Boolean
browser.election.desire.wins	WINS	Boolean
browser.election.os	Election OS	Unsigned 8-bit integer
browser.election.os.nts	NT Server	Boolean
browser.election.os.ntw	NT Workstation	Boolean
browser.election.os.wfw	WfW	Boolean
browser.election.revision	Election Revision	Unsigned 16-bit integer
browser.election.version	Election Version	Unsigned 8-bit integer
browser.mb_server	Master Browser Server Name	String
browser.os_major	OS Major Version	Unsigned 8-bit integer
browser.os_minor	OS Minor Version	Unsigned 8-bit integer
browser.period	Update Periodicity	Unsigned 32-bit integer
browser.proto_major	Browser Protocol Major Version	Unsigned 8-bit integer
browser.proto_minor	Browser Protocol Minor Version	Unsigned 8-bit integer
browser.response_computer_name	Response Computer Name	String
browser.server	Server Name	String
browser.server_type	Server Type	Unsigned 32-bit integer
browser.server_type.apple	Apple	Boolean
browser.server_type.backup_controller	Backup Controller	Boolean
browser.server_type.browser	Backup Browser	Boolean

Field	Field Name	Type
browser.server_type.browser_domain_master	Domain Master Browser	Boolean
browser.server_type.browser_master	Master Browser	Boolean
browser.server_type.browser_potential	Potential Browser	Boolean
browser.server_type.dialin	Dialin	Boolean
browser.server_type.domain_controller	Domain Controller	Boolean
browser.server_type.domain_enum	Domain Enum	Boolean
browser.server_type.local	Local	Boolean
browser.server_type.member	Member	Boolean
browser.server_type.novell	Novell	Boolean
browser.server_type.nts	NT Server	Boolean
browser.server_type.ntw	NT Workstation	Boolean
browser.server_type.osf	OSF	Boolean
browser.server_type.print	Print	Boolean
browser.server_type.server	Server	Boolean
browser.server_type.sql	SQL	Boolean
browser.server_type.time	Time Source	Boolean
browser.server_type.vms	VMS	Boolean
browser.server_type.w95	Windows 95+	Boolean
browser.server_type.wfw	WfW	Boolean
browser.server_type.workstation	Workstation	Boolean
browser.server_type.xenix	Xenix	Boolean
browser.sig	Signature	Unsigned 16-bit integer
browser.unused	Unused flags	Unsigned 8-bit integer
browser.update_count	Update Count	Unsigned 8-bit integer
browser.uptime	Uptime	Unsigned 32-bit integer

Microsoft Windows Lanman Remote API Protocol (lanman)

Table A-142. Microsoft Windows Lanman Remote API Protocol (lanman)

Field	Field Name	Type
lanman.aux_data_desc	Auxiliary Data Descriptor	String
lanman.available_bytes	Available Bytes	Unsigned 16-bit integer
lanman.available_count	Available Entries	Unsigned 16-bit integer
lanman.bad_pw_count	Bad Password Count	Unsigned 16-bit integer
lanman.code_page	Code Page	Unsigned 16-bit integer
lanman.comment	Comment	String
lanman.computer_name	Computer Name	String
lanman.continuation_from	Continuation from message in frame	Unsigned 32-bit integer
lanman.convert	Convert	Unsigned 16-bit integer
lanman.country_code	Country Code	Unsigned 16-bit integer
lanman.current_time	Current Date/Time	Date/Time stamp
lanman.day	Day	Unsigned 8-bit integer
lanman.duration	Duration of Session	Time duration
lanman.entry_count	Entry Count	Unsigned 16-bit integer
lanman.enumeration_domain	Enumeration Domain	String
lanman.full_name	Full Name	String
lanman.function_code	Function Code	Unsigned 16-bit integer
lanman.group_name	Group Name	String
lanman.homedir	Home Directory	String
lanman.hour	Hour	Unsigned 8-bit integer
lanman.hundredths	Hundredths of a second	Unsigned 8-bit integer
lanman.kickoff_time	Kickoff Date/Time	Date/Time stamp
lanman.last_logoff	Last Logoff Date/Time	Date/Time stamp
lanman.last_logon	Last Logon Date/Time	Date/Time stamp
lanman.level	Detail Level	Unsigned 16-bit integer
lanman.logoff_code	Logoff Code	Unsigned 16-bit integer
lanman.logoff_time	Logoff Date/Time	Date/Time stamp
lanman.logon_code	Logon Code	Unsigned 16-bit integer
lanman.logon_domain	Logon Domain	String
lanman.logon_hours	Logon Hours	Byte array
lanman.logon_server	Logon Server	String

Field	Field Name	Type
lanman.max_storage	Max Storage	Unsigned 32-bit integer
lanman.minute	Minute	Unsigned 8-bit integer
lanman.month	Month	Unsigned 8-bit integer
lanman.msecs	Milliseconds	Unsigned 32-bit integer
lanman.new_password	New Password	Byte array
lanman.num_logons	Number of Logons	Unsigned 16-bit integer
lanman.old_password	Old Password	Byte array
lanman.operator_privileges	Operator Privileges	Unsigned 32-bit integer
lanman.other_domains	Other Domains	String
lanman.param_desc	Parameter Descriptor	String
lanman.parameters	Parameters	String
lanman.password	Password	String
lanman.password_age	Password Age	Time duration
lanman.password_can_change	Password Can Change	Date/Time stamp
lanman.password_must_change	Password Must Change	Date/Time stamp
lanman.privilege_level	Privilege Level	Unsigned 16-bit integer
lanman.recv_buf_len	Receive Buffer Length	Unsigned 16-bit integer
lanman.reserved	Reserved	Unsigned 32-bit integer
lanman.ret_desc	Return Descriptor	String
lanman.script_path	Script Path	String
lanman.second	Second	Unsigned 8-bit integer
lanman.send_buf_len	Send Buffer Length	Unsigned 16-bit integer
lanman.server.comment	Server Comment	String
lanman.server.major	Major Version	Unsigned 8-bit integer
lanman.server.minor	Minor Version	Unsigned 8-bit integer
lanman.server.name	Server Name	String
lanman.share.comment	Share Comment	String
lanman.share.current_uses	Share Current Uses	Unsigned 16-bit integer
lanman.share.max_uses	Share Max Uses	Unsigned 16-bit integer
lanman.share.name	Share Name	String
lanman.share.password	Share Password	String
lanman.share.path	Share Path	String
lanman.share.permissions	Share Permissions	Unsigned 16-bit integer
lanman.share.type	Share Type	Unsigned 16-bit integer

Field	Field Name	Type
lanman.status	Status	Unsigned 16-bit integer
lanman.timeinterval	Time Interval	Unsigned 16-bit integer
lanman.tzoffset	Time Zone Offset	Signed 16-bit integer
lanman.units_per_week	Units Per Week	Unsigned 16-bit integer
lanman.user_comment	User Comment	String
lanman.user_name	User Name	String
lanman.ustruct_size	Length of UStruct	Unsigned 16-bit integer
lanman.weekday	Weekday	Unsigned 8-bit integer
lanman.workstation_domain	Workstation Domain	String
lanman.workstation_major	Workstation Major Version	Unsigned 8-bit integer
lanman.workstation_minor	Workstation Minor Version	Unsigned 8-bit integer
lanman.workstation_name	Workstation Name	String
lanman.workstations	Workstations	String
lanman.year	Year	Unsigned 16-bit integer

Microsoft Windows Logon Protocol (netlogon)

Table A-143. Microsoft Windows Logon Protocol (netlogon)

Field	Field Name	Type
netlogon.command	Command	Unsigned 8-bit integer
netlogon.date_time	Date/Time	Unsigned 32-bit integer
netlogon.db_count	DB Count	Unsigned 32-bit integer
netlogon.db_index	Database Index	Unsigned 32-bit integer
netlogon.domain_name	Domain Name	String
netlogon.domain_sid_size	Domain SID Size	Unsigned 32-bit integer
netlogon.flags.autolock	Autolock	Boolean
netlogon.flags.enabled	Enabled	Boolean
netlogon.flags.expire	Expire	Boolean
netlogon.flags.homedir	Homedir	Boolean
netlogon.flags.interdomain	Interdomain Trust	Boolean
netlogon.flags.mns	MNS User	Boolean
netlogon.flags.normal	Normal User	Boolean

Field	Field Name	Type
netlogon.flags.password	Password	Boolean
netlogon.flags.server	Server Trust	Boolean
netlogon.flags.temp_dup	Temp Duplicate User	Boolean
netlogon.flags.workstation	Workstation Trust	Boolean
netlogon.large_serial	Large Serial Number	
netlogon.lm_token	LM Token	Unsigned 16-bit integer
netlogon.lmnt_token	LMNT Token	Unsigned 16-bit integer
netlogon.low_serial	Low Serial Number	Unsigned 32-bit integer
netlogon.mailslot_name	Mailslot Name	String
netlogon.major_version	Workstation Major Version	Unsigned 8-bit integer
netlogon.minor_version	Workstation Minor Version	Unsigned 8-bit integer
netlogon.nt_date_time	NT Date/Time	Date/Time stamp
netlogon.nt_version	NT Version	Unsigned 32-bit integer
netlogon.os_version	Workstation OS Version	Unsigned 8-bit integer
netlogon.pdc_name	PDC Name	String
netlogon.pulse	Pulse	Unsigned 32-bit integer
netlogon.random	Random	Unsigned 32-bit integer
netlogon.request_count	Request Count	Unsigned 16-bit integer
netlogon.script_name	Script Name	String
netlogon.server_name	Server Name	String
netlogon.unicode_computer_name	Unicode Computer Name	String
netlogon.unicode_pdc_name	Unicode PDC Name	String
netlogon.update	Update Type	Unsigned 16-bit integer
netlogon.user_name	User Name	String

Microsoft Workstation Service (wkssvc)

Table A-144. Microsoft Workstation Service (wkssvc)

Field	Field Name	Type

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Mobile IP (mip)

Table A-145. Mobile IP (mip)

Field	Field Name	Type
mip.auth.auth	Authenticator	Byte array
mip.auth.spi	SPI	Unsigned 32-bit integer
mip.b	Broadcast Datagrams	Boolean
mip.coa	Care of Address	IPv4 address
mip.code	Reply Code	Unsigned 8-bit integer
mip.d	Co-lcated Care-of Address	Boolean
mip.ext.auth.subtype	Gen Auth Ext SubType	Unsigned 8-bit integer
mip.ext.len	Extension Length	Unsigned 16-bit integer
mip.ext.type	Extension Type	Unsigned 8-bit integer
mip.extension	Extension	Byte array
mip.flags	Flags	Unsigned 8-bit integer
mip.g	GRE	Boolean
mip.haaddr	Home Agent	IPv4 address
mip.homeaddr	Home Address	IPv4 address
mip.ident	Identification	Date/Time stamp
mip.life	Lifetime	Unsigned 16-bit integer
mip.m	Minimal Encapsulation	Boolean
mip.nai	NAI	String
mip.s	Simultaneous Bindings	Boolean
mip.t	Reverse Tunneling	Boolean
mip.type	Message Type	Unsigned 8-bit integer
mip.v	Van Jacobson	Boolean

Modbus/TCP (mbtcp)

Table A-146. Modbus/TCP (mbtcp)

Field	Field Name	Type
modbus_tcp.func_code	function code	Unsigned 8-bit integer
modbus_tcp.len	length	Unsigned 16-bit integer
modbus_tcp.prot_id	protocol identifier	Unsigned 16-bit integer
modbus_tcp.trans_id	transaction identifier	Unsigned 16-bit integer

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Field	Field Name	Type
modbus_tcp.unit_id	unit identifier	Unsigned 8-bit integer

Mount Service (mount)

Table A-147. Mount Service (mount)

Field	Field Name	Type
mount.dump.directory	Directory	String
mount.dump.entry	Mount List Entry	No value
mount.dump.hostname	Hostname	String
mount.export.directory	Directory	String
mount.export.entry	Export List Entry	No value
mount.export.group	Group	String
mount.export.groups	Groups	No value
mount.flavor	Flavor	Unsigned 32-bit integer
mount.flavors	Flavors	Unsigned 32-bit integer
mount.path	Path	String
mount.pathconf.link_max	Maximum number of links to a file	Unsigned 32-bit integer
mount.pathconf.mask	Reply error/status bits	Unsigned 16-bit integer
mount.pathconf.mask.chown_restricted	CHOWN_RESTRICTED	Boolean
mount.pathconf.mask.error_all	ERROR_ALL	Boolean
mount.pathconf.mask.error_link_max	ERROR_LINK_MAX	Boolean
mount.pathconf.mask.error_max_canon	ERROR_MAX_CANON	Boolean
mount.pathconf.mask.error_max_input	ERROR_MAX_INPUT	Boolean
mount.pathconf.mask.error_name_max	ERROR_NAME_MAX	Boolean
mount.pathconf.mask.error_path_max	ERROR_PATH_MAX	Boolean
mount.pathconf.mask.error_pipe_buf	ERROR_PIPE_BUF	Boolean
mount.pathconf.mask.error_vdisable	ERROR_VDISABLE	Boolean

Field	Field Name	Type
mount.pathconf.mask.no_trunc	NO_TRUNC	Boolean
mount.pathconf.max_canon	Maximum terminal input line length	Unsigned 16-bit integer
mount.pathconf.max_input	Terminal input buffer size	Unsigned 16-bit integer
mount.pathconf.name_max	Maximum file name length	Unsigned 16-bit integer
mount.pathconf.path_max	Maximum path name length	Unsigned 16-bit integer
mount.pathconf.pipe_buf	Pipe buffer size	Unsigned 16-bit integer
mount.pathconf.vdisable_char	VDISABLE character	Unsigned 8-bit integer
mount.status	Status	Unsigned 32-bit integer

MultiProtocol Label Switching Header (mpls)

Table A-148. MultiProtocol Label Switching Header (mpls)

Field	Field Name	Type
mpls.bottom	MPLS Bottom Of Label Stack	Unsigned 8-bit integer
mpls.exp	MPLS Experimental Bits	Unsigned 8-bit integer
mpls.label	MPLS Label	Unsigned 32-bit integer
mpls.ttl	MPLS TTL	Unsigned 8-bit integer

Multicast Router DISCovery protocol (mrdisc)

Table A-149. Multicast Router DISCovery protocol (mrdisc)

Field	Field Name	Type
mrdisc.adv_int	Advertising Interval	Unsigned 8-bit integer
mrdisc.checksum	Checksum	Unsigned 16-bit integer
mrdisc.checksum_bad	Bad Checksum	Boolean
mrdisc.num_opts	Number Of Options	Unsigned 16-bit integer
mrdisc.opt_len	Length	Unsigned 8-bit integer
mrdisc.option	Option	Unsigned 8-bit integer

Field	Field Name	Type
mrdisc.option_data	Data	Byte array
mrdisc.options	Options	No value
mrdisc.query_int	Query Interval	Unsigned 16-bit integer
mrdisc.rob_var	Robustness Variable	Unsigned 16-bit integer
mrdisc.type	Type	Unsigned 8-bit integer

Multicast Source Discovery Protocol (msdp)

Table A-150. Multicast Source Discovery Protocol (msdp)

Field	Field Name	Type
msdp.length	Length	Unsigned 16-bit integer
msdp.not.entry_count	Entry Count	Unsigned 24-bit integer
msdp.not.error	Error Code	Unsigned 8-bit integer
msdp.not.error_sub	Error subode	Unsigned 8-bit integer
msdp.not.ipv4	IPv4 address	IPv4 address
msdp.not.o	Open-bit	Unsigned 8-bit integer
msdp.not.res	Reserved	Unsigned 24-bit integer
msdp.not.sprefix_len	Sprefix len	Unsigned 8-bit integer
msdp.sa.entry_count	Entry Count	Unsigned 8-bit integer
msdp.sa.group_addr	Group Address	IPv4 address
msdp.sa.reserved	Reserved	Unsigned 24-bit integer
msdp.sa.rp_addr	RP Address	IPv4 address
msdp.sa.sprefix_len	Sprefix len	Unsigned 8-bit integer
msdp.sa.src_addr	Source Address	IPv4 address
msdp.sa_req.group_addr	Group Address	IPv4 address
msdp.sa_req.res	Reserved	Unsigned 8-bit integer
msdp.type	Type	Unsigned 8-bit integer

NFSACL (nfsacl)

Table A-151. NFSACL (nfsacl)

Field	Field Name	Type

NFSAUTH (nfsauth)

Table A-152. NFSAUTH (nfsauth)

Field	Field Name	Type

NIS+ (nisplus)

Table A-153. NIS+ (nisplus)

Field	Field Name	Type
.nisplus.dummy		Byte array
nisplus.access.mask	access mask	No value
nisplus.aticks	aticks	Unsigned 32-bit integer
nisplus.attr	Attribute	No value
nisplus.attr.name	name	String
nisplus.attr.val	val	Byte array
nisplus.attributes	Attributes	No value
nisplus.callback.status	status	Boolean
nisplus.checkpoint.dticks	dticks	Unsigned 32-bit integer
nisplus.checkpoint.status	status	Unsigned 32-bit integer
nisplus.checkpoint.zticks	zticks	Unsigned 32-bit integer
nisplus.cookie	cookie	Byte array
nisplus.cticks	cticks	Unsigned 32-bit integer
nisplus.ctime	ctime	Date/Time stamp
nisplus.directory	directory	No value
nisplus.directory.mask	mask	No value
nisplus.directory.mask.group_create	GROUP CREATE	Boolean
nisplus.directory.mask.group_destroy	GROUP DESTROY	Boolean
nisplus.directory.mask.group_modify	GROUP MODIFY	Boolean
nisplus.directory.mask.group_read	GROUP READ	Boolean
nisplus.directory.mask.nobody_create	NOBODY CREATE	Boolean

Field	Field Name	Type
nisplus.directory.mask.nobody.destroy	NOBODY DESTROY	Boolean
nisplus.directory.mask.nobody.modify	NOBODY MODIFY	Boolean
nisplus.directory.mask.nobody.read	NOBODY READ	Boolean
nisplus.directory.mask.owner.create	OWNER CREATE	Boolean
nisplus.directory.mask.owner.destroy	OWNER DESTROY	Boolean
nisplus.directory.mask.owner.modify	OWNER MODIFY	Boolean
nisplus.directory.mask.owner.read	OWNER READ	Boolean
nisplus.directory.mask.world.create	WORLD CREATE	Boolean
nisplus.directory.mask.world.destroy	WORLD DESTROY	Boolean
nisplus.directory.mask.world.modify	WORLD MODIFY	Boolean
nisplus.directory.mask.world.read	WORLD READ	Boolean
nisplus.directory.mask_list	mask list	No value
nisplus.directory.name	directory name	String
nisplus.directory.ttl	ttl	Unsigned 32-bit integer
nisplus.directory.type	type	Unsigned 32-bit integer
nisplus.dticks	dticks	Unsigned 32-bit integer
nisplus.dump.dir	directory	String
nisplus.dump.time	time	Date/Time stamp
nisplus.endpoint	endpoint	No value
nisplus.endpoint.family	family	String
nisplus.endpoint.proto	proto	String
nisplus.endpoint.uaddr	addr	String
nisplus.endpoints	nis endpoints	No value
nisplus.entry	entry	No value
nisplus.entry.col	column	No value
nisplus.entry.cols	columns	No value
nisplus.entry.flags	flags	Unsigned 32-bit integer
nisplus.entry.flags.asn	ASN.1	Boolean

Field	Field Name	Type
nisplus.entry.flags.binary	BINARY	Boolean
nisplus.entry.flags.encrypted	ENCRYPTED	Boolean
nisplus.entry.flags.modified	MODIFIED	Boolean
nisplus.entry.flags.xdr	XDR	Boolean
nisplus.entry.type	type	String
nisplus.entry.val	val	String
nisplus.fd.dir.data	data	Byte array
nisplus.fd.dirname	dirname	String
nisplus.fd.requester	requester	String
nisplus.fd.sig	signature	Byte array
nisplus.group	Group	No value
nisplus.group.flags	flags	Unsigned 32-bit integer
nisplus.group.name	group name	String
nisplus.grps	Groups	No value
nisplus.ib.bufsize	bufsize	Unsigned 32-bit integer
nisplus.ib.flags	flags	Unsigned 32-bit integer
nisplus.key.data	key data	Byte array
nisplus.key.type	type	Unsigned 32-bit integer
nisplus.link	link	No value
nisplus.log.entries	log entries	No value
nisplus.log.entry	log entry	No value
nisplus.log.entry.type	type	Unsigned 32-bit integer
nisplus.log.principal	principal	String
nisplus.log.time	time	Date/Time stamp
nisplus.mtime	mtime	Date/Time stamp
nisplus.object	NIS Object	No value
nisplus.object.domain	domain	String
nisplus.object.group	group	String
nisplus.object.name	name	String
nisplus.object.oid	Object Identity Verifier	No value
nisplus.object.owner	owner	String
nisplus.object.private	private	Byte array
nisplus.object.ttl	ttl	Unsigned 32-bit integer
nisplus.object.type	type	Unsigned 32-bit integer

Field	Field Name	Type
nisplus.ping.dir	directory	String
nisplus.ping.time	time	Date/Time stamp
nisplus.server	server	No value
nisplus.server.name	name	String
nisplus.servers	nis servers	No value
nisplus.status	status	Unsigned 32-bit integer
nisplus.table	table	No value
nisplus.table.col	column	No value
nisplus.table.col.flags	flags	No value
nisplus.table.col.name	column name	String
nisplus.table.cols	columns	No value
nisplus.table.flags.asn	asn	Boolean
nisplus.table.flags.binary	binary	Boolean
nisplus.table.flags.casesensitive	casesensitive	Boolean
nisplus.table.flags.encrypted	encrypted	Boolean
nisplus.table.flags.modified	modified	Boolean
nisplus.table.flags.searchable	searchable	Boolean
nisplus.table.flags.xdr	xdr	Boolean
nisplus.table.maxcol	max columns	Unsigned 16-bit integer
nisplus.table.path	path	String
nisplus.table.separator	separator	Unsigned 8-bit integer
nisplus.table.type	type	String
nisplus.tag	tag	No value
nisplus.tag.type	type	Unsigned 32-bit integer
nisplus.tag.value	value	String
nisplus.taglist	taglist	No value
nisplus.zticks	zticks	Unsigned 32-bit integer

NIS+ Callback (nispluscb)

Table A-154. NIS+ Callback (nispluscb)

Field	Field Name	Type

Field	Field Name	Type
nispluscb.entries	entries	No value
nispluscb.entry	entry	No value

NSPI (nspi)

Table A-155. NSPI (nspi)

Field	Field Name	Type
nspi.opnum	Operation	Unsigned 16-bit integer

NTLM Secure Service Provider (ntlmssp)

Table A-156. NTLM Secure Service Provider (ntlmssp)

Field	Field Name	Type
dcerpc.negotiateflags	Flags	Unsigned 32-bit integer
ntlmssp.auth.domain	Domain name	String
ntlmssp.auth.domain.maxlen	Domain name max length	Unsigned 16-bit integer
ntlmssp.auth.domain.offset	Domain name offset	Unsigned 32-bit integer
ntlmssp.auth.domain.strlen	Domain name length	Unsigned 16-bit integer
ntlmssp.auth.hostname	Host name	String
ntlmssp.auth.hostname.maxlen	Hostname max length	Unsigned 16-bit integer
ntlmssp.auth.hostname.offset	Hostname offset	Unsigned 32-bit integer
ntlmssp.auth.hostname.strlen	Hostname length	Unsigned 16-bit integer
ntlmssp.auth.lmresponse	Lan Manager Response	Byte array
ntlmssp.auth.lmresponse.maxlen	Lan Manager response max length	Unsigned 16-bit integer
ntlmssp.auth.lmresponse.offset	Lan Manager response offset	Unsigned 16-bit integer
ntlmssp.auth.lmresponse.strlen	Lan Manager response length	Unsigned 16-bit integer
ntlmssp.auth.ntresponse	NTLM Response	Byte array

Field	Field Name	Type
ntlmssp.auth.ntresponse.maxlen	NTLM response max length	Unsigned 16-bit integer
ntlmssp.auth.ntresponse.offset	NTLM response offset	Unsigned 32-bit integer
ntlmssp.auth.ntresponse.strlen	NTLM response length	Unsigned 16-bit integer
ntlmssp.auth.unknown1	Unknown1	Byte array
ntlmssp.auth.unknown1.maxlen	Unknown1 max length	Unsigned 16-bit integer
ntlmssp.auth.unknown1.offset	Unknown1 offset	Unsigned 32-bit integer
ntlmssp.auth.unknown1.strlen	Unknown1 length	Unsigned 16-bit integer
ntlmssp.auth.username	User name	String
ntlmssp.auth.username.maxlen	Username max length	Unsigned 16-bit integer
ntlmssp.auth.username.offset	Username offset	Unsigned 32-bit integer
ntlmssp.auth.username.strlen	Username length	Unsigned 16-bit integer
ntlmssp.challenge.unknown1	Unknown1	Unsigned 32-bit integer
ntlmssp.challenge.unknown2	Unknown2	Unsigned 32-bit integer
ntlmssp.identifier	NTLMSSP identifier	String
ntlmssp.messagetype	NTLM Message Type	Unsigned 32-bit integer
ntlmssp.negotiate.callingworkstation	Calling workstation name	String
ntlmssp.negotiate.callingworkstation.buffer	Calling workstation name buffer	Unsigned 32-bit integer
ntlmssp.negotiate.callingworkstation.maxlen	Calling workstation name max length	Unsigned 16-bit integer
ntlmssp.negotiate.callingworkstation.strlen	Calling workstation name length	Unsigned 16-bit integer
ntlmssp.negotiate.domain	Calling workstation domain	String
ntlmssp.negotiate.domain.buffer	Calling workstation domain buffer	Unsigned 32-bit integer
ntlmssp.negotiate.domain.maxlen	Calling workstation domain max length	Unsigned 16-bit integer

Field	Field Name	Type
ntlmssp.negotiate.domain.st	Calling workstation domain length	Unsigned 16-bit integer
ntlmssp.negotiate00000008	Request 0x00000008	Boolean
ntlmssp.negotiate00000400	Negotiate 0x00000400	Boolean
ntlmssp.negotiate00000800	Negotiate 0x00000800	Boolean
ntlmssp.negotiate128	Negotiate 128	Boolean
ntlmssp.negotiatealwayssign	Negotiate Always Sign	Boolean
ntlmssp.negotiatechallengea	Negotiate Challenge Accept Response	Boolean
ntlmssp.negotiatechallengei	Negotiate Challenge Init Response	Boolean
ntlmssp.negotiatechallengen	Negotiate Challenge Non NT Session Key	Boolean
ntlmssp.negotiatedatagrams	Negotiate Datagram Style	Boolean
ntlmssp.negotiatedomainsup	Negotiate Domain Supplied	Boolean
ntlmssp.negotiatekeyexch	Negotiate Key Exchange	Boolean
ntlmssp.negotiatelmkey	Negotiate Lan Manager Key	Boolean
ntlmssp.negotiatenetware	Negotiate Netware	Boolean
ntlmssp.negotiatent00100000	Negotiate 0x00100000	Boolean
ntlmssp.negotiatent00200000	Negotiate 0x00200000	Boolean
ntlmssp.negotiatent00400000	Negotiate 0x00400000	Boolean
ntlmssp.negotiatent01000000	Negotiate 0x01000000	Boolean
ntlmssp.negotiatent02000000	Negotiate 0x02000000	Boolean
ntlmssp.negotiatent04000000	Negotiate 0x04000000	Boolean
ntlmssp.negotiatent08000000	Negotiate 0x08000000	Boolean
ntlmssp.negotiatent10000000	Negotiate 0x10000000	Boolean
ntlmssp.negotiatent80000000	Negotiate 0x80000000	Boolean
ntlmssp.negotiatentlm	Negotiate NTLM key	Boolean

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Field	Field Name	Type
ntlmssp.negotiatentlm2	Negotiate NTLM2 key	Boolean
ntlmssp.negotiateoem	Negotiate OEM	Boolean
ntlmssp.negotiateseal	Negotiate Seal	Boolean
ntlmssp.negotiatesign	Negotiate Sign	Boolean
ntlmssp.negotiatetargetinfo	Negotiate Target Info	Boolean
ntlmssp.negotiatethisislocalcall	Negotiate This is Local Call	Boolean
ntlmssp.negotiateunicode	Negotiate UNICODE	Boolean
ntlmssp.negotiateworkstationsupplied	Negotiate Workstation Supplied	Boolean
ntlmssp.ntlmchallenge	NTLM Challenge	Byte array
ntlmssp.requesttarget	Request Target	Boolean
ntlmssp.reserved	Reserved	Byte array

Name Binding Protocol (nbp)

Table A-157. Name Binding Protocol (nbp)

Field	Field Name	Type
nbp.count	Count	Unsigned 8-bit integer
nbp.enum	Enumerator	Unsigned 8-bit integer
nbp.info	Info	Unsigned 8-bit integer
nbp.net	Network	Unsigned 16-bit integer
nbp.node	Node	Unsigned 8-bit integer
nbp.object	Object	String
nbp.op	Operation	Unsigned 8-bit integer
nbp.port	Port	Unsigned 8-bit integer
nbp.tid	Transaction ID	Unsigned 8-bit integer
nbp.type	Type	String
nbp.zone	Zone	String

Name Management Protocol over IPX (nmpi)

Table A-158. Name Management Protocol over IPX (nmpi)

Field	Field Name	Type

NetBIOS (netbios)

Table A-159. NetBIOS (netbios)

Field	Field Name	Type
netbios.ack	Acknowledge	Boolean
netbios.ack_expected	Acknowledge expected	Boolean
netbios.ack_with_data	Acknowledge with data	Boolean
netbios.call_name_type	Caller's Name Type	Unsigned 8-bit integer
netbios.command	Command	Unsigned 8-bit integer
netbios.data1	DATA1 value	Unsigned 8-bit integer
netbios.data2	DATA2 value	Unsigned 16-bit integer
netbios.hdr_len	Header Length	Unsigned 16-bit integer
netbios.largest_frame	Largest Frame	Unsigned 8-bit integer
netbios.local_session	Local Session No.	Unsigned 8-bit integer
netbios.max_data_recv_size	Maximum data receive size	Unsigned 16-bit integer
netbios.name_type	Name type	Unsigned 16-bit integer
netbios.nb_name	NetBIOS Name	String
netbios.nb_name_type	NetBIOS Name Type	Unsigned 8-bit integer
netbios.num_data_bytes_accepted	Number of data bytes accepted	Unsigned 16-bit integer
netbios.recv_cont_req	RECEIVE_CONTINUE requested	Boolean
netbios.remote_session	Remote Session No.	Unsigned 8-bit integer
netbios.resp_corrl	Response Correlator	Unsigned 16-bit integer
netbios.send_no_ack	Handle SEND.NO.ACK	Boolean
netbios.status	Status	Unsigned 8-bit integer
netbios.status_buffer_len	Length of status buffer	Unsigned 16-bit integer
netbios.termination_indicator	Termination indicator	Unsigned 16-bit integer
netbios.version	NetBIOS Version	Boolean
netbios.xmit_corrl	Transmit Correlator	Unsigned 16-bit integer

NetBIOS Datagram Service (nbdgm)

Table A-160. NetBIOS Datagram Service (nbdgm)

Field	Field Name	Type
nbdgm.dgram_id	Datagram ID	Unsigned 16-bit integer
nbdgm.first	This is first fragment	Boolean
nbdgm.next	More fragments follow	Boolean
nbdgm.node_type	Node Type	Unsigned 8-bit integer
nbdgm.src.ip	Source IP	IPv4 address
nbdgm.src.port	Source Port	Unsigned 16-bit integer
nbdgm.type	Message Type	Unsigned 8-bit integer

NetBIOS Name Service (nbns)

Table A-161. NetBIOS Name Service (nbns)

Field	Field Name	Type
nbns.count.add_rr	Additional RRs	Unsigned 16-bit integer
nbns.count.answers	Answer RRs	Unsigned 16-bit integer
nbns.count.auth_rr	Authority RRs	Unsigned 16-bit integer
nbns.count.queries	Questions	Unsigned 16-bit integer
nbns.flags	Flags	Unsigned 16-bit integer
nbns.flags.authoritative	Authoritative	Boolean
nbns.flags.broadcast	Broadcast	Boolean
nbns.flags.opcode	Opcode	Unsigned 16-bit integer
nbns.flags.rcode	Reply code	Unsigned 16-bit integer
nbns.flags.recavail	Recursion available	Boolean
nbns.flags.recdesired	Recursion desired	Boolean
nbns.flags.response	Response	Boolean
nbns.flags.truncated	Truncated	Boolean
nbns.id	Transaction ID	Unsigned 16-bit integer

NetBIOS Session Service (nbss)

Table A-162. NetBIOS Session Service (nbss)

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Field	Field Name	Type
nbss.flags	Flags	Unsigned 8-bit integer
nbss.type	Message Type	Unsigned 8-bit integer

NetBIOS over IPX (nbipx)

Table A-163. NetBIOS over IPX (nbipx)

Field	Field Name	Type

NetWare Core Protocol (ncp)

Table A-164. NetWare Core Protocol (ncp)

Field	Field Name	Type
ncp.Service_type	Service Type	Unsigned 16-bit integer
ncp.abort_q_flag	Abort Queue Flag	Unsigned 8-bit integer
ncp.abs_min_time_since_file_delete	Absolute Minimum Time Since File Delete	Unsigned 32-bit integer
ncp.acc_mode_comp	Compatibility Mode	Boolean
ncp.acc_mode_deny_read	Deny Read Access	Boolean
ncp.acc_mode_deny_write	Deny Write Access	Boolean
ncp.acc_mode_read	Read Access	Boolean
ncp.acc_mode_write	Write Access	Boolean
ncp.acc_priv_create	Create Privileges (files only)	Boolean
ncp.acc_priv_delete	Delete Privileges (files only)	Boolean
ncp.acc_priv_modify	Modify File Status Flags Privileges (files and directories)	Boolean
ncp.acc_priv_open	Open Privileges (files only)	Boolean
ncp.acc_priv_parent	Parental Privileges (directories only for creating, deleting, and renaming)	Boolean
ncp.acc_priv_read	Read Privileges (files only)	Boolean

Field	Field Name	Type
ncp.acc_priv_search	Search Privileges (directories only)	Boolean
ncp.acc_priv_write	Write Privileges (files only)	Boolean
ncp.acc_rights1_create	Create Rights	Boolean
ncp.acc_rights1_delete	Delete Rights	Boolean
ncp.acc_rights1_modify	Modify Rights	Boolean
ncp.acc_rights1_open	Open Rights	Boolean
ncp.acc_rights1_parent	Parental Rights	Boolean
ncp.acc_rights1_read	Read Rights	Boolean
ncp.acc_rights1_search	Search Rights	Boolean
ncp.acc_rights1_supervisor	Supervisor Access Rights	Boolean
ncp.acc_rights1_write	Write Rights	Boolean
ncp.acc_rights_create	Create Rights	Boolean
ncp.acc_rights_delete	Delete Rights	Boolean
ncp.acc_rights_modify	Modify Rights	Boolean
ncp.acc_rights_open	Open Rights	Boolean
ncp.acc_rights_parent	Parental Rights	Boolean
ncp.acc_rights_read	Read Rights	Boolean
ncp.acc_rights_search	Search Rights	Boolean
ncp.acc_rights_write	Write Rights	Boolean
ncp.accel_cache_node_write	Accelerate Cache Node Write Count	Unsigned 32-bit integer
ncp.accepted_max_size	Accepted Max Size	Unsigned 16-bit integer
ncp.access_control	Access Control	Unsigned 8-bit integer
ncp.access_mode	Access Mode	Unsigned 8-bit integer
ncp.access_privileges	Access Privileges	Unsigned 8-bit integer
ncp.access_rights_mask	Access Rights	Unsigned 8-bit integer
ncp.access_rights_mask_word	Access Rights	Unsigned 16-bit integer
ncp.account_balance	Account Balance	Unsigned 32-bit integer
ncp.acct_version	Acct Version	Unsigned 8-bit integer
ncp.ack_seqno	ACK Sequence Number	Unsigned 16-bit integer
ncp.act_flag_create	Create	Boolean
ncp.act_flag_open	Open	Boolean
ncp.act_flag_replace	Replace	Boolean

Field	Field Name	Type
ncp.action_flag	Action Flag	Unsigned 8-bit integer
ncp.active_conn_bit_list	Active Connection List	String
ncp.active_indexed_files	Active Indexed Files	Unsigned 16-bit integer
ncp.actual_max_bindery_objects	Actual Max Bindery Objects	Unsigned 16-bit integer
ncp.actual_max_indexed_files	Actual Max Indexed Files	Unsigned 16-bit integer
ncp.actual_max_open_files	Actual Max Open Files	Unsigned 16-bit integer
ncp.actual_max_sim_trans	Actual Max Simultaneous Transactions	Unsigned 16-bit integer
ncp.actual_max_used_directory	Actual Max Used Directory Entries	Unsigned 16-bit integer
ncp.actual_max_used_routing_buffers	Actual Max Used Routing Buffers	Unsigned 16-bit integer
ncp.actual_response_count	Actual Response Count	Unsigned 16-bit integer
ncp.add_nm_spc_and_vol	Add Name Space and Volume	String
ncp.address	Address	
ncp.aes_event_count	AES Event Count	Unsigned 32-bit integer
ncp.afp_entry_id	AFP Entry ID	Unsigned 32-bit integer
ncp.alloc_avail_byte	Bytes Available for Allocation	Unsigned 32-bit integer
ncp.alloc_blck	Allocate Block Count	Unsigned 32-bit integer
ncp.alloc_blck_already_wait	Allocate Block Already Waiting	Unsigned 32-bit integer
ncp.alloc_blck_frm_avail	Allocate Block From Available Count	Unsigned 32-bit integer
ncp.alloc_blck_frm_lru	Allocate Block From LRU Count	Unsigned 32-bit integer
ncp.alloc_blck_i_had_to_wait	Allocate Block I Had To Wait Count	Unsigned 32-bit integer
ncp.alloc_blck_i_had_to_wait_for	Allocate Block I Had To Wait For Someone Count	Unsigned 32-bit integer
ncp.alloc_free_count	Reclaimable Free Bytes	Unsigned 32-bit integer
ncp.alloc_waiting	Allocate Waiting Count	Unsigned 32-bit integer
ncp.allocate_mode	Allocate Mode	Unsigned 16-bit integer
ncp.allocation_block_size	Allocation Block Size	Unsigned 32-bit integer

Field	Field Name	Type
ncp.already_doing_realloc	Already Doing Re-Allocate Count	Unsigned 32-bit integer
ncp.application_number	Application Number	Unsigned 16-bit integer
ncp.archived_date	Archived Date	Unsigned 16-bit integer
ncp.archived_time	Archived Time	Unsigned 16-bit integer
ncp.archiver_id	Archiver ID	Unsigned 32-bit integer
ncp.associated_name_space	Associated Name Space	Unsigned 8-bit integer
ncp.async_internl_dsk_get	Async Internal Disk Get Count	Unsigned 32-bit integer
ncp.async_internl_dsk_get_need_to_alloc	Async Internal Disk Get Need To Alloc	Unsigned 32-bit integer
ncp.async_internl_dsk_get_someone_beat	Async Internal Disk Get Someone Beat Me	Unsigned 32-bit integer
ncp.async_read_error	Async Read Error Count	Unsigned 32-bit integer
ncp.att_def16_archive	Archive	Boolean
ncp.att_def16_execute	Execute	Boolean
ncp.att_def16_hidden	Hidden	Boolean
ncp.att_def16_read_audit	Read Audit	Boolean
ncp.att_def16_ro	Read Only	Boolean
ncp.att_def16_shareable	Shareable	Boolean
ncp.att_def16_sub_only	Subdirectories Only	Boolean
ncp.att_def16_system	System	Boolean
ncp.att_def16_transaction	Transactional	Boolean
ncp.att_def16_write_audit	Write Audit	Boolean
ncp.att_def32_archive	Archive	Boolean
ncp.att_def32_execute	Execute	Boolean
ncp.att_def32_hidden	Hidden	Boolean
ncp.att_def32_read_audit	Read Audit	Boolean
ncp.att_def32_ro	Read Only	Boolean
ncp.att_def32_shareable	Shareable	Boolean
ncp.att_def32_sub_only	Subdirectories Only	Boolean
ncp.att_def32_system	System	Boolean
ncp.att_def32_transaction	Transactional	Boolean
ncp.att_def32_write_audit	Write Audit	Boolean
ncp.att_def_archive	Archive	Boolean
ncp.att_def_comp	Compressed	Boolean

Field	Field Name	Type
ncp.att_def_cpyinhibit	Copy Inhibit	Boolean
ncp.att_def_delinhibit	Delete Inhibit	Boolean
ncp.att_def_execute	Execute	Boolean
ncp.att_def_hidden	Hidden	Boolean
ncp.att_def_im_comp	Immediate Compress	Boolean
ncp.att_def_purge	Purge	Boolean
ncp.att_def_reninhibit	Rename Inhibit	Boolean
ncp.att_def_ro	Read Only	Boolean
ncp.att_def_shareable	Shareable	Boolean
ncp.att_def_sub_only	Subdirectories Only	Boolean
ncp.att_def_system	System	Boolean
ncp.attach_during_processing	Attach During Processing	Unsigned 16-bit integer
ncp.attach_while_processing_attach	Attach While Processing Attach	Unsigned 16-bit integer
ncp.attached_indexed_files	Attached Indexed Files	Unsigned 8-bit integer
ncp.attr_def	Attributes	Unsigned 8-bit integer
ncp.attr_def_16	Attributes	Unsigned 16-bit integer
ncp.attr_def_32	Attributes	Unsigned 32-bit integer
ncp.attribute_valid_flag	Attribute Valid Flag	Unsigned 32-bit integer
ncp.attributes	Attributes	Unsigned 32-bit integer
ncp.audit_enable_flag	Auditing Enabled Flag	Unsigned 16-bit integer
ncp.audit_file_max_size	Audit File Maximum Size	Unsigned 32-bit integer
ncp.audit_file_size	Audit File Size	Unsigned 32-bit integer
ncp.audit_file_size_threshold	Audit File Size Threshold	Unsigned 32-bit integer
ncp.audit_file_ver_date	Audit File Version Date	Unsigned 16-bit integer
ncp.audit_flag	Audit Flag	Unsigned 8-bit integer
ncp.audit_handle	Audit File Handle	Unsigned 32-bit integer
ncp.audit_id	Audit ID	Unsigned 32-bit integer
ncp.audit_id_type	Audit ID Type	Unsigned 16-bit integer
ncp.audit_record_count	Audit Record Count	Unsigned 32-bit integer
ncp.audit_ver_date	Auditing Version Date	Unsigned 16-bit integer
ncp.auditing_flags	Auditing Flags	Unsigned 32-bit integer
ncp.avail_space	Available Space	Unsigned 32-bit integer
ncp.available_blocks	Available Blocks	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.available_clusters	Available Clusters	Unsigned 16-bit integer
ncp.available_dir_entries	Available Directory Entries	Unsigned 32-bit integer
ncp.available_directory_slots	Available Directory Slots	Unsigned 16-bit integer
ncp.available_indexed_files	Available Indexed Files	Unsigned 16-bit integer
ncp.background_aged_writes	Background Aged Writes	Unsigned 32-bit integer
ncp.background_dirty_writes	Background Dirty Writes	Unsigned 32-bit integer
ncp.bad_logical_connection_count	Bad Logical Connection Count	Unsigned 16-bit integer
ncp.banner_name	Banner Name	String
ncp.base_directory_id	Base Directory ID	Unsigned 32-bit integer
ncp.being_aborted	Being Aborted Count	Unsigned 32-bit integer
ncp.being_processed	Being Processed Count	Unsigned 32-bit integer
ncp.big_forged_packet	Big Forged Packet Count	Unsigned 32-bit integer
ncp.big_invalid_packet	Big Invalid Packet Count	Unsigned 32-bit integer
ncp.big_invalid_slot	Big Invalid Slot Count	Unsigned 32-bit integer
ncp.big_read_being_torn_down	Big Read Being Torn Down Count	Unsigned 32-bit integer
ncp.big_read_do_it_over	Big Read Do It Over Count	Unsigned 32-bit integer
ncp.big_read_invalid_mess	Big Read Invalid Message Number Count	Unsigned 32-bit integer
ncp.big_read_no_data_avail	Big Read No Data Available Count	Unsigned 32-bit integer
ncp.big_read_phy_read_err	Big Read Physical Read Error Count	Unsigned 32-bit integer
ncp.big_read_trying_to_read	Big Read Trying To Read Too Much Count	Unsigned 32-bit integer
ncp.big_repeat_the_file_read	Big Repeat the File Read Count	Unsigned 32-bit integer
ncp.big_return_abort_mess	Big Return Abort Message Count	Unsigned 32-bit integer
ncp.big_send_extra_cc_count	Big Send Extra CC Count	Unsigned 32-bit integer
ncp.big_still_transmitting	Big Still Transmitting Count	Unsigned 32-bit integer
ncp.big_write_being_abort	Big Write Being Aborted Count	Unsigned 32-bit integer

Field	Field Name	Type
ncp.big_write_being_torn_down	Big Write Being Torn Down Count	Unsigned 32-bit integer
ncp.big_write_inv_message_num	Big Write Invalid Message Number Count	Unsigned 32-bit integer
ncp.bindery_context	Bindery Context	
ncp.bit_map	Bit Map	Byte array
ncp.block_number	Block Number	Unsigned 32-bit integer
ncp.block_size	Block Size	Unsigned 16-bit integer
ncp.block_size_in_sectors	Block Size in Sectors	Unsigned 32-bit integer
ncp.board_installed	Board Installed	Unsigned 8-bit integer
ncp.board_number	Board Number	Unsigned 32-bit integer
ncp.board_numbers	Board Numbers	Unsigned 32-bit integer
ncp.buffer_size	Buffer Size	Unsigned 16-bit integer
ncp.bumped_out_of_order	Bumped Out Of Order Write Count	Unsigned 32-bit integer
ncp.burst_len	Burst Length	Unsigned 32-bit integer
ncp.burst_seqno	Burst Sequence Number	Unsigned 16-bit integer
ncp.bus_string	Bus String	String
ncp.bus_type	Bus Type	Unsigned 8-bit integer
ncp.bytes_actually_transferred	Bytes Actually Transferred	Unsigned 32-bit integer
ncp.bytes_read	Bytes Read	String
ncp.bytes_to_copy	Bytes to Copy	Unsigned 32-bit integer
ncp.bytes_written	Bytes Written	String
ncp.cache_allocations	Cache Allocations	Unsigned 32-bit integer
ncp.cache_block_scrapped	Cache Block Scrapped	Unsigned 16-bit integer
ncp.cache_buffer_count	Cache Buffer Count	Unsigned 16-bit integer
ncp.cache_buffer_size	Cache Buffer Size	Unsigned 16-bit integer
ncp.cache_byte_to_block	Cache Byte To Block Shift Factor	Unsigned 32-bit integer
ncp.cache_dirty_block_thresh	Cache Dirty Block Threshold	Unsigned 32-bit integer
ncp.cache_dirty_wait_time	Cache Dirty Wait Time	Unsigned 32-bit integer
ncp.cache_full_write_requests	Cache Full Write Requests	Unsigned 32-bit integer
ncp.cache_get_requests	Cache Get Requests	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.cache_hit_on_unavailable_block	Cache Hit On Unavailable Block	Unsigned 16-bit integer
ncp.cache_hits	Cache Hits	Unsigned 32-bit integer
ncp.cache_max_concur_writes	Cache Maximum Concurrent Writes	Unsigned 32-bit integer
ncp.cache_misses	Cache Misses	Unsigned 32-bit integer
ncp.cache_partial_write_requests	Cache Partial Write Requests	Unsigned 32-bit integer
ncp.cache_read_requests	Cache Read Requests	Unsigned 32-bit integer
ncp.cache_used_while_check	Cache Used While Checking	Unsigned 32-bit integer
ncp.cache_write_requests	Cache Write Requests	Unsigned 32-bit integer
ncp.category_name	Category Name	String
ncp.cc_file_handle	File Handle	Byte array
ncp.cc_function	OP-Lock Flag	Unsigned 8-bit integer
ncp.cfg_max_simultaneous_transactions	Configured Max Simultaneous Transactions	Unsigned 16-bit integer
ncp.change_bits	Change Bits	Unsigned 16-bit integer
ncp.change_bits_acc_date	Access Date	Boolean
ncp.change_bits_adate	Archive Date	Boolean
ncp.change_bits_aid	Archiver ID	Boolean
ncp.change_bits_atime	Archive Time	Boolean
ncp.change_bits_cdate	Creation Date	Boolean
ncp.change_bits_ctime	Creation Time	Boolean
ncp.change_bits_fatt	File Attributes	Boolean
ncp.change_bits_max_acc_mask	Maximum Access Mask	Boolean
ncp.change_bits_max_space	Maximum Space	Boolean
ncp.change_bits_modify	Modify Name	Boolean
ncp.change_bits_owner	Owner ID	Boolean
ncp.change_bits_udate	Update Date	Boolean
ncp.change_bits_uid	Update ID	Boolean
ncp.change_bits_utime	Update Time	Boolean
ncp.channel_state	Channel State	Unsigned 8-bit integer
ncp.channel_synchronization_state	Channel Synchronization State	Unsigned 8-bit integer
ncp.charge_amount	Charge Amount	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.charge_information	Charge Information	Unsigned 32-bit integer
ncp.checksum_error_count	Checksum Error Count	Unsigned 32-bit integer
ncp.checksuming	Checksumming	Boolean
ncp.client_comp_flag	Completion Flag	Unsigned 16-bit integer
ncp.client_id_number	Client ID Number	Unsigned 32-bit integer
ncp.client_list	Client List	Unsigned 32-bit integer
ncp.client_list_cnt	Client List Count	Unsigned 16-bit integer
ncp.client_list_len	Client List Length	Unsigned 8-bit integer
ncp.client_record_area	Client Record Area	String
ncp.client_station	Client Station	Unsigned 8-bit integer
ncp.client_station_long	Client Station	Unsigned 32-bit integer
ncp.client_task_number	Client Task Number	Unsigned 8-bit integer
ncp.client_task_number_long	Client Task Number	Unsigned 32-bit integer
ncp.cluster_count	Cluster Count	Unsigned 16-bit integer
ncp.clusters_used_by_directories	Clusters Used by Directories	Unsigned 32-bit integer
ncp.clusters_used_by_extended_dirs	Clusters Used by Extended Directories	Unsigned 32-bit integer
ncp.clusters_used_by_fat	Clusters Used by FAT	Unsigned 32-bit integer
ncp.cmd_flags_advanced	Advanced	Boolean
ncp.cmd_flags_hidden	Hidden	Boolean
ncp.cmd_flags_later	Restart Server Required to Take Effect	Boolean
ncp.cmd_flags_secure	Console Secured	Boolean
ncp.cmd_flags_startup_only	Startup.ncf Only	Boolean
ncp.cmpbyteincount	Compress Byte In Count	Unsigned 32-bit integer
ncp.cmpbyteoutcnt	Compress Byte Out Count	Unsigned 32-bit integer
ncp.cmphibyteincnt	Compress High Byte In Count	Unsigned 32-bit integer
ncp.cmphibyteoutcnt	Compress High Byte Out Count	Unsigned 32-bit integer
ncp.cmphitickcnt	Compress High Tick Count	Unsigned 32-bit integer
ncp.cmphitickhigh	Compress High Tick	Unsigned 32-bit integer
ncp.co_proc_string	CoProcessor String	String

