Understanding Discovery & Connection Data Structures

This chapter provides details about the data structures used in eStreamer messages for discovery and connection events, as well as the metadata for those events. Discovery and connection event messages use the same general message format and series of data blocks; the differences are in the contents of data blocks themselves.

Discovery events include two sub-categories of events:

- Host discovery events, which identify new and changed hosts on your managed network, including the applications running on the hosts detected from the contents of the packets, and the host vulnerabilities.
- User events, which report the detection of new users and user activity, such as logins.

Connection events report information about the session traffic between your monitored hosts and all other hosts. Connection information includes the first and last packet of the transaction, source and destination IP address, source and destination port, and the number of packets and bytes sent and received. If applicable, connection events also report the client application and URL involved in the session.

For information about requesting discovery or connection events from the eStreamer server, see Request Flags, page 2-11.

For information about the general structure of eStreamer event data messages, see Understanding the Organization of Event Data Messages, page 2-17.

See the following sections in this chapter for more information about discovery and connection event data structures:

- Discovery and Connection Event Data Messages, page 4-2 provides a high-level view of the structure that eStreamer uses for host discovery, user, and connection messages.
- Discovery and Connection Event Record Types, page 4-2 describes the record types for discovery and connection events.
- Metadata for Discovery Events, page 4-6 describes the metadata records that you can request for context information to convert numeric and coded data to text; for example, convert the user ID in an event to a user name.
- Discovery Event Header 5.2+, page 4-39 describes the structure of the standard event header used in all discovery and connection messages, and the values that can occur in the event type and event subtype fields. The event type and subtype fields further define the structure of the data record carried in the message.

- Host Discovery Structures by Event Type, page 4-43 describes the structure of the data record that eStreamer uses for the various host discovery event types.
- User Data Structures by Event Type, page 4-60 describes the structure of the data record that eStreamer uses for the various user event types.
- Understanding Discovery (Series 1) Blocks, page 4-61 describes the series of data block structures that are used to convey complex records in discovery and connection event messages. Series 1 data blocks also appear in correlation events.
- User Vulnerability Data Block 5.0+, page 4-153 describes other series 1 block structures that are used to convey complex user event records.

Tip See "Data Structure Examples" section on page A-1 for examples that illustrate sample discovery events.

Discovery and Connection Event Data Messages

eStreamer packages the data for discovery and connection events in the same message structure, which contains:

- An option netmap ID
- a record header that defines the record type
- a discovery event header that identifies and characterizes the event, and specifically identifies the event type and subtype. For information, see Discovery Event Header 5.2+, page 4-39.
- a data record consisting of a block header and a data block. Discovery and connection event data messages use series 1 data blocks. For information, see Host Discovery and Connection Data Blocks, page 4-62 or User Vulnerability Data Block 5.0+, page 4-153.

Discovery and Connection Event Record Types

The following table lists the event record types for host discovery and connection events, and provides links to the event message structure for each record type. The list includes metadata record types as well. Some records contain a single data block which stores a specific piece of data. These data blocks are broken up into series 1 blocks that contain most types of data, and series 2 blocks that specifically contain discovery data. The table also indicates the status of each version (current or legacy). A current record is the latest version. A legacy record has been superseded by a later version but can still be requested from eStreamer.

Table 4-1 Discovery and Connection Event Record Types

Record Type	Contains Block Type	Series	Description	Record Status	Data Format Described in...
10	139	1	New Host Detected	Current	New Host and Host Last Seen Messages, page 4-44
11	103	1	New TCP Server	Current	Server Messages, page 4-45
12	103	1	New UDP Server	Current	Server Messages, page 4-45
13	4	1	New Network Protocol	Current	New Network Protocol Message, page 4-46
14	4	1	New Transport Protocol	Current	New Transport Protocol Message, page 4-46

Table 4-1 Discovery and Connection Event Record Types (continued)

Record Type	Contains Block Type	Series	Description	Record Status	Data Format Described in...
15	122	1	New Client Application	Current	Client Application Messages, page 4-46
16	103	1	TCP Server Information Update	Current	Server Messages, page 4-45
17	103	1	UDP Server Information Update	Current	Server Messages, page 4-45
18	53	1	OS Information Update	Current	Operating System Update Messages, page 4-48
19	N/A	N/A	Host Timeout	Current	IP Address Reused and Host Timeout/Deleted Messages, page 4-48
20	N/A	N/A	Host IP Address Reused	Current	IP Address Reused and Host Timeout/Deleted Messages, page 4-48
21	N/A	N/A	Host Deleted: Host Limit Reached	Current	IP Address Reused and Host Timeout/Deleted Messages, page 4-48
22	N/A	N/A	Hops Change	Current	Hops Change Message, page 4-49
23	N/A	N/A	TCP Port Closed	Current	TCP and UDP Port Closed/Timeout Messages, page 4-49
24	N/A	N/A	UDP Port Closed	Current	TCP and UDP Port Closed/Timeout Messages, page 4-49
25	N/A	N/A	TCP Port Timeout	Current	TCP and UDP Port Closed/Timeout Messages, page 4-49
26	N/A	N/A	UDP Port Timeout	Current	TCP and UDP Port Closed/Timeout Messages, page 4-49
27	N/A	N/A	MAC Information Change	Current	MAC Address Messages, page 4-50
28	N/A	N/A	Additional MAC Detected for Host	Current	MAC Address Messages, page 4-50
29	N/A	N/A	Host IP Address Changed	Current	IP Address Change Message, page 4-47
31	N/A	N/A	Host Identified as Router/Bridge	Current	Host Identified as a Bridge/Router Message, page 4-50
34	14	1	VLAN Tag Information Update	Current	VLAN Tag Information Update Messages, page 4-51
35	122	1	Client Application Timeout	Current	Client Application Messages, page 4-46
42	35	1	NetBIOS Name Change	Current	Change NetBIOS Name Message, page 4-51
44	N/A	N/A	Host Dropped: Host Limit Reached	Current	IP Address Reused and Host Timeout/Deleted Messages, page 4-48
45	37	1	Update Banner	Current	Update Banner Message, page 4-52
46	55	1	Add Host Attribute	Current	Attribute Messages, page 4-55
47	55	1	Update Host Attribute	Current	Attribute Messages, page 4-55
48	55	1	Delete Host Attribute	Current	Attribute Messages, page 4-55

Table 4-1 Discovery and Connection Event Record Types (continued)

Record Type	Contains Block Type	Series	Description	Record Status	Data Format Described in...
51	103	1	TCP Server Confidence Update	Legacy	Server Messages, page 4-45
52	103	1	UDP Server Confidence Update	Legacy	Server Messages, page 4-45
53	53	1	OS Confidence Update	Legacy	Operating System Update Messages, page 4-48
54	N/A	N/A	Fingerprint Metadata	Current	Fingerprint Record, page 4-7
55	N/A	N/A	Client Application Metadata	Current	Client Application Record, page 4-8
57	N/A	N/A	Vulnerability Metadata	Current	Vulnerability Record, page 4-9
58	N/A	N/A	Criticality Metadata	Current	Criticality Record, page 4-11
59	N/A	N/A	Network Protocol Metadata	Current	Network Protocol Record, page 4-12
60	N/A	N/A	Attribute Metadata	Current	Attribute Record, page 4-13
61	N/A	N/A	Scan Type Metadata	Current	Scan Type Record, page 4-14
63	N/A	N/A	Server Metadata	Current	Server Record, page 4-14
71	144	1	Connection Statistics	Legacy	Connection Statistics Data Block 5.2.x, page B-135
71	152	1	Connection Statistics	Legacy	Connection Statistics Data Block 5.3, page B-150
71	154	1	Connection Statistics	Legacy	Connection Statistics Data Block 5.3.1, page B-156
71	155	1	Connection Statistics	Legacy	Connection Statistics Data Block 5.4, page B-163
71	157	1	Connection Statistics	Legacy	Connection Statistics Data Block 5.4.1, page B-176
71	160	1	Connection Statistics	Legacy	Connection Statistics Data Block 6.0.x, page B-189
71	163	1	Connection Statistics	Current	Connection Statistics Data Block 6.2+, page 4-116
73	136	1	Connection Chunks	Current	Connection Chunk Message, page 4-53
74	N/A	N/A	User Set OS	Current	User Server and Operating System Messages, page 4-56
75	N/A	N/A	User Set Server	Current	User Server and Operating System Messages, page 4-56
76	83	1	User Delete Protocol	Current	User Protocol Messages, page 4-57
77	60	1	User Delete Client Application	Current	User Client Application Messages, page 4-57
78	78	1	User Delete Address	Current	User Add and Delete Host Messages, page 4-54
79	77	1	User Delete Server	Current	User Delete Server Message, page 4-54
80	80	1	User Set Valid Vulnerabilities	Current	User Set Vulnerabilities Messages for Version 4.6.1+, page 4-53

Table 4-1 Discovery and Connection Event Record Types (continued)

Record Type	Contains Block Type	Series	Description	Record Status	Data Format Described in...
81	80	1	User Set Invalid Vulnerabilities	Current	User Set Vulnerabilities Messages for Version 4.6.1+, page 4-53
82	81	1	User Set Host Criticality	Current	User Set Host Criticality Messages, page 4-55
83	55	1	User Set Attribute Value	Current	Attribute Value Messages, page 4-56
84	82	1	User Delete Attribute Value	Current	Attribute Value Messages, page 4-56
85	78	1	User Add Host	Current	User Add and Delete Host Messages, page 4-54
86	N/A	N/A	User Add Server	Current	User Server and Operating System Messages, page 4-56
87	60	1	User Add Client Application	Current	User Client Application Messages, page 4-57
88	83	1	User Add Protocol	Current	User Protocol Messages, page 4-57
89	142	1	User Add Scan Result	Current	Add Scan Result Messages, page 4-58
90	N/A	N/A	Source Type Record	Current	Source Type Record, page 4-15
91	N/A	N/A	Source Application Record	Current	Source Application Record, page 4-16
92	120	1	User Dropped Change Event	Current	User Modification Messages, page 4-60
93	120	1	User Removed Change Event	Current	User Modification Messages, page 4-60
94	120	1	New User Identification Event	Current	User Modification Messages, page 4-60
95	121	1	User Login Change Event	Current	User Information Update Message Block, page 4-61
96	N/A	N/A	Source Detector Record	Current	Source Detector Record, page 4-17
98	57	2	User Record	Current	User Record, page 4-19
101	N/A	N/A	New OS Event	Current	New Operating System Messages, page 4-58
102	94	1	Identity Conflict Event	Current	Identity Conflict and Identity Timeout System Messages, page 4-59
103	94	1	Identity Timeout Event	Current	Identity Conflict and Identity Timeout System Messages, page 4-59
106	N/A	N/A	Third Party Scanner Vulnerability Record	Current	Third Party Scanner Vulnerability Record, page 4-18
107	122	1	Client Application Update	Current	Client Application Messages, page 4-46
109	N/A	N/A	Web Application Record	Current	Web Application Record, page 4-20
115	N/A	N/A	Security Zone Name Record	Current	Security Zone Name Record, page 3-29

Table 4-1 Discovery and Connection Event Record Types (continued)

Record Type	Contains Block Type	Series	Description	Record Status	Data Format Described in...
116	14	2	Interface Name Record	Current	Interface Name Record, page 3-30
117	14	2	Access Control Policy Name Metadata	Current	Access Control Policy Name Record, page 3-31
118	14	2	Intrusion Policy Name Record	Current	Intrusion Policy Name Record, page 4-21
119	14	2	Access Control Rule ID Record	Current	Access Control Rule ID Record Metadata, page 3-33
120	N/A	N/A	Access Control Rule Action Record	Current	Access Control Rule Action Record Metadata, page 4-22
121	N/A	N/A	URL Category Record	Current	URL Category Record Metadata, page 4-23
122	N/A	N/A	URL Reputation Metadata	Current	URL Reputation Record Metadata, page 4-24
124	21	2	Access Control Rule Reason Metadata	Current	Access Control Rule Reason Metadata, page 4-25
145	64	2	Access Control Policy Metadata	Current	Access Control Policy Metadata, page 4-26
146	64	2	Prefilter Policy Metadata	Current	Prefilter Policy Metadata, page 4-27
147	21	2	Tunnel or Prefilter Rule Metadata	Current	Tunnel or Prefilter Rule Metadata, page 4-29
160	7	1	Host IOC Set Messages	Current	Host IOC Set Messages, page 4-59
161	39	2	IOC Name Data Block for 5.3+	Current	IOC Name Data Block for 5.3+, page 4-34
280	22	2	Security Intelligence Category Metadata	Current	Security Intelligence Category Metadata, page 4-30
281	N/A	N/A	Security Intelligence Source/Destination Record	Current	Security Intelligence Source/Destination Record, page 4-31

Metadata for Discovery Events

You request metadata by metadata version number. For the metadata version that corresponds to your version of the Firepower System, see Understanding Metadata, page 2-37. For important information on how eStreamer streams metadata records, see Metadata Transmission, page 2-37.

For information on the structures of the various metadata records types for host discovery and user event records, see:

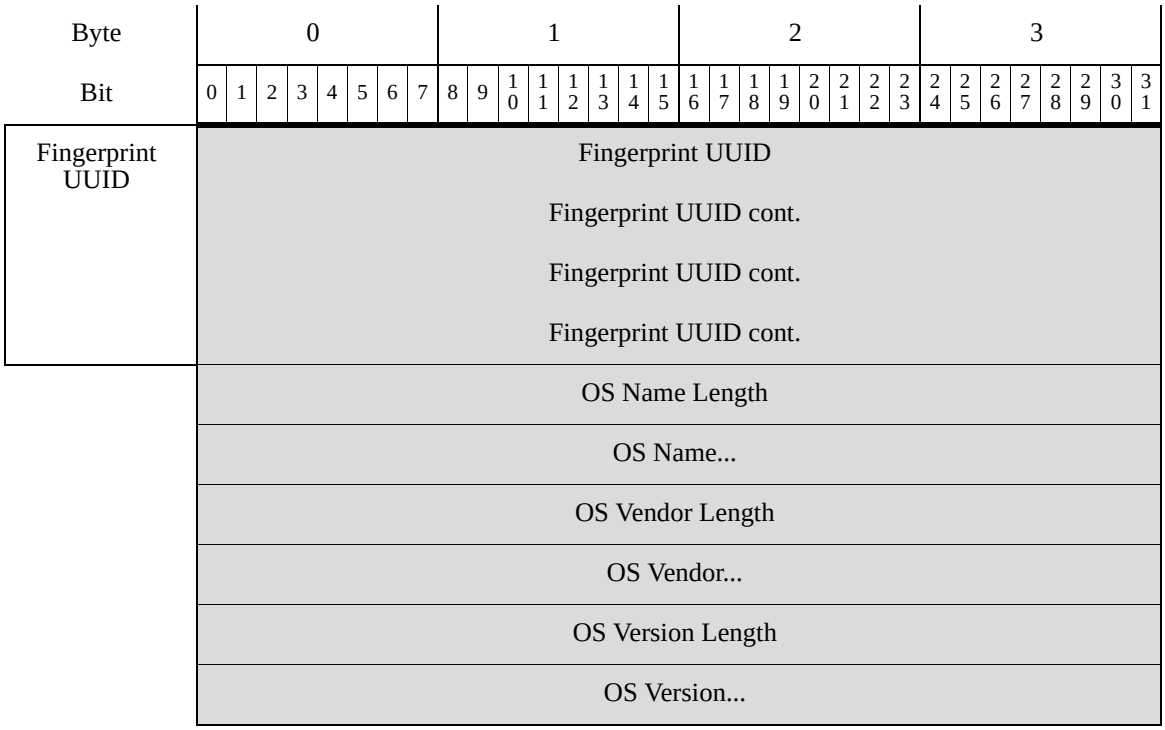
- Fingerprint Record, page 4-7
- Client Application Record, page 4-8
- Vulnerability Record, page 4-9
- Criticality Record, page 4-11

For metadata records for intrusion and correlation events, see Intrusion Event and Metadata Record Types, page 3-1.

Fingerprint Record

The eStreamer service transmits the fingerprint metadata for an event within a Fingerprint record, the format of which is shown below. (Fingerprint metadata is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `54`, indicating a Fingerprint record.

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Header Version (1)																Message Type (4)															
	Message Length																															
	Netmap ID																Record Type (54)															
	Record Length																															



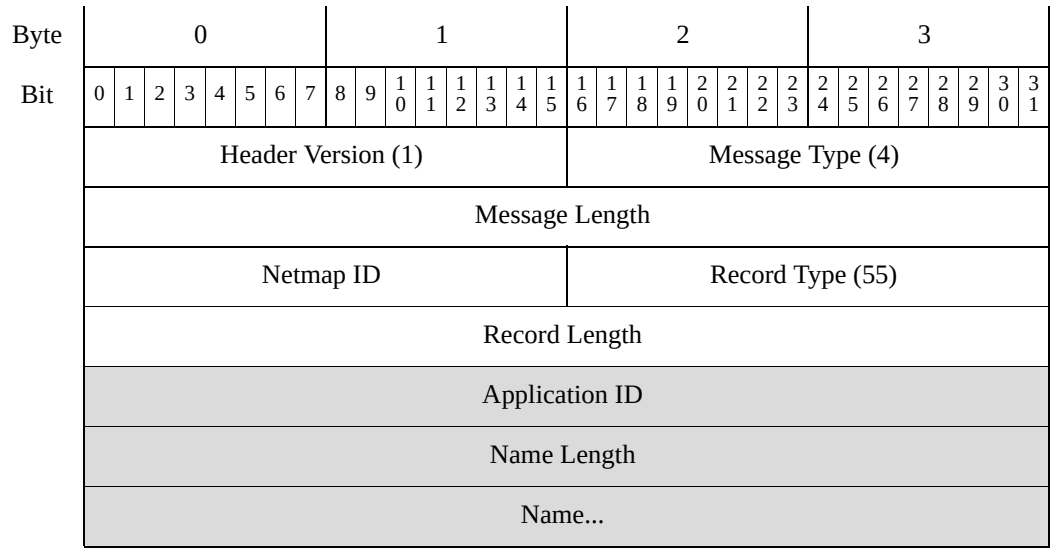
The following table describes the fields in the Fingerprint record.

Table 4-2 Fingerprint Record Fields

Field	Data Type	Description
Fingerprint UUID	uint8[16]	A fingerprint ID number that acts as a unique identifier for the operating system.
OS Name Length	uint32	The number of bytes included in the operating system name.
OS Name	string	The name of the operating system for the fingerprint.
OS Vendor Length	uint32	The number of bytes included in the operating system vendor name.
OS Vendor	string	The name of the operating system vendor for the fingerprint.
OS Version Length	uint32	The number of bytes included in the operating system version.
OS Version	string	The version of the operating system for the fingerprint.

Client Application Record

The eStreamer service transmits the client application metadata for an event within a Client Application record, the format of which is shown below. (Client application metadata is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `55`, indicating a Client Application record.



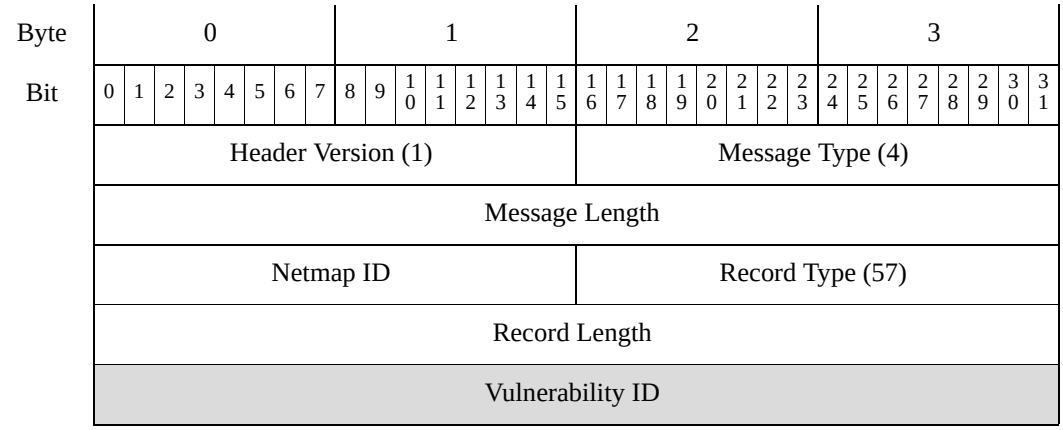
The following table describes the fields in the Client Application record.

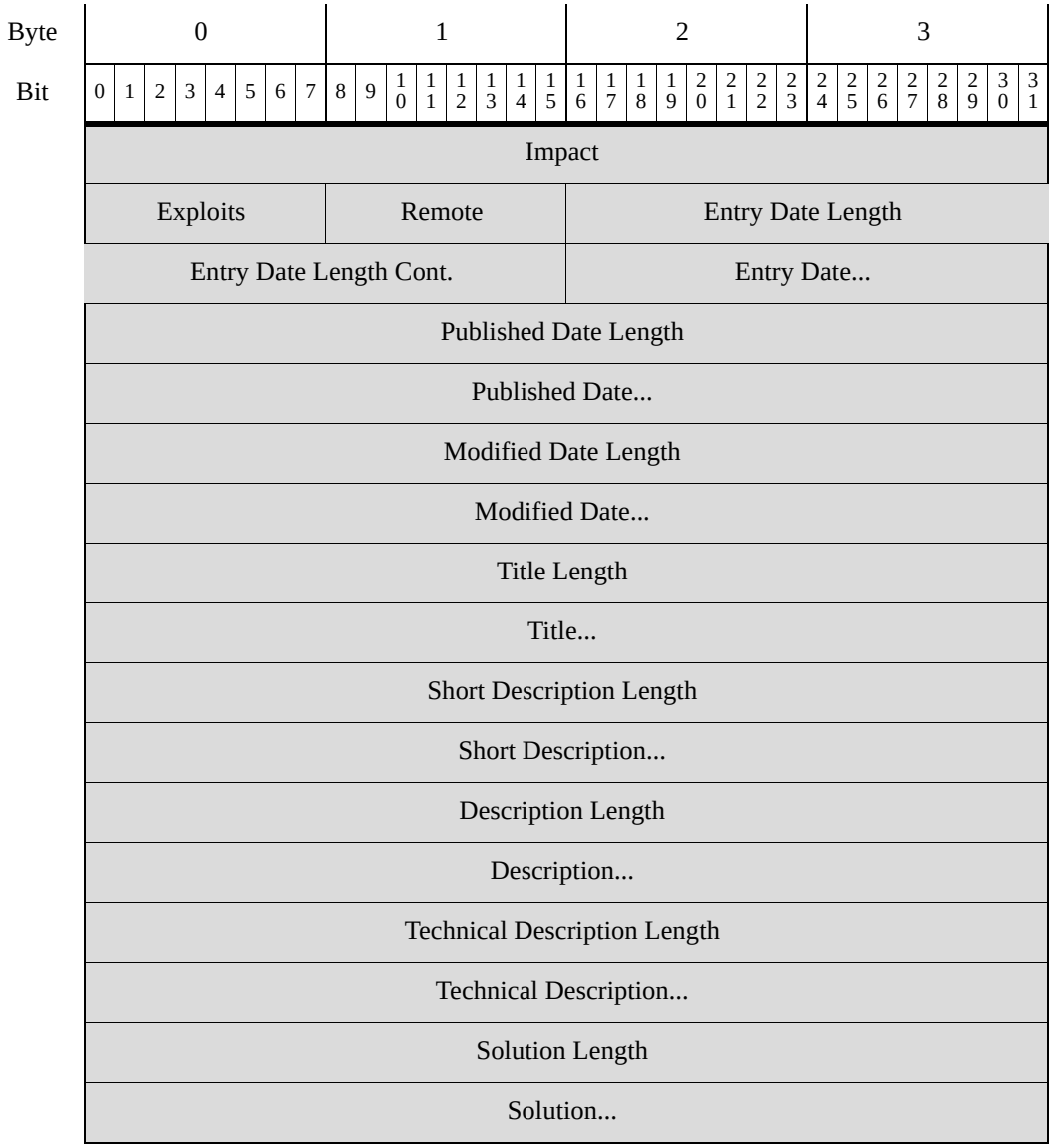
Table 4-3 Client Application Record Fields

Field	Data Type	Description
Application ID	uint32	The application ID number for the client application.
Name Length	uint32	The number of bytes included in the name.
Name	string	The client application name.

Vulnerability Record

The eStreamer service transmits metadata containing vulnerability information for an event within a Vulnerability record, the format of which is shown below. (Vulnerability information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of 57, indicating a Vulnerability record.





The following table describes the fields in the Vulnerability record.

Table 4-4 Vulnerability Record Fields

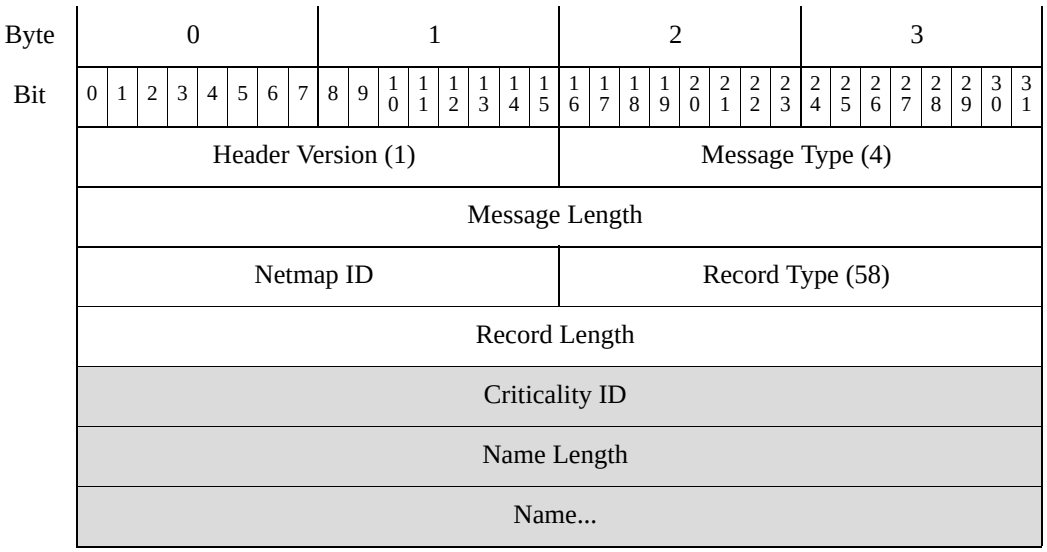
Field	Data Type	Description
Vulnerability ID	uint32	The vulnerability ID number.
Impact	uint32	The vulnerability impact, corresponding to the impact level determined through correlation of intrusion data, host discovery events, and vulnerability assessments. The value can be from `1` to `10`, with `10` being the most severe. The impact value of a vulnerability is determined by the writer of the Bugtraq entry.

Table 4-4 Vulnerability Record Fields (continued)

Field	Data Type	Description
Exploits	uint8	Indicates whether known exploits exist for the vulnerability. Possible values include: • 0 — Yes • 1 — No
Remote	uint8	Indicates whether the vulnerability can be exploited across a network. Possible values include: • 0 — Yes • 1 — No • Blank — Vulnerability to remote exploits unknown
Entry Date Length	uint32	The length of the entry date field.
Entry Date	string	The date the vulnerability was entered in the database.
Published Date Length	uint32	The length of the published date field.
Published Date	string	The date the vulnerability was published.
Modified Date Length	uint32	The length of the modified date field.
Modified Date	string	The date of the most recent modification to the vulnerability, if applicable.
Title Length	uint32	The length of the title field.
Title	string	The title of the vulnerability.
Short Description Length	uint32	The length of the short description field.
Short Description	string	A summary description of the vulnerability.
Description Length	uint32	The length of the description field.
Description	string	A general description of the vulnerability.
Technical Description Length	uint32	The length of the technical description field.
Technical Description	string	The technical description of the vulnerability.
Solution Length	uint32	The length of the solution field.
Solution	string	The solution to the vulnerability.

Criticality Record

The eStreamer service transmits metadata containing host criticality information for an event within a Criticality record, the format of which is shown below. (Criticality information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of 58, indicating a Criticality record.



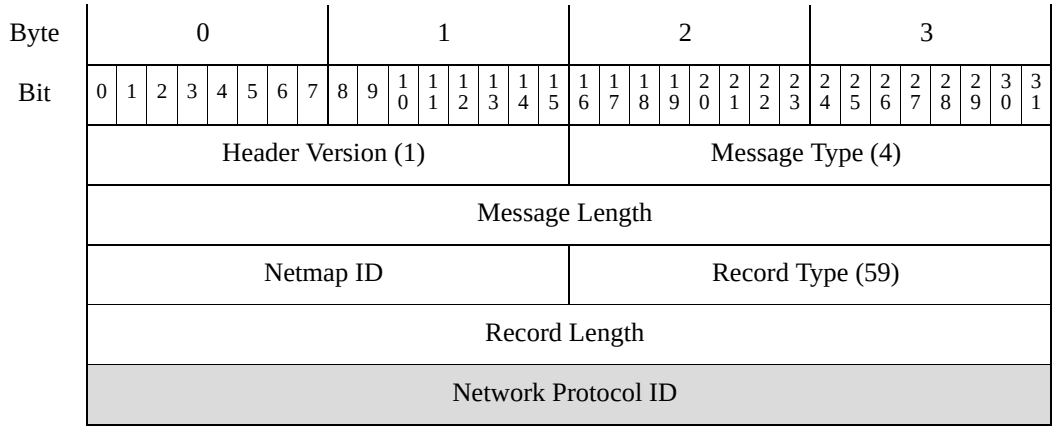
The following table describes the fields in the Criticality record.

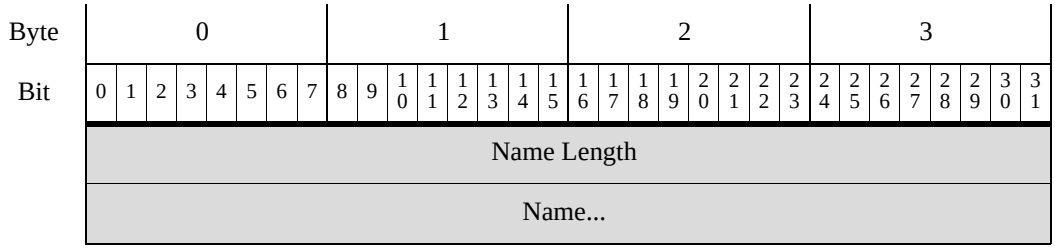
Table 4-5 Criticality Record Fields

Field	Data Type	Description
Criticality ID	uint32	The criticality ID number.
Name Length	uint32	The number of bytes included in the criticality level.
Name	string	The criticality level.

Network Protocol Record

The eStreamer service transmits metadata containing network protocol information for an event within a Network Protocol record, the format of which is shown below. (Network protocol information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of 59, indicating a Network Protocol record.





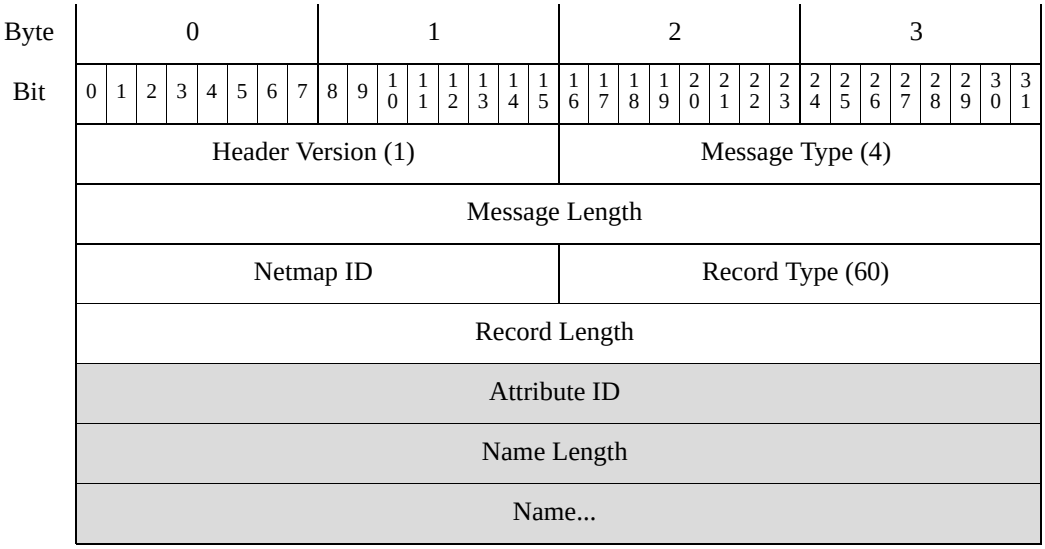
The following table describes the fields in the Network Protocol record.

Table 4-6 Network Protocol Record Fields

Field	Data Type	Description
Network Protocol ID	uint32	The network protocol ID number.
Name Length	uint32	The number of bytes included in the network protocol name.
Name	string	The name of the network protocol.

Attribute Record

The eStreamer service transmits metadata containing attribute information for an event within an Attribute record, the format of which is shown below. (Attribute information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `60`, indicating an Attribute record.



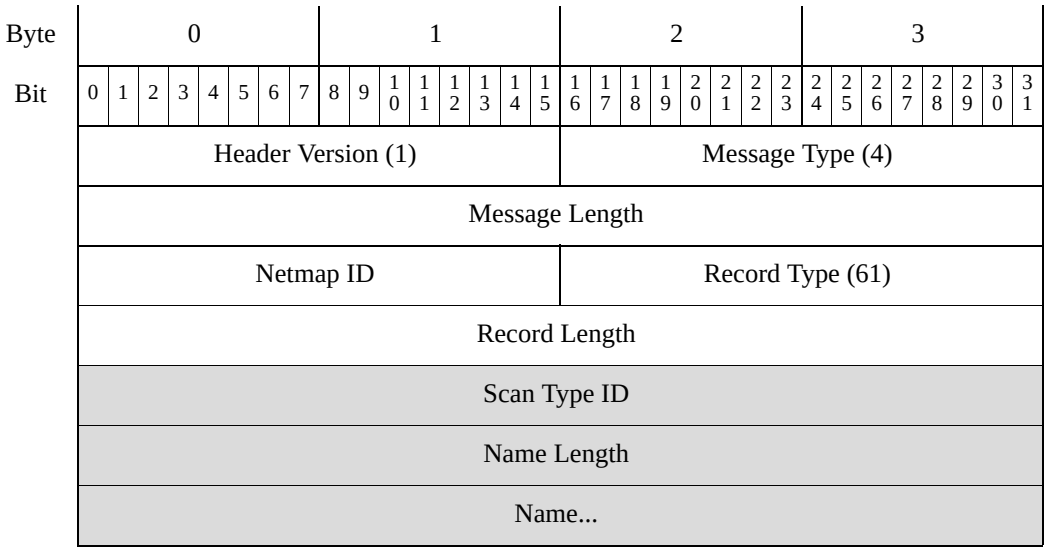
The following table describes the fields in the Attribute record.