Field	Field Name	Type
ncp.co_processor_flag	CoProcessor Present Flag	Unsigned 32-bit integer
ncp.com_cnts	Communication Counters	Unsigned 16-bit integer
ncp.comment	Comment	
ncp.comment_type	Comment Type	Unsigned 16-bit integer
ncp.complete_signatures	Complete Signatures	Boolean
ncp.completion_code	Completion Code	Unsigned 8-bit integer
ncp.compress_volume	Volume Compression	Unsigned 32-bit integer
ncp.compressed_data_streams_count	Compressed Data Streams Count	Unsigned 32-bit integer
ncp.compressed_limbo_data_streams_count	Compressed Limbo Data Streams Count	Unsigned 32-bit integer
ncp.compressed_sectors	Compressed Sectors	Unsigned 32-bit integer
ncp.compression_ios_limit	Compression IOs Limit	Unsigned 32-bit integer
ncp.compression_lower_limit	Compression Lower Limit	Unsigned 32-bit integer
ncp.compression_stage	Compression Stage	Unsigned 32-bit integer
ncp.config_major_vn	Configuration Major Version Number	Unsigned 8-bit integer
ncp.config_minor_vn	Configuration Minor Version Number	Unsigned 8-bit integer
ncp.configuration_description	Configuration Description	String
ncp.configuration_text	Configuration Text	String
ncp.configured_max_bindery_objects	Configured Max Bindery Objects	Unsigned 16-bit integer
ncp.configured_max_open_files	Configured Max Open Files	Unsigned 16-bit integer
ncp.configured_max_routing_buffers	Configured Max Routing Buffers	Unsigned 16-bit integer
ncp.conn_being_aborted	Connection Being Aborted Count	Unsigned 32-bit integer
ncp.conn_ctrl_bits	Connection Control	Unsigned 8-bit integer
ncp.conn_list	Connection List	Unsigned 32-bit integer
ncp.conn_list_count	Connection List Count	Unsigned 32-bit integer
ncp.conn_list_len	Connection List Length	Unsigned 8-bit integer
ncp.conn_number_byte	Connection Number	Unsigned 8-bit integer
ncp.conn_number_word	Connection Number	Unsigned 16-bit integer
ncp.connected_lan	LAN Adapter	Unsigned 32-bit integer
ncp.connection	Connection Number	Unsigned 16-bit integer

Field	Field Name	Type
ncp.connection_list	Connection List	Unsigned 32-bit integer
ncp.connection_number	Connection Number	Unsigned 32-bit integer
ncp.connection_number_list	Connection Number List	
ncp.connection_service_type	Connection Service Type	Unsigned 8-bit integer
ncp.connection_status	Connection Status	Unsigned 8-bit integer
ncp.connection_type	Connection Type	Unsigned 8-bit integer
ncp.connections_in_use	Connections In Use	Unsigned 16-bit integer
ncp.connections_max_used	Connections Max Used	Unsigned 16-bit integer
ncp.connections_supported_max	Connections Supported Max	Unsigned 16-bit integer
ncp.control_being_torn_down	Control Being Torn Down Count	Unsigned 32-bit integer
ncp.control_code	Control Code	Unsigned 8-bit integer
ncp.control_flags	Control Flags	Unsigned 8-bit integer
ncp.control_invalid_message_number	Control Invalid Message Number Count	Unsigned 32-bit integer
ncp.controller_drive_number	Controller Drive Number	Unsigned 8-bit integer
ncp.controller_number	Controller Number	Unsigned 8-bit integer
ncp.controller_type	Controller Type	Unsigned 8-bit integer
ncp.cookie_1	Cookie 1	Unsigned 32-bit integer
ncp.cookie_2	Cookie 2	Unsigned 32-bit integer
ncp.copies	Copies	Unsigned 8-bit integer
ncp.copyright	Copyright	
ncp.counter_mask	Counter Mask	Unsigned 8-bit integer
ncp.cpu_number	CPU Number	Unsigned 32-bit integer
ncp.cpu_string	CPU String	String
ncp.cpu_type	CPU Type	Unsigned 8-bit integer
ncp.creation_date	Creation Date	Unsigned 16-bit integer
ncp.creation_time	Creation Time	Unsigned 16-bit integer
ncp.creator_id	Creator ID	Unsigned 32-bit integer
ncp.creator_name_space_number	Creator Name Space Number	Unsigned 8-bit integer
ncp.credit_limit	Credit Limit	Unsigned 32-bit integer

Field	Field Name	Type
ncp.ctl_bad_ack_frag_list	Control Bad ACK Fragment List Count	Unsigned 32-bit integer
ncp.ctl_no_data_read	Control No Data Read Count	Unsigned 32-bit integer
ncp.ctrl_flags	Control Flags	Unsigned 16-bit integer
ncp.cur_blk_being_dcompress	Current Block Being Decompressed	Unsigned 32-bit integer
ncp.cur_comp_blks	Current Compression Blocks	Unsigned 32-bit integer
ncp.cur_initial_blks	Current Initial Blocks	Unsigned 32-bit integer
ncp.cur_inter_blks	Current Intermediate Blocks	Unsigned 32-bit integer
ncp.cur_num_of_r_tags	Current Number of Resource Tags	Unsigned 32-bit integer
ncp.curr_num_cache_buff	Current Number Of Cache Buffers	Unsigned 32-bit integer
ncp.curr_ref_id	Current Reference ID	Unsigned 16-bit integer
ncp.current_changed_fats	Current Changed FAT Entries	Unsigned 16-bit integer
ncp.current_entries	Current Entries	Unsigned 32-bit integer
ncp.current_form_type	Current Form Type	Unsigned 8-bit integer
ncp.current_lfs_counters	Current LFS Counters	Unsigned 32-bit integer
ncp.current_open_files	Current Open Files	Unsigned 16-bit integer
ncp.current_server_time	Time Elapsed Since Server Was Brought Up	Unsigned 32-bit integer
ncp.current_servers	Current Servers	Unsigned 32-bit integer
ncp.current_space	Current Space	Unsigned 32-bit integer
ncp.current_trans_count	Current Transaction Count	Unsigned 32-bit integer
ncp.current_used_bindery_objects	Current Used Bindery Objects	Unsigned 16-bit integer
ncp.currently_used_routing_buffers	Currently Used Routing Buffers	Unsigned 16-bit integer
ncp.custom_cnts	Custom Counters	Unsigned 32-bit integer
ncp.custom_count	Custom Count	Unsigned 32-bit integer
ncp.custom_counters	Custom Counters	Unsigned 32-bit integer
ncp.custom_string	Custom String	
ncp.custom_var_value	Custom Variable Value	Unsigned 32-bit integer
ncp.data	Data	
ncp.data_bytes	Data Bytes	Unsigned 16-bit integer

Field	Field Name	Type
ncp.data_fork_first_fat	Data Fork First FAT Entry	Unsigned 32-bit integer
ncp.data_fork_len	Data Fork Len	Unsigned 32-bit integer
ncp.data_fork_size	Data Fork Size	Unsigned 32-bit integer
ncp.data_offset	Data Offset	Unsigned 32-bit integer
ncp.data_size	Data Size	Unsigned 32-bit integer
ncp.data_stream	Data Stream	Unsigned 8-bit integer
ncp.data_stream_name	Data Stream Name	
ncp.data_stream_number	Data Stream Number	Unsigned 8-bit integer
ncp.data_stream_size	Size	Unsigned 32-bit integer
ncp.data_stream_space_allo	Space Allocated for Data Stream	Unsigned 32-bit integer
ncp.data_streams_count	Data Streams Count	Unsigned 32-bit integer
ncp.dc_dirty_wait_time	DC Dirty Wait Time	Unsigned 32-bit integer
ncp.dc_double_read_flag	DC Double Read Flag	Unsigned 32-bit integer
ncp.dc_max_concurrent_writes	DC Maximum Concurrent Writes	Unsigned 32-bit integer
ncp.dc_min_non_ref_time	DC Minimum Non-Referenced Time	Unsigned 32-bit integer
ncp.dc_wait_time_before_new_buff	DC Wait Time Before New Buffer	Unsigned 32-bit integer
ncp.dead_mirror_table	Dead Mirror Table	Byte array
ncp.dealloc_being_proc	De-Allocate Being Processed Count	Unsigned 32-bit integer
ncp.dealloc_forged_packet	De-Allocate Forged Packet Count	Unsigned 32-bit integer
ncp.dealloc_invalid_slot	De-Allocate Invalid Slot Count	Unsigned 32-bit integer
ncp.dealloc_still_transmit	De-Allocate Still Transmitting Count	Unsigned 32-bit integer
ncp.decpbyteincount	DeCompress Byte In Count	Unsigned 32-bit integer
ncp.decpbyteoutcnt	DeCompress Byte Out Count	Unsigned 32-bit integer
ncp.decphibyteincnt	DeCompress High Byte In Count	Unsigned 32-bit integer
ncp.decphibyteoutcnt	DeCompress High Byte Out Count	Unsigned 32-bit integer
ncp.decphitickcnt	DeCompress High Tick Count	Unsigned 32-bit integer
ncp.decphitickhigh	DeCompress High Tick	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.definded_name_spaces	Defined Name Spaces	Unsigned 8-bit integer
ncp.defined_data_streams	Defined Data Streams	Unsigned 8-bit integer
ncp.delay_time	Delay Time	Unsigned 32-bit integer
ncp.delete_existing_file_flag	Delete Existing File Flag	Unsigned 8-bit integer
ncp.delete_id	Deleted ID	Unsigned 32-bit integer
ncp.deleted_date	Deleted Date	Unsigned 16-bit integer
ncp.deleted_file_time	Deleted File Time	Unsigned 32-bit integer
ncp.deleted_time	Deleted Time	Unsigned 16-bit integer
ncp.deny_read_count	Deny Read Count	Unsigned 16-bit integer
ncp.deny_write_count	Deny Write Count	Unsigned 16-bit integer
ncp.description_string	Description	String
ncp.desired_access_rights	Desired Access Rights	Unsigned 16-bit integer
ncp.desired_response_count	Desired Response Count	Unsigned 16-bit integer
ncp.dest_component_count	Destination Path Component Count	Unsigned 8-bit integer
ncp.dest_dir_handle	Destination Directory Handle	Unsigned 8-bit integer
ncp.dest_name_space	Destination Name Space	Unsigned 8-bit integer
ncp.dest_path	Destination Path	
ncp.detach_during_processing	Detach During Processing	Unsigned 16-bit integer
ncp.detach_for_bad_connection	Detach For Bad Connection Number	Unsigned 16-bit integer
ncp.dir_base	Directory Base	Unsigned 32-bit integer
ncp.dir_count	Directory Count	Unsigned 16-bit integer
ncp.dir_handle	Directory Handle	Unsigned 8-bit integer
ncp.dir_handle_long	Directory Handle	Unsigned 32-bit integer
ncp.dir_handle_name	Handle Name	Unsigned 8-bit integer
ncp.directory_access_rights	Directory Access Rights	Unsigned 8-bit integer
ncp.directory_attributes	Directory Attributes	Unsigned 8-bit integer
ncp.directory_entry_number	Directory Entry Number	Unsigned 32-bit integer
ncp.directory_entry_number_word	Directory Entry Number	Unsigned 16-bit integer
ncp.directory_id	Directory ID	Unsigned 16-bit integer

Field	Field Name	Type
ncp.directory_name	Directory Name	String
ncp.directory_name_14	Directory Name	String
ncp.directory_name_len	Directory Name Length	Unsigned 8-bit integer
ncp.directory_number	Directory Number	Unsigned 32-bit integer
ncp.directory_path	Directory Path	String
ncp.directory_services_object_id	Directory Services Object ID	Unsigned 32-bit integer
ncp.directory_stamp	Directory Stamp (0xD1D1)	Unsigned 16-bit integer
ncp.dirty_cache_buffers	Dirty Cache Buffers	Unsigned 16-bit integer
ncp.disable_brdcasts	Disable Broadcasts	Boolean
ncp.disable_personal_brdcasts	Disable Personal Broadcasts	Boolean
ncp.disable_wdog_messages	Disable Watchdog Message	Boolean
ncp.disk_channel_number	Disk Channel Number	Unsigned 8-bit integer
ncp.disk_channel_table	Disk Channel Table	Unsigned 8-bit integer
ncp.disk_space_limit	Disk Space Limit	Unsigned 32-bit integer
ncp.dm_flags	DM Flags	Unsigned 8-bit integer
ncp.dm_info_entries	DM Info Entries	Unsigned 32-bit integer
ncp.dm_info_level	DM Info Level	Unsigned 8-bit integer
ncp.dm_major_version	DM Major Version	Unsigned 32-bit integer
ncp.dm_minor_version	DM Minor Version	Unsigned 32-bit integer
ncp.dm_present_flag	Data Migration Present Flag	Unsigned 8-bit integer
ncp.dma_channels_used	DMA Channels Used	Unsigned 32-bit integer
ncp.dos_directory_base	DOS Directory Base	Unsigned 32-bit integer
ncp.dos_directory_entry	DOS Directory Entry	Unsigned 32-bit integer
ncp.dos_directory_entry_number	DOS Directory Entry Number	Unsigned 32-bit integer
ncp.dos_file_attributes	DOS File Attributes	Unsigned 8-bit integer
ncp.dos_parent_directory_entry	DOS Parent Directory Entry	Unsigned 32-bit integer
ncp.dos_sequence	DOS Sequence	Unsigned 32-bit integer
ncp.drive_cylinders	Drive Cylinders	Unsigned 16-bit integer
ncp.drive_definition_string	Drive Definition	String
ncp.drive_heads	Drive Heads	Unsigned 8-bit integer
ncp.drive_mapping_table	Drive Mapping Table	Byte array

Field	Field Name	Type
ncp.drive_mirror_table	Drive Mirror Table	Byte array
ncp.drive_removable_flag	Drive Removable Flag	Unsigned 8-bit integer
ncp.drive_size	Drive Size	Unsigned 32-bit integer
ncp.driver_board_name	Driver Board Name	String
ncp.driver_log_name	Driver Logical Name	String
ncp.driver_short_name	Driver Short Name	String
ncp.dsired_acc_rights_compat	Compatibility	Boolean
ncp.dsired_acc_rights_del_file	Delete File Close	Boolean
ncp.dsired_acc_rights_deny_r	Deny Read	Boolean
ncp.dsired_acc_rights_deny_w	Deny Write	Boolean
ncp.dsired_acc_rights_read_o	Read Only	Boolean
ncp.dsired_acc_rights_w_thru	File Write Through	Boolean
ncp.dsired_acc_rights_write	Write Only	Boolean
ncp.dst_connection	Destination Connection ID	Unsigned 32-bit integer
ncp.dst_ea_flags	Destination EA Flags	Unsigned 16-bit integer
ncp.dst_ns_indicator	Destination Name Space Indicator	Unsigned 16-bit integer
ncp.dst_queue_id	Destination Queue ID	Unsigned 32-bit integer
ncp.dup_is_being_sent	Duplicate Is Being Sent Already Count	Unsigned 32-bit integer
ncp.duplicate_replies_sent	Duplicate Replies Sent	Unsigned 16-bit integer
ncp.dyn_mem_struct_cur	Current Used Dynamic Space	Unsigned 32-bit integer
ncp.dyn_mem_struct_max	Max Used Dynamic Space	Unsigned 32-bit integer
ncp.dyn_mem_struct_total	Total Dynamic Space	Unsigned 32-bit integer
ncp.ea_access_flag	EA Access Flag	Unsigned 16-bit integer
ncp.ea_bytes_written	Bytes Written	Unsigned 32-bit integer
ncp.ea_count	Count	Unsigned 32-bit integer
ncp.ea_data_size	Data Size	Unsigned 32-bit integer
ncp.ea_data_size_duplicated	Data Size Duplicated	Unsigned 32-bit integer
ncp.ea_duplicate_count	Duplicate Count	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.ea_error_codes	EA Error Codes	Unsigned 16-bit integer
ncp.ea_flags	EA Flags	Unsigned 16-bit integer
ncp.ea_handle	EA Handle	Unsigned 32-bit integer
ncp.ea_handle_or_netware_handle_or_volume	EA Handle or NetWare Handle or Volume (see EAFlags)	Unsigned 32-bit integer
ncp.ea_key	EA Key	
ncp.ea_key_size	Key Size	Unsigned 32-bit integer
ncp.ea_key_size_duplicated	Key Size Duplicated	Unsigned 32-bit integer
ncp.ea_need_bit_flag	EA Need Bit Flag	Boolean
ncp.ea_value	EA Value	
ncp.ea_value_length	Value Length	Unsigned 16-bit integer
ncp.ea_value_rep	EA Value	String
ncp.ecb_cxl_fails	ECB Cancel Failures	Unsigned 32-bit integer
ncp.echo_socket	Echo Socket	Unsigned 16-bit integer
ncp.effective_rights	Effective Rights	Unsigned 8-bit integer
ncp.effective_rights_create	Create Rights	Boolean
ncp.effective_rights_delete	Delete Rights	Boolean
ncp.effective_rights_modify	Modify Rights	Boolean
ncp.effective_rights_open	Open Rights	Boolean
ncp.effective_rights_parental	Parental Rights	Boolean
ncp.effective_rights_read	Read Rights	Boolean
ncp.effective_rights_search	Search Rights	Boolean
ncp.effective_rights_write	Write Rights	Boolean
ncp.enable_brdcasts	Enable Broadcasts	Boolean
ncp.enable_personal_brdcast	Enable Personal Broadcasts	Boolean
ncp.enable_wdog_messages	Enable Watchdog Message	Boolean
ncp.encryption	Encryption	Boolean
ncp.enqueued_send_cnt	Enqueued Send Count	Unsigned 32-bit integer
ncp.enum_info_account	Accounting Information	Boolean
ncp.enum_info_auth	Authentication Information	Boolean

Field	Field Name	Type
ncp.enum_info_lock	Lock Information	Boolean
ncp.enum_info_mask	Return Information Mask	Unsigned 8-bit integer
ncp.enum_info_name	Name Information	Boolean
ncp.enum_info_print	Print Information	Boolean
ncp.enum_info_stats	Statistical Information	Boolean
ncp.enum_info_time	Time Information	Boolean
ncp.enum_info_transport	Transport Information	Boolean
ncp.err_doing_async_read	Error Doing Async Read Count	Unsigned 32-bit integer
ncp.error_read_last_fat	Error Reading Last FAT Count	Unsigned 32-bit integer
ncp.event_offset	Event Offset	Byte array
ncp.event_time	Event Time	Unsigned 32-bit integer
ncp.expiration_time	Expiration Time	Unsigned 32-bit integer
ncp.ext_info	Extended Return Information	Unsigned 16-bit integer
ncp.ext_info_64_bit_fs	64 Bit File Sizes	Boolean
ncp.ext_info_access	Last Access	Boolean
ncp.ext_info_dos_name	DOS Name	Boolean
ncp.ext_info_effective	Effective	Boolean
ncp.ext_info_flush	Flush	Boolean
ncp.ext_info_mac_date	MAC Date	Boolean
ncp.ext_info_mac_finder	MAC Finder	Boolean
ncp.ext_info_newstyle	New Style	Boolean
ncp.ext_info_parental	Parental	Boolean
ncp.ext_info_sibling	Sibling	Boolean
ncp.ext_info_update	Update	Boolean
ncp.ext_router_active_flag	External Router Active Flag	Boolean
ncp.extended_attribute_extants_used	Extended Attribute Extants Used	Unsigned 32-bit integer
ncp.extended_attributes_defined	Extended Attributes Defined	Unsigned 32-bit integer
ncp.extra_extra_use_count_node_alloc	Errors allocating an additional use count node for TTS	Unsigned 32-bit integer
ncp.extra_use_count_node_count	Errors allocating a use count node for TTS	Unsigned 32-bit integer

Field	Field Name	Type
ncp.failed_alloc_req	Failed Alloc Request Count	Unsigned 32-bit integer
ncp.fat_moved	Number of times the OS has move the location of FAT	Unsigned 32-bit integer
ncp.fat_scan_errors	FAT Scan Errors	Unsigned 16-bit integer
ncp.fat_write_err	Number of write errors in both original and mirrored copies of FAT	Unsigned 32-bit integer
ncp.fat_write_errors	FAT Write Errors	Unsigned 16-bit integer
ncp.fatal_fat_write_errors	Fatal FAT Write Errors	Unsigned 16-bit integer
ncp.fields_len_table	Fields Len Table	Byte array
ncp.file_count	File Count	Unsigned 16-bit integer
ncp.file_date	File Date	Unsigned 16-bit integer
ncp.file_dir_win	File/Dir Window	Unsigned 16-bit integer
ncp.file_execute_type	File Execute Type	Unsigned 8-bit integer
ncp.file_ext_attr	File Extended Attributes	Unsigned 8-bit integer
ncp.file_flags	File Flags	Unsigned 32-bit integer
ncp.file_handle	File Handle	Byte array
ncp.file_limbo	File Limbo	Unsigned 32-bit integer
ncp.file_list_count	File List Count	Unsigned 32-bit integer
ncp.file_lock_count	File Lock Count	Unsigned 16-bit integer
ncp.file_mode	File Mode	Unsigned 8-bit integer
ncp.file_name	Filename	
ncp.file_name_12	Filename	String
ncp.file_name_14	Filename	String
ncp.file_name_len	Filename Length	Unsigned 8-bit integer
ncp.file_offset	File Offset	Unsigned 32-bit integer
ncp.file_path	File Path	
ncp.file_size	File Size	Unsigned 32-bit integer
ncp.file_system_id	File System ID	Unsigned 8-bit integer
ncp.file_time	File Time	Unsigned 16-bit integer
ncp.file_write_flags	File Write Flags	Unsigned 8-bit integer
ncp.file_write_state	File Write State	Unsigned 8-bit integer
ncp.filler	Filler	Unsigned 8-bit integer
ncp.finder_attr	Finder Info Attributes	Unsigned 16-bit integer
ncp.finder_attr_bundle	Object Has Bundle	Boolean

Field	Field Name	Type
ncp.finder_attr_desktop	Object on Desktop	Boolean
ncp.finder_attr_invisible	Object is Invisible	Boolean
ncp.first_packet_isnt_a_write	First Packet Isn't A Write Count	Unsigned 32-bit integer
ncp.fixed_bit_mask	Fixed Bit Mask	Unsigned 32-bit integer
ncp.fixed_bits_defined	Fixed Bits Defined	Unsigned 16-bit integer
ncp.flag_bits	Flag Bits	Unsigned 8-bit integer
ncp.flags	Flags	Unsigned 8-bit integer
ncp.flags_def	Flags	Unsigned 16-bit integer
ncp.flush_time	Flush Time	Unsigned 32-bit integer
ncp.folder_flag	Folder Flag	Unsigned 8-bit integer
ncp.force_flag	Force Server Down Flag	Unsigned 8-bit integer
ncp.forged_detached_requests	Forged Detached Requests	Unsigned 16-bit integer
ncp.forged_packet	Forged Packet Count	Unsigned 32-bit integer
ncp.fork_count	Fork Count	Unsigned 8-bit integer
ncp.fork_indicator	Fork Indicator	Unsigned 8-bit integer
ncp.form_type	Form Type	Unsigned 16-bit integer
ncp.form_type_count	Form Types Count	Unsigned 32-bit integer
ncp.found_some_mem	Found Some Memory	Unsigned 32-bit integer
ncp.fractional_time	Fractional Time in Seconds	Unsigned 32-bit integer
ncp.frag_size	Fragment Size	Unsigned 32-bit integer
ncp.fragger_handle	Fragment Handle	Unsigned 32-bit integer
ncp.fragment_write_occurred	Fragment Write Occurred	Unsigned 16-bit integer
ncp.free_blocks	Free Blocks	Unsigned 32-bit integer
ncp.free_directory_entries	Free Directory Entries	Unsigned 16-bit integer
ncp.freeable_limbo_sectors	Freeable Limbo Sectors	Unsigned 32-bit integer
ncp.freed_clusters	Freed Clusters	Unsigned 32-bit integer
ncp.fs_engine_flag	FS Engine Flag	Boolean
ncp.full_name	Full Name	String
ncp.func	Function	Unsigned 8-bit integer
ncp.generic_block_size	Block Size	Unsigned 32-bit integer
ncp.generic_capacity	Capacity	Unsigned 32-bit integer
ncp.generic_cartridge_type	Cartridge Type	Unsigned 32-bit integer

Field	Field Name	Type
ncp.generic_child_count	Child Count	Unsigned 32-bit integer
ncp.generic_ctl_mask	Control Mask	Unsigned 32-bit integer
ncp.generic_func_mask	Function Mask	Unsigned 32-bit integer
ncp.generic_ident_time	Identification Time	Unsigned 32-bit integer
ncp.generic_ident_type	Identification Type	Unsigned 32-bit integer
ncp.generic_label	Label	String
ncp.generic_media_slot	Media Slot	Unsigned 32-bit integer
ncp.generic_media_type	Media Type	Unsigned 32-bit integer
ncp.generic_name	Name	String
ncp.generic_object_uniq_id	Unique Object ID	Unsigned 32-bit integer
ncp.generic_parent_count	Parent Count	Unsigned 32-bit integer
ncp.generic_pref_unit_size	Preferred Unit Size	Unsigned 32-bit integer
ncp.generic_sib_count	Sibling Count	Unsigned 32-bit integer
ncp.generic_spec_info_sz	Specific Information Size	Unsigned 32-bit integer
ncp.generic_status	Status	Unsigned 32-bit integer
ncp.generic_type	Type	Unsigned 32-bit integer
ncp.generic_unit_size	Unit Size	Unsigned 32-bit integer
ncp.get_ecb_buf	Get ECB Buffers	Unsigned 32-bit integer
ncp.get_ecb_fails	Get ECB Failures	Unsigned 32-bit integer
ncp.get_set_flag	Get Set Flag	Unsigned 8-bit integer
ncp.guid	GUID	Byte array
ncp.had_an_out_of_order	Had An Out Of Order Write Count	Unsigned 32-bit integer
ncp.handle_flag	Handle Flag	Unsigned 8-bit integer
ncp.handle_info_level	Handle Info Level	Unsigned 8-bit integer
ncp.hardware_rx_mismatch_count	Hardware Receive Mismatch Count	Unsigned 32-bit integer
ncp.held_bytes_read	Held Bytes Read	Byte array
ncp.held_bytes_write	Held Bytes Written	Byte array
ncp.held_conn_time	Held Connect Time in Minutes	Unsigned 32-bit integer
ncp.hold_amount	Hold Amount	Unsigned 32-bit integer
ncp.hold_cancel_amount	Hold Cancel Amount	Unsigned 32-bit integer
ncp.hold_time	Hold Time	Unsigned 32-bit integer
ncp.holder_id	Holder ID	Unsigned 32-bit integer

Field	Field Name	Type
ncp.hops_to_net	Hop Count	Unsigned 16-bit integer
ncp.horiz_location	Horizontal Location	Unsigned 16-bit integer
ncp.host_address	Host Address	Byte array
ncp.hot_fix_blocks_available	Hot Fix Blocks Available	Unsigned 16-bit integer
ncp.hot_fix_disabled	Hot Fix Disabled	Unsigned 8-bit integer
ncp.hot_fix_table_size	Hot Fix Table Size	Unsigned 16-bit integer
ncp.hot_fix_table_start	Hot Fix Table Start	Unsigned 32-bit integer
ncp.huge_bit_mask	Huge Bit Mask	Unsigned 32-bit integer
ncp.huge_bits_defined	Huge Bits Defined	Unsigned 16-bit integer
ncp.huge_data	Huge Data	
ncp.huge_data_used	Huge Data Used	Unsigned 32-bit integer
ncp.huge_state_info	Huge State Info	Byte array
ncp.i_ran_out_someone_else_did_it_0	I Ran Out Someone Else Did It Count 0	Unsigned 32-bit integer
ncp.i_ran_out_someone_else_did_it_1	I Ran Out Someone Else Did It Count 1	Unsigned 32-bit integer
ncp.i_ran_out_someone_else_did_it_2	I Ran Out Someone Else Did It Count 2	Unsigned 32-bit integer
ncp.id_get_no_read_no_wait	ID Get No Read No Wait Count	Unsigned 32-bit integer
ncp.id_get_no_read_no_wait_alloc	ID Get No Read No Wait Allocate Count	Unsigned 32-bit integer
ncp.id_get_no_read_no_wait_buffer	ID Get No Read No Wait No Buffer Count	Unsigned 32-bit integer
ncp.id_get_no_read_no_wait_no_alloc	ID Get No Read No Wait No Alloc Count	Unsigned 32-bit integer
ncp.id_get_no_read_no_wait_no_alloc_alloc	ID Get No Read No Wait No Alloc Allocate Count	Unsigned 32-bit integer
ncp.id_get_no_read_no_wait_no_alloc_sema	ID Get No Read No Wait No Alloc Semaphored Count	Unsigned 32-bit integer
ncp.id_get_no_read_no_wait_sema	ID Get No Read No Wait Semaphored Count	Unsigned 32-bit integer
ncp.identification_number	Identification Number	Unsigned 32-bit integer
ncp.ignored_rx_pkts	Ignored Receive Packets	Unsigned 32-bit integer
ncp.in_use	Bytes in Use	Unsigned 32-bit integer
ncp.incoming_packet_discarded_no_dgroup	Incoming Packet Discarded No DGroup	Unsigned 16-bit integer
ncp.info_count	Info Count	Unsigned 16-bit integer

Field	Field Name	Type
ncp.info_flags	Info Flags	Unsigned 32-bit integer
ncp.info_flags_all_attr	All Attributes	Boolean
ncp.info_flags_all_dirbase_num	All Directory Base Numbers	Boolean
ncp.info_flags_dos_attr	DOS Attributes	Boolean
ncp.info_flags_dos_time	DOS Time	Boolean
ncp.info_flags_ds_sizes	Data Stream Sizes	Boolean
ncp.info_flags_ea_present	EA Present Flag	Boolean
ncp.info_flags_effect_rights	Effective Rights	Boolean
ncp.info_flags_flags	Return Object Flags	Boolean
ncp.info_flags_flush_time	Flush Time	Boolean
ncp.info_flags_ids	ID's	Boolean
ncp.info_flags_mac_finder	Mac Finder Information	Boolean
ncp.info_flags_mac_time	Mac Time	Boolean
ncp.info_flags_max_access_mask	Maximum Access Mask	Boolean
ncp.info_flags_name	Return Object Name	Boolean
ncp.info_flags_ns_attr	Name Space Attributes	Boolean
ncp.info_flags_prnt_base_id	Parent Base ID	Boolean
ncp.info_flags_ref_count	Reference Count	Boolean
ncp.info_flags_security	Return Object Security	Boolean
ncp.info_flags_sibling_cnt	Sibling Count	Boolean
ncp.info_flags_type	Return Object Type	Boolean
ncp.info_level_num	Information Level Number	Unsigned 8-bit integer
ncp.info_mask	Information Mask	Unsigned 32-bit integer
ncp.info_mask_c_name_space	Creator Name Space & Name	Boolean
ncp.info_mask_dosname	DOS Name	Boolean
ncp.info_mask_name	Name	Boolean
ncp.inh_revoke_create	Create Rights	Boolean
ncp.inh_revoke_delete	Delete Rights	Boolean
ncp.inh_revoke_modify	Modify Rights	Boolean
ncp.inh_revoke_open	Open Rights	Boolean
ncp.inh_revoke_parent	Change Access	Boolean

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Field	Field Name	Type
ncp.inh_revoke_read	Read Rights	Boolean
ncp.inh_revoke_search	See Files Flag	Boolean
ncp.inh_revoke_supervisor	Supervisor	Boolean
ncp.inh_revoke_write	Write Rights	Boolean
ncp.inh_rights_create	Create Rights	Boolean
ncp.inh_rights_delete	Delete Rights	Boolean
ncp.inh_rights_modify	Modify Rights	Boolean
ncp.inh_rights_open	Open Rights	Boolean
ncp.inh_rights_parent	Change Access	Boolean
ncp.inh_rights_read	Read Rights	Boolean
ncp.inh_rights_search	See Files Flag	Boolean
ncp.inh_rights_supervisor	Supervisor	Boolean
ncp.inh_rights_write	Write Rights	Boolean
ncp.inheritance_revoke_mask	Revoke Rights Mask	Unsigned 16-bit integer
ncp.inherited_rights_mask	Inherited Rights Mask	Unsigned 16-bit integer
ncp.initial_semaphore_value	Initial Semaphore Value	Unsigned 8-bit integer
ncp.inspect_size	Inspect Size	Unsigned 32-bit integer
ncp.internet_bridge_version	Internet Bridge Version	Unsigned 8-bit integer
ncp.internl_dsk_get	Internal Disk Get Count	Unsigned 32-bit integer
ncp.internl_dsk_get_need_to_alloc	Internal Disk Get Need To Allocate Count	Unsigned 32-bit integer
ncp.internl_dsk_get_no_read	Internal Disk Get No Read Count	Unsigned 32-bit integer
ncp.internl_dsk_get_no_read_alloc	Internal Disk Get No Read Allocate Count	Unsigned 32-bit integer
ncp.internl_dsk_get_no_read_someone_beat	Internal Disk Get No Read Someone Beat Me Count	Unsigned 32-bit integer
ncp.internl_dsk_get_no_wait	Internal Disk Get No Wait Count	Unsigned 32-bit integer
ncp.internl_dsk_get_no_wait_need	Internal Disk Get No Wait Need To Allocate Count	Unsigned 32-bit integer
ncp.internl_dsk_get_no_wait_no_blk	Internal Disk Get No Wait No Block Count	Unsigned 32-bit integer
ncp.internl_dsk_get_part_read	Internal Disk Get Partial Read Count	Unsigned 32-bit integer

Field	Field Name	Type
ncp.internl_dsk_get_read_err	Internal Disk Get Read Error Count	Unsigned 32-bit integer
ncp.internl_dsk_get_someone_beat	Internal Disk Get Someone Beat My Count	Unsigned 32-bit integer
ncp.internl_dsk_write	Internal Disk Write Count	Unsigned 32-bit integer
ncp.internl_dsk_write_alloc	Internal Disk Write Allocate Count	Unsigned 32-bit integer
ncp.internl_dsk_write_someone_beat	Internal Disk Write Someone Beat Me Count	Unsigned 32-bit integer
ncp.interrupt_numbers_used	Interrupt Numbers Used	Unsigned 32-bit integer
ncp.invalid_control_req	Invalid Control Request Count	Unsigned 32-bit integer
ncp.invalid_req_type	Invalid Request Type Count	Unsigned 32-bit integer
ncp.invalid_sequence_number	Invalid Sequence Number Count	Unsigned 32-bit integer
ncp.invalid_slot	Invalid Slot Count	Unsigned 32-bit integer
ncp.io_addresses_used	IO Addresses Used	Byte array
ncp.io_engine_flag	IO Engine Flag	Boolean
ncp.io_error_count	IO Error Count	Unsigned 16-bit integer
ncp.io_flag	IO Flag	Unsigned 32-bit integer
ncp.ip.length	NCP over IP length	Unsigned 32-bit integer
ncp.ip.packetsig	NCP over IP Packet Signature	Byte array
ncp.ip.replybufsize	NCP over IP Reply Buffer Size	Unsigned 32-bit integer
ncp.ip.signature	NCP over IP signature	Unsigned 32-bit integer
ncp.ip.version	NCP over IP Version	Unsigned 32-bit integer
ncp.ipx_aes_event	IPX AES Event Count	Unsigned 32-bit integer
ncp.ipx_ecb_cancel_fail	IPX ECB Cancel Fail Count	Unsigned 16-bit integer
ncp.ipx_get_ecb_fail	IPX Get ECB Fail Count	Unsigned 32-bit integer
ncp.ipx_get_ecb_req	IPX Get ECB Request Count	Unsigned 32-bit integer
ncp.ipx_get_lcl_targ_fail	IPX Get Local Target Fail Count	Unsigned 16-bit integer
ncp.ipx_listen_ecb	IPX Listen ECB Count	Unsigned 32-bit integer
ncp.ipx_malform_pkt	IPX Malformed Packet Count	Unsigned 16-bit integer

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Field	Field Name	Type
ncp.ipx_max_conf_sock	IPX Max Configured Socket Count	Unsigned 16-bit integer
ncp.ipx_max_open_sock	IPX Max Open Socket Count	Unsigned 16-bit integer
ncp.ipx_not_my_network	IPX Not My Network	Unsigned 16-bit integer
ncp.ipx_open_sock_fail	IPX Open Socket Fail Count	Unsigned 16-bit integer
ncp.ipx_postponed_aes	IPX Postponed AES Count	Unsigned 16-bit integer
ncp.ipx_send_pkt	IPX Send Packet Count	Unsigned 32-bit integer
ncp.items_changed	Items Changed	Unsigned 32-bit integer
ncp.items_checked	Items Checked	Unsigned 32-bit integer
ncp.items_count	Items Count	Unsigned 32-bit integer
ncp.items_in_list	Items in List	Unsigned 32-bit integer
ncp.items_in_packet	Items in Packet	Unsigned 32-bit integer
ncp.job_control1_file_open	File Open	Boolean
ncp.job_control1_job_recovery	Job Recovery	Boolean
ncp.job_control1_operator_hold	Operator Hold	Boolean
ncp.job_control1_reservice	ReService Job	Boolean
ncp.job_control1_user_hold	User Hold	Boolean
ncp.job_control_file_open	File Open	Boolean
ncp.job_control_flags	Job Control Flags	Unsigned 8-bit integer
ncp.job_control_flags_word	Job Control Flags	Unsigned 16-bit integer
ncp.job_control_job_recovery	Job Recovery	Boolean
ncp.job_control_operator_hold	Operator Hold	Boolean
ncp.job_control_reservice	ReService Job	Boolean
ncp.job_control_user_hold	User Hold	Boolean
ncp.job_count	Job Count	Unsigned 32-bit integer
ncp.job_file_handle	Job File Handle	Byte array
ncp.job_file_handle_long	Job File Handle	Unsigned 32-bit integer
ncp.job_file_name	Job File Name	String
ncp.job_number	Job Number	Unsigned 16-bit integer
ncp.job_number_list	Job Number List	Unsigned 32-bit integer

Field	Field Name	Type
ncp.job_number_long	Job Number	Unsigned 32-bit integer
ncp.job_position	Job Position	Unsigned 8-bit integer
ncp.job_position_word	Job Position	Unsigned 16-bit integer
ncp.job_type	Job Type	Unsigned 16-bit integer
ncp.lan_driver_number	LAN Driver Number	Unsigned 8-bit integer
ncp.lan_drv_bd_inst	LAN Driver Board Instance	Unsigned 16-bit integer
ncp.lan_drv_bd_num	LAN Driver Board Number	Unsigned 16-bit integer
ncp.lan_drv_card_id	LAN Driver Card ID	Unsigned 16-bit integer
ncp.lan_drv_card_name	LAN Driver Card Name	String
ncp.lan_drv_dma_usage1	Primary DMA Channel	Unsigned 8-bit integer
ncp.lan_drv_dma_usage2	Secondary DMA Channel	Unsigned 8-bit integer
ncp.lan_drv_flags	LAN Driver Flags	Unsigned 16-bit integer
ncp.lan_drv_interrupt1	Primary Interrupt Vector	Unsigned 8-bit integer
ncp.lan_drv_interrupt2	Secondary Interrupt Vector	Unsigned 8-bit integer
ncp.lan_drv_io_ports_and_ranges1	Primary Base I/O Port	Unsigned 16-bit integer
ncp.lan_drv_io_ports_and_ranges2	Number of I/O Ports	Unsigned 16-bit integer
ncp.lan_drv_io_ports_and_ranges3	Secondary Base I/O Port	Unsigned 16-bit integer
ncp.lan_drv_io_ports_and_ranges4	Number of I/O Ports	Unsigned 16-bit integer
ncp.lan_drv_io_reserved	LAN Driver IO Reserved	Byte array
ncp.lan_drv_line_speed	LAN Driver Line Speed	Unsigned 16-bit integer
ncp.lan_drv_link	LAN Driver Link	Unsigned 32-bit integer
ncp.lan_drv_log_name	LAN Driver Logical Name	Byte array
ncp.lan_drv_major_ver	LAN Driver Major Version	Unsigned 8-bit integer
ncp.lan_drv_max_rcv_size	LAN Driver Maximum Receive Size	Unsigned 32-bit integer
ncp.lan_drv_max_size	LAN Driver Maximum Size	Unsigned 32-bit integer
ncp.lan_drv_media_id	LAN Driver Media ID	Unsigned 16-bit integer
ncp.lan_drv_mem_decode_0	LAN Driver Memory Decode 0	Unsigned 32-bit integer
ncp.lan_drv_mem_decode_1	LAN Driver Memory Decode 1	Unsigned 32-bit integer

Field	Field Name	Type
ncp.lan_drv_mem_length_0	LAN Driver Memory Length 0	Unsigned 16-bit integer
ncp.lan_drv_mem_length_1	LAN Driver Memory Length 1	Unsigned 16-bit integer
ncp.lan_drv_minor_ver	LAN Driver Minor Version	Unsigned 8-bit integer
ncp.lan_drv_rcv_size	LAN Driver Receive Size	Unsigned 32-bit integer
ncp.lan_drv_reserved	LAN Driver Reserved	Unsigned 16-bit integer
ncp.lan_drv_share	LAN Driver Sharing Flags	Unsigned 16-bit integer
ncp.lan_drv_slot	LAN Driver Slot	Unsigned 16-bit integer
ncp.lan_drv_snd_retries	LAN Driver Send Retries	Unsigned 16-bit integer
ncp.lan_drv_src_route	LAN Driver Source Routing	Unsigned 32-bit integer
ncp.lan_drv_trans_time	LAN Driver Transport Time	Unsigned 16-bit integer
ncp.lan_dvr_cfg_major_vrs	LAN Driver Config - Major Version	Unsigned 8-bit integer
ncp.lan_dvr_cfg_minor_vrs	LAN Driver Config - Minor Version	Unsigned 8-bit integer
ncp.lan_dvr_mode_flags	LAN Driver Mode Flags	Unsigned 8-bit integer
ncp.lan_dvr_node_addr	LAN Driver Node Address	Byte array
ncp.large_internet_packets	Large Internet Packets (LIP) Disabled	Boolean
ncp.last_access_date	Last Accessed Date	Unsigned 16-bit integer
ncp.last_access_time	Last Accessed Time	Unsigned 16-bit integer
ncp.last_garbage_collect	Last Garbage Collection	Unsigned 32-bit integer
ncp.last_instance	Last Instance	Unsigned 32-bit integer
ncp.last_record_seen	Last Record Seen	Unsigned 16-bit integer
ncp.last_search_index	Search Index	Unsigned 16-bit integer
ncp.last_seen	Last Seen	Unsigned 32-bit integer
ncp.last_sequence_number	Sequence Number	Unsigned 16-bit integer
ncp.last_time_rx_buff_was_alloc	Last Time a Receive Buffer was Allocated	Unsigned 32-bit integer
ncp.length	Packet Length	Unsigned 16-bit integer
ncp.level	Level	Unsigned 8-bit integer
ncp.lfs_counters	LFS Counters	Unsigned 32-bit integer
ncp.limb_count	Limb Count	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.limbo_data_streams_column	Limbo Data Streams Count	Unsigned 32-bit integer
ncp.limbo_used	Limbo Used	Unsigned 32-bit integer
ncp.local_connection_id	Local Connection ID	Unsigned 32-bit integer
ncp.local_login_info_ccode	Local Login Info C Code	Unsigned 8-bit integer
ncp.local_max_packet_size	Local Max Packet Size	Unsigned 32-bit integer
ncp.local_max_recv_size	Local Max Recv Size	Unsigned 32-bit integer
ncp.local_max_send_size	Local Max Send Size	Unsigned 32-bit integer
ncp.local_target_socket	Local Target Socket	Unsigned 32-bit integer
ncp.lock_area_len	Lock Area Length	Unsigned 32-bit integer
ncp.lock_areas_start_offset	Lock Areas Start Offset	Unsigned 32-bit integer
ncp.lock_flag	Lock Flag	Unsigned 8-bit integer
ncp.lock_name	Lock Name	
ncp.lock_status	Lock Status	Unsigned 8-bit integer
ncp.lock_timeout	Lock Timeout	Unsigned 16-bit integer
ncp.lock_type	Lock Type	Unsigned 8-bit integer
ncp.locked	Locked Flag	Unsigned 8-bit integer
ncp.log_file_flag_high	Log File Flag (byte 2)	Unsigned 8-bit integer
ncp.log_file_flag_low	Log File Flag	Unsigned 8-bit integer
ncp.log_flag_call_back	Call Back Requested	Boolean
ncp.log_flag_lock_file	Lock File Immediately	Boolean
ncp.log_ttl_rx_pkts	Total Received Packets	Unsigned 32-bit integer
ncp.log_ttl_tx_pkts	Total Transmitted Packets	Unsigned 32-bit integer
ncp.logged_count	Logged Count	Unsigned 16-bit integer
ncp.logged_object_id	Logged in Object ID	Unsigned 32-bit integer
ncp.logical_connection_number	Logical Connection Number	Unsigned 16-bit integer
ncp.logical_drive_count	Logical Drive Count	Unsigned 8-bit integer
ncp.logical_drive_number	Logical Drive Number	Unsigned 8-bit integer
ncp.logical_lock_threshold	LogicalLockThreshold	Unsigned 8-bit integer
ncp.logical_record_name	Logical Record Name	
ncp.login_expiration_time	Login Expiration Time	Unsigned 32-bit integer
ncp.login_key	Login Key	Byte array
ncp.login_name	Login Name	

Field	Field Name	Type
ncp.long_name	Long Name	String
ncp.lru_block_was_dirty	LRU Block Was Dirty	Unsigned 16-bit integer
ncp.lru_sit_time	LRU Sitting Time	Unsigned 32-bit integer
ncp.mac_attr	Attributes	Unsigned 16-bit integer
ncp.mac_attr_archive	Archive	Boolean
ncp.mac_attr_execute_only	Execute Only	Boolean
ncp.mac_attr_hidden	Hidden	Boolean
ncp.mac_attr_index	Index	Boolean
ncp.mac_attr_r_audit	Read Audit	Boolean
ncp.mac_attr_r_only	Read Only	Boolean
ncp.mac_attr_share	Shareable File	Boolean
ncp.mac_attr_smode1	Search Mode	Boolean
ncp.mac_attr_smode2	Search Mode	Boolean
ncp.mac_attr_smode3	Search Mode	Boolean
ncp.mac_attr_subdirectory	Subdirectory	Boolean
ncp.mac_attr_system	System	Boolean
ncp.mac_attr_transaction	Transaction	Boolean
ncp.mac_attr_w_audit	Write Audit	Boolean
ncp.mac_backup_date	Mac Backup Date	Unsigned 16-bit integer
ncp.mac_backup_time	Mac Backup Time	Unsigned 16-bit integer
ncp.mac_base_directory_id	Mac Base Directory ID	Unsigned 32-bit integer
ncp.mac_create_date	Mac Create Date	Unsigned 16-bit integer
ncp.mac_create_time	Mac Create Time	Unsigned 16-bit integer
ncp.mac_destination_base_id	Mac Destination Base ID	Unsigned 32-bit integer
ncp.mac_finder_info	Mac Finder Information	Byte array
ncp.mac_last_seen_id	Mac Last Seen ID	Unsigned 32-bit integer
ncp.mac_root_ids	MAC Root IDs	Unsigned 32-bit integer
ncp.mac_source_base_id	Mac Source Base ID	Unsigned 32-bit integer
ncp.major_version	Major Version	Unsigned 32-bit integer
ncp.map_hash_node_count	Map Hash Node Count	Unsigned 32-bit integer
ncp.max_byte_cnt	Maximum Byte Count	Unsigned 32-bit integer
ncp.max_bytes	Maximum Number of Bytes	Unsigned 16-bit integer

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Field	Field Name	Type
ncp.max_data_streams	Maximum Data Streams	Unsigned 32-bit integer
ncp.max_dir_depth	Maximum Directory Depth	Unsigned 32-bit integer
ncp.max_dirty_time	Maximum Dirty Time	Unsigned 32-bit integer
ncp.max_num_of_conn	Maximum Number of Connections	Unsigned 32-bit integer
ncp.max_num_of_dir_cache_buff	Maximum Number Of Directory Cache Buffers	Unsigned 32-bit integer
ncp.max_num_of_lans	Maximum Number Of LAN's	Unsigned 32-bit integer
ncp.max_num_of_media_types	Maximum Number of Media Types	Unsigned 32-bit integer
ncp.max_num_of_medias	Maximum Number Of Media's	Unsigned 32-bit integer
ncp.max_num_of_nme_sps	Maximum Number Of Name Spaces	Unsigned 32-bit integer
ncp.max_num_of_protocols	Maximum Number of Protocols	Unsigned 32-bit integer
ncp.max_num_of_spool_pr	Maximum Number Of Spool Printers	Unsigned 32-bit integer
ncp.max_num_of_stacks	Maximum Number Of Stacks	Unsigned 32-bit integer
ncp.max_num_of_users	Maximum Number Of Users	Unsigned 32-bit integer
ncp.max_num_of_vol	Maximum Number of Volumes	Unsigned 32-bit integer
ncp.max_phy_packet_size	Maximum Physical Packet Size	Unsigned 32-bit integer
ncp.max_space	Maximum Space	Unsigned 16-bit integer
ncp.maxspace	Maximum Space	Unsigned 32-bit integer
ncp.may_had_out_of_order	Maybe Had Out Of Order Writes Count	Unsigned 32-bit integer
ncp.media_list	Media List	Unsigned 32-bit integer
ncp.media_list_count	Media List Count	Unsigned 32-bit integer
ncp.media_name	Media Name	
ncp.media_number	Media Number	Unsigned 32-bit integer
ncp.media_object_type	Object Type	Unsigned 8-bit integer
ncp.member_name	Member Name	
ncp.member_type	Member Type	Unsigned 8-bit integer
ncp.message_language	NLM Language	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.migrated_files	Migrated Files	Unsigned 32-bit integer
ncp.migrated_sectors	Migrated Sectors	Unsigned 32-bit integer
ncp.min_cache_report_thresh	Minimum Cache Report Threshold	Unsigned 32-bit integer
ncp.min_num_of_cache_buff	Minimum Number Of Cache Buffers	Unsigned 32-bit integer
ncp.min_num_of_dir_cache_buff	Minimum Number Of Directory Cache Buffers	Unsigned 32-bit integer
ncp.min_time_since_file_delete	Minimum Time Since File Delete	Unsigned 32-bit integer
ncp.minor_version	Minor Version	Unsigned 32-bit integer
ncp.missing_data_count	Missing Data Count	Unsigned 16-bit integer
ncp.missing_data_offset	Missing Data Offset	Unsigned 32-bit integer
ncp.missing_fraglist_count	Missing Fragment List Count	Unsigned 16-bit integer
ncp.mixed_mode_path_flag	Mixed Mode Path Flag	Unsigned 8-bit integer
ncp.modified_counter	Modified Counter	Unsigned 32-bit integer
ncp.modified_date	Modified Date	Unsigned 16-bit integer
ncp.modified_time	Modified Time	Unsigned 16-bit integer
ncp.modifier_id	Modifier ID	Unsigned 32-bit integer
ncp.modify_dos_create	Creator ID	Boolean
ncp.modify_dos_delete	Archive Date	Boolean
ncp.modify_dos_info_mask	Modify DOS Info Mask	Unsigned 16-bit integer
ncp.modify_dos_inheritance	Inheritance	Boolean
ncp.modify_dos_laccess	Last Access	Boolean
ncp.modify_dos_max_space	Maximum Space	Boolean
ncp.modify_dos_mdate	Modify Date	Boolean
ncp.modify_dos_mid	Modifier ID	Boolean
ncp.modify_dos_mtime	Modify Time	Boolean
ncp.modify_dos_open	Creation Time	Boolean
ncp.modify_dos_parent	Archive Time	Boolean
ncp.modify_dos_read	Attributes	Boolean
ncp.modify_dos_search	Archiver ID	Boolean
ncp.modify_dos_write	Creation Date	Boolean

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Field	Field Name	Type
ncp.more_flag	More Flag	Unsigned 8-bit integer
ncp.more_properties	More Properties	Unsigned 8-bit integer
ncp.move_cache_node	Move Cache Node Count	Unsigned 32-bit integer
ncp.move_cache_node_from_avail	Move Cache Node From Avail Count	Unsigned 32-bit integer
ncp.moved_the_ack_bit_dn	Moved The ACK Bit Down Count	Unsigned 32-bit integer
ncp.name	Name	
ncp.name12	Name	String
ncp.name_len	Name Space Length	Unsigned 8-bit integer
ncp.name_length	Name Length	Unsigned 8-bit integer
ncp.name_list	Name List	Unsigned 32-bit integer
ncp.name_space	Name Space	Unsigned 8-bit integer
ncp.name_space_name	Name Space Name	
ncp.name_type	nameType	Unsigned 32-bit integer
ncp.ncompletion_code	Completion Code	Unsigned 32-bit integer
ncp.ncp_data_size	NCP Data Size	Unsigned 32-bit integer
ncp.ncp_extension_major_version	NCP Extension Major Version	Unsigned 8-bit integer
ncp.ncp_extension_minor_version	NCP Extension Minor Version	Unsigned 8-bit integer
ncp.ncp_extension_name	NCP Extension Name	
ncp.ncp_extension_number	NCP Extension Number	Unsigned 32-bit integer
ncp.ncp_extension_numbers	NCP Extension Numbers	Unsigned 32-bit integer
ncp.ncp_extension_revision_number	NCP Extension Revision Number	Unsigned 8-bit integer
ncp.ncp_peak_sta_in_use	Peak Number of Connections since Server was brought up	Unsigned 32-bit integer
ncp.ncp_sta_in_use	Number of Workstations Connected to Server	Unsigned 32-bit integer
ncp.ndirty_blocks	Number of Dirty Blocks	Unsigned 32-bit integer
ncp.nds_flags	NDS Flags	Unsigned 32-bit integer
ncp.nds_request_flags	NDS Request Flags	Unsigned 16-bit integer
ncp.nds_request_flags_alias_ref	Alias Referral	Boolean

Field	Field Name	Type
ncp.nds_request_flags_dn_ref	Down Referral	Boolean
ncp.nds_request_flags_local_entry	Local Entry	Boolean
ncp.nds_request_flags_no_such_entry	No Such Entry	Boolean
ncp.nds_request_flags_output	Output Fields	Boolean
ncp.nds_request_flags_reply_data	Reply Data Size	Boolean
ncp.nds_request_flags_req_cnt	Request Count	Boolean
ncp.nds_request_flags_req_data_size	Requisite Data Size	Boolean
ncp.nds_request_flags_trans_ref	Transport Referral	Boolean
ncp.nds_request_flags_trans_ref2	Transport Referral	Boolean
ncp.nds_request_flags_type_ref	Type Referral	Boolean
ncp.nds_request_flags_up_ref	Up Referral	Boolean
ncp.nds_status	NDS Status	Unsigned 32-bit integer
ncp.nds_verb	NDS Verb	Unsigned 16-bit integer
ncp.net_id_number	Net ID Number	Unsigned 32-bit integer
ncp.net_status	Network Status	Unsigned 16-bit integer
ncp.netbios_broadcast_was_propagated	NetBIOS Broadcast Was Propogated	Unsigned 32-bit integer
ncp.netbios_progated	NetBIOS Propagated Count	Unsigned 32-bit integer
ncp.netware_access_handle	NetWare Access Handle	Byte array
ncp.network_address	Network Address	Unsigned 32-bit integer
ncp.network_node_address	Network Node Address	Byte array
ncp.network_number	Network Number	Unsigned 32-bit integer
ncp.network_socket	Network Socket	Unsigned 16-bit integer
ncp.new_access_rights_create	Create	Boolean
ncp.new_access_rights_delete	Delete	Boolean

Field	Field Name	Type
ncp.new_access_rights_mask	New Access Rights	Unsigned 16-bit integer
ncp.new_access_rights_modify	Modify	Boolean
ncp.new_access_rights_open	Open	Boolean
ncp.new_access_rights_parental	Parental	Boolean
ncp.new_access_rights_read	Read	Boolean
ncp.new_access_rights_search	Search	Boolean
ncp.new_access_rights_supervisor	Supervisor	Boolean
ncp.new_access_rights_write	Write	Boolean
ncp.new_directory_id	New Directory ID	Unsigned 32-bit integer
ncp.new_ea_handle	New EA Handle	Unsigned 32-bit integer
ncp.new_file_name	New File Name	String
ncp.new_file_name_len	New File Name	
ncp.new_file_size	New File Size	Unsigned 32-bit integer
ncp.new_object_name	New Object Name	
ncp.new_password	New Password	
ncp.new_path	New Path	
ncp.new_position	New Position	Unsigned 8-bit integer
ncp.next_cnt_block	Next Count Block	Unsigned 32-bit integer
ncp.next_huge_state_info	Next Huge State Info	Byte array
ncp.next_limb_scan_num	Next Limb Scan Number	Unsigned 32-bit integer
ncp.next_object_id	Next Object ID	Unsigned 32-bit integer
ncp.next_record	Next Record	Unsigned 32-bit integer
ncp.next_request_record	Next Request Record	Unsigned 16-bit integer
ncp.next_search_index	Next Search Index	Unsigned 16-bit integer
ncp.next_search_number	Next Search Number	Unsigned 16-bit integer
ncp.next_starting_number	Next Starting Number	Unsigned 32-bit integer
ncp.next_trustee_entry	Next Trustee Entry	Unsigned 32-bit integer
ncp.next_volume_number	Next Volume Number	Unsigned 32-bit integer
ncp.nlm_count	NLM Count	Unsigned 32-bit integer
ncp.nlm_flags	Flags	Unsigned 8-bit integer

Field	Field Name	Type
ncp.nlm_flags_multiple	Can Load Multiple Times	Boolean
ncp.nlm_flags_pseudo	PseudoPreemption	Boolean
ncp.nlm_flags_reentrant	ReEntrant	Boolean
ncp.nlm_flags_synchronize	Synchronize Start	Boolean
ncp.nlm_load_options	NLM Load Options	Unsigned 32-bit integer
ncp.nlm_name_stringz	NLM Name	String
ncp.nlm_number	NLM Number	Unsigned 32-bit integer
ncp.nlm_numbers	NLM Numbers	Unsigned 32-bit integer
ncp.nlm_start_num	NLM Start Number	Unsigned 32-bit integer
ncp.nlm_type	NLM Type	Unsigned 8-bit integer
ncp.nlms_in_list	NLM's in List	Unsigned 32-bit integer
ncp.no_avail_conns	No Available Connections Count	Unsigned 32-bit integer
ncp.no_ecb_available_count	No ECB Available Count	Unsigned 32-bit integer
ncp.no_mem_for_station	No Memory For Station Control Count	Unsigned 32-bit integer
ncp.no_more_mem_avail	No More Memory Available Count	Unsigned 32-bit integer
ncp.no_receive_buff	No Receive Buffers	Unsigned 16-bit integer
ncp.no_space_for_service	No Space For Service	Unsigned 16-bit integer
ncp.node	Node	Byte array
ncp.node_flags	Node Flags	Unsigned 32-bit integer
ncp.non_ded_flag	Non Dedicated Flag	Boolean
ncp.non_freeable_avail_sub_alloc_sectors	Non Freeable Available Sub Alloc Sectors	Unsigned 32-bit integer
ncp.non_freeable_limbo_sectors	Non Freeable Limbo Sectors	Unsigned 32-bit integer
ncp.not_my_network	Not My Network	Unsigned 16-bit integer
ncp.not_supported_mask	Bit Counter Supported	Boolean
ncp.not_usable_sub_alloc_sectors	Not Usable Sub Alloc Sectors	Unsigned 32-bit integer
ncp.not_yet_purgeable_blocks	Not Yet Purgeable Blocks	Unsigned 32-bit integer
ncp.ns_info_mask	Names Space Info Mask	Unsigned 16-bit integer
ncp.ns_info_mask_acc_date	Access Date	Boolean
ncp.ns_info_mask_adate	Archive Date	Boolean

Field	Field Name	Type
ncp.ns_info_mask_aid	Archiver ID	Boolean
ncp.ns_info_mask_atime	Archive Time	Boolean
ncp.ns_info_mask_cdate	Creation Date	Boolean
ncp.ns_info_mask_ctime	Creation Time	Boolean
ncp.ns_info_mask_fatt	File Attributes	Boolean
ncp.ns_info_mask_max_acc_mask	Inheritance	Boolean
ncp.ns_info_mask_max_space	Maximum Space	Boolean
ncp.ns_info_mask_modify	Modify Name	Boolean
ncp.ns_info_mask_owner	Owner ID	Boolean
ncp.ns_info_mask_udate	Update Date	Boolean
ncp.ns_info_mask_uid	Update ID	Boolean
ncp.ns_info_mask_utime	Update Time	Boolean
ncp.ns_specific_info	Name Space Specific Info	String
ncp.num_bytes	Number of Bytes	Unsigned 16-bit integer
ncp.num_dir_cache_buff	Number Of Directory Cache Buffers	Unsigned 32-bit integer
ncp.num_of_allocs	Number of Allocations	Unsigned 32-bit integer
ncp.num_of_cache_check_no_wait	Number Of Cache Check No Wait	Unsigned 32-bit integer
ncp.num_of_cache_checks	Number Of Cache Checks	Unsigned 32-bit integer
ncp.num_of_cache_dirty_checks	Number Of Cache Dirty Checks	Unsigned 32-bit integer
ncp.num_of_cache_hits	Number Of Cache Hits	Unsigned 32-bit integer
ncp.num_of_cache_hits_no_wait	Number Of Cache Hits No Wait	Unsigned 32-bit integer
ncp.num_of_cc_in_pkt	Number of Custom Counters in Packet	Unsigned 32-bit integer
ncp.num_of_checks	Number of Checks	Unsigned 32-bit integer
ncp.num_of_dir_cache_buff	Number Of Directory Cache Buffers	Unsigned 32-bit integer
ncp.num_of_dirty_cache_checks	Number Of Dirty Cache Checks	Unsigned 32-bit integer
ncp.num_of_entries	Number of Entries	Unsigned 32-bit integer
ncp.num_of_files_migrated	Number Of Files Migrated	Unsigned 32-bit integer
ncp.num_of_garb_coll	Number of Garbage Collections	Unsigned 32-bit integer

Field	Field Name	Type
ncp.num_of_ncp_reqs	Number of NCP Requests since Server was brought up	Unsigned 32-bit integer
ncp.num_of_ref_publics	Number of Referenced Public Symbols	Unsigned 32-bit integer
ncp.num_of_segments	Number of Segments	Unsigned 32-bit integer
ncp.number_of_attributes	Number of Attributes	Unsigned 32-bit integer
ncp.number_of_cpus	Number of CPU's	Unsigned 32-bit integer
ncp.number_of_data_streams	Number of Data Streams	Unsigned 16-bit integer
ncp.number_of_dynamic_memory_areas	Number Of Dynamic Memory Areas	Unsigned 16-bit integer
ncp.number_of_entries	Number of Entries	Unsigned 8-bit integer
ncp.number_of_locks	Number of Locks	Unsigned 8-bit integer
ncp.number_of_minutes_to_delay	Number of Minutes to Delay	Unsigned 32-bit integer
ncp.number_of_ncp_extensions	Number Of NCP Extensions	Unsigned 32-bit integer
ncp.number_of_ns_loaded	Number Of Name Spaces Loaded	Unsigned 16-bit integer
ncp.number_of_protocols	Number of Protocols	Unsigned 8-bit integer
ncp.number_of_records	Number of Records	Unsigned 16-bit integer
ncp.number_of_semaphores	Number Of Semaphores	Unsigned 16-bit integer
ncp.number_of_service_processes	Number Of Service Processes	Unsigned 8-bit integer
ncp.number_of_set_categories	Number Of Set Categories	Unsigned 32-bit integer
ncp.number_of_sms	Number Of Storage Medias	Unsigned 32-bit integer
ncp.number_of_stations	Number of Stations	Unsigned 8-bit integer
ncp.nxt_search_num	Next Search Number	Unsigned 32-bit integer
ncp.o_c_ret_flags	Open Create Return Flags	Unsigned 8-bit integer
ncp.object_count	Object Count	Unsigned 32-bit integer
ncp.object_flags	Object Flags	Unsigned 8-bit integer
ncp.object_has_properites	Object Has Properties	Unsigned 8-bit integer
ncp.object_id	Object ID	Unsigned 32-bit integer
ncp.object_id_count	Object ID Count	Unsigned 16-bit integer
ncp.object_id_info	Object Information	Unsigned 32-bit integer

Field	Field Name	Type
ncp.object_info_rtn_count	Object Information Count	Unsigned 32-bit integer
ncp.object_name	Object Name	
ncp.object_name_len	Object Name	String
ncp.object_name_stringz	Object Name	String
ncp.object_number	Object Number	Unsigned 32-bit integer
ncp.object_security	Object Security	Unsigned 8-bit integer
ncp.object_type	Object Type	Unsigned 16-bit integer
ncp.old_file_name	Old File Name	Byte array
ncp.old_file_size	Old File Size	Unsigned 32-bit integer
ncp.oldest_deleted_file_age_in_ticks	Oldest Deleted File Age in Ticks	Unsigned 32-bit integer
ncp.open_count	Open Count	Unsigned 16-bit integer
ncp.open_create_action	Open Create Action	Unsigned 8-bit integer
ncp.open_create_action_compressed	Compressed	Boolean
ncp.open_create_action_created	Created	Boolean
ncp.open_create_action_opened	Opened	Boolean
ncp.open_create_action_read_only	Read Only	Boolean
ncp.open_create_action_replaced	Replaced	Boolean
ncp.open_create_mode	Open Create Mode	Unsigned 8-bit integer
ncp.open_create_mode_create	Create new file or subdirectory (file or subdirectory cannot exist)	Boolean
ncp.open_create_mode_open	Open existing file (file must exist)	Boolean
ncp.open_create_mode_oplock	Open Callback (Op-Lock)	Boolean
ncp.open_create_mode_replace	Replace existing file	Boolean
ncp.open_for_read_count	Open For Read Count	Unsigned 16-bit integer
ncp.open_for_write_count	Open For Write Count	Unsigned 16-bit integer
ncp.open_rights	Open Rights	Unsigned 8-bit integer
ncp.open_rights_compat	Compatibility	Boolean
ncp.open_rights_deny_read	Deny Read	Boolean

Field	Field Name	Type
ncp.open_rights_deny_write	Deny Write	Boolean
ncp.open_rights_read_only	Read Only	Boolean
ncp.open_rights_write_only	Write Only	Boolean
ncp.open_rights_write_thru	Write Through	Boolean
ncp.option_number	Option Number	Unsigned 8-bit integer
ncp.orig_num_cache_buff	Original Number Of Cache Buffers	Unsigned 32-bit integer
ncp.original_size	Original Size	Unsigned 32-bit integer
ncp.os_language_id	OS Language ID	Unsigned 8-bit integer
ncp.os_major_version	OS Major Version	Unsigned 8-bit integer
ncp.os_minor_version	OS Minor Version	Unsigned 8-bit integer
ncp.os_revision	OS Revision	Unsigned 8-bit integer
ncp.other_file_fork_fat	Other File Fork FAT Entry	Unsigned 32-bit integer
ncp.other_file_fork_size	Other File Fork Size	Unsigned 32-bit integer
ncp.outgoing_packet_discarded_no_turbo	Outgoing Packet Buffer Discarded No Turbo Buffer	Unsigned 16-bit integer
ncp.outstanding_compression_ios	Outstanding Compression IOs	Unsigned 32-bit integer
ncp.outstanding_ios	Outstanding IOs	Unsigned 32-bit integer
ncp.packet_rs_too_small_count	Receive Packet Too Small Count	Unsigned 32-bit integer
ncp.packet_rx_misc_error_count	Receive Packet Misc Error Count	Unsigned 32-bit integer
ncp.packet_rx_overflow_count	Receive Packet Overflow Count	Unsigned 32-bit integer
ncp.packet_rx_too_big_count	Receive Packet Too Big Count	Unsigned 32-bit integer
ncp.packet_seqno	Packet Sequence Number	Unsigned 32-bit integer
ncp.packet_tx_misc_error_count	Transmit Packet Misc Error Count	Unsigned 32-bit integer
ncp.packet_tx_too_big_count	Transmit Packet Too Big Count	Unsigned 32-bit integer
ncp.packet_tx_too_small_count	Transmit Packet Too Small Count	Unsigned 32-bit integer
ncp.packets_discarded_by_hop_count	Packets Discarded By Hop Count	Unsigned 16-bit integer

Field	Field Name	Type
ncp.packets_discarded_unknown_net	Packets Discarded Unknown Net	Unsigned 16-bit integer
ncp.packets_from_invalid_connection	Packets From Invalid Connection	Unsigned 16-bit integer
ncp.packets_received_during_processing	Packets Received During Processing	Unsigned 16-bit integer
ncp.packets_with_bad_request_type	Packets With Bad Request Type	Unsigned 16-bit integer
ncp.packets_with_bad_sequence_number	Packets With Bad Sequence Number	Unsigned 16-bit integer
ncp.page_table_owner_flag	Page Table Owner	Unsigned 32-bit integer
ncp.parent_base_id	Parent Base ID	Unsigned 32-bit integer
ncp.parent_directory_base	Parent Directory Base	Unsigned 32-bit integer
ncp.parent_dos_directory_base	Parent DOS Directory Base	Unsigned 32-bit integer
ncp.parent_id	Parent ID	Unsigned 32-bit integer
ncp.parent_object_number	Parent Object Number	Unsigned 32-bit integer
ncp.password	Password	
ncp.path	Path	
ncp.path_and_name	Path and Name	String
ncp.path_base	Path Base	Unsigned 8-bit integer
ncp.path_component_count	Path Component Count	Unsigned 16-bit integer
ncp.path_component_size	Path Component Size	Unsigned 16-bit integer
ncp.path_cookie_flags	Path Cookie Flags	Unsigned 16-bit integer
ncp.path_count	Path Count	Unsigned 8-bit integer
ncp.pending_io_commands	Pending IO Commands	Unsigned 16-bit integer
ncp.percent_of_vol_used_by_dirs	Percent Of Volume Used By Directories	Unsigned 32-bit integer
ncp.physical_disk_channel	Physical Disk Channel	Unsigned 8-bit integer
ncp.physical_disk_number	Physical Disk Number	Unsigned 8-bit integer
ncp.physical_drive_count	Physical Drive Count	Unsigned 8-bit integer
ncp.physical_drive_type	Physical Drive Type	Unsigned 8-bit integer
ncp.physical_lock_threshold	Physical Lock Threshold	Unsigned 8-bit integer
ncp.physical_read_errors	Physical Read Errors	Unsigned 16-bit integer

Field	Field Name	Type
ncp.physical_read_requests	Physical Read Requests	Unsigned 32-bit integer
ncp.physical_write_errors	Physical Write Errors	Unsigned 16-bit integer
ncp.physical_write_requests	Physical Write Requests	Unsigned 32-bit integer
ncp.ping_version	Ping Version	Unsigned 16-bit integer
ncp.poll_abort_conn	Poller Aborted The Connnection Count	Unsigned 32-bit integer
ncp.poll_rem_old_out_of_order	Poller Removed Old Out Of Order Count	Unsigned 32-bit integer
ncp.positive_acknowledges_sent	Positive Acknowledges Sent	Unsigned 16-bit integer
ncp.post_poned_events	Postponed Events	Unsigned 32-bit integer
ncp.pre_compressed_sectors	Precompressed Sectors	Unsigned 32-bit integer
ncp.previous_control_packet	Previous Control Packet Count	Unsigned 32-bit integer
ncp.previous_record	Previous Record	Unsigned 32-bit integer
ncp.primary_entry	Primary Entry	Unsigned 32-bit integer
ncp.print_flags	Print Flags	Unsigned 8-bit integer
ncp.print_flags_banner	Print Banner Page	Boolean
ncp.print_flags_cr	Create	Boolean
ncp.print_flags_del_spool	Delete Spool File after Printing	Boolean
ncp.print_flags_exp_tabs	Expand Tabs in the File	Boolean
ncp.print_flags_ff	Suppress Form Feeds	Boolean
ncp.print_server_version	Print Server Version	Unsigned 8-bit integer
ncp.print_to_file_flag	Print to File Flag	Boolean
ncp.printer_halted	Printer Halted	Unsigned 8-bit integer
ncp.printer_offline	Printer Off-Line	Unsigned 8-bit integer
ncp.priority	Priority	Unsigned 32-bit integer
ncp.privileges	Login Privileges	Unsigned 32-bit integer
ncp.pro_dos_info	Pro DOS Info	Byte array
ncp.processor_type	Processor Type	Unsigned 8-bit integer
ncp.product_major_version	Product Major Version	Unsigned 16-bit integer
ncp.product_minor_version	Product Minor Version	Unsigned 16-bit integer

Field	Field Name	Type
ncp.product_revision_version	Product Revision Version	Unsigned 8-bit integer
ncp.projected_comp_size	Projected Compression Size	Unsigned 32-bit integer
ncp.property_data	Property Data	Byte array
ncp.property_has_more_segments	Property Has More Segments	Unsigned 8-bit integer
ncp.property_name	Property Name	
ncp.property_name_16	Property Name	String
ncp.property_segment	Property Segment	Unsigned 8-bit integer
ncp.property_type	Property Type	Unsigned 8-bit integer
ncp.property_value	Property Value	String
ncp.proposed_max_size	Proposed Max Size	Unsigned 16-bit integer
ncp.protocol_board_num	Protocol Board Number	Unsigned 32-bit integer
ncp.protocol_flags	Protocol Flags	Unsigned 32-bit integer
ncp.protocol_id	Protocol ID	Byte array
ncp.protocol_name	Protocol Name	
ncp.protocol_number	Protocol Number	Unsigned 16-bit integer
ncp.purge_c_code	Purge Completion Code	Unsigned 32-bit integer
ncp.purge_count	Purge Count	Unsigned 32-bit integer
ncp.purge_flags	Purge Flags	Unsigned 16-bit integer
ncp.purge_list	Purge List	Unsigned 32-bit integer
ncp.purgeable_blocks	Purgeable Blocks	Unsigned 32-bit integer
ncp.qms_version	QMS Version	Unsigned 8-bit integer
ncp.queue_id	Queue ID	Unsigned 32-bit integer
ncp.queue_name	Queue Name	
ncp.queue_start_position	Queue Start Position	Unsigned 32-bit integer
ncp.queue_status	Queue Status	Unsigned 8-bit integer
ncp.queue_status_new_jobs	Operator does not want to add jobs to the queue	Boolean
ncp.queue_status_pserver	Operator does not want additional servers attaching	Boolean
ncp.queue_status_svc_jobs	Operator does not want servers to service jobs	Boolean
ncp.queue_type	Queue Type	Unsigned 16-bit integer
ncp.r_tag_num	Resource Tag Number	Unsigned 32-bit integer

Field	Field Name	Type
ncp.re_mirror_current_offset	ReMirror Current Offset	Unsigned 32-bit integer
ncp.re_mirror_drive_number	ReMirror Drive Number	Unsigned 8-bit integer
ncp.read_beyond_write	Read Beyond Write	Unsigned 16-bit integer
ncp.read_exist_blck	Read Existing Block Count	Unsigned 32-bit integer
ncp.read_exist_part_read	Read Existing Partial Read Count	Unsigned 32-bit integer
ncp.read_exist_read_err	Read Existing Read Error Count	Unsigned 32-bit integer
ncp.read_exist_write_wait	Read Existing Write Wait Count	Unsigned 32-bit integer
ncp.realloc_slot	Re-Allocate Slot Count	Unsigned 32-bit integer
ncp.realloc_slot_came_too_soon	Re-Allocate Slot Came Too Soon Count	Unsigned 32-bit integer
ncp.rec_lock_count	Record Lock Count	Unsigned 16-bit integer
ncp.record_end	Record End	Unsigned 32-bit integer
ncp.record_in_use	Record in Use	Unsigned 16-bit integer
ncp.record_start	Record Start	Unsigned 32-bit integer
ncp.redirected_printer	Redirected Printer	Unsigned 8-bit integer
ncp.reexecute_request	Re-Execute Request Count	Unsigned 32-bit integer
ncp.reference_count	Reference Count	Unsigned 32-bit integer
ncp.relations_count	Relations Count	Unsigned 16-bit integer
ncp.rem_cache_node	Remove Cache Node Count	Unsigned 32-bit integer
ncp.rem_cache_node_from_avail	Remove Cache Node From Avail Count	Unsigned 32-bit integer
ncp.remote_max_packet_size	Remote Max Packet Size	Unsigned 32-bit integer
ncp.remote_target_id	Remote Target ID	Unsigned 32-bit integer
ncp.removable_flag	Removable Flag	Unsigned 16-bit integer
ncp.remove_open_rights	Remove Open Rights	Unsigned 8-bit integer
ncp.remove_open_rights_comp	Compatibility	Boolean
ncp.remove_open_rights_dr	Deny Read	Boolean
ncp.remove_open_rights_dw	Deny Write	Boolean
ncp.remove_open_rights_ro	Read Only	Boolean

Field	Field Name	Type
ncp.remove_open_rights_wo	Write Only	Boolean
ncp.remove_open_rights_wt	Write Through	Boolean
ncp.rename_flag	Rename Flag	Unsigned 8-bit integer
ncp.rename_flag_comp	Compatability allows files that are marked read only to be opened with read/write access	Boolean
ncp.rename_flag_no	Name Only renames only the specified name space entry name	Boolean
ncp.rename_flag_ren	Rename to Myself allows file to be renamed to it's original name	Boolean
ncp.replies_cancelled	Replies Cancelled	Unsigned 16-bit integer
ncp.reply_canceled	Reply Canceled Count	Unsigned 32-bit integer
ncp.reply_queue_job_numbers	Reply Queue Job Numbers	Unsigned 32-bit integer
ncp.req_frame_num	Response to Request in Frame Number	Unsigned 32-bit integer
ncp.request_bit_map	Request Bit Map	Unsigned 16-bit integer
ncp.request_bit_map_ratt	Return Attributes	Boolean
ncp.request_bit_map_ret_acc_date	Access Date	Boolean
ncp.request_bit_map_ret_acc_priv	Access Privileges	Boolean
ncp.request_bit_map_ret_afp_ent	AFP Entry ID	Boolean
ncp.request_bit_map_ret_afp_par	AFP Parent Entry ID	Boolean
ncp.request_bit_map_ret_back	Backup Date&Time	Boolean
ncp.request_bit_map_ret_cr_date	Creation Date	Boolean
ncp.request_bit_map_ret_data_fork	Data Fork Length	Boolean
ncp.request_bit_map_ret_finder	Finder Info	Boolean
ncp.request_bit_map_ret_long_nm	Long Name	Boolean

Field	Field Name	Type
ncp.request_bit_map_ret_m_date	Modify Date&Time	Boolean
ncp.request_bit_map_ret_number	Number of Offspring	Boolean
ncp.request_bit_map_ret_owner	Owner ID	Boolean
ncp.request_bit_map_ret_resource	Resource Fork Length	Boolean
ncp.request_bit_map_ret_short	Short Name	Boolean
ncp.request_code	Request Code	Unsigned 8-bit integer
ncp.requests_reprocessed	Requests Reprocessed	Unsigned 16-bit integer
ncp.reserved	Reserved	Unsigned 8-bit integer
ncp.reserved10	Reserved	Byte array
ncp.reserved12	Reserved	Byte array
ncp.reserved120	Reserved	Byte array
ncp.reserved16	Reserved	Byte array
ncp.reserved2	Reserved	Byte array
ncp.reserved20	Reserved	Byte array
ncp.reserved28	Reserved	Byte array
ncp.reserved3	Reserved	Byte array
ncp.reserved36	Reserved	Byte array
ncp.reserved4	Reserved	Byte array
ncp.reserved44	Reserved	Byte array
ncp.reserved48	Reserved	Byte array
ncp.reserved51	Reserved	Byte array
ncp.reserved56	Reserved	Byte array
ncp.reserved6	Reserved	Byte array
ncp.reserved64	Reserved	Byte array
ncp.reserved8	Reserved	Byte array
ncp.reserved_or_directory_number	Reserved or Directory Number (see EAFlags)	Unsigned 32-bit integer
ncp.resource_count	Resource Count	Unsigned 32-bit integer
ncp.resource_fork_len	Resource Fork Len	Unsigned 32-bit integer
ncp.resource_fork_size	Resource Fork Size	Unsigned 32-bit integer
ncp.resource_name	Resource Name	String
ncp.resource_sig	Resource Signature	String

Field	Field Name	Type
ncp.restore_time	Restore Time	Unsigned 32-bit integer
ncp.restriction	Disk Space Restriction	Unsigned 32-bit integer
ncp.restrictions_enforced	Disk Restrictions Enforce Flag	Unsigned 8-bit integer
ncp.ret_info_mask	Return Information	Unsigned 16-bit integer
ncp.ret_info_mask_actual	Return Actual Information	Boolean
ncp.ret_info_mask_alloc	Return Allocation Space Information	Boolean
ncp.ret_info_mask_arch	Return Archive Information	Boolean
ncp.ret_info_mask_attr	Return Attribute Information	Boolean
ncp.ret_info_mask_create	Return Creation Information	Boolean
ncp.ret_info_mask_dir	Return Directory Information	Boolean
ncp.ret_info_mask_eattr	Return Extended Attributes Information	Boolean
ncp.ret_info_mask_fname	Return File Name Information	Boolean
ncp.ret_info_mask_id	Return ID Information	Boolean
ncp.ret_info_mask_logical	Return Logical Information	Boolean
ncp.ret_info_mask_mod	Return Modify Information	Boolean
ncp.ret_info_mask_ns	Return Name Space Information	Boolean
ncp.ret_info_mask_ns_attr	Return Name Space Attributes Information	Boolean
ncp.ret_info_mask_rights	Return Rights Information	Boolean
ncp.ret_info_mask_size	Return Size Information	Boolean
ncp.ret_info_mask_tspace	Return Total Space Information	Boolean
ncp.retry_tx_count	Transmit Retry Count	Unsigned 32-bit integer
ncp.return_info_count	Return Information Count	Unsigned 32-bit integer
ncp.returned_list_count	Returned List Count	Unsigned 32-bit integer
ncp.rev_query_flag	Revoke Rights Query Flag	Unsigned 8-bit integer
ncp.revision	Revision	Unsigned 32-bit integer
ncp.revision_number	Revision	Unsigned 8-bit integer
ncp.rights_grant_mask	Grant Rights	Unsigned 8-bit integer

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Field	Field Name	Type
ncp.rights_grant_mask_create	Create	Boolean
ncp.rights_grant_mask_del	Delete	Boolean
ncp.rights_grant_mask_mod	Modify	Boolean
ncp.rights_grant_mask_open	Open	Boolean
ncp.rights_grant_mask_parent	Parental	Boolean
ncp.rights_grant_mask_read	Read	Boolean
ncp.rights_grant_mask_search	Search	Boolean
ncp.rights_grant_mask_write	Write	Boolean
ncp.rights_revoke_mask	Revoke Rights	Unsigned 8-bit integer
ncp.rights_revoke_mask_create	Create	Boolean
ncp.rights_revoke_mask_del	Delete	Boolean
ncp.rights_revoke_mask_mod	Modify	Boolean
ncp.rights_revoke_mask_open	Open	Boolean
ncp.rights_revoke_mask_parent	Parental	Boolean
ncp.rights_revoke_mask_read	Read	Boolean
ncp.rights_revoke_mask_search	Search	Boolean
ncp.rights_revoke_mask_write	Write	Boolean
ncp.rip_socket_num	RIP Socket Number	Unsigned 16-bit integer
ncp.route_hops	Hop Count	Unsigned 16-bit integer
ncp.route_time	Route Time	Unsigned 16-bit integer
ncp.router_dn_flag	Router Down Flag	Boolean
ncp.rpc_c_code	RPC Completion Code	Unsigned 16-bit integer
ncp.rpy_nearest_srv_flag	Reply to Nearest Server Flag	Boolean
ncp.rx_buffer_size	Receive Buffer Size	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.rx_buffers	Receive Buffers	Unsigned 32-bit integer
ncp.rx_buffers_75	Receive Buffers Warning Level	Unsigned 32-bit integer
ncp.rx_buffers_checked_out	Receive Buffers Checked Out Count	Unsigned 32-bit integer
ncp.s_day	Day	Unsigned 8-bit integer
ncp.s_day_of_week	Day of Week	Unsigned 8-bit integer
ncp.s_hour	Hour	Unsigned 8-bit integer
ncp.s_m_info	Storage Media Information	Unsigned 8-bit integer
ncp.s_minute	Minutes	Unsigned 8-bit integer
ncp.s_module_name	Storage Module Name	String
ncp.s_month	Month	Unsigned 8-bit integer
ncp.s_second	Seconds	Unsigned 8-bit integer
ncp.salvageable_file_entry_number	Salvageable File Entry Number	Unsigned 32-bit integer
ncp.sap_socket_number	SAP Socket Number	Unsigned 16-bit integer
ncp.sattr	Search Attributes	Unsigned 8-bit integer
ncp.sattr_hid	Hidden	Boolean
ncp.sattr_sub	Subdirectory	Boolean
ncp.sattr_sys	System	Boolean
ncp.saved_an_out_of_order_packet	Saved An Out Of Order Packet Count	Unsigned 32-bit integer
ncp.scan_items	Number of Items returned from Scan	Unsigned 32-bit integer
ncp.search_att_archive	Archive	Boolean
ncp.search_att_execute_confirm	Execute Confirm	Boolean
ncp.search_att_execute_only	Execute Only	Boolean
ncp.search_att_hidden	Hidden	Boolean
ncp.search_att_low	Search Attributes	Unsigned 16-bit integer
ncp.search_att_read_only	Read Only	Boolean
ncp.search_att_shareable	Shareable	Boolean
ncp.search_att_sub	Subdirectory	Boolean
ncp.search_att_system	System	Boolean
ncp.search_attr_all_files	All Files and Directories	Boolean
ncp.search_bit_map	Search Bit Map	Unsigned 8-bit integer

Field	Field Name	Type
ncp.search_bit_map_files	Files	Boolean
ncp.search_bit_map_hidden	Hidden	Boolean
ncp.search_bit_map_sub	Subdirectory	Boolean
ncp.search_bit_map_sys	System	Boolean
ncp.search_conn_number	Search Connection Number	Unsigned 32-bit integer
ncp.search_instance	Search Instance	Unsigned 32-bit integer
ncp.search_number	Search Number	Unsigned 32-bit integer
ncp.search_pattern	Search Pattern	
ncp.search_sequence	Search Sequence	Byte array
ncp.search_sequence_word	Search Sequence	Unsigned 16-bit integer
ncp.sec_rel_to_y2k	Seconds Relative to the Year 2000	Unsigned 32-bit integer
ncp.sector_size	Sector Size	Unsigned 32-bit integer
ncp.sectors_per_block	Sectors Per Block	Unsigned 8-bit integer
ncp.sectors_per_cluster	Sectors Per Cluster	Unsigned 16-bit integer
ncp.sectors_per_cluster_long	Sectors Per Cluster	Unsigned 32-bit integer
ncp.sectors_per_track	Sectors Per Track	Unsigned 8-bit integer
ncp.security_equiv_list	Security Equivalent List	String
ncp.security_flag	Security Flag	Unsigned 8-bit integer
ncp.security_restriction_version	Security Restriction Version	Unsigned 8-bit integer
ncp.semaphore_handle	Semaphore Handle	Unsigned 32-bit integer
ncp.semaphore_name	Semaphore Name	
ncp.semaphore_name_len	Semaphore Name Len	Unsigned 8-bit integer
ncp.semaphore_open_count	Semaphore Open Count	Unsigned 8-bit integer
ncp.semaphore_share_count	Semaphore Share Count	Unsigned 8-bit integer
ncp.semaphore_time_out	Semaphore Time Out	Unsigned 16-bit integer
ncp.semaphore_value	Semaphore Value	Unsigned 16-bit integer
ncp.send_hold_off_message	Send Hold Off Message Count	Unsigned 32-bit integer
ncp.send_status	Send Status	Unsigned 8-bit integer
ncp.sent_a_dup_reply	Sent A Duplicate Reply Count	Unsigned 32-bit integer

Field	Field Name	Type
ncp.sent_pos_ack	Sent Positive Acknowledge Count	Unsigned 32-bit integer
ncp.seq	Sequence Number	Unsigned 8-bit integer
ncp.sequence_byte	Sequence	Unsigned 8-bit integer
ncp.sequence_number	Sequence Number	Unsigned 32-bit integer
ncp.server_address	Server Address	Byte array
ncp.server_app_num	Server App Number	Unsigned 16-bit integer
ncp.server_id_list	Server ID List	Unsigned 32-bit integer
ncp.server_id_number	Server ID	Unsigned 32-bit integer
ncp.server_info_flags	Server Information Flags	Unsigned 16-bit integer
ncp.server_list_flags	Server List Flags	Unsigned 32-bit integer
ncp.server_name	Server Name	String
ncp.server_name_len	Server Name	
ncp.server_name_stringz	Server Name	String
ncp.server_network_address	Server Network Address	Byte array
ncp.server_node	Server Node	Byte array
ncp.server_serial_number	Server Serial Number	Unsigned 32-bit integer
ncp.server_station	Server Station	Unsigned 8-bit integer
ncp.server_station_list	Server Station List	Unsigned 8-bit integer
ncp.server_station_long	Server Station	Unsigned 32-bit integer
ncp.server_status_record	Server Status Record	String
ncp.server_task_number	Server Task Number	Unsigned 8-bit integer
ncp.server_task_number_long	Server Task Number	Unsigned 32-bit integer
ncp.server_type	Server Type	Unsigned 16-bit integer
ncp.server_utilization	Server Utilization	Unsigned 32-bit integer
ncp.server_utilization_percentage	Server Utilization Percentage	Unsigned 8-bit integer
ncp.set_cmd_catagory	Set Command Catagory	Unsigned 8-bit integer
ncp.set_cmd_flags	Set Command Flags	Unsigned 8-bit integer
ncp.set_cmd_name	Set Command Name	String
ncp.set_cmd_type	Set Command Type	Unsigned 8-bit integer
ncp.set_cmd_value_num	Set Command Value	Unsigned 32-bit integer
ncp.set_cmd_value_string	Set Command Value	String
ncp.set_parm_name	Set Parameter Name	String
ncp.sft_error_table	SFT Error Table	Byte array

Field	Field Name	Type
ncp.sft_support_level	SFT Support Level	Unsigned 8-bit integer
ncp.shareable_lock_count	Shareable Lock Count	Unsigned 16-bit integer
ncp.shared_memory_addresses	Shared Memory Addresses	Byte array
ncp.short_name	Short Name	String
ncp.short_stack_name	Short Stack Name	String
ncp.shouldnt_be_ack_here	Shouldn't Be ACKing Here Count	Unsigned 32-bit integer
ncp.sibling_count	Sibling Count	Unsigned 32-bit integer
ncp.signature	Signature	Boolean
ncp.slot	Slot	Unsigned 8-bit integer
ncp.sm_info_size	Storage Module Information Size	Unsigned 32-bit integer
ncp.smids	Storage Media ID's	Unsigned 32-bit integer
ncp.software_description	Software Description	String
ncp.software_driver_type	Software Driver Type	Unsigned 8-bit integer
ncp.software_major_version_number	Software Major Version Number	Unsigned 8-bit integer
ncp.software_minor_version_number	Software Minor Version Number	Unsigned 8-bit integer
ncp.someone_else_did_it_0	Someone Else Did It Count 0	Unsigned 32-bit integer
ncp.someone_else_did_it_1	Someone Else Did It Count 1	Unsigned 32-bit integer
ncp.someone_else_did_it_2	Someone Else Did It Count 2	Unsigned 32-bit integer
ncp.someone_else_using_this_file	Someone Else Using This File Count	Unsigned 32-bit integer
ncp.source_component_count	Source Path Component Count	Unsigned 8-bit integer
ncp.source_dir_handle	Source Directory Handle	Unsigned 8-bit integer
ncp.source_originate_time	Source Originate Time	Byte array
ncp.source_path	Source Path	
ncp.source_return_time	Source Return Time	Byte array
ncp.space_migrated	Space Migrated	Unsigned 32-bit integer
ncp.space_restriction_node_count	Space Restriction Node Count	Unsigned 32-bit integer
ncp.space_used	Space Used	Unsigned 32-bit integer
ncp.spx_abort_conn	SPX Aborted Connection	Unsigned 16-bit integer

Field	Field Name	Type
ncp.spx_bad_in_pkt	SPX Bad In Packet Count	Unsigned 16-bit integer
ncp.spx_bad_listen	SPX Bad Listen Count	Unsigned 16-bit integer
ncp.spx_bad_send	SPX Bad Send Count	Unsigned 16-bit integer
ncp.spx_est_conn_fail	SPX Establish Connection Fail	Unsigned 16-bit integer
ncp.spx_est_conn_req	SPX Establish Connection Requests	Unsigned 16-bit integer
ncp.spx_incoming_pkt	SPX Incoming Packet Count	Unsigned 32-bit integer
ncp.spx_listen_con_fail	SPX Listen Connect Fail	Unsigned 16-bit integer
ncp.spx_listen_con_req	SPX Listen Connect Request	Unsigned 16-bit integer
ncp.spx_listen_pkt	SPX Listen Packet Count	Unsigned 32-bit integer
ncp.spx_max_conn	SPX Max Connections Count	Unsigned 16-bit integer
ncp.spx_max_used_conn	SPX Max Used Connections	Unsigned 16-bit integer
ncp.spx_no_ses_listen	SPX No Session Listen ECB Count	Unsigned 16-bit integer
ncp.spx_send	SPX Send Count	Unsigned 32-bit integer
ncp.spx_send_fail	SPX Send Fail Count	Unsigned 16-bit integer
ncp.spx_supp_pkt	SPX Suppressed Packet Count	Unsigned 16-bit integer
ncp.spx_watch_dog	SPX Watch Dog Destination Session Count	Unsigned 16-bit integer
ncp.spx_window_choke	SPX Window Choke Count	Unsigned 32-bit integer
ncp.src_connection	Source Connection ID	Unsigned 32-bit integer
ncp.src_name_space	Source Name Space	Unsigned 8-bit integer
ncp.stack_count	Stack Count	Unsigned 32-bit integer
ncp.stack_full_name_str	Stack Full Name	
ncp.stack_major_vn	Stack Major Version Number	Unsigned 8-bit integer
ncp.stack_minor_vn	Stack Minor Version Number	Unsigned 8-bit integer
ncp.stack_number	Stack Number	Unsigned 32-bit integer
ncp.stack_short_name	Stack Short Name	String
ncp.start_conn_num	Starting Connection Number	Unsigned 32-bit integer
ncp.start_number	Start Number	Unsigned 32-bit integer

Field	Field Name	Type
ncp.start_number_flag	Start Number Flag	Unsigned 16-bit integer
ncp.start_search_number	Start Search Number	Unsigned 16-bit integer
ncp.start_station_error	Start Station Error Count	Unsigned 32-bit integer
ncp.start_volume_number	Starting Volume Number	Unsigned 32-bit integer
ncp.starting_block	Starting Block	Unsigned 16-bit integer
ncp.starting_number	Starting Number	Unsigned 32-bit integer
ncp.stat_major_version	Statistics Table Major Version	Unsigned 8-bit integer
ncp.stat_minor_version	Statistics Table Minor Version	Unsigned 8-bit integer
ncp.stat_table_major_version	Statistics Table Major Version	Unsigned 8-bit integer
ncp.stat_table_minor_version	Statistics Table Minor Version	Unsigned 8-bit integer
ncp.station_list	Station List	Unsigned 32-bit integer
ncp.station_number	Station Number	Byte array
ncp.status	Status	Unsigned 16-bit integer
ncp.status_flag_bits	Status Flag	Unsigned 32-bit integer
ncp.status_flag_bits_audit	Audit	Boolean
ncp.status_flag_bits_comp	Compression	Boolean
ncp.status_flag_bits_im_purge	Immediate Purge	Boolean
ncp.status_flag_bits_migrate	Migration	Boolean
ncp.status_flag_bits_nss	NSS Volume	Boolean
ncp.status_flag_bits_ro	Read Only	Boolean
ncp.status_flag_bits_suballoc	Sub Allocation	Boolean
ncp.still_doing_the_last_req	Still Doing The Last Request Count	Unsigned 32-bit integer
ncp.still_transmitting	Still Transmitting Count	Unsigned 32-bit integer
ncp.stream_type	Stream Type	Unsigned 8-bit integer
ncp.sub_alloc_clusters	Sub Alloc Clusters	Unsigned 32-bit integer
ncp.sub_alloc_freeable_clusters	Sub Alloc Freeable Clusters	Unsigned 32-bit integer
ncp.sub_directory	Subdirectory	Unsigned 32-bit integer
ncp.subfunc	SubFunction	Unsigned 8-bit integer
ncp.suggested_file_size	Suggested File Size	Unsigned 32-bit integer

Field	Field Name	Type
ncp.support_module_id	Support Module ID	Unsigned 32-bit integer
ncp.synch_name	Synch Name	
ncp.system_flags	System Flags	Unsigned 8-bit integer
ncp.system_flags.abt	ABT	Boolean
ncp.system_flags.eob	EOB	Boolean
ncp.system_flags.sys	SYS	Boolean
ncp.system_interval_marker	System Interval Marker	Unsigned 32-bit integer
ncp.tab_size	Tab Size	Unsigned 8-bit integer
ncp.target_client_list	Target Client List	Unsigned 8-bit integer
ncp.target_connection_number	Target Connection Number	Unsigned 16-bit integer
ncp.target_dir_handle	Target Directory Handle	Unsigned 8-bit integer
ncp.target_entry_id	Target Entry ID	Unsigned 32-bit integer
ncp.target_execution_time	Target Execution Time	Byte array
ncp.target_file_handle	Target File Handle	Byte array
ncp.target_file_offset	Target File Offset	Unsigned 32-bit integer
ncp.target_message	Message	
ncp.target_ptr	Target Printer	Unsigned 8-bit integer
ncp.target_receive_time	Target Receive Time	Byte array
ncp.target_server_id_number	Target Server ID Number	Unsigned 32-bit integer
ncp.target_transmit_time	Target Transmit Time	Byte array
ncp.task	Task Number	Unsigned 8-bit integer
ncp.task_num_byte	Task Number	Unsigned 8-bit integer
ncp.task_number_word	Task Number	Unsigned 16-bit integer
ncp.text_job_description	Text Job Description	String
ncp.thrashing_count	Thrashing Count	Unsigned 16-bit integer
ncp.time_to_net	Time To Net	Unsigned 16-bit integer
ncp.timeout_limit	Timeout Limit	Unsigned 16-bit integer
ncp.timesync_status_active	Time Synchronization is Active	Boolean
ncp.timesync_status_ext_sync	External Clock Status	Boolean
ncp.timesync_status_external	External Time Synchronization Active	Boolean
ncp.timesync_status_flags	Timesync Status	Unsigned 32-bit integer

Field	Field Name	Type
ncp.timesync_status_net_sync	Time is Synchronized to the Network	Boolean
ncp.timesync_status_server_type	Time Server Type	Unsigned 32-bit integer
ncp.timesync_status_sync	Time is Synchronized	Boolean
ncp.too_many_ack_frag	Too Many ACK Fragments Count	Unsigned 32-bit integer
ncp.too_many_hops	Too Many Hops	Unsigned 16-bit integer
ncp.total_blks_to_dcompress	Total Blocks To Decompress	Unsigned 32-bit integer
ncp.total_blocks	Total Blocks	Unsigned 32-bit integer
ncp.total_cache_writes	Total Cache Writes	Unsigned 32-bit integer
ncp.total_changed_fats	Total Changed FAT Entries	Unsigned 32-bit integer
ncp.total_cnt_blocks	Total Count Blocks	Unsigned 32-bit integer
ncp.total_common_cnts	Total Common Counts	Unsigned 32-bit integer
ncp.total_dir_entries	Total Directory Entries	Unsigned 32-bit integer
ncp.total_directory_slots	Total Directory Slots	Unsigned 16-bit integer
ncp.total_extended_directory_extants	Total Extended Directory Extants	Unsigned 32-bit integer
ncp.total_file_service_packets	Total File Service Packets	Unsigned 32-bit integer
ncp.total_files_opened	Total Files Opened	Unsigned 32-bit integer
ncp.total_lfs_counters	Total LFS Counters	Unsigned 32-bit integer
ncp.total_offspring	Total Offspring	Unsigned 16-bit integer
ncp.total_other_packets	Total Other Packets	Unsigned 32-bit integer
ncp.total_queue_jobs	Total Queue Jobs	Unsigned 32-bit integer
ncp.total_read_requests	Total Read Requests	Unsigned 32-bit integer
ncp.total_request	Total Requests	Unsigned 32-bit integer
ncp.total_request_packets	Total Request Packets	Unsigned 32-bit integer
ncp.total_routed_packets	Total Routed Packets	Unsigned 32-bit integer
ncp.total_rx_packet_count	Total Receive Packet Count	Unsigned 32-bit integer
ncp.total_rx_packets	Total Receive Packets	Unsigned 32-bit integer
ncp.total_rx_pkts	Total Receive Packets	Unsigned 32-bit integer
ncp.total_server_memory	Total Server Memory	Unsigned 16-bit integer
ncp.total_stream_size_struct_space_alloc	Total Data Stream Disk Space Alloc	Unsigned 32-bit integer