Table 4-7 Attribute Record Fields

Field	Data Type	Description
Attribute ID	uint32	The attribute ID number.
Name Length	uint32	The number of bytes included in the attribute name.
Name	string	The name of the attribute.

Scan Type Record

The eStreamer service transmits metadata containing scan type information for an event within a Scan Type record, the format of which is shown below. (Scan type information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `61`, indicating a Scan Type record.



The following table describes the fields in the Scan Type record.

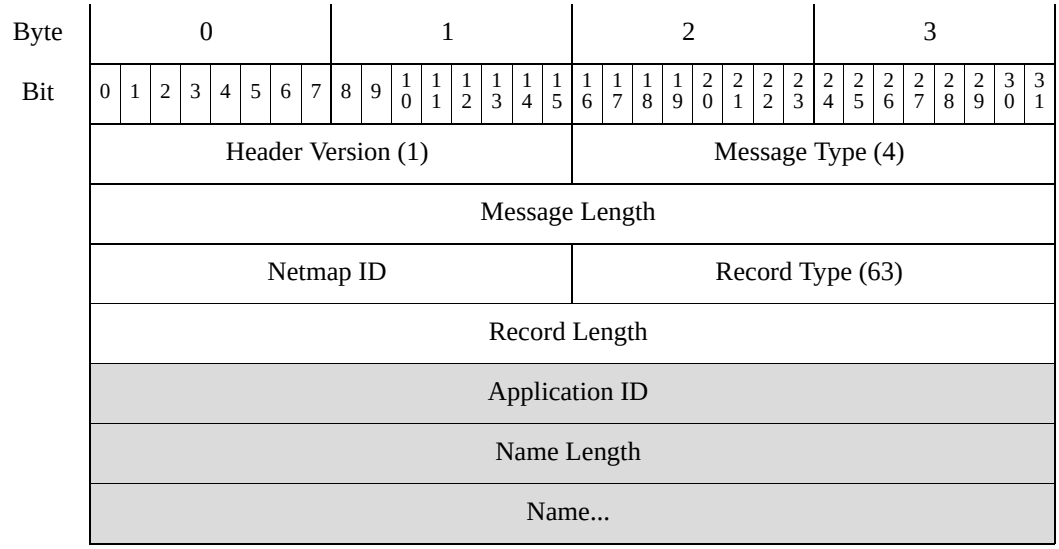
Table 4-8 Scan Type Record Fields

Field	Data Type	Description
Scan Type ID	uint32	The scan type ID number.
Name Length	uint32	The number of bytes included in the scan type name.
Name	string	The name of the scan type.

Server Record

The eStreamer service transmits metadata containing server information for an event within a Server record, the format of which is shown below. The application ID of the server's application protocol provides the cross-reference to the metadata. (Server information is sent when one of the metadata

flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `63`, indicating a Server record.



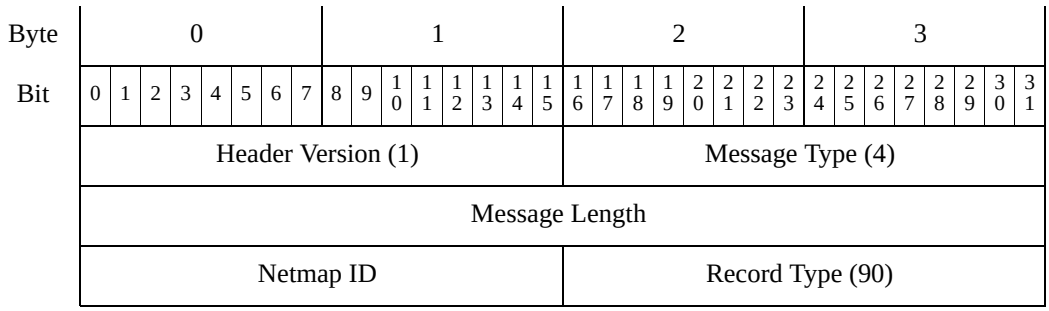
The following table describes the fields in the Server record.

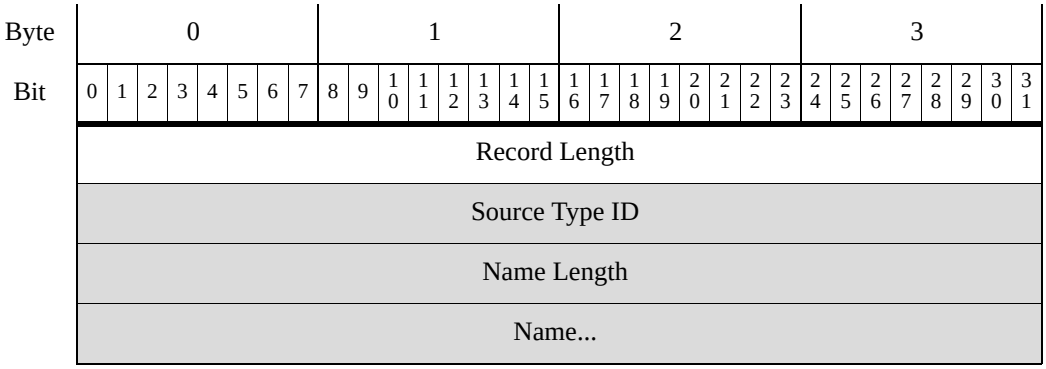
Table 4-9 Server Record Fields

Field	Data Type	Description
Application ID	uint32	The application ID number of the application protocol.
Name Length	uint32	The number of bytes included in the server name.
Name	string	The name of the application protocol. For application ID 65535, the name is `unknown`.

Source Type Record

The eStreamer service transmits metadata containing information about the source application for an event within a Source Type record, the format of which is shown below. (Source type information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `90`, indicating a Source Type record.





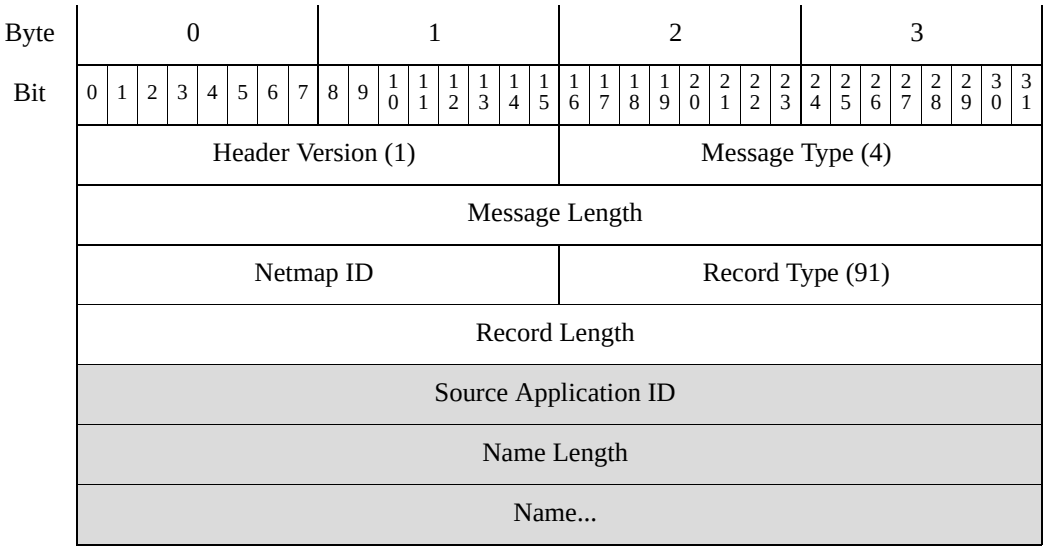
The following table describes the fields in the Source Type record.

Table 4-10 Source Type Record Fields

Field	Data Type	Description
Source Type ID	uint32	The identification number for the source type.
Name Length	uint32	The number of bytes included in the source type name.
Name	string	The name of the source type.

Source Application Record

The eStreamer service transmits metadata containing information about the source application for a host discovery event within a Source Application record, the format of which is shown below. (Source application information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `91`, indicating a Source Application record.



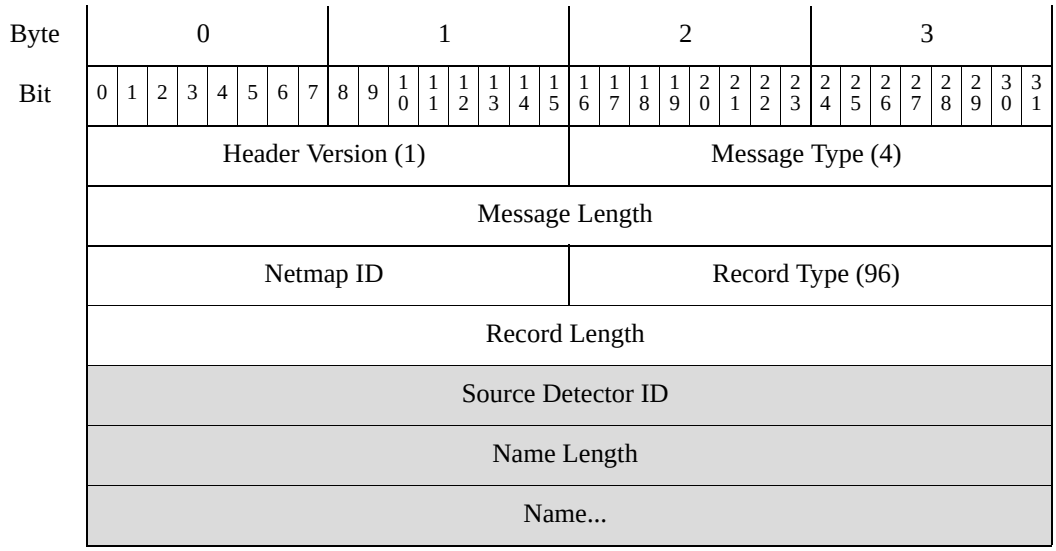
The following table describes the fields in the Source Application record.

Table 4-11 Source Application Record Fields

Field	Data Type	Description
Source Application ID	uint32	The ID number for the source application.
Name Length	uint32	The number of bytes included in the source application name.
Name	string	The name of the source application.

Source Detector Record

The eStreamer service transmits metadata containing information about the source application for a host discovery event within a Source Type record, the format of which is shown below. (Source type information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `96`, indicating a Source Detector record.



The following table describes the fields in the Source Detector record.

Table 4-12 Source Detector Record Fields

Field	Data Type	Description
Source Detector ID	uint32	The ID string for the source detector.
Name Length	uint32	The number of bytes included in the source type name.
Name	string	The name of the source detector.

Third Party Scanner Vulnerability Record

The eStreamer service transmits metadata containing third-party vulnerability information for an event within a Third Party Scanner Vulnerability record, the format of which is shown below. (Vulnerability information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `106`, indicating a Third Party Scanner Vulnerability record.

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Header Version (1)																	Message Type (4)															
Message Length																																
Netmap ID																	Record Type (106)															
Record Length																																
Vulnerability ID																																
Scanner Type																																
Title Length																																
Title...																																
Description Length																																
Description...																																
CVE ID Length																																
CVE ID...																																
BugTraq Length																																
BugTraq ID...																																

The following table describes the fields in the Vulnerability record.

Table 4-13 Third Party Scanner Vulnerability Record Fields

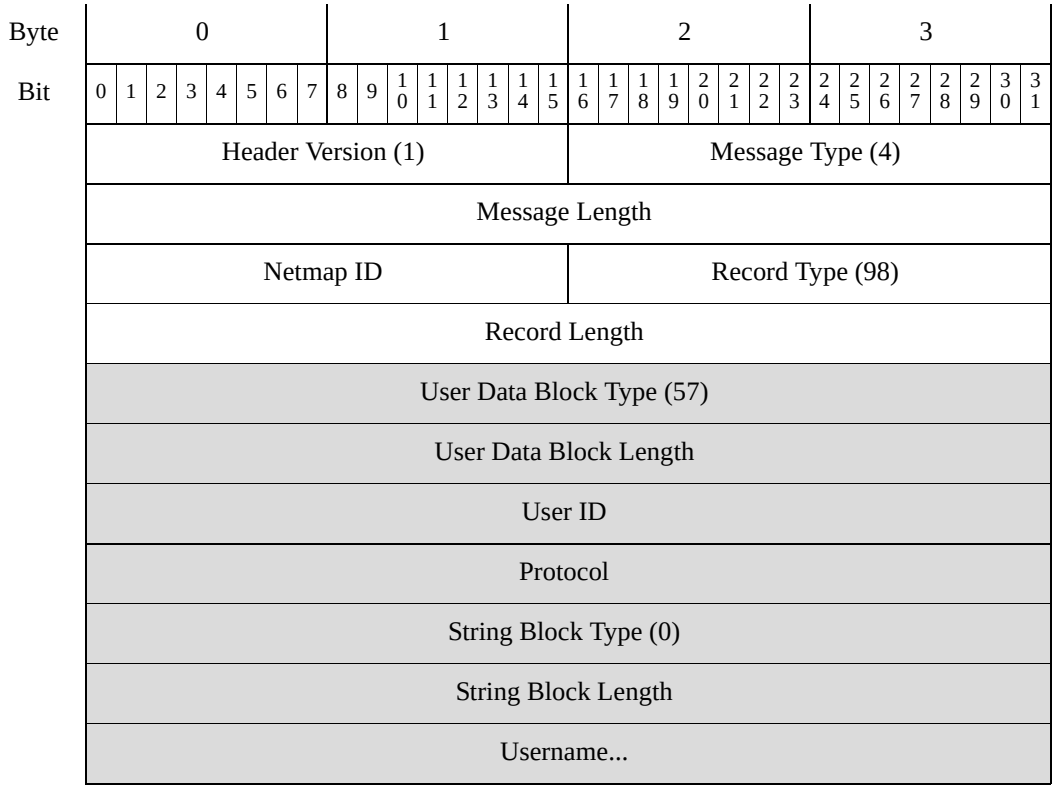
Field	Data Type	Description
Vulnerability ID	uint32	The third-party vulnerability ID number.
Scanner Type	uint32	The third-party scanner type.
Title Length	uint32	The length of the title field.
Title	string	The title of the vulnerability.
Description Length	uint32	The length of the description field.
Description	string	A general description of the vulnerability.

Table 4-13 Third Party Scanner Vulnerability Record Fields (continued)

Field	Data Type	Description
CVE ID Length	uint32	The length of the CVE ID field.
CVE ID	string	The Common Vulnerabilities and Exposures (CVE) ID number for the vulnerability.
BugTraq ID Length	uint32	The length of the BugTraq ID field.
BugTraq ID	string	The BugTraq ID number for the vulnerability.

User Record

The eStreamer service transmits metadata containing information about users detected by the system within a User record, the format of which is shown below. (User information is sent when the Version 4 metadata and the policy event request flag—bits 20 and 22, respectively, in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of 98, indicating a User record.



The following table describes the fields in the User record.

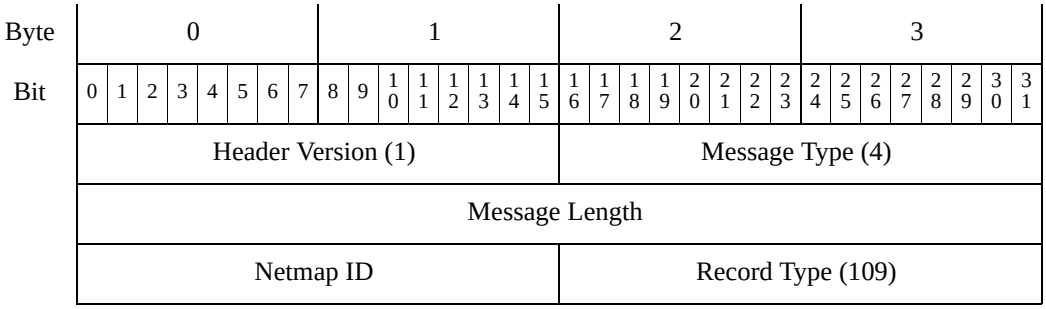
Table 4-14 User Record Fields

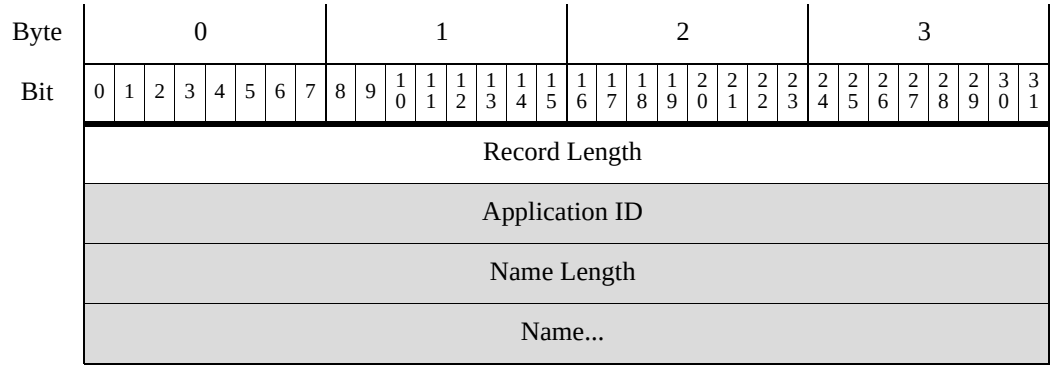
Field	Data Type	Description
User Data Block Type	uint32	Initiates an User Data block. This value is always 57. The block type is a series 2 block.
User Data Block Length	uint32	Length of the data block. Includes the number of bytes of data plus the 8 bytes in the two data block header fields.
User ID	uint32	The unique identifier for the user.
Protocol	uint32	Protocol used to detect or report the user. Possible values are: • 165 - FTP • 426 - SIP • 547 - AOL Instant Messenger • 683 - IMAP • 710 - LDAP • 767 - NTP • 773 - Oracle Database • 788 - POP3 • 1755 - MDNS
String Block Type	uint32	Initiates a String data block containing the username. This value is always 0.
String Block Length	uint32	The number of bytes included in the username String data block, including eight bytes for the block type and header fields plus the number of bytes in the Username field.
Username	string	The name of the user

Web Application Record

The system detects the content of HTTP traffic from websites, if available. Web application metadata for a host discovery event may include the specific type of content (for example, WMV or QuickTime).

The eStreamer service transmits the web application metadata for an event within a Web Application record, the format of which is shown below. (Web application metadata is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of 109, indicating a Web Application record.





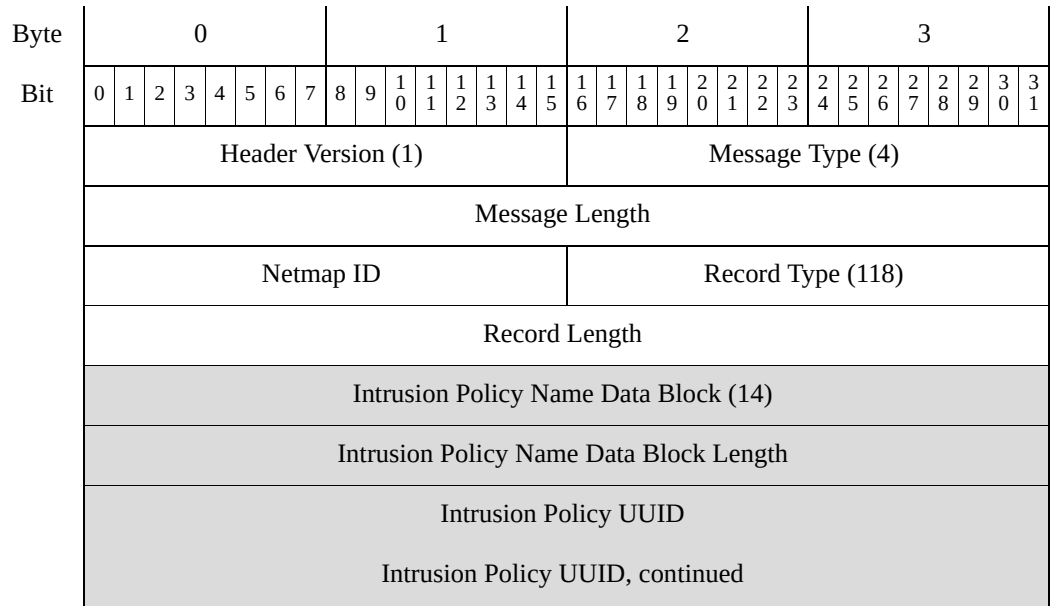
The following table describes the fields in the Web Application record.

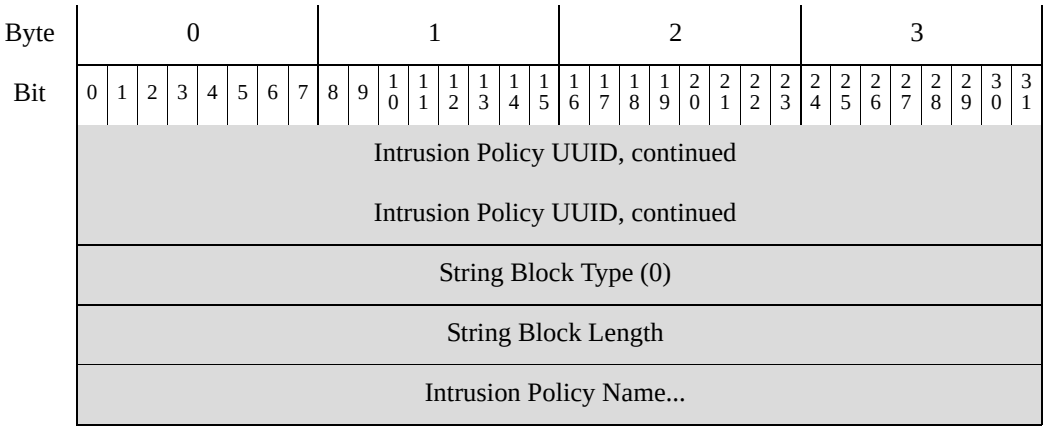
Table 4-15 Web Application Record Fields

Field	Data Type	Description
Application ID	uint32	Application ID number of the web application.
Name Length	uint32	The number of bytes included in the name.
Name	string	The web application content name.

Intrusion Policy Name Record

The eStreamer service transmits metadata containing intrusion policy name information for a connection event within an Intrusion Policy Name record, the format of which is shown below. (Intrusion policy name information is sent when one of the metadata flags—version 4 metadata bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Intrusion Policy Name record field, which appears after the Message Length field, has a value of `118`, indicating an Intrusion Policy Name record. It contains a UUID String data block, block type 14 in the series 2 set of data blocks.





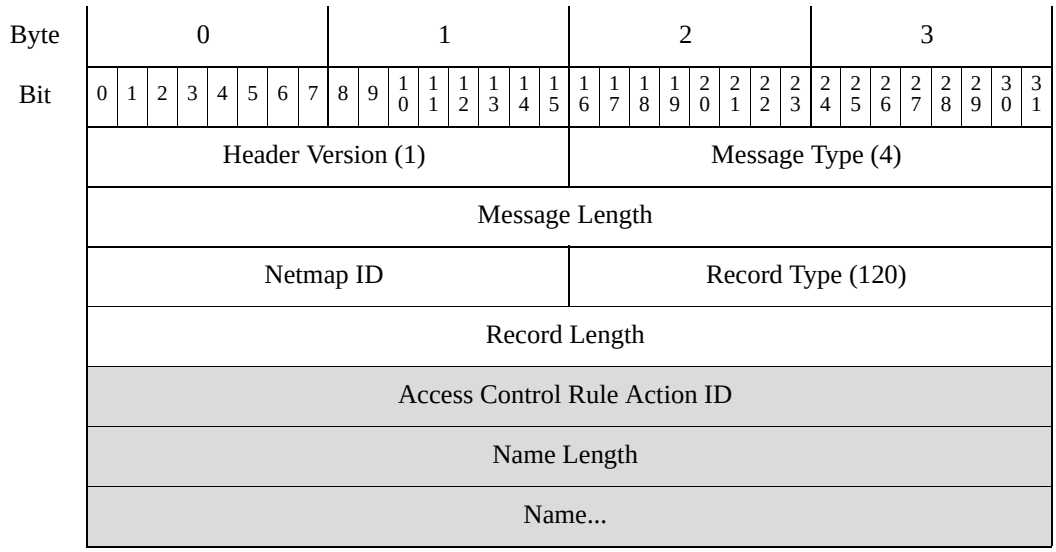
The following table describes the fields in the Intrusion Policy Name data block.

Table 4-16 Intrusion Policy Name Data Block Fields

Field	Data Type	Description
Intrusion Policy Name Data Block Type	uint32	Initiates an Intrusion Policy Name data block. This value is always `14`. The block type is a series 2 block.
Intrusion Policy Name Data Block Length	uint32	Length of the data block. Includes the number of bytes of data plus the 8 bytes in the two data block header fields.
Intrusion Policy UUID	uint8[16]	The unique identifier for the intrusion policy associated with the connection event.
String Block Type	uint32	Initiates a String data block containing the name of the intrusion policy. This value is always `0`.
String Block Length	uint32	The number of bytes included in the intrusion policy name String data block, including eight bytes for the block type and header fields plus the number of bytes in the intrusion policy name.
Intrusion Policy Name	string	The intrusion policy name.

Access Control Rule Action Record Metadata

The eStreamer service transmits metadata containing the action associated with a triggered access control rule within an Access Control Rule Action record, the format of which is shown below. (Access Control Rule Action information is sent when the version 4 metadata flag—bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Access Control Rule Action record field, which appears after the Message Length field, has a value of `120`, indicating an Access Control Rule Action record.



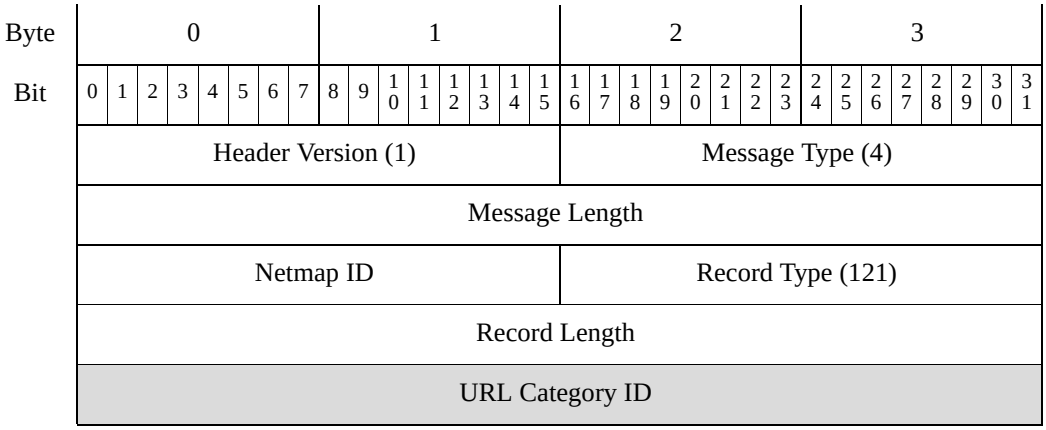
The following table describes the fields in the Access Control Rule Action record.

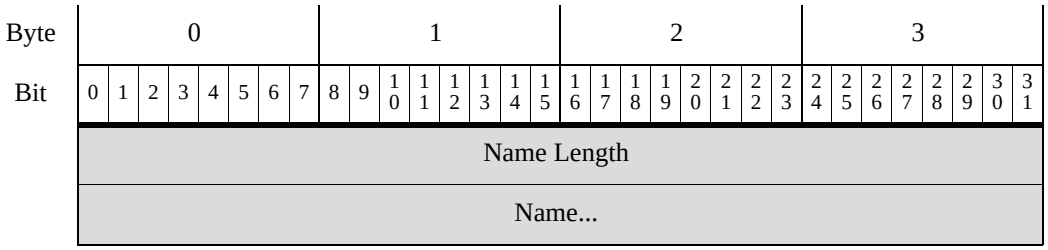
Table 4-17 Access Control Rule Action Record Fields

Field	Data Type	Description
Access Control Rule Action ID	uint32	ID number of the access control rule action.
Name Length	uint32	The number of bytes included in the name.
Name	string	The firewall rule action name.

URL Category Record Metadata

The eStreamer service transmits metadata containing the category name associated with a URL in a connection log within a URL Category record, the format of which is shown below. (URL category information is sent when the version 4 metadata flag—bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the record field, which appears after the Message Length field, has a value of `121`, indicating a URL Category record.





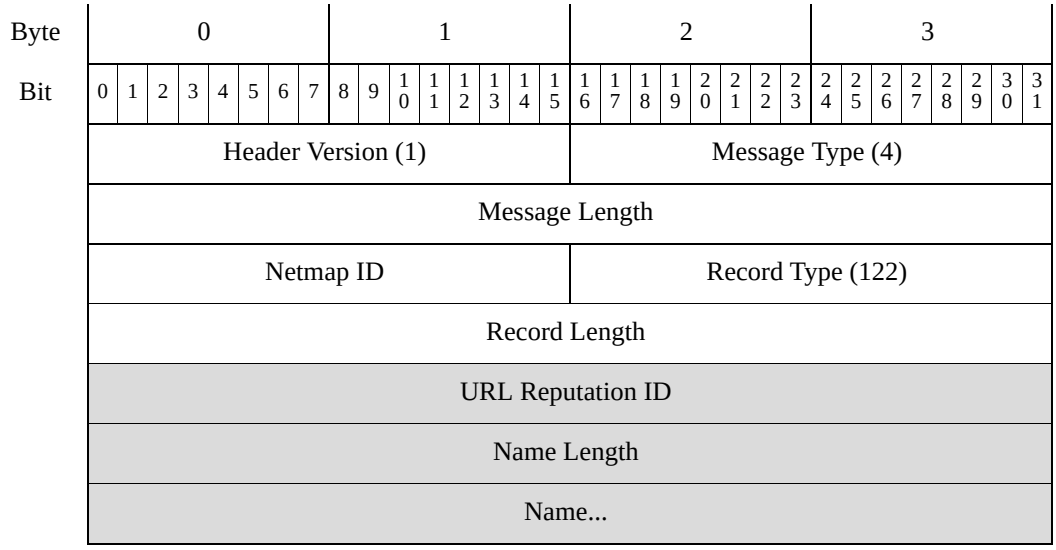
The following table describes the fields in the URL Category record.

Table 4-18 URL Category Record Fields

Field	Data Type	Description
URL Category ID	uint32	ID number of the URL category.
Name Length	uint32	The number of bytes included in the name.
Name	string	The URL category name.

URL Reputation Record Metadata

The eStreamer service transmits metadata containing the reputation (that is, risk level) associated with a URL in a connection log within a URL Reputation record, the format of which is shown below. (URL reputation information is sent when the version 4 metadata flag—bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the URL Reputation metadata record field, which appears after the Message Length field, has a value of `122`, indicating a URL Reputation metadata record.



The following table describes the fields in the URL Reputation record.

Table 4-19 URL Reputation Record Fields

Field	Data Type	Description
URL Reputation ID	uint32	ID number of the URL reputation.
Name Length	uint32	The number of bytes included in the name.
Name	string	The URL reputation name.

Access Control Rule Reason Metadata

The eStreamer service transmits metadata containing information about the reason an access control rule triggered an intrusion event or connection event within an Access Control Rule Reason record, the format of which is shown below. Access control rule reason metadata is sent when the Version 4 metadata flag—bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11. Note that the Record Type field, which appears after the Message Length field, has a value of `124`, indicating an Access Control Rule Reason record. It contains an Access Control Rule Reason Block (as documented in Access Control Rule Reason Data Block 5.1+, page 4-194). The Access Control Rule Reason data block is block type 21 in series 2.

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Header Version (1)																	Message Type (4)															
Message Length																																
Netmap ID																	Record Type (124)															
Record Length																																
Access Control Rule Reason Block Type (21)																																
Access Control Rule Block Length																																
Access Control Rule Reason																	String Block Type (0)															
String Block Type (0), cont.																	String Block Length															
String Block Length, cont.																	Description...															

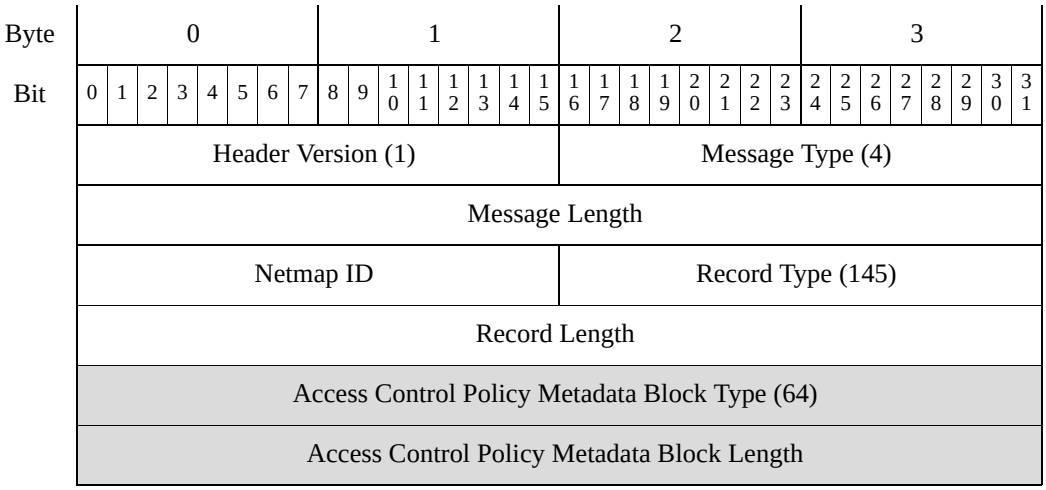
The following table describes the fields in the Access Control Rule ID data block.