Field	Field Name	Type
ncp.total_trans_backed_out	Total Transactions Backed Out	Unsigned 32-bit integer
ncp.total_trans_performed	Total Transactions Performed	Unsigned 32-bit integer
ncp.total_tx_packet_count	Total Transmit Packet Count	Unsigned 32-bit integer
ncp.total_tx_packets	Total Transmit Packets	Unsigned 32-bit integer
ncp.total_tx_pkts	Total Transmit Packets	Unsigned 32-bit integer
ncp.total_unfilled_backout_requests	Total Unfilled Backout Requests	Unsigned 16-bit integer
ncp.total_volume_clusters	Total Volume Clusters	Unsigned 16-bit integer
ncp.total_write_requests	Total Write Requests	Unsigned 32-bit integer
ncp.total_write_trans_performed	Total Write Transactions Performed	Unsigned 32-bit integer
ncp.track_on_flag	Track On Flag	Boolean
ncp.transaction_disk_space	Transaction Disk Space	Unsigned 16-bit integer
ncp.transaction_fat_allocations	Transaction FAT Allocations	Unsigned 32-bit integer
ncp.transaction_file_size_changes	Transaction File Size Changes	Unsigned 32-bit integer
ncp.transaction_files_truncated	Transaction Files Truncated	Unsigned 32-bit integer
ncp.transaction_number	Transaction Number	Unsigned 32-bit integer
ncp.transaction_tracking_enabled	Transaction Tracking Enabled	Unsigned 8-bit integer
ncp.transaction_tracking_supported	Transaction Tracking Supported	Unsigned 8-bit integer
ncp.transaction_volume_number	Transaction Volume Number	Unsigned 16-bit integer
ncp.transport_addr	Transport Address	
ncp.transport_type	Communications Type	Unsigned 8-bit integer
ncp.trustee_id_set	Trustee ID	Unsigned 32-bit integer
ncp.trustee_list_node_count	Trustee List Node Count	Unsigned 32-bit integer
ncp.trustee_rights_create	Create	Boolean
ncp.trustee_rights_del	Delete	Boolean
ncp.trustee_rights_low	Trustee Rights	Unsigned 16-bit integer
ncp.trustee_rights_modify	Modify	Boolean
ncp.trustee_rights_open	Open	Boolean

Field	Field Name	Type
ncp.trustee_rights_parent	Parental	Boolean
ncp.trustee_rights_read	Read	Boolean
ncp.trustee_rights_search	Search	Boolean
ncp.trustee_rights_super	Supervisor	Boolean
ncp.trustee_rights_write	Write	Boolean
ncp.trustee_set_number	Trustee Set Number	Unsigned 8-bit integer
ncp.try_to_write_too_much	Trying To Write Too Much Count	Unsigned 32-bit integer
ncp.ttl_comp_blks	Total Compression Blocks	Unsigned 32-bit integer
ncp.ttl_ds_disk_space_alloc	Total Streams Space Allocated	Unsigned 32-bit integer
ncp.ttl_eas	Total EA's	Unsigned 32-bit integer
ncp.ttl_eas_data_size	Total EA's Data Size	Unsigned 32-bit integer
ncp.ttl_eas_key_size	Total EA's Key Size	Unsigned 32-bit integer
ncp.ttl_inter_blks	Total Intermediate Blocks	Unsigned 32-bit integer
ncp.ttl_migrated_size	Total Migrated Size	Unsigned 32-bit integer
ncp.ttl_num_of_r_tags	Total Number of Resource Tags	Unsigned 32-bit integer
ncp.ttl_num_of_set_cmds	Total Number of Set Commands	Unsigned 32-bit integer
ncp.ttl_pckts_routed	Total Packets Routed	Unsigned 32-bit integer
ncp.ttl_pckts_srvcd	Total Packets Serviced	Unsigned 32-bit integer
ncp.ttl_values_length	Total Values Length	Unsigned 32-bit integer
ncp.ttl_write_data_size	Total Write Data Size	Unsigned 32-bit integer
ncp.tts_flag	Transaction Tracking Flag	Unsigned 16-bit integer
ncp.tts_level	TTS Level	Unsigned 8-bit integer
ncp.turbo_fat_build_failed	Turbo FAT Build Failed Count	Unsigned 32-bit integer
ncp.turbo_used_for_file_service	Turbo Used For File Service	Unsigned 16-bit integer
ncp.type	Type	Unsigned 16-bit integer
ncp.un_claimed_packets	Unclaimed Packets	Unsigned 32-bit integer
ncp.un_compressable_data_streams_cnt	Uncompressable Data Streams Count	Unsigned 32-bit integer
ncp.un_used	Unused	Unsigned 8-bit integer
ncp.un_used_directory_entries	Unused Directory Entries	Unsigned 32-bit integer

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Field	Field Name	Type
ncp.un_used_extended_directory_extants	Unused Extended Directory Extants	Unsigned 32-bit integer
ncp.unclaimed_packets	Unclaimed Packets	Unsigned 32-bit integer
ncp.undefined_28	Undefined	Byte array
ncp.undefined_8	Undefined	Byte array
ncp.unique_id	Unique ID	Unsigned 8-bit integer
ncp.unknown_network	Unknown Network	Unsigned 16-bit integer
ncp.unused_disk_blocks	Unused Disk Blocks	Unsigned 32-bit integer
ncp.update_date	Update Date	Unsigned 16-bit integer
ncp.update_id	Update ID	Unsigned 32-bit integer
ncp.update_time	Update Time	Unsigned 16-bit integer
ncp.used_blocks	Used Blocks	Unsigned 32-bit integer
ncp.used_space	Used Space	Unsigned 32-bit integer
ncp.user_id	User ID	Unsigned 32-bit integer
ncp.user_info_audit_conn	Audit Connection Recorded	Boolean
ncp.user_info_audited	Audited	Boolean
ncp.user_info_being_abort	Being Aborted	Boolean
ncp.user_info_bindery	Bindery Connection	Boolean
ncp.user_info_dsaudit_conn	DS Audit Connection Recorded	Boolean
ncp.user_info_held_req	Held Requests	Unsigned 32-bit integer
ncp.user_info_int_login	Internal Login	Boolean
ncp.user_info_logged_in	Logged In	Boolean
ncp.user_info_logout	Logout in Progress	Boolean
ncp.user_info_mac_station	MAC Station	Boolean
ncp.user_info_need_sec	Needs Security Change	Boolean
ncp.user_info_temp_authen	Temporary Authenticated	Boolean
ncp.user_info_ttl_bytes_rd	Total Bytes Read	Byte array
ncp.user_info_ttl_bytes_wrt	Total Bytes Written	Byte array
ncp.user_info_use_count	Use Count	Unsigned 16-bit integer
ncp.user_login_allowed	Login Status	Unsigned 8-bit integer
ncp.user_name	User Name	
ncp.user_name_16	User Name	String
ncp.uts_time_in_seconds	UTC Time in Seconds	Unsigned 32-bit integer

Field	Field Name	Type
ncp.valid_bfrs_reused	Valid Buffers Reused	Unsigned 32-bit integer
ncp.value_available	Value Available	Unsigned 8-bit integer
ncp.vap_version	VAP Version	Unsigned 8-bit integer
ncp.variable_bit_mask	Variable Bit Mask	Unsigned 32-bit integer
ncp.variable_bits_defined	Variable Bits Defined	Unsigned 16-bit integer
ncp.vconsole_rev	Console Revision	Unsigned 8-bit integer
ncp.vconsole_ver	Console Version	Unsigned 8-bit integer
ncp.verb	Verb	Unsigned 32-bit integer
ncp.verb_data	Verb Data	Unsigned 8-bit integer
ncp.version	Version	Unsigned 32-bit integer
ncp.version_number	Version	Unsigned 8-bit integer
ncp.vert_location	Vertical Location	Unsigned 16-bit integer
ncp.virtual_console_version	Virtual Console Version	Unsigned 8-bit integer
ncp.vol_info_reply_len	Volume Information Reply Length	Unsigned 16-bit integer
ncp.volume_active_count	Volume Active Count	Unsigned 32-bit integer
ncp.volume_cached_flag	Volume Cached Flag	Unsigned 8-bit integer
ncp.volume_hashed_flag	Volume Hashed Flag	Unsigned 8-bit integer
ncp.volume_id	Volume ID	Unsigned 32-bit integer
ncp.volume_last_modified_date	Volume Last Modified Date	Unsigned 16-bit integer
ncp.volume_last_modified_time	Volume Last Modified Time	Unsigned 16-bit integer
ncp.volume_mounted_flag	Volume Mounted Flag	Unsigned 8-bit integer
ncp.volume_name	Volume Name	String
ncp.volume_name_len	Volume Name	
ncp.volume_name_stringz	Volume Name	String
ncp.volume_number	Volume Number	Unsigned 8-bit integer
ncp.volume_number_long	Volume Number	Unsigned 32-bit integer
ncp.volume_reference_count	Volume Reference Count	Unsigned 32-bit integer
ncp.volume_removable_flag	Volume Removable Flag	Unsigned 8-bit integer
ncp.volume_request_flags	Volume Request Flags	Unsigned 16-bit integer
ncp.volume_segment_dev_num	Volume Segment Device Number	Unsigned 32-bit integer

Field	Field Name	Type
ncp.volume_segment_offset	Volume Segment Offset	Unsigned 32-bit integer
ncp.volume_segment_size	Volume Segment Size	Unsigned 32-bit integer
ncp.volume_size_in_clusters	Volume Size in Clusters	Unsigned 32-bit integer
ncp.volume_type	Volume Type	Unsigned 16-bit integer
ncp.volume_use_count	Volume Use Count	Unsigned 32-bit integer
ncp.volumes_supported_max	Volumes Supported Max	Unsigned 16-bit integer
ncp.wait_node	Wait Node Count	Unsigned 32-bit integer
ncp.wait_node_alloc_fail	Wait Node Alloc Failure Count	Unsigned 32-bit integer
ncp.wait_on_sema	Wait On Semaphore Count	Unsigned 32-bit integer
ncp.wait_till_dirty_blcks_dec	Wait Till Dirty Blocks Decrease Count	Unsigned 32-bit integer
ncp.wait_time	Wait Time	Unsigned 32-bit integer
ncp.wasted_server_memory	Wasted Server Memory	Unsigned 16-bit integer
ncp.write_curr_trans	Write Currently Transmitting Count	Unsigned 32-bit integer
ncp.write_didnt_need_but_req_ack	Write Didn't Need But Requested ACK Count	Unsigned 32-bit integer
ncp.write_didnt_need_this_frag	Write Didn't Need This Fragment Count	Unsigned 32-bit integer
ncp.write_dup_req	Write Duplicate Request Count	Unsigned 32-bit integer
ncp.write_err	Write Error Count	Unsigned 32-bit integer
ncp.write_got_an_ack0	Write Got An ACK Count 0	Unsigned 32-bit integer
ncp.write_got_an_ack1	Write Got An ACK Count 1	Unsigned 32-bit integer
ncp.write_held_off	Write Held Off Count	Unsigned 32-bit integer
ncp.write_held_off_with_dup	Write Held Off With Duplicate Request	Unsigned 32-bit integer
ncp.write_incon_packet_len	Write Inconsistent Packet Lengths Count	Unsigned 32-bit integer
ncp.write_out_of_mem_for_ctrl_nodes	Write Out Of Memory For Control Nodes Count	Unsigned 32-bit integer
ncp.write_timeout	Write Time Out Count	Unsigned 32-bit integer
ncp.write_too_many_buf_check	Write Too Many Buffers Checked Out Count	Unsigned 32-bit integer

Field	Field Name	Type
ncp.write_trash_dup_req	Write Trashed Duplicate Request Count	Unsigned 32-bit integer
ncp.write_trash_packet	Write Trashed Packet Count	Unsigned 32-bit integer
ncp.wrt_blck_cnt	Write Block Count	Unsigned 32-bit integer
ncp.wrt_entire_blck	Write Entire Block Count	Unsigned 32-bit integer
ncp.year	Year	Unsigned 8-bit integer
ncp.zero_ack_frag	Zero ACK Fragment Count	Unsigned 32-bit integer

Network Data Management Protocol (ndmp)

Table A-165. Network Data Management Protocol (ndmp)

Field	Field Name	Type
ndmp.addr.ip	IP Address	IPv4 address
ndmp.addr.ipc	IPC	Byte array
ndmp.addr.loop_id	Loop ID	Unsigned 32-bit integer
ndmp.addr.tcp_port	TCP Port	Unsigned 32-bit integer
ndmp.addr_type	Addr Type	Unsigned 32-bit integer
ndmp.addr_types	Addr Types	No value
ndmp.auth.challenge	Challenge	Byte array
ndmp.auth.digest	Digest	Byte array
ndmp.auth.id	ID	String
ndmp.auth.password	Password	String
ndmp.auth.types	Auth types	No value
ndmp.auth_type	Auth Type	Unsigned 32-bit integer
ndmp.bu.destination_dir	Destination Dir	String
ndmp.bu.new_name	New Name	String
ndmp.bu.operation	Operation	Unsigned 32-bit integer
ndmp.bu.original_path	Original Path	String
ndmp.bu.other_name	Other Name	String
ndmp.butype.default_env	Default Env	No value
ndmp.butype.env.name	Name	String
ndmp.butype.env.value	Value	String
ndmp.butype.info	Butype Info	No value

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Field	Field Name	Type
ndmp.butype.name	Butype Name	String
ndmp.bytes_left_to_read	Bytes left to read	
ndmp.connected	Connected	Unsigned 32-bit integer
ndmp.connected.reason	Reason	String
ndmp.count	Count	Unsigned 32-bit integer
ndmp.data	Data	Byte array
ndmp.data.bytes_processed	Bytes Processed	
ndmp.data.est_bytes_remain	Est Bytes Remain	
ndmp.data.est_time_remain	Est Time Remain	Time duration
ndmp.data.halted	Halted Reason	Unsigned 32-bit integer
ndmp.data.state	State	Unsigned 32-bit integer
ndmp.data.written	Data Written	
ndmp.dirs	Dirs	No value
ndmp.error	Error	Unsigned 32-bit integer
ndmp.execute_cdb.cdb_len	CDB length	Unsigned 32-bit integer
ndmp.execute_cdb.datain	Data in	Byte array
ndmp.execute_cdb.datain_len	Data in length	Unsigned 32-bit integer
ndmp.execute_cdb.dataout	Data out	Byte array
ndmp.execute_cdb.dataout_len	Data out length	Unsigned 32-bit integer
ndmp.execute_cdb.flags.data_in	DATA_IN	Boolean
ndmp.execute_cdb.flags.data_out	DATA_OUT	Boolean
ndmp.execute_cdb.sns_len	Sense data length	Unsigned 32-bit integer
ndmp.execute_cdb.status	Status	Unsigned 8-bit integer
ndmp.execute_cdb.timeout	Timeout	Unsigned 32-bit integer
ndmp.file	File	String
ndmp.file.atime	atime	Date/Time stamp
ndmp.file.ctime	ctime	Date/Time stamp
ndmp.file.fattr	Fattr	Unsigned 32-bit integer

Field	Field Name	Type
ndmp.file.fh_info	FH Info	
ndmp.file.fs_type	File FS Type	Unsigned 32-bit integer
ndmp.file.group	Group	Unsigned 32-bit integer
ndmp.file.links	Links	Unsigned 32-bit integer
ndmp.file.mtime	mtime	Date/Time stamp
ndmp.file.names	File Names	No value
ndmp.file.node	Node	
ndmp.file.owner	Owner	Unsigned 32-bit integer
ndmp.file.parent	Parent	
ndmp.file.size	Size	
ndmp.file.stats	File Stats	No value
ndmp.file.type	File Type	Unsigned 32-bit integer
ndmp.files	Files	No value
ndmp.fs.avail_size	Avail Size	
ndmp.fs.env	Env variables	No value
ndmp.fs.env.name	Name	String
ndmp.fs.env.value	Value	String
ndmp.fs.info	FS Info	No value
ndmp.fs.logical_device	Logical Device	String
ndmp.fs.physical_device	Physical Device	String
ndmp.fs.status	Status	String
ndmp.fs.total_inodes	Total Inodes	
ndmp.fs.total_size	Total Size	
ndmp.fs.type	Type	String
ndmp.fs.used_inodes	Used Inodes	
ndmp.fs.used_size	Used Size	
ndmp.halt	Halt	Unsigned 32-bit integer
ndmp.halt.reason	Reason	String
ndmp.header	NDMP Header	No value
ndmp.hostid	HostID	String
ndmp.hostname	Hostname	String
ndmp.log.message	Message	String
ndmp.log.message.id	Message ID	Unsigned 32-bit integer
ndmp.log.type	Type	Unsigned 32-bit integer
ndmp.mover.mode	Mode	Unsigned 32-bit integer
ndmp.mover.pause	Pause	Unsigned 32-bit integer

Field	Field Name	Type
ndmp.mover.state	State	Unsigned 32-bit integer
ndmp.msg	Message	Unsigned 32-bit integer
ndmp.msg_type	Type	Unsigned 32-bit integer
ndmp.nlist	Nlist	No value
ndmp.nodes	Nodes	No value
ndmp.os.type	OS Type	String
ndmp.os.version	OS Version	String
ndmp.record.num	Record Num	Unsigned 32-bit integer
ndmp.record.size	Record Size	Unsigned 32-bit integer
ndmp.reply_sequence	Reply Sequence	Unsigned 32-bit integer
ndmp.resid_count	Resid Count	Unsigned 32-bit integer
ndmp.scsi.controller	Controller	Unsigned 32-bit integer
ndmp.scsi.device	Device	String
ndmp.scsi.id	ID	Unsigned 32-bit integer
ndmp.scsi.info	SCSI Info	No value
ndmp.scsi.lun	LUN	Unsigned 32-bit integer
ndmp.scsi.model	Model	String
ndmp.seek.position	Seek Position	
ndmp.sequence	Sequence	Unsigned 32-bit integer
ndmp.server.product	Product	String
ndmp.server.revision	Revision	String
ndmp.server.vendor	Vendor	String
ndmp.tape.cap.name	Name	String
ndmp.tape.cap.value	Value	String
ndmp.tape.capability	Tape Capabilities	No value
ndmp.tape.dev_cap	Device Capability	No value
ndmp.tape.device	Device	String
ndmp.tape.info	Tape Info	No value
ndmp.tape.model	Model	String
ndmp.tape.mtio.op	Operation	Unsigned 32-bit integer
ndmp.tape.open_mode	Mode	Unsigned 32-bit integer
ndmp.tape.status.block_no	block_no	Unsigned 32-bit integer
ndmp.tape.status.block_size	block_size	Unsigned 32-bit integer
ndmp.tape.status.file_num	file_num	Unsigned 32-bit integer

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Field	Field Name	Type
ndmp.tape.status.partition	partition	Unsigned 32-bit integer
ndmp.tape.status.soft_errors	soft_errors	Unsigned 32-bit integer
ndmp.tape.status.space_remain	space_remain	
ndmp.tape.status.total_space	total_space	
ndmp.timestamp	Time	Date/Time stamp
ndmp.version	Version	Unsigned 32-bit integer
ndmp.window.length	Window Length	
ndmp.window.offset	Window Offset	

Network File System (nfs)

Table A-166. Network File System (nfs)

Field	Field Name	Type
nfs.ace	ace	String
nfs.aceflag4	aceflag	Unsigned 32-bit integer
nfs.acemask4	acemask	Unsigned 32-bit integer
nfs.acetype4	acetype	Unsigned 32-bit integer
nfs.acl	ACL	No value
nfs.atime	atime	Date/Time stamp
nfs.atime.nsec	nano seconds	Unsigned 32-bit integer
nfs.atime.sec	seconds	Unsigned 32-bit integer
nfs.atime.usec	micro seconds	Unsigned 32-bit integer
nfs.attr	mand_attr	Unsigned 32-bit integer
nfs.bytes_per_block	bytes_per_block	Unsigned 32-bit integer
nfs.call.operation	Opcode	Unsigned 32-bit integer
nfs.callback.ident	callback_ident	Unsigned 32-bit integer
nfs.cb_location	cb_location	Unsigned 32-bit integer
nfs.cb_program	cb_program	Unsigned 32-bit integer
nfs.change_info.atomic	Atomic	Boolean
nfs.changeid4	changeid	
nfs.changeid4.after	changeid	
nfs.changeid4.before	changeid	

Field	Field Name	Type
nfs.clientid	clientid	
nfs.cookie3	cookie	
nfs.cookie4	cookie	
nfs.cookieverf4	cookieverf	
nfs.count3	count	Unsigned 32-bit integer
nfs.count3_dircount	dircount	Unsigned 32-bit integer
nfs.count3_maxcount	maxcount	Unsigned 32-bit integer
nfs.count4	count	Unsigned 32-bit integer
nfs.createmode	Create Mode	Unsigned 32-bit integer
nfs.ctime	ctime	Date/Time stamp
nfs.ctime.nsec	nano seconds	Unsigned 32-bit integer
nfs.ctime.sec	seconds	Unsigned 32-bit integer
nfs.ctime.usec	micro seconds	Unsigned 32-bit integer
nfs.data	Data	Byte array
nfs.delegate_stateid	delegate_stateid	
nfs.delegate_type	delegate_type	Unsigned 32-bit integer
nfs.dircount	dircount	Unsigned 32-bit integer
nfs.dirlist4.eof	eof	Boolean
nfs.dtime	time delta	Time duration
nfs.dtime.nsec	nano seconds	Unsigned 32-bit integer
nfs.dtime.sec	seconds	Unsigned 32-bit integer
nfs.eof	eof	Unsigned 32-bit integer
nfs.fattr.blocks	blocks	Unsigned 32-bit integer
nfs.fattr.blocksize	blocksize	Unsigned 32-bit integer
nfs.fattr.fileid	fileid	Unsigned 32-bit integer
nfs.fattr.fsid	fsid	Unsigned 32-bit integer
nfs.fattr.gid	gid	Unsigned 32-bit integer
nfs.fattr.nlink	nlink	Unsigned 32-bit integer
nfs.fattr.rdev	rdev	Unsigned 32-bit integer
nfs.fattr.size	size	Unsigned 32-bit integer
nfs.fattr.type	type	Unsigned 32-bit integer
nfs.fattr.uid	uid	Unsigned 32-bit integer
nfs.fattr3.fileid	fileid	
nfs.fattr3.fsid	fsid	
nfs.fattr3.gid	gid	Unsigned 32-bit integer
nfs.fattr3.nlink	nlink	Unsigned 32-bit integer

Field	Field Name	Type
nfs.fattr3.rdev	rdev	Unsigned 32-bit integer
nfs.fattr3.size	size	
nfs.fattr3.type	Type	Unsigned 32-bit integer
nfs.fattr3.uid	uid	Unsigned 32-bit integer
nfs.fattr3.used	used	
nfs.fattr4.aclsupport	aclsupport	Unsigned 32-bit integer
nfs.fattr4.attr_vals	attr_vals	Byte array
nfs.fattr4.fileid	fileid	
nfs.fattr4.files_avail	files_avail	
nfs.fattr4.files_free	files_free	
nfs.fattr4.files_total	files_total	
nfs.fattr4.lease_time	lease_time	Unsigned 32-bit integer
nfs.fattr4.maxfilesize	maxfilesize	
nfs.fattr4.maxlink	maxlink	Unsigned 32-bit integer
nfs.fattr4.maxname	maxname	Unsigned 32-bit integer
nfs.fattr4.maxread	maxread	
nfs.fattr4.maxwrite	maxwrite	
nfs.fattr4.numlinks	numlinks	Unsigned 32-bit integer
nfs.fattr4.quota_hard	quota_hard	
nfs.fattr4.quota_soft	quota_soft	
nfs.fattr4.quota_used	quota_used	
nfs.fattr4.size	size	
nfs.fattr4.space_avail	space_avail	
nfs.fattr4.space_free	space_free	
nfs.fattr4.space_total	space_total	
nfs.fattr4.space_used	space_used	
nfs.fattr4_archive	fattr4_archive	Boolean
nfs.fattr4_cansettime	fattr4_cansettime	Boolean
nfs.fattr4_case_insensitive	fattr4_case_insensitive	Boolean
nfs.fattr4_case_preserving	fattr4_case_preserving	Boolean
nfs.fattr4_chown_restricted	fattr4_chown_restricted	Boolean
nfs.fattr4_hidden	fattr4_hidden	Boolean
nfs.fattr4_homogeneous	fattr4_homogeneous	Boolean
nfs.fattr4_link_support	fattr4_link_support	Boolean
nfs.fattr4_mimetype	fattr4_mimetype	String

Field	Field Name	Type
nfs.fattr4_named_attr	fattr4_named_attr	Boolean
nfs.fattr4_no_trunc	fattr4_no_trunc	Boolean
nfs.fattr4_owner	fattr4_owner	String
nfs.fattr4_owner_group	fattr4_owner_group	String
nfs.fattr4_symlink_support	fattr4_symlink_support	Boolean
nfs.fattr4_system	fattr4_system	Boolean
nfs.fattr4_unique_handles	fattr4_unique_handles	Boolean
nfs.fh.auth_type	auth_type	Unsigned 8-bit integer
nfs.fh.dentry	dentry	Unsigned 32-bit integer
nfs.fh.dev	device	Unsigned 32-bit integer
nfs.fh.dirinode	directory inode	Unsigned 32-bit integer
nfs.fh.fileid_type	fileid_type	Unsigned 8-bit integer
nfs.fh.fn	file number	Unsigned 32-bit integer
nfs.fh.fn.generation	generation	Unsigned 32-bit integer
nfs.fh.fn.inode	inode	Unsigned 32-bit integer
nfs.fh.fn.len	length	Unsigned 32-bit integer
nfs.fh.fsid.inode	inode	Unsigned 32-bit integer
nfs.fh.fsid.major	major	Unsigned 32-bit integer
nfs.fh.fsid.minor	minor	Unsigned 32-bit integer
nfs.fh.fsid_type	fsid_type	Unsigned 8-bit integer
nfs.fh.fstype	file system type	Unsigned 32-bit integer
nfs.fh.hash	hash	Unsigned 32-bit integer
nfs.fh.hp.len	length	Unsigned 32-bit integer
nfs.fh.length	length	Unsigned 32-bit integer
nfs.fh.pinode	pseudo inode	Unsigned 32-bit integer
nfs.fh.version	version	Unsigned 8-bit integer
nfs.fh.xdev	exported device	Unsigned 32-bit integer
nfs.fh.xfn	exported file number	Unsigned 32-bit integer
nfs.fh.xfn.generation	generation	Unsigned 32-bit integer
nfs.fh.xfn.inode	exported inode	Unsigned 32-bit integer
nfs.fh.xfn.len	length	Unsigned 32-bit integer
nfs.fh.xfsid.major	exported major	Unsigned 32-bit integer
nfs.fh.xfsid.minor	exported minor	Unsigned 32-bit integer
nfs.filesize	filesize	
nfs.fsid4.major	fsid4.major	

Field	Field Name	Type
nfs.fsid4.minor	fsid4.minor	
nfs.fsinfo.dtpref	dtpref	Unsigned 32-bit integer
nfs.fsinfo.maxfilesize	maxfilesize	
nfs.fsinfo.propeties	Properties	Unsigned 32-bit integer
nfs.fsinfo.rtmax	rtmax	Unsigned 32-bit integer
nfs.fsinfo.rtmult	rtmult	Unsigned 32-bit integer
nfs.fsinfo.rtpref	rtpref	Unsigned 32-bit integer
nfs.fsinfo.wtmax	wtmax	Unsigned 32-bit integer
nfs.fsinfo.wtmult	wtmult	Unsigned 32-bit integer
nfs.fsinfo.wtpref	wtpref	Unsigned 32-bit integer
nfs.fsstat.invarsec	invarsec	Unsigned 32-bit integer
nfs.fsstat3_resok.abytes	Available free bytes	
nfs.fsstat3_resok.afiles	Available free file slots	
nfs.fsstat3_resok.fbytes	Free bytes	
nfs.fsstat3_resok.ffiles	Free file slots	
nfs.fsstat3_resok.tbytes	Total bytes	
nfs.fsstat3_resok.tfiles	Total file slots	
nfs.full_name	Full Name	String
nfs.gid3	gid	Unsigned 32-bit integer
nfs.length4	length	
nfs.lock.locker.new_lock_owner	new lock owner?	Boolean
nfs.lock.reclaim	reclaim?	Boolean
nfs.lock_owner4	owner	Byte array
nfs.lock_seqid	lock_seqid	Unsigned 32-bit integer
nfs.locktype4	locktype	Unsigned 32-bit integer
nfs.maxcount	maxcount	Unsigned 32-bit integer
nfs.minorversion	minorversion	Unsigned 32-bit integer
nfs.mtime	mtime	Date/Time stamp
nfs.mtime.nsec	nano seconds	Unsigned 32-bit integer
nfs.mtime.sec	seconds	Unsigned 32-bit integer
nfs.mtime.usec	micro seconds	Unsigned 32-bit integer
nfs.name	Name	String
nfs.nfs_client_id4.id	id	Byte array
nfs.nfs_ftype4	nfs_ftype4	Unsigned 32-bit integer
nfs.nfstime4.nseconds	nseconds	Unsigned 32-bit integer

Field	Field Name	Type
nfs.nfstime4.seconds	seconds	
nfs.num_blocks	num_blocks	Unsigned 32-bit integer
nfs.offset3	offset	
nfs.offset4	offset	
nfs.open.claim_type	Claim Type	Unsigned 32-bit integer
nfs.open.delegation_type	Delegation Type	Unsigned 32-bit integer
nfs.open.limit_by	Space Limit	Unsigned 32-bit integer
nfs.open.opentype	Open Type	Unsigned 32-bit integer
nfs.open4.share_access	share_access	Unsigned 32-bit integer
nfs.open4.share_deny	share_deny	Unsigned 32-bit integer
nfs.open_owner4	owner	Byte array
nfs.openattr4.createdir	attribute dir create	Boolean
nfs.pathconf.case_insensitive	case_insensitive	Boolean
nfs.pathconf.case_preserving	case_preserving	Boolean
nfs.pathconf.chown_restricted	chown_restricted	Boolean
nfs.pathconf.linkmax	linkmax	Unsigned 32-bit integer
nfs.pathconf.name_max	name_max	Unsigned 32-bit integer
nfs.pathconf.no_trunc	no_trunc	Boolean
nfs.pathname.component	Filename	String
nfs.r_addr	r_addr	Byte array
nfs.r_netid	r_netid	Byte array
nfs.read.count	Count	Unsigned 32-bit integer
nfs.read.eof	EOF	Boolean
nfs.read.offset	Offset	Unsigned 32-bit integer
nfs.read.totalcount	Total Count	Unsigned 32-bit integer
nfs.readdir.cookie	Cookie	Unsigned 32-bit integer
nfs.readdir.count	Count	Unsigned 32-bit integer
nfs.readdir.entry	Entry	No value
nfs.readdir.entry.cookie	Cookie	Unsigned 32-bit integer
nfs.readdir.entry.fileid	File ID	Unsigned 32-bit integer
nfs.readdir.entry.name	Name	String
nfs.readdir.entry3.cookie	Cookie	
nfs.readdir.entry3.fileid	File ID	
nfs.readdir.entry3.name	Name	String

Field	Field Name	Type
nfs.readdir.eof	EOF	Unsigned 32-bit integer
nfs.readdirplus.entry.cookie	Cookie	
nfs.readdirplus.entry.fileid	File ID	
nfs.readdirplus.entry.name	Name	String
nfs.readlink.data	Data	String
nfs.recall	EOF	Boolean
nfs.recall4	recall	Boolean
nfs.reclaim4	reclaim	Boolean
nfs.reply.operation	Opcode	Unsigned 32-bit integer
nfs.secinfo.flavor	flavor	Unsigned 32-bit integer
nfs.secinfo.flavor_info.rpcsec_gss_info.oid	oid	Byte array
nfs.secinfo.flavor_info.rpcsec_gss_info.qop	qop	Unsigned 32-bit integer
nfs.secinfo.rpcsec_gss_info.service	service	Unsigned 32-bit integer
nfs.seqid	seqid	Unsigned 32-bit integer
nfs.server	server	String
nfs.set_it	set_it	Unsigned 32-bit integer
nfs.set_size3.size	size	
nfs.specdata1	specdata1	Unsigned 32-bit integer
nfs.specdata2	specdata2	Unsigned 32-bit integer
nfs.stable_how4	stable_how4	Unsigned 32-bit integer
nfs.stateid4	stateid	
nfs.stateid4.other	Data	Byte array
nfs.statfs.bavail	Available Blocks	Unsigned 32-bit integer
nfs.statfs.bfree	Free Blocks	Unsigned 32-bit integer
nfs.statfs.blocks	Total Blocks	Unsigned 32-bit integer
nfs.statfs.bsize	Block Size	Unsigned 32-bit integer
nfs.statfs.tsize	Transfer Size	Unsigned 32-bit integer
nfs.status	Status	Unsigned 32-bit integer
nfs.status2	Status	Unsigned 32-bit integer
nfs.symlink.linktext	Name	String
nfs.symlink.to	To	String
nfs.tag	Tag	String

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Field	Field Name	Type
nfs.type	Type	Unsigned 32-bit integer
nfs.uid3	uid	Unsigned 32-bit integer
nfs.verifier4	verifier	
nfs.wcc_attr.size	size	
nfs.who	who	String
nfs.write.beginoffset	Begin Offset	Unsigned 32-bit integer
nfs.write.committed	Committed	Unsigned 32-bit integer
nfs.write.offset	Offset	Unsigned 32-bit integer
nfs.write.stable	Stable	Unsigned 32-bit integer
nfs.write.totalcount	Total Count	Unsigned 32-bit integer

Network Lock Manager Protocol (nlm)

Table A-167. Network Lock Manager Protocol (nlm)

Field	Field Name	Type
nlm.block	block	Boolean
nlm.cookie	cookie	Byte array
nlm.exclusive	exclusive	Boolean
nlm.holder	holder	No value
nlm.lock	lock	No value
nlm.lock.caller_name	caller_name	String
nlm.lock.l_len	l_len	
nlm.lock.l_offset	l_offset	
nlm.lock.owner	owner	Byte array
nlm.lock.svid	svid	Unsigned 32-bit integer
nlm.msg_in	Request MSG in	Unsigned 32-bit integer
nlm.reclaim	reclaim	Boolean
nlm.res_in	Reply RES in	Unsigned 32-bit integer
nlm.sequence	sequence	Signed 32-bit integer
nlm.share	share	No value
nlm.share.access	access	Unsigned 32-bit integer
nlm.share.mode	mode	Unsigned 32-bit integer
nlm.share.name	name	String
nlm.stat	stat	Unsigned 32-bit integer

Field	Field Name	Type
nlm.state	state	Unsigned 32-bit integer
nlm.test_stat	test_stat	No value
nlm.test_stat.stat	stat	Unsigned 32-bit integer
nlm.time	Time from request	Time duration

Network News Transfer Protocol (nntp)

Table A-168. Network News Transfer Protocol (nntp)

Field	Field Name	Type
nntp.request	Request	Boolean
nntp.response	Response	Boolean

Network Status Monitor CallBack Protocol (statnotify)

Table A-169. Network Status Monitor CallBack Protocol (statnotify)

Field	Field Name	Type
statnotify.name	Name	String
statnotify.priv	Priv	Byte array
statnotify.state	State	Unsigned 32-bit integer

Network Status Monitor Protocol (stat)

Table A-170. Network Status Monitor Protocol (stat)

Field	Field Name	Type
stat.mon	Monitor	No value
stat.mon_id.name	Monitor ID Name	String
stat.my_id	My ID	No value
stat.my_id.hostname	Hostname	String
stat.my_id.proc	Procedure	Unsigned 32-bit integer
stat.my_id.prog	Program	Unsigned 32-bit integer
stat.my_id.vers	Version	Unsigned 32-bit integer
stat.name	Name	String

Field	Field Name	Type
stat.priv	Priv	Byte array
stat.stat_chge	Status Change	No value
stat.stat_res	Status Result	No value
stat.stat_res.res	Result	Unsigned 32-bit integer
stat.stat_res.state	State	Unsigned 32-bit integer
stat.state	State	Unsigned 32-bit integer

Network Time Protocol (ntp)

Table A-171. Network Time Protocol (ntp)

Field	Field Name	Type
ntp.flags	Flags	Unsigned 8-bit integer
ntp.flags.li	Leap Indicator	Unsigned 8-bit integer
ntp.flags.mode	Mode	Unsigned 8-bit integer
ntp.flags.vn	Version number	Unsigned 8-bit integer
ntp.keyid	Key ID	Byte array
ntp.mac	Message Authentication Code	Byte array
ntp.org	Originate Time Stamp	Byte array
ntp.ppoll	Peer Polling Interval	Unsigned 8-bit integer
ntp.precision	Peer Clock Precision	Unsigned 8-bit integer
ntp.rec	Receive Time Stamp	Byte array
ntp.refid	Reference Clock ID	Byte array
ntp.reftime	Reference Clock Update Time	Byte array
ntp.rootdelay	Root Delay	Double-precision floating point
ntp.rootdispersion	Clock Dispersion	Double-precision floating point
ntp.stratum	Peer Clock Stratum	Unsigned 8-bit integer
ntp.xmt	Transmit Time Stamp	Byte array

Null/Loopback (null)

Table A-172. Null/Loopback (null)

Field	Field Name	Type
null.family	Family	Unsigned 32-bit integer
null.type	Type	Unsigned 16-bit integer

Open Shortest Path First (ospf)

Table A-173. Open Shortest Path First (ospf)

Field	Field Name	Type
ospf.advrouter	Advertising Router	IPv4 address
ospf.lsa	Link-State Advertisement Type	Unsigned 8-bit integer
ospf.lsa.asbr	Summary LSA (ASBR)	Boolean
ospf.lsa.asext	AS-External LSA (ASBR)	Boolean
ospf.lsa.attr	External Attributes LSA	Boolean
ospf.lsa.member	Group Membership LSA	Boolean
ospf.lsa.mpls	MPLS Traffic Engineering LSA	Boolean
ospf.lsa.network	Network LSA	Boolean
ospf.lsa.nssa	NSSA AS-External LSA	Boolean
ospf.lsa.opaque	Opaque LSA	Boolean
ospf.lsa.router	Router LSA	Boolean
ospf.lsa.summary	Summary LSA (IP Network)	Boolean
ospf.lsid_opaque_type	Link State ID Opaque Type	Unsigned 8-bit integer
ospf.lsid_te_lsa.instance	Link State ID TE-LSA Instance	Unsigned 16-bit integer
ospf.mpls.linkid	MPLS/TE Link ID	IPv4 address
ospf.mpls.local_addr	MPLS/TE Local Interface Address	IPv4 address
ospf.mpls.local_id	MPLS/TE Local Interface Index	Unsigned 32-bit integer
ospf.mpls.remote_addr	MPLS/TE Remote Interface Address	IPv4 address
ospf.mpls.remote_id	MPLS/TE Remote Interface Index	Unsigned 32-bit integer
ospf.mpls.routerid	MPLS/TE Router ID	IPv4 address
ospf.msg	Message Type	Unsigned 8-bit integer

Field	Field Name	Type
ospf.msg.dbdesc	Database Description	Boolean
ospf.msg.hello	Hello	Boolean
ospf.msg.lsack	Link State Adv Acknowledgement	Boolean
ospf.msg.lsreq	Link State Adv Request	Boolean
ospf.msg.lsupdate	Link State Adv Update	Boolean
ospf.srcrouter	Source OSPF Router	IPv4 address

OpenBSD Packet Filter log file (pflog)

Table A-174. OpenBSD Packet Filter log file (pflog)

Field	Field Name	Type
pflog.action	Action	Unsigned 16-bit integer
pflog.af	Address Family	Unsigned 32-bit integer
pflog.dir	Direction	Unsigned 16-bit integer
pflog.ifname	Interface	String
pflog.reason	Reason	Unsigned 16-bit integer
pflog.rnr	Rule Number	Signed 16-bit integer

PC NFS (pcnfsd)

Table A-175. PC NFS (pcnfsd)

Field	Field Name	Type
pcnfsd.auth.client	Authentication Client	String
pcnfsd.auth.ident.clear	Clear Ident	String
pcnfsd.auth.ident.obscure	Obscure Ident	String
pcnfsd.auth.password.clear	Clear Password	String
pcnfsd.auth.password.obscure	Obscure Password	String
pcnfsd.comment	Comment	String
pcnfsd.def_umask	def_umask	Signed 32-bit integer
pcnfsd.gid	Group ID	Unsigned 32-bit integer
pcnfsd.gids.count	Group ID Count	Unsigned 32-bit integer

Field	Field Name	Type
pcnfsd.homedir	Home Directory	String
pcnfsd.status	Reply Status	Unsigned 32-bit integer
pcnfsd.uid	User ID	Unsigned 32-bit integer
pcnfsd.username	User name	String

PPP Bandwidth Allocation Control Protocol (bacp)

Table A-176. PPP Bandwidth Allocation Control Protocol (bacp)

Field	Field Name	Type

PPP Bandwidth Allocation Protocol (bap)

Table A-177. PPP Bandwidth Allocation Protocol (bap)

Field	Field Name	Type

PPP Callback Control Protocol (cbcp)

Table A-178. PPP Callback Control Protocol (cbcp)

Field	Field Name	Type

PPP Challenge Handshake Authentication Protocol (chap)

Table A-179. PPP Challenge Handshake Authentication Protocol (chap)

Field	Field Name	Type

PPP Compressed Datagram (comp_data)

Table A-180. PPP Compressed Datagram (comp_data)

Field	Field Name	Type

PPP Compression Control Protocol (ccp)

Table A-181. PPP Compression Control Protocol (ccp)

Field	Field Name	Type

PPP IP Control Protocol (ipcp)

Table A-182. PPP IP Control Protocol (ipcp)

Field	Field Name	Type

PPP Link Control Protocol (lcp)

Table A-183. PPP Link Control Protocol (lcp)

Field	Field Name	Type

PPP Multilink Protocol (mp)

Table A-184. PPP Multilink Protocol (mp)

Field	Field Name	Type
mp.first	First fragment	Boolean
mp.last	Last fragment	Boolean
mp.seq	Sequence number	Unsigned 24-bit integer

PPP Multiplexing (pppmux)

Table A-185. PPP Multiplexing (pppmux)

Field	Field Name	Type

PPP Password Authentication Protocol (pap)

Table A-186. PPP Password Authentication Protocol (pap)

Field	Field Name	Type

PPP VJ Compression (vj)

Table A-187. PPP VJ Compression (vj)

Field	Field Name	Type
vj.ack_delta	Ack delta	Unsigned 16-bit integer
vj.change_mask	Change mask	Unsigned 8-bit integer
vj.change_mask_a	Ack number changed	Boolean
vj.change_mask_c	Connection changed	Boolean
vj.change_mask_i	IP ID change != 1	Boolean
vj.change_mask_p	Push bit set	Boolean
vj.change_mask_s	Sequence number changed	Boolean
vj.change_mask_u	Urgent pointer set	Boolean
vj.change_mask_w	Window changed	Boolean
vj.connection_number	Connection number	Unsigned 8-bit integer
vj.ip_id_delta	IP ID delta	Unsigned 16-bit integer
vj.seq_delta	Sequence delta	Unsigned 16-bit integer
vj.tcp_cksum	TCP checksum	Unsigned 16-bit integer
vj.urp	Urgent pointer	Unsigned 16-bit integer
vj.win_delta	Window delta	Signed 16-bit integer

PPP-over-Ethernet Discovery (pppoed)

Table A-188. PPP-over-Ethernet Discovery (pppoed)

Field	Field Name	Type

PPP-over-Ethernet Session (pppoes)

Table A-189. PPP-over-Ethernet Session (pppoes)

Field	Field Name	Type

PPPMux Control Protocol (pppmuxcp)

Table A-190. PPPMux Control Protocol (pppmuxcp)

Field	Field Name	Type

Point-to-Point Protocol (ppp)

Table A-191. Point-to-Point Protocol (ppp)

Field	Field Name	Type
ppp.address	Address	Unsigned 8-bit integer
ppp.control	Control	Unsigned 8-bit integer
ppp.protocol	Protocol	Unsigned 16-bit integer

Point-to-Point Tunnelling Protocol (pptp)

Table A-192. Point-to-Point Tunnelling Protocol (pptp)

Field	Field Name	Type
pptp.type	Message type	Unsigned 16-bit integer

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Portmap (portmap)

Table A-193. Portmap (portmap)

Field	Field Name	Type
portmap.answer	Answer	Boolean
portmap.args	Arguments	Byte array
portmap.port	Port	Unsigned 32-bit integer
portmap.proc	Procedure	Unsigned 32-bit integer
portmap.prog	Program	Unsigned 32-bit integer
portmap.proto	Protocol	Unsigned 32-bit integer
portmap.result	Result	Byte array
portmap.rpcb	RPCB	No value
portmap.rpcb.addr	Universal Address	String
portmap.rpcb.netid	Network Id	String
portmap.rpcb.owner	Owner of this Service	String
portmap.rpcb.prog	Program	Unsigned 32-bit integer
portmap.rpcb.version	Version	Unsigned 32-bit integer
portmap.uaddr	Universal Address	String
portmap.version	Version	Unsigned 32-bit integer

Post Office Protocol (pop)

Table A-194. Post Office Protocol (pop)

Field	Field Name	Type
pop.request	Request	Boolean
pop.response	Response	Boolean

Pragmatic General Multicast (pgm)

Table A-195. Pragmatic General Multicast (pgm)

Field	Field Name	Type
pgm.ack.bitmap	Packet Bitmap	Unsigned 32-bit integer
pgm.ack.maxsqn	Maximum Received Sequence Number	Unsigned 32-bit integer

Field	Field Name	Type
pgm.data.sqn	Data Packet Sequence Number	Unsigned 32-bit integer
pgm.data.trail	Trailing Edge Sequence Number	Unsigned 32-bit integer
pgm.genopts.len	Length	Unsigned 8-bit integer
pgm.genopts.opx	Option Extensibility Bits	Unsigned 8-bit integer
pgm.genopts.type	Type	Unsigned 8-bit integer
pgm.hdr.cksum	Checksum	Unsigned 16-bit integer
pgm.hdr.dport	Destination Port	Unsigned 16-bit integer
pgm.hdr.gsi	Global Source Identifier	Byte array
pgm.hdr.opts	Options	Unsigned 8-bit integer
pgm.hdr.opts.netsig	Network Significant Options	Boolean
pgm.hdr.opts.opt	Options	Boolean
pgm.hdr.opts.parity	Parity	Boolean
pgm.hdr.opts.varlen	Variable length Parity Packet Option	Boolean
pgm.hdr.sport	Source Port	Unsigned 16-bit integer
pgm.hdr.tsdulen	Transport Service Data Unit Length	Unsigned 16-bit integer
pgm.hdr.type	Type	Unsigned 8-bit integer
pgm.nak.grp	Multicast Group NLA	IPv4 address
pgm.nak.grpafi	Multicast Group AFI	Unsigned 16-bit integer
pgm.nak.grpres	Reserved	Unsigned 16-bit integer
pgm.nak.sqn	Requested Sequence Number	Unsigned 32-bit integer
pgm.nak.src	Source NLA	IPv4 address
pgm.nak.srcafi	Source NLA AFI	Unsigned 16-bit integer
pgm.nak.srcres	Reserved	Unsigned 16-bit integer
pgm.opts.ccdata.acker	Acker	IPv4 address
pgm.opts.ccdata.afi	Acker AFI	Unsigned 16-bit integer
pgm.opts.ccdata.lossrate	Loss Rate	Unsigned 16-bit integer
pgm.opts.ccdata.res	Reserved	Unsigned 8-bit integer
pgm.opts.ccdata.res2	Reserved	Unsigned 16-bit integer
pgm.opts.ccdata.tstamp	Time Stamp	Unsigned 16-bit integer
pgm.opts.join.min_join	Minimum Sequence Number	Unsigned 32-bit integer
pgm.opts.join.res	Reserved	Unsigned 8-bit integer

Field	Field Name	Type
pgm.opts.len	Length	Unsigned 8-bit integer
pgm.opts.nak.list	List	Byte array
pgm.opts.nak.op	Reserved	Unsigned 8-bit integer
pgm.opts.parity_prm.op	Parity Parameters	Unsigned 8-bit integer
pgm.opts.parity_prm.prm_grp	Transmission Group Size	Unsigned 32-bit integer
pgm.opts.tlen	Total Length	Unsigned 16-bit integer
pgm.opts.type	Type	Unsigned 8-bit integer
pgm.spm.lead	Leading Edge Sequence Number	Unsigned 32-bit integer
pgm.spm.path	Path NLA	IPv4 address
pgm.spm.pathafi	Path NLA AFI	Unsigned 16-bit integer
pgm.spm.res	Reserved	Unsigned 16-bit integer
pgm.spm.sqn	Sequence number	Unsigned 32-bit integer
pgm.spm.trail	Trailing Edge Sequence Number	Unsigned 32-bit integer

Prism (prism)

Table A-196. Prism (prism)

Field	Field Name	Type
prism.channel.data	Channel Time Field	Unsigned 32-bit integer
prism.frmlen.data	Frame Length Field	Unsigned 32-bit integer
prism.hosttime.data	Host Time Field	Unsigned 32-bit integer
prism.istx.data	IsTX Field	Unsigned 32-bit integer
prism.mactime.data	MAC Time Field	Unsigned 32-bit integer
prism.msgcode	Message Code	Unsigned 32-bit integer
prism.msglen	Message Length	Unsigned 32-bit integer
prism.noise.data	Noise Field	Unsigned 32-bit integer
prism.rate.data	Rate Field	Unsigned 32-bit integer
prism.rssi.data	RSSI Field	Unsigned 32-bit integer
prism.signal.data	Signal Field	Unsigned 32-bit integer
prism.sq.data	SQ Field	Unsigned 32-bit integer

Protocol Independent Multicast (pim)

Table A-197. Protocol Independent Multicast (pim)

Field	Field Name	Type
pim.cksum	Checksum	Unsigned 16-bit integer
pim.code	Code	Unsigned 8-bit integer
pim.type	Type	Unsigned 8-bit integer
pim.version	Version	Unsigned 8-bit integer

Q.2931 (q2931)

Table A-198. Q.2931 (q2931)

Field	Field Name	Type
q2931.call_ref	Call reference value	Byte array
q2931.call_ref_len	Call reference value length	Unsigned 8-bit integer
q2931.disc	Protocol discriminator	Unsigned 8-bit integer
q2931.message_action_indicator	Action indicator	Unsigned 8-bit integer
q2931.message_flag	Flag	Boolean
q2931.message_len	Message length	Unsigned 16-bit integer
q2931.message_type	Message type	Unsigned 8-bit integer
q2931.message_type_ext	Message type extension	Unsigned 8-bit integer

Q.931 (q931)

Table A-199. Q.931 (q931)

Field	Field Name	Type
q931.call_ref	Call reference value	Byte array
q931.call_ref_len	Call reference value length	Unsigned 8-bit integer
q931.disc	Protocol discriminator	Unsigned 8-bit integer
q931.message_type	Message type	Unsigned 8-bit integer

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Quake II Network Protocol (quake2)

Table A-200. Quake II Network Protocol (quake2)

Field	Field Name	Type
quake2.c2s	Client to Server	Unsigned 32-bit integer
quake2.connectionless	Connectionless	Unsigned 32-bit integer
quake2.connectionless.marker	Marker	Unsigned 32-bit integer
quake2.connectionless.text	Text	String
quake2.game	Game	Unsigned 32-bit integer
quake2.game.client.command	Client Command Type	Unsigned 8-bit integer
quake2.game.client.command.move.bitfield	Bitfield	Unsigned 8-bit integer
quake2.game.client.command.move.angles.pitch	Angles (pitch)	Unsigned 8-bit integer
quake2.game.client.command.move.buttons	Buttons.buttons	Unsigned 8-bit integer
quake2.game.client.command.checksum	Checksum	Unsigned 8-bit integer
quake2.game.client.command.move.impulse	Impulse.impulse	Unsigned 8-bit integer
quake2.game.client.command.lastframe	Last Frame	Unsigned 32-bit integer
quake2.game.client.command.lightlevel	Lightlevel.lightlevel	Unsigned 8-bit integer
quake2.game.client.command.move.movement.forward	Movement (forward)	Unsigned 8-bit integer
quake2.game.client.command.move.msec	Msec.msec	Unsigned 8-bit integer
quake2.game.qport	QPort	Unsigned 32-bit integer
quake2.game.rel1	Reliable	Boolean
quake2.game.rel2	Reliable	Boolean
quake2.game.seq1	Sequence Number	Unsigned 32-bit integer
quake2.game.seq2	Sequence Number	Unsigned 32-bit integer
quake2.game.server.command	Server Command	Unsigned 8-bit integer
quake2.s2c	Server to Client	Unsigned 32-bit integer

Quake III Arena Network Protocol (quake3)

Table A-201. Quake III Arena Network Protocol (quake3)

Field	Field Name	Type
quake3.connectionless	Connectionless	Unsigned 32-bit integer
quake3.connectionless.command	Command	String
quake3.connectionless.marker	Marker	Unsigned 32-bit integer
quake3.connectionless.text	Text	String
quake3.direction	Direction	No value
quake3.game	Game	Unsigned 32-bit integer
quake3.game.qport	QPort	Unsigned 32-bit integer
quake3.game.rel1	Reliable	Boolean
quake3.game.rel2	Reliable	Boolean
quake3.game.seq1	Sequence Number	Unsigned 32-bit integer
quake3.game.seq2	Sequence Number	Unsigned 32-bit integer
quake3.server.addr	Server Address	IPv4 address
quake3.server.port	Server Port	Unsigned 16-bit integer

Quake Network Protocol (quake)

Table A-202. Quake Network Protocol (quake)

Field	Field Name	Type
quake.control.accept.port	Port	Unsigned 32-bit integer
quake.control.command	Command	Unsigned 8-bit integer
quake.control.connect.game	Game	String
quake.control.connect.version	Version	Unsigned 8-bit integer
quake.control.player_info.address	Address	String
quake.control.player_info.colors	Colors	Unsigned 32-bit integer
quake.control.player_info.connect	Participants	Unsigned 8-bit integer
quake.control.player_info.connect	Shirt	Unsigned 8-bit integer

Field	Field Name	Type
quake.control.player_info.connect_time	Connect Time	Unsigned 32-bit integer
quake.control.player_info.frags	Frags	Unsigned 32-bit integer
quake.control.player_info.name	Name	String
quake.control.player_info.player	Player	Unsigned 8-bit integer
quake.control.reject.reason	Reason	String
quake.control.rule_info.lastrule	Last Rule	String
quake.control.rule_info.rule	Rule	String
quake.control.rule_info.value	Value	String
quake.control.server_info.address	Address	String
quake.control.server_info.game	Game	String
quake.control.server_info.map	Map	String
quake.control.server_info.max_player	Maximum Number of Players	Unsigned 8-bit integer
quake.control.server_info.num_player	Number of Players	Unsigned 8-bit integer
quake.control.server_info.server	Server	String
quake.control.server_info.version	Version	Unsigned 8-bit integer
quake.header.flags	Flags	Unsigned 16-bit integer
quake.header.length	Length	Unsigned 16-bit integer
quake.header.sequence	Sequence	Unsigned 32-bit integer

QuakeWorld Network Protocol (quakeworld)

Table A-203. QuakeWorld Network Protocol (quakeworld)

Field	Field Name	Type
quakeworld.c2s	Client to Server	Unsigned 32-bit integer

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Field	Field Name	Type
quakeworld.connectionless	Connectionless	Unsigned 32-bit integer
quakeworld.connectionless.arguments	Arguments	String
quakeworld.connectionless.command	Command	String
quakeworld.connectionless.challenge	Challenge	Signed 32-bit integer
quakeworld.connectionless.infostring	Infostring	String
quakeworld.connectionless.connect.infostring.key	Key	String
quakeworld.connectionless.connect.infostring.key_value	Key/Value	String
quakeworld.connectionless.connect.infostring.value	Value	String
quakeworld.connectionless.connect.qport	QPort	Unsigned 32-bit integer
quakeworld.connectionless.connect.version	Version	Unsigned 32-bit integer
quakeworld.connectionless.marker	Marker	Unsigned 32-bit integer
quakeworld.connectionless.rcon.command	Command	String
quakeworld.connectionless.rcon.password	Password	String
quakeworld.connectionless.text	Text	String
quakeworld.game	Game	Unsigned 32-bit integer
quakeworld.game.qport	QPort	Unsigned 32-bit integer
quakeworld.game.rel1	Reliable	Boolean
quakeworld.game.rel2	Reliable	Boolean
quakeworld.game.seq1	Sequence Number	Unsigned 32-bit integer
quakeworld.game.seq2	Sequence Number	Unsigned 32-bit integer
quakeworld.s2c	Server to Client	Unsigned 32-bit integer

Qualified Logical Link Control (qllc)

Table A-204. Qualified Logical Link Control (qllc)

Field	Field Name	Type
qllc.address	Address Field	Unsigned 8-bit integer
qllc.control	Control Field	Unsigned 8-bit integer

RFC 2250 MPEG1 (mpeg1)

Table A-205. RFC 2250 MPEG1 (mpeg1)

Field	Field Name	Type
mpeg1.stream	MPEG-1 stream	Byte array
rtp.payload_mpeg_T	T	Unsigned 16-bit integer
rtp.payload_mpeg_an	AN	Unsigned 16-bit integer
rtp.payload_mpeg_b	Beginning-of-slice	Boolean
rtp.payload_mpeg_bfc	BFC	Unsigned 16-bit integer
rtp.payload_mpeg_fbv	FBV	Unsigned 16-bit integer
rtp.payload_mpeg_ffc	FFC	Unsigned 16-bit integer
rtp.payload_mpeg_ffv	FFV	Unsigned 16-bit integer
rtp.payload_mpeg_mbz	MBZ	Unsigned 16-bit integer
rtp.payload_mpeg_n	New Picture Header	Unsigned 16-bit integer
rtp.payload_mpeg_p	Picture type	Unsigned 16-bit integer
rtp.payload_mpeg_s	Sequence Header	Boolean
rtp.payload_mpeg_tr	Temporal Reference	Unsigned 16-bit integer

RIPng (ripng)

Table A-206. RIPng (ripng)

Field	Field Name	Type
ripng.cmd	Command	Unsigned 8-bit integer
ripng.version	Version	Unsigned 8-bit integer

RPC Browser (rpc_browser)

Table A-207. RPC Browser (rpc_browser)

Field	Field Name	Type

Field	Field Name	Type
rpc_browser.rc	Return code	Unsigned 32-bit integer
rpc_browser.unknown.bytes	Unknown bytes	Byte array
rpc_browser.unknown.hyper	Unknown hyper	
rpc_browser.unknown.long	Unknown long	Unsigned 32-bit integer
rpc_browser.unknown.string	Unknown string	String

RSTAT (rstat)

Table A-208. RSTAT (rstat)

Field	Field Name	Type

RX Protocol (rx)

Table A-209. RX Protocol (rx)

Field	Field Name	Type
rx.abort	ABORT Packet	No value
rx.abort_code	Abort Code	Unsigned 32-bit integer
rx.ack	ACK Packet	No value
rx.ack_type	ACK Type	Unsigned 8-bit integer
rx.bufferspace	Bufferspace	Unsigned 16-bit integer
rx.callnumber	Call Number	Unsigned 32-bit integer
rx.challenge	CHALLENGE Packet	No value
rx.cid	CID	Unsigned 32-bit integer
rx.encrypted	Encrypted	No value
rx.epoch	Epoch	Date/Time stamp
rx.first	First Packet	Unsigned 32-bit integer
rx.flags	Flags	Unsigned 8-bit integer
rx.flags.client_init	Client Initiated	Unsigned 8-bit integer
rx.flags.free_packet	Free Packet	Unsigned 8-bit integer
rx.flags.last_packet	Last Packet	Unsigned 8-bit integer

Field	Field Name	Type
rx.flags.more_packets	More Packets	Unsigned 8-bit integer
rx.flags.request_ack	Request Ack	Unsigned 8-bit integer
rx.if_mtu	Interface MTU	Unsigned 32-bit integer
rx.inc_nonce	Inc Nonce	Unsigned 32-bit integer
rx.kvno	kvno	Unsigned 32-bit integer
rx.level	Level	Unsigned 32-bit integer
rx.max_mtu	Max MTU	Unsigned 32-bit integer
rx.max_packets	Max Packets	Unsigned 32-bit integer
rx.maxskew	Max Skew	Unsigned 16-bit integer
rx.min_level	Min Level	Unsigned 32-bit integer
rx.nonce	Nonce	Unsigned 32-bit integer
rx.num_acks	Num ACKs	Unsigned 8-bit integer
rx.prev	Prev Packet	Unsigned 32-bit integer
rx.reason	Reason	Unsigned 8-bit integer
rx.response	RESPONSE Packet	No value
rx.rwind	rwind	Unsigned 32-bit integer
rx.securityindex	Security Index	Unsigned 32-bit integer
rx.seq	Sequence Number	Unsigned 32-bit integer
rx.serial	Serial	Unsigned 32-bit integer
rx.serviceid	Service ID	Unsigned 16-bit integer
rx.spare	Spare/Checksum	Unsigned 16-bit integer
rx.ticket	ticket	Byte array
rx.ticket_len	Ticket len	Unsigned 32-bit integer
rx.type	Type	Unsigned 8-bit integer
rx.userstatus	User Status	Unsigned 32-bit integer
rx.version	Version	Unsigned 32-bit integer

Radio Access Network Application Part (ranap)

Table A-210. Radio Access Network Application Part (ranap)

Field	Field Name	Type
ranap.CN_DomainIndicator	CN-DomainIndicator	Unsigned 8-bit integer
ranap.Extension_Field_Value	Extension Field Value	Byte array

Field	Field Name	Type
ranap.IuSigConId	IuSigConId	Byte array
ranap.NAS_PDU	NAS-PDU	Byte array
ranap.PLMN_ID	PLMN-ID	Byte array
ranap.ProtocolExtensionContainer	ProtocolExtensionContainer	Unsigned 8-bit integer
ranap.ProtocolExtensionFieldNumber	Number of octets	Unsigned 16-bit integer
ranap.RAB_ID	RAB-ID	Unsigned 8-bit integer
ranap.RAB_SetupOrModifyItemFirst.PDP_Type	PDP_Type.PDP_Type	Unsigned 8-bit integer
ranap.RAB_SetupOrModify.dataVolumeReportingIndication	dataVolumeReportingIndication	Unsigned 8-bit integer
ranap.RAB_SetupOrModifyItem.GTP_PDU_SequenceNumber	dl_GTP_PDU_SequenceNumber	Unsigned 16-bit integer
ranap.RAB_SetupOrModifyItem.GTP_PDU_SequenceNumber	ul_GTP_PDU_SequenceNumber	Unsigned 16-bit integer
ranap.RAC	RAC	Byte array
ranap.SAC	SAC	Byte array
ranap.allocationOrRetentionPriority_present	allocationOrRetentionPriority	Unsigned 8-bit integer
ranap.bindingID	bindingID	Byte array
ranap.cause_choice	cause choice	Unsigned 8-bit integer
ranap.cause_value	cause value	Unsigned 8-bit integer
ranap.dataVolumeReference	dataVolumeReference	Unsigned 8-bit integer
ranap.dataVolumeReference_present	dataVolumeReference	Unsigned 8-bit integer
ranap.dataVolumeReportingIndication	dataVolumeReportingIndication	Unsigned 8-bit integer
ranap.dl-UnsuccessfullyTransmittedDataVolume	dl-UnsuccessfullyTransmittedDataVolume	Unsigned 32-bit integer
ranap.dl_GTP_PDU_SequenceNumber_present	dl_GTP_PDU_SequenceNumber	Unsigned 8-bit integer
ranap.dl_N_PDU_SequenceNumber_present	dl_N_PDU_SequenceNumber	Unsigned 8-bit integer
ranap.dl_UnsuccessfullyTransmittedDataVolume_present	dl_UnsuccessfullyTransmittedDataVolume	Unsigned 8-bit integer
ranap.dl_dataVolumes_present	dl_dataVolumes	Unsigned 8-bit integer

Field	Field Name	Type
ranap.gTP_TEI	gTP_TEI	Byte array
ranap.guaranteedBitRate_present	guaranteedBitRate	Unsigned 8-bit integer
ranap.iECriticality	iECriticality	Unsigned 8-bit integer
ranap.iEsCriticalityDiagnostics_present	iEsCriticalityDiagnostics	Unsigned 8-bit integer
ranap.ie.ProtocolExtensionField_id	ProtocolExtensionField ID	Unsigned 16-bit integer
ranap.ie.ProtocolExtensionField.criticality	Criticality of ProtocolExtensionField	Unsigned 8-bit integer
ranap.ie.criticality	Criticality of IE	Unsigned 8-bit integer
ranap.ie.iE-Extensions_present	iE-Extensions	Unsigned 8-bit integer
ranap.ie.ie_id	IE-ID	Unsigned 16-bit integer
ranap.ie.number_of_ProtocolExt	Number of Protocol Extension Fields	Unsigned 16-bit integer
ranap.ie.number_of_octets	Number of Octets in IE	Unsigned 16-bit integer
ranap.ie.protocol_extension_present	Protocol Extension	Unsigned 8-bit integer
ranap.ie_pair.first_criticality	First Criticality	Unsigned 8-bit integer
ranap.ie_pair.first_value.number_of_octets	Number of Octets in first value	Unsigned 16-bit integer
ranap.ie_pair.second_criticality	Second Criticality	Unsigned 8-bit integer
ranap.ie_pair.second_value.number_of_octets	Number of Octets in second value	Unsigned 16-bit integer
ranap.iuTransportAssociation_present	iuTransportAssociation	Unsigned 8-bit integer
ranap.msg_extension_present	Message Extension	Unsigned 8-bit integer
ranap.nAS-SynchronisationIndicator	nAS-SynchronisationIndicator	Unsigned 8-bit integer
ranap.nAS-SynchronisationIndicator_present	nAS-SynchronisationIndicator	Unsigned 8-bit integer
ranap.nas_pdu_length	length of NAS-PDU	Unsigned 16-bit integer
ranap.num_of_CriticalityDiagnostics	Number of iEs CriticalityDiagnostics-IEs	Unsigned 16-bit integer

Field	Field Name	Type
ranap.number_of_ProtocolExtensionFields	Number of ProtocolExtensionFields	Unsigned 16-bit integer
ranap.number_of_RABs	Number of RABs	Unsigned 8-bit integer
ranap.number_of_ies	Number of IEs in list	Unsigned 16-bit integer
ranap.pDP_TypeInformation.pPresent	pDP_TypeInformation	Unsigned 8-bit integer
ranap.pdu.criticality	Criticality of PDU	Unsigned 8-bit integer
ranap.pdu.num_of_octets	Number of Octets in PDU	Unsigned 16-bit integer
ranap.pdu.number_of_ies	Number of IEs in PDU	Unsigned 16-bit integer
ranap.procedureCode_present	procedureCode	Unsigned 8-bit integer
ranap.procedureCriticality	procedureCriticality	Unsigned 8-bit integer
ranap.procedureCriticality_present	procedureCriticality	Unsigned 8-bit integer
ranap.procedure_code	Procedure Code	Unsigned 8-bit integer
ranap.rAB_Parameters_present	rAB-Parameters	Unsigned 8-bit integer
ranap.rAB_SubflowCombinationBitRate_present	SubflowBitRate_present	Unsigned 8-bit integer
ranap.rab_Parameters.allocationOrRetentionPriority.preEmptionCapability	preEmptionCapability	Unsigned 8-bit integer
ranap.rab_Parameters.allocationOrRetentionPriority.preEmptionVulnerability	preEmptionVulnerability	Unsigned 8-bit integer
ranap.rab_Parameters.allocationOrRetentionPriority.priorityLevel	priorityLevel	Unsigned 8-bit integer
ranap.rab_Parameters.allocationOrRetentionPriority.queuingAllowed	queuingAllowed	Unsigned 8-bit integer
ranap.rab_Parameters.deliveryOrder	deliveryOrder	Unsigned 8-bit integer
ranap.rab_Parameters.guaranteedBitrate	guaranteedBitrate	Unsigned 32-bit integer
ranap.rab_Parameters.maxBitrate	maxBitrate	Unsigned 32-bit integer
ranap.rab_Parameters.maxSDU_Size	maxSDU_Size	Unsigned 16-bit integer
ranap.rab_Parameters.rAB_AsymmetryIndicator	rAB_AsymmetryIndicator	Unsigned 8-bit integer
ranap.rab_Parameters.rAB_SubflowCombinationBitRate	rAB_SubflowCombinationBitRate	Unsigned 32-bit integer
ranap.rab_Parameters.ranap_deliveryOfErroneousSDU	deliveryOfErroneousSDU	Unsigned 8-bit integer

Field	Field Name	Type
ranap.rab_Parameters.relocationRequirement	relocationRequirement	Unsigned 8-bit integer
ranap.rab_Parameters.residualBitErrorRatio_exponent	residualBitErrorRatio exponent	Unsigned 8-bit integer
ranap.rab_Parameters.residualBitErrorRatio_mantissa	residualBitErrorRatio mantissa	Unsigned 8-bit integer
ranap.rab_Parameters.sDU_Error_Ratio_exponent	sDU_ErrorRatio exponent	Unsigned 8-bit integer
ranap.rab_Parameters.sDU_Error_Ratio_mantissa	sDU_ErrorRatio mantissa	Unsigned 8-bit integer
ranap.rab_Parameters.sourceStatisticsDescriptor	sourceStatisticsDescriptor	Unsigned 8-bit integer
ranap.rab_Parameters.subflowSDU_Size	subflowSDU_Size	Unsigned 8-bit integer
ranap.rab_Parameters.trafficClass	Traffic Class	Unsigned 8-bit integer
ranap.rab_Parameters.trafficHandlingPriority	trafficHandlingPriority	Unsigned 8-bit integer
ranap.rab_Parameters.transferDelay	transferDelay	Unsigned 16-bit integer
ranap.ranap_pdu_index	RANAP-PDU Index	Unsigned 8-bit integer
ranap.relocationRequirement_present	relocationRequirement	Unsigned 8-bit integer
ranap.repetitionNumber	repetitionNumber	Unsigned 16-bit integer
ranap.repetitionNumber_present	repetitionNumber	Unsigned 8-bit integer
ranap.sDU_ErrorRatio_present	sDU_ErrorRatio	Unsigned 8-bit integer
ranap.sDU_FormatInformationParameters_present	sDU_FormatInformationParameters	Unsigned 8-bit integer
ranap.service_Handover	service-Handover	Unsigned 8-bit integer
ranap.service_Handover_present	service-Handover	Unsigned 8-bit integer
ranap.sourceStatisticsDescriptor_present	sourceStatisticsDescriptor	Unsigned 8-bit integer
ranap.subflowSDU_Size_present	subflowSDU_Size	Unsigned 8-bit integer
ranap.trafficHandlingPriority_present	trafficHandlingPriority	Unsigned 8-bit integer
ranap.transferDelay_present	transferDelay	Unsigned 8-bit integer

Field	Field Name	Type
ranap.transportLayerAddress	transportLayerAddress	Byte array
ranap.transportLayerAddress_bit_length	bit length of transportLayerAddress	Unsigned 8-bit integer
ranap.transportLayerAddress_present	transportLayerAddress	Unsigned 8-bit integer
ranap.transportLayerInformation_present	transportLayerInformation	Unsigned 8-bit integer
ranap.triggeringMessage	triggeringMessage	Unsigned 8-bit integer
ranap.triggeringMessage_present	triggeringMessage	Unsigned 8-bit integer
ranap.uP_ModeVersions	uP_ModeVersions	Byte array
ranap.ul_GTP_PDU_SequenceNumber_present	ul_GTP_PDU_SequenceNumber	Unsigned 8-bit integer
ranap.ul_N_PDU_SequenceNumber_present	ul_N_PDU_SequenceNumber	Unsigned 8-bit integer
ranap.userPlaneInformation_present	userPlaneInformation	Unsigned 8-bit integer
ranap.userPlaneMode	userPlaneMode	Unsigned 8-bit integer

Radius Protocol (radius)

Table A-211. Radius Protocol (radius)

Field	Field Name	Type
radius.code	Code	Unsigned 8-bit integer
radius.id	Identifier	Unsigned 8-bit integer
radius.length	Length	Unsigned 16-bit integer

Raw packet data (raw)

Table A-212. Raw packet data (raw)

Field	Field Name	Type

Real Time Streaming Protocol (rtsp)

Table A-213. Real Time Streaming Protocol (rtsp)

Field	Field Name	Type
rtsp.method	Method	String
rtsp.status	Status	Unsigned 32-bit integer
rtsp.url	URL	String

Real-Time Transport Protocol (rtp)

Table A-214. Real-Time Transport Protocol (rtp)

Field	Field Name	Type
rtp.cc	Contributing source identifiers count	Unsigned 8-bit integer
rtp.csrc.item	CSRC item	Unsigned 32-bit integer
rtp.ext	Extension	Boolean
rtp.ext.len	Extension length	Unsigned 16-bit integer
rtp.ext.profile	Defined by profile	Unsigned 16-bit integer
rtp.hdr_ext	Header extension	Unsigned 32-bit integer
rtp.marker	Marker	Boolean
rtp.p_type	Payload type	Unsigned 8-bit integer
rtp.padding	Padding	Boolean
rtp.padding.count	Padding count	Unsigned 8-bit integer
rtp.padding.data	Padding data	Byte array
rtp.payload	Payload	Byte array
rtp.seq	Sequence number	Unsigned 16-bit integer
rtp.ssrc	Synchronization Source identifier	Unsigned 32-bit integer
rtp.timestamp	Timestamp	Unsigned 32-bit integer
rtp.version	Version	Unsigned 8-bit integer

Real-time Transport Control Protocol (rtcp)

Table A-215. Real-time Transport Control Protocol (rtcp)

Field	Field Name	Type

Field	Field Name	Type
rtcp.app.data	Application specific data	Byte array
rtcp.app.name	Name (ASCII)	String
rtcp.app.subtype	Subtype	Unsigned 8-bit integer
rtcp.length	Length	Unsigned 16-bit integer
rtcp.nack.blp	Bitmask of following lost packets	Unsigned 16-bit integer
rtcp.nack.fsn	First sequence number	Unsigned 16-bit integer
rtcp.padding	Padding	Boolean
rtcp.padding.count	Padding count	Unsigned 8-bit integer
rtcp.padding.data	Padding data	Byte array
rtcp.pt	Packet type	Unsigned 8-bit integer
rtcp.rc	Reception report count	Unsigned 8-bit integer
rtcp.sc	Source count	Unsigned 8-bit integer
rtcp.sdes.length	Length	Unsigned 32-bit integer
rtcp.sdes.prefix.length	Prefix length	Unsigned 8-bit integer
rtcp.sdes.prefix.string	Prefix string	String
rtcp.sdes.ssrc_csrc	SSRC / CSRC identifier	Unsigned 32-bit integer
rtcp.sdes.text	Text	String
rtcp.sdes.type	Type	Unsigned 8-bit integer
rtcp.sender.octetcount	Sender's octet count	Unsigned 32-bit integer
rtcp.sender.packetcount	Sender's packet count	Unsigned 32-bit integer
rtcp.senderssrc	Sender SSRC	Unsigned 32-bit integer
rtcp.ssrc.cum_nr	Cumulative number of packets lost	Unsigned 32-bit integer
rtcp.ssrc.dlsr	Delay since last SR timestamp	Unsigned 32-bit integer
rtcp.ssrc.ext_high	Extended highest sequence number received	Unsigned 32-bit integer
rtcp.ssrc.fraction	Fraction lost	Unsigned 8-bit integer
rtcp.ssrc.high_cycles	Sequence number cycles count	Unsigned 16-bit integer
rtcp.ssrc.high_seq	Highest sequence number received	Unsigned 16-bit integer
rtcp.ssrc.identifier	Identifier	Unsigned 32-bit integer
rtcp.ssrc.jitter	Interarrival jitter	Unsigned 32-bit integer
rtcp.ssrc.lsr	Last SR timestamp	Unsigned 32-bit integer
rtcp.timestamp.ntp	NTP timestamp	String

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Field	Field Name	Type
rtcp.timestamp.rtp	RTP timestamp	Unsigned 32-bit integer
rtcp.version	Version	Unsigned 8-bit integer

Remote Procedure Call (rpc)

Table A-216. Remote Procedure Call (rpc)

Field	Field Name	Type
rpc.array.len	num	Unsigned 32-bit integer
rpc.auth.flavor	Flavor	Unsigned 32-bit integer
rpc.auth.gid	GID	Unsigned 32-bit integer
rpc.auth.length	Length	Unsigned 32-bit integer
rpc.auth.machinename	Machine Name	String
rpc.auth.stamp	Stamp	Unsigned 32-bit integer
rpc.auth.uid	UID	Unsigned 32-bit integer
rpc.authdes.convkey	Conversation Key (encrypted)	Unsigned 32-bit integer
rpc.authdes.namekind	Namekind	Unsigned 32-bit integer
rpc.authdes.netname	Netname	String
rpc.authdes.nickname	Nickname	Unsigned 32-bit integer
rpc.authdes.timestamp	Timestamp (encrypted)	Unsigned 32-bit integer
rpc.authdes.timeverf	Timestamp verifier (encrypted)	Unsigned 32-bit integer
rpc.authdes.window	Window (encrypted)	Unsigned 32-bit integer
rpc.authdes.windowverf	Window verifier (encrypted)	Unsigned 32-bit integer
rpc.authgss.checksum	GSS Checksum	Byte array
rpc.authgss.context	GSS Context	Byte array
rpc.authgss.data	GSS Data	Byte array
rpc.authgss.data.length	Length	Unsigned 32-bit integer
rpc.authgss.major	GSS Major Status	Unsigned 32-bit integer
rpc.authgss.minor	GSS Minor Status	Unsigned 32-bit integer
rpc.authgss.procedure	GSS Procedure	Unsigned 32-bit integer
rpc.authgss.seqnum	GSS Sequence Number	Unsigned 32-bit integer
rpc.authgss.service	GSS Service	Unsigned 32-bit integer
rpc.authgss.token	GSS Token	Byte array

Field	Field Name	Type
rpc.authgss.version	GSS Version	Unsigned 32-bit integer
rpc.authgss.window	GSS Sequence Window	Unsigned 32-bit integer
rpc.call.dup	Duplicate Call	Unsigned 32-bit integer
rpc.dup	Duplicate Transaction	Unsigned 32-bit integer
rpc.fraglen	Fragment Length	Unsigned 32-bit integer
rpc.fragment	RPC Fragment	No value
rpc.fragment.error	Defragmentation error	No value
rpc.fragment.multipletails	Multiple tail fragments found	Boolean
rpc.fragment.overlap	Fragment overlap	Boolean
rpc.fragment.overlap.conflict	Conflicting data in fragment overlap	Boolean
rpc.fragment.toolongfragment	Fragment too long	Boolean
rpc.fragments	RPC Fragments	No value
rpc.lastfrag	Last Fragment	Boolean
rpc.msgtyp	Message Type	Unsigned 32-bit integer
rpc.procedure	Procedure	Unsigned 32-bit integer
rpc.program	Program	Unsigned 32-bit integer
rpc.programversion	Program Version	Unsigned 32-bit integer
rpc.programversion.max	Program Version (Maximum)	Unsigned 32-bit integer
rpc.programversion.min	Program Version (Minimum)	Unsigned 32-bit integer
rpc.reply.dup	Duplicate Reply	Unsigned 32-bit integer
rpc.replystat	Reply State	Unsigned 32-bit integer
rpc.state_accept	Accept State	Unsigned 32-bit integer
rpc.state_auth	Auth State	Unsigned 32-bit integer
rpc.state_reject	Reject State	Unsigned 32-bit integer
rpc.time	Time from request	Time duration
rpc.value_follows	Value Follows	Boolean
rpc.version	RPC Version	Unsigned 32-bit integer
rpc.version.max	RPC Version (Maximum)	Unsigned 32-bit integer
rpc.version.min	RPC Version (Minimum)	Unsigned 32-bit integer
rpc.xid	XID	Unsigned 32-bit integer

Remote Quota (rquota)

Table A-217. Remote Quota (rquota)

Field	Field Name	Type
rquota.active	active	Boolean
rquota.bhardlimit	bhardlimit	Unsigned 32-bit integer
rquota.bsize	bsize	Unsigned 32-bit integer
rquota.bsoftlimit	bsoftlimit	Unsigned 32-bit integer
rquota.btimeleft	btimeleft	Unsigned 32-bit integer
rquota.curblocks	curblocks	Unsigned 32-bit integer
rquota.curfiles	curfiles	Unsigned 32-bit integer
rquota.fhardlimit	fhardlimit	Unsigned 32-bit integer
rquota.fsoftlimit	fsoftlimit	Unsigned 32-bit integer
rquota.ftimeleft	ftimeleft	Unsigned 32-bit integer
rquota.pathp	pathp	String
rquota.rquota	rquota	No value
rquota.status	status	Unsigned 32-bit integer
rquota.uid	uid	Unsigned 32-bit integer

Remote Shell (rsh)

Table A-218. Remote Shell (rsh)

Field	Field Name	Type
rsh.request	Request	Boolean
rsh.response	Response	Boolean

Remote Wall protocol (rwall)

Table A-219. Remote Wall protocol (rwall)

Field	Field Name	Type
rwall.message	Message	String

Resource ReserVation Protocol (RSVP) (rsvp)

Table A-220. Resource ReserVation Protocol (RSVP) (rsvp)

Field	Field Name	Type
rsvp.acceptable_label_set	ACCEPTABLE LABEL SET	No value
rsvp.ack	Ack Message	Boolean
rsvp.admin_status	ADMIN STATUS	No value
rsvp.adspec	ADSPEC	No value
rsvp.bundle	Bundle Message	Boolean
rsvp.confirm	CONFIRM	No value
rsvp.dclass	DCLASS	No value
rsvp.error	ERROR	No value
rsvp.explicit_route	EXPLICIT ROUTE	No value
rsvp.filter	FILTERSPEC	No value
rsvp.flowspec	FLOWSPEC	No value
rsvp.generalized_uni	GENERALIZED UNI	No value
rsvp.hello	HELLO Message	Boolean
rsvp.hello_obj	HELLO Request/Ack	No value
rsvp.hop	HOP	No value
rsvp.integrity	INTEGRITY	No value
rsvp.label	LABEL	No value
rsvp.label_request	LABEL REQUEST	No value
rsvp.label_set	RESTRICTED LABEL SET	No value
rsvp.lsp_tunnel_if_id	LSP INTERFACE-ID	No value
rsvp.msg	Message Type	Unsigned 8-bit integer
rsvp.msgid	MESSAGE-ID	No value
rsvp.msgid_list	MESSAGE-ID LIST	No value
rsvp.notify_request	NOTIFY REQUEST	No value
rsvp.obj_unknown	Unknown object	No value
rsvp.object	Object class	Unsigned 8-bit integer
rsvp.path	Path Message	Boolean
rsvp.perr	Path Error Message	Boolean
rsvp.policy	POLICY	No value
rsvp.protection	PROTECTION	No value
rsvp.ptear	Path Tear Message	Boolean
rsvp.record_route	RECORD ROUTE	No value

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Field	Field Name	Type
rsvp.recovery_label	RECOVERY LABEL	No value
rsvp.rerr	Resv Error Message	Boolean
rsvp.restart	RESTART CAPABILITY	No value
rsvp.resv	Resv Message	Boolean
rsvp.resvconf	Resv Confirm Message	Boolean
rsvp.rtear	Resv Tear Message	Boolean
rsvp.rtearconf	Resv Tear Confirm Message	Boolean
rsvp.scope	SCOPE	No value
rsvp.sender	SENDER TEMPLATE	No value
rsvp.sender.ip	Sender IPv4 address	IPv4 address
rsvp.sender.lsp_id	Sender LSP ID	Unsigned 16-bit integer
rsvp.sender.port	Sender port number	Unsigned 16-bit integer
rsvp.session	SESSION	No value
rsvp.session.ext_tunnel_id	Extended tunnel ID	Unsigned 32-bit integer
rsvp.session.ip	Destination address	IPv4 address
rsvp.session.port	Port number	Unsigned 16-bit integer
rsvp.session.proto	Protocol	Unsigned 8-bit integer
rsvp.session.tunnel_id	Tunnel ID	Unsigned 16-bit integer
rsvp.session_attribute	SESSION ATTRIBUTE	No value
rsvp.srefresh	Srefresh Message	Boolean
rsvp.style	STYLE	No value
rsvp.suggested_label	SUGGESTED LABEL	No value
rsvp.time	TIME VALUES	No value
rsvp.tspec	SENDER TSPEC	No value
rsvp.upstream_label	UPSTREAM LABEL	No value

Rlogin Protocol (rlogin)

Table A-221. Rlogin Protocol (rlogin)

Field	Field Name	Type
rlogin.user_info	User Info	No value
rlogin.window_size	Window Info	No value
rlogin.window_size.cols	Columns	Unsigned 16-bit integer
rlogin.window_size.rows	Rows	Unsigned 16-bit integer

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Field	Field Name	Type
rlogin.window_size.x_pixels	X Pixels	Unsigned 16-bit integer
rlogin.window_size.y_pixels	Y Pixels	Unsigned 16-bit integer

Routing Information Protocol (rip)

Table A-222. Routing Information Protocol (rip)

Field	Field Name	Type
rip.auth.passwd	Password	String
rip.auth.type	Authentication type	Unsigned 16-bit integer
rip.command	Command	Unsigned 8-bit integer
rip.family	Address Family	Unsigned 16-bit integer
rip.ip	IP Address	IPv4 address
rip.metric	Metric	Unsigned 16-bit integer
rip.netmask	Netmask	IPv4 address
rip.next_hop	Next Hop	IPv4 address
rip.route_tag	Route Tag	Unsigned 16-bit integer
rip.routing_domain	Routing Domain	Unsigned 16-bit integer
rip.version	Version	Unsigned 8-bit integer

Routing Table Maintenance Protocol (rtmp)

Table A-223. Routing Table Maintenance Protocol (rtmp)

Field	Field Name	Type
nbp.nodeid	Node	Unsigned 8-bit integer
nbp.nodeid.length	Node Length	Unsigned 8-bit integer
rtmp.function	Function	Unsigned 8-bit integer
rtmp.net	Net	Unsigned 16-bit integer
rtmp.tuple.dist	Distance	Unsigned 16-bit integer
rtmp.tuple.net	Net	Unsigned 16-bit integer
rtmp.tuple.range_end	Range End	Unsigned 16-bit integer
rtmp.tuple.range_start	Range Start	Unsigned 16-bit integer

SADMIND (sadmind)

Table A-224. SADMIND (sadmind)

Field	Field Name	Type

SCSI (scsi)

Table A-225. SCSI (scsi)

Field	Field Name	Type
scsi.cdb.alloclen	Allocation Length	Unsigned 8-bit integer
scsi.cdb.alloclen16	Allocation Length	Unsigned 16-bit integer
scsi.cdb.alloclen32	Allocation Length	Unsigned 32-bit integer
scsi.cdb.control	Control	Unsigned 8-bit integer
scsi.cdb.defectfmt	Defect List Format	Unsigned 8-bit integer
scsi.cdb.mode.flags	Mode Sense/Select Flags	Unsigned 8-bit integer
scsi.cdb.paramlen	Parameter Length	Unsigned 8-bit integer
scsi.cdb.paramlen16	Parameter Length	Unsigned 16-bit integer
scsi.formatunit.flags	Flags	Unsigned 8-bit integer
scsi.formatunit.interleave	Interleave	Unsigned 16-bit integer
scsi.formatunit.vendor	Vendor Unique	Unsigned 8-bit integer
scsi.inquiry.cmdt.pagecode	CMDT Page Code	Unsigned 8-bit integer
scsi.inquiry.devtype	Device Type	Unsigned 8-bit integer
scsi.inquiry.evpd.pagecode	EVPD Page Code	Unsigned 8-bit integer
scsi.inquiry.flags	Flags	Unsigned 8-bit integer
scsi.inquiry.normaca	NormACA	Unsigned 8-bit integer
scsi.inquiry.version	Version	Unsigned 8-bit integer
scsi.log.pc	Page Control	Unsigned 8-bit integer
scsi.logsel.flags	Flags	Unsigned 8-bit integer
scsi.logsns.flags	Flags	Unsigned 16-bit integer
scsi.logsns.pagecode	Page Code	Unsigned 8-bit integer
scsi.mode.flags	Flags	Unsigned 8-bit integer
scsi.mode.mrie	MRIE	Unsigned 8-bit integer
scsi.mode.pagecode	Page Code	Unsigned 8-bit integer

Field	Field Name	Type
scsi.mode.pc	Page Control	Unsigned 8-bit integer
scsi.mode.qerr	Queue Error Management	Boolean
scsi.mode.qmod	Queue Algorithm Modifier	Unsigned 8-bit integer
scsi.mode.tac	Task Aborted Status	Boolean
scsi.mode.tst	Task Set Type	Unsigned 8-bit integer
scsi.persresv.scope	Reservation Scope	Unsigned 8-bit integer
scsi.persresv.type	Reservation Type	Unsigned 8-bit integer
scsi.persresvin.svcaction	Service Action	Unsigned 8-bit integer
scsi.persresvout.svcaction	Service Action	Unsigned 8-bit integer
scsi.proto	Protocol	Unsigned 8-bit integer
scsi.rdwr10.lba	Logical Block Address (LBA)	Unsigned 32-bit integer
scsi.rdwr10.xferlen	Transfer Length	Unsigned 16-bit integer
scsi.rdwr12.xferlen	Transfer Length	Unsigned 32-bit integer
scsi.rdwr16.lba	Logical Block Address (LBA)	Byte array
scsi.rdwr6.lba	Logical Block Address (LBA)	Unsigned 24-bit integer
scsi.rdwr6.xferlen	Transfer Length	Unsigned 8-bit integer
scsi.read.flags	Flags	Unsigned 8-bit integer
scsi.readcapacity.flags	Flags	Unsigned 8-bit integer
scsi.readcapacity.lba	Logical Block Address	Unsigned 32-bit integer
scsi.readcapacity.pmi	PMI	Unsigned 8-bit integer
scsi.readdefdata.flags	Flags	Unsigned 8-bit integer
scsi.reassignblks.flags	Flags	Unsigned 8-bit integer
scsi.release.flags	Release Flags	Unsigned 8-bit integer
scsi.release.thirdpartyid	Third-Party ID	Byte array
scsi.reportluns.lun	LUN	Unsigned 8-bit integer
scsi.reportluns.mlun	Multi-level LUN	Byte array
scsi.sbc.opcode	SBC-2 Opcode	Unsigned 8-bit integer
scsi.sns.addlen	Additional Sense Length	Unsigned 8-bit integer
scsi.sns.asc	Additional Sense Code	Unsigned 8-bit integer
scsi.sns.ascascq	Additional Sense Code+Qualifier	Unsigned 16-bit integer
scsi.sns.ascq	Additional Sense Code Qualifier	Unsigned 8-bit integer

Field	Field Name	Type
scsi.sns.errtype	SNS Error Type	Unsigned 8-bit integer
scsi.sns.fru	Field Replaceable Unit Code	Unsigned 8-bit integer
scsi.sns.info	Sense Info	Unsigned 32-bit integer
scsi.sns.key	Sense Key	Unsigned 8-bit integer
scsi.sns.sksv	SKSV	Boolean
scsi.spc.opcode	SPC-2 Opcode	Unsigned 8-bit integer
scsi.spc2.addcdblen	Additional CDB Length	Unsigned 8-bit integer
scsi.spc2.resv.key	Reservation Key	Byte array
scsi.spc2.resv.scopeaddr	Scope Address	Byte array
scsi.spc2.svcaction	Service Action	Unsigned 16-bit integer
scsi.ssc.opcode	SSC-2 Opcode	Unsigned 8-bit integer
ssci.mode.rac	Report a Check	Boolean

SMB (Server Message Block Protocol) (smb)

Table A-226. SMB (Server Message Block Protocol) (smb)

Field	Field Name	Type
smb.access.append	Append	Boolean
smb.access.caching	Caching	Boolean
smb.access.delete	Delete	Boolean
smb.access.delete_child	Delete Child	Boolean
smb.access.execute	Execute	Boolean
smb.access.generic_all	Generic All	Boolean
smb.access.generic_execute	Generic Execute	Boolean
smb.access.generic_read	Generic Read	Boolean
smb.access.generic_write	Generic Write	Boolean
smb.access.locality	Locality	Unsigned 16-bit integer
smb.access.maximum_allowed	Maximum Allowed	Boolean
smb.access.mode	Access Mode	Unsigned 16-bit integer
smb.access.read	Read	Boolean
smb.access.read_attributes	Read Attributes	Boolean
smb.access.read_control	Read Control	Boolean

Field	Field Name	Type
smb.access.read_ea	Read EA	Boolean
smb.access.sharing	Sharing Mode	Unsigned 16-bit integer
smb.access.smb.date	Last Access Date	Unsigned 16-bit integer
smb.access.smb.time	Last Access Time	Unsigned 16-bit integer
smb.access.synchronize	Synchronize	Boolean
smb.access.system_security	System Security	Boolean
smb.access.time	Last Access	Date/Time stamp
smb.access.write	Write	Boolean
smb.access.write_attributes	Write Attributes	Boolean
smb.access.write_dac	Write DAC	Boolean
smb.access.write_ea	Write EA	Boolean
smb.access.write_owner	Write Owner	Boolean
smb.access.writethrough	Writethrough	Boolean
smb.account	Account	String
smb.ace.flags.container_inherit	Container Inherit	Boolean
smb.ace.flags.failed_access	Audit Failed Accesses	Boolean
smb.ace.flags.inherit_only	Inherit Only	Boolean
smb.ace.flags.inherited_ace	Inherited ACE	Boolean
smb.ace.flags.non_propagate_inherit	Non-Propagate Inherit	Boolean
smb.ace.flags.object_inherit	Object Inherit	Boolean
smb.ace.flags.successful_access	Audit Successful Accesses	Boolean
smb.ace.size	Size	Unsigned 16-bit integer
smb.ace.type	Type	Unsigned 8-bit integer
smb.acl.num_aces	Num ACEs	Unsigned 32-bit integer
smb.acl.revision	Revision	Unsigned 16-bit integer
smb.acl.size	Size	Unsigned 16-bit integer
smb.actual_free_alloc_units	Actual Free Units	
smb.alignment	Alignment	Unsigned 32-bit integer
smb.alloc_size	Allocation Size	Unsigned 32-bit integer
smb.andxoffset	AndXOffset	Unsigned 16-bit integer

Field	Field Name	Type
smb.ansi_password	ANSI Password	Byte array
smb.ansi_pwlen	ANSI Password Length	Unsigned 16-bit integer
smb.avail.units	Available Units	Unsigned 32-bit integer
smb.bcc	Byte Count (BCC)	Unsigned 16-bit integer
smb.blocksize	Block Size	Unsigned 16-bit integer
smb.bpu	Blocks Per Unit	Unsigned 16-bit integer
smb.buffer_format	Buffer Format	Unsigned 8-bit integer
smb.caller_free_alloc_units	Caller Free Units	
smb.cancel_to	Cancel to	Unsigned 32-bit integer
smb.change.time	Change	Date/Time stamp
smb.change_count	Change Count	Unsigned 16-bit integer
smb.cmd	SMB Command	Unsigned 8-bit integer
smb.compressed.chunk_shift	Chunk Shift	Unsigned 8-bit integer
smb.compressed.cluster_shift	Cluster Shift	Unsigned 8-bit integer
smb.compressed.file_size	Compressed Size	
smb.compressed.format	Compression Format	Unsigned 16-bit integer
smb.compressed.unit_shift	Unit Shift	Unsigned 8-bit integer
smb.connect.flags.dtid	Disconnect TID	Boolean
smb.connect.support.dfs	In Dfs	Boolean
smb.connect.support.search	Search Bits	Boolean
smb.continuation_to	Continuation to	Unsigned 32-bit integer
smb.copy.flags.dest_mode	Destination mode	Boolean
smb.copy.flags.dir	Must be directory	Boolean
smb.copy.flags.ea_action	EA action if EAs not supported on dest	Boolean
smb.copy.flags.file	Must be file	Boolean
smb.copy.flags.source_mode	Source mode	Boolean
smb.copy.flags.tree_copy	Tree copy	Boolean
smb.copy.flags.verify	Verify writes	Boolean
smb.count	Count	Unsigned 32-bit integer
smb.create.action	Create action	Unsigned 32-bit integer
smb.create.disposition	Disposition	Unsigned 32-bit integer

Field	Field Name	Type
smb.create.file_id	Server unique file ID	Unsigned 32-bit integer
smb.create.smb.date	Create Date	Unsigned 16-bit integer
smb.create.smb.time	Create Time	Unsigned 16-bit integer
smb.create.time	Created	Date/Time stamp
smb.data_disp	Data Displacement	Unsigned 16-bit integer
smb.data_len	Data Length	Unsigned 16-bit integer
smb.data_offset	Data Offset	Unsigned 16-bit integer
smb.data_size	Data Size	Unsigned 32-bit integer
smb.dc	Data Count	Unsigned 16-bit integer
smb.dcm	Data Compaction Mode	Unsigned 16-bit integer
smb.delete_pending	Delete Pending	Unsigned 16-bit integer
smb.destination_name	Destination Name	String
smb.device.floppy	Floppy	Boolean
smb.device.mounted	Mounted	Boolean
smb.device.read_only	Read Only	Boolean
smb.device.remote	Remote	Boolean
smb.device.removable	Removable	Boolean
smb.device.type	Device Type	Unsigned 32-bit integer
smb.device.virtual	Virtual	Boolean
smb.device.write_once	Write Once	Boolean
smb.dfs.flags.fielding	Fielding	Boolean
smb.dfs.flags.server_hold_storage	Hold Storage	Boolean
smb.dfs.num_referrals	Num Referrals	Unsigned 16-bit integer
smb.dfs.path_consumed	Path Consumed	Unsigned 16-bit integer
smb.dfs.referral.alt_path	Alt Path	String
smb.dfs.referral.alt_path_offset	Alt Path Offset	Unsigned 16-bit integer
smb.dfs.referral.flags.strip	Strip	Boolean
smb.dfs.referral.node	Node	String
smb.dfs.referral.node_offset	Node Offset	Unsigned 16-bit integer
smb.dfs.referral.path	Path	String
smb.dfs.referral.path_offset	Path Offset	Unsigned 16-bit integer
smb.dfs.referral.proximity	Proximity	Unsigned 16-bit integer

Field	Field Name	Type
smb.dfs.referral.server.type	Server Type	Unsigned 16-bit integer
smb.dfs.referral.size	Size	Unsigned 16-bit integer
smb.dfs.referral.ttl	TTL	Unsigned 16-bit integer
smb.dfs.referral.version	Version	Unsigned 16-bit integer
smb.dialect.index	Selected Index	Unsigned 16-bit integer
smb.dialect.name	Name	String
smb.dir_name	Directory	String
smb.ea.error_offset	EA Error offset	Unsigned 32-bit integer
smb.ea.length	EA Length	Unsigned 32-bit integer
smb.ea_size	EA Size	Unsigned 32-bit integer
smb.echo.count	Echo Count	Unsigned 16-bit integer
smb.echo.data	Echo Data	Byte array
smb.echo.seq_num	Echo Seq Num	Unsigned 16-bit integer
smb.encryption_key	Encryption Key	Byte array
smb.encryption_key_length	Key Length	Unsigned 16-bit integer
smb.end_of_file	End Of File	
smb.end_of_search	End Of Search	Unsigned 16-bit integer
smb.error_class	Error Class	Unsigned 8-bit integer
smb.error_code	Error Code	Unsigned 16-bit integer
smb.ext_attr	Extended Attributes	Byte array
smb.ff2_loi	Level of Interest	Unsigned 16-bit integer
smb.fid	FID	Unsigned 16-bit integer
smb.file	File Name	String
smb.file_attribute.archive	Archive	Boolean
smb.file_attribute.backup_semantics	Backup	Boolean
smb.file_attribute.compressed	Compressed	Boolean
smb.file_attribute.delete_on_close	Delete on Close	Boolean
smb.file_attribute.device	Device	Boolean
smb.file_attribute.directory	Directory	Boolean
smb.file_attribute.encrypted	Encrypted	Boolean
smb.file_attribute.hidden	Hidden	Boolean

Field	Field Name	Type
smb.file_attribute.no_buffering	No Buffering	Boolean
smb.file_attribute.normal	Normal	Boolean
smb.file_attribute.not_content	Content Indexed	Boolean
smb.file_attribute.offline	Offline	Boolean
smb.file_attribute.posix_semantics	Posix	Boolean
smb.file_attribute.random_access	Random Access	Boolean
smb.file_attribute.read_only	Read Only	Boolean
smb.file_attribute.reparse	Reparse Point	Boolean
smb.file_attribute.sequential	Sequential Scan	Boolean
smb.file_attribute.sparse	Sparse	Boolean
smb.file_attribute.system	System	Boolean
smb.file_attribute.temporary	Temporary	Boolean
smb.file_attribute.volume	Volume ID	Boolean
smb.file_attribute.write_through	Write Through	Boolean
smb.file_data	File Data	Byte array
smb.file_index	File Index	Unsigned 32-bit integer
smb.file_name_len	File Name Len	Unsigned 32-bit integer
smb.file_size	File Size	Unsigned 32-bit integer
smb.file_type	File Type	Unsigned 16-bit integer
smb.files_moved	Files Moved	Unsigned 16-bit integer
smb.find_first2.flags.backup	Backup Intent	Boolean
smb.find_first2.flags.close	Close	Boolean
smb.find_first2.flags.continue	Continue	Boolean
smb.find_first2.flags.eos	Close on EOS	Boolean
smb.find_first2.flags.resume	Resume	Boolean
smb.flags.canon	Canonicalized Pathnames	Boolean
smb.flags.caseless	Case Sensitivity	Boolean
smb.flags.lock	Lock and Read	Boolean

Field	Field Name	Type
smb.flags.notify	Notify	Boolean
smb.flags.oplock	Oplocks	Boolean
smb.flags.receive_buffer	Receive Buffer Posted	Boolean
smb.flags.response	Request/Response	Boolean
smb.flags2.dfs	Dfs	Boolean
smb.flags2.ea	Extended Attributes	Boolean
smb.flags2.esn	Extended Security Negotiation	Boolean
smb.flags2.long_names_allowed	Long Names Allowed	Boolean
smb.flags2.long_names_used	Long Names Used	Boolean
smb.flags2.nt_error	Error Code Type	Boolean
smb.flags2.roe	Execute-only Reads	Boolean
smb.flags2.sec_sig	Security Signatures	Boolean
smb.flags2.string	Unicode Strings	Boolean
smb.fn_loi	Level of Interest	Unsigned 16-bit integer
smb.forwarded_name	Forwarded Name	String
smb.free_alloc_units	Free Units	
smb.free_units	Free Units	Unsigned 16-bit integer
smb.fs_attr.cpn	Case Preserving	Boolean
smb.fs_attr.css	Case Sensitive Search	Boolean
smb.fs_attr.dim	Mounted	Boolean
smb.fs_attr.fc	Compression	Boolean
smb.fs_attr.pacls	Persistent ACLs	Boolean
smb.fs_attr.vic	Compressed	Boolean
smb.fs_attr.vq	Volume Quotas	Boolean
smb.fs_bytes_per_sector	Bytes per Sector	Unsigned 32-bit integer
smb.fs_id	FS Id	Unsigned 32-bit integer
smb.fs_max_name_len	Max name length	Unsigned 32-bit integer
smb.fs_name	FS Name	String
smb.fs_name.len	Label Length	Unsigned 32-bit integer
smb.fs_sector_per_unit	Sectors/Unit	Unsigned 32-bit integer
smb.fs_units	Total Units	Unsigned 32-bit integer
smb.impersonation.level	Impersonation	Unsigned 32-bit integer
smb.index_number	Index Number	
smb.ipc_state.endpoint	Endpoint	Unsigned 16-bit integer