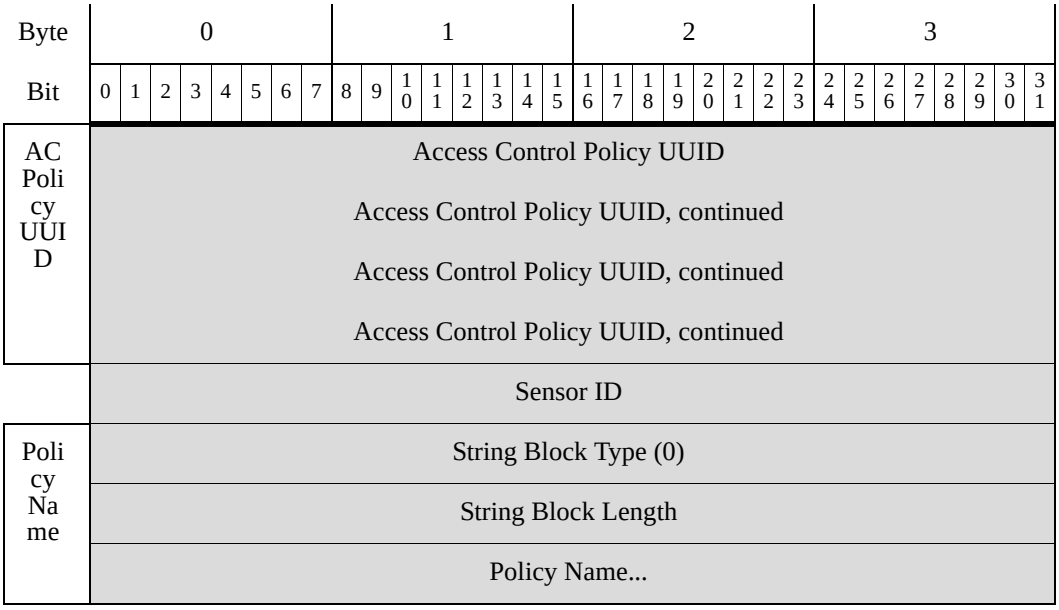
Table 4-20 Access Control Rule Reason Metadata Fields

Field	Data Type	Description
Access Control Rule Reason Block Type	uint32	Initiates an Access Control Rule Reason block. This value is always `21`. This is a series 2 data block.
Access Control Rule Reason Block Length	uint32	Total number of bytes in the Access Control Rule Reason block, including eight bytes for the Access Control Rule Reason block type and length fields, plus the number of bytes of data that follows.
Access Control Rule Reason	uint16	The reason the Access Control rule logged the connection.
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the access control rule reason. This value is always `0`.
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Description field.
Description	string	Description of the Access Control rule reason.

Access Control Policy Metadata

The eStreamer service transmits metadata containing information about the access control policy that triggered an intrusion event or connection event within an Access Control Policy Metadata record, the format of which is shown below. Access control rule policy metadata is sent when the Version 4 metadata flag—bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11. Note that the Record Type field, which appears after the Message Length field, has a value of `145`, indicating an Access Control Policy Metadata record. It contains an Access Control Policy Metadata Block (as documented in Access Control Policy Metadata Block 6.0+, page 4-198). The Access Control Policy Metadata block is block type 64 in series 2.





The following table describes the fields in the Access Control Rule ID data block.

Table 4-21 Access Control Rule Reason Metadata Fields

Field	Data Type	Description
Access Control Policy Metadata Block Type	uint32	Initiates an Access Control Policy Metadata block. This value is always `64`. This is a series 2 data block.
Access Control Policy Metadata Block Length	uint32	Total number of bytes in the Access Control Policy Metadata block, including eight bytes for the Access Control Policy Metadata block type and length fields, plus the number of bytes of data that follows.
Access Control Policy UUID	uint8[16]	UUID of the Access Control Policy
Sensor ID	uint32	ID Number of the Sensor associated with the Access Control policy
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the access control policy. This value is always `0`.
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Name field.
Name	string	Name of the access control policy.

Prefilter Policy Metadata

The eStreamer service transmits metadata containing information about the prefilter policy that triggered an intrusion event or connection event within a Prefilter Policy record, the format of which is shown below. Prefilter Policy metadata is sent when the Version 4 metadata flag—bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11. Note that the Record Type field, which appears after the Message Length field, has a value of `146`, indicating an Prefilter Policy Metadata

record. It contains an Access Control Policy Metadata Block (as documented in Access Control Policy Metadata Block 6.0+, page 4-198). The Access Control Policy Metadata block is block type 64 in series 2.

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Header Version (1)																Message Type (4)															
	Message Length																															
	Netmap ID																Record Type (146)															
	Record Length																															
	Access Control Policy Metadata Block Type (64)																															
	Access Control Policy Metadata Block Length																															
AC Policy UUID	Access Control Policy UUID Access Control Policy UUID, continued Access Control Policy UUID, continued Access Control Policy UUID, continued																															
	Sensor ID																															
Policy Name	String Block Type (0)																															
	String Block Length																															
	Policy Name...																															

The following table describes the fields in the Prefilter Policy Metadata block.

Table 4-22 Prefilter Policy Metadata Fields

Field	Data Type	Description
Access Control Rule Reason Block Type	uint32	Initiates an Access Control Rule Reason block. This value is always `64`. This is a series 2 data block.
Access Control Rule Reason Block Length	uint32	Total number of bytes in the Access Control Rule Reason block, including eight bytes for the Access Control Rule Reason block type and length fields, plus the number of bytes of data that follows.
Prefilter Policy UUID	uint8[16]	UUID of the Prefilter Policy
Sensor ID	uint32	ID Number of the Sensor associated with the Prefilter policy
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the prefilter policy. This value is always `0`.

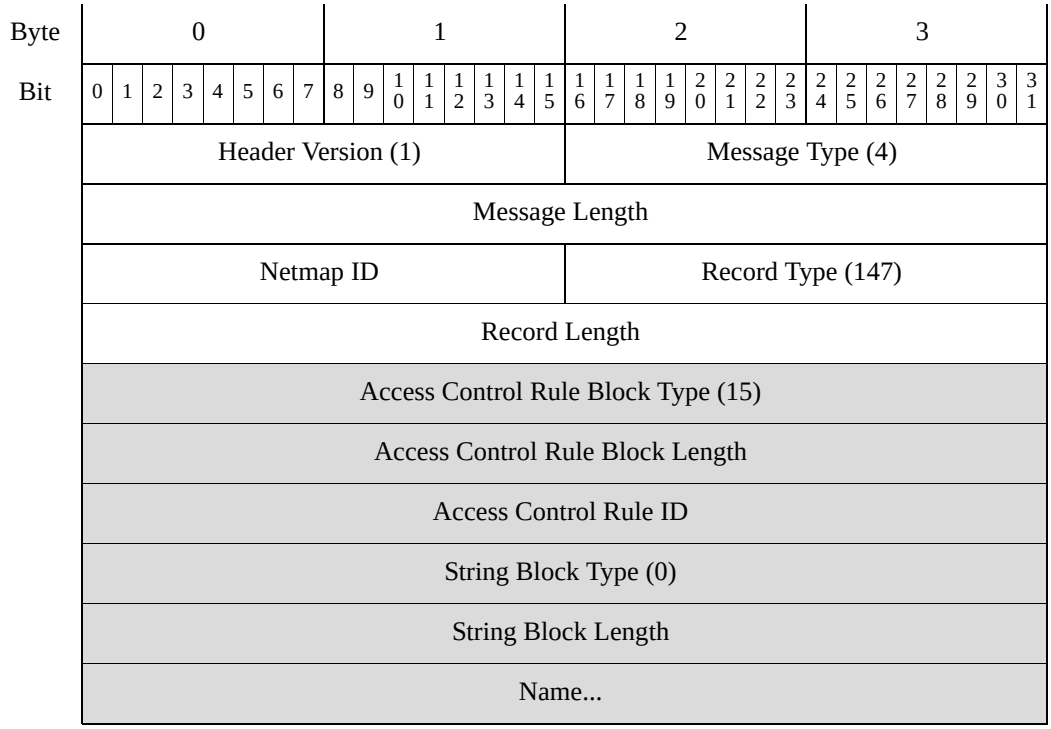
Table 4-22 Prefilter Policy Metadata Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Name field.
Name	string	Name of the prefilter policy.

Tunnel or Prefilter Rule Metadata

The eStreamer service transmits metadata containing information about the reason a tunnel or prefilter rule triggered an intrusion event or connection event within a Tunnel or Prefilter Rule Reason record, the format of which is shown below. Tunnel or Prefilter rule reason metadata is sent when the Version 4 metadata flag—bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11. Note that the Record Type field, which appears after the Message Length field, has a value of 147, indicating a Tunnel or Prefilter Rule Reason record.

As they are identical in content, it contains an Access Control Rule Reason Block (as documented in Access Control Rule Data Block, page 4-193). The Access Control Rule Reason data block is block type 15 in series 2.



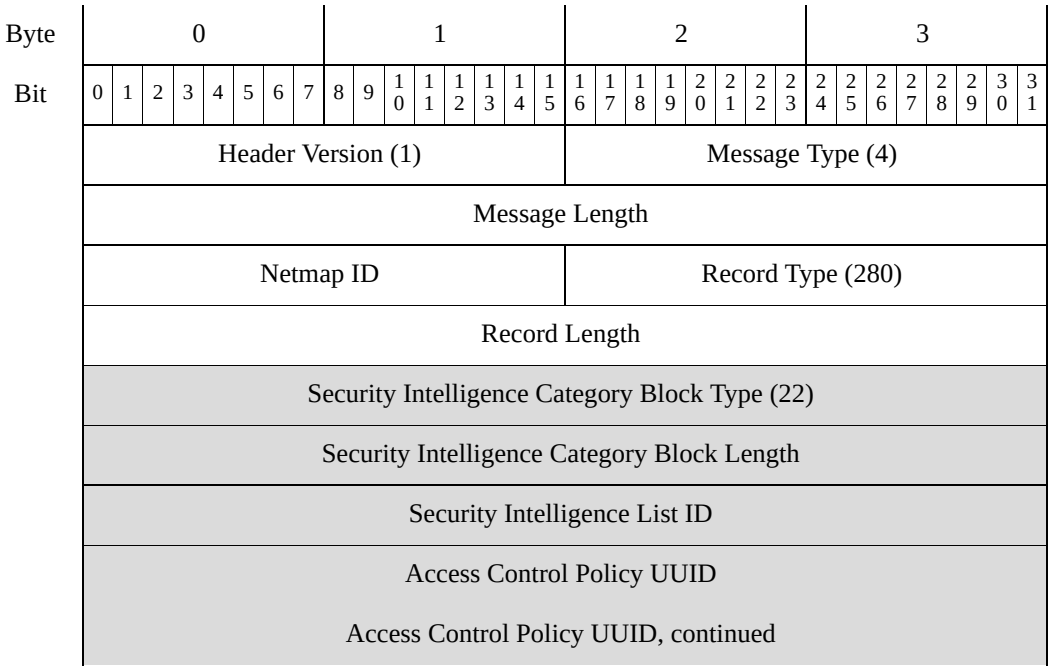
The following table describes the fields in the Tunnel or Prefilter Rule Reason metadata block.

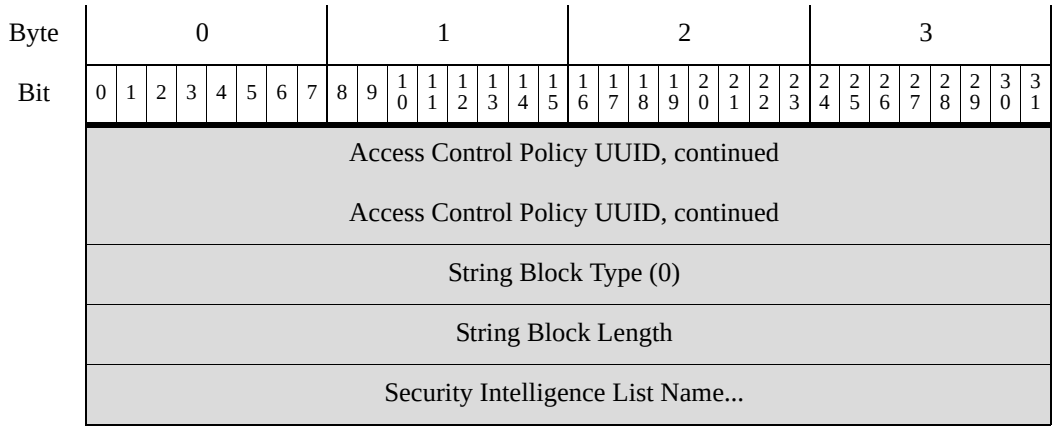
Table 4-23 Tunnel or Prefilter Rule Reason Metadata Fields

Field	Data Type	Description
Access Control Rule Block Type	uint32	Initiates an Access Control Rule block. This value is always `15`. Notice that this block is used for Tunnel and Prefilter rules in addition to Access Control rules.
Access Control Rule Block Length	uint32	Total number of bytes in the Access Control Rule block, including eight bytes for the Access Control Rule block type and length fields, plus the number of bytes of data that follows.
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the access control rule UUID and access control rule ID. This value is always `0`.
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Name field.
Name	string	The descriptive name.

Security Intelligence Category Metadata

The eStreamer service transmits metadata containing information about the Security Intelligence category within a Security Intelligence Category record, the format of which is shown below. Access control rule reason metadata is sent when the Version 4 metadata flag—bit 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11. Note that the Record Type field, which appears after the Message Length field, has a value of `280`, indicating a Security Intelligence Category record. It contains a Security Intelligence Category data block (as documented in Security Intelligence Category Data Block 5.1+, page 4-195). The Security Intelligence data block is block type 22 in series 2.





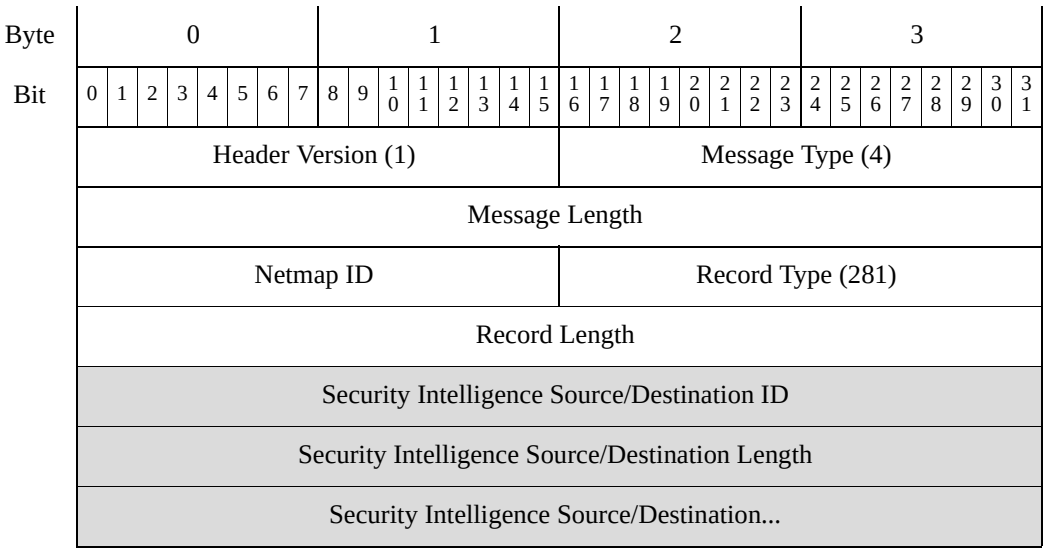
The following table describes the fields in the Security Intelligence Category record.

Table 4-24 Security Intelligence Category Metadata Fields

Field	Data Type	Description
Security Intelligence Category Block Type	uint32	Initiates an Security Intelligence Category data block. This value is always `22`. This is a series 2 data block.
Security Intelligence Category Block Length	uint32	Total number of bytes in the Security Intelligence Category block, including eight bytes for the Security Intelligence Category block type and length fields, plus the number of bytes of data that follows.
Security Intelligence List ID	uint32	The ID of the IP blacklist or whitelist triggered by the connection.
Access Control Policy UUID	uint8[16]	The UUID of the access control policy configured for Security Intelligence.
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the access control rule reason. This value is always `0`.
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Security Intelligence List Name field.
Security Intelligence List Name	string	The name of the IP category blacklist or whitelist triggered by the connection.

Security Intelligence Source/Destination Record

The eStreamer service transmits metadata containing whether a Security Intelligence-detected IP address is a source IP address or destination IP address within a Security Intelligence Source/Destination record, the format of which is shown below. (The source/destination IP information is sent when one of the metadata flags—bits 1, 14, 15, or 20 in the Request Flags field of a request message—is set. See Request Flags, page 2-11.) Note that the Record Type field, which appears after the Message Length field, has a value of `281`, indicating a Security Intelligence Source/Destination record.



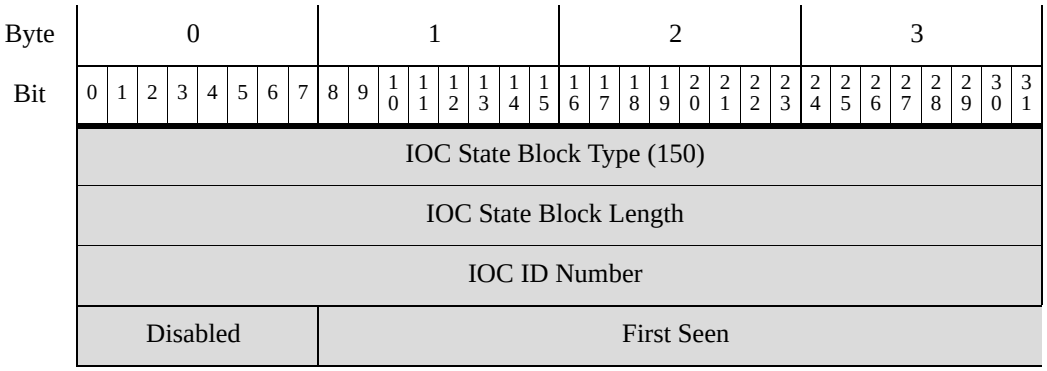
The following table describes the fields in the Security Intelligence Source/Destination record.

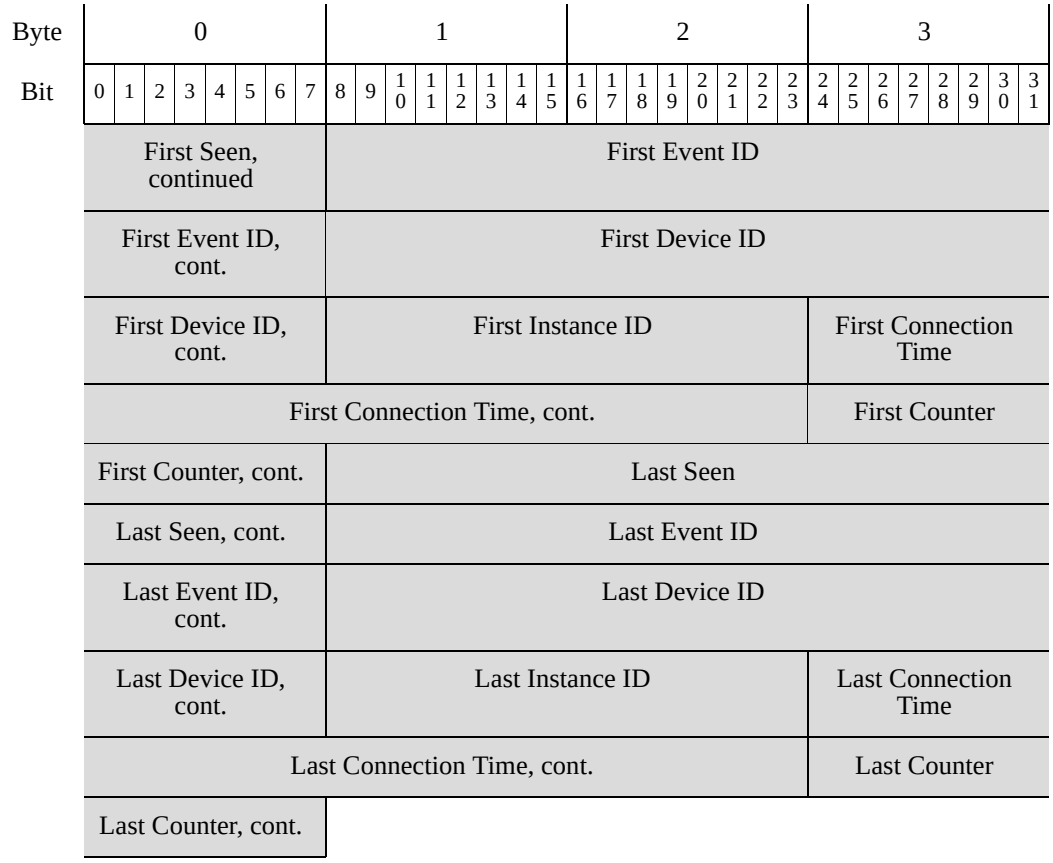
Table 4-25 Security Intelligence Source/Destination Record Fields

Field	Data Type	Description
Security Intelligence Source/ Destination ID	uint32	The Security Intelligence source/destination ID number.
Security Intelligence Source/ Destination Length	uint32	The number of bytes included in the Security Intelligence source/destination.
Security Intelligence Source/ Destination	string	Whether the detected IP address is a source or destination IP address.

IOC State Data Block for 5.3+

The IOC State data block provides information about an Indication of Compromise (IOC). It is block type of 150 in series 1. It is used by the host tracker to store information about a compromise on a host. The following diagram shows the structure of an IOC State data block:





The following table describes the components of the IOC State data block.

Table 4-26 IOC State Data Block Fields

Field	Data Type	Description
IOC State Data Block Type	uint32	Initiates an IOC State data block. This value is always `150`.
IOC State Data Block Length	uint32	Total number of bytes in the IOC State data block, including eight bytes for the IOC State data block type and length fields, plus the number of bytes of data that follows.
IOC ID Number	uint32	Unique ID number for the compromise.
Disabled	uint8	Indicates whether the compromise has been disabled on the host: • `0` — The compromise is not disabled. • `1` — The compromise is disabled.
First Seen	uint32	Unix timestamp of when this compromise was first seen.
First Event ID	uint32	ID number of the event on which this compromise was first seen.
First Device ID	uint32	ID of the sensor which first detected the IOC.
First Instance ID	uint16	Numerical ID of the Snort instance on the managed device that first detected the compromise.

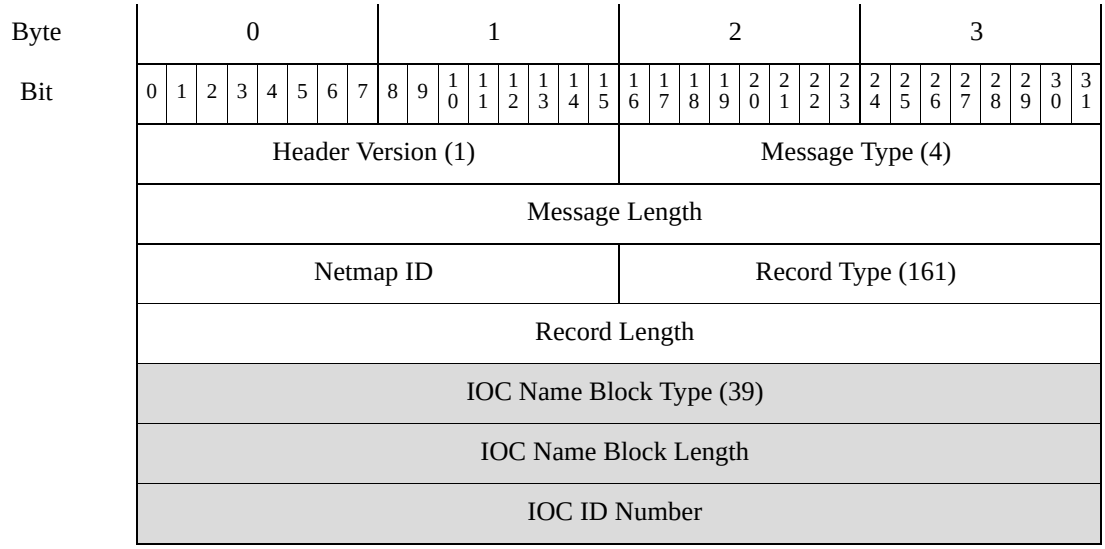
Table 4-26 IOC State Data Block Fields (continued)

Field	Data Type	Description
First Connection Time	uint32	Unix timestamp of the connection where this compromise was first seen.
First Counter	uint16	Counter for the connection on which this compromise was last seen. Used to differentiate between multiple connections occurring at the same time.
Last Seen	uint32	Unix timestamp of when this compromise was last seen
Last Event ID	uint32	ID number of the event on which this compromise was last seen.
Last Device ID	uint32	ID of the sensor which most recently detected the IOC.
Last Instance ID	uint16	Numerical ID of the Snort instance on the managed device that last detected the compromise.
Last Connection Time	uint32	Unix timestamp of the connection on which this compromise was last seen.
Last Counter	uint16	Counter for the connection on which this compromise was last seen. Used to differentiate between multiple connections occurring at the same time.

IOC Name Data Block for 5.3+

This is a data block that provides the category and event type for an Indication of Compromise (IOC). The record type is 161, with a block type of 39 in series 2. It is exposed as metadata for any event that has IOC information. These include malware events, file events, and intrusion events.

The following diagram shows the structure of an IOC Name data block:



Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Category	String Block Type (0)																															
	String Block Length																															
	Category...																															
Event Type	String Block Type (0)																															
	String Block Length																															
	Event Type...																															

The following table describes the fields in the IOC Name data block.

Table 4-27 IOC Name Data Block Fields

Field	Data Type	Description
IOC Name Data Block Type	uint32	Initiates an IOC Name data block. This value is always `39`.
IOC Name Data Block Length	uint32	Total number of bytes in the IOC Name data block, including eight bytes for the IOC Name data block type and length fields, plus the number of bytes of data that follows.
IOC ID Number	uint32	Unique ID number for the compromise.
String Block Type	uint32	Initiates a String data block containing the category associated with the compromise. This value is always `0`.
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Category field.

Table 4-27 IOC Name Data Block Fields (continued)

Field	Data Type	Description
Category	string	The category for the compromise. Possible values include: • `CnC Connected` • `Exploit Kit` • `High Impact Attack` • `Low Impact Attack` • `Malware Detected` • `Malware Executed` • `Dropper Infection` • `Java Compromise` • `Word Compromise` • `Adobe Reader Compromise` • `Excel Compromise` • `PowerPoint Compromise` • `QuickTime Compromise`
String Block Type	uint32	Initiates a String data block containing the event type associated with the compromise. This value is always `0`.

Table 4-27 IOC Name Data Block Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Event Type field.

Table 4-27 IOC Name Data Block Fields (continued)

Field	Data Type	Description
Event Type	string	The event type for the compromise. Possible values include: • Adobe Reader launched shell • Dropper Infection Detected by AMP for Endpoints • Excel Compromise Detected by AMP for Endpoints • Excel launched shell • Impact 1 Intrusion Event - attempted-admin • Impact 1 Intrusion Event - attempted-user • Impact 1 Intrusion Event - successful-admin • Impact 1 Intrusion Event - successful-user • Impact 1 Intrusion Event - web-application-attack • Impact 2 Intrusion Event - attempted-admin • Impact 2 Intrusion Event - attempted-user • Impact 2 Intrusion Event - successful-admin • Impact 2 Intrusion Event - successful-user • Impact 2 Intrusion Event - web-application-attack • Intrusion Event - exploit-kit • Intrusion Event - malware-backdoor • Intrusion Event - malware-cnc • Java Compromise Detected by AMP for Endpoints • Java launched shell • PDF Compromise Detected by AMP for Endpoints • PowerPoint Compromise Detected by AMP for Endpoints • PowerPoint launched shell • QuickTime Compromise Detected by AMP for Endpoints • QuickTime launched shell • Security Intelligence Event - CnC • Security Intelligence Event - DNS CnC • Security Intelligence Event - DNS Malware • Security Intelligence Event - DNS Phishing • Security Intelligence Event - Sinkhole CnC • Security Intelligence Event - Sinkhole Malware • Security Intelligence Event - Sinkhole Phishing • Security Intelligence Event - URL CnC • Security Intelligence Event - URL Malware • Security Intelligence Event - URL Phishing • Suspected Botnet Detected by AMP for Endpoints • Threat Detected by AMP for Endpoints - Executed • Threat Detected by AMP for Endpoints - Not Executed • Threat Detected in File Transfer • Word Compromise Detected by AMP for Endpoints • Word launched shell

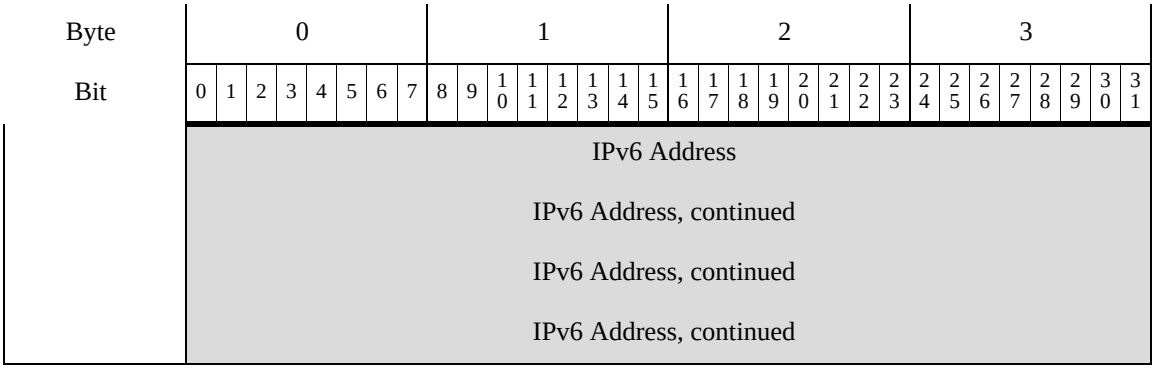
Discovery Event Header 5.2+

Discovery and connection event messages contain a discovery event header. It conveys the type and subtype of the event, the time the event occurred, the device on which the event occurred, and the structure of the event data in the message. This header is followed by the actual host discovery, user, or connection event data. The structures associated with the different event type/subtype values are described in Host Discovery Structures by Event Type, page 4-43. This header has IPv6 support, and deprecates Discovery Event Header 5.0 - 5.1.1.x, page B-87.

The event type and event subtype fields of the discovery event header identify the structure of the transmitted event message. Once the structure of the event data block is determined, your program can parse the message appropriately.

The shaded rows in the following diagram illustrate the format of the discovery event header.

	Byte	0								1								2								3							
	Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
		Header Version (1)																Message Type (4)															
		Message Length																															
		Netmap ID																Record Type															
		Record Length																															
		eStreamer Server Timestamp (in events, only if bit 23 is set)																															
		Reserved for Future Use (in events, only if bit 23 is set)																															
Discovery Event Header		Device ID																															
		Legacy IP Address																															
		MAC Address																															
		MAC Address, continued																Has IPv6								Reserved for future use							
		Event Second																															
		Event Microsecond																															
		Event Type																															
		Event Subtype																															
		File Number (Internal Use Only)																															
		File Position (Internal Use Only)																															



The following table describes the discovery event header.

Table 4-28 Discovery Event Header Fields

Field	Data Types	Description
Device ID	uint32	ID number of the device that generated the discovery event. You can obtain the metadata for the device by requesting Version 3 and 4 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Legacy IP Address	uint32	This field is reserved but no longer populated. The IPv4 address is stored in the IPv6 Address field. See IP Addresses, page 1-5 for more information.
MAC Address	uint8[6]	MAC address of the host involved in the event.
Has IPv6	uint8	Flag indicating that the host has an IPv6 address.
Reserved for future use	uint8	Reserved for future use
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) that the system generated the event.
Event Microsecond	uint32	Microsecond (one millionth of a second) increment that the system generated the event.
Event Type	uint32	Event type (`1000` for new events, `1001` for change events, `1002` for user input events, `1050` for full host profile). See Host Discovery Structures by Event Type, page 4-43 for a list of available event types.
Event Subtype	uint32	Event subtype. See Host Discovery Structures by Event Type, page 4-43 for a list of available event subtypes.
File Number	byte[4]	Serial file number. This field is for Cisco internal use and can be disregarded.
File Position	byte[4]	Event's position in the serial file. This field is for Cisco internal use and can be disregarded.
IPv6 Address	uin8[16]	IPv6 address. This field is present and used if the Has IPv6 flag is set.

Discovery and Connection Event Types and Subtypes

The values in the Event Type and Event Subtype fields identify and classify the event contained in a host discovery or user data message. They also identify the structure of the data in the message.

The following table lists the event types and event subtypes for discovery and connection events.

Table 4-29 Discovery and Connection Events by Type and Subtype

Event Name	Event Type	Event Subtype
New Host	1000	1
New TCP Server	1000	2
New Network Protocol	1000	3
New Transport Protocol	1000	4
New IP to IP Traffic	1000	5
New UDP Server	1000	6
New Client Application	1000	7
New OS	1000	8
New IPv6 to IPv6 Traffic	1000	9
Host IP Address Changed	1001	1
OS Information Update	1001	2
Host IP Address Reused	1001	3
Vulnerability Change	1001	4
Hops Change	1001	5
TCP Server Information Update	1001	6
Host Timeout	1001	7
TCP Port Closed	1001	8
UDP Port Closed	1001	9
UDP Server Information Update	1001	10
TCP Port Timeout	1001	11
UDP Port Timeout	1001	12
MAC Information Change	1001	13
Additional MAC Detected for Host	1001	14
Host Last Seen	1001	15
Host Identified as Router/Bridge	1001	16
Connection Statistics	1001	17
VLAN Tag Information Update	1001	18
Host Deleted: Host Limit Reached	1001	19
Client Application Timeout	1001	20
NetBIOS Name Change	1001	21
NetBIOS Domain Change	1001	22

Table 4-29 Discovery and Connection Events by Type and Subtype (continued)

Event Name	Event Type	Event Subtype
Host Dropped: Host Limit Reached	1001	23
Banner Update	1001	24
TCP Server Confidence Update	1001	25
UDP Server Confidence Update	1001	26
Identity Conflict	1001	29
Identity Timeout	1001	30
Secondary Host Update	1001	31
Client Application Update	1001	32
User Set Valid Vulnerabilities (Legacy)	1002	1
User Set Invalid Vulnerabilities (Legacy)	1002	2
User Delete Address (Legacy)	1002	3
User Delete Server (Legacy)	1002	4
User Set Host Criticality	1002	5
Host Attribute Add	1002	6
Host Attribute Update	1002	7
Host Attribute Delete	1002	8
Host Attribute Set Value (Legacy)	1002	9
Host Attribute Delete Value (Legacy)	1002	10
Add Scan Result	1002	11
User Set Vulnerability Qualification	1002	12
User Policy Control	1002	13
Delete Protocol	1002	14
Delete Client Application	1002	15
User Set Operating System	1002	16
User Account Seen	1002	17
User Account Update	1002	18
User Set Server	1002	19
User Delete Address (Current)	1002	20
User Delete Server (Current)	1002	21
User Set Valid Vulnerabilities (Current)	1002	22
User Set Invalid Vulnerabilities (Current)	1002	23
User Host Criticality	1002	24
Host Attribute Set Value (Current)	1002	25
Host Attribute Delete Value (Current)	1002	26
User Add Host	1002	27
User Add Server	1002	28

Table 4-29 Discovery and Connection Events by Type and Subtype (continued)

Event Name	Event Type	Event Subtype
User Add Client Application	1002	29
User Add Protocol	1002	30
Reload App	1002	31
Account Delete	1002	32
Connection Statistics	1003	1
Connection Chunks	1003	2
New User Identity	1004	1
User Login	1004	2
Delete User Identity	1004	3
User Identity Dropped: User Limit Reached	1004	4
Host IOC Set Type	1008	1
Full Host Profile	1050	N/A

Tip For information about the data structure used for each event type/subtype, see Host Discovery Structures by Event Type, page 4-43.

Host Discovery Structures by Event Type

eStreamer builds host discovery event messages based on the event type indicated in the discovery event header. The following sub-sections describe the high-level structure for each event type:

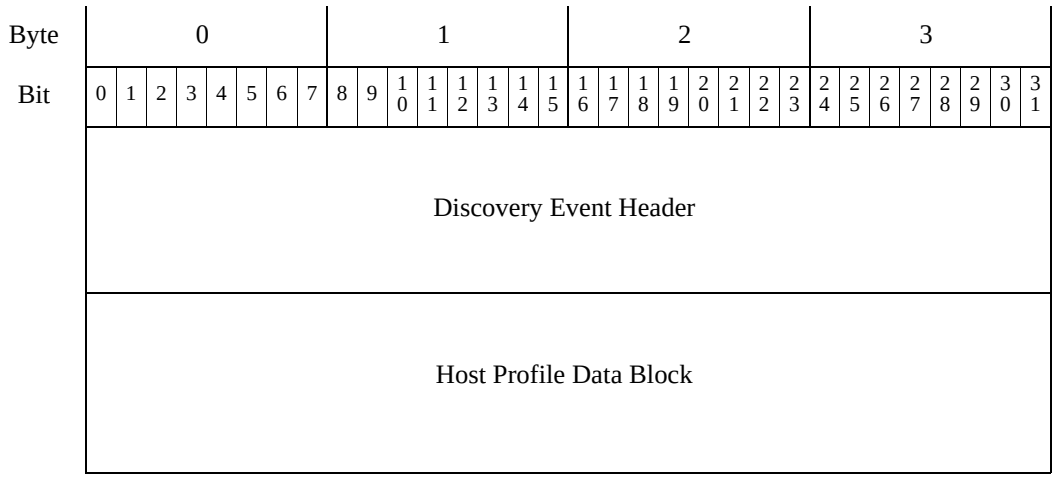
The data block diagrams in the following sections depict the different record data blocks returned in host discovery event messages.

New Host and Host Last Seen Messages

New Host and Host Last Seen event messages have a standard discovery event header and a Host Profile data block (as documented in Host Profile Data Block for 5.2+, page 4-158). The Host Profile data block is block type 139 in series 1.

Note that the Host Last Seen message includes server information only for servers on the host that have changed within the Update Interval set in the discovery detection policy. In other words, only servers that have changed since the system last reported information will be included in the Host Last Seen message.

Note The Host Profile data block differs depending on which system version created the message. For information on legacy versions of the Host Profile data block, see Legacy Host Data Structures, page B-268.



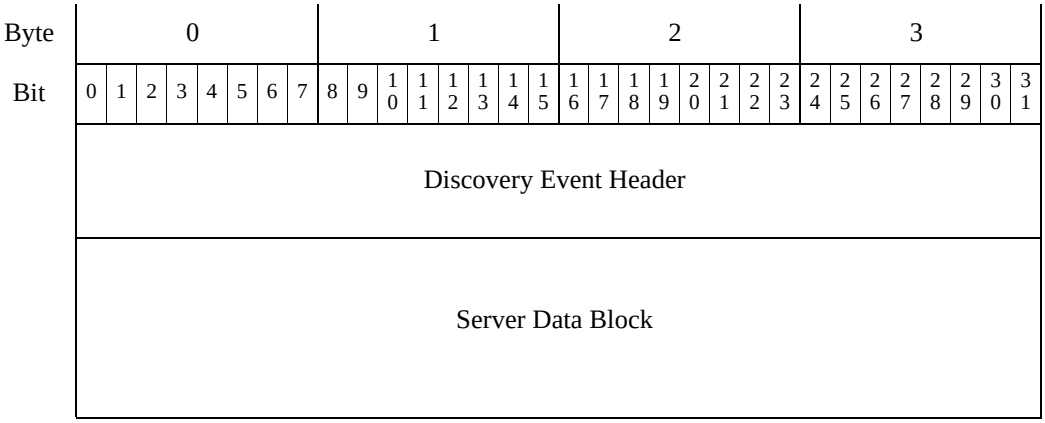
Server Messages

The following TCP and UDP server event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a Server data block (as documented in Host Server Data Block 4.10.0+, page 4-134, block type 103 in series 1):

- New TCP Server
- New UDP Server
- TCP Server Information Update
- UDP Server Information Update
- TCP Server Confidence Update
- UDP Server Confidence Update

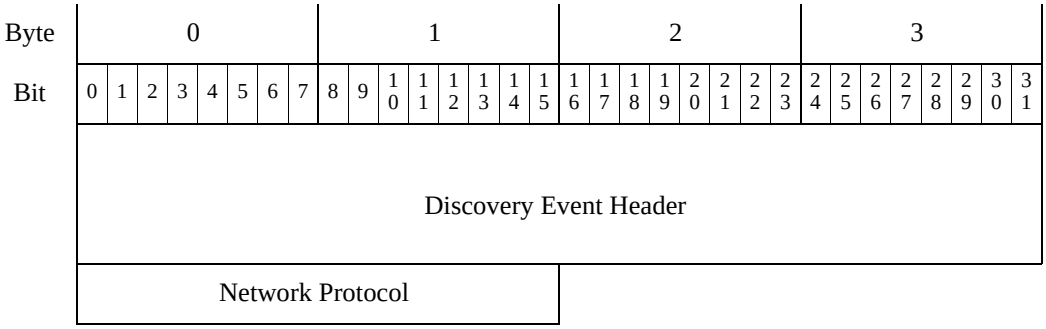
Note The Server data block differs depending on which system version created the message. For information on the legacy versions of the Server data block, see Understanding Legacy Data Structures, page B-1.

Each of these events use the following format:



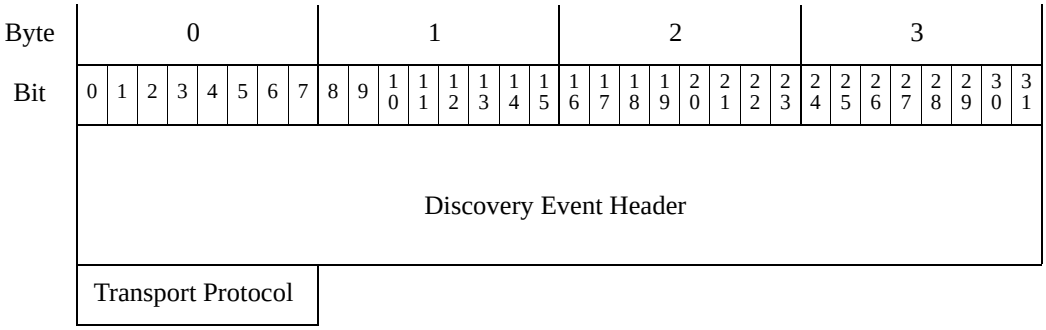
New Network Protocol Message

A New Network Protocol event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a two-byte field for the network protocol (using protocol values described in following table).



New Transport Protocol Message

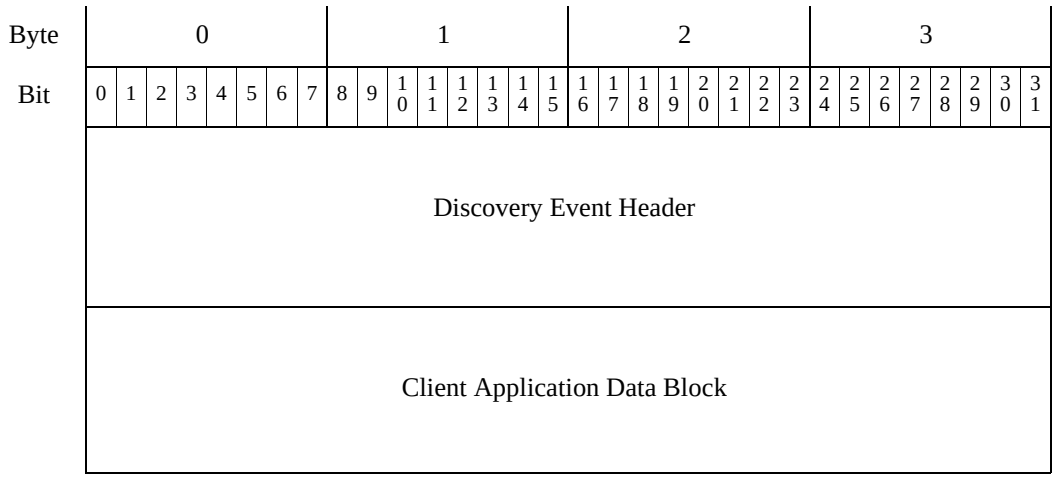
A New Transport Protocol event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39, block type 4 in series 1) and a one-byte field for the transport protocol number (using values described in following table).



Client Application Messages

New Client Application, Client Application Update, and Client Application Timeout events have the same format and contain a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a Client Application data block (see Host Client Application Data Block for 5.0+, page 4-151, block type 122 in series 1). The discovery event header has a different record type, event type, and event subtype, depending on the event transmitted.

Note The Client Application data block differs depending on the system version that created the message. For information on the legacy version of the Client Application data block, see Understanding Legacy Data Structures, page B-1.

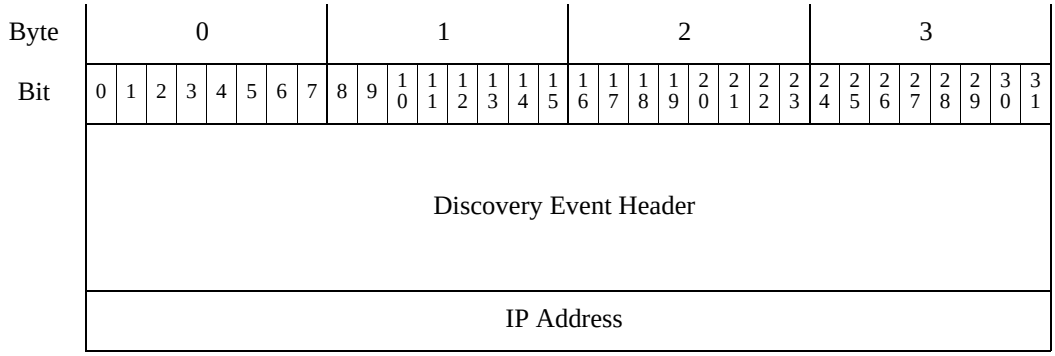


IP Address Change Message

The following host discovery messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) and two different forms, structures, one with four bytes for the IP address and one with 16 bytes for the IP address.

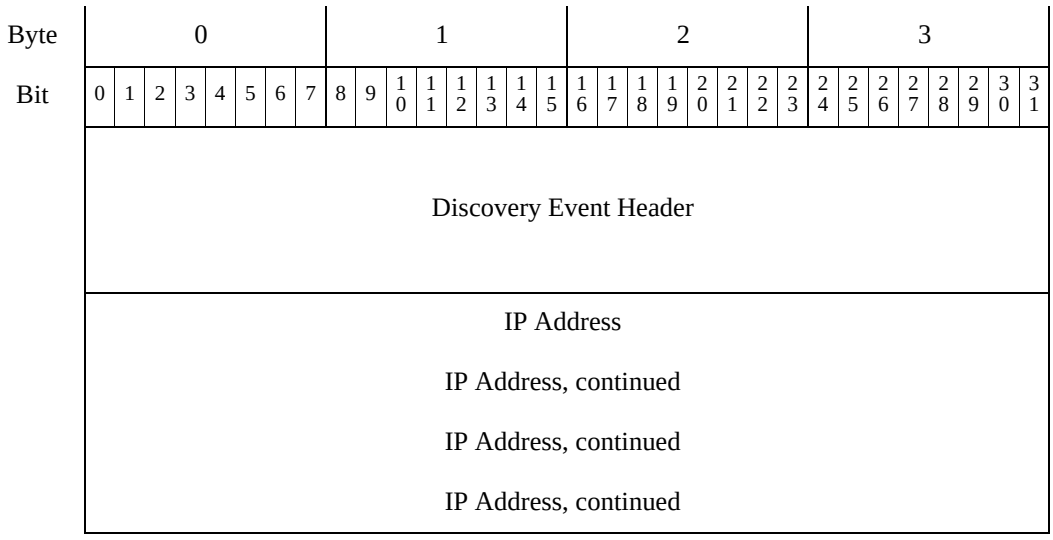
Four bytes are used for the IP address (in IP address octets) in the following case:

- New IPv4 to IPv4 Traffic
- Host IP Address Changed, when the RNA event version is less than 10



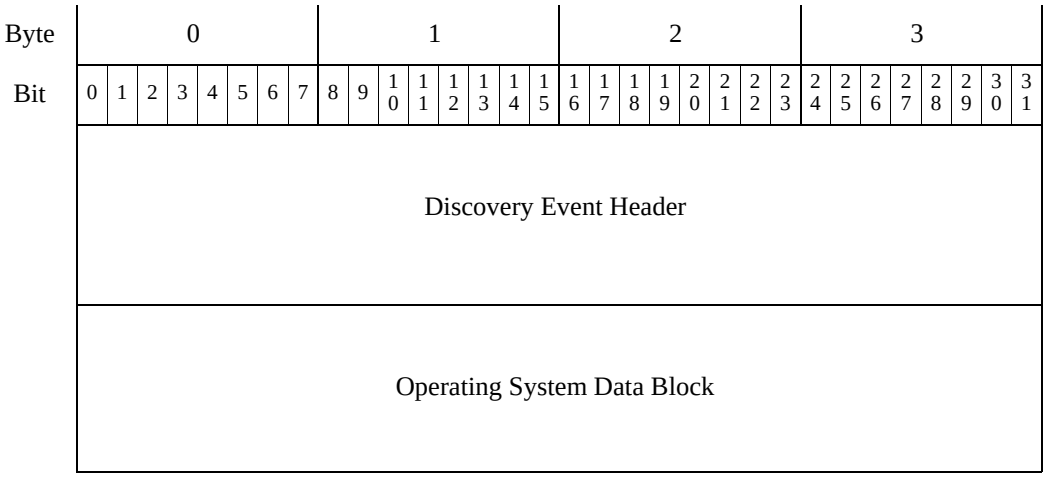
16 bytes are used for the IP address in the following cases:

- New IPv6 to IPv6 Traffic
- Host IP Address Changed, when the RNA event version is 10



Operating System Update Messages

The OS Information Update event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by an Operating System data block (as documented in Operating System Data Block 3.5+, page 4-83, block type 53 in series 1).

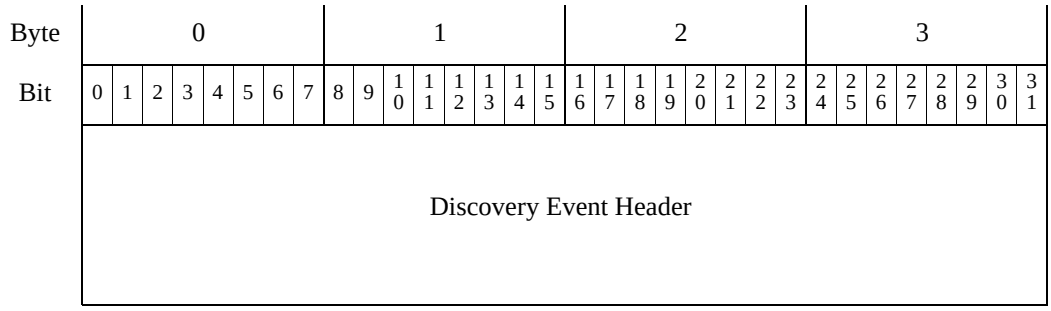


IP Address Reused and Host Timeout/Deleted Messages

The following host event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) with no other data:

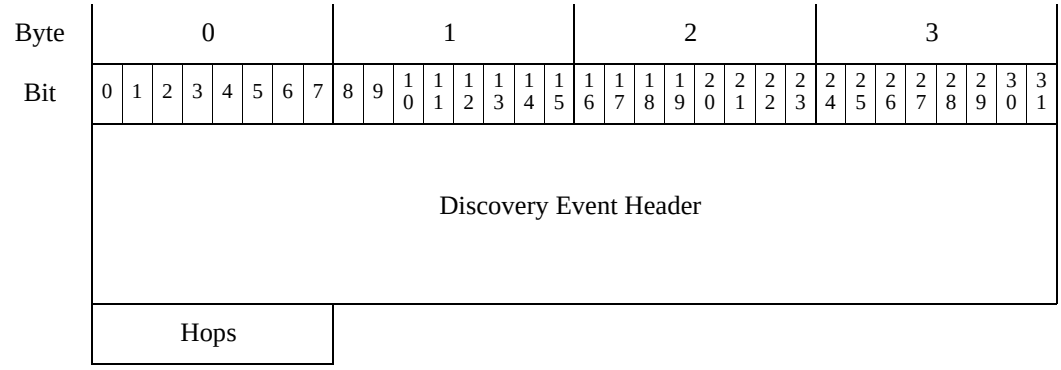
- Host IP Address Reused
- Host Timeout
- Host Deleted: Host Limit Reached

- Host Dropped: Host Limit Reached



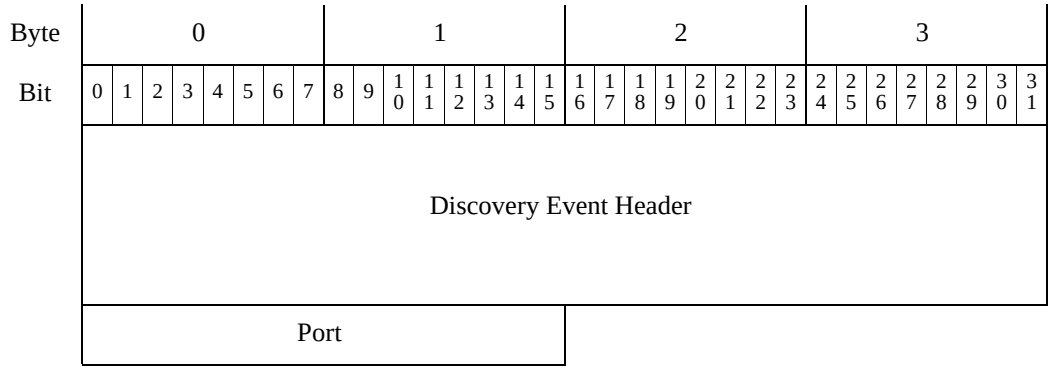
Hops Change Message

A Hops Change event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a one-byte field for the hops count.



TCP and UDP Port Closed/Timeout Messages

TCP and UDP Port Closed and Port Timeout event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a two-byte field for the port number.

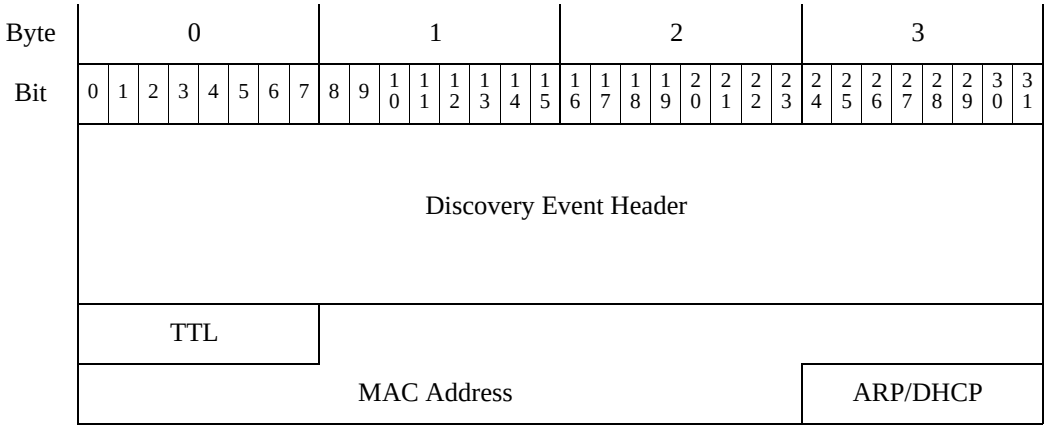


MAC Address Messages

MAC Information Change and Additional MAC Detected for Host messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39), 1 byte for the TTL value, 6 bytes for the MAC address, and 1 byte to indicate whether the MAC address was detected via ARP/DHCP traffic as the actual MAC address.

Note If you receive MAC address messages from a system running version 4.9.x, you must check for the length of the MAC address data block and decode accordingly. If the data block is 8 bytes in length (16 bytes with the header), see MAC Address Messages, page 4-50. If the data block is 12 bytes in length (20 bytes with the header), see Host MAC Address 4.9+, page 4-113.

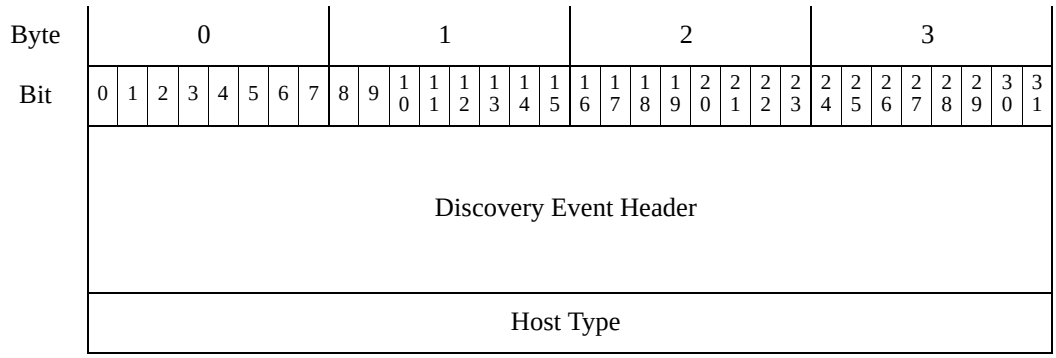
Note that the MAC address data block header is **not** used within MAC Information Change and Additional MAC Detected for Host messages.



Host Identified as a Bridge/Router Message

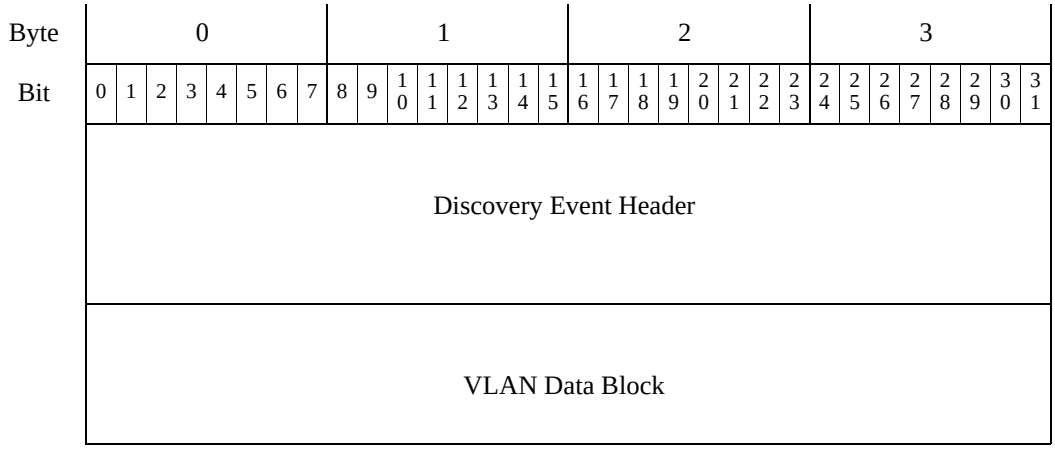
A Host Identified as a Bridge/Router event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a four-byte field for the value that matches the host type:

- `0` — Host
- `1` — Router
- `2` — Bridge



VLAN Tag Information Update Messages

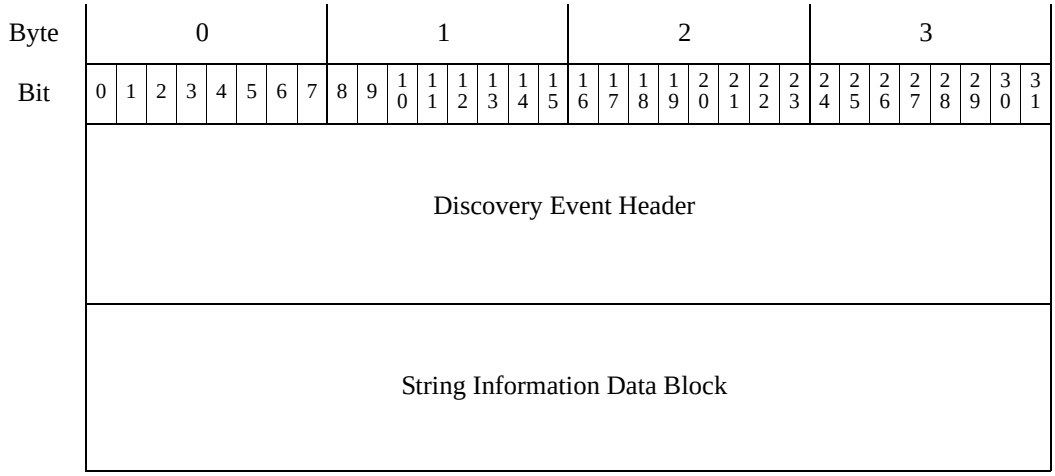
The VLAN Tag Information Update event has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by VLAN data block (as documented in VLAN Data Block, page 4-75). The VLAN Data block is block type 14 in the series 1 group of blocks.



Change NetBIOS Name Message

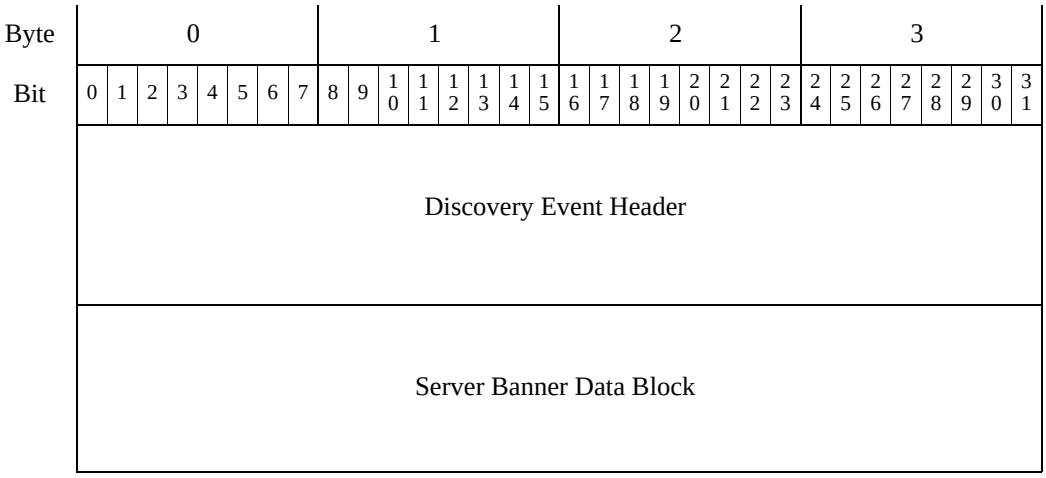
A Change NetBIOS Name event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a String Information data block (as documented in String Information Data Block, page 4-77). The String Information data block is block type 35 in series 1.

Note The Change NetBIOS Domain event is not currently generated by the Firepower System.



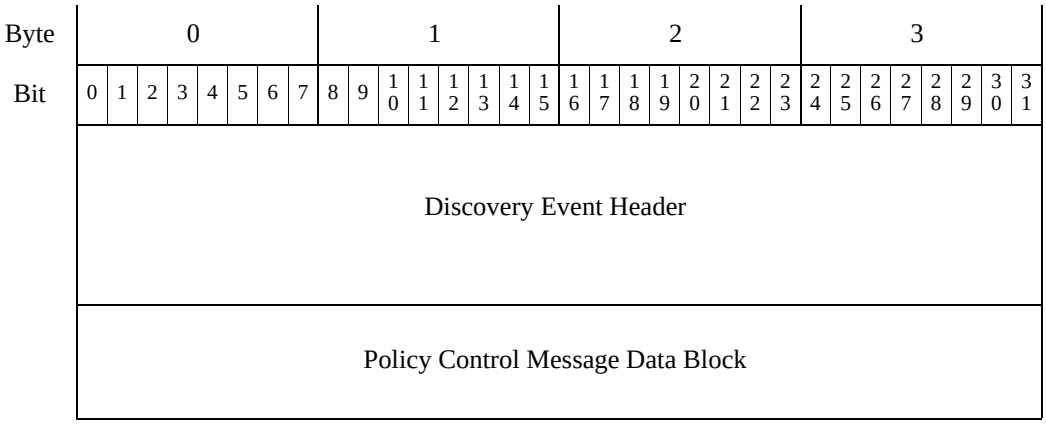
Update Banner Message

An Update Banner event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a Server Banner data block (as documented in Server Banner Data Block, page 4-76). The server banner data block is block type 37 in series 1.



Policy Control Message

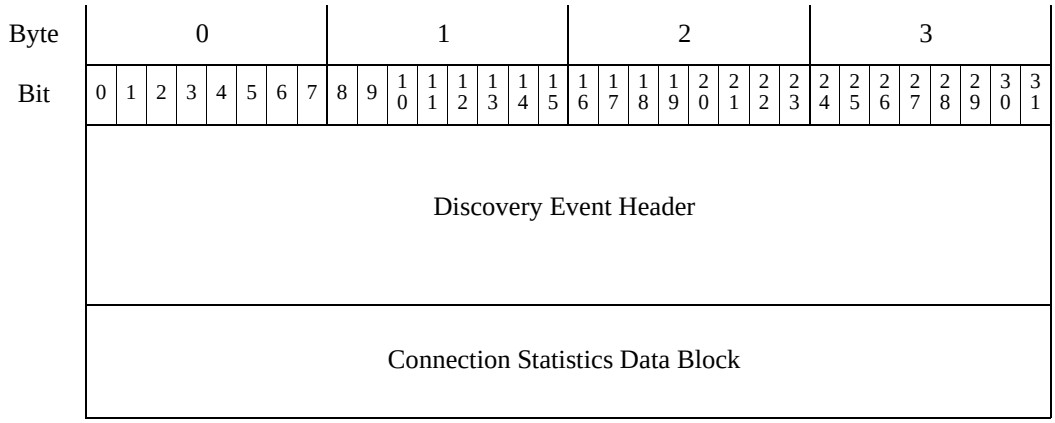
The Policy Control Message event has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a Policy Control Message data block. The format of the Policy Control Message data block differs depending on the system version. For information on policy control message data block format for the current version, see Policy Engine Control Message Data Block, page 4-84.



Connection Statistics Data Message

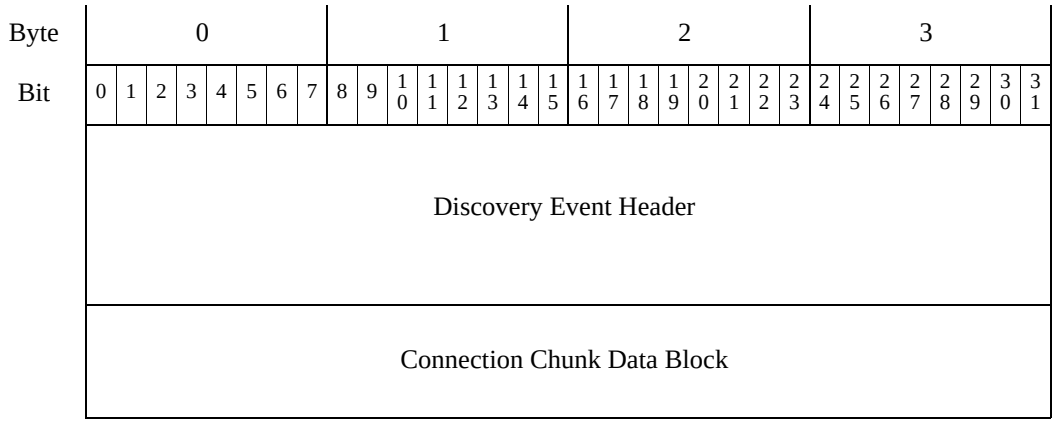
The Connection Statistics event has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a Connection Statistics data block. The documentation of each version of the Connection Statistics data block includes the system versions that use it. For information on the connection statistics data block format for version 6.1+, see Connection Statistics Data Block 6.2+, page 4-116.

Note The Connection Statistics data block differs depending on which system version created the message. For information on legacy versions, see the Connection Statistics data block in Understanding Legacy Data Structures, page B-1.



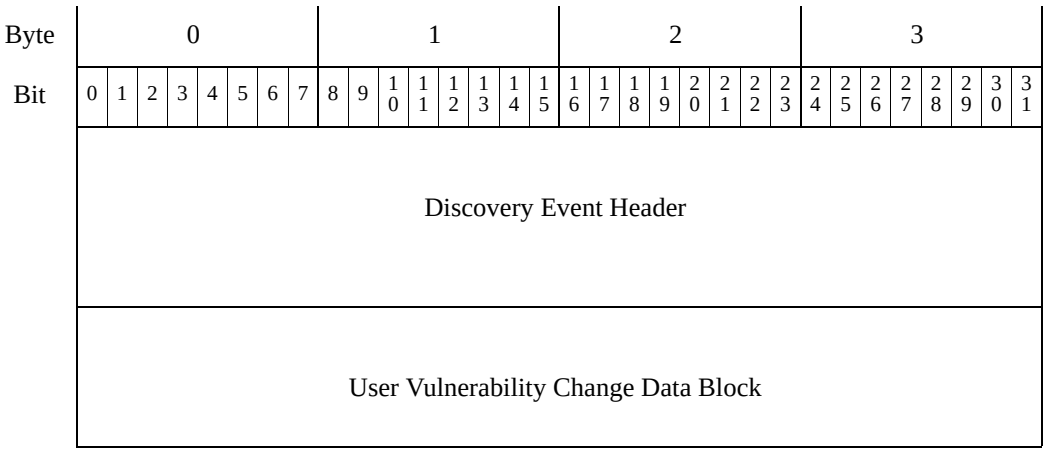
Connection Chunk Message

The Connection Chunk event has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a Connection Chunk data block. The format differs depending on the system version. For information on connection chunk data block format for the current version, see Connection Chunk Data Block for 6.1+, page 4-98. The Connection Chunk data block is block type 136 in series 1.