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Field	Field Name	Type
smb.ipc_state.icount	Icount	Unsigned 16-bit integer
smb.ipc_state.nonblocking	Nonblocking	Boolean
smb.ipc_state.pipe_type	Pipe Type	Unsigned 16-bit integer
smb.ipc_state.read_mode	Read Mode	Unsigned 16-bit integer
smb.is_directory	Is Directory	Unsigned 8-bit integer
smb.last_name_offset	Last Name Offset	Unsigned 16-bit integer
smb.last_write.smb.date	Last Write Date	Unsigned 16-bit integer
smb.last_write.smb.time	Last Write Time	Unsigned 16-bit integer
smb.last_write.time	Last Write	Date/Time stamp
smb.link_count	Link Count	Unsigned 32-bit integer
smb.list_len	ListLength	Unsigned 32-bit integer
smb.lock.length	Length	
smb.lock.offset	Offset	
smb.lock.type.cancel	Cancel	Boolean
smb.lock.type.change	Change	Boolean
smb.lock.type.large	Large Files	Boolean
smb.lock.type.oplock_release	Oplock Break	Boolean
smb.lock.type.shared	Shared	Boolean
smb.locking.num_locks	Number of Locks	Unsigned 16-bit integer
smb.locking.num_unlocks	Number of Unlocks	Unsigned 16-bit integer
smb.locking.oplock.level	Oplock Level	Unsigned 8-bit integer
smb.loi	Level of Interest	Unsigned 16-bit integer
smb.machine_name	Machine Name	String
smb.max_buf	Max Buffer	Unsigned 16-bit integer
smb.max_bufsize	Max Buffer Size	Unsigned 32-bit integer
smb.max_mpx_count	Max Mpx Count	Unsigned 16-bit integer
smb.max_raw	Max Raw Buffer	Unsigned 32-bit integer
smb.max_referral_level	Max Referral Level	Unsigned 16-bit integer
smb.max_vcs	Max VCs	Unsigned 16-bit integer
smb.maxcount	Max Count	Unsigned 16-bit integer
smb.mdc	Max Data Count	Unsigned 32-bit integer
smb.message	Message	String
smb.message.len	Message Len	Unsigned 16-bit integer
smb.mgid	Message Group ID	Unsigned 16-bit integer
smb.mid	Multiplex ID	Unsigned 16-bit integer

Field	Field Name	Type
smb.mincount	Min Count	Unsigned 16-bit integer
smb.monitor_handle	Monitor Handle	Unsigned 16-bit integer
smb.move.flags.dir	Must be directory	Boolean
smb.move.flags.file	Must be file	Boolean
smb.move.flags.verify	Verify writes	Boolean
smb.mpc	Max Parameter Count	Unsigned 32-bit integer
smb.msc	Max Setup Count	Unsigned 8-bit integer
smb.native_fs	Native File System	String
smb.native_lanman	Native LAN Manager	String
smb.native_os	Native OS	String
smb.next_entry_offset	Next Entry Offset	Unsigned 32-bit integer
smb.nt.create.batch_oplock	Batch Oplock	Boolean
smb.nt.create.dir	Create Directory	Boolean
smb.nt.create.oplock	Exclusive Oplock	Boolean
smb.nt.create_options.delete_on_close	Delete On Close	Boolean
smb.nt.create_options.directory	Directory	Boolean
smb.nt.create_options.eight_dot_three_only	8.3 Only	Boolean
smb.nt.create_options.no_ea_knowledge	No EA Knowledge	Boolean
smb.nt.create_options.non_directory	Non-Directory	Boolean
smb.nt.create_options.random_access	Random Access	Boolean
smb.nt.create_options.sequential_only	Sequential Only	Boolean
smb.nt.create_options.sync_io_alert	Sync I/O Alert	Boolean
smb.nt.create_options.sync_io_nonalert	Sync I/O Nonalert	Boolean
smb.nt.create_options.write_through	Write Through	Boolean
smb.nt.function	Function	Unsigned 16-bit integer
smb.nt.ioctl.data	IOCTL Data	Byte array
smb.nt.ioctl.flags.root_handle	Root Handle	Boolean

Field	Field Name	Type
smb.nt.ioctl.function	Function	Unsigned 32-bit integer
smb.nt.ioctl.isfsctl	IsFSctl	Unsigned 8-bit integer
smb.nt.notify.action	Action	Unsigned 32-bit integer
smb.nt.notify.attributes	Attribute Change	Boolean
smb.nt.notify.creation	Created Change	Boolean
smb.nt.notify.dir_name	Directory Name Change	Boolean
smb.nt.notify.ea	EA Change	Boolean
smb.nt.notify.file_name	File Name Change	Boolean
smb.nt.notify.last_access	Last Access Change	Boolean
smb.nt.notify.last_write	Last Write Change	Boolean
smb.nt.notify.security	Security Change	Boolean
smb.nt.notify.size	Size Change	Boolean
smb.nt.notify.stream_name	Stream Name Change	Boolean
smb.nt.notify.stream_size	Stream Size Change	Boolean
smb.nt.notify.stream_write	Stream Write	Boolean
smb.nt.notify.watch_tree	Watch Tree	Unsigned 8-bit integer
smb.nt_qsd.dacl	DACL	Boolean
smb.nt_qsd.group	Group	Boolean
smb.nt_qsd.owner	Owner	Boolean
smb.nt_qsd.sacl	SACL	Boolean
smb.nt_status	NT Status	Unsigned 32-bit integer
smb.ntr_clu	Cluster count	Unsigned 32-bit integer
smb.ntr_loi	Level of Interest	Unsigned 16-bit integer
smb.offset	Offset	Unsigned 32-bit integer
smb.offset_high	High Offset	Unsigned 32-bit integer
smb.open.action.lock	Exclusive Open	Boolean
smb.open.action.open	Open Action	Unsigned 16-bit integer
smb.open.flags.add_info	Additional Info	Boolean
smb.open.flags.batch_oplock	Batch Oplock	Boolean
smb.open.flags.ealen	Total EA Len	Boolean
smb.open.flags.ex_oplock	Exclusive Oplock	Boolean
smb.open.function.create	Create	Boolean
smb.open.function.open	Open	Unsigned 16-bit integer
smb.oplock.level	Oplock level	Unsigned 8-bit integer

Field	Field Name	Type
smb.originator_name	Originator Name	String
smb.padding	Padding	Byte array
smb.password	Password	Byte array
smb.path	Path	String
smb.pc	Parameter Count	Unsigned 16-bit integer
smb.pd	Parameter Displacement	Unsigned 16-bit integer
smb.pid	Process ID	Unsigned 16-bit integer
smb.po	Parameter Offset	Unsigned 16-bit integer
smb.primary_domain	Primary Domain	String
smb.print.identifier	Identifier	String
smb.print.mode	Mode	Unsigned 16-bit integer
smb.print.queued.date	Queued	Date/Time stamp
smb.print.queued.smb.date	Queued Date	Unsigned 16-bit integer
smb.print.queued.smb.time	Queued Time	Unsigned 16-bit integer
smb.print.restart_index	Restart Index	Unsigned 16-bit integer
smb.print.setup.len	Setup Len	Unsigned 16-bit integer
smb.print.spool.file_number	Spool File Number	Unsigned 16-bit integer
smb.print.spool.file_size	Spool File Size	Unsigned 32-bit integer
smb.print.spool.name	Name	Byte array
smb.print.start_index	Start Index	Unsigned 16-bit integer
smb.print.status	Status	Unsigned 8-bit integer
smb.pwlen	Password Length	Unsigned 16-bit integer
smb.qfi_loi	Level of Interest	Unsigned 16-bit integer
smb.quota.flags.deny_disk	Deny Disk	Boolean
smb.quota.flags.enabled	Enabled	Boolean
smb.quota.flags.log_limit	Log Limit	Boolean
smb.quota.flags.log_warning	Log Warning	Boolean
smb.quota.hard.default	(Hard) Quota Limit	
smb.quota.soft.default	(Soft) Quota Treshold	
smb.quota.used	Quota Used	
smb.quota.user.offset	Next Offset	Unsigned 32-bit integer
smb.remaining	Remaining	Unsigned 32-bit integer
smb.request.mask	Request Mask	Unsigned 32-bit integer

Field	Field Name	Type
smb.reserved	Reserved	Byte array
smb.response.mask	Response Mask	Unsigned 32-bit integer
smb.response_in	Response in	Unsigned 32-bit integer
smb.response_to	Response to	Unsigned 32-bit integer
smb.resume	Resume Key	Unsigned 32-bit integer
smb.resume.client.cookie	Client Cookie	Byte array
smb.resume.find_id	Find ID	Unsigned 8-bit integer
smb.resume.key_len	Resume Key Length	Unsigned 16-bit integer
smb.resume.server.cookie	Server Cookie	Byte array
smb.rfid	Root FID	Unsigned 32-bit integer
smb.rm.read	Read Raw	Boolean
smb.rm.write	Write Raw	Boolean
smb.sc	Setup Count	Unsigned 8-bit integer
smb.sd.length	SD Length	Unsigned 32-bit integer
smb.search.attribute.archive	Archive	Boolean
smb.search.attribute.directory	Directory	Boolean
smb.search.attribute.hidden	Hidden	Boolean
smb.search.attribute.read_only	Read Only	Boolean
smb.search.attribute.system	System	Boolean
smb.search.attribute.volume	Volume ID	Boolean
smb.search_count	Search Count	Unsigned 16-bit integer
smb.search_pattern	Search Pattern	String
smb.sec_desc.revision	Revision	Unsigned 16-bit integer
smb.sec_desc.type.dacl_auto_inherit_req	DACL Auto Inherit Required	Boolean
smb.sec_desc.type.dacl_auto_inherited	DACL Auto Inherited	Boolean
smb.sec_desc.type.dacl_defaulted	DACL Defaulted	Boolean
smb.sec_desc.type.dacl_present	DACL Present	Boolean
smb.sec_desc.type.dacl_protected	DACL Protected	Boolean

Field	Field Name	Type
smb.sec_desc.type.group_defaulted	Group Defaulted	Boolean
smb.sec_desc.type.owner_defaulted	Owner Defaulted	Boolean
smb.sec_desc.type.sacl_auto_inherit_req	SACL Auto Inherit Required	Boolean
smb.sec_desc.type.sacl_auto_inherited	SACL Auto Inherited	Boolean
smb.sec_desc.type.sacl_defaulted	SACL Defaulted	Boolean
smb.sec_desc.type.sacl_present	SACL Present	Boolean
smb.sec_desc.type.sacl_protected	SACL Protected	Boolean
smb.sec_desc.type.self_relative	Self Relative	Boolean
smb.sec_desc_len	NT Security Descriptor Length	Unsigned 32-bit integer
smb.security.flags.context_tracking	Context Tracking	Boolean
smb.security.flags.effective_only	Effective Only	Boolean
smb.security_blob	Security Blob	Byte array
smb.security_blob_len	Security Blob Length	Unsigned 16-bit integer
smb.seek_mode	Seek Mode	Unsigned 16-bit integer
smb.segment	SMB Segment	No value
smb.segment.error	Defragmentation error	No value
smb.segment.multipletails	Multiple tail fragments found	Boolean
smb.segment.overlap	Fragment overlap	Boolean
smb.segment.overlap.conflict	Conflicting data in fragment overlap	Boolean
smb.segment.segments	SMB Segments	No value
smb.segment.toolongfragment	Fragment too long	Boolean
smb.server_cap.bulk_transfer	Bulk Transfer	Boolean
smb.server_cap.compressed_data	Compressed Data	Boolean
smb.server_cap.dfs	Dfs	Boolean

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Field	Field Name	Type
smb.server_cap.extended_security	Extended Security	Boolean
smb.server_cap.infolevel_passthru	Infolevel Passthru	Boolean
smb.server_cap.large_files	Large Files	Boolean
smb.server_cap.large_readx	Large ReadX	Boolean
smb.server_cap.large_writex	Large WriteX	Boolean
smb.server_cap.level_2_oplocks	Level 2 Oplocks	Boolean
smb.server_cap.lock_and_read	Lock and Read	Boolean
smb.server_cap.mpx_mode	MPX Mode	Boolean
smb.server_cap.nt_find	NT Find	Boolean
smb.server_cap.nt_smbs	NT SMBs	Boolean
smb.server_cap.nt_status	NT Status Codes	Boolean
smb.server_cap.raw_mode	Raw Mode	Boolean
smb.server_cap.reserved	Reserved	Boolean
smb.server_cap.rpc_remote_apis	RPC Remote APIs	Boolean
smb.server_cap.unicode	Unicode	Boolean
smb.server_cap.unix	UNIX	Boolean
smb.server_date_time	Server Date and Time	Date/Time stamp
smb.server_date_time.smb_date	Server Date	Unsigned 16-bit integer
smb.server_date_time.smb_time	Server Time	Unsigned 16-bit integer
smb.server_fid	Server FID	Unsigned 32-bit integer
smb.server_guid	Server GUID	Byte array
smb.server_timezone	Time Zone	Signed 16-bit integer
smb.service	Service	String
smb.session_key	Session Key	Unsigned 32-bit integer
smb.setup.action.guest	Guest	Boolean
smb.share.access.delete	Delete	Boolean
smb.share.access.read	Read	Boolean
smb.share.access.write	Write	Boolean

Field	Field Name	Type
smb.short_file	Short File Name	String
smb.short_file_name_len	Short File Name Len	Unsigned 32-bit integer
smb.sid	SID	Unsigned 16-bit integer
smb.sid.num_auth	Num Auth	Unsigned 8-bit integer
smb.sid.revision	Revision	Unsigned 8-bit integer
smb.sm.mode	Mode	Boolean
smb.sm.password	Password	Boolean
smb.sm.sig_required	Sig Req	Boolean
smb.sm.signatures	Signatures	Boolean
smb.storage_type	Storage Type	Unsigned 32-bit integer
smb.stream_name	Stream Name	String
smb.stream_name_len	Stream Name Length	Unsigned 32-bit integer
smb.stream_size	Stream Size	
smb.system.time	System Time	Date/Time stamp
smb.tdc	Total Data Count	Unsigned 32-bit integer
smb.tid	Tree ID	Unsigned 16-bit integer
smb.time	Time from request	Time duration
smb.timeout	Timeout	Unsigned 32-bit integer
smb.total_data_len	Total Data Length	Unsigned 16-bit integer
smb.tpc	Total Parameter Count	Unsigned 32-bit integer
smb.trans2.cmd	Subcommand	Unsigned 16-bit integer
smb.trans_name	Transaction Name	String
smb.transaction.flags.dtid	Disconnect TID	Boolean
smb.transaction.flags.owt	One Way Transaction	Boolean
smb.uid	User ID	Unsigned 16-bit integer
smb.unicode_password	Unicode Password	Byte array
smb.unicode_pwlen	Unicode Password Length	Unsigned 16-bit integer
smb.units	Total Units	Unsigned 16-bit integer
smb.unknown	Unknown Data	Byte array
smb.vc	VC Number	Unsigned 16-bit integer
smb.volume.label	Label	String
smb.volume.label.len	Label Length	Unsigned 32-bit integer
smb.volume.serial	Volume Serial Number	Unsigned 32-bit integer
smb.wct	Word Count (WCT)	Unsigned 8-bit integer
smb.write.mode.connectionless	Connectionless	Boolean

Field	Field Name	Type
smb.write.mode.message_start	Message Start	Boolean
smb.write.mode.raw	Write Raw	Boolean
smb.write.mode.return_remaining	Return Remaining	Boolean
smb.write.mode.write_through	Write Through	Boolean

SMB MailSlot Protocol (mailslot)

Table A-227. SMB MailSlot Protocol (mailslot)

Field	Field Name	Type
mailslot.class	Class	Unsigned 16-bit integer
mailslot.name	Mailslot Name	String
mailslot.opcode	Opcode	Unsigned 16-bit integer
mailslot.priority	Priority	Unsigned 16-bit integer
mailslot.size	Size	Unsigned 16-bit integer

SMB Pipe Protocol (pipe)

Table A-228. SMB Pipe Protocol (pipe)

Field	Field Name	Type
pipe.fragment	Fragment	No value
pipe.fragment.error	Defragmentation error	No value
pipe.fragment.multipletails	Multiple tail fragments found	Boolean
pipe.fragment.overlap	Fragment overlap	Boolean
pipe.fragment.overlap.conflict	Conflicting data in fragment overlap	Boolean
pipe.fragment.toolongfragment	Fragment too long	Boolean
pipe.fragments	Fragments	No value
pipe.function	Function	Unsigned 16-bit integer
pipe.getinfo.current_instances	Current Instances	Unsigned 8-bit integer

Field	Field Name	Type
pipe.getinfo.info_level	Information Level	Unsigned 16-bit integer
pipe.getinfo.input_buffer_size	Input Buffer Size	Unsigned 16-bit integer
pipe.getinfo.maximum_instances	Maximum Instances	Unsigned 8-bit integer
pipe.getinfo.output_buffer_size	Output Buffer Size	Unsigned 16-bit integer
pipe.getinfo.pipe_name	Pipe Name	String
pipe.getinfo.pipe_name_length	Pipe Name Length	Unsigned 8-bit integer
pipe.peek.available_bytes	Available Bytes	Unsigned 16-bit integer
pipe.peek.remaining_bytes	Bytes Remaining	Unsigned 16-bit integer
pipe.peek.status	Pipe Status	Unsigned 16-bit integer
pipe.priority	Priority	Unsigned 16-bit integer
pipe.write_raw.bytes_written	Bytes Written	Unsigned 16-bit integer

SNA-over-Ethernet (snaeth)

Table A-229. SNA-over-Ethernet (snaeth)

Field	Field Name	Type
snaeth_len	Length	Unsigned 16-bit integer

SNMP Multiplex Protocol (smux)

Table A-230. SNMP Multiplex Protocol (smux)

Field	Field Name	Type

SPRAY (spray)

Table A-231. SPRAY (spray)

Field	Field Name	Type

Field	Field Name	Type
spray.clock	clock	No value
spray.counter	counter	Unsigned 32-bit integer
spray.sec	sec	Unsigned 32-bit integer
spray.sprayarr	Data	Byte array
spray.usec	usec	Unsigned 32-bit integer

SS7 SCCP-User Adaptation Layer (sua)

Table A-232. SS7 SCCP-User Adaptation Layer (sua)

Field	Field Name	Type
sua.affected_point_code.mask	Mask	Unsigned 8-bit integer
sua.affected_pointcode.dpc	Affected DPC	Unsigned 24-bit integer
sua.asp_capabilities.a_bit	Protocol Class 3	Boolean
sua.asp_capabilities.b_bit	Protocol Class 2	Boolean
sua.asp_capabilities.c_bit	Protocol Class 1	Boolean
sua.asp_capabilities.d_bit	Protocol Class 0	Boolean
sua.asp_capabilities.interworking	Interworking	Unsigned 8-bit integer
sua.asp_capabilities.reserved	Reserved	Byte array
sua.asp_capabilities.reserved_bits	Reserved Bits	Unsigned 8-bit integer
sua.asp_identifier.id	ASP Identifier	Unsigned 32-bit integer
sua.cause_user.cause	Cause	Unsigned 16-bit integer
sua.cause_user.user	User	Unsigned 16-bit integer
sua.congestion_level.level	Congestion Level	Unsigned 32-bit integer
sua.correlation_id.identifier	Correlation ID	Unsigned 32-bit integer
sua.credit.credit	Credit	Unsigned 32-bit integer
sua.data.padding	Padding	Byte array
sua.deregistration_result.deregistration_status	Deregistration status	Unsigned 32-bit integer
sua.deregistration_result.routing_context	Routing Context	Unsigned 32-bit integer

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Field	Field Name	Type
sua.destination_address.gt_bit	Include GT	Boolean
sua.destination_address.pc_bit	Include PC	Boolean
sua.destination_address.reserved_bits	Reserved Bits	Unsigned 16-bit integer
sua.destination_address.routing_indicator	Routing Indicator	Unsigned 16-bit integer
sua.destination_address.ssn_bit	Include SSN	Boolean
sua.destination_reference_number	Destination Reference Number	Unsigned 32-bit integer
sua.diagnostic_information.info	Diagnostic Information	Byte array
sua.diagnostic_information.padding	Padding	Byte array
sua.drn_label.end	End	Unsigned 8-bit integer
sua.drn_label.start	Start	Unsigned 8-bit integer
sua.drn_label.value	Label Value	Unsigned 16-bit integer
sua.error_code.code	Error code	Unsigned 32-bit integer
sua.global_title.nature_of_address	Nature of Address	Unsigned 8-bit integer
sua.global_title.number_of_digits	Number of Digits	Unsigned 8-bit integer
sua.global_title.numbering_plan	Numbering Plan	Unsigned 8-bit integer
sua.global_title.padding	Padding	Byte array
sua.global_title.signals	Global Title	Byte array
sua.global_title.translation_type	Translation Type	Unsigned 8-bit integer
sua.heartbeat.data	Heratbeat Data	Byte array
sua.heartbeat.padding	Padding	Byte array
sua.hostname.name	Hostname	String
sua.hostname.padding	Padding	Byte array
sua.importance.inportance	Importance	Unsigned 8-bit integer
sua.importance.reserved	Reserved	Byte array
sua.info_string.padding	Padding	Byte array
sua.info_string.string	Info string	String
sua.ipv4.address	IP Version 4 address	IPv4 address

Field	Field Name	Type
sua.ipv6.address	IP Version 6 address	IPv6 address
sua.light.error_code	Error Code	Unsigned 16-bit integer
sua.light.message_length	Message length	Unsigned 32-bit integer
sua.light.message_type	Message Type	Unsigned 16-bit integer
sua.light.spare_1	Spare	Unsigned 8-bit integer
sua.light.spare_2	Spare	Unsigned 16-bit integer
sua.light.subsystem_number	Subsystem number	Unsigned 16-bit integer
sua.light.version	Version	Unsigned 8-bit integer
sua.message_class	Message Class	Unsigned 8-bit integer
sua.message_length	Message Length	Unsigned 32-bit integer
sua.message_priority.priority	Message Priority	Unsigned 8-bit integer
sua.message_priority.reserved	Reserved	Byte array
sua.message_type	Message Type	Unsigned 8-bit integer
sua.network_appearance.appearance	Network Appearance	Unsigned 32-bit integer
sua.parameter_length	Parameter Length	Unsigned 16-bit integer
sua.parameter_padding	Padding	Byte array
sua.parameter_tag	Parameter Tag	Unsigned 16-bit integer
sua.parameter_value	Parameter Value	Byte array
sua.point_code.mask	Mask	Unsigned 8-bit integer
sua.point_code.pc	Point Code	Unsigned 24-bit integer
sua.protcol_class.reserved	Reserved	Byte array
sua.protocol_class.class	Protocol Class	Unsigned 8-bit integer
sua.protocol_class.return_on	Return On Error Bit	Boolean
sua.receive_sequence_number	Receive Sequence Number P(R)	Unsigned 8-bit integer
sua.receive_sequence_number.reserved	Reserved	Byte array
sua.receive_sequence_number.spare	Spare Bit	Boolean
sua.registration_result.local_routing_key_identifier	Local Routing Key Identifier	Unsigned 32-bit integer
sua.registration_result.registration_status	Registration Status	Unsigned 32-bit integer

Field	Field Name	Type
sua.registration_result.routing_context	Routing Context	Unsigned 32-bit integer
sua.reserved	Reserved	Byte array
sua.routing_context.context	Routing context	Unsigned 32-bit integer
sua.routing_key.identifier	Local Routing Key Identifier	Unsigned 32-bit integer
sua.sccp_cause.reserved	Reserved	Byte array
sua.sccp_cause.type	Cause Type	Unsigned 8-bit integer
sua.sccp_cause.value	Cause Value	Unsigned 8-bit integer
sua.segmentation.first_bit	First Segment Bit	Boolean
sua.segmentation.number_of_remaining_segments	Number of Remaining Segments	Unsigned 8-bit integer
sua.segmentation.reference	Segmentation Reference	Unsigned 24-bit integer
sua.sequence_control.sequence_control	Sequence Control	Unsigned 32-bit integer
sua.sequence_number.more_data	More Data Bit	Boolean
sua.sequence_number.receive_sequence_number	Receive Sequence Number P(R)	Unsigned 8-bit integer
sua.sequence_number.reserved	Reserved	Byte array
sua.sequence_number.sent_sequence_number	Sent Sequence Number P(S)	Unsigned 8-bit integer
sua.sequence_number.spare_bit	Spare Bit	Boolean
sua.smi.reserved	Reserved	Byte array
sua.smi.smi	SMI	Unsigned 8-bit integer
sua.source_address.gt_bit	Include GT	Boolean
sua.source_address.pc_bit	Include PC	Boolean
sua.source_address.reserved_bits	Reserved Bits	Unsigned 16-bit integer
sua.source_address.routing_indicator	Routing Indicator	Unsigned 16-bit integer
sua.source_address.ssn_bit	Include SSN	Boolean
sua.source_reference_number	Source Reference Number	Unsigned 32-bit integer
sua.ss7_hop_counter.counter	SS7 Hop Counter	Unsigned 8-bit integer

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Field	Field Name	Type
sua.ss7_hop_counter.reserved	Reserved	Byte array
sua.ssn.number	Subsystem Number	Unsigned 8-bit integer
sua.ssn.reserved	Reserved	Byte array
sua.status.info	Status info	Unsigned 16-bit integer
sua.status.type	Status type	Unsigned 16-bit integer
sua.tid_label.end	End	Unsigned 8-bit integer
sua.tid_label.start	Start	Unsigned 8-bit integer
sua.tid_label.value	Label Value	Unsigned 16-bit integer
sua.traffic_mode_type.type	Traffic mode Type	Unsigned 32-bit integer
sua.version	Version	Unsigned 8-bit integer

SSCOP (sscop)

Table A-233. SSCOP (sscop)

Field	Field Name	Type

Secure Socket Layer (ssl)

Table A-234. Secure Socket Layer (ssl)

Field	Field Name	Type
ssl.alert_message	Alert Message	No value
ssl.alert_message.desc	Description	Unsigned 8-bit integer
ssl.alert_message.level	Level	Unsigned 8-bit integer
ssl.app_data	Application Data	No value
ssl.change_cipher_spec	Change Cipher Spec Message	No value
ssl.handshake	Handshake Protocol	No value
ssl.handshake.cert_type	Certificate type	Unsigned 8-bit integer
ssl.handshake.cert_types	Certificate types	No value
ssl.handshake.cert_types_count	Certificate types count	Unsigned 8-bit integer

Field	Field Name	Type
ssl.handshake.certificate	Certificate	Byte array
ssl.handshake.certificate_length	Certificate Length	Unsigned 24-bit integer
ssl.handshake.certificates	Certificates	No value
ssl.handshake.certificates_length	Certificates Length	Unsigned 24-bit integer
ssl.handshake.challenge	Challenge	No value
ssl.handshake.challenge_length	Challenge Length	Unsigned 16-bit integer
ssl.handshake.cipher_spec_len	Cipher Spec Length	Unsigned 16-bit integer
ssl.handshake.cipher_suites_length	Cipher Suites Length	Unsigned 16-bit integer
ssl.handshake.cipherspec	Cipher Spec	Unsigned 24-bit integer
ssl.handshake.ciphersuite	Cipher Suite	Unsigned 16-bit integer
ssl.handshake.ciphersuites	Cipher Suites	No value
ssl.handshake.clear_key_data	Clear Key Data	No value
ssl.handshake.clear_key_length	Clear Key Data Length	Unsigned 16-bit integer
ssl.handshake.comp_method	Compression Method	Unsigned 8-bit integer
ssl.handshake.comp_methods	Compression Methods	No value
ssl.handshake.comp_methods_length	Compression Methods Length	Unsigned 8-bit integer
ssl.handshake.connection_id	Connection ID	No value
ssl.handshake.connection_id_length	Connection ID Length	Unsigned 16-bit integer
ssl.handshake.dname	Distinguished Name	Byte array
ssl.handshake.dname_len	Distinguished Name Length	Unsigned 16-bit integer
ssl.handshake.dnames	Distinguished Names	No value
ssl.handshake.dnames_len	Distinguished Names Length	Unsigned 16-bit integer
ssl.handshake.encrypted_key	Encrypted Key	No value
ssl.handshake.encrypted_key_length	Encrypted Key Data Length	Unsigned 16-bit integer
ssl.handshake.key_arg	Key Argument	No value

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Field	Field Name	Type
ssl.handshake.key_arg_length	Key Argument Length	Unsigned 16-bit integer
ssl.handshake.length	Length	Unsigned 24-bit integer
ssl.handshake.md5_hash	MD5 Hash	No value
ssl.handshake.random	Random.bytes	No value
ssl.handshake.random_time	Random.gmt_unix_time	Date/Time stamp
ssl.handshake.session_id	Session ID	Byte array
ssl.handshake.session_id_hit	Session ID Hit	Boolean
ssl.handshake.session_id_length	Session ID Length	Unsigned 8-bit integer
ssl.handshake.sha_hash	SHA-1 Hash	No value
ssl.handshake.type	Handshake Message Type	Unsigned 8-bit integer
ssl.handshake.verify_data	Verify Data	No value
ssl.handshake.version	Version	Unsigned 16-bit integer
ssl.pct_handshake.type	Handshake Message Type	Unsigned 8-bit integer
ssl.record	Record Layer	No value
ssl.record.content_type	Content Type	Unsigned 8-bit integer
ssl.record.is_escape	Is Escape	Boolean
ssl.record.length	Length	Unsigned 16-bit integer
ssl.record.padding_length	Padding Length	Unsigned 8-bit integer
ssl.record.version	Version	Unsigned 16-bit integer

Sequenced Packet eXchange (spx)

Table A-235. Sequenced Packet eXchange (spx)

Field	Field Name	Type
spx.ack	Acknowledgment Number	Unsigned 16-bit integer
spx.alloc	Allocation Number	Unsigned 16-bit integer
spx.ctl	Connection Control	Unsigned 8-bit integer
spx.dst	Destination Connection ID	Unsigned 16-bit integer
spx.seq	Sequence Number	Unsigned 16-bit integer
spx.src	Source Connection ID	Unsigned 16-bit integer
spx.type	Datastream type	Unsigned 8-bit integer

Service Advertisement Protocol (ipxsap)

Table A-236. Service Advertisement Protocol (ipxsap)

Field	Field Name	Type
ipxsap.request	Request	Boolean
ipxsap.response	Response	Boolean

Service Location Protocol (srvloc)

Table A-237. Service Location Protocol (srvloc)

Field	Field Name	Type
srvloc.err	Error Code	Unsigned 16-bit integer
srvloc.flags	Flags	Unsigned 8-bit integer
srvloc.function	Function	Unsigned 8-bit integer
srvloc.version	Version	Unsigned 8-bit integer

Session Announcement Protocol (sap)

Table A-238. Session Announcement Protocol (sap)

Field	Field Name	Type
sap.auth	Authentication data	No value
sap.auth.flags	Authentication data flags	Unsigned 8-bit integer
sap.auth.flags.p	Padding Bit	Boolean
sap.auth.flags.t	Authentication Type	Unsigned 8-bit integer
sap.auth.flags.v	Version Number	Unsigned 8-bit integer
sap.flags	Flags	Unsigned 8-bit integer
sap.flags.a	Address Type	Boolean
sap.flags.c	Compression Bit	Boolean
sap.flags.e	Encryption Bit	Boolean
sap.flags.r	Reserved	Boolean
sap.flags.t	Message Type	Boolean
sap.flags.v	Version Number	Unsigned 8-bit integer

Session Description Protocol (sdp)

Table A-239. Session Description Protocol (sdp)

Field	Field Name	Type
sdp.bandwidth	Bandwidth Information (b)	String
sdp.bandwidth.modifier	Bandwidth Modifier	String
sdp.bandwidth.value	Bandwidth Value	String
sdp.connection_info	Connection Information (c)	String
sdp.connection_info.address	Connection Address	String
sdp.connection_info.address_type	Connection Address Type	String
sdp.connection_info.network_type	Connection Network Type	String
sdp.connection_info.num_addr	Connection Number of Addresses	String
sdp.connection_info.ttl	Connection TTL	String
sdp.email	E-mail Address (e)	String
sdp.encryption_key	Encryption Key (k)	String
sdp.encryption_key.data	Key Data	String
sdp.encryption_key.type	Key Type	String
sdp.invalid	Invalid line	String
sdp.media	Media Description, name and address (m)	String
sdp.media.format	Media Format	String
sdp.media.media	Media Type	String
sdp.media.port	Media Port	String
sdp.media.portcount	Media Port Count	String
sdp.media.proto	Media Proto	String
sdp.media_attr	Media Attribute (a)	String
sdp.media_attribute.field	Media Attribute Fieldname	String
sdp.media_attribute.value	Media Attribute Value	String
sdp.media_title	Media Title (i)	String
sdp.misplaced	Misplaced	String
sdp.owner	Owner/Creator, Session Id (o)	String

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Field	Field Name	Type
sdp.owner.address	Owner Address	String
sdp.owner.address_type	Owner Address Type	String
sdp.owner.network_type	Owner Network Type	String
sdp.owner.sessionid	Session ID	String
sdp.owner.username	Owner Username	String
sdp.owner.version	Session Version	String
sdp.phone	Phone Number (p)	String
sdp.repeat_time	Repeat Time (r)	String
sdp.repeat_time.duration	Repeat Duration	String
sdp.repeat_time.interval	Repeat Interval	String
sdp.repeat_time.offset	Repeat Offset	String
sdp.session_attr	Session Attribute (a)	String
sdp.session_attr.field	Session Attribute Fieldname	String
sdp.session_attr.value	Session Attribute Value	String
sdp.session_info	Session Information (i)	String
sdp.session_name	Session Name (s)	String
sdp.time	Time Description, active time (t)	String
sdp.time.start	Session Start Time	String
sdp.time.stop	Session Stop Time	String
sdp.timezone	Time Zone Adjustments (z)	String
sdp.timezone.offset	Timezone Offset	String
sdp.timezone.time	Timezone Time	String
sdp.unknown	Unknown	String
sdp.uri	URI of Description (u)	String
sdp.version	Session Description Protocol Version (v)	String

Session Initiation Protocol (sip)

Table A-240. Session Initiation Protocol (sip)

Field	Field Name	Type
sip.msg_hdr	Message Header	No value

Short Frame (short)

Table A-241. Short Frame (short)

Field	Field Name	Type

Short Message Peer to Peer (smpp)

Table A-242. Short Message Peer to Peer (smpp)

Field	Field Name	Type
smpp.SC_interface_version	SMSC-supported version	String
smpp.additional_status_info_text	Information	String
smpp.addr_npi	Numbering plan indicator	Unsigned 8-bit integer
smpp.addr_ton	Type of number	Unsigned 8-bit integer
smpp.address_range	Address	String
smpp.alert_on_message_delivery	Alert on delivery	No value
smpp.callback_num	Callback number	No value
smpp.callback_num.pres	Presentation	Unsigned 8-bit integer
smpp.callback_num.scrn	Screening	Unsigned 8-bit integer
smpp.callback_num_atag	Callback number - alphanumeric display tag	No value
smpp.command_id	Operation	Unsigned 32-bit integer
smpp.command_length	Length	Unsigned 32-bit integer
smpp.command_status	Result	Unsigned 32-bit integer
smpp.data_coding	Data coding	Unsigned 8-bit integer
smpp.delivery_failure_reason	Delivery failure reason	Unsigned 8-bit integer
smpp.dest_addr_npi	Numbering plan indicator (recipient)	Unsigned 8-bit integer
smpp.dest_addr_subunit	Subunit destination	Unsigned 8-bit integer
smpp.dest_addr_ton	Type of number (recipient)	Unsigned 8-bit integer
smpp.dest_bearer_type	Destination bearer	Unsigned 8-bit integer
smpp.dest_network_type	Destination network	Unsigned 8-bit integer

Field	Field Name	Type
smpp.dest_telematics_id	Telematic interworking (dest)	Unsigned 16-bit integer
smpp.destination_addr	Recipient address	String
smpp.destination_port	Destination port	Unsigned 16-bit integer
smpp.display_time	Display time	Unsigned 8-bit integer
smpp.dl_name	Distr. list name	String
smpp.dlist	Destination list	No value
smpp.dlist_resp	Unsuccesfull delivery list	No value
smpp.dpf_result	Delivery pending set?	Unsigned 8-bit integer
smpp.error_code	Error code	Unsigned 8-bit integer
smpp.error_status_code	Status	Unsigned 32-bit integer
smpp.esm.submit.features	GSM features	Unsigned 8-bit integer
smpp.esm.submit.msg_mode	Messaging mode	Unsigned 8-bit integer
smpp.esm.submit.msg_type	Message type	Unsigned 8-bit integer
smpp.esme_addr	ESME address	String
smpp.esme_addr_npi	Numbering plan indicator (ESME)	Unsigned 8-bit integer
smpp.esme_addr_ton	Type of number (ESME)	Unsigned 8-bit integer
smpp.final_date	Final date	Date/Time stamp
smpp.final_date_r	Final date	Time duration
smpp.interface_version	Version (if)	String
smpp.its_reply_type	Reply method	Unsigned 8-bit integer
smpp.its_session.ind	Session indicator	Unsigned 8-bit integer
smpp.its_session.number	Session number	Unsigned 8-bit integer
smpp.its_session.sequence	Sequence number	Unsigned 8-bit integer
smpp.language_indicator	Language	Unsigned 8-bit integer
smpp.message	Message	No value
smpp.message_id	Message id.	String
smpp.message_payload	Payload	No value
smpp.message_state	Message state	Unsigned 8-bit integer
smpp.more_messages_to_send	More messages?	Unsigned 8-bit integer
smpp.ms_availability_status	Availability status	Unsigned 8-bit integer
smpp.ms_validity	Validity info	Unsigned 8-bit integer

Field	Field Name	Type
smpp.msg_wait.ind	Indication	Unsigned 8-bit integer
smpp.msg_wait.type	Type	Unsigned 8-bit integer
smpp.network_error.code	Error code	Unsigned 16-bit integer
smpp.network_error.type	Error type	Unsigned 8-bit integer
smpp.number_of_messages	Number of messages	Unsigned 8-bit integer
smpp.opt_param	Optional parameters	No value
smpp.password	Password	String
smpp.payload_type	Payload	Unsigned 8-bit integer
smpp.priority_flag	Priority level	Unsigned 8-bit integer
smpp.privacy_indicator	Privacy indicator	Unsigned 8-bit integer
smpp.protocol_id	Protocol id.	Unsigned 8-bit integer
smpp.qos_time_to_live	Validity period	Unsigned 32-bit integer
smpp.receipted_message_id	SMSC identifier	String
smpp.regdel.acks	Message type	Unsigned 8-bit integer
smpp.regdel.notif	Intermediate notif	Unsigned 8-bit integer
smpp.regdel.receipt	Delivery receipt	Unsigned 8-bit integer
smpp.replace_if_present_flag	Replace	Unsigned 8-bit integer
smpp.reserved_op	Optional parameter - Reserved	No value
smpp.sar_msg_ref_num	SAR reference number	Unsigned 16-bit integer
smpp.sar_segment_seqnum	SAR sequence number	Unsigned 8-bit integer
smpp.sar_total_segments	SAR size	Unsigned 16-bit integer
smpp.schedule_delivery_time	Scheduled delivery time	Date/Time stamp
smpp.schedule_delivery_time_r	Scheduled delivery time	Time duration
smpp.sequence_number	Sequence #	Unsigned 32-bit integer
smpp.service_type	Service type	String
smpp.set_dpf	Request DPF set	Unsigned 8-bit integer
smpp.sm_default_msg_id	Predefined message	Unsigned 8-bit integer
smpp.sm_length	Message length	Unsigned 8-bit integer
smpp.source_addr	Originator address	String
smpp.source_addr_npi	Numbering plan indicator (originator)	Unsigned 8-bit integer

Field	Field Name	Type
smpp.source_addr_subunit	Subunit origin	Unsigned 8-bit integer
smpp.source_addr_ton	Type of number (originator)	Unsigned 8-bit integer
smpp.source_bearer_type	Originator bearer	Unsigned 8-bit integer
smpp.source_network_type	Originator network	Unsigned 8-bit integer
smpp.source_port	Source port	Unsigned 16-bit integer
smpp.source_telematics_id	Telematic interworking (orig)	Unsigned 16-bit integer
smpp.system_id	System ID	String
smpp.system_type	System type	String
smpp.user_message_reference	Message reference	Unsigned 16-bit integer
smpp.user_response_code	Application response code	Unsigned 8-bit integer
smpp.ussd_service_op	USSD service operation	Unsigned 8-bit integer
smpp.validity_period	Validity period	Date/Time stamp
smpp.validity_period_r	Validity period	Time duration
smpp.vendor_op	Optional parameter - Vendor-specific	No value

Signalling Connection Control Part (sccp)

Table A-243. Signalling Connection Control Part (sccp)

Field	Field Name	Type
sccp.called.cluster	PC Cluster	Unsigned 24-bit integer
sccp.called.digits	GT Digits	String
sccp.called.es	Encoding Scheme	Unsigned 8-bit integer
sccp.called.gti	Global Title Indicator	Unsigned 8-bit integer
sccp.called.member	PC Member	Unsigned 24-bit integer
sccp.called.nai	Nature of Address Indicator	Unsigned 8-bit integer
sccp.called.network	PC Network	Unsigned 24-bit integer
sccp.called.ni	National Indicator	Unsigned 8-bit integer
sccp.called.np	Numbering Plan	Unsigned 8-bit integer
sccp.called.oe	Odd/Even Indicator	Unsigned 8-bit integer
sccp.called.pc	PC	Unsigned 16-bit integer

Field	Field Name	Type
sccp.called.pci	Point Code Indicator	Unsigned 8-bit integer
sccp.called.ri	Routing Indicator	Unsigned 8-bit integer
sccp.called.ssn	SubSystem Number	Unsigned 8-bit integer
sccp.called.ssni	SubSystem Number Indicator	Unsigned 8-bit integer
sccp.called.tt	Translation Type	Unsigned 8-bit integer
sccp.calling.cluster	PC Cluster	Unsigned 24-bit integer
sccp.calling.digits	GT Digits	String
sccp.calling.es	Encoding Scheme	Unsigned 8-bit integer
sccp.calling.gti	Global Title Indicator	Unsigned 8-bit integer
sccp.calling.member	PC Member	Unsigned 24-bit integer
sccp.calling.nai	Nature of Address Indicator	Unsigned 8-bit integer
sccp.calling.network	PC Network	Unsigned 24-bit integer
sccp.calling.ni	National Indicator	Unsigned 8-bit integer
sccp.calling.np	Numbering Plan	Unsigned 8-bit integer
sccp.calling.oe	Odd/Even Indicator	Unsigned 8-bit integer
sccp.calling.pc	PC	Unsigned 16-bit integer
sccp.calling.pci	Point Code Indicator	Unsigned 8-bit integer
sccp.calling.ri	Routing Indicator	Unsigned 8-bit integer
sccp.calling.ssn	SubSystem Number	Unsigned 8-bit integer
sccp.calling.ssni	SubSystem Number Indicator	Unsigned 8-bit integer
sccp.calling.tt	Translation Type	Unsigned 8-bit integer
sccp.class	Class	Unsigned 8-bit integer
sccp.credit	Credit	Unsigned 8-bit integer
sccp.digits	Called or Calling GT Digits	String
sccp.dlr	Destination Local Reference	Unsigned 24-bit integer
sccp.error_cause	Error Cause	Unsigned 8-bit integer
sccp.handling	Message handling	Unsigned 8-bit integer
sccp.hops	Hop Counter	Unsigned 8-bit integer
sccp.importance	Importance	Unsigned 8-bit integer
sccp.isni.counter	ISNI Counter	Unsigned 8-bit integer
sccp.isni.iri	ISNI Routing Indicator	Unsigned 8-bit integer

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Field	Field Name	Type
sccp.isni.mi	ISNI Mark for Identification Indicator	Unsigned 8-bit integer
sccp.isni.netspec	ISNI Network Specific (Type 1)	Unsigned 8-bit integer
sccp.isni.ti	ISNI Type Indicator	Unsigned 8-bit integer
sccp.message_type	Message Type	Unsigned 8-bit integer
sccp.more	More data	Unsigned 8-bit integer
sccp.optional_pointer	Pointer to Optional parameter	Unsigned 8-bit integer
sccp.refusal_cause	Refusal Cause	Unsigned 8-bit integer
sccp.release_cause	Release Cause	Unsigned 8-bit integer
sccp.reset_cause	Reset Cause	Unsigned 8-bit integer
sccp.return_cause	Return Cause	Unsigned 8-bit integer
sccp.rsn	Receive Sequence Number	Unsigned 8-bit integer
sccp.segmentation.class	Segmentation: Class	Unsigned 8-bit integer
sccp.segmentation.first	Segmentation: First	Unsigned 8-bit integer
sccp.segmentation.remaining	Segmentation: Remaining	Unsigned 8-bit integer
sccp.segmentation.slr	Segmentation: Source Local Reference	Unsigned 24-bit integer
sccp.sequencing_segmenting.more	Sequencing Segmenting: More	Unsigned 8-bit integer
sccp.sequencing_segmenting.rsn	Sequencing Segmenting: Receive Sequence Number	Unsigned 8-bit integer
sccp.sequencing_segmenting.ssn	Sequencing Segmenting: Send Sequence Number	Unsigned 8-bit integer
sccp.slr	Source Local Reference	Unsigned 24-bit integer
sccp.ssn	Called or Calling SubSystem Number	Unsigned 8-bit integer
sccp.variable_pointer1	Pointer to first Mandatory Variable parameter	Unsigned 8-bit integer
sccp.variable_pointer2	Pointer to second Mandatory Variable parameter	Unsigned 8-bit integer
sccp.variable_pointer3	Pointer to third Mandatory Variable parameter	Unsigned 8-bit integer

Simple Mail Transfer Protocol (smtp)

Table A-244. Simple Mail Transfer Protocol (smtp)

Field	Field Name	Type
smtp.req	Request	Boolean
smtp.req.command	Command	String
smtp.req.parameter	Request parameter	String
smtp.response.code	Response code	Unsigned 32-bit integer
smtp.rsp	Response	Boolean
smtp.rsp.parameter	Response parameter	String

Simple Network Management Protocol (snmp)

Table A-245. Simple Network Management Protocol (snmp)

Field	Field Name	Type
snmpv3.flags	SNMPv3 Flags	Unsigned 8-bit integer
snmpv3.flags.auth	Authenticated	Boolean
snmpv3.flags.crypt	Encrypted	Boolean
snmpv3.flags.report	Reportable	Boolean

Sinec H1 Protocol (h1)

Table A-246. Sinec H1 Protocol (h1)

Field	Field Name	Type
h1.dbnr	Memory block number	Unsigned 8-bit integer
h1.dlen	Length in words	Signed 16-bit integer
h1.dwnr	Address within memory block	Unsigned 16-bit integer
h1.empty	Empty field	Unsigned 8-bit integer
h1.empty_len	Empty field length	Unsigned 8-bit integer
h1.header	H1-Header	Unsigned 16-bit integer
h1.len	Length indicator	Unsigned 16-bit integer
h1.opcode	Opcode	Unsigned 8-bit integer
h1.opfield	Operation identifier	Unsigned 8-bit integer

Field	Field Name	Type
h1.oplen	Operation length	Unsigned 8-bit integer
h1.org	Memory type	Unsigned 8-bit integer
h1.reqlen	Request length	Unsigned 8-bit integer
h1.request	Request identifier	Unsigned 8-bit integer
h1.reslen	Response length	Unsigned 8-bit integer
h1.response	Response identifier	Unsigned 8-bit integer
h1.resvalue	Response value	Unsigned 8-bit integer

Skinny Client Control Protocol (skinny)

Table A-247. Skinny Client Control Protocol (skinny)

Field	Field Name	Type
skinny.activeForward	Active Forward	Unsigned 32-bit integer
skinny.alarmParam1	AlarmParam1	Unsigned 32-bit integer
skinny.alarmParam2	AlarmParam2	IPv4 address
skinny.alarmSeverity	AlarmSeverity	Unsigned 32-bit integer
skinny.buttonCount	ButtonCount	Unsigned 32-bit integer
skinny.buttonDefinition	ButtonDefinition	Unsigned 8-bit integer
skinny.buttonInstanceNumber	InstanceNumber	Unsigned 8-bit integer
skinny.buttonOffset	ButtonOffset	Unsigned 32-bit integer
skinny.callIdentifier	Call Identifier	Unsigned 32-bit integer
skinny.callState	CallState	Unsigned 32-bit integer
skinny.callType	Call Type	Unsigned 32-bit integer
skinny.calledParty	CalledParty	String
skinny.calledPartyName	Called Party Name	String
skinny.callingPartyName	Calling Party Name	String
skinny.capCount	CapCount	Unsigned 32-bit integer
skinny.conferenceID	Conference ID	Unsigned 32-bit integer
skinny.data_length	Data Length	Unsigned 32-bit integer
skinny.dateMilliseconds	Milliseconds	Unsigned 32-bit integer
skinny.dateSeconds	Seconds	Unsigned 32-bit integer
skinny.dateTemplate	DateTemplate	String
skinny.day	Day	Unsigned 32-bit integer
skinny.dayOfWeek	DayOfWeek	Unsigned 32-bit integer

Field	Field Name	Type
skinny.detectInterval	HF Detect Interval	Unsigned 32-bit integer
skinny.deviceName	DeviceName	String
skinny.deviceResetType	Reset Type	Unsigned 32-bit integer
skinny.deviceTone	Tone	Unsigned 32-bit integer
skinny.deviceType	DeviceType	Unsigned 32-bit integer
skinny.deviceUnregisterStatus	Unregister Status	Unsigned 32-bit integer
skinny.directoryNumber	Directory Number	String
skinny.displayMessage	DisplayMessage	String
skinny.echoCancelType	Echo Cancel Type	Unsigned 32-bit integer
skinny.forwardAllActive	Forward All	Unsigned 32-bit integer
skinny.forwardBusyActive	Forward Busy	Unsigned 32-bit integer
skinny.forwardNoAnswerActive	Forward NoAns	Unsigned 32-bit integer
skinny.forwardNumber	Forward Number	String
skinny.fqdn	DisplayName	String
skinny.g723BitRate	G723 BitRate	Unsigned 32-bit integer
skinny.hookFlashDetectMode	Hook Flash Mode	Unsigned 32-bit integer
skinny.hour	Hour	Unsigned 32-bit integer
skinny.ipAddress	IP Address	IPv4 address
skinny.jitter	Jitter	Unsigned 32-bit integer
skinny.keepAliveInterval	KeepAliveInterval	Unsigned 32-bit integer
skinny.lampMode	LampMode	Unsigned 32-bit integer
skinny.latency	Latency(ms)	Unsigned 32-bit integer
skinny.lineDirNumber	Line Dir Number	String
skinny.lineInstance	Line Instance	Unsigned 32-bit integer
skinny.lineNumber	LineNumber	Unsigned 32-bit integer
skinny.maxFramesPerPacket	MaxFramesPerPacket	Unsigned 16-bit integer
skinny.maxStreams	MaxStreams	Unsigned 32-bit integer
skinny.mediaEnunciationType	Enunciation Type	Unsigned 32-bit integer
skinny.messageTimeOutValue	Message Timeout	Unsigned 32-bit integer
skinny.messageid	Message ID	Unsigned 32-bit integer
skinny.microphoneMode	Microphone Mode	Unsigned 32-bit integer

Field	Field Name	Type
skinny.millisecondPacketSize	MS/Packet	Unsigned 32-bit integer
skinny.minute	Minute	Unsigned 32-bit integer
skinny.month	Month	Unsigned 32-bit integer
skinny.multicastIpAddress	Multicast Ip Address	IPv4 address
skinny.multicastPort	Multicast Port	Unsigned 32-bit integer
skinny.numberLines	Number of Lines	Unsigned 32-bit integer
skinny.numberSpeedDials	Number of SpeedDials	Unsigned 32-bit integer
skinny.octetsRecv	Octets Received	Unsigned 32-bit integer
skinny.octetsSent	Octets Sent	Unsigned 32-bit integer
skinny.openReceiveChannelStatus	OpenReceiveChannelStatus	Unsigned 32-bit integer
skinny.originalCalledParty	Original Called Party	String
skinny.originalCalledPartyName	Original Called Party Name	String
skinny.packetsLost	Packets Lost	Unsigned 32-bit integer
skinny.packetsRecv	Packets Received	Unsigned 32-bit integer
skinny.packetsSent	Packets Sent	Unsigned 32-bit integer
skinny.passThruPartyID	PassThruPartyID	Unsigned 32-bit integer
skinny.payloadCapability	PayloadCapability	Unsigned 32-bit integer
skinny.portNumber	Port Number	Unsigned 32-bit integer
skinny.precedenceValue	Precedence	Unsigned 32-bit integer
skinny.receptionStatus	ReceptionStatus	Unsigned 32-bit integer
skinny.remoteIpAddr	Remote Ip Address	IPv4 address
skinny.remotePortNumber	Remote Port	Unsigned 32-bit integer
skinny.reserved	Reserved	Unsigned 32-bit integer
skinny.ringType	Ring Type	Unsigned 32-bit integer
skinny.secondaryKeepAliveInterval	SecondaryKeepAliveInterval	Unsigned 32-bit integer
skinny.serverIdentifier	Server Identifier	String
skinny.serverIpAddress	Server Ip Address	IPv4 address
skinny.serverListenPort	Server Port	Unsigned 32-bit integer
skinny.serverName	Server Name	String
skinny.sessionType	Session Type	Unsigned 32-bit integer
skinny.silenceSuppression	Silence Suppression	Unsigned 32-bit integer
skinny.softKeyCount	SoftKeyCount	Unsigned 32-bit integer
skinny.softKeyEvent	SoftKeyEvent	Unsigned 32-bit integer

Field	Field Name	Type
skinny.softKeyInfoIndex	SoftKeyInfoIndex	Unsigned 16-bit integer
skinny.softKeyLabel	SoftKeyLabel	String
skinny.softKeyMap	SoftKeyMap	Unsigned 16-bit integer
skinny.softKeyMap.0	SoftKey0	Boolean
skinny.softKeyMap.1	SoftKey1	Boolean
skinny.softKeyMap.10	SoftKey10	Boolean
skinny.softKeyMap.11	SoftKey11	Boolean
skinny.softKeyMap.12	SoftKey12	Boolean
skinny.softKeyMap.13	SoftKey13	Boolean
skinny.softKeyMap.14	SoftKey14	Boolean
skinny.softKeyMap.15	SoftKey15	Boolean
skinny.softKeyMap.2	SoftKey2	Boolean
skinny.softKeyMap.3	SoftKey3	Boolean
skinny.softKeyMap.4	SoftKey4	Boolean
skinny.softKeyMap.5	SoftKey5	Boolean
skinny.softKeyMap.6	SoftKey6	Boolean
skinny.softKeyMap.7	SoftKey7	Boolean
skinny.softKeyMap.8	SoftKey8	Boolean
skinny.softKeyMap.9	SoftKey9	Boolean
skinny.softKeyOffset	SoftKeyOffset	Unsigned 32-bit integer
skinny.softKeySetCount	SoftKeySetCount	Unsigned 32-bit integer
skinny.softKeySetDescription	SoftKeySet	Unsigned 8-bit integer
skinny.softKeySetOffset	SoftKeySetOffset	Unsigned 32-bit integer
skinny.softKeyTemplateIndex	SoftKeyTemplateIndex	Unsigned 8-bit integer
skinny.speakerMode	Speaker	Unsigned 32-bit integer
skinny.speedDialDirNum	SpeedDial Number	String
skinny.speedDialDisplay	SpeedDial Display	String
skinny.speedDialNumber	SpeedDialNumber	Unsigned 32-bit integer
skinny.stationInstance	StationInstance	Unsigned 32-bit integer
skinny.stationIpPort	StationIpPort	Unsigned 16-bit integer
skinny.stationKeypadButton	KeypadButton	Unsigned 32-bit integer
skinny.stationUserId	StationUserId	Unsigned 32-bit integer
skinny.statsProcessingType	StatsProcessingType	Unsigned 32-bit integer

Field	Field Name	Type
skinny.stimulus	Stimulus	Unsigned 32-bit integer
skinny.stimulusInstance	StimulusInstance	Unsigned 32-bit integer
skinny.timeStamp	Timestamp	Unsigned 32-bit integer
skinny.tokenRejWaitTime	Retry Wait Time	Unsigned 32-bit integer
skinny.totalButtonCount	TotalButtonCount	Unsigned 32-bit integer
skinny.totalSoftKeyCount	TotalSoftKeyCount	Unsigned 32-bit integer
skinny.totalSoftKeySetCount	TotalSoftKeySetCount	Unsigned 32-bit integer
skinny.unknown	Data	Unsigned 32-bit integer
skinny.userName	Username	String
skinny.version	Version	String
skinny.year	Year	Unsigned 32-bit integer

SliMP3 Communication Protocol (slimp3)

Table A-248. SliMP3 Communication Protocol (slimp3)

Field	Field Name	Type
slimp3.control	Control Packet	Boolean
slimp3.data	Data	Boolean
slimp3.data_req	Data Request	Boolean
slimp3.discovery_req	Discovery Request	Boolean
slimp3.discovery_response	Discovery Response	Boolean
slimp3.display	Display	Boolean
slimp3.hello	Hello	Boolean
slimp3.i2c	I2C	Boolean
slimp3.ir	Infrared	Unsigned 32-bit integer
slimp3.opcode	Opcode	Unsigned 8-bit integer

Socks Protocol (socks)

Table A-249. Socks Protocol (socks)

Field	Field Name	Type
socks.command	Command	Unsigned 8-bit integer

Field	Field Name	Type
socks.dst	Remote Address	IPv4 address
socks.dstV6	Remote Address(ipv6)	IPv6 address
socks.dstport	Remote Port	Unsigned 16-bit integer
socks.results	Results(V5)	Unsigned 8-bit integer
socks.results_v4	Results(V4)	Unsigned 8-bit integer
socks.results_v5	Results(V5)	Unsigned 8-bit integer
socks.username	User Name	String
socks.version	Version	Unsigned 8-bit integer

Spanning Tree Protocol (stp)

Table A-250. Spanning Tree Protocol (stp)

Field	Field Name	Type
stp.bridge.hw	Bridge Identifier	6-byte Hardware (MAC) Address
stp.flags	BPDU flags	Unsigned 8-bit integer
stp.flags.agreement	Agreement	Boolean
stp.flags.forwarding	Forwarding	Boolean
stp.flags.learning	Learning	Boolean
stp.flags.port_role	Port Role	Unsigned 8-bit integer
stp.flags.proposal	Proposal	Boolean
stp.flags.tc	Topology Change	Boolean
stp.flags.tcack	Topology Change Acknowledgment	Boolean
stp.forward	Forward Delay	Double-precision floating point
stp.hello	Hello Time	Double-precision floating point
stp.max_age	Max Age	Double-precision floating point
stp.msg_age	Message Age	Double-precision floating point
stp.port	Port identifier	Unsigned 16-bit integer
stp.protocol	Protocol Identifier	Unsigned 16-bit integer
stp.root.cost	Root Path Cost	Unsigned 32-bit integer
stp.root.hw	Root Identifier	6-byte Hardware (MAC) Address

Field	Field Name	Type
stp.type	BPDU Type	Unsigned 8-bit integer
stp.version	Protocol Version Identifier	Unsigned 8-bit integer
stp.version_1_length	Version 1 Length	Unsigned 8-bit integer

Stream Control Transmission Protocol (sctp)

Table A-251. Stream Control Transmission Protocol (sctp)

Field	Field Name	Type
sctp.abort.t_bit	T-Bit	Boolean
sctp.adapation_layer_indication	Indication	Unsigned 32-bit integer
sctp.asconf.serial_number	Serial Number	Unsigned 32-bit integer
sctp.asconf_ack.serial_number	Serial Number	Unsigned 32-bit integer
sctp.cause.code	Cause code	Unsigned 16-bit integer
sctp.cause.length	Cause length	Unsigned 16-bit integer
sctp.cause.measure_of_staleness	Measure of staleness in usec	Unsigned 32-bit integer
sctp.cause.missing_parameter_type	Missing parameter type	Unsigned 16-bit integer
sctp.cause.nr_of_missing_parameters	Number of missing parameters	Unsigned 32-bit integer
sctp.cause.stream_identifier	Stream identifier	Unsigned 16-bit integer
sctp.cause.tsn	TSN	Unsigned 32-bit integer
sctp.checksum	Checksum	Unsigned 32-bit integer
sctp.checksum_bad	Bad checksum	Boolean
sctp.chunk_flags	Flags	Unsigned 8-bit integer
sctp.chunk_length	Length	Unsigned 16-bit integer
sctp.chunk_type	Identifier	Unsigned 8-bit integer
sctp.correlation_id	Correlation_id	Unsigned 32-bit integer
sctp.cumulative.tsn.ack	Cumulative TSN Ack	Unsigned 32-bit integer
sctp.cwr.lowest_tsn	Lowest TSN	Unsigned 32-bit integer
sctp.data.b_bit	B-Bit	Boolean
sctp.data.e_bit	E-Bit	Boolean
sctp.data.u.bit	U-Bit	Boolean

Field	Field Name	Type
sctp.dstport	Destination port	Unsigned 16-bit integer
sctp.ecne.lowest_tsn	Lowest TSN	Unsigned 32-bit integer
sctp.forward_tsn.sid	Stream identifier	Unsigned 16-bit integer
sctp.forward_tsn.ssn	Stream sequence number	Unsigned 16-bit integer
sctp.forward_tsn.tsn	New cumulative TSN	Unsigned 32-bit integer
sctp.init.chunk.credit	Advertised reciever window credit (a_rwnd)	Unsigned 32-bit integer
sctp.init.chunk.initial.tsn	Initial TSN	Unsigned 32-bit integer
sctp.init.chunk.initiate.tag	Initiate tag	Unsigned 32-bit integer
sctp.init.chunk.nr.in.streams	Number of inbound streams	Unsigned 16-bit integer
sctp.init.chunk.nr.out.streams	Number of outbound streams	Unsigned 16-bit integer
sctp.parameter.cookie_preservated_inc	Suggested Cookie life-span increment (msec)	Unsigned 32-bit integer
sctp.parameter.hostname.hostname	Hostname	String
sctp.parameter.ipv4_address	IP Version 4 address	IPv4 address
sctp.parameter.ipv6_address	IP Version 6 address	IPv6 address
sctp.parameter.length	Parameter length	Unsigned 16-bit integer
sctp.parameter.supported_address_type	Supported address type	Unsigned 16-bit integer
sctp.parameter.type	Parameter type	Unsigned 16-bit integer
sctp.payload_proto_id	Payload protocol identifier	Unsigned 32-bit integer
sctp.port	Port	Unsigned 16-bit integer
sctp.sack.a_rwnd	Advertised receiver window credit (a_rwnd)	Unsigned 32-bit integer
sctp.sack.cumulative_tsn_ack	Cumulative TSN ACK	Unsigned 32-bit integer
sctp.sack.duplicate.tsn	Duplicate TSN	Unsigned 16-bit integer
sctp.sack.gap_block_end	End	Unsigned 16-bit integer
sctp.sack.gap_block_start	Start	Unsigned 16-bit integer
sctp.sack.number_of_duplicate.tsn	Number of duplicated TSNs	Unsigned 16-bit integer
sctp.sack.number_of_gap_blocks	Number of gap acknowldgement blocks	Unsigned 16-bit integer
sctp.shutdown.cumulative_tsn_ack	Cumulative TSN Ack	Unsigned 32-bit integer

Field	Field Name	Type
sctp.shutdown_complete.t_bit	T-Bit	Boolean
sctp.srcport	Source port	Unsigned 16-bit integer
sctp.stream_id	Stream Identifier	Unsigned 16-bit integer
sctp.stream_seq_number	Stream sequence number	Unsigned 16-bit integer
sctp.tsn	TSN	Unsigned 32-bit integer
sctp.verfication_tag	Verification tag	Unsigned 32-bit integer

Syslog message (syslog)

Table A-252. Syslog message (syslog)

Field	Field Name	Type
syslog.facility	Facility	Unsigned 8-bit integer
syslog.level	Level	Unsigned 8-bit integer
syslog.msg	Message	String

Systems Network Architecture (sna)

Table A-253. Systems Network Architecture (sna)

Field	Field Name	Type
sna.nlp.frh	Transmission Priority Field	Unsigned 8-bit integer
sna.nlp.nhdr	Network Layer Packet Header	No value
sna.nlp.nhdr.0	Network Layer Packet Header Byte 0	Unsigned 8-bit integer
sna.nlp.nhdr.1	Network Layer Packet Header Bype 1	Unsigned 8-bit integer
sna.nlp.nhdr.anr	Automatic Network Routing Entry	Byte array
sna.nlp.nhdr.fra	Function Routing Address Entry	Byte array
sna.nlp.nhdr.ft	Function Type	Unsigned 8-bit integer
sna.nlp.nhdr.slowdn1	Slowdown 1	Boolean
sna.nlp.nhdr.slowdn2	Slowdown 2	Boolean

Field	Field Name	Type
sna.nlp.nhdr.sm	Switching Mode Field	Unsigned 8-bit integer
sna.nlp.nhdr.tpf	Transmission Priority Field	Unsigned 8-bit integer
sna.nlp.nhdr.tspi	Time Sensitive Packet Indicator	Boolean
sna.nlp.thdr	RTP Transport Header	No value
sna.nlp.thdr.8	RTP Transport Packet Header Bype 8	Unsigned 8-bit integer
sna.nlp.thdr.9	RTP Transport Packet Header Bype 9	Unsigned 8-bit integer
sna.nlp.thdr.bsn	Byte Sequence Number	Unsigned 32-bit integer
sna.nlp.thdr.cqfi	Connection Qualifyer Field Indicator	Boolean
sna.nlp.thdr.dlf	Data Length Field	Unsigned 32-bit integer
sna.nlp.thdr.eomi	End Of Message Indicator	Boolean
sna.nlp.thdr.lmi	Last Message Indicator	Boolean
sna.nlp.thdr.offset	Data Offset/4	Unsigned 16-bit integer
sna.nlp.thdr.osi	Optional Segments Present Indicator	Boolean
sna.nlp.thdr.rasapi	Reply ASAP Indicator	Boolean
sna.nlp.thdr.retryi	Retry Indicator	Boolean
sna.nlp.thdr.setupi	Setup Indicator	Boolean
sna.nlp.thdr.somi	Start Of Message Indicator	Boolean
sna.nlp.thdr.sri	Session Request Indicator	Boolean
sna.nlp.thdr.tcid	Transport Connection Identifier	Byte array
sna.rh	Request/Response Header	No value
sna.rh.0	Request/Response Header Byte 0	Unsigned 8-bit integer
sna.rh.1	Request/Response Header Byte 1	Unsigned 8-bit integer
sna.rh.2	Request/Response Header Byte 2	Unsigned 8-bit integer
sna.rh.bbi	Begin Bracket Indicator	Boolean
sna.rh.bci	Begin Chain Indicator	Boolean
sna.rh.cdi	Change Direction Indicator	Boolean
sna.rh.cebi	Conditional End Bracket Indicator	Boolean

Field	Field Name	Type
sna.rh.csi	Code Selection Indicator	Unsigned 8-bit integer
sna.rh.dr1	Definite Response 1 Indicator	Boolean
sna.rh.dr2	Definite Response 2 Indicator	Boolean
sna.rh.ebi	End Bracket Indicator	Boolean
sna.rh.eci	End Chain Indicator	Boolean
sna.rh.edi	Enciphered Data Indicator	Boolean
sna.rh.eri	Exception Response Indicator	Boolean
sna.rh.fi	Format Indicator	Boolean
sna.rh.lcci	Length-Checked Compression Indicator	Boolean
sna.rh.pdi	Padded Data Indicator	Boolean
sna.rh.pi	Pacing Indicator	Boolean
sna.rh.qri	Queued Response Indicator	Boolean
sna.rh.rlwi	Request Larger Window Indicator	Boolean
sna.rh.rri	Request/Response Indicator	Unsigned 8-bit integer
sna.rh.rti	Response Type Indicator	Boolean
sna.rh.ru_category	Request/Response Unit Category	Unsigned 8-bit integer
sna.rh.sdi	Sense Data Included	Boolean
sna.th	Transmission Header	No value
sna.th.0	Transmission Header Byte 0	Unsigned 8-bit integer
sna.th.cmd_fmt	Command Format	Unsigned 8-bit integer
sna.th.cmd_sn	Command Sequence Number	Unsigned 16-bit integer
sna.th.cmd_type	Command Type	Unsigned 8-bit integer
sna.th.daf	Destination Address Field	Unsigned 16-bit integer
sna.th.dcf	Data Count Field	Unsigned 16-bit integer
sna.th.def	Destination Element Field	Unsigned 16-bit integer
sna.th.dsaf	Destination Subarea Address Field	Unsigned 32-bit integer
sna.th.efi	Expedited Flow Indicator	Unsigned 8-bit integer

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Field	Field Name	Type
sna.th.er_vr_supp_ind	ER and VR Support Indicator	Unsigned 8-bit integer
sna.th.ern	Explicit Route Number	Unsigned 8-bit integer
sna.th.fid	Format Identifer	Unsigned 8-bit integer
sna.th.iern	Initial Explicit Route Number	Unsigned 8-bit integer
sna.th.lsid	Local Session Identification	Unsigned 8-bit integer
sna.th.mft	MPR FID4 Type	Boolean
sna.th.mpf	Mapping Field	Unsigned 8-bit integer
sna.th.nlp_cp	NLP Count or Padding	Unsigned 8-bit integer
sna.th.nlpoi	NLP Offset Indicator	Unsigned 8-bit integer
sna.th.ntwk_prty	Network Priority	Unsigned 8-bit integer
sna.th.oaf	Origin Address Field	Unsigned 16-bit integer
sna.th.odai	ODAI Assignment Indicator	Unsigned 8-bit integer
sna.th.oef	Origin Element Field	Unsigned 16-bit integer
sna.th.osaf	Origin Subarea Address Field	Unsigned 32-bit integer
sna.th.piubf	PIU Blocking Field	Unsigned 8-bit integer
sna.th.sa	Session Address	Byte array
sna.th.snai	SNA Indicator	Boolean
sna.th.snf	Sequence Number Field	Unsigned 16-bit integer
sna.th.tg_nonfifo_ind	Transmission Group Non-FIFO Indicator	Boolean
sna.th.tg_snf	Transmission Group Sequence Number Field	Unsigned 16-bit integer
sna.th.tg_sweep	Transmission Group Sweep	Unsigned 8-bit integer
sna.th.tgsf	Transmission Group Segmenting Field	Unsigned 8-bit integer
sna.th.tpf	Transmission Priority Field	Unsigned 8-bit integer
sna.th.vr_cwi	Virtual Route Change Window Indicator	Unsigned 16-bit integer
sna.th.vr_cwri	Virtual Route Change Window Reply Indicator	Unsigned 16-bit integer
sna.th.vr_pac_cnt_ind	Virtual Route Pacing Count Indicator	Unsigned 8-bit integer

Field	Field Name	Type
sna.th.vr_rwi	Virtual Route Reset Window Indicator	Boolean
sna.th.vr_snf_send	Virtual Route Send Sequence Number Field	Unsigned 16-bit integer
sna.th.vr_sqti	Virtual Route Sequence and Type Indicator	Unsigned 16-bit integer
sna.th.vrn	Virtual Route Number	Unsigned 8-bit integer
sna.th.vrprq	Virtual Route Pacing Request	Boolean
sna.th.vrprs	Virtual Route Pacing Response	Boolean

TACACS (tacacs)

Table A-254. TACACS (tacacs)

Field	Field Name	Type
tacacs.destaddr	Destination address	IPv4 address
tacacs.destport	Destination port	Unsigned 16-bit integer
tacacs.line	Line	Unsigned 16-bit integer
tacacs.nonce	Nonce	Unsigned 16-bit integer
tacacs.passlen	Password length	Unsigned 8-bit integer
tacacs.reason	Reason	Unsigned 8-bit integer
tacacs.response	Response	Unsigned 8-bit integer
tacacs.result1	Result 1	Unsigned 32-bit integer
tacacs.result2	Result 2	Unsigned 32-bit integer
tacacs.result3	Result 3	Unsigned 16-bit integer
tacacs.type	Type	Unsigned 8-bit integer
tacacs.userlen	Username length	Unsigned 8-bit integer
tacacs.version	Version	Unsigned 8-bit integer

TACACS+ (tacplus)

Table A-255. TACACS+ (tacplus)

Field	Field Name	Type
tacplus.flags	Flags	Unsigned 8-bit integer

Field	Field Name	Type
tacplus.flags.connection_type	Connection type	Boolean
tacplus.flags.payload_type	Payload type	Boolean
tacplus.majvers	Major version	Unsigned 8-bit integer
tacplus.minvers	Minor version	Unsigned 8-bit integer
tacplus.packet_len	Packet length	Unsigned 32-bit integer
tacplus.request	Request	Boolean
tacplus.response	Response	Boolean
tacplus.seqno	Sequence number	Unsigned 8-bit integer
tacplus.session_id	Session ID	Unsigned 32-bit integer
tacplus.type	Type	Unsigned 8-bit integer

TPKT (tpkt)

Table A-256. TPKT (tpkt)

Field	Field Name	Type
tpkt.length	Length	Unsigned 16-bit integer
tpkt.reserved	Reserved	Unsigned 8-bit integer
tpkt.version	Version	Unsigned 8-bit integer

Telnet (telnet)

Table A-257. Telnet (telnet)

Field	Field Name	Type

Time Protocol (time)

Table A-258. Time Protocol (time)

Field	Field Name	Type
time.time	Time	Unsigned 32-bit integer

Time Synchronization Protocol (tsp)

Table A-259. Time Synchronization Protocol (tsp)

Field	Field Name	Type
tsp.hopcnt	Hop Count	Unsigned 8-bit integer
tsp.name	Machine Name	String
tsp.sec	Seconds	Unsigned 32-bit integer
tsp.sequence	Sequence	Unsigned 16-bit integer
tsp.type	Type	Unsigned 8-bit integer
tsp.usec	Microseconds	Unsigned 32-bit integer
tsp.version	Version	Unsigned 8-bit integer

Token-Ring (tr)

Table A-260. Token-Ring (tr)

Field	Field Name	Type
tr.ac	Access Control	Unsigned 8-bit integer
tr.addr	Source or Destination Address	6-byte Hardware (MAC) Address
tr.broadcast	Broadcast Type	Unsigned 8-bit integer
tr.direction	Direction	Unsigned 8-bit integer
tr.dst	Destination	6-byte Hardware (MAC) Address
tr.fc	Frame Control	Unsigned 8-bit integer
tr.frame	Frame	Boolean
tr.frame_pcf	Frame PCF	Unsigned 8-bit integer
tr.frame_type	Frame Type	Unsigned 8-bit integer
tr.max_frame_size	Maximum Frame Size	Unsigned 8-bit integer
tr.monitor_cnt	Monitor Count	Unsigned 8-bit integer
tr.priority	Priority	Unsigned 8-bit integer
tr.priority_reservation	Priority Reservation	Unsigned 8-bit integer
tr.rif	Ring-Bridge Pairs	String
tr.rif.bridge	RIF Bridge	Unsigned 8-bit integer
tr.rif.ring	RIF Ring	Unsigned 16-bit integer
tr.rif_bytes	RIF Bytes	Unsigned 8-bit integer
tr.sr	Source Routed	Boolean

Field	Field Name	Type
tr.src	Source	6-byte Hardware (MAC) Address

Token-Ring Media Access Control (trmac)

Table A-261. Token-Ring Media Access Control (trmac)

Field	Field Name	Type
trmac.dstclass	Destination Class	Unsigned 8-bit integer
trmac.errors.abort	Abort Delimiter Transmitted Errors	Unsigned 8-bit integer
trmac.errors.ac	A/C Errors	Unsigned 8-bit integer
trmac.errors.burst	Burst Errors	Unsigned 8-bit integer
trmac.errors.congestion	Receiver Congestion Errors	Unsigned 8-bit integer
trmac.errors.fc	Frame-Copied Errors	Unsigned 8-bit integer
trmac.errors.freq	Frequency Errors	Unsigned 8-bit integer
trmac.errors.internal	Internal Errors	Unsigned 8-bit integer
trmac.errors.iso	Isolating Errors	Unsigned 16-bit integer
trmac.errors.line	Line Errors	Unsigned 8-bit integer
trmac.errors.lost	Lost Frame Errors	Unsigned 8-bit integer
trmac.errors.noniso	Non-Isolating Errors	Unsigned 16-bit integer
trmac.errors.token	Token Errors	Unsigned 8-bit integer
trmac.length	Total Length	Unsigned 8-bit integer
trmac.mvec	Major Vector	Unsigned 8-bit integer
trmac.naun	NAUN	6-byte Hardware (MAC) Address
trmac.srcclass	Source Class	Unsigned 8-bit integer
trmac.svec	Sub-Vector	Unsigned 8-bit integer

Transmission Control Protocol (tcp)

Table A-262. Transmission Control Protocol (tcp)

Field	Field Name	Type
tcp.ack	Acknowledgement number	Unsigned 32-bit integer

Field	Field Name	Type
tcp.analysis.ack_rtt	The RTT to ACK the segment was	Time duration
tcp.analysis.acks_frame	This is an ACK to the segment in frame	Unsigned 32-bit integer
tcp.checksum	Checksum	Unsigned 16-bit integer
tcp.checksum_bad	Bad Checksum	Boolean
tcp.dstport	Destination Port	Unsigned 16-bit integer
tcp.flags	Flags	Unsigned 8-bit integer
tcp.flags.ack	Acknowledgment	Boolean
tcp.flags.cwr	Congestion Window Reduced (CWR)	Boolean
tcp.flags.ecn	ECN-Echo	Boolean
tcp.flags.fin	Fin	Boolean
tcp.flags.push	Push	Boolean
tcp.flags.reset	Reset	Boolean
tcp.flags.syn	Syn	Boolean
tcp.flags.urg	Urgent	Boolean
tcp.hdr_len	Header Length	Unsigned 8-bit integer
tcp.len	TCP Segment Len	Unsigned 32-bit integer
tcp.nxtseq	Next sequence number	Unsigned 32-bit integer
tcp.port	Source or Destination Port	Unsigned 16-bit integer
tcp.seq	Sequence number	Unsigned 32-bit integer
tcp.srcport	Source Port	Unsigned 16-bit integer
tcp.urgent_pointer	Urgent pointer	Unsigned 16-bit integer
tcp.window_size	Window size	Unsigned 16-bit integer

Transparent Network Substrate Protocol (tns)

Table A-263. Transparent Network Substrate Protocol (tns)

Field	Field Name	Type
tns.abort	Abort	Boolean
tns.abort_data	Abort Data	String
tns.abort_reason_system	Abort Reason (User)	Unsigned 8-bit integer
tns.abort_reason_user	Abort Reason (User)	Unsigned 8-bit integer
tns.accept	Accept	Boolean

Field	Field Name	Type
tns.accept_data	Accept Data	String
tns.accept_data_length	Accept Data Length	Unsigned 16-bit integer
tns.accept_data_offset	Offset to Accept Data	Unsigned 16-bit integer
tns.compat_version	Version (Compatible)	Unsigned 16-bit integer
tns.connect	Connect	Boolean
tns.connect_data	Connect Data	String
tns.connect_data_length	Length of Connect Data	Unsigned 16-bit integer
tns.connect_data_max	Maximum Receivable Connect Data	Unsigned 32-bit integer
tns.connect_data_offset	Offset to Connect Data	Unsigned 16-bit integer
tns.connect_flags.enablena	NA services enabled	Unsigned 8-bit integer
tns.connect_flags.ichg	Interchange is involved	Unsigned 8-bit integer
tns.connect_flags.nalink	NA services linked in	Unsigned 8-bit integer
tns.connect_flags.nareq	NA services required	Unsigned 8-bit integer
tns.connect_flags.wantna	NA services wanted	Unsigned 8-bit integer
tns.connect_flags0	Connect Flags 0	Unsigned 8-bit integer
tns.connect_flags1	Connect Flags 1	Unsigned 8-bit integer
tns.control	Control	Boolean
tns.control.cmd	Control Command	Unsigned 16-bit integer
tns.control.data	Control Data	Byte array
tns.data	Data	Boolean
tns.data_flag	Data Flag	Unsigned 16-bit integer
tns.data_flag.c	Confirmation	Unsigned 16-bit integer
tns.data_flag.dic	Do Immediate Confirmation	Unsigned 16-bit integer
tns.data_flag.eof	End of File	Unsigned 16-bit integer
tns.data_flag.more	More Data to Come	Unsigned 16-bit integer
tns.data_flag.rc	Request Confirmation	Unsigned 16-bit integer
tns.data_flag.reserved	Reserved	Unsigned 16-bit integer
tns.data_flag.rts	Request To Send	Unsigned 16-bit integer
tns.data_flag.send	Send Token	Unsigned 16-bit integer
tns.data_flag.sntt	Send NT Trailer	Unsigned 16-bit integer
tns.header_checksum	Header Checksum	Unsigned 16-bit integer
tns.length	Packet Length	Unsigned 16-bit integer
tns.line_turnaround	Line Turnaround Value	Unsigned 16-bit integer
tns.marker	Marker	Boolean

Field	Field Name	Type
tns.marker.data	Marker Data	Unsigned 16-bit integer
tns.marker.databyte	Marker Data Byte	Unsigned 8-bit integer
tns.marker.type	Marker Type	Unsigned 8-bit integer
tns.max_tdu_size	Maximum Transmission Data Unit Size	Unsigned 16-bit integer
tns.nt_proto_characteristics	NT Protocol Characteristics	Unsigned 16-bit integer
tns.ntp_flag.asio	ASync IO Supported	Unsigned 16-bit integer
tns.ntp_flag.cbio	Callback IO supported	Unsigned 16-bit integer
tns.ntp_flag.crel	Confirmed release	Unsigned 16-bit integer
tns.ntp_flag.dfio	Full duplex IO supported	Unsigned 16-bit integer
tns.ntp_flag.dtest	Data test	Unsigned 16-bit integer
tns.ntp_flag.grant	Can grant connection to another	Unsigned 16-bit integer
tns.ntp_flag.handoff	Can handoff connection to another	Unsigned 16-bit integer
tns.ntp_flag.hangon	Hangon to listener connect	Unsigned 16-bit integer
tns.ntp_flag.pio	Packet oriented IO	Unsigned 16-bit integer
tns.ntp_flag.sigio	Generate SIGIO signal	Unsigned 16-bit integer
tns.ntp_flag.sigpipe	Generate SIGPIPE signal	Unsigned 16-bit integer
tns.ntp_flag.sigurg	Generate SIGURG signal	Unsigned 16-bit integer
tns.ntp_flag.srun	Spawner running	Unsigned 16-bit integer
tns.ntp_flag.tduio	TDU based IO	Unsigned 16-bit integer
tns.ntp_flag.testop	Test operation	Unsigned 16-bit integer
tns.ntp_flag.urgentio	Urgent IO supported	Unsigned 16-bit integer
tns.packet_checksum	Packet Checksum	Unsigned 16-bit integer
tns.redirect	Redirect	Boolean
tns.redirect_data	Redirect Data	String
tns.redirect_data_length	Redirect Data Length	Unsigned 16-bit integer
tns.refuse	Refuse	Boolean
tns.refuse_data	Refuse Data	String
tns.refuse_data_length	Refuse Data Length	Unsigned 16-bit integer
tns.refuse_reason_system	Refuse Reason (System)	Unsigned 8-bit integer
tns.refuse_reason_user	Refuse Reason (User)	Unsigned 8-bit integer
tns.request	Request	Boolean
tns.reserved_byte	Reserved Byte	Byte array
tns.response	Response	Boolean

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Field	Field Name	Type
tns.sdu_size	Session Data Unit Size	Unsigned 16-bit integer
tns.service_options	Service Options	Unsigned 16-bit integer
tns.so_flag.ap	Attention Processing	Unsigned 16-bit integer
tns.so_flag.bconn	Broken Connect Notify	Unsigned 16-bit integer
tns.so_flag.dc1	Don't Care	Unsigned 16-bit integer
tns.so_flag.dc2	Don't Care	Unsigned 16-bit integer
tns.so_flag.dio	Direct IO to Transport	Unsigned 16-bit integer
tns.so_flag.fd	Full Duplex	Unsigned 16-bit integer
tns.so_flag.hc	Header Checksum	Unsigned 16-bit integer
tns.so_flag.hd	Half Duplex	Unsigned 16-bit integer
tns.so_flag.pc	Packet Checksum	Unsigned 16-bit integer
tns.so_flag.ra	Can Receive Attention	Unsigned 16-bit integer
tns.so_flag.sa	Can Send Attention	Unsigned 16-bit integer
tns.trace_cf1	Trace Cross Facility Item 1	Unsigned 32-bit integer
tns.trace_cf2	Trace Cross Facility Item 2	Unsigned 32-bit integer
tns.trace_cid	Trace Unique Connection ID	
tns.type	Packet Type	Unsigned 8-bit integer
tns.value_of_one	Value of 1 in Hardware	Byte array
tns.version	Version	Unsigned 16-bit integer

Trivial File Transfer Protocol (tftp)

Table A-264. Trivial File Transfer Protocol (tftp)

Field	Field Name	Type
tftp.block	Block	Unsigned 16-bit integer
tftp.destination_file	DESTINATION File	String
tftp.error.code	Error code	Unsigned 16-bit integer
tftp.error.message	Error message	String
tftp.opcode	Opcode	Unsigned 16-bit integer
tftp.source_file	Source File	String
tftp.type	Type	String

Universal Computer Protocol (ucp)

Table A-265. Universal Computer Protocol (ucp)

Field	Field Name	Type
ucp.hdr.LEN	Length	Unsigned 16-bit integer
ucp.hdr.OT	Operation	Unsigned 8-bit integer
ucp.hdr.O_R	Type	Unsigned 8-bit integer
ucp.hdr.TRN	Transaction Reference Number	Unsigned 8-bit integer
ucp.message	Data	No value
ucp.parm	Data	No value
ucp.parm.AAC	AAC	String
ucp.parm.AC	AC	String
ucp.parm.ACK	(N)Ack	Unsigned 8-bit integer
ucp.parm.A_D	A_D	Unsigned 8-bit integer
ucp.parm.AdC	AdC	String
ucp.parm.BAS	BAS	Unsigned 8-bit integer
ucp.parm.CPg	CPg	String
ucp.parm.CS	CS	Unsigned 8-bit integer
ucp.parm.CT	CT	Date/Time stamp
ucp.parm.DAdC	DAdC	String
ucp.parm.DCs	DCs	Unsigned 8-bit integer
ucp.parm.DD	DD	Unsigned 8-bit integer
ucp.parm.DDT	DDT	Date/Time stamp
ucp.parm.DSCTS	DSCTS	Date/Time stamp
ucp.parm.Dst	Dst	Unsigned 8-bit integer
ucp.parm.EC	Error code	Unsigned 8-bit integer
ucp.parm.GA	GA	String
ucp.parm.GAdC	GAdC	String
ucp.parm.HPLMN	HPLMN	String
ucp.parm.IVR5x	IVR5x	String
ucp.parm.L1P	L1P	String
ucp.parm.L1R	L1R	Unsigned 8-bit integer
ucp.parm.L3P	L3P	String
ucp.parm.L3R	L3R	Unsigned 8-bit integer
ucp.parm.LAC	LAC	String
ucp.parm.LAR	LAR	Unsigned 8-bit integer

Field	Field Name	Type
ucp.parm.LAdC	LAdC	String
ucp.parm.LCR	LCR	Unsigned 8-bit integer
ucp.parm.LMN	LMN	Unsigned 8-bit integer
ucp.parm.LNPI	LNPI	Unsigned 8-bit integer
ucp.parm.LNo	LNo	String
ucp.parm.LPID	LPID	Unsigned 16-bit integer
ucp.parm.LPR	LPR	String
ucp.parm.LRAd	LRAd	String
ucp.parm.LRC	LRC	String
ucp.parm.LRP	LRP	String
ucp.parm.LRR	LRR	Unsigned 8-bit integer
ucp.parm.LRq	LRq	Unsigned 8-bit integer
ucp.parm.LST	LST	String
ucp.parm.LTON	LTON	Unsigned 8-bit integer
ucp.parm.LUM	LUM	String
ucp.parm.LUR	LUR	Unsigned 8-bit integer
ucp.parm.MCLs	MCLs	Unsigned 8-bit integer
ucp.parm.MMS	MMS	Unsigned 8-bit integer
ucp.parm.MNo	MNo	String
ucp.parm.MT	MT	Unsigned 8-bit integer
ucp.parm.MVP	MVP	Date/Time stamp
ucp.parm.NAC	NAC	String
ucp.parm.NAdC	NAdC	String
ucp.parm.NB	NB	String
ucp.parm.NMESS	NMESS	Unsigned 8-bit integer
ucp.parm.NMESS_str	NMESS_str	String
ucp.parm.NPID	NPID	Unsigned 16-bit integer
ucp.parm.NPL	NPL	Unsigned 16-bit integer
ucp.parm.NPWD	NPWD	No value
ucp.parm.NRq	NRq	Unsigned 8-bit integer
ucp.parm.NT	NT	Unsigned 8-bit integer
ucp.parm.NoA	NoA	Unsigned 16-bit integer
ucp.parm.NoB	NoB	Unsigned 16-bit integer
ucp.parm.NoN	NoN	Unsigned 16-bit integer
ucp.parm.OAC	OAC	String
ucp.parm.OAdC	OAdC	String

Field	Field Name	Type
ucp.parm.ONPI	ONPI	Unsigned 8-bit integer
ucp.parm.OPID	OPID	Unsigned 8-bit integer
ucp.parm.OTOA	OTOA	String
ucp.parm.OTON	OTON	Unsigned 8-bit integer
ucp.parm.PID	PID	Unsigned 16-bit integer
ucp.parm.PNC	PNC	Unsigned 8-bit integer
ucp.parm.PR	PR	Unsigned 8-bit integer
ucp.parm.PWD	PWD	No value
ucp.parm.RC	RC	Unsigned 8-bit integer
ucp.parm.REQ_OT	REQ_OT	Unsigned 8-bit integer
ucp.parm.RES1	RES1	String
ucp.parm.RES2	RES2	String
ucp.parm.RES4	RES4	String
ucp.parm.RES5	RES5	String
ucp.parm.RP	RP	Unsigned 8-bit integer
ucp.parm.RPI	RPI	Unsigned 8-bit integer
ucp.parm.RPID	RPID	String
ucp.parm.RPLy	RPLy	String
ucp.parm.RT	RT	Unsigned 8-bit integer
ucp.parm.R_T	R_T	String
ucp.parm.Rsn	Rsn	Unsigned 16-bit integer
ucp.parm.SCTS	SCTS	Date/Time stamp
ucp.parm.SM	SM	String
ucp.parm.SP	SP	Date/Time stamp
ucp.parm.SSTAT	SSTAT	Unsigned 8-bit integer
ucp.parm.ST	ST	Date/Time stamp
ucp.parm.STYP0	STYP0	Unsigned 8-bit integer
ucp.parm.STYP1	STYP1	Unsigned 8-bit integer
ucp.parm.STx	STx	No value
ucp.parm.TNo	TNo	String
ucp.parm.UM	UM	Unsigned 8-bit integer
ucp.parm.VERS	VERS	String
ucp.parm.VP	VP	Date/Time stamp
ucp.parm.XSer	Extra services:	No value
ucp.xser.service	Type of service	Unsigned 8-bit integer

Unreassembled Fragmented Packet (unreassembled)

Table A-266. Unreassembled Fragmented Packet (unreassembled)

Field	Field Name	Type

User Datagram Protocol (udp)

Table A-267. User Datagram Protocol (udp)

Field	Field Name	Type
udp.checksum	Checksum	Unsigned 16-bit integer
udp.checksum_bad	Bad Checksum	Boolean
udp.dstport	Destination Port	Unsigned 16-bit integer
udp.length	Length	Unsigned 16-bit integer
udp.port	Source or Destination Port	Unsigned 16-bit integer
udp.srcport	Source Port	Unsigned 16-bit integer

Virtual Router Redundancy Protocol (vrrp)

Table A-268. Virtual Router Redundancy Protocol (vrrp)

Field	Field Name	Type
vrrp.adver_int	Adver Int	Unsigned 8-bit integer
vrrp.auth_type	Auth Type	Unsigned 8-bit integer
vrrp.count_ip_addrs	Count IP Addrs	Unsigned 8-bit integer
vrrp.ip_addr	IP Address	IPv4 address
vrrp.ipv6_addr	IPv6 Address	IPv6 address
vrrp.prio	Priority	Unsigned 8-bit integer
vrrp.type	VRRP packet type	Unsigned 8-bit integer
vrrp.typever	VRRP message version and type	Unsigned 8-bit integer
vrrp.version	VRRP protocol version	Unsigned 8-bit integer
vrrp.virt_rtr_id	Virtual Rtr ID	Unsigned 8-bit integer

Virtual Trunking Protocol (vtp)

Table A-269. Virtual Trunking Protocol (vtp)

Field	Field Name	Type
vtp.code	Code	Unsigned 8-bit integer
vtp.conf_rev_num	Configuration Revision Number	Unsigned 32-bit integer
vtp.followers	Followers	Unsigned 8-bit integer
vtp.md	Management Domain	String
vtp.md5_digest	MD5 Digest	Byte array
vtp.md_len	Management Domain Length	Unsigned 8-bit integer
vtp.seq_num	Sequence Number	Unsigned 8-bit integer
vtp.start_value	Start Value	Unsigned 16-bit integer
vtp.upd_id	Updater Identity	IPv4 address
vtp.upd_ts	Update Timestamp	String
vtp.version	Version	Unsigned 8-bit integer
vtp.vlan_info.802_10_index	802.10 Index	Unsigned 32-bit integer
vtp.vlan_info.isl_vlan_id	ISL VLAN ID	Unsigned 16-bit integer
vtp.vlan_info.len	VLAN Information Length	Unsigned 8-bit integer
vtp.vlan_info.mtu_size	MTU Size	Unsigned 16-bit integer
vtp.vlan_info.status.vlan_susp	VLAN suspended	Boolean
vtp.vlan_info.tlv_len	Length	Unsigned 8-bit integer
vtp.vlan_info.tlv_type	Type	Unsigned 8-bit integer
vtp.vlan_info.vlan_name	VLAN Name	String
vtp.vlan_info.vlan_name_len	VLAN Name Length	Unsigned 8-bit integer
vtp.vlan_info.vlan_type	VLAN Type	Unsigned 8-bit integer

Web Cache Coordination Protocol (wccp)

Table A-270. Web Cache Coordination Protocol (wccp)

Field	Field Name	Type
wccp.cache_ip	Web Cache IP address	IPv4 address
wccp.change_num	Change Number	Unsigned 32-bit integer

Field	Field Name	Type
wccp.hash_revision	Hash Revision	Unsigned 32-bit integer
wccp.message	WCCP Message Type	Unsigned 32-bit integer
wccp.recvd_id	Received ID	Unsigned 32-bit integer
wccp.version	WCCP Version	Unsigned 32-bit integer

Wellfleet Compression (wcp)

Table A-271. Wellfleet Compression (wcp)

Field	Field Name	Type
wcp.alg	Alg	Unsigned 8-bit integer
wcp.alg1	Alg 1	Unsigned 8-bit integer
wcp.alg2	Alg 2	Unsigned 8-bit integer
wcp.alg3	Alg 3	Unsigned 8-bit integer
wcp.alg4	Alg 4	Unsigned 8-bit integer
wcp.alg_cnt	Alg Count	Unsigned 8-bit integer
wcp.checksum	Checksum	Unsigned 8-bit integer
wcp.cmd	Command	Unsigned 8-bit integer
wcp.ext_cmd	Extended Command	Unsigned 8-bit integer
wcp.flag	Compress Flag	Unsigned 8-bit integer
wcp.hist	History	Unsigned 8-bit integer
wcp.init	Initiator	Unsigned 8-bit integer
wcp.long_comp	Long Compression	Unsigned 16-bit integer
wcp.long_len	Compress Length	Unsigned 8-bit integer
wcp.mark	Compress Marker	Unsigned 8-bit integer
wcp.off	Source offset	Unsigned 16-bit integer
wcp.pib	PIB	Unsigned 8-bit integer
wcp.ppc	PerPackComp	Unsigned 8-bit integer
wcp.rev	Revision	Unsigned 8-bit integer
wcp.rexmit	Rexmit	Unsigned 8-bit integer
wcp.seq	SEQ	Unsigned 16-bit integer
wcp.seq_size	Seq Size	Unsigned 8-bit integer
wcp.short_comp	Short Compression	Unsigned 8-bit integer
wcp.short_len	Compress Length	Unsigned 8-bit integer
wcp.tid	TID	Unsigned 16-bit integer

Who (who)

Table A-272. Who (who)

Field	Field Name	Type
who.boottime	Boot Time	Date/Time stamp
who.hostname	Hostname	String
who.idle	Time Idle	Unsigned 32-bit integer
who.loadav_10	Load Average Over Past 10 Minutes	Double-precision floating point
who.loadav_15	Load Average Over Past 15 Minutes	Double-precision floating point
who.loadav_5	Load Average Over Past 5 Minutes	Double-precision floating point
who.recvtime	Receive Time	Date/Time stamp
who.sendtime	Send Time	Date/Time stamp
who.timeon	Time On	Date/Time stamp
who.tty	TTY Name	String
who.type	Type	Unsigned 8-bit integer
who.uid	User ID	String
who.vers	Version	Unsigned 8-bit integer
who.whoent	Who utmp Entry	No value

Wireless Session Protocol (wap-wsp)

Table A-273. Wireless Session Protocol (wap-wsp)

Field	Field Name	Type
wsp.TID	Transmission ID	Unsigned 8-bit integer
wsp.capabilities	Capabilities	No value
wsp.capabilities.aliases	Aliases	Unsigned 8-bit integer
wsp.capabilities.client_SDU	Client SDU	Unsigned 8-bit integer
wsp.capabilities.code_pages	Header Code Pages	String
wsp.capabilities.extend_methods	Extended Methods	String
wsp.capabilities.method_mor	Method MOR	Unsigned 8-bit integer

Field	Field Name	Type
wsp.capabilities.protocol_opt	Protocol Options	String
wsp.capabilities.push_mor	Push MOR	Unsigned 8-bit integer
wsp.capabilities.server_SDU	Server SDU	Unsigned 8-bit integer
wsp.capability.length	Capability Length	Unsigned 32-bit integer
wsp.content_type.parameter.charset	Charset	Unsigned 16-bit integer
wsp.content_type.parameter.comment	Comment	String
wsp.content_type.parameter.domain	Domain	String
wsp.content_type.parameter.filename	Filename	String
wsp.content_type.parameter.name	Name	String
wsp.content_type.parameter.path	Path	String
wsp.content_type.parameter.start	Start	String
wsp.content_type.parameter.start_info	Start info	String
wsp.content_type.parameter.type	Type	Unsigned 32-bit integer
wsp.content_type.parameter.upart.type	Type.type	String
wsp.content_type.parameter.upart.type.int	Type.type.int	Unsigned 8-bit integer
wsp.content_type.type	Content Type	Unsigned 8-bit integer
wsp.content_type.type.string	Content Type	String
wsp.header.accept	Accept	Unsigned 8-bit integer
wsp.header.accept.string	Accept	String
wsp.header.accept_application	Accept-Application	Unsigned 32-bit integer
wsp.header.accept_application.string	Accept-Application	String
wsp.header.accept_charset	Accept-Charset	Unsigned 16-bit integer
wsp.header.accept_charset.string	Accept-Charset	String

Field	Field Name	Type
wsp.header.accept_language	Accept-Language	Unsigned 8-bit integer
wsp.header.accept_language.string	Accept-Language	String
wsp.header.accept_ranges	Accept-Ranges	Unsigned 8-bit integer
wsp.header.accept_ranges.string	Accept-Ranges	String
wsp.header.age	Age	Unsigned 32-bit integer
wsp.header.application_header	Application Header	String
wsp.header.application_header.value	Application Header Value	String
wsp.header.bearer_indication	Bearer-indication	Unsigned 32-bit integer
wsp.header.cache_control	Cache-Control	Unsigned 8-bit integer
wsp.header.cache_control.field_name	Field Name	Unsigned 8-bit integer
wsp.header.cache_control.field_name.str	Field Name	String
wsp.header.cache_control.string	Cache-Control	String
wsp.header.connection	Connection	Unsigned 8-bit integer
wsp.header.connection_str	Connection	String
wsp.header.content-id	Content-ID	String
wsp.header.content_length	Content-Length	Unsigned 32-bit integer
wsp.header.date	Date	Date/Time stamp
wsp.header.etag	Etag	String
wsp.header.expires	Expires	Date/Time stamp
wsp.header.if_modified_since	If-Modified-Since	Date/Time stamp
wsp.header.last_modified	Last-Modified	Date/Time stamp
wsp.header.location	Location	String
wsp.header.pragma	Pragma	String
wsp.header.profile	Profile	String
wsp.header.server	Server	String
wsp.header.shift	Shift code	Unsigned 8-bit integer
wsp.header.transfer_enc	Transfer Encoding	Unsigned 8-bit integer