User Set Vulnerabilities Messages for Version 4.6.1+

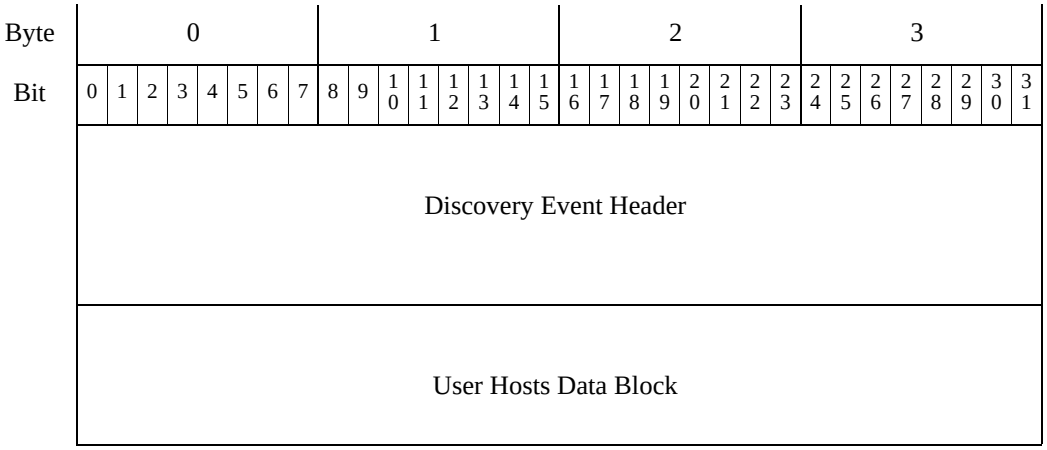
User Set Valid Vulnerabilities, User Set Invalid Vulnerabilities, and User Vulnerability Qualification messages use the same data format: the standard discovery event header (see Discovery Event Header 5.2+, page 4-39) followed by a User Vulnerability change data block (see User Vulnerability Change Data Block 4.7+, page 4-104, block type 80 in series 1). They are differentiated by record type, event type, and event subtype.



User Add and Delete Host Messages

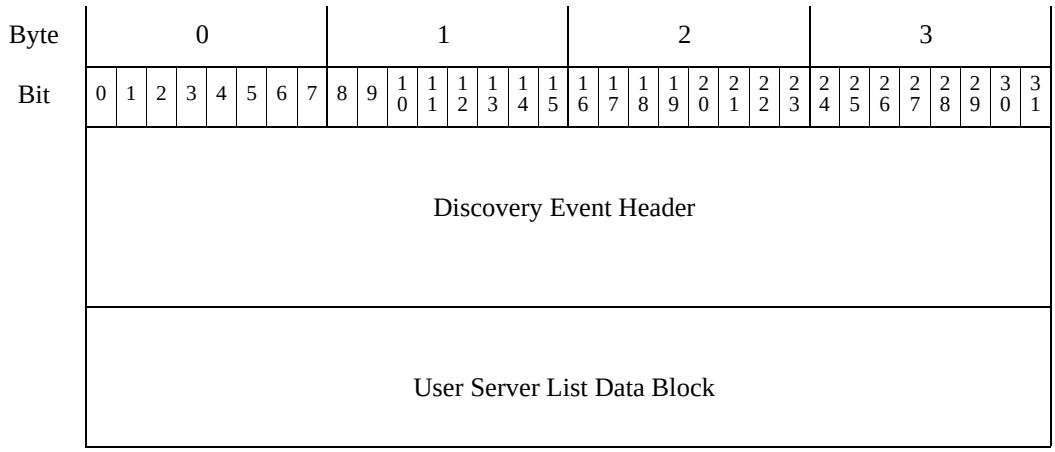
The following host input event messages have the standard discovery event header (see Discovery Event Header 5.2+, page 4-39) followed by a User Hosts data block (see User Hosts Data Block 4.7+, page 4-103, block type 78 in series 1):

- User Delete Address
- User Add Hosts



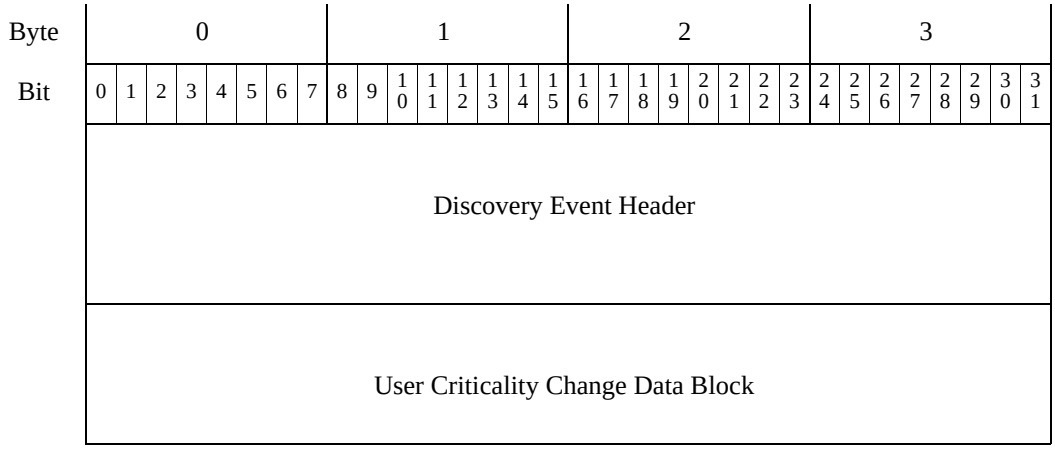
User Delete Server Message

User Delete Server messages have the standard discovery event header (see Discovery Event Header 5.2+, page 4-39) followed by a User Server List data block (see User Server List Data Block, page 4-102). The User Server List data block is block type 77 in series 1.



User Set Host Criticality Messages

User Set Host Criticality messages have the standard discovery event header (see Discovery Event Header 5.2+, page 4-39) followed by a User Criticality Change data block (see User Criticality Change Data Block 4.7+, page 4-106). The User Criticality Change data block is block type 81 in series 1.

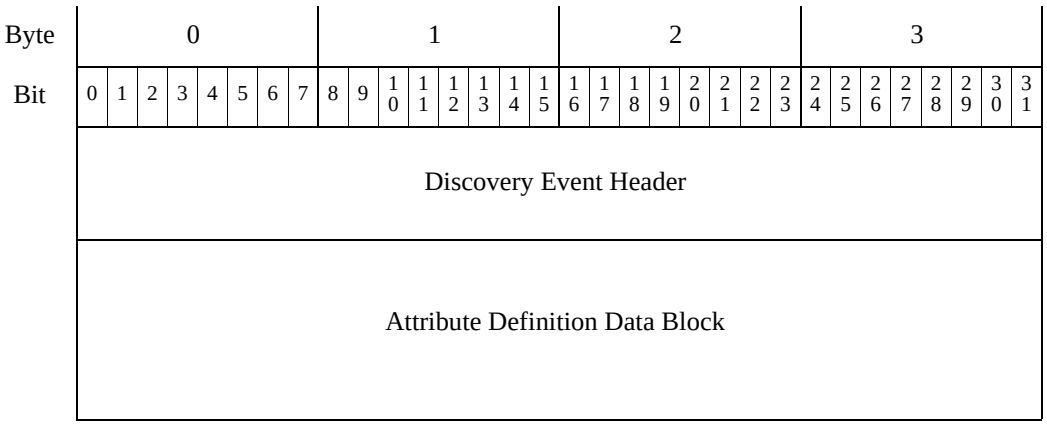


Attribute Messages

The following event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by an Attribute Definition data block (as documented in Attribute Definition Data Block for 4.7+, page 4-85, block type 55 in series 1):

- Add Host Attribute
- Update Host Attribute
- Delete Host Attribute

Each of these events use the following format:

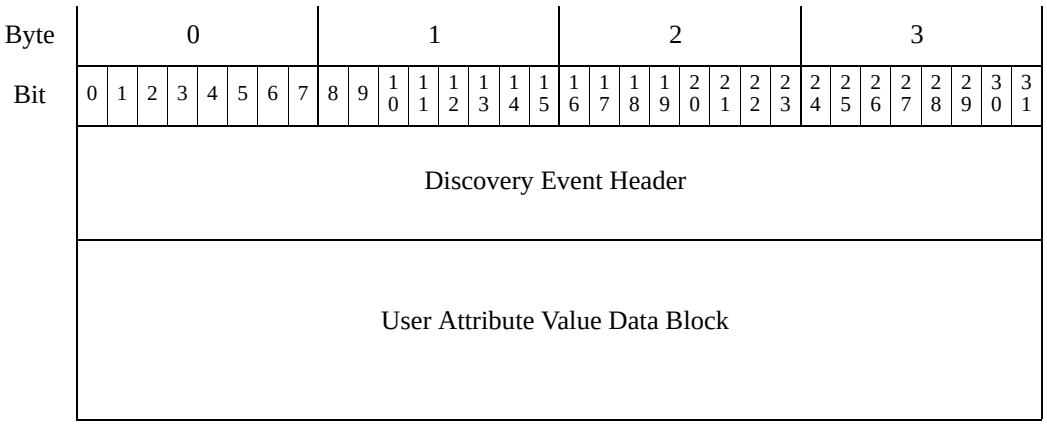


Attribute Value Messages

The following event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a User Attribute Value data block (as documented in User Attribute Value Data Block 4.7+, page 4-107, block type 82 in series 1):

- Set Host Attribute Value
- Delete Host Attribute Value

Each of these events use the following format:

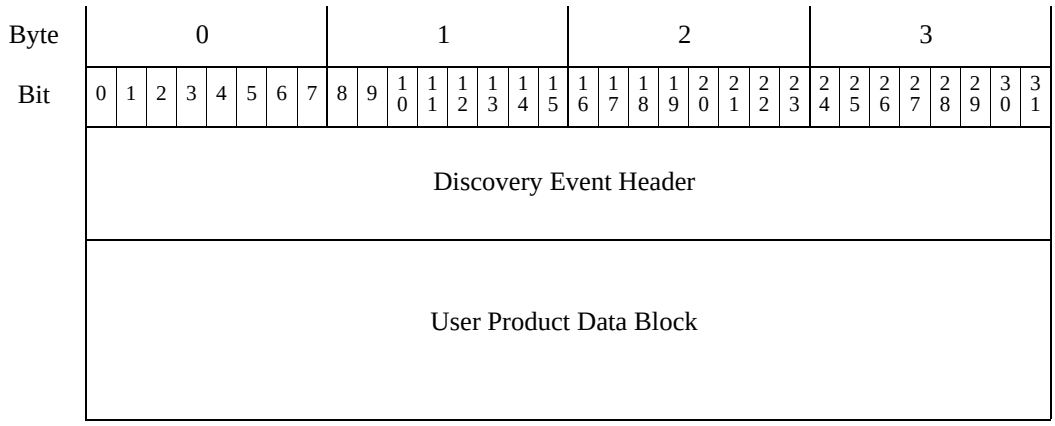


User Server and Operating System Messages

The following event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a User Product data block (as documented in User Product Data Block 5.1+, page 4-166, block type 60 in series 1):

- Set Operating System Definition
- Set Server Definition
- Add Server

Each of these events use the following format:

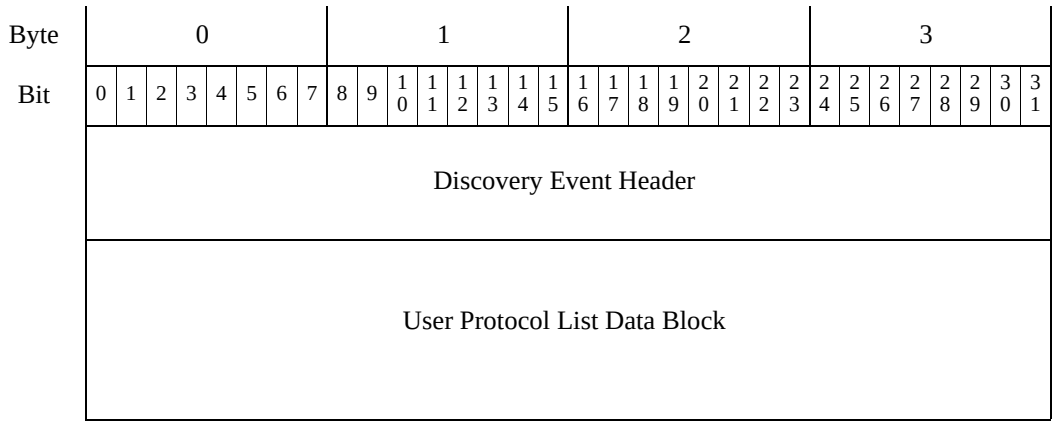


User Protocol Messages

The following event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a User Protocol List data block (as documented in User Protocol List Data Block 4.7+, page 4-109, block type 83 in series 1):

- Delete Protocol
- Add Protocol

Each of these events use the following format:

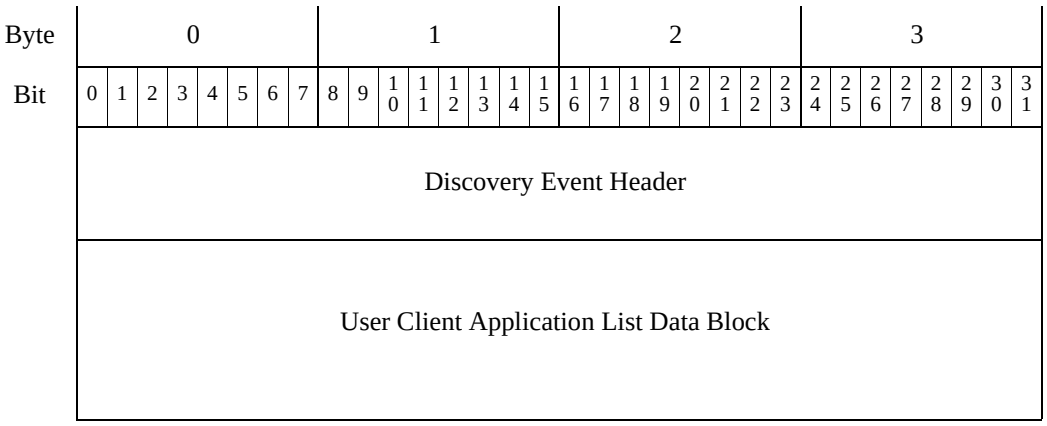


User Client Application Messages

The following event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a User Client Application List data block (as documented in User Client Application List Data Block, page 4-91, block type 60 in series 1):

- Delete Client Application
- Add Client Application

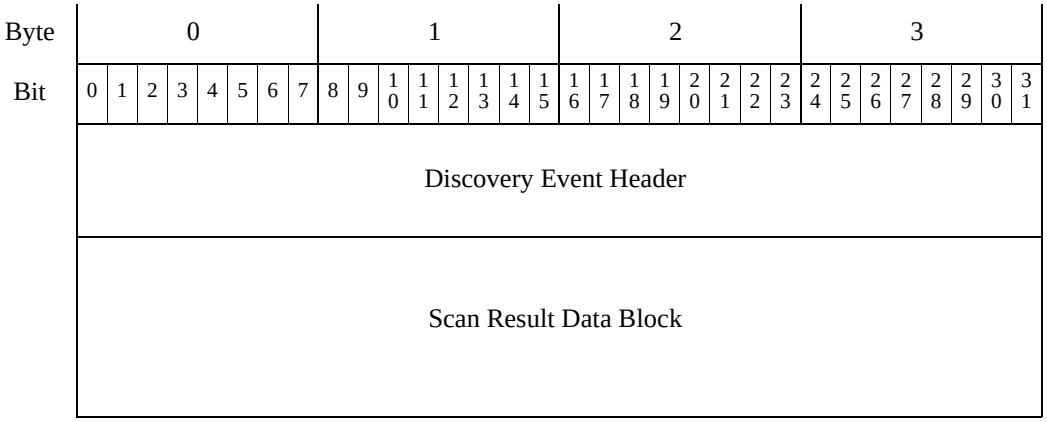
Each of these events use the following format:



Add Scan Result Messages

The Add Scan Result event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by a Scan Results data block (as documented in Scan Result Data Block 5.2+, page 4-132). The Scan Result data block is block type 142 in series 1.

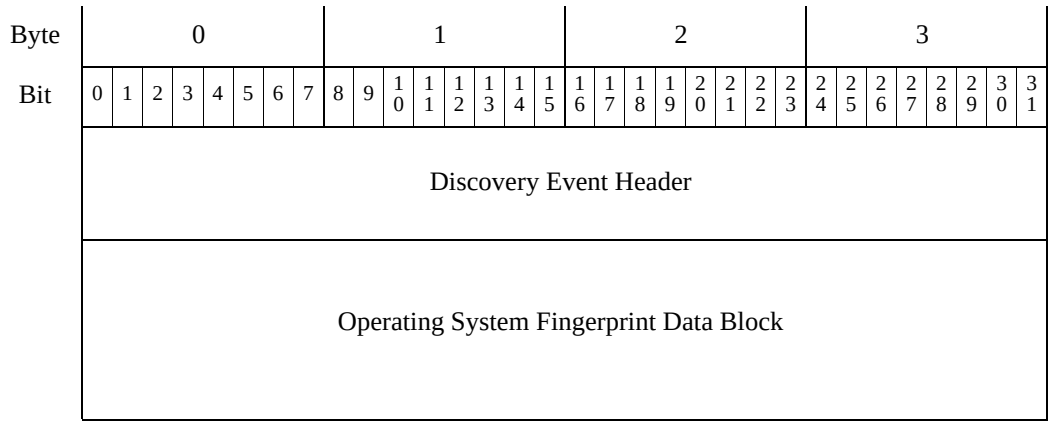
This event uses the following format:



New Operating System Messages

The New OS event message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by an Operating System Fingerprint data block (as documented in Operating System Fingerprint Data Block 5.1+, page 4-155).

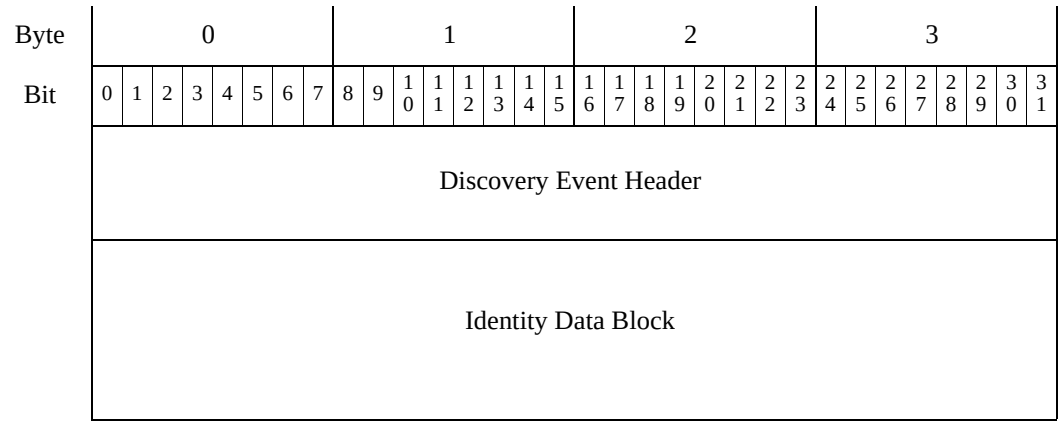
This event uses the following format:



Identity Conflict and Identity Timeout System Messages

The Identity Conflict and Identity Timeout event messages each have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by an Identity data block (as documented in Identity Data Block, page 4-111). The Identity data block is block type 94 in series 1. These messages are generated when there are conflicts or timeouts in a fingerprint source identity.

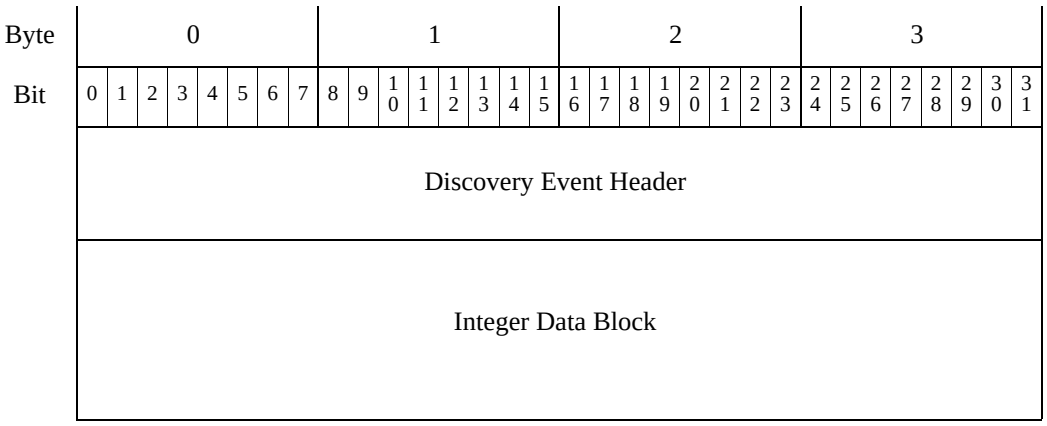
This event uses the following format:



Host IOC Set Messages

The Host IOC Set message has a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) followed by an integer data block (as documented in Integer (INT32) Data Block, page 4-75). This integer data block contains the ID number of the IOC set for the host.

This event uses the following format:



User Data Structures by Event Type

eStreamer builds user event messages based on the event type indicated in the discovery event header. The following sub-sections describe the high-level structure for each event type:

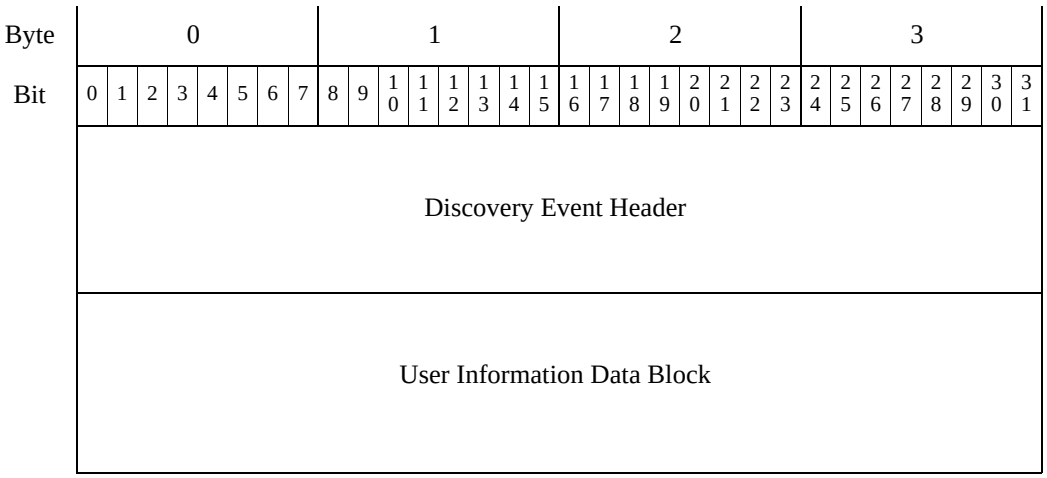
- User Modification Messages, page 4-60
- User Information Update Message Block, page 4-61

User Modification Messages

When any of the following events occurs through system detection, a user modification message is sent:

- a new user is detected (a New User Identity event—event type 1004, subtype 1)
- a user is removed (a Delete User Identity event—event type 1004, subtype 3)
- a user is dropped (a User Identity Dropped: User Limit Reached event—event type 1004, subtype 4)

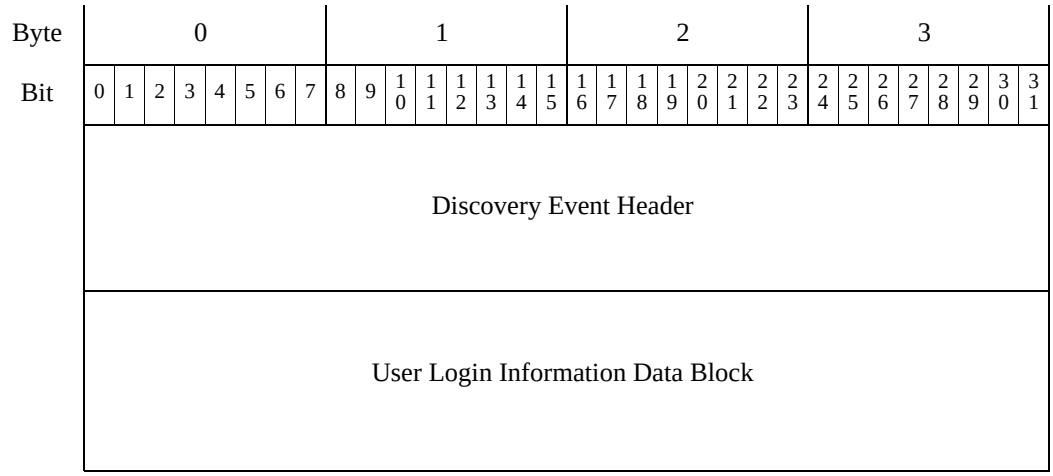
User Modification event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) and a User Information data block (as documented in User Information Data Block for 6.0+, page 4-183). The User Information data block is block type 120 in series 1.



User Information Update Message Block

When the login changes for a user (a User Login event—event type 1004, subtype 2) detected by the system, a user information update message is sent.

User Information Update event messages have a standard discovery event header (as documented in Discovery Event Header 5.2+, page 4-39) and a User Login Information data block (as documented in User Login Information Data Block 6.2+, page 4-188). The User Login Information data block is block type 121 in series 1.

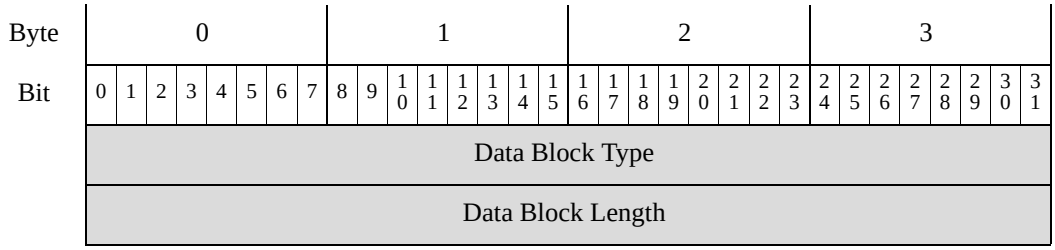


Understanding Discovery (Series 1) Blocks

Most discovery and connection events incorporate one or more data blocks from the series 1 group of data structures. Each series 1 data block type conveys a particular type of information. The block type number appears in the data block header which precedes the data in the block. For information on block header format, see Data Block Header, page 2-24.

Series 1 Data Block Header

The series 1 data block header, like the series 2 block header, has two 32-bit integer fields that contain the block's type number and the block length.



Note The data block length field contains the number of bytes in the entire data block, including the eight bytes of the two data block header fields.

For some block series 1 types, the block header is followed immediately by raw data. In more complex block types, the header may be followed by standard fixed length fields or by the header of a series 1 primitive block that encapsulates another series 1 data block or list of blocks.

Series 1 Primitive Data Blocks

Both series 1 and series 2 blocks include a set of primitives that encapsulate lists of variable-length blocks as well as variable-length strings and BLOBs within messages. These primitive blocks have the standard series 1 block header discussed above. These primitives appear only within other series 1 data blocks. Any number can be included in a given block type. For details on the structure of the primitive blocks, see the following:

- String Data Block, page 4-70
- BLOB Data Block, page 4-71
- List Data Block, page 4-71
- Generic List Block, page 4-72

Host Discovery and Connection Data Blocks

For the list of block types in host discovery and connection events, see Table 4-30 on page 4-62. The block types in user events are described in Table 4-85 on page 4-173. These are all Series 1 data blocks.

Each entry in the table below contains a link to the subsection where the data block is defined. For each block type, the status (current or legacy) is indicated. A current data block is the latest version. A legacy data block is one that is used for an older version of the product, and the message format can still be requested from eStreamer.

Table 4-30 Host Discovery and Connection Data Block Types

Type	Content	Data Block Status	Description
0	String	Current	Contains string data. See String Data Block, page 4-70 for more information.
1	Sub-Server	Current	Contains information about a sub-server detected on a server. See Sub-Server Data Block, page 4-73 for more information.
4	Protocol	Current	Contains protocol data. See Protocol Data Block, page 4-74 for more information.
7	Integer Data	Current	Contains integer (numeric) data. See Integer (INT32) Data Block, page 4-75 for more information.
10	BLOB	Current	Contains a raw block of binary data and is used specifically for banners. See BLOB Data Block, page 4-71 for more information.

Table 4-30 Host Discovery and Connection Data Block Types (continued)

Type	Content	Data Block Status	Description
11	List	Current	Contains a list of other data blocks. See List Data Block, page 4-71 for more information.
14	VLAN	Current	Contains VLAN information. See VLAN Data Block, page 4-75 for more information.
20	Intrusion Impact Alert	Current	Contains intrusion impact alert information. Intrusion impact alert events have slightly different headers than other data blocks. See Intrusion Impact Alert Data 5.3+, page 3-16 for more information.
31	Generic List	Current	Contains generic list information, for example, to encapsulate lists of blocks, such as Client Application blocks, in the Host Profile block. See Generic List Block, page 4-72 for more information.
35	String Information	Current	Contains string information. For example, when used in the Scan Vulnerability data block, the String Information data block contains the CVE identification number data. See String Information Data Block, page 4-77.
37	Server Banner	Current	Contains server banner data. See Server Banner Data Block, page 4-76 for more information.
38	Attribute Address	Legacy	Contains the host attribute address (as documented in earlier versions of the product). The successor block is 146.
39	Attribute List Item	Current	Contains a host attribute list item value. See Attribute List Item Data Block, page 4-79 for more information.
42	Host Client Application	Legacy	Contains client application information for New Client Application events (as documented for earlier versions of the product).
47	Full Host Profile	Legacy	Contains complete host profile information (as documented in earlier versions of the product).
48	Attribute Value	Current	Contains attribute identification numbers and values for host attributes. See Attribute Value Data Block, page 4-80 for more information.
51	Full Sub-Server	Current	Contains information about a sub-server detected on a server. Referenced in Full Server information blocks and in full host profiles. Includes vulnerability information for each sub-server. See Full Sub-Server Data Block, page 4-81 for more information.
53	Operating System	Current	Contains operating system information for Version 3.5+. See Operating System Data Block 3.5+, page 4-83 for more information.
54	Policy Engine Control Message	Current	Contains information on user policy control changes. See Policy Engine Control Message Data Block, page 4-84 for more information.

Table 4-30 Host Discovery and Connection Data Block Types (continued)

Type	Content	Data Block Status	Description
55	Attribute Definition	Current	Contains information on attribute definitions. See Attribute Definition Data Block for 4.7+, page 4-85 for more information.
56	Connection Statistics	Legacy	Contains information for connection statistics events in 4.7 - 4.9.0 (as documented in earlier versions of the product).
57	User Protocol	Current	Contains protocol information from user input. See User Protocol Data Block, page 4-88 for more information.
59	User Client Application	Legacy	Contains client application data from user input. See User Client Application Data Block for 5.0 - 5.1, page B-90 for more information. Superseded by block 138.
60	User Client Application List	Current	Contains lists of user client application data blocks. See User Client Application List Data Block, page 4-91 for more information.
61	IP Range Specification	Legacy	Contains IP address range specifications. See IP Range Specification Data Block for 5.0 - 5.1.1.x, page B-304 for more information. Superseded by block 141.
62	Attribute Specification	Current	Contains an attribute name and value. See Attribute Specification Data Block, page 4-94 for more information.
63	MAC Address Specification	Current	Contains MAC address range specifications. See MAC Address Specification Data Block, page 4-96 for more information.
64	IP Address Specification	Current	Contains lists of IP and MAC address specification blocks. See Address Specification Data Block, page 4-97 for more information.
65	User Product	Legacy	Contains host input data imported from a third-party application, including third-party application string mappings. See User Product Data Block for 5.0.x, page B-94 for more information. The successor block type 118 introduced for 5.0 has an identical structure as block type 65.
66	Connection Chunk	Legacy	Contains connection chunk information. See Connection Chunk Data Block for 5.0 - 5.1, page B-141 for more information. The successor block type 119 introduced for 5.0 has an identical structure as block type 66.
67	Fix List	Current	Contains a fix that applies to a host. See Fix List Data Block, page 4-100 for more information.
71	Generic Scan Results	Legacy	Contains results from an Nmap scan (as documented in earlier versions of the product).

Table 4-30 Host Discovery and Connection Data Block Types (continued)

Type	Content	Data Block Status	Description
72	Scan Result	Legacy	Contains results from a third-party scan (as documented in earlier versions of the product).
76	User Server	Current	Contains server information from a user input event. See User Server Data Block, page 4-100 for more information.
77	User Server List	Current	Contains lists of user server blocks. See User Server List Data Block, page 4-102 for more information.
78	User Hosts	Current	Contains information about host ranges from a user host input event. See User Hosts Data Block 4.7+, page 4-103 for more information.
79	User Vulnerability	Legacy	Contains information about a vulnerability for a host or hosts (as documented in earlier versions of the product). The successor block introduced for version 5.0 has block type 124.
80	User Host Vulnerability Change	Current	Contains lists of deactivated or activated vulnerabilities. See User Vulnerability Change Data Block 4.7+, page 4-104 for more information.
81	User Criticality	Current	Contains information on criticality changes for a host or host. See User Criticality Change Data Block 4.7+, page 4-106 for more information.
82	User Attribute Value	Current	Contains attribute value changes for a host or hosts. See User Attribute Value Data Block 4.7+, page 4-107 for more information.
83	User Protocol List	Current	Contains lists of protocols for a host or hosts. See User Protocol List Data Block 4.7+, page 4-109 for more information.
85	Vulnerability List	Current	Contains vulnerabilities that apply to a host. See Host Vulnerability Data Block 4.9.0+, page 4-110 for more information.
86	Scan Vulnerability	Legacy	Contains information on vulnerabilities detected by a scan (as documented in earlier versions of the product).
87	Operating System Fingerprint	Legacy	Contains lists of operating system fingerprints. See Operating System Fingerprint Data Block for 5.0 - 5.0.2, page B-123 for more information. The successor block introduced for version 5.1 has block type 130.
88	Server Information	Legacy	Contains server information used in server fingerprints (as documented in earlier versions of the product).
89	Host Server	Legacy	Contains server information for a host (as documented in earlier versions of the product).
90	Full Host Server	Legacy	Contains server information for a host (as documented in earlier versions of the product).

Table 4-30 Host Discovery and Connection Data Block Types (continued)

Type	Content	Data Block Status	Description
91	Host Profile	Legacy	Contains profile information for a host. See Host Profile Data Block for 5.2+, page 4-158 for more information. The successor block introduced for version 5.1 has block type 132.
92	Full Host Profile	Legacy	Contains complete host profile information (as documented in earlier versions of the product). Supersedes data block 47.
94	Identity Data	Current	Contains identity data for a host. See Identity Data Block, page 4-111 for more information.
95	Host MAC Address	Current	Contains MAC address information for a host. See Host MAC Address 4.9+, page 4-113 for more information.
96	Secondary Host Update	Current	Contains lists of MAC address information reported by a secondary Secondary Host Update, page 4-114.
97	Web Application	Legacy	Contains lists of web application data (as documented in earlier versions of the product). The successor block introduced for version 5.0 has block type 123.
98	Host Server	Legacy	Contains server information for a host (as documented in earlier versions of the product).
99	Full Host Server	Legacy	Contains server information for a host (as documented in earlier versions of the product).
100	Host Client Application	Legacy	Contains client application information for New Client Application events (as documented in earlier versions of the product). The successor block type 122 introduced for version 5.0 has the same structure as block type 100.
101	Connection Statistics	Legacy	Contains information for connection statistics events in 4.9.1+ (as documented in earlier versions of the product).
102	Scan Results	Legacy	Contains information about a vulnerability and is used within Add Scan Result events. See Scan Result Data Block 5.0 - 5.1.1.x, page B-92.
103	Host Server	Current	Contains server information for a host. See Host Server Data Block 4.10.0+, page 4-134 for more information.
104	Full Host Server	Current	Contains server information for a host. See Full Host Server Data Block 4.10.0+, page 4-136 for more information.
105	Server Information	Legacy	Contains server information used in server fingerprints. See Server Information Data Block for 4.10.x, 5.0 - 5.0.2, page 4-140 for more information. The successor block type 117 introduced for 5.0 has an identical structure as block type 105.

Table 4-30 Host Discovery and Connection Data Block Types (continued)

Type	Content	Data Block Status	Description
106	Full Server Information	Current	Contains information about a server detected on a host. See Full Server Information Data Block, page 4-142 for more information.
108	Generic Scan Results	Current	Contains results from an Nmap scan. See Generic Scan Results Data Block for 4.10.0+, page 4-145 for more information.
109	Scan Vulnerability	Current	Contains information on vulnerabilities detected by a third-party scan. See Scan Vulnerability Data Block for 4.10.0+, page 4-147.
111	Full Host Profile	Legacy	Contains complete host profile information. See Full Host Profile Data Block 5.0 - 5.0.2, page B-268 for more information. Supersedes data block 92.
112	Full Host Client Application	Current	Contains client application information for New Client Application events and includes a list of vulnerabilities. See Full Host Client Application Data Block 5.0+, page 4-150 for more information.
115	Connection Statistics	Legacy	Contains information for connection statistics events in 5.0 - 5.0.2. See Connection Statistics Data Block 5.0 - 5.0.2, page B-125 for more information. The successor block introduced for version 5.1 has block type 126.
117	Server Information	Current	Contains server information used in server fingerprints. See Server Information Data Block for 4.10.x, 5.0 - 5.0.2, page 4-140 for more information.
118	User Product	Legacy	Contains host input data imported from a third-party application, including third-party application string mappings. See User Product Data Block for 5.0.x, page B-94 for more information. The predecessor block type 65, superseded in 5.0, has the same structure as this block type. The successor block introduced for version 5.1 has block type 132.
119	Connection Chunk	Legacy	Contains connection chunk information for versions 4.10.1 - 5.1. See Connection Chunk Data Block for 5.0 - 5.1, page B-141 for more information. The successor block is 136.
122	Host Client Application	Current	Contains client application information for New Client Application events for version 5.0+. See Host Client Application Data Block for 5.0+, page 4-151 for more information. It supersedes block type 100.
123	Web Application	Current	Contains web application data for version 5.0+. See Web Application Data Block for 5.0+, page 4-115 for more information. It supersedes block type 97.
124	User Vulnerability	Current	Contains information about a vulnerability for a host or hosts. See User Vulnerability Data Block 5.0+, page 4-153. It supersedes block type 79.

Table 4-30 Host Discovery and Connection Data Block Types (continued)

Type	Content	Data Block Status	Description
125	Connection Statistics	Legacy	Contains information for connection statistics events in 4.10.2 (as documented in earlier versions of the product). The successor block introduced for version 5.1 has block type 115.
126	Connection Statistics	Legacy	Contains information for connection statistics events in 5.1. See Connection Statistics Data Block 5.1, page B-129 for more information. It supersedes block type 115. This block type is superseded by block type 137.
130	Operating System Fingerprint	Current	Contains lists of operating system fingerprints. See Operating System Fingerprint Data Block 5.1+, page 4-155 for more information. It supersedes block type 87.
131	Mobile Device Information	Current	Contains information about a detected mobile device's hardware. See Mobile Device Information Data Block for 5.1+, page 4-157 for more information.
132	Host Profile	Legacy	Contains profile information for a host. See Full Host Profile Data Block 5.2.x, page B-286 for more information. It supersedes block type 91. Superseded by block 139.
134	User Product	Current	Contains host input data imported from a third-party application, including third-party application string mappings. See User Product Data Block 5.1+, page 4-166 for more information. This supersedes the predecessor block type 118.
135	Full Host Profile	Legacy	Contains complete host profile information. See Full Host Profile Data Block 5.1.1, page B-277 for more information. Supersedes data block 111.
136	Connection Chunk	Current	Contains connection chunk information. See Connection Chunk Data Block for 6.1+, page 4-98 for more information. Supersedes block 119.
137	Connection Statistics	Legacy	Contains information for connection events in 5.1.1. See Connection Chunk Data Block for 5.0 - 5.1, page B-141 for more information. It supersedes block type 126. It is superseded by block type 144.
138	User Client Application	Current	Contains client application data from user input. See User Client Application Data Block for 5.1.1+, page 4-90 for more information. It supersedes block type .
139	Host Profile	Current	Contains profile information for a host. See Host Profile Data Block for 5.2+, page 4-158 for more information. It supersedes block type 132.

Table 4-30 Host Discovery and Connection Data Block Types (continued)

Type	Content	Data Block Status	Description
140	Full Host Profile	Legacy	Contains complete host profile information. See Full Host Profile Data Block 5.3+, page 5-1 for more information. Supersedes data block 135.
141	IP Range Specification	Current	Contains IP address range specifications. See IP Address Range Data Block for 5.2+, page 4-93 for more information. It supersedes block 61.
142	Scan Results	Current	Contains information about a vulnerability and is used within Add Scan Result events. See Scan Result Data Block 5.2+, page 4-132. It supersedes block 102.
143	Host IP	Current	Contains a host's IP address and last seen information. See Host IP Address Data Block, page 4-95 for more information.
144	Connection Statistics	Legacy	Contains information for connection events in 5.2.x. See Connection Statistics Data Block 5.2.x, page B-135 for more information. It supersedes block type 137.
146	Attribute Address	Current	Contains the host attribute address for 5.2+. See Attribute Address Data Block 5.2+, page 4-78 for more information. It supersedes block type 38.
140	Full Host Profile	Current	Contains complete host profile information. See Full Host Profile Data Block 5.3+, page 5-1 for more information. Supersedes data block 135.
152	Connection Statistics	Legacy	Contains information for connection events in 5.3+. See Connection Statistics Data Block 5.3, page B-150 for more information. It supersedes block type 144.
154	Connection Statistics	Legacy	Contains information for connection events in 5.3. See Connection Statistics Data Block 5.3.1, page B-156 for more information. It supersedes block type 152.
155	Connection Statistics	Legacy	Contains information for connection events in 5.4. See Connection Statistics Data Block 5.4, page B-163 for more information. It supersedes block type 154.
157	Connection Statistics	Legacy	Contains information for connection events in 5.4.1. See Connection Statistics Data Block 5.4.1, page B-176 for more information. It supersedes block type 155.

Table 4-30 Host Discovery and Connection Data Block Types (continued)

Type	Content	Data Block Status	Description
160	Connection Statistics	Legacy	Contains information for connection events in 5.4.1. See Connection Statistics Data Block 6.0.x, page B-189 for more information. It supersedes block type 157.
163	Connection Statistics	Current	Contains information for connection events in 6.0+. See Connection Statistics Data Block 6.2+, page 4-116 for more information. It supersedes block type 160.

String Data Block

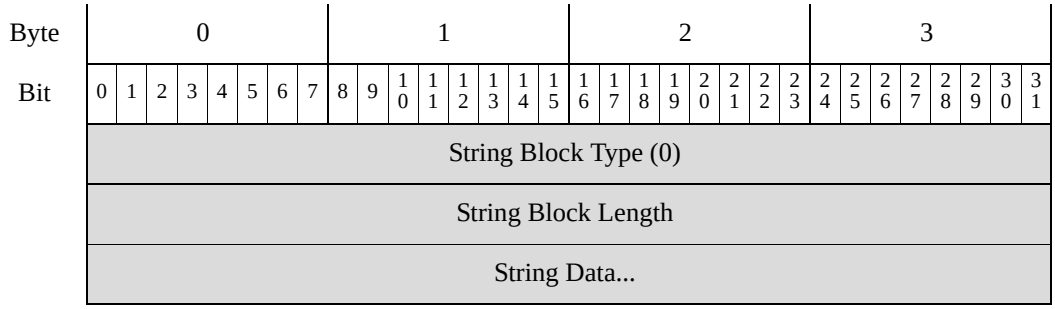
The String data block is used for sending string data in series 1 blocks. It commonly appears within other series 1 data blocks to describe, for example, operating system or server names.

Empty string data blocks (string data blocks containing no string data) have a block length value of `8` and are followed by zero bytes of string data. An empty string data block is returned when there is no content for the string value, as might happen, for example, in the OS vendor string field in an Operating System data block when the vendor of the operating system is unknown.

The String data block has a block type of 0 in the series 1 group of blocks.

Note Strings returned in this data block are not always null-terminated (that is, they are not always terminated with a 0).

The following diagram shows the format of the String data block:



The following table describes the fields of the String data block.

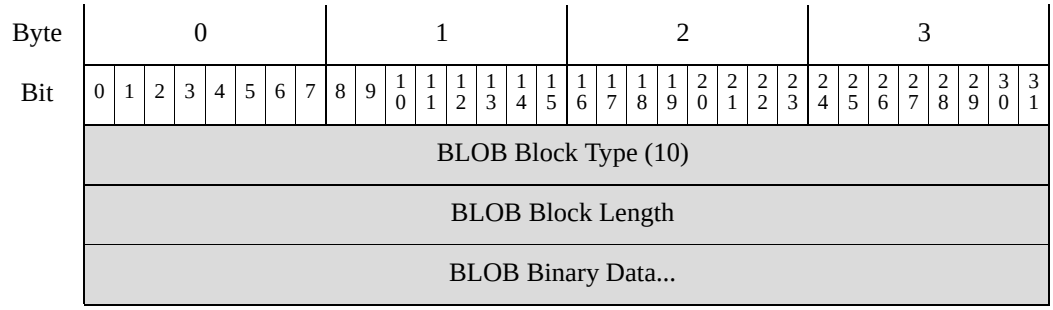
Table 4-31 String Data Block Fields

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block. This value is always `0`.
String Block Length	uint32	Combined length of the string data block header and string data.
String Data	string	Contains the string data and may contain a terminating character (null byte) at the end of the string.

BLOB Data Block

The BLOB data block can be used to convey binary data. For example, it is used to hold the server banner captured by the system. The BLOB data block has a block type of 10 in the series 1 group of blocks.

The following diagram shows the format of the BLOB data block:



The following table describes the fields of the BLOB data block.

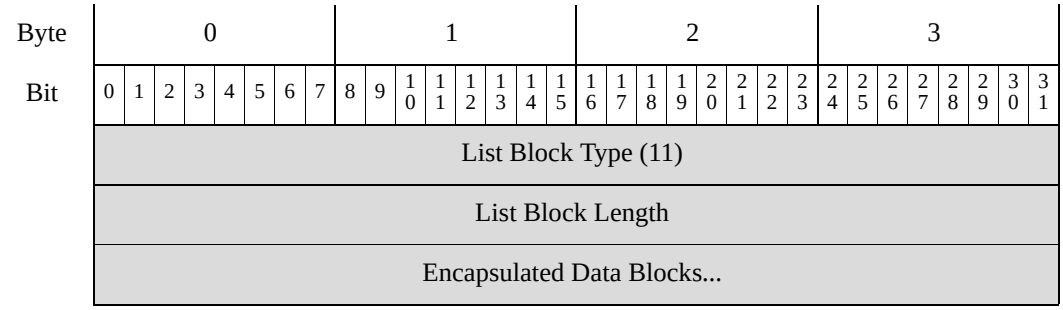
Table 4-32 BLOB Data Block Fields

Field	Data Type	Description
BLOB Block Type	uint32	Initiates a BLOB data block. This value is always `10`.
BLOB Block Length	uint32	Number of bytes in the BLOB data block, including eight bytes for the BLOB block type and length fields, plus the length of the binary data that follows.
Binary Data	variable	Contains binary data, typically a server banner.

List Data Block

The List data block is used to encapsulate a list of series 1 data blocks. For example, if a list of TCP servers is being transmitted, the Server data blocks containing the data are encapsulated in a List data block. The List data block has a block type of 11 in the series 1 group of blocks.

The following diagram shows the basic format of a List data block:



The following table describes the fields of the List data block.

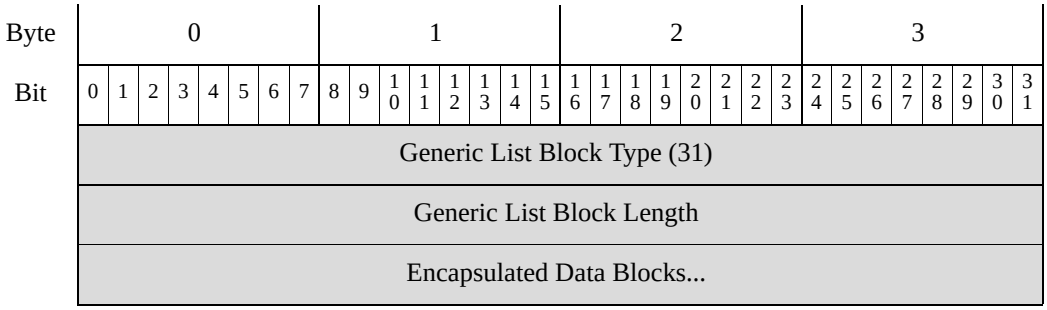
Table 4-33 List Data Block Fields

Field	Data Type	Description
List Block Type	uint32	Initiates a List data block. This value is always `11`.
List Block Length	uint32	Number of bytes in the list block and encapsulated data. For example, if there were three sub-server data blocks included in the list, the value here would include the number of bytes in the sub-server blocks, plus eight bytes for the list block header.
Encapsulated Data Blocks	variable	Encapsulated data blocks up to the maximum number of bytes in the list block length.

Generic List Block

The Generic List data block is used to encapsulate a list of series 1 data blocks. For example, when client application information is transmitted within a Host Profile data block, a list of Client Application data blocks are encapsulated by the Generic List data block. The Generic List data block has a block type of 31 in the series 1 group of blocks.

The following diagram shows the basic structure of a Generic List data block:



The following table describes the fields of the Generic List data block.

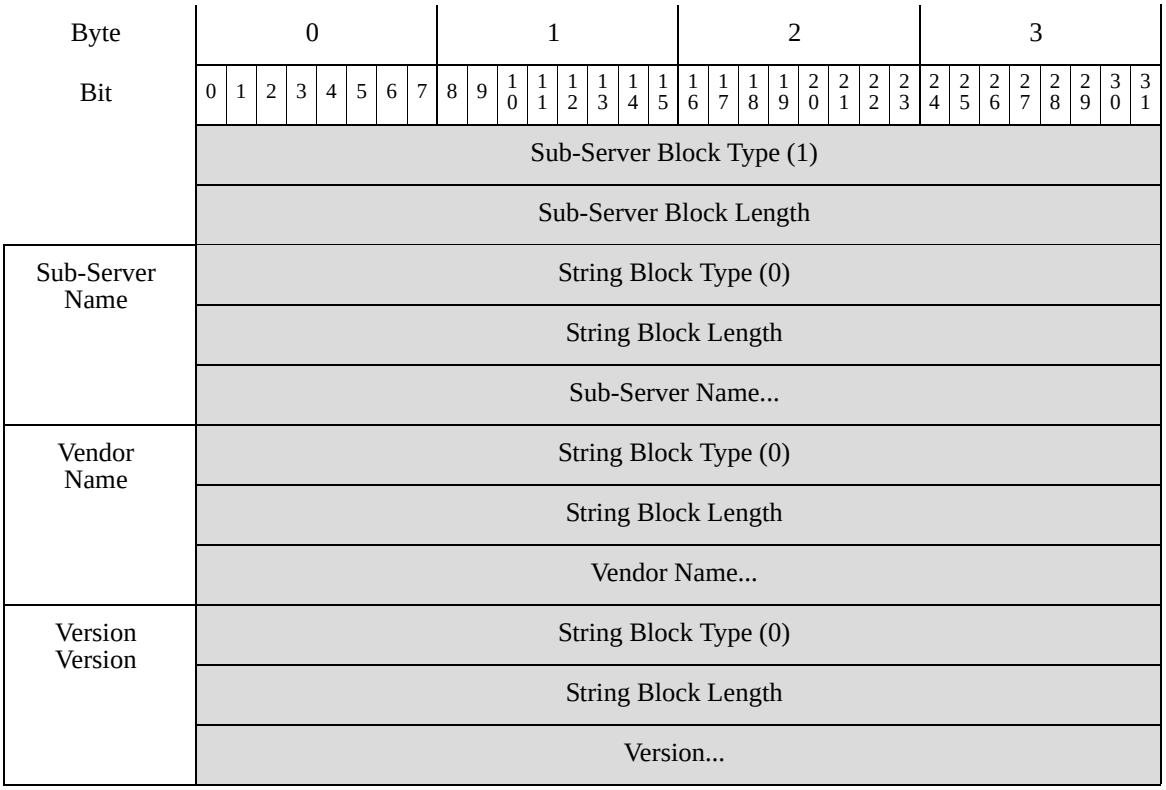
Table 4-34 Generic List Data Block Fields

Field	Number of Bytes	Description
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
Encapsulated Data Blocks	variable	Encapsulated data blocks up to the maximum number of bytes in the list block length.

Sub-Server Data Block

The Sub-Server data block conveys information about an individual sub-server, which is a server called by another server on the same host and has associated vulnerabilities. The Sub-Server data block has a block type of 1 in the series 1 group of blocks.

The following diagram shows the format of the Sub-Server data block:



The following table describes the fields of the Sub-Server data block.

Table 4-35 Sub-Server Data Block Fields

Field	Data Type	Description
Sub-Server Block Type	uint32	Initiates a Sub-Server data block. This value is always `1`.
Sub-Server Block Length	uint32	Total number of bytes in the Sub-Server data block, including eight bytes for the Sub-Server block type and length fields, plus the number of bytes of data that follows.
String Block Type	uint32	Initiates a String data block containing the sub-server name. This value is always `0`.
String Block Length	uint32	Number of bytes in the sub-server name String data block, including the string block type and length fields, plus the number of bytes in the sub-server name.
Sub-Server Name	string	Name of the sub-server.

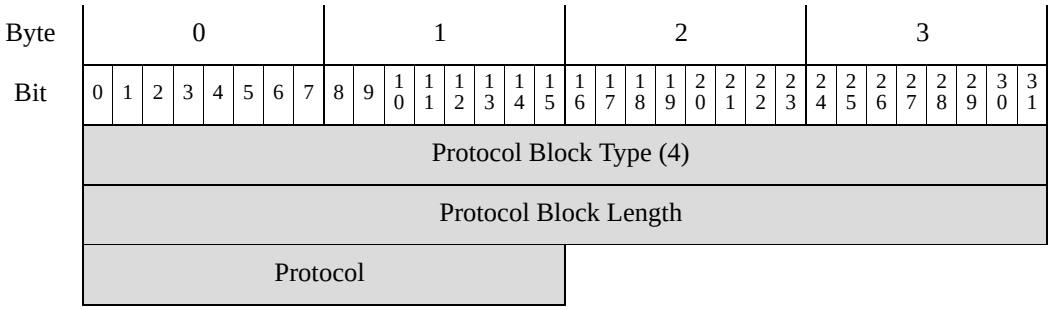
Table 4-35 Sub-Server Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block that contains the sub-server vendor. This value is always 0.
String Block Length	uint32	Number of bytes in the vendor name String data block, including the string block type and length fields, plus the number of bytes in the vendor name.
Vendor Name	string	Sub-server vendor name.
String Block Type	uint32	Initiates a String data block that contains the sub-server version. This value is always 0.
String Block Length	uint32	Number of bytes in the Sub-Server version String data block, including the string block type and length fields, plus the number of bytes in the version.
Version	string	Sub-server version.

Protocol Data Block

The Protocol data block defines protocols. It is a very simple data block, with only the block type, block length, and the IANA protocol number identifying the protocol. The Protocol data block has a block type of 4 in the series 1 group of blocks.

The following graphic shows the format of the Protocol data block:



The following table describes the fields of the Protocol data block.

Table 4-36 Protocol Data Block Fields

Field	Data Type	Description
Protocol Block Type	uint32	Initiates a Protocol data block. This value is always 4.

Table 4-36 Protocol Data Block Fields (continued)

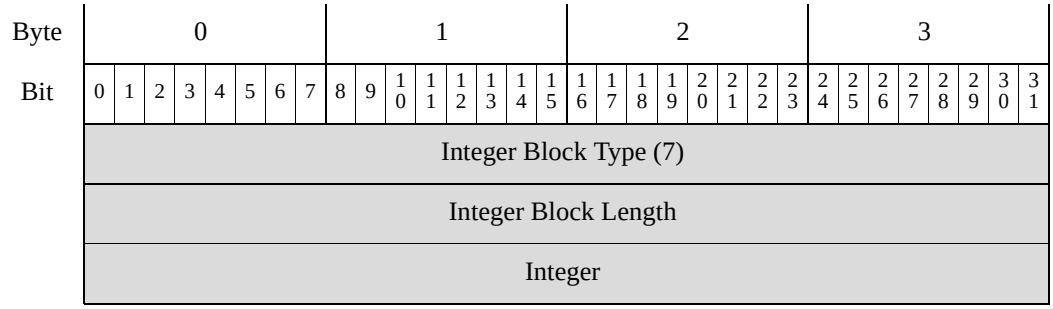
Field	Data Type	Description
Protocol Block Length	uint32	Number of bytes in the Protocol data block. This value is always `10`.
Protocol	uint16	IANA protocol number or Ethertype. This is handled differently for Transport and Network layer protocols. Transport layer protocols are identified by the IANA protocol number. For example: • `6` — TCP • `17` — UDP Network layer protocols are identified by the decimal form of the IEEE Registration Authority Ethertype. For example: • `2048` — IP

Integer (INT32) Data Block

The Integer (INT32) data block is used in List data blocks to convey 32-bit integer data.

The Integer data block has a block type of 7 in the series 1 group of blocks.

The following diagram shows the format of the integer data block:



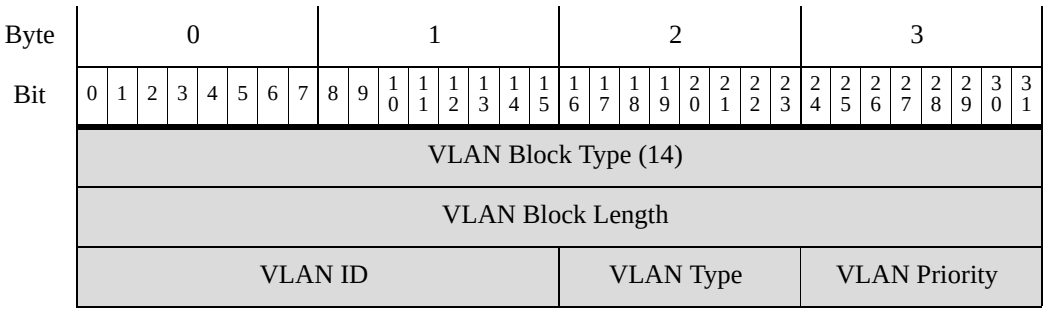
The following table describes the fields of the Integer data block:

Table 4-37 Integer Data Block Fields

Field	Data Type	Description
Integer Block Type	uint32	Initiates an Integer data block. The value is always `7`.
Integer Block Length	uint32	Number of bytes in the Integer data block. This value is always `12`.
Integer	uint32	Contains the integer value.

VLAN Data Block

The VLAN data block contains VLAN tag information for a host. The VLAN data block has a block type of 14 in the series 1 group of blocks.The following diagram shows the format of the VLAN data block:



The following table describes the fields of the VLAN data block.

Table 4-38 VLAN Data Block Fields

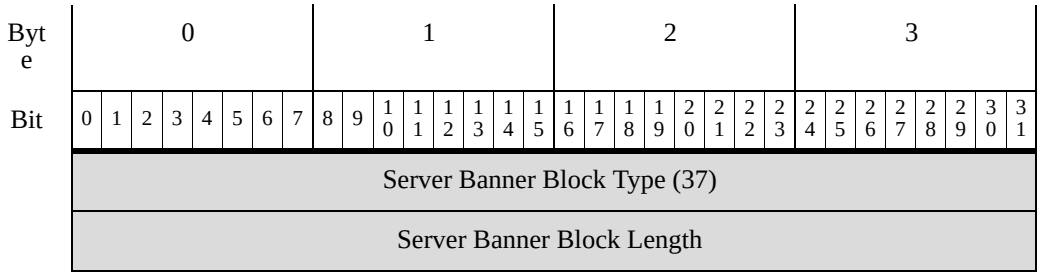
Field	Data Type	Description
VLAN Block Type	uint32	Initiates a VLAN data block. This value is always `14`.
VLAN Block Length	uint32	Number of bytes in the VLAN data block. This value is always `12`.
VLAN ID	uint16	Contains the VLAN identification number that indicates which VLAN the host is a member of.
VLAN Type	uint8	Type of packet encapsulated in the VLAN tag. • `0` — Ethernet • `1` — Token Ring
VLAN Priority	uint8	Priority value included in the VLAN tag.

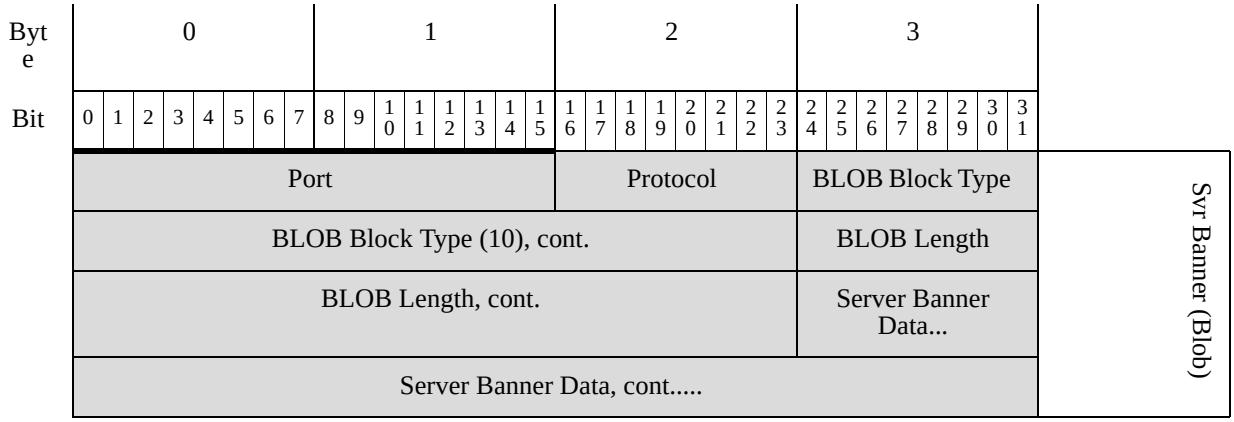
Server Banner Data Block

The Server Banner data block provides information about the banner for a server running on a host. It contains the server port, protocol, and the banner data. The Server Banner data block has a block type of 37 in the series 1 group of blocks.

The following diagram shows the format of the Server Banner data block.

Note An asterisk(*) next to a block type field in the following diagram indicates the message may contain zero or more instances of the series 1 data block.





The following table describes the fields of the Server Banner data block.

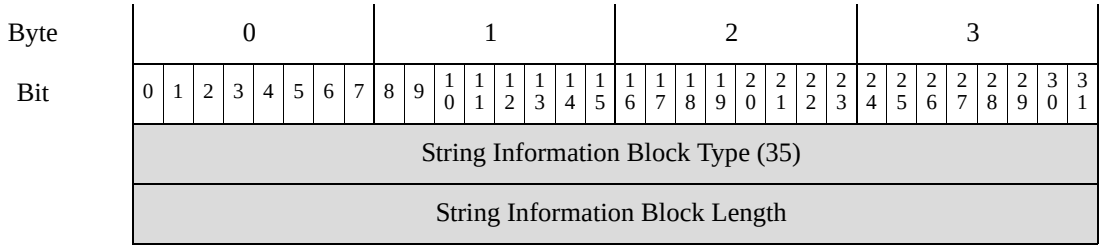
Table 4-39 Server Banner Data Block Fields

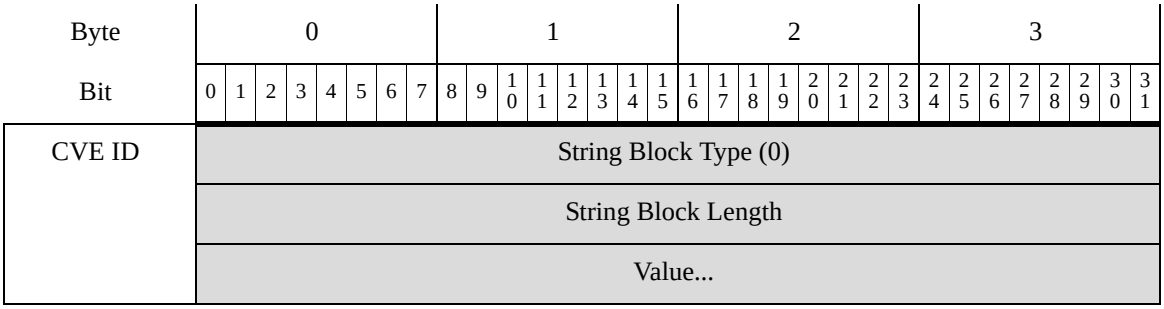
Field	Data Type	Description
Server Banner Block Type	uint32	Initiates a Server Banner data block. This value is always `37`.
Server Banner Block Length	uint32	Total number of bytes in the Server Banner data block, including the eight bytes in the server banner block type and length fields, plus the number of bytes of data that follows.
Port	uint16	Port number on which the server runs.
Protocol	uint8	Protocol number for the server.
BLOB Block Type	uint32	Initiates a BLOB data block containing server banner data. This value is always `10`.
Length	uint32	Total number of bytes in the BLOB data block (typically 264 bytes).
Banner	byte[*n*]	First *n* bytes of the packet involved in the server event, where *n* is equal to or less than 256.

String Information Data Block

The String Information data block contains string data. For example, the String Information data block is used to convey the Common Vulnerabilities and Exposures (CVE) identification string within a Scan Vulnerability data block. The String Information data block has a block type of 35 in the series 1 group of blocks.

The following diagram shows the format of the String Information data block:





The following table describes the fields of the String Information data block.

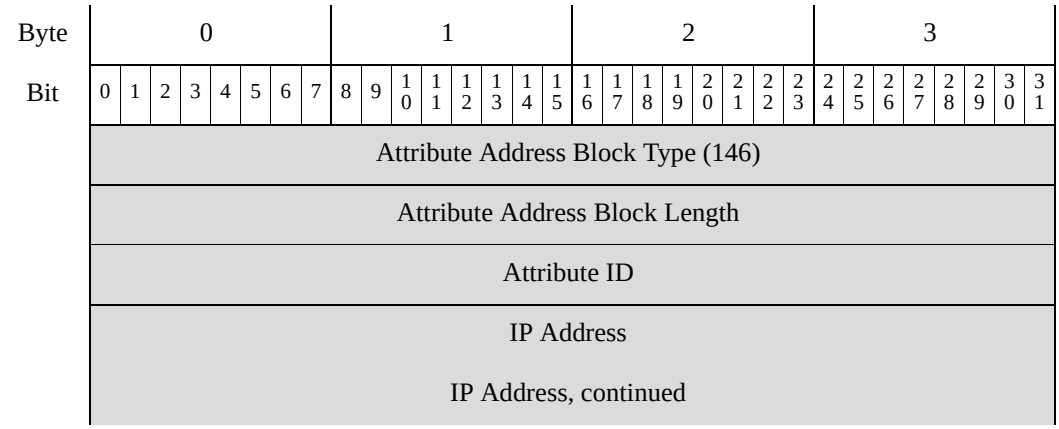
Table 4-40 String Information Data Block Fields

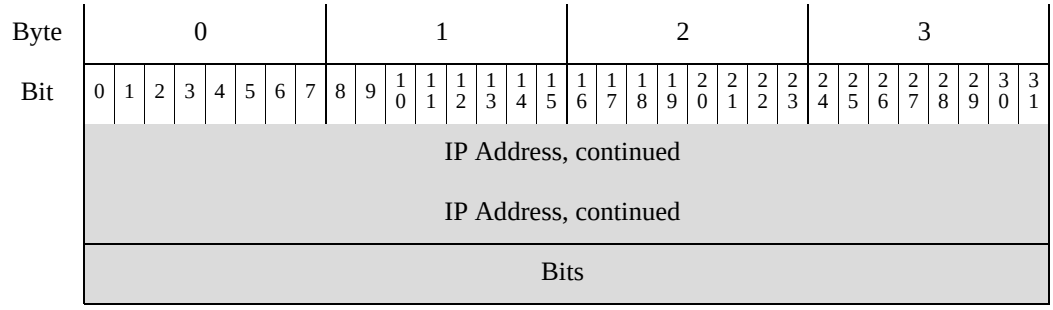
Field	Data Type	Description
String Information Block Type	uint32	Initiates a String Information data block. This value is always `35`.
String Information Block Length	uint32	Combined length of the String Information data block header and String Information data.
String Block Type	uint32	Initiates a string data block for the value.
String Block Length	uint32	Number of bytes in the string data block for the value, including eight bytes for the string block type and length, plus the number of bytes in the value.
Value	string	The value of the Common Vulnerabilities and Exposures (CVE) identification number for the vulnerability data block where the String Information data block is used.

Attribute Address Data Block 5.2+

The Attribute Address data block contains an attribute list item and is used within an Attribute Definition data block. It has a block type of 146 in the series 1 group of blocks.

The following diagram shows the basic structure of an Attribute Address data block:





The following table describes the fields of the Attribute Address data block.