Field	Field Name	Type
wsp.header.transfer_enc_str	Transfer Encoding	String
wsp.header.user_agent	User-Agent	String
wsp.header.via	Via	String
wsp.header.wap_application_id	X-Wap-Application-Id	Unsigned 8-bit integer
wsp.header.wap_application_id_str	X-Wap-Application-Id	String
wsp.header.warning	Warning	No value
wsp.header.warning.agent	Warning Agent	String
wsp.header.warning.code	Warning Code	Unsigned 32-bit integer
wsp.header.warning.text	Warning Text	String
wsp.header.x-up-devcap-em-size	x-up-devcap-em-size	Unsigned 32-bit integer
wsp.header.x-up-devcap-gui	x-up-devcap-gui	Unsigned 8-bit integer
wsp.header.x-up-devcap-has-color	x-up-devcap-has-color	Unsigned 8-bit integer
wsp.header.x-up-devcap-immed-alert	x-up-devcap-immed-alert	Unsigned 8-bit integer
wsp.header.x-up-devcap-num-softkeys	x-up-devcap-num-softkeys	Unsigned 8-bit integer
wsp.header.x-up-devcap-screen-chars	x-up-devcap-screen-chars	Unsigned 8-bit integer
wsp.header.x-up-devcap-screen-depth	x-up-devcap-screen-depth	Unsigned 8-bit integer
wsp.header.x-up-devcap-screen-pixels	x-up-devcap-screen-pixels	Unsigned 32-bit integer
wsp.header.x-up-devcap-softkey-size	x-up-devcap-softkey-size	Unsigned 8-bit integer
wsp.header.x-up-proxy-ba-enable	x-up-proxy-ba-enable	Unsigned 8-bit integer

Field	Field Name	Type
wsp.header.x-up-proxy-ba-realm	x-up-proxy-ba-realm	String
wsp.header.x-up-proxy-bookmark	x-up-proxy-bookmark	String
wsp.header.x-up-proxy-client-id	x-up-proxy-client-id	Byte array
wsp.header.x-up-proxy-enable-trust	x-up-proxy-enable-trust	Unsigned 8-bit integer
wsp.header.x-up-proxy-home-page	x-up-proxy-home-page	String
wsp.header.x-up-proxy-linger	x-up-proxy-linger	Unsigned 8-bit integer
wsp.header.x-up-proxy-net-ask	x-up-proxy-net-ask	Unsigned 8-bit integer
wsp.header.x-up-proxy-notify	x-up-proxy-notify	Unsigned 8-bit integer
wsp.header.x-up-proxy-operator-domain	x-up-proxy-operator-domain	String
wsp.header.x-up-proxy-push-accept	x-up-proxy-push-accept	String
wsp.header.x-up-proxy-push-addr	x-up-proxy-push-addr	Byte array
wsp.header.x-up-proxy-push-seq	x-up-proxy-push-seq	Unsigned 16-bit integer
wsp.header.x-up-proxy-redirect-enable	x-up-proxy-redirect-enable	Unsigned 8-bit integer
wsp.header.x-up-proxy-redirect-status	x-up-proxy-redirect-status	Unsigned 32-bit integer
wsp.header.x-up-proxy-request-uri	x-up-proxy-request-uri	String

Field	Field Name	Type
wsp.header.x-up-proxy-tod	x-up-proxy-tod	Unsigned 8-bit integer
wsp.header.x-up-proxy-trans-charset	x-up-proxy-trans-charset	Unsigned 16-bit integer
wsp.header.x-up-proxy-trans-charset.string	x-up-proxy-trans-charset	String
wsp.header.x-up-proxy-trust	x-up-proxy-trust	Unsigned 8-bit integer
wsp.header.x-up-proxy-trust-old	x-up-proxy-trust-old	Unsigned 8-bit integer
wsp.header.x-up-proxy-uplink-version	x-up-proxy-uplink-version	String
wsp.header.x_wap_tod	X-WAP.TOD	Date/Time stamp
wsp.headers	Headers	No value
wsp.headers.header	Header	No value
wsp.headers_length	Headers Length	Unsigned 32-bit integer
wsp.multipart	Part	Unsigned 32-bit integer
wsp.multipart.data	Data in this part	No value
wsp.pdu_type	PDU Type	Unsigned 8-bit integer
wsp.post.data	Data (Post)	No value
wsp.push.data	Push Data	No value
wsp.redirect_addr	Address	Byte array
wsp.redirect_afl	Flags/Length	Unsigned 8-bit integer
wsp.redirect_afl.address_len	Address Len	Unsigned 8-bit integer
wsp.redirect_afl.bearer_type_included	Bearer Type Included	Boolean
wsp.redirect_afl.port_number_included	Port Number Included	Boolean
wsp.redirect_bearer_type	Bearer Type	Unsigned 8-bit integer
wsp.redirect_flags	Flags	Unsigned 8-bit integer
wsp.redirect_flags.permanent	Permanent Redirect	Boolean
wsp.redirect_flags.reuse_security_session	Reuse Security Session	Boolean

Field	Field Name	Type
wsp.redirect_ipv4_addr	IP Address	IPv4 address
wsp.redirect_ipv6_addr	IPv6 Address	IPv6 address
wsp.redirect_port_num	Port Number	Unsigned 16-bit integer
wsp.reply.data	Data	No value
wsp.reply.status	Status	Unsigned 8-bit integer
wsp.server.session_id	Server Session ID	Unsigned 32-bit integer
wsp.uri	URI	String
wsp.uri_length	URI Length	Unsigned 32-bit integer
wsp.version.major	Version (Major)	Unsigned 8-bit integer
wsp.version.minor	Version (Minor)	Unsigned 8-bit integer

Wireless Transaction Protocol (wap-wsp-wtp)

Table A-274. Wireless Transaction Protocol (wap-wsp-wtp)

Field	Field Name	Type
wtp.RID	Re-transmission Indicator	Boolean
wtp.TID	Transaction ID	Unsigned 16-bit integer
wtp.TID.response	TID Response	Boolean
wtp.abort.reason.provider	Abort Reason	Unsigned 8-bit integer
wtp.abort.reason.user	Abort Reason	Unsigned 8-bit integer
wtp.abort.type	Abort Type	Unsigned 8-bit integer
wtp.ack.tvetok	Tve/Tok flag	Boolean
wtp.continue_flag	Continue Flag	Boolean
wtp.fragment	WTP Fragment	No value
wtp.fragment.error	Defragmentation error	No value
wtp.fragment.multipletails	Multiple tail fragments found	Boolean
wtp.fragment.overlap	Fragment overlap	Boolean
wtp.fragment.overlap.conflict	Conflicting data in fragment overlap	Boolean
wtp.fragment.toolongfragment	Fragment too long	Boolean
wtp.fragments	WTP Fragments	No value
wtp.header.TIDNew	TIDNew	Boolean
wtp.header.UP	U/P flag	Boolean

Field	Field Name	Type
wtp.header.missing_packets	Missing Packets	Unsigned 8-bit integer
wtp.header.sequence	Packet Sequence Number	Unsigned 8-bit integer
wtp.header.version	Version	Unsigned 8-bit integer
wtp.header_data	Data	Byte array
wtp.header_variable_part	Header: Variable part	Byte array
wtp.inv.reserved	Reserved	Unsigned 8-bit integer
wtp.inv.transaction_class	Transaction Class	Unsigned 8-bit integer
wtp.pdu_type	PDU Type	Unsigned 8-bit integer
wtp.sub_pdu_size	Sub PDU size	Byte array
wtp.tpi	TPI	Unsigned 8-bit integer
wtp.tpi.info	Information	No value
wtp.tpi.opt	Option	Unsigned 8-bit integer
wtp.tpi.opt.val	Option Value	No value
wtp.tpi.psn	Packet sequence number	Unsigned 8-bit integer
wtp.trailer_flags	Trailer Flags	Unsigned 8-bit integer

Wireless Transport Layer Security (wap-wtls)

Table A-275. Wireless Transport Layer Security (wap-wtls)

Field	Field Name	Type
wsp.wtls.alert	Alert	No value
wsp.wtls.alert.description	Description	Unsigned 8-bit integer
wsp.wtls.alert.level	Level	Unsigned 8-bit integer
wsp.wtls.handshake	Handshake	Unsigned 8-bit integer
wsp.wtls.handshake.certificate	Certificate	No value
wsp.wtls.handshake.certificate.valid.not after	Valid not after	Date/Time stamp
wsp.wtls.handshake.certificate.valid.not before	Valid not before	Date/Time stamp
wsp.wtls.handshake.certificate.issuer.charset	Charset	Unsigned 16-bit integer
wsp.wtls.handshake.certificate.issuer.name	Name	String
wsp.wtls.handshake.certificate.issuer.size	Size	Unsigned 8-bit integer

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Field	Field Name	Type
wsp.wtls.handshake.certificate.issuer.type	Issuer type	Unsigned 8-bit integer
wsp.wtls.handshake.certificate.parameter_set	Parameter Set	String
wsp.wtls.handshake.certificate.parameter_index	Parameter Index	Unsigned 8-bit integer
wsp.wtls.handshake.certificate.public_key.type	Public Key Type	Unsigned 8-bit integer
wsp.wtls.handshake.certificate.rsa_exponent	RSA Exponent Size	Unsigned 32-bit integer
wsp.wtls.handshake.certificate.rsa_modulus	RSA Modulus Size	Unsigned 32-bit integer
wsp.wtls.handshake.certificate.signature	Signature signature	Unsigned 32-bit integer
wsp.wtls.handshake.certificate.signature.type	Signature Type	Unsigned 8-bit integer
wsp.wtls.handshake.certificate.object.charset	Charset	Unsigned 16-bit integer
wsp.wtls.handshake.certificate.subject.name	Name	String
wsp.wtls.handshake.certificate.subject.size	Size	Unsigned 8-bit integer
wsp.wtls.handshake.certificate.subject.type	Subject type	Unsigned 8-bit integer
wsp.wtls.handshake.certificate.type	Type	Unsigned 8-bit integer
wsp.wtls.handshake.certificate.version	Version	Unsigned 8-bit integer
wsp.wtls.handshake.certificates	Certificates	No value
wsp.wtls.handshake.client_hello	Client Hello	No value
wsp.wtls.handshake.client_cipher	Cipher	String
wsp.wtls.handshake.client_cipher_suites	Cipher Suites	No value
wsp.wtls.handshake.client_keys_id	Client keys_id	No value
wsp.wtls.handshake.client_keys_len	Length client_keys_len	Unsigned 16-bit integer
wsp.wtls.handshake.client_comp_methods	Compression Methods	No value

Field	Field Name	Type
wsp.wtls.handshake.client_hello.compression	Compression	Unsigned 8-bit integer
wsp.wtls.handshake.client_hello.gmt	Time GMT	Date/Time stamp
wsp.wtls.handshake.client_hello.identified_charset	Identified Charset	Unsigned 16-bit integer
wsp.wtls.handshake.client_hello.identified_name	Identified Name	String
wsp.wtls.handshake.client_hello.identified_size	Identified Size	Unsigned 8-bit integer
wsp.wtls.handshake.client_hello.identified_type	Identified Type	Unsigned 8-bit integer
wsp.wtls.handshake.client_hello.identifier	Identifier	No value
wsp.wtls.handshake.client_hello.key_exchange	Key Exchange	Unsigned 8-bit integer
wsp.wtls.handshake.client_hello.key.key_exchange.suite	Suite	Unsigned 8-bit integer
wsp.wtls.handshake.client_hello.parameter	Parameter Set	String
wsp.wtls.handshake.client_hello.parameter_index	Parameter index	Unsigned 8-bit integer
wsp.wtls.handshake.client_hello.random	Random	No value
wsp.wtls.handshake.client_hello.refresh	Refresh	Unsigned 8-bit integer
wsp.wtls.handshake.client_hello.sequence_mode	Sequence Mode	Unsigned 8-bit integer
wsp.wtls.handshake.client_hello.session.str	Session ID str	String
wsp.wtls.handshake.client_hello.session_id	Session ID id	Unsigned 32-bit integer
wsp.wtls.handshake.client_hello.trusted_keys_id	Trusted Keys_id	No value
wsp.wtls.handshake.client_hello.version	Version	Unsigned 8-bit integer
wsp.wtls.handshake.length	Length	Unsigned 16-bit integer
wsp.wtls.handshake.server_hello	Server Hello	No value
wsp.wtls.handshake.server_hello.cipher	Cipher	No value

Field	Field Name	Type
wsp.wtls.handshake.server_cipher.bulk	Cipher Bulk	Unsigned 8-bit integer
wsp.wtls.handshake.server_cipher.mac	Cipher MAC	Unsigned 8-bit integer
wsp.wtls.handshake.server_compression	Compression	Unsigned 8-bit integer
wsp.wtls.handshake.server_time.gmt	Time GMT	Date/Time stamp
wsp.wtls.handshake.server_client.key	Client Key ID	Unsigned 8-bit integer
wsp.wtls.handshake.server_random	Random	No value
wsp.wtls.handshake.server_refresh	Refresh	Unsigned 8-bit integer
wsp.wtls.handshake.server_sequence_mode	Sequence Mode	Unsigned 8-bit integer
wsp.wtls.handshake.server_session.str	Session ID	String
wsp.wtls.handshake.server_session.id	Session ID	Unsigned 32-bit integer
wsp.wtls.handshake.server_version	Version	Unsigned 8-bit integer
wsp.wtls.handshake.type	Type	Unsigned 8-bit integer
wsp.wtls.rec_cipher	Record Ciphered	No value
wsp.wtls.rec_length	Record Length	Unsigned 16-bit integer
wsp.wtls.rec_seq	Record Sequence	Unsigned 16-bit integer
wsp.wtls.rec_type	Record Type	Unsigned 8-bit integer
wsp.wtls.record	Record	Unsigned 8-bit integer

X Display Manager Control Protocol (xdmcp)

Table A-276. X Display Manager Control Protocol (xdmcp)

Field	Field Name	Type
xdmcp.authentication_name	Authentication name	String
xdmcp.authorization_name	Authorization name	String
xdmcp.display_number	Display number	Unsigned 16-bit integer

Field	Field Name	Type
xdmcp.hostname	Hostname	String
xdmcp.length	Message length	Unsigned 16-bit integer
xdmcp.opcode	Opcode	Unsigned 16-bit integer
xdmcp.session_id	Session ID	Unsigned 32-bit integer
xdmcp.status	Status	String
xdmcp.version	Version	Unsigned 16-bit integer

X.25 (x.25)

Table A-277. X.25 (x.25)

Field	Field Name	Type
x.25.a	A Bit	Boolean
x.25.d	D Bit	Boolean
x.25.gfi	GFI	Unsigned 16-bit integer
x.25.lcn	Logical Channel	Unsigned 16-bit integer
x.25.m	M Bit	Boolean
x.25.mod	Modulo	Unsigned 16-bit integer
x.25.p_r	P(R)	Unsigned 8-bit integer
x.25.p_s	P(S)	Unsigned 8-bit integer
x.25.q	Q Bit	Boolean
x.25.type	Packet Type	Unsigned 8-bit integer

X.25 over TCP (xot)

Table A-278. X.25 over TCP (xot)

Field	Field Name	Type
xot.length	Length	Unsigned 16-bit integer
xot.version	Version	Unsigned 16-bit integer

X11 (x11)

Table A-279. X11 (x11)

Field	Field Name	Type
x11.acceleration-denominator	acceleration-denominator	Signed 16-bit integer
x11.acceleration-numerator	acceleration-numerator	Signed 16-bit integer
x11.access-mode	access-mode	Unsigned 8-bit integer
x11.address	address	Byte array
x11.address-length	address-length	Unsigned 16-bit integer
x11.alloc	alloc	Unsigned 8-bit integer
x11.allow-events-mode	allow-events-mode	Unsigned 8-bit integer
x11.allow-exposures	allow-exposures	Unsigned 8-bit integer
x11.arc	arc	No value
x11.arc.angle1	angle1	Signed 16-bit integer
x11.arc.angle2	angle2	Signed 16-bit integer
x11.arc.height	height	Unsigned 16-bit integer
x11.arc.mode	mode	Unsigned 8-bit integer
x11.arc.width	width	Unsigned 16-bit integer
x11.arc.x	x	Signed 16-bit integer
x11.arc.y	y	Signed 16-bit integer
x11.arcs	arcs	No value
x11.atom	atom	Unsigned 32-bit integer
x11.authorization-protocol-data	authorization-protocol-data	String
x11.authorization-protocol-data-length	authorization-protocol-data-length	Unsigned 16-bit integer
x11.authorization-protocol-name	authorization-protocol-name	String
x11.authorization-protocol-name-length	authorization-protocol-name-length	Unsigned 16-bit integer
x11.auto-repeat-mode	auto-repeat-mode	Unsigned 8-bit integer
x11.back-blue	back-blue	Unsigned 16-bit integer
x11.back-green	back-green	Unsigned 16-bit integer
x11.back-red	back-red	Unsigned 16-bit integer
x11.background	background	Unsigned 32-bit integer
x11.background-pixel	background-pixel	Unsigned 32-bit integer

Field	Field Name	Type
x11.background-pixmap	background-pixmap	Unsigned 32-bit integer
x11.backing-pixel	backing-pixel	Unsigned 32-bit integer
x11.backing-planes	backing-planes	Unsigned 32-bit integer
x11.backing-store	backing-store	Unsigned 8-bit integer
x11.bell-duration	bell-duration	Signed 16-bit integer
x11.bell-percent	bell-percent	Signed 8-bit integer
x11.bell-pitch	bell-pitch	Signed 16-bit integer
x11.bit-gravity	bit-gravity	Unsigned 8-bit integer
x11.bit-plane	bit-plane	Unsigned 32-bit integer
x11.blue	blue	Unsigned 16-bit integer
x11.blues	blues	Unsigned 16-bit integer
x11.border-pixel	border-pixel	Unsigned 32-bit integer
x11.border-pixmap	border-pixmap	Unsigned 32-bit integer
x11.border-width	border-width	Unsigned 16-bit integer
x11.button	button	Unsigned 8-bit integer
x11.byte-order	byte-order	Unsigned 8-bit integer
x11.cap-style	cap-style	Unsigned 8-bit integer
x11.change-host-mode	change-host-mode	Unsigned 8-bit integer
x11.cid	cid	Unsigned 32-bit integer
x11.class	class	Unsigned 8-bit integer
x11.clip-mask	clip-mask	Unsigned 32-bit integer
x11.clip-x-origin	clip-x-origin	Signed 16-bit integer
x11.clip-y-origin	clip-y-origin	Signed 16-bit integer
x11.close-down-mode	close-down-mode	Unsigned 8-bit integer
x11.cmap	cmap	Unsigned 32-bit integer
x11.color-items	color-items	No value
x11.coloritem	coloritem	No value
x11.coloritem.blue	blue	Unsigned 16-bit integer
x11.coloritem.flags	flags	Unsigned 8-bit integer
x11.coloritem.flags.do-blue	do-blue	Boolean
x11.coloritem.flags.do-green	do-green	Boolean
x11.coloritem.flags.do-red	do-red	Boolean
x11.coloritem.flags.unused	unused	Boolean
x11.coloritem.green	green	Unsigned 16-bit integer

Field	Field Name	Type
x11.coloritem.pixel	pixel	Unsigned 32-bit integer
x11.coloritem.red	red	Unsigned 16-bit integer
x11.coloritem.unused	unused	No value
x11.colormap	colormap	Unsigned 32-bit integer
x11.colors	colors	Unsigned 16-bit integer
x11.configure-window-mask	configure-window-mask	Unsigned 16-bit integer
x11.configure-window-mask.border-width	border-width	Boolean
x11.configure-window-mask.height	height	Boolean
x11.configure-window-mask.sibling	sibling	Boolean
x11.configure-window-mask.stack-mode	stack-mode	Boolean
x11.configure-window-mask.width	width	Boolean
x11.configure-window-mask.x	x	Boolean
x11.configure-window-mask.y	y	Boolean
x11.confine-to	confine-to	Unsigned 32-bit integer
x11.contiguous	contiguous	Boolean
x11.coordinate-mode	coordinate-mode	Unsigned 8-bit integer
x11.count	count	Unsigned 8-bit integer
x11.cursor	cursor	Unsigned 32-bit integer
x11.dash-offset	dash-offset	Unsigned 16-bit integer
x11.dashes	dashes	Byte array
x11.dashes-length	dashes-length	Unsigned 16-bit integer
x11.data	data	Byte array
x11.data-length	data-length	Unsigned 32-bit integer
x11.delete	delete	Boolean
x11.delta	delta	Signed 16-bit integer

Field	Field Name	Type
x11.depth	depth	Unsigned 8-bit integer
x11.direction	direction	Unsigned 8-bit integer
x11.do-acceleration	do-acceleration	Boolean
x11.do-not-propagate-mask	do-not-propagate-mask	Unsigned 32-bit integer
x11.do-not-propagate-mask.Button1Motion	Button1Motion	Boolean
x11.do-not-propagate-mask.Button2Motion	Button2Motion	Boolean
x11.do-not-propagate-mask.Button3Motion	Button3Motion	Boolean
x11.do-not-propagate-mask.Button4Motion	Button4Motion	Boolean
x11.do-not-propagate-mask.Button5Motion	Button5Motion	Boolean
x11.do-not-propagate-mask.ButtonMotion	ButtonMotion	Boolean
x11.do-not-propagate-mask.ButtonPress	ButtonPress	Boolean
x11.do-not-propagate-mask.ButtonRelease	ButtonRelease	Boolean
x11.do-not-propagate-mask.KeyPress	KeyPress	Boolean
x11.do-not-propagate-mask.KeyRelease	KeyRelease	Boolean
x11.do-not-propagate-mask.PointerMotion	PointerMotion	Boolean
x11.do-not-propagate-mask.erroneous-bits	erroneous-bits	Boolean
x11.do-threshold	do-threshold	Boolean
x11.drawable	drawable	Unsigned 32-bit integer

Field	Field Name	Type
x11.dst-drawable	dst-drawable	Unsigned 32-bit integer
x11.dst-gc	dst-gc	Unsigned 32-bit integer
x11.dst-window	dst-window	Unsigned 32-bit integer
x11.dst-x	dst-x	Signed 16-bit integer
x11.dst-y	dst-y	Signed 16-bit integer
x11.event-mask	event-mask	Unsigned 32-bit integer
x11.event-mask.Button1Motion	Button1Motion	Boolean
x11.event-mask.Button2Motion	Button2Motion	Boolean
x11.event-mask.Button3Motion	Button3Motion	Boolean
x11.event-mask.Button4Motion	Button4Motion	Boolean
x11.event-mask.Button5Motion	Button5Motion	Boolean
x11.event-mask.ButtonMotion	ButtonMotion	Boolean
x11.event-mask.ButtonPress	ButtonPress	Boolean
x11.event-mask.ButtonRelease	ButtonRelease	Boolean
x11.event-mask.ColormapChange	ColormapChange	Boolean
x11.event-mask.EnterWindow	EnterWindow	Boolean
x11.event-mask.Exposure	Exposure	Boolean
x11.event-mask.FocusChange	FocusChange	Boolean
x11.event-mask.KeyPress	KeyPress	Boolean

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Field	Field Name	Type
x11.event-mask.KeyRelease	KeyRelease	Boolean
x11.event-mask.KeymapState	KeymapState	Boolean
x11.event-mask.LeaveWindow	LeaveWindow	Boolean
x11.event-mask.OwnerGrabButton	OwnerGrabButton	Boolean
x11.event-mask.PointerMotion	PointerMotion	Boolean
x11.event-mask.PointerMotionHint	PointerMotionHint	Boolean
x11.event-mask.PropertyChange	PropertyChange	Boolean
x11.event-mask.ResizeRedirect	ResizeRedirect	Boolean
x11.event-mask.StructureNotify	StructureNotify	Boolean
x11.event-mask.SubstructureNotify	SubstructureNotify	Boolean
x11.event-mask.SubstructureRedirect	SubstructureRedirect	Boolean
x11.event-mask.VisibilityChange	VisibilityChange	Boolean
x11.event-mask.erroneous-bits	erroneous-bits	Boolean
x11.exposures	exposures	Boolean
x11.family	family	Unsigned 8-bit integer
x11.fid	fid	Unsigned 32-bit integer
x11.fill-rule	fill-rule	Unsigned 8-bit integer
x11.fill-style	fill-style	Unsigned 8-bit integer

Field	Field Name	Type
x11.first-keycode	first-keycode	Unsigned 8-bit integer
x11.focus	focus	Unsigned 8-bit integer
x11.font	font	Unsigned 32-bit integer
x11.fore-blue	fore-blue	Unsigned 16-bit integer
x11.fore-green	fore-green	Unsigned 16-bit integer
x11.fore-red	fore-red	Unsigned 16-bit integer
x11.foreground	foreground	Unsigned 32-bit integer
x11.format	format	Unsigned 8-bit integer
x11.function	function	Unsigned 8-bit integer
x11.gc	gc	Unsigned 32-bit integer
x11.gc-dashes	gc-dashes	Unsigned 8-bit integer
x11.gc-value-mask	gc-value-mask	Unsigned 32-bit integer
x11.gc-value-mask.arc-mode	arc-mode	Boolean
x11.gc-value-mask.background	background	Boolean
x11.gc-value-mask.cap-style	cap-style	Boolean
x11.gc-value-mask.clip-mask	clip-mask	Boolean
x11.gc-value-mask.clip-x-origin	clip-x-origin	Boolean
x11.gc-value-mask.clip-y-origin	clip-y-origin	Boolean
x11.gc-value-mask.dash-offset	dash-offset	Boolean
x11.gc-value-mask.fill-rule	fill-rule	Boolean
x11.gc-value-mask.fill-style	fill-style	Boolean
x11.gc-value-mask.font	font	Boolean
x11.gc-value-mask.foreground	foreground	Boolean

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Field	Field Name	Type
x11.gc-value-mask.function	function	Boolean
x11.gc-value-mask.gc-dashes	gc-dashes	Boolean
x11.gc-value-mask.graphics-exposures	graphics-exposures	Boolean
x11.gc-value-mask.join-style	join-style	Boolean
x11.gc-value-mask.line-style	line-style	Boolean
x11.gc-value-mask.line-width	line-width	Boolean
x11.gc-value-mask.plane-mask	plane-mask	Boolean
x11.gc-value-mask.stipple	stipple	Boolean
x11.gc-value-mask.subwindow-mode	subwindow-mode	Boolean
x11.gc-value-mask.tile	tile	Boolean
x11.gc-value-mask.tile-stipple-x-origin	tile-stipple-x-origin	Boolean
x11.gc-value-mask.tile-stipple-y-origin	tile-stipple-y-origin	Boolean
x11.get-property-type	get-property-type	Unsigned 32-bit integer
x11.grab_window	grab_window	Unsigned 32-bit integer
x11.graphics-exposures	graphics-exposures	Boolean
x11.green	green	Unsigned 16-bit integer
x11.greens	greens	Unsigned 16-bit integer
x11.height	height	Unsigned 16-bit integer
x11.image-format	image-format	Unsigned 8-bit integer
x11.image-pixmap-format	image-pixmap-format	Unsigned 8-bit integer
x11.interval	interval	Signed 16-bit integer
x11.ip-address	ip-address	IPv4 address

Field	Field Name	Type
x11.items	items	No value
x11.join-style	join-style	Unsigned 8-bit integer
x11.key	key	Unsigned 8-bit integer
x11.key-click-percent	key-click-percent	Signed 8-bit integer
x11.keyboard-key	keyboard-key	Unsigned 8-bit integer
x11.keyboard-mode	keyboard-mode	Unsigned 8-bit integer
x11.keyboard-value-mask	keyboard-value-mask	Unsigned 32-bit integer
x11.keyboard-value-mask.auto-repeat-mode	auto-repeat-mode	Boolean
x11.keyboard-value-mask.bell-duration	bell-duration	Boolean
x11.keyboard-value-mask.bell-percent	bell-percent	Boolean
x11.keyboard-value-mask.bell-pitch	bell-pitch	Boolean
x11.keyboard-value-mask.key-click-percent	key-click-percent	Boolean
x11.keyboard-value-mask.keyboard-key	keyboard-key	Boolean
x11.keyboard-value-mask.led	led	Boolean
x11.keyboard-value-mask.led-mode	led-mode	Boolean
x11.keycode-count	keycode-count	Unsigned 8-bit integer
x11.keycodes	keycodes	No value
x11.keycodes-per-modifier	keycodes-per-modifier	Unsigned 8-bit integer
x11.keycodes.item	item	Byte array
x11.keysyms	keysyms	No value
x11.keysyms-per-keycode	keysyms-per-keycode	Unsigned 8-bit integer
x11.keysyms.item	item	No value
x11.keysyms.item.keysym	keysym	Unsigned 32-bit integer
x11.led	led	Unsigned 8-bit integer
x11.led-mode	led-mode	Unsigned 8-bit integer

Field	Field Name	Type
x11.left-pad	left-pad	Unsigned 8-bit integer
x11.line-style	line-style	Unsigned 8-bit integer
x11.line-width	line-width	Unsigned 16-bit integer
x11.long-length	long-length	Unsigned 32-bit integer
x11.long-offset	long-offset	Unsigned 32-bit integer
x11.map	map	Byte array
x11.map-length	map-length	Unsigned 8-bit integer
x11.mask	mask	Unsigned 32-bit integer
x11.mask-char	mask-char	Unsigned 16-bit integer
x11.mask-font	mask-font	Unsigned 32-bit integer
x11.max-names	max-names	Unsigned 16-bit integer
x11.mid	mid	Unsigned 32-bit integer
x11.mode	mode	Unsigned 8-bit integer
x11.modifiers-mask	modifiers-mask	Unsigned 16-bit integer
x11.modifiers-mask.AnyModifier	AnyModifier	Unsigned 16-bit integer
x11.modifiers-mask.Control	Control	Boolean
x11.modifiers-mask.Lock	Lock	Boolean
x11.modifiers-mask.Mod1	Mod1	Boolean
x11.modifiers-mask.Mod2	Mod2	Boolean
x11.modifiers-mask.Mod3	Mod3	Boolean
x11.modifiers-mask.Mod4	Mod4	Boolean
x11.modifiers-mask.Mod5	Mod5	Boolean
x11.modifiers-mask.Shift	Shift	Boolean
x11.modifiers-mask.erroneous-bits	erroneous-bits	Boolean
x11.name	name	String
x11.name-length	name-length	Unsigned 16-bit integer
x11.odd-length	odd-length	Boolean
x11.only-if-exists	only-if-exists	Boolean
x11.opcode	opcode	Unsigned 8-bit integer
x11.ordering	ordering	Unsigned 8-bit integer
x11.override-redirect	override-redirect	Boolean

Field	Field Name	Type
x11.owner	owner	Unsigned 32-bit integer
x11.owner-events	owner-events	Boolean
x11.parent	parent	Unsigned 32-bit integer
x11.path	path	No value
x11.path.string	string	String
x11.pattern	pattern	String
x11.pattern-length	pattern-length	Unsigned 16-bit integer
x11.percent	percent	Unsigned 8-bit integer
x11.pid	pid	Unsigned 32-bit integer
x11.pixel	pixel	Unsigned 32-bit integer
x11.pixels	pixels	No value
x11.pixels_item	pixels_item	Unsigned 32-bit integer
x11.pixmap	pixmap	Unsigned 32-bit integer
x11.plane-mask	plane-mask	Unsigned 32-bit integer
x11.planes	planes	Unsigned 16-bit integer
x11.point	point	No value
x11.point-x	point-x	Signed 16-bit integer
x11.point-y	point-y	Signed 16-bit integer
x11.pointer-event-mask	pointer-event-mask	Unsigned 16-bit integer
x11.pointer-event-mask.Button1Motion	Button1Motion	Boolean
x11.pointer-event-mask.Button2Motion	Button2Motion	Boolean
x11.pointer-event-mask.Button3Motion	Button3Motion	Boolean
x11.pointer-event-mask.Button4Motion	Button4Motion	Boolean
x11.pointer-event-mask.Button5Motion	Button5Motion	Boolean
x11.pointer-event-mask.ButtonMotion	ButtonMotion	Boolean
x11.pointer-event-mask.ButtonPress	ButtonPress	Boolean

Field	Field Name	Type
x11.pointer-event-mask.ButtonRelease	ButtonRelease	Boolean
x11.pointer-event-mask.EnterWindow	EnterWindow	Boolean
x11.pointer-event-mask.KeymapState	KeymapState	Boolean
x11.pointer-event-mask.LeaveWindow	LeaveWindow	Boolean
x11.pointer-event-mask.PointerMotion	PointerMotion	Boolean
x11.pointer-event-mask.PointerMotionHint	PointerMotionHint	Boolean
x11.pointer-event-mask.erroneous-bits	erroneous-bits	Boolean
x11.pointer-mode	pointer-mode	Unsigned 8-bit integer
x11.points	points	No value
x11.prefer-blanking	prefer-blanking	Unsigned 8-bit integer
x11.properties	properties	No value
x11.properties.item	item	Unsigned 32-bit integer
x11.property	property	Unsigned 32-bit integer
x11.property-number	property-number	Unsigned 16-bit integer
x11.protocol-major-version	protocol-major-version	Unsigned 16-bit integer
x11.protocol-minor-version	protocol-minor-version	Unsigned 16-bit integer
x11.rectangle	rectangle	No value
x11.rectangle-height	rectangle-height	Unsigned 16-bit integer
x11.rectangle-width	rectangle-width	Unsigned 16-bit integer
x11.rectangle-x	rectangle-x	Signed 16-bit integer
x11.rectangle-y	rectangle-y	Signed 16-bit integer
x11.rectangles	rectangles	No value
x11.red	red	Unsigned 16-bit integer
x11.reds	reds	Unsigned 16-bit integer
x11.request	request	Unsigned 8-bit integer

Field	Field Name	Type
x11.request-length	request-length	Unsigned 16-bit integer
x11.requestor	requestor	Unsigned 32-bit integer
x11.resource	resource	Unsigned 32-bit integer
x11.revert-to	revert-to	Unsigned 8-bit integer
x11.save-set-mode	save-set-mode	Unsigned 8-bit integer
x11.save-under	save-under	Boolean
x11.screen-saver-mode	screen-saver-mode	Unsigned 8-bit integer
x11.segment	segment	No value
x11.segment_x1	segment_x1	Signed 16-bit integer
x11.segment_x2	segment_x2	Signed 16-bit integer
x11.segment_y1	segment_y1	Signed 16-bit integer
x11.segment_y2	segment_y2	Signed 16-bit integer
x11.segments	segments	No value
x11.selection	selection	Unsigned 32-bit integer
x11.shape	shape	Unsigned 8-bit integer
x11.sibling	sibling	Unsigned 32-bit integer
x11.source-char	source-char	Unsigned 16-bit integer
x11.source-font	source-font	Unsigned 32-bit integer
x11.source-pixmap	source-pixmap	Unsigned 32-bit integer
x11.src-cmap	src-cmap	Unsigned 32-bit integer
x11.src-drawable	src-drawable	Unsigned 32-bit integer
x11.src-gc	src-gc	Unsigned 32-bit integer
x11.src-height	src-height	Unsigned 16-bit integer
x11.src-width	src-width	Unsigned 16-bit integer
x11.src-window	src-window	Unsigned 32-bit integer
x11.src-x	src-x	Signed 16-bit integer
x11.src-y	src-y	Signed 16-bit integer
x11.stack-mode	stack-mode	Unsigned 8-bit integer
x11.start	start	Unsigned 32-bit integer
x11.stipple	stipple	Unsigned 32-bit integer
x11.stop	stop	Unsigned 32-bit integer
x11.str-number-in-path	str-number-in-path	Unsigned 16-bit integer
x11.string	string	String
x11.string-length	string-length	Unsigned 32-bit integer
x11.string16	string16	String
x11.string16.bytes	bytes	Byte array

Field	Field Name	Type
x11.subwindow-mode	subwindow-mode	Unsigned 8-bit integer
x11.target	target	Unsigned 32-bit integer
x11.textitem	textitem	No value
x11.textitem.font	font	Unsigned 32-bit integer
x11.textitem.string	string	No value
x11.textitem.string.delta	delta	Signed 8-bit integer
x11.textitem.string.string16	string16	String
x11.textitem.string.string16.bytes	bytes	Byte array
x11.textitem.string.string8	string8	String
x11.threshold	threshold	Signed 16-bit integer
x11.tile	tile	Unsigned 32-bit integer
x11.tile-stipple-x-origin	tile-stipple-x-origin	Signed 16-bit integer
x11.tile-stipple-y-origin	tile-stipple-y-origin	Signed 16-bit integer
x11.time	time	Unsigned 32-bit integer
x11.timeout	timeout	Signed 16-bit integer
x11.type	type	Unsigned 32-bit integer
x11.undecoded	undecoded	No value
x11.unused	unused	No value
x11.visual	visual	Unsigned 32-bit integer
x11.visualid	visualid	Unsigned 32-bit integer
x11.warp-pointer-dst-window	warp-pointer-dst-window	Unsigned 32-bit integer
x11.warp-pointer-src-window	warp-pointer-src-window	Unsigned 32-bit integer
x11.wid	wid	Unsigned 32-bit integer
x11.width	width	Unsigned 16-bit integer
x11.win-gravity	win-gravity	Unsigned 8-bit integer
x11.window	window	Unsigned 32-bit integer
x11.window-class	window-class	Unsigned 16-bit integer
x11.window-value-mask	window-value-mask	Unsigned 32-bit integer
x11.window-value-mask.background-pixel	background-pixel	Boolean

Field	Field Name	Type
x11.window-value-mask.background-pixmap	background-pixmap	Boolean
x11.window-value-mask.backing-pixel	backing-pixel	Boolean
x11.window-value-mask.backing-planes	backing-planes	Boolean
x11.window-value-mask.backing-store	backing-store	Boolean
x11.window-value-mask.bit-gravity	bit-gravity	Boolean
x11.window-value-mask.border-pixel	border-pixel	Boolean
x11.window-value-mask.border-pixmap	border-pixmap	Boolean
x11.window-value-mask.colormap	colormap	Boolean
x11.window-value-mask.cursor	cursor	Boolean
x11.window-value-mask.do-not-propagate-mask	do-not-propagate-mask	Boolean
x11.window-value-mask.event-mask	event-mask	Boolean
x11.window-value-mask.override-redirect	override-redirect	Boolean
x11.window-value-mask.save-under	save-under	Boolean
x11.window-value-mask.win-gravity	win-gravity	Boolean
x11.x	x	Signed 16-bit integer
x11.y	y	Signed 16-bit integer

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Xyplex (xyplex)

Table A-280. Xyplex (xyplex)

Field	Field Name	Type
xyplex.pad	Pad	Unsigned 8-bit integer
xyplex.reply	Registration Reply	Unsigned 16-bit integer
xyplex.reserved	Reserved field	Unsigned 16-bit integer
xyplex.return_port	Return Port	Unsigned 16-bit integer
xyplex.server_port	Server Port	Unsigned 16-bit integer
xyplex.type	Type	Unsigned 8-bit integer

Yahoo Messenger Protocol (yhoo)

Table A-281. Yahoo Messenger Protocol (yhoo)

Field	Field Name	Type
yhoo.connection_id	Connection ID	Unsigned 32-bit integer
yhoo.content	Content	String
yhoo.len	Packet Length	Unsigned 32-bit integer
yhoo.magic_id	Magic ID	Unsigned 32-bit integer
yhoo.msgtype	Message Type	Unsigned 32-bit integer
yhoo.nick1	Real Nick (nick1)	String
yhoo.nick2	Active Nick (nick2)	String
yhoo.service	Service Type	Unsigned 32-bit integer
yhoo.unknown1	Unknown 1	Unsigned 32-bit integer
yhoo.version	Version	String

Yellow Pages Bind (ypbind)

Table A-282. Yellow Pages Bind (ypbind)

Field	Field Name	Type
ypbind.addr	IP Addr	IPv4 address
ypbind.domain	Domain	String
ypbind.error	Error	Unsigned 32-bit integer
ypbind.port	Port	Unsigned 32-bit integer

Field	Field Name	Type
ypbind.resp_type	Response Type	Unsigned 32-bit integer
ypbind.setdom.version	Version	Unsigned 32-bit integer

Yellow Pages Passwd (yppasswd)

Table A-283. Yellow Pages Passwd (yppasswd)

Field	Field Name	Type
yppasswd.newpw	newpw	No value
yppasswd.newpw.dir	dir	String
yppasswd.newpw.gecos	gecos	String
yppasswd.newpw.gid	gid	Unsigned 32-bit integer
yppasswd.newpw.name	name	String
yppasswd.newpw.passwd	passwd	String
yppasswd.newpw.shell	shell	String
yppasswd.newpw.uid	uid	Unsigned 32-bit integer
yppasswd.oldpass	oldpass	String
yppasswd.status	status	Unsigned 32-bit integer

Yellow Pages Service (ypserv)

Table A-284. Yellow Pages Service (ypserv)

Field	Field Name	Type
ypserv.domain	Domain	String
ypserv.key	Key	String
ypserv.map	Map Name	String
ypserv.map_parms	YP Map Parameters	No value
ypserv.more	More	Boolean
ypserv.ordernum	Order Number	Unsigned 32-bit integer
ypserv.peer	Peer Name	String
ypserv.port	Port	Unsigned 32-bit integer
ypserv.prog	Program Number	Unsigned 32-bit integer
ypserv.servesdomain	Serves Domain	Boolean
ypserv.status	Status	Signed 32-bit integer

Field	Field Name	Type
ypserv.transid	Host Transport ID	IPv4 address
ypserv.value	Value	String
ypserv.xfrstat	Xfrstat	Signed 32-bit integer

Yellow Pages Transfer (ypxfr)

Table A-285. Yellow Pages Transfer (ypxfr)

Field	Field Name	Type

Zebra Protocol (zebra)

Table A-286. Zebra Protocol (zebra)

Field	Field Name	Type
zebra.bandwidth	Bandwidth	Unsigned 32-bit integer
zebra.command	Command	Unsigned 8-bit integer
zebra.dest4	Destination	IPv4 address
zebra.dest6	Destination	IPv6 address
zebra.distance	Distance	Unsigned 8-bit integer
zebra.family	Family	Unsigned 32-bit integer
zebra.index	Index	Unsigned 32-bit integer
zebra.indexnum	Index Number	Unsigned 8-bit integer
zebra.interface	Interface	String
zebra.intflags	Flags	Unsigned 32-bit integer
zebra.len	Length	Unsigned 16-bit integer
zebra.message	Message	Unsigned 8-bit integer
zebra.message.distance	Message Distance	Boolean
zebra.message.index	Message Index	Boolean
zebra.message.metric	Message Metric	Boolean
zebra.message.nexthop	Message Nexthop	Boolean
zebra.metric	Metric	Unsigned 32-bit integer
zebra.mtu	MTU	Unsigned 32-bit integer
zebra.nexthop4	Nexthop	IPv4 address

Field	Field Name	Type
zebra.nexthop6	Nexthop	IPv6 address
zebra.nexthopnum	Nexthop Number	Unsigned 8-bit integer
zebra.prefix4	Prefix	IPv4 address
zebra.prefix6	Prefix	IPv6 address
zebra.prefixlen	Prefix length	Unsigned 32-bit integer
zebra.request	Request	Boolean
zebra.rtflags	Flags	Unsigned 8-bit integer
zebra.type	Type	Unsigned 8-bit integer

Zone Information Protocol (zip)

Table A-287. Zone Information Protocol (zip)

Field	Field Name	Type
zip.atp_function	Function	Unsigned 8-bit integer
zip.count	Count	Unsigned 16-bit integer
zip.default_zone	Default zone	
zip.flags	Flags	Boolean
zip.flags.only_one_zone	Only one zone	Boolean
zip.flags.use_broadcast	Use broadcast	Boolean
zip.flags.zone_invalid	Zone invalid	Boolean
zip.function	Function	Unsigned 8-bit integer
zip.last_flag	Last Flag	Boolean
zip.multicast_address	Multicast address	Byte array
zip.multicast_length	Multicast length	Unsigned 8-bit integer
zip.network	Network	Unsigned 16-bit integer
zip.network_count	Count	Unsigned 8-bit integer
zip.network_end	Network end	Unsigned 16-bit integer
zip.network_start	Network start	Unsigned 16-bit integer
zip.start_index	Start index	Unsigned 16-bit integer
zip.zero_value	Pad (0)	Byte array
zip.zone_name	Zone	

iSCSI (iscsi)

Table A-288. iSCSI (iscsi)

Field	Field Name	Type
iscsi.I	I	Boolean
iscsi.X	X	Boolean
iscsi.ahs	AHS	Byte array
iscsi.asyncevent	AsyncEvent	Unsigned 8-bit integer
iscsi.asyncmessagedata	AsyncMessageData	Byte array
iscsi.bufferOffset	BufferOffset	Unsigned 32-bit integer
iscsi.cid	CID	Unsigned 16-bit integer
iscsi.cmdsn	CmdSN	Unsigned 32-bit integer
iscsi.datadigest	DataDigest	Byte array
iscsi.datadigest32	DataDigest	Unsigned 32-bit integer
iscsi.datasegmentlength	DataSegmentLength	Unsigned 32-bit integer
iscsi.datasn	DataSN	Unsigned 32-bit integer
iscsi.desireddatalength	DesiredDataLength	Unsigned 32-bit integer
iscsi.errorpdudata	ErrorPDUData	Byte array
iscsi.eventvendorcode	EventVendorCode	Unsigned 8-bit integer
iscsi.expcmdsn	ExpCmdSN	Unsigned 32-bit integer
iscsi.expdatasn	ExpDataSN	Unsigned 32-bit integer
iscsi.expstatsn	ExpStatSN	Unsigned 32-bit integer
iscsi.flags	Flags	Unsigned 8-bit integer
iscsi.headerdigest	HeaderDigest	Byte array
iscsi.headerdigest32	HeaderDigest	Unsigned 32-bit integer
iscsi.immediatedata	ImmediateData	Byte array
iscsi.initcmdsn	InitCmdSN	Unsigned 32-bit integer
iscsi.initiatortasktag	InitiatorTaskTag	Unsigned 32-bit integer
iscsi.initstatsn	InitStatSN	Unsigned 32-bit integer
iscsi.isid	ISID	Unsigned 16-bit integer
iscsi.isid.a	ISID_a	Unsigned 8-bit integer
iscsi.isid.b	ISID_b	Unsigned 16-bit integer
iscsi.isid.c	ISID_c	Unsigned 8-bit integer
iscsi.isid.d	ISID_d	Unsigned 16-bit integer
iscsi.isid.namingauthority	ISID_NamingAuthority	Unsigned 24-bit integer
iscsi.isid.qualifier	ISID_Qualifier	Unsigned 8-bit integer
iscsi.isid.t	ISID_t	Unsigned 8-bit integer

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Field	Field Name	Type
iscsi.isid.type	ISID_Type	Unsigned 8-bit integer
iscsi.keyvalue	KeyValue	String
iscsi.login.T	T	Boolean
iscsi.login.X	X	Boolean
iscsi.login.csg	CSG	Unsigned 8-bit integer
iscsi.login.nsg	NSG	Unsigned 8-bit integer
iscsi.login.status	Status	Unsigned 16-bit integer
iscsi.logout.reason	Reason	Unsigned 8-bit integer
iscsi.logout.response	Response	Unsigned 8-bit integer
iscsi.lun	LUN	Byte array
iscsi.maxcmdsn	MaxCmdSN	Unsigned 32-bit integer
iscsi.opcode	Opcode	Unsigned 8-bit integer
iscsi.padding	Padding	Byte array
iscsi.parameter1	Parameter1	Unsigned 16-bit integer
iscsi.parameter2	Parameter2	Unsigned 16-bit integer
iscsi.parameter3	Parameter3	Unsigned 16-bit integer
iscsi.pingdata	PingData	Byte array
iscsi.r2tsn	R2TSN	Unsigned 32-bit integer
iscsi.readdata	ReadData	Byte array
iscsi.refcmdsn	RefCmdSN	Unsigned 32-bit integer
iscsi.reject.reason	Reason	Unsigned 8-bit integer
iscsi.scsicommand.F	F	Boolean
iscsi.scsicommand.R	R	Boolean
iscsi.scsicommand.W	W	Boolean
iscsi.scsicommand.addcdb	AddCDB	Unsigned 8-bit integer
iscsi.scsicommand.attr	Attr	Unsigned 8-bit integer
iscsi.scsicommand.crn	CRN	Unsigned 8-bit integer
iscsi.scsicommand.expecteddatatransferlength	ExpectedDataTransferLength	Unsigned 32-bit integer
iscsi.scsidata.A	A	Boolean
iscsi.scsidata.F	F	Boolean
iscsi.scsidata.O	O	Boolean
iscsi.scsidata.S	S	Boolean
iscsi.scsidata.U	U	Boolean
iscsi.scsidata.readresidualcount	ResidualCount	Unsigned 32-bit integer

Field	Field Name	Type
iscsi.scsiresponse.O	O	Boolean
iscsi.scsiresponse.U	U	Boolean
iscsi.scsiresponse.bidireadresidualcount	BidiReadResidualCount	Unsigned 32-bit integer
iscsi.scsiresponse.o	o	Boolean
iscsi.scsiresponse.residualcount	ResidualCount	Unsigned 32-bit integer
iscsi.scsiresponse.response	Response	Unsigned 8-bit integer
iscsi.scsiresponse.senselength	SenseLength	Unsigned 16-bit integer
iscsi.scsiresponse.status	Status	Unsigned 8-bit integer
iscsi.scsiresponse.u	u	Boolean
iscsi.snack.begrun	BegRun	Unsigned 32-bit integer
iscsi.snack.runlength	RunLength	Unsigned 32-bit integer
iscsi.snack.type	S	Unsigned 8-bit integer
iscsi.statsn	StatSN	Unsigned 32-bit integer
iscsi.targettransfertag	TargetTransferTag	Unsigned 32-bit integer
iscsi.taskmanfun.function	Function	Unsigned 8-bit integer
iscsi.taskmanfun.referencedtasktag	ReferencedTaskTag	Unsigned 32-bit integer
iscsi.taskmanfun.response	Response	Unsigned 8-bit integer
iscsi.text.F	F	Boolean
iscsi.time2retain	Time2Retain	Unsigned 16-bit integer
iscsi.time2wait	Time2Wait	Unsigned 16-bit integer
iscsi.totalahslength	TotalAHSLength	Unsigned 8-bit integer
iscsi.tsid	TSID	Unsigned 16-bit integer
iscsi.tsih	TSIH	Unsigned 16-bit integer
iscsi.vendorspecificdata	VendorSpecificData	Byte array
iscsi.versionactive	VersionActive	Unsigned 8-bit integer
iscsi.versionmax	VersionMax	Unsigned 8-bit integer
iscsi.versionmin	VersionMin	Unsigned 8-bit integer
iscsi.writedata	WriteData	Byte array

Appendix B. Ethereal Error Messages

Capture file format not understood

If `Ethereal` cannot decode the capture file format of the file you have asked it to load, you will receive a warning box similar to that shown in Figure B-1.

Figure B-1. Ethereal Read Format warning

Save file error

If `Ethereal` cannot open the file you requested it to save captured packets in, you will receive a warning box similar to that shown in Figure B-2.
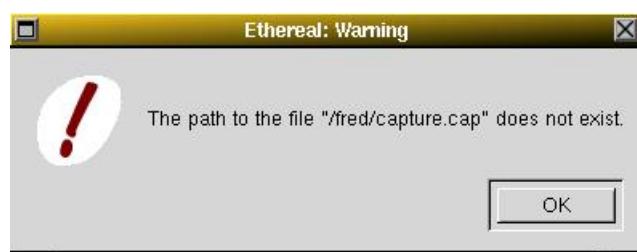
Figure B-2. Save Error warning

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