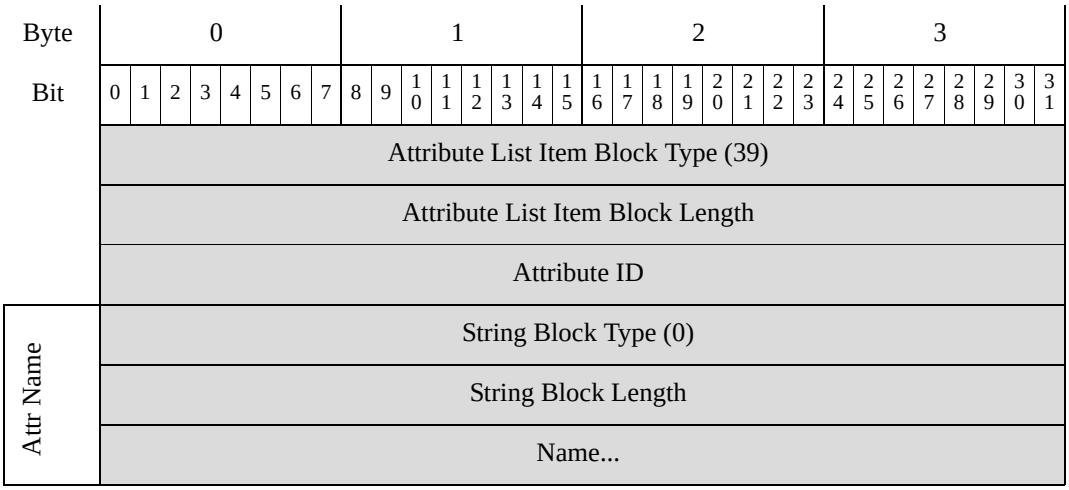
Table 4-41 Attribute Address Data Block 5.2+ Fields

Field	Data Type	Description
Attribute Address Block Type	uint32	Initiates an Attribute Address data block. This value is always `146`.
Attribute Address Block Length	uint32	Number of bytes in the Attribute Address data block, including eight bytes for the attribute address block type and length, plus the number of bytes in the attribute address data that follows.
Attribute ID	uint32	Identification number of the affected attribute, if applicable.
IP Address	uint8[16]	IP address of the host, if the address was automatically assigned. The address can be IPv4 or IPv6.
Bits	uint32	Contains the significant bits used to calculate the netmask if an IP address was automatically assigned.

Attribute List Item Data Block

The Attribute List Item data block contains an attribute list item and is used within an Attribute Definition data block. It has a block type of 39 in the series 1 group of blocks.

The following diagram shows the basic structure of an Attribute List Item data block:



The following table describes the fields of the Attribute List Item data block.

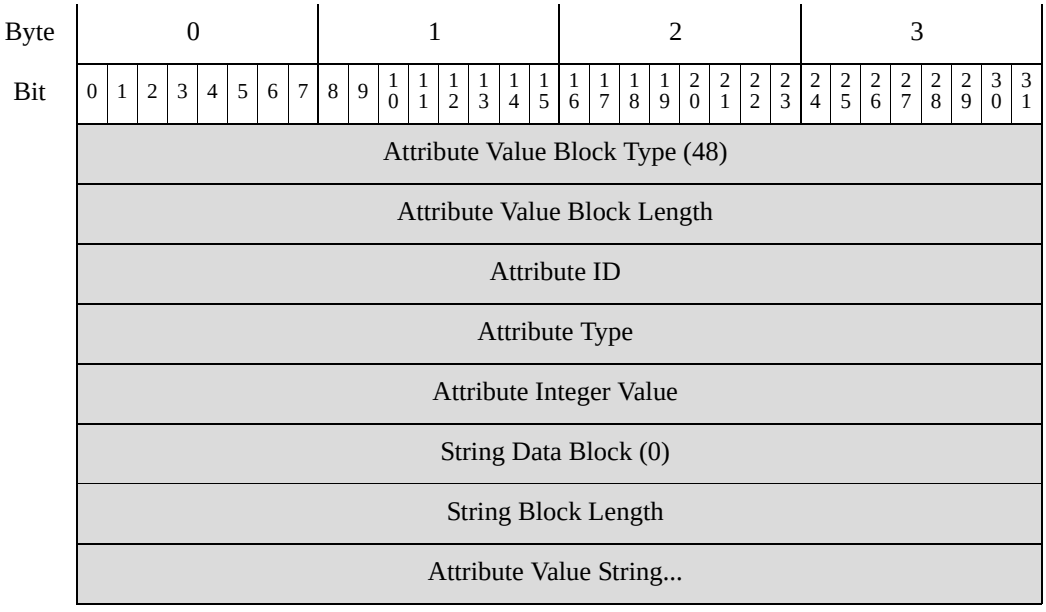
Table 4-42 Attribute List Item Data Block Fields

Field	Data Type	Description
Attribute List Item Block Type	uint32	Initiates an Attribute List Item data block. This value is always 39.
Attribute List Item Block Length	uint32	Number of bytes in the Attribute List Item data block, including eight bytes for the attribute list item block type and length, plus the number of bytes in the attribute list item data that follows.
Attribute ID	uint32	Identification number of the affected attribute, if applicable.
String Block Type	uint32	Initiates a String data block for the attribute list item name. This value is always 0.
String Block Length	uint32	Number of bytes in the String data block for the attribute list item name, including eight bytes for the string block type and length, plus the number of bytes in the attribute list item name.
Name	string	Attribute list item name.

Attribute Value Data Block

The Attribute Value data block conveys attribute identification numbers and values for host attributes. An Attribute Value data block for each attribute applied to the host in the event is included in a list in the Full Host Profile data block. The Attribute Value data block has a block type of 48 in the series 1 group of blocks.

The following diagram shows the format of the Attribute Value data block:



The following table describes the components of the Attribute Value data block.

Table 4-43 Attribute Value Data Block Fields

Field	Data Type	Description
Attribute Value Block Type	uint32	Initiates an Attribute Value data block. This value is always 48.
Attribute Value Block Length	uint32	Total number of bytes in the Attribute Value data block, including eight bytes for the attribute value block type and length fields, plus the number of bytes of attribute block data that follows.
Attribute ID	uint32	The identification number for the attribute.
Attribute Type	uint32	Type of affected attribute. Possible values are: • 0 — Attribute with text as value; this uses string data • 1 — Attribute with value in range; this uses integer data • 2 — Attribute with a list of possible values, this uses integer data • 3 — Attribute with a URL as value; this uses string data • 4 — Attribute with binary BLOB as value; this uses string data
Attribute Integer Value	uint32	Integer value for the attribute, if applicable.
String Block Type	uint32	Initiates a String data block containing the attribute name. This value is always 0.
String Block Length	uint32	Number of bytes in the String data block, including the string block type and length fields, plus the number of bytes in the attribute name.
Attribute Value	string	Value of the attribute.

Full Sub-Server Data Block

The Full Sub-Server data block conveys information about a sub-server associated with a server detected on a host, and includes information about the sub-server such as its vendor and version and any related VDB and third-party vulnerabilities for the sub-server on the host. A sub-server is a loadable module of a server that has its own associated vulnerabilities. A Full Host Server data block includes a Full Sub-Server data block for each sub-server detected on the host. The Full Sub-Server data block has a block type of 51 in the series 1 group of blocks.

Note An asterisk (*) next to a series 1 data block name in the following diagram indicates that multiple instances of the data block may occur.

The following diagram shows the format of the Full Sub-Server data block:

The following table describes the components of the Full Sub-Server data block.

Table 4-44 Full Sub-Server Data Block Fields

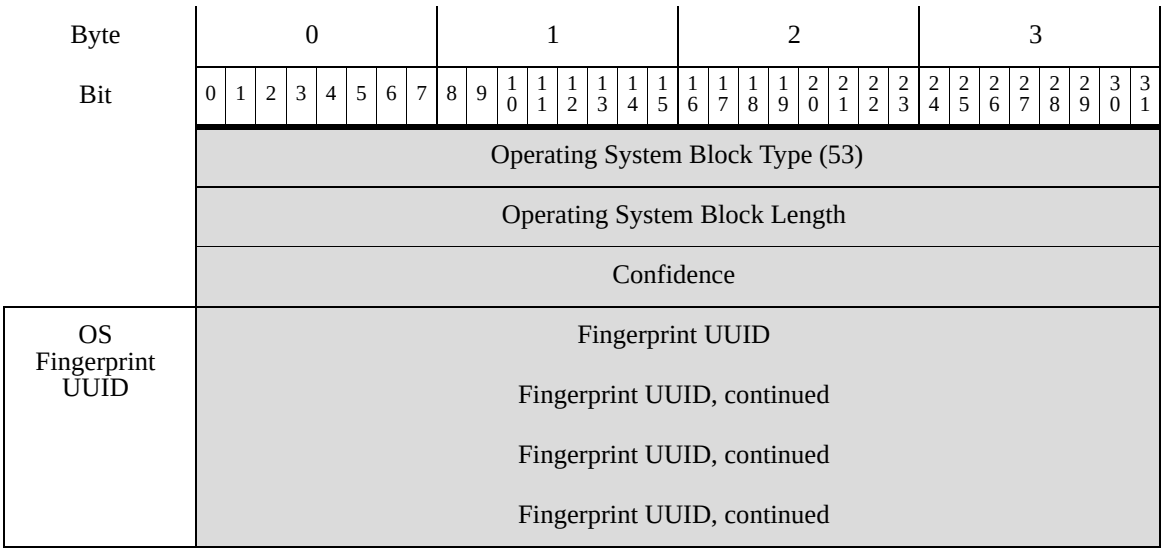
Field	Data Type	Description
Full Sub-Server Block Type	uint32	Initiates a Full Sub-Server data block. This value is always `51`.
Full Sub-Server Block Length	uint32	Total number of bytes in the Full Sub-Server data block, including eight bytes for the Full Sub-Server block type and length fields, plus the number of bytes in the full sub-server data that follows.
String Block Type	uint32	Initiates a String data block containing the sub-server name. This value is always `0`.

Table 4-44 Full Sub-Server Data Block Fields (continued)

Field	Data Type	Description
String Block Length	uint32	Number of bytes in the sub-server name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the sub-server name.
Sub-Server Name	string	Sub-server name.
String Block Type	uint32	Initiates a String data block containing the sub-server vendor's name. This value is always `0`.
String Block Length	uint32	Number of bytes in the vendor name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the sub-server vendor name.
Sub-Server Vendor Name	string	Name of the sub-server vendor.
String Block Type	uint32	Initiates a String data block that contains the sub-server version. This value is always `0`.
String Block Length	uint32	Number of bytes in the sub-server version String data block, including eight bytes for the block type and length fields, plus the number of bytes in the sub-server version.
Sub-Server Version	string	Sub-server version.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Host Vulnerability data blocks conveying VDB Vulnerability data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Host Vulnerability data blocks.
VDB Host Vulnerability Data Blocks *	variable	Host Vulnerability data blocks containing information about host vulnerabilities identified by Cisco. See Host Vulnerability Data Block 4.9.0+, page 4-110 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Host Vulnerability data blocks conveying Third-Party Scan Vulnerability data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Host Vulnerability data blocks.
Third-Party Scan Host Vulnerability Data Blocks *	variable	Host Vulnerability data blocks containing information about host vulnerabilities identified by a third-party vulnerability scanner. See Host Vulnerability Data Block 4.9.0+, page 4-110 for a description of this data block.

Operating System Data Block 3.5+

The operating system data block for Version 3.5+ has a block type of 53 in the series 1 group of blocks. The block includes a fingerprint Universally Unique Identifier (UUID). The following diagram shows the format of an operating system data block in 3.5+.



The following table describes the fields of the v3.5 operating system data block.

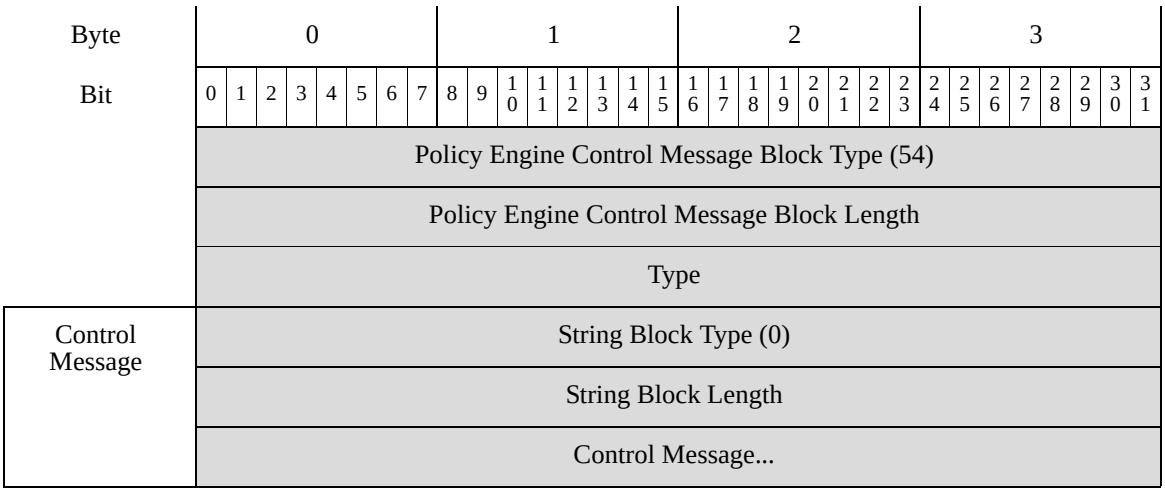
Table 4-45 Operating System Data Block 3.5+ Fields

Field	Data Type	Description
Operating System Data Block Type	uint32	Initiates the operating system data block. This value is always `53`.
Operating System Data Block Length	uint32	Number of bytes in the Operating System data block. This value should always be `28`: eight bytes for the data block type and length fields, plus four bytes for the confidence value and sixteen bytes for the fingerprint UUID value.
Confidence	uint32	Confidence percentage value.
Fingerprint UUID	uint8[16]	Fingerprint identification number, in octets, that acts as a unique identifier for the operating system. The fingerprint UUID maps to the operating system name, vendor, and version in the Cisco database.

Policy Engine Control Message Data Block

The Policy Engine Control Message data block conveys the control message content for policy types. The Policy Engine Control Message data block has a block type of 54 in the series 1 group of blocks.

The following diagram shows the format of the Policy Engine Control Message data block:



The following table describes the components of the Policy Engine Control Message data block.

Table 4-46 Policy Engine Control Message Data Block Fields

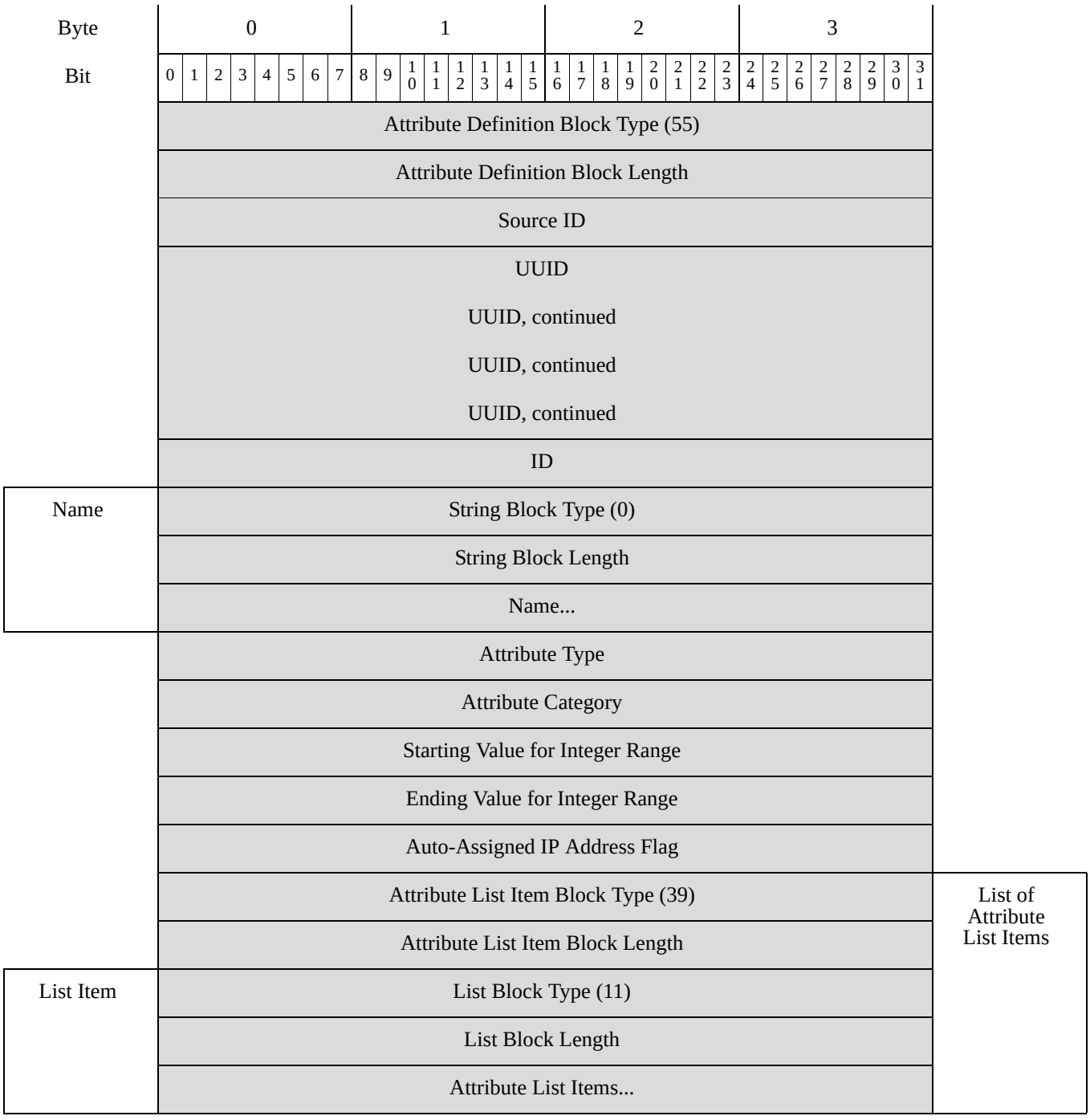
Field	Data Type	Description
Policy Engine Control Message Block Type	uint32	Initiates a Policy Engine Control Message data block. This value is always `54`.
Policy Engine Control Message Length	uint32	Total number of bytes in the Policy Engine Control Message data block, including eight bytes for the policy engine control block type and length fields, plus the number of bytes of policy engine control data that follows.
Type	uint32	Indicates the type of policy for the event.
String Block Type	uint32	Initiates a String data block that contains the control message. This value is always `0`.
String Block Length	uint32	Number of bytes in the control message String data block, including eight bytes for the block type and length fields, plus the number of bytes in the control message.
Control Message	uint32	The control message from the policy engine.

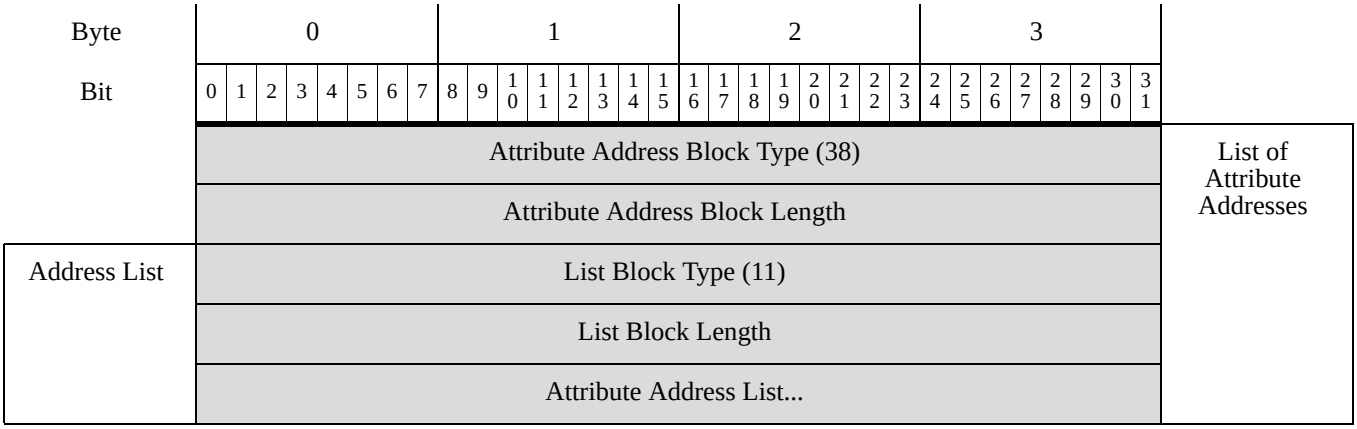
Attribute Definition Data Block for 4.7+

The Attribute Definition data block contains the attribute definition in an attribute creation, change, or deletion event and is used within Host Attribute Add events (event type 1002, subtype 6), Host Attribute Update events (event type 1002, subtype 7), and Host Attribute Delete events (event type 1002, subtype 8). It has a block type of 55 in the series 1 group of blocks.

For more information on those events, see Attribute Messages, page 4-55.

The following diagram shows the basic structure of an Attribute Definition data block:


Byte
0
1
2
3
Bit
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Attribute Definition Block Type (55)
Attribute Definition Block Length
Source ID
UUID
UUID, continued
UUID, continued
UUID, continued
ID
Name
String Block Type (0)
String Block Length
Name...
Attribute Type
Attribute Category
Starting Value for Integer Range
Ending Value for Integer Range
Auto-Assigned IP Address Flag
Attribute List Item Block Type (39)
List of Attribute List Items
Attribute List Item Block Length
List Item
List Block Type (11)
List Block Length
Attribute List Items...



The following table describes the fields of the Attribute Definition data block.

Table 4-47 Attribute Definition Data Block Fields

Field	Data Type	Description
Attribute Definition Block Type	uint32	Initiates an Attribute Definition data block. This value is always `55`.
Attribute Definition Block Length	uint32	Number of bytes in the Attribute Definition data block, including eight bytes for the attribute definition block type and length, plus the number of bytes in the attribute definition data that follows.
Source ID	uint32	Identification number that maps to the source of the attribute data. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
UUID	uint8[16]	An ID number that acts as a unique identifier for the affected attribute.
Attribute ID	uint32	Identification number of the affected attribute, if applicable.
String Block Type	uint32	Initiates a String data block for the attribute definition name. This value is always `0`.
String Block Length	uint32	Number of bytes in the String data block for the attribute definition name, including eight bytes for the string block type and length, plus the number of bytes in the attribute definition name.
Name	string	Attribute definition name.
Attribute Type	uint32	Type of attribute. Possible values are: • `0` — Attribute with text as value; this uses string data • `1` — Attribute with value in range; this uses integer data • `2` — Attribute with a list of possible values; this uses integer data • `3` — Attribute with a URL as value; this uses string data • `4` — Attribute with binary BLOB as value; this uses string data
Attribute Category	uint32	Attribute category.
Starting Value for Range	uint32	First integer in the integer range for the defined attribute.

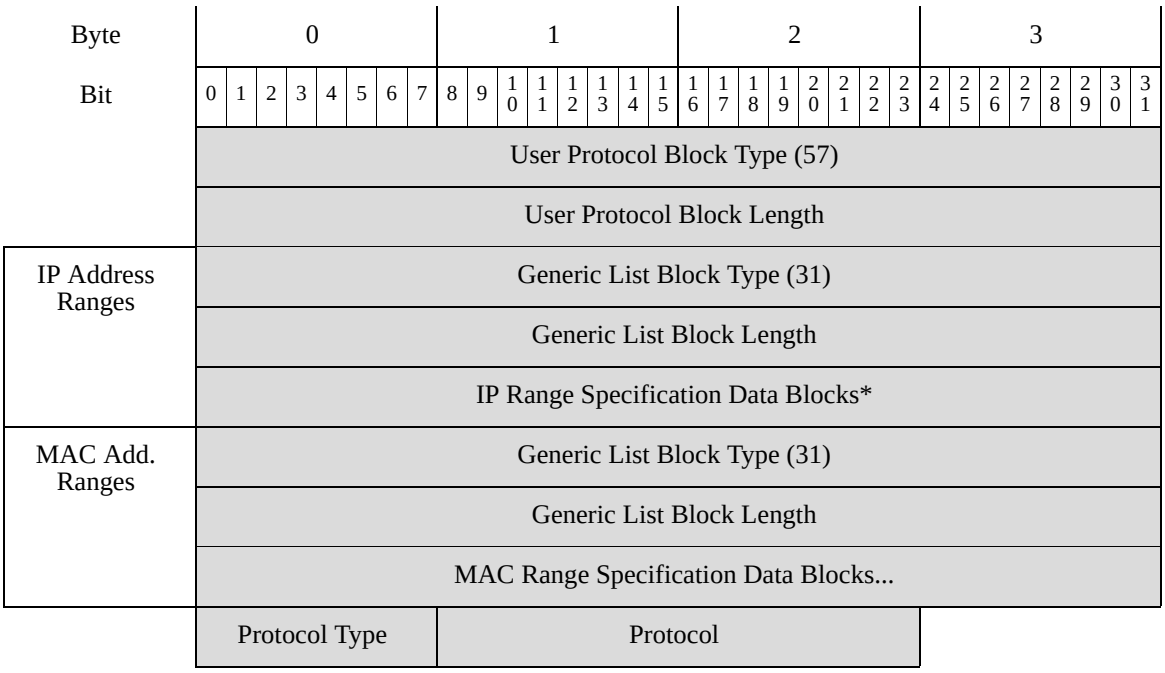
Table 4-47 Attribute Definition Data Block Fields (continued)

Field	Data Type	Description
Ending Value for Range	uint32	Last integer in the integer range for the defined attribute.
Auto-Assigned IP Address Flag	uint32	Flag indicating if an IP address is auto-assigned based on the attribute.
List Block Type	uint32	Initiates a List data block comprising Attribute List Item data blocks conveying attribute list items. This value is always `11`.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Attribute List Item data blocks. This field is followed by zero or more Attribute List Item data blocks.
Attribute List Item Block Type	uint32	Initiates the first Attribute List Item data block. This data block can be followed by other Attribute List Item data blocks up to the limit defined in the list block length field.
Attribute List Item Block Length	uint32	Number of bytes in the Attribute List Item String data block, including eight bytes for the block type and header fields, plus the number of bytes in the attribute list item.
Attribute List Item	variable	Attribute List Item data as documented in Attribute List Item Data Block, page 4-79.
List Block Type	uint32	Initiates a List data block comprising Attribute Address data blocks conveying IP addresses for hosts with the attribute. This value is always `11`.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Attribute Address data blocks. This field is followed by zero or more Attribute Address data blocks.
Attribute Address Block Type	uint32	Initiates the first Attribute Address data block. This data block can be followed by other Attribute Address data blocks up to the limit defined in the list block length field.
Attribute Address Block Length	uint32	Number of bytes in the Attribute Address data block, including eight bytes for the block type and header fields, plus the number of bytes in the attribute address.
Attribute Address	variable	Attribute Address data as documented in Attribute Address Data Block 5.2+, page 4-78.

User Protocol Data Block

The User Protocol data block is used to contain information about added protocols, the type of the protocol, and lists of IP address and MAC address ranges for the hosts with the protocol. The User Protocol data block has a block type of 57 in the series 1 group of blocks.

The following diagram shows the basic structure of a User Protocol data block:



The following table describes the fields of the User Protocol data block.

Table 4-48 User Protocol Data Block Fields

Field	Number of Bytes	Description
User Protocol Block Type	uint32	Initiates a User Protocol data block. This value is always `57`.
User Protocol Block Length	uint32	Total number of bytes in the User Protocol data block, including eight bytes for the user protocol block type and length fields, plus the number of bytes of user protocol data that follows.
Generic List Block Type	uint32	Initiates a Generic List data block comprising IP Range Specification data blocks conveying IP address range data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated IP Range Specification data blocks.
IP Range Specification Data Blocks *	variable	IP Range Specification data blocks containing information about the IP address ranges for the user input. See IP Address Range Data Block for 5.2+, page 4-93 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising MAC Range Specification data blocks conveying MAC address range data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated MAC Range Specification data blocks.
MAC Range Specification Data Blocks *	variable	MAC Range Specification data blocks containing information about the MAC address ranges for the user input. See MAC Address Specification Data Block, page 4-96 for a description of this data block.

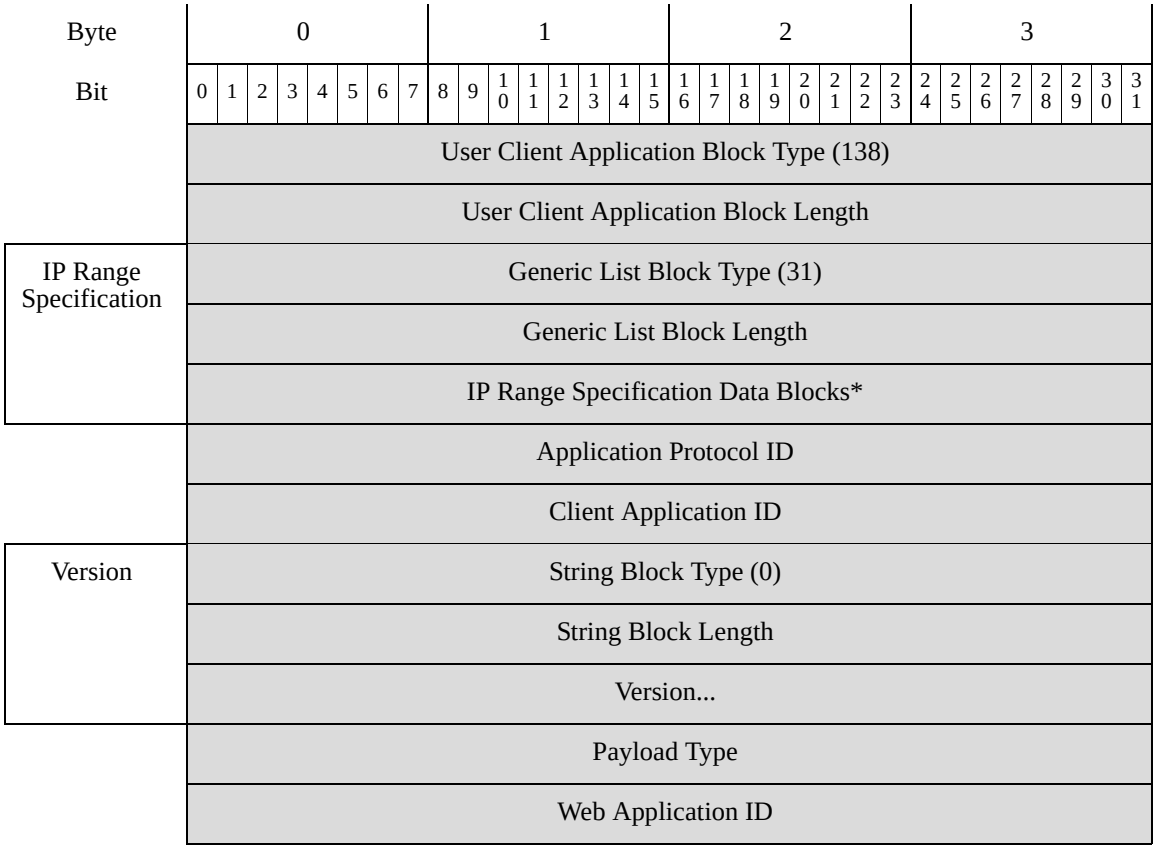
Table 4-48 User Protocol Data Block Fields (continued)

Field	Number of Bytes	Description
Protocol Type	uint8	Indicates the type of the protocol. The protocol can be either `0`, for a network layer protocol such as IP, or `1` for a transport layer protocol such as TCP or UDP.
Protocol	uint16	Indicates the protocol for the data contained in the data block.

User Client Application Data Block for 5.1.1+

The User Client Application data block contains information about the source of the client application data, the identification number for the user who added the data, and the lists of IP address range data blocks. The payload ID, which was added in Version 6.2.2, specifies the application instance associated with the record. The User Client Application data block has a block type of 138 in the series 1 group of blocks. It replaces block type 59.

The following diagram shows the basic structure of a User Client Application data block:



The following table describes the fields of the User Client Application data block.

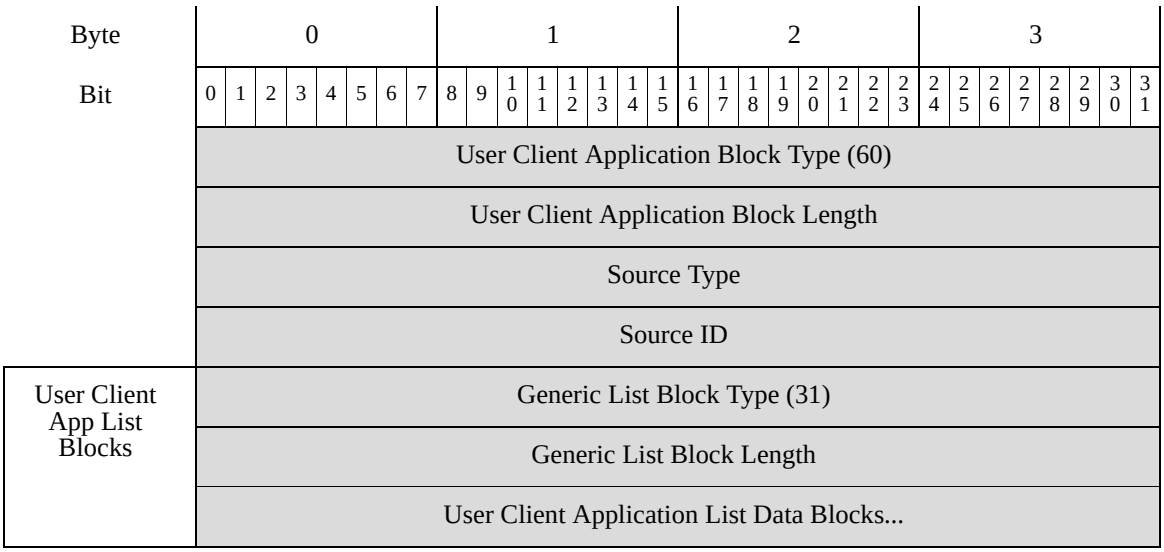
Table 4-49 User Client Application Data Block Fields

Field	Number of Bytes	Description
User Client Application Block Type	uint32	Initiates a User Client Application data block. This value is always `138`.
User Client Application Block Length	uint32	Total number of bytes in the User Client Application data block, including eight bytes for the user client application block type and length fields, plus the number of bytes of user client application data that follows.
Generic List Block Type	uint32	Initiates a Generic List data block comprising IP Range Specification data blocks conveying IP address range data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated IP Range Specification data blocks.
IP Range Specification Data Blocks *	variable	IP Range Specification data blocks containing information about the IP address ranges for the user input. See IP Address Range Data Block for 5.2+, page 4-93 for a description of this data block.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.
Client Application ID	uint32	The internal identification number of the detected client application, if applicable.
String Block Type	uint32	Initiates a String data block that contains the client application version. This value is always `0`.
String Block Length	uint32	Number of bytes in the client application version String data block, including the string block type and length fields, plus the number of bytes in the version.
Version	string	Client application version.
Payload Type	uint32	This field is included for backwards compatibility. It is always `0`.
Web Application ID	uint32	The internal identification number for the web application, if applicable.

User Client Application List Data Block

The User Client Application List data block contains information about the source of the client application data, the identification number for the user who added the data, and the lists of client application blocks. The User Client Application List data block has a block type of 60 in the series 1 group of blocks.

The following diagram shows the basic structure of a User Client Application List data block:



The following table describes the fields of the User Client Application List data block.

Table 4-50 User Client Application List Data Block Fields

Field	Number of Bytes	Description
User Client Application List Block Type	uint32	Initiates a User Client Application List data block. This value is always `60`.
User Client Application List Block Length	uint32	Total number of bytes in the User Client Application List data block, including eight bytes for the user client application list block type and length fields, plus the number of bytes of user client application list data that follows.
Source Type	uint32	Number that maps to the type of data source: • `0` if the client data was detected by RNA • `1` if the client data was provided by a user • `2` if the client data was detected by a third-party scanner • `3` if the client data was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Source ID	uint32	Identification number that maps to the source that added the affected client application. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.

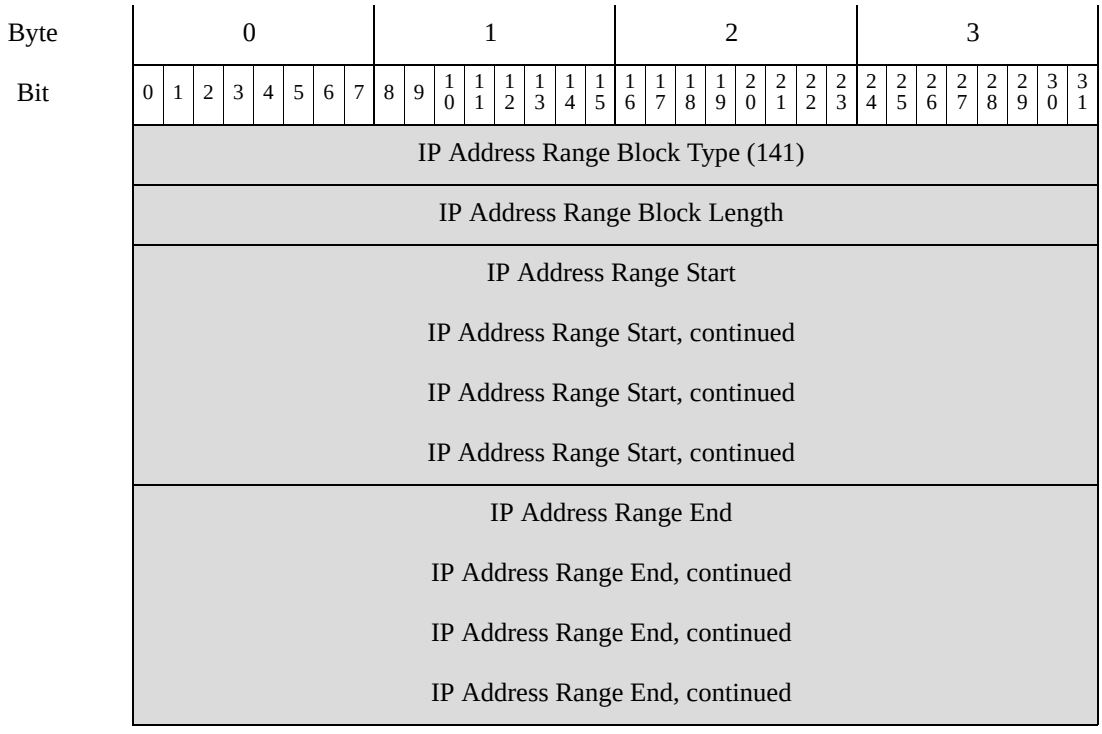
Table 4-50 User Client Application List Data Block Fields (continued)

Field	Number of Bytes	Description
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
User Client Application Blocks	variable	Encapsulated User Client Application data blocks up to the maximum number of bytes in the list block length. For more information on the User Client Application data block, see User Client Application Data Block for 5.1.1+, page 4-90.

IP Address Range Data Block for 5.2+

The IP Address Range data block for 5.2+ conveys a range of IP addresses. IP Address Range data blocks are used in User Protocol, User Client Application, Address Specification, User Product, User Server, User Hosts, User Vulnerability, User Criticality, and User Attribute Value data blocks. The IP Address Range data block has a block type of 141 in the series 1 group of blocks.

The following diagram shows the format of the IP Address Range data block:



The following table describes the components of the IP Address Range Specification data block.

Table 4-51 IP Address Range Data Block Fields

Field	Data Type	Description
IP Address Range Block Type	uint32	Initiates a IP Address Range data block. This value is always 61.
IP Address Range Block Length	uint32	Total number of bytes in the IP Address Range data block, including eight bytes for the IP Address Range block type and length fields, plus the number of bytes of IP Address Range data that follows.
IP Address Range Start	uint8[16]	The starting IP address for the IP address range.
IP Address Range End	uint8[16]	The ending IP address for the IP address range.

Attribute Specification Data Block

The Attribute Specification data block conveys the attribute name and value. The Attribute Specification data block has a block type of 62 in the series 1 group of blocks.

The following diagram shows the format of the Attribute Specification data block:

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Attribute Specification Block Type (62)																															
Attribute Name	String Block Type (0)																															
	String Block Length																															
	Attribute Name...																															
Attribute Value	String Block Type (0)																															
	String Block Length																															
	Attribute Value...																															

The following table describes the components of the Attribute Specification data block.

Table 4-52 Attribute Specification Data Block Fields

Field	Data Type	Description
Attribute Specification Block Type	uint32	Initiates an Attribute Specification data block. This value is always 62.
String Block Type	uint32	Initiates a String data block that contains the attribute name. This value is always 0.

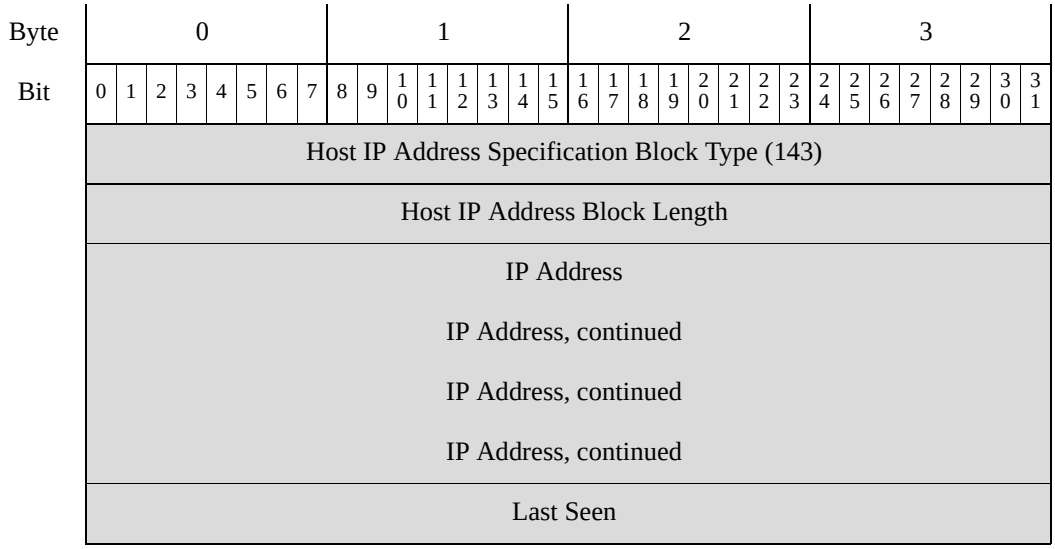
Table 4-52 Attribute Specification Data Block Fields (continued)

Field	Data Type	Description
String Block Length	uint32	Number of bytes in the attribute name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the attribute name.
Attribute Value	uint32	The value of the attribute.
String Block Type	uint32	Initiates a String data block that contains the attribute name. This value is always `0`.
String Block Length	uint32	Number of bytes in the attribute name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the attribute name.
Attribute Name	uint32	The name of the attribute.

Host IP Address Data Block

The Host IP Address data block conveys an individual IP address. The IP address may be either an IPv4 or IPv6 address. Host IP Address data blocks are used in User Protocol, Address Specification, and User Host data blocks. The Host IP data block has a block type of 143 in the series 1 group of blocks.

The following diagram shows the format of the Host IP Address data block:



The following table describes the components of the Host IP Address data block.

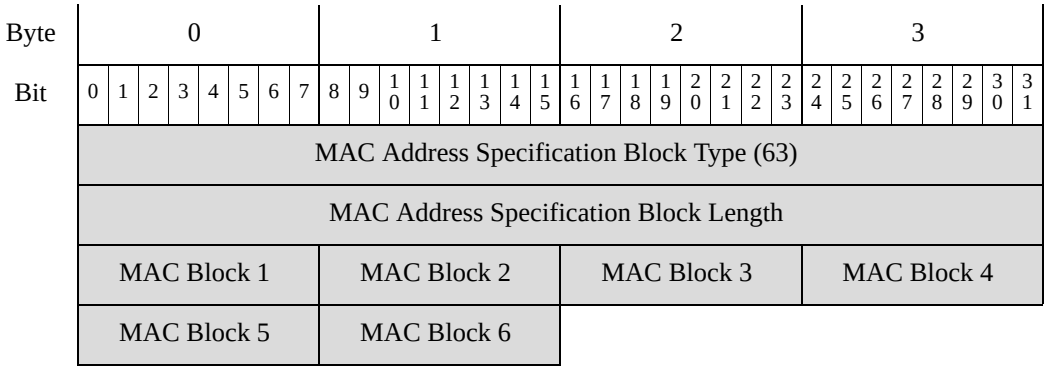
Table 4-53 Host IP Address Data Block Fields

Field	Data Type	Description
Host IP Address Block Type	uint32	Initiates a Host IP Address data block. This value is always 143.
Host IP Block Length	uint32	Total number of bytes in the Host IP Address data block, including eight bytes for the Host IP block type and length fields, plus the number of bytes of Host IP Address data that follows.
IP Address	uint8[16]	The IP address. This can be IPv4 or IPv6.
Last Seen	uint32	UNIX timestamp that represents the last time the IP address was detected.

MAC Address Specification Data Block

The MAC Address Specification data block conveys an individual MAC address. MAC Address Specification data blocks are used in User Protocol, Address Specification, and User Hosts data blocks. The MAC Address Specification data block has a block type of 63 in the series 1 group of blocks.

The following diagram shows the format of the MAC Address Specification data block:



The following table describes the components of the MAC Address Specification data block.

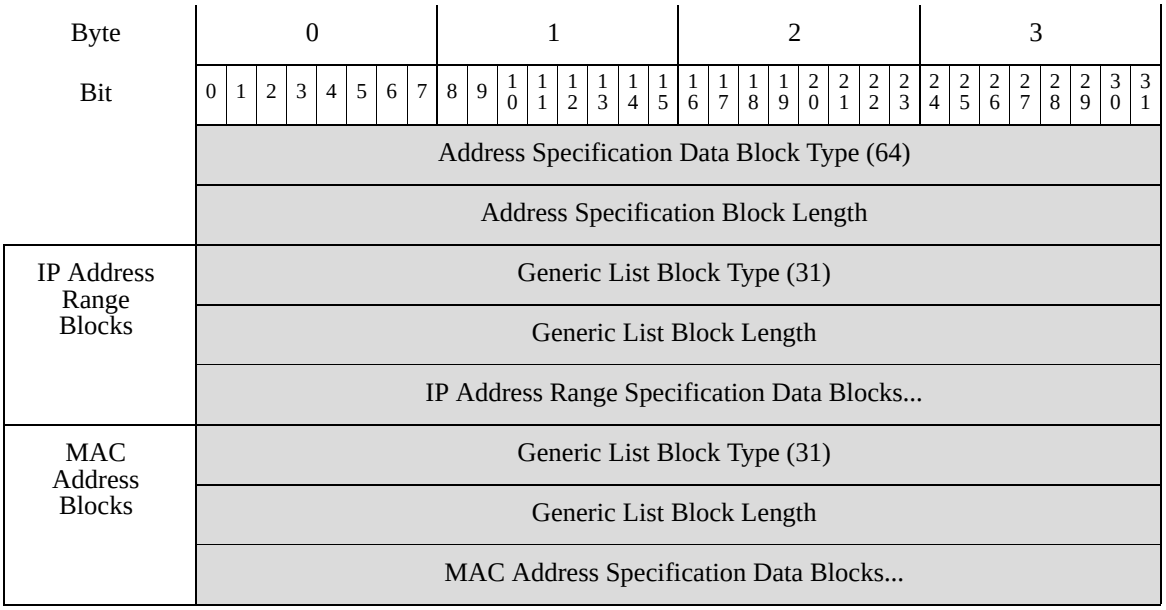
Table 4-54 MAC Address Specification Data Block Fields

Field	Data Type	Description
MAC Address Specification Block Type	uint32	Initiates a MAC Address Specification data block. This value is always 63.
MAC Address Specification Block Length	uint32	Total number of bytes in the MAC Address Specification data block, including eight bytes for the MAC Address Specification block type and length fields, plus the number of bytes of MAC address specification data that follows.
MAC Address Blocks 1 - 6	uint8	The blocks of the MAC address in sequential order.

Address Specification Data Block

The Address Specification data block is used to contain lists of IP address range specifications and MAC address specifications. The Address Specification data block has a block type of 64 in the series 1 group of blocks.

The following diagram shows the basic structure of an Address Specification data block:



The following table describes the fields of the Address Specification data block.

Table 4-55 Address Specification Data Block Fields

Field	Number of Bytes	Description
Address Specification Data Block Type	uint32	Initiates an Address Specification data block. This value is always `64`.
Address Specification Block Length	uint32	Total number of bytes in the Address Specification data block, including eight bytes for the address specification block type and length fields, plus the number of bytes of address specification data that follows.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.

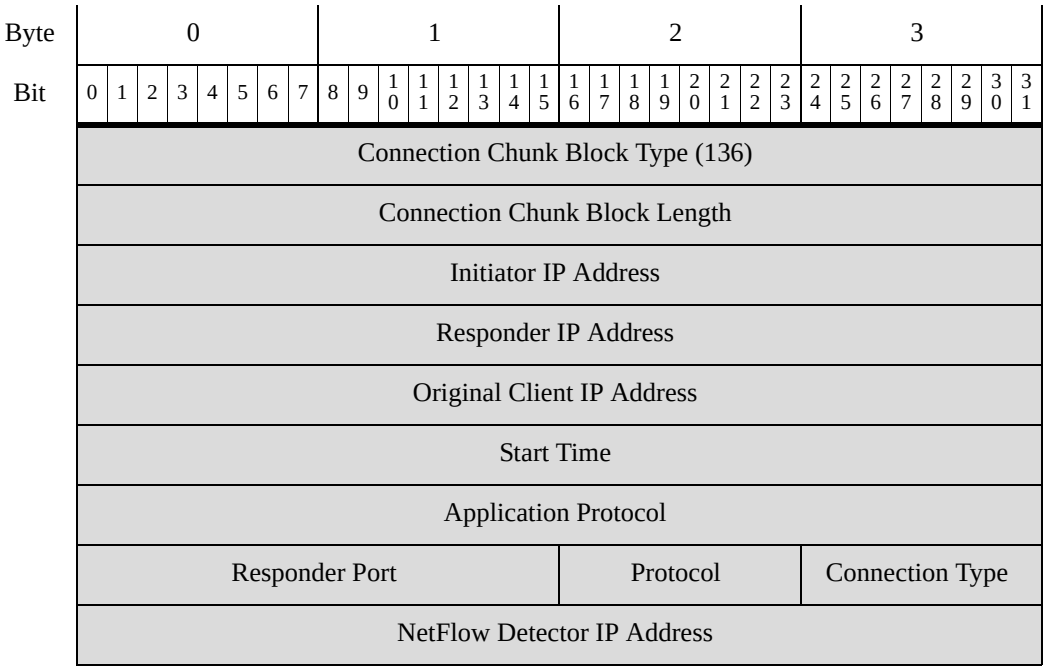
Table 4-55 Address Specification Data Block Fields (continued)

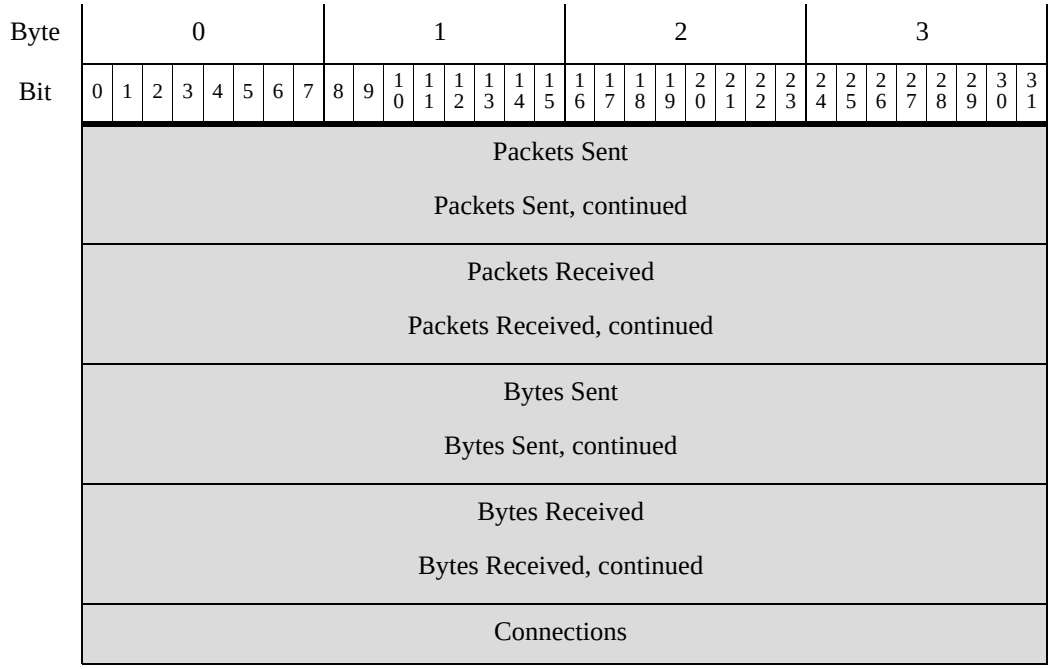
Field	Number of Bytes	Description
IP Address Range Specification Data Blocks	variable	Encapsulated IP Address Range Specification data blocks up to the maximum number of bytes in the list block length. For more information, see IP Address Range Data Block for 5.2+, page 4-93.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
MAC Address Specification Data Blocks	variable	Encapsulated MAC Address Specification data blocks up to the maximum number of bytes in the list block length. For more information, see MAC Address Specification Data Block, page 4-96.

Connection Chunk Data Block for 6.1+

The Connection Chunk data block conveys connection data. It stores connection log data that aggregates over a five-minute period. The version for 6.1+ introduces the new field Original Client IP Address. The Connection Chunk data block has a block type of 164 in the series 1 group of blocks. It supersedes block type 136.

The following diagram shows the format of the Connection Chunk data block:





The following table describes the components of the Connection Chunk data block.

Table 4-56 Connection Chunk Data Block Fields

Field	Data Type	Description
Connection Chunk Block Type	uint32	Initiates a Connection Chunk data block. This value is always `164`.
Connection Chunk Block Length	uint32	Total number of bytes in the Connection Chunk data block, including eight bytes for the connection chunk block type and length fields, plus the number of bytes in the connection chunk data that follows.
Initiator IP Address	uint8(4)	IP address of the initiator of this type of connection. This is used with the original client and responder IP addresses to identify identical connections.
Responder IP Address	uint8(4)	IP address of the responder to this type of connection. This is used with the initiator and original client IP addresses to identify identical connections.
Original Client IP Address	uint8(4)	IP address of the host behind the proxy that originated the request. This is used with the initiator and responder IP addresses to identify identical connections.
Start Time	uint32	The starting time for the connection chunk.
Application Protocol	uint32	Identification number for the protocol used in the connection.
Responder Port	uint16	The port used by the responder in the connection chunk.
Protocol	uint8	The protocol for the packet containing the user information.
Connection Type	uint8	The type of connection.

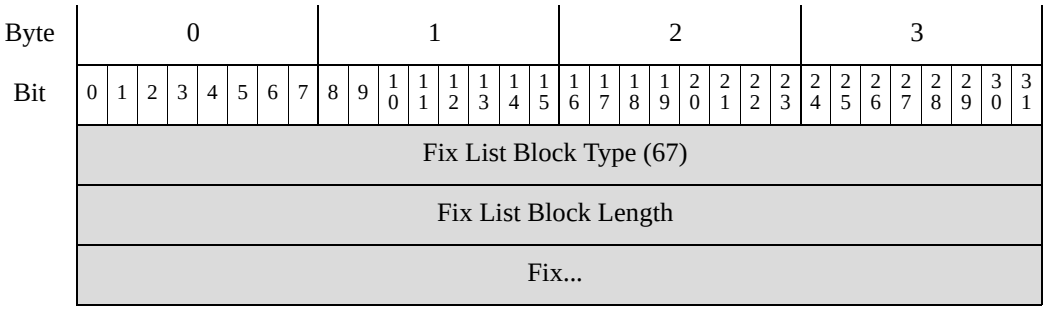
Table 4-56 Connection Chunk Data Block Fields (continued)

Field	Data Type	Description
NetFlow Detector IP Address	uint8[4]	IP address of the NetFlow device that detected the connection, in IP address octets.
Packets Sent	uint64	The number of packets sent in the connection chunk.
Packets Received	uint64	The number of packets received in the connection chunk.
Bytes Sent	uint64	The number of bytes sent in the connection chunk.
Bytes Received	uint64	The number of bytes received in the connection chunk.
Connections	uint32	The number of connections over a five-minute period.

Fix List Data Block

The Fix List data block conveys a fix that applies to a host. A Fix List data block for each fix applied to the affected host is included in a User Product data block. The Fix List data block has a block type of 67 in the series 1 group of blocks.

The following diagram shows the format of the Fix List data block:



The following table describes the components of the Fix List data block.

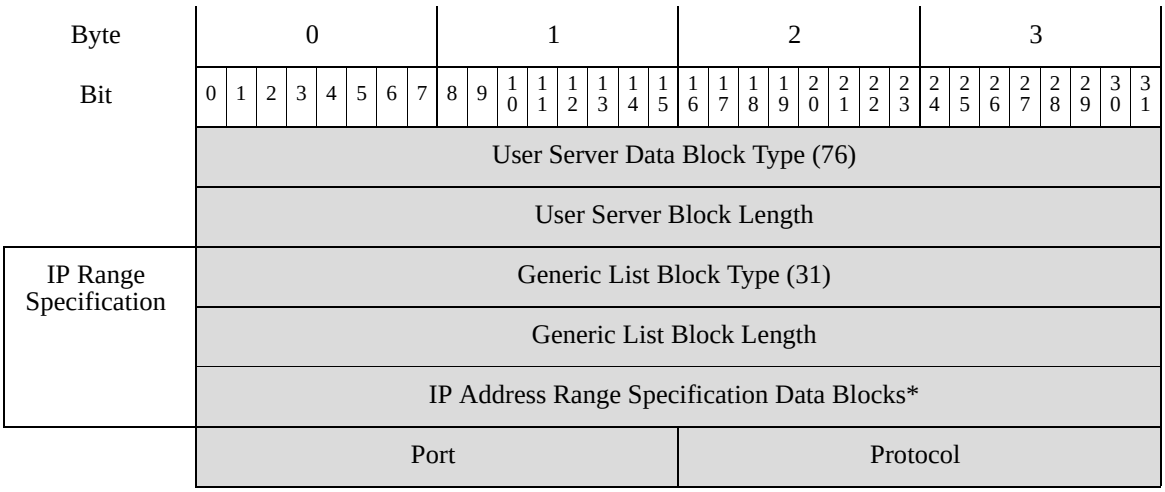
Table 4-57 Fix List Data Block Fields

Field	Data Type	Description
Fix List Block Type	uint32	Initiates a Fix List data block. This value is always 67.
Fix List Block Length	uint32	Total number of bytes in the Fix List data block, including eight bytes for the Fix List block type and length fields, plus the number of bytes of fix identification data that follows.
Fix ID	uint32	The identification number for the fix.

User Server Data Block

The User Server data block contains server details from a user input event. The User Server data block has a block type of 76 in the series 1 group of blocks.

The following diagram shows the basic structure of a User Server data block:



The following table describes the fields of the User Server data block.

Table 4-58 User Server Data Block Fields

Field	Number of Bytes	Description
User Server Data Block Type	uint32	Initiates a User Server data block. This value is always `76`.
User Server Block Length	uint32	Total number of bytes in the User Server data block, including eight bytes for the user server block type and length fields, plus the number of bytes of user server data that follows.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
IP Address Range Specification Data Blocks	variable	Encapsulated IP Address Range Specification data blocks up to the maximum number of bytes in the list block length.
Port	uint16	Port used by the server.
Protocol	uint16	IANA protocol number or Ethertype. This is handled differently for Transport and Network layer protocols. Transport layer protocols are identified by the IANA protocol number. For example: • `6` — TCP • `17` — UDP Network layer protocols are identified by the decimal form of the IEEE Registration Authority Ethertype. For example: • `2048` — IP

User Server List Data Block

The User Server List data block contains a list of server data blocks from a user input event. The User Server List data block has a block type of 77 in the series 1 group of blocks. The following diagram shows the basic structure of a User Server List data block:

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	User Server List Data Block Type (77)																															
	User Server List Block Length																															
	Source Type																															
	Source ID																															
User Server Blocks	Generic List Block Type (31)																															
	Generic List Block Length																															
	User Server Data Block*																															

The following table describes the fields of the User Server List data block.

Table 4-59 User Server List Data Block Fields

Field	Number of Bytes	Description
User Server List Data Block Type	uint32	Initiates a User Server List data block. This value is always `77`.
User Server List Block Length	uint32	Total number of bytes in the User Server List data block, including eight bytes for the user server list block type and length fields, plus the number of bytes of user server list data that follows.
Source Type	uint32	Number that maps to the type of data source: • `0` if the server data was detected by RNA • `1` if the server data was provided by a user • `2` if the server data was detected by a third-party scanner • `3` if the server data was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Source ID	uint32	Identification number that maps to the source of the server data. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.

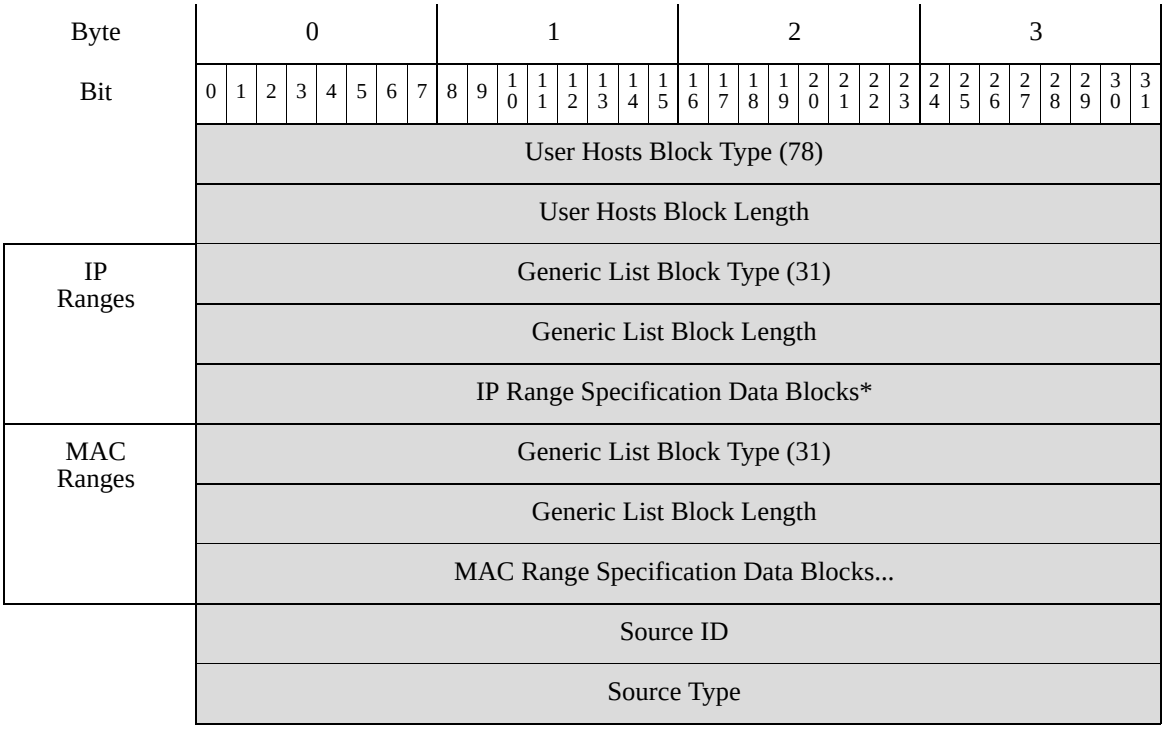
Table 4-59 User Server List Data Block Fields (continued)

Field	Number of Bytes	Description
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
User Server Data Blocks	variable	Encapsulated User Server data blocks up to the maximum number of bytes in the list block length.

User Hosts Data Block 4.7+

The User Hosts data block is used in User Add and Delete Host Messages, page 4-54 to contain information about host ranges and user and source identity from a user host input event. The User Hosts data block has a block type of 78 in the series 1 group of blocks.

The following diagram shows the basic structure of a User Hosts data block:



The following table describes the fields of the User Hosts data block:

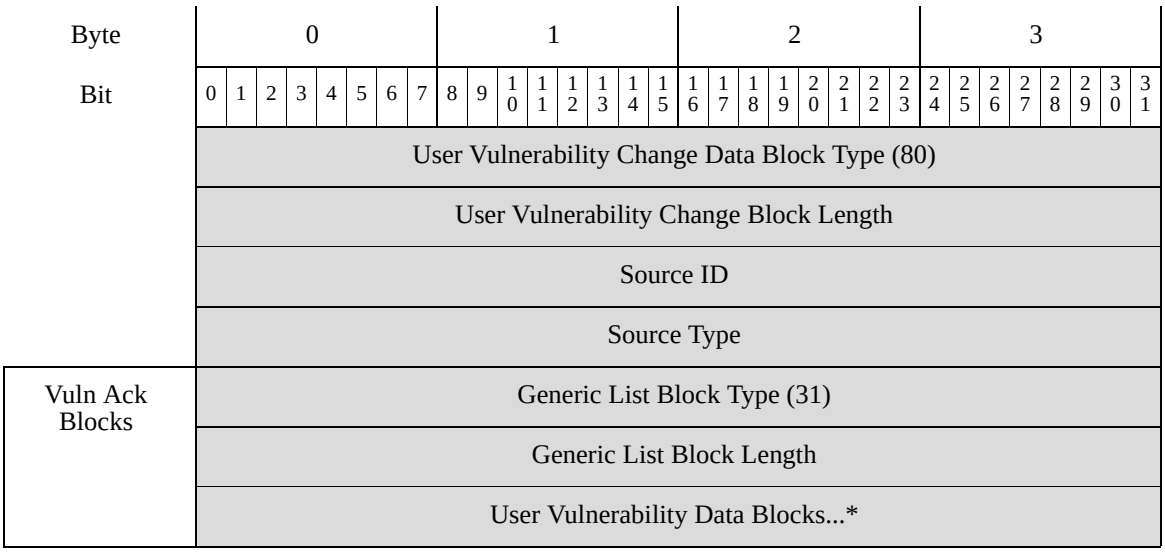
Table 4-60 User Hosts Data Block Fields

Field	Number of Bytes	Description
User Hosts Block Type	uint32	Initiates a User Hosts data block. This value is always `78`.
User Hosts Block Length	uint32	Total number of bytes in the User Hosts data block, including eight bytes for the user hosts block type and length fields, plus the number of bytes of user hosts data that follows.
Generic List Block Type	uint32	Initiates a Generic List data block comprising IP Range Specification data blocks conveying IP address range data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated IP Range Specification data blocks.
IP Range Specification Data Blocks *	variable	IP Range Specification data blocks containing information about the IP address ranges for the user input. See IP Address Range Data Block for 5.2+, page 4-93 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising MAC Range Specification data blocks conveying MAC address range data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated MAC Range Specification data blocks.
MAC Range Specification Data Blocks *	variable	MAC Range Specification data blocks containing information about the MAC address ranges for the user input. See MAC Address Specification Data Block, page 4-96 for a description of this data block.
Source ID	uint32	Identification number that maps to the source that added or updated the hostdata. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
Source Type	uint32	Number that maps to the type of data source: • `0` if the host data was detected by RNA • `1` if the host data was provided by a user • `2` if the host data was detected by a third-party scanner • `3` if the host data was provided by a command line tool such as `nmimport.pl` or the Host Input API client

User Vulnerability Change Data Block 4.7+

The User Vulnerability Change data block contains a list of deactivated vulnerabilities for the host, the identification number for the user who deactivated the vulnerabilities, information about the source that supplied the vulnerability changes, and the criticality value. The User Vulnerability Change data block has a block type of 80 in the series 1 group of blocks. Changes from the previous User Vulnerability Change data block include a new source type field and the use of the Generic list data block instead of the List data block to store vulnerability deactivations. This data block is used in user vulnerability change messages as documented in User Set Vulnerabilities Messages for Version 4.6.1+, page 4-53.

The following diagram shows the basic structure of a User Vulnerability Change data block:



The following table describes the fields of the Generic List data block.

Table 4-61 User Vulnerability Change Data Block Fields

Field	Number of Bytes	Description
User Vulnerability Change Data Block Type	uint32	Initiates a User Vulnerability Change data block. This value is always `80`.
User Vulnerability Change Block Length	uint32	Total number of bytes in the User Vulnerability Change data block, including eight bytes for the host vulnerability block type and length fields, plus the number of bytes of host vulnerability data that follows.
Source ID	uint32	Identification number that maps to the source that updated or added the host vulnerability change value. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
Source Type	uint32	Number that maps to the type of data source: • `0` if the host vulnerability data was detected by RNA • `1` if the host vulnerability data was provided by a user • `2` if the host vulnerability data was detected by a third-party scanner • `3` if the host vulnerability data was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Type	uint32	Type of vulnerability.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.

Table 4-61 User Vulnerability Change Data Block Fields (continued)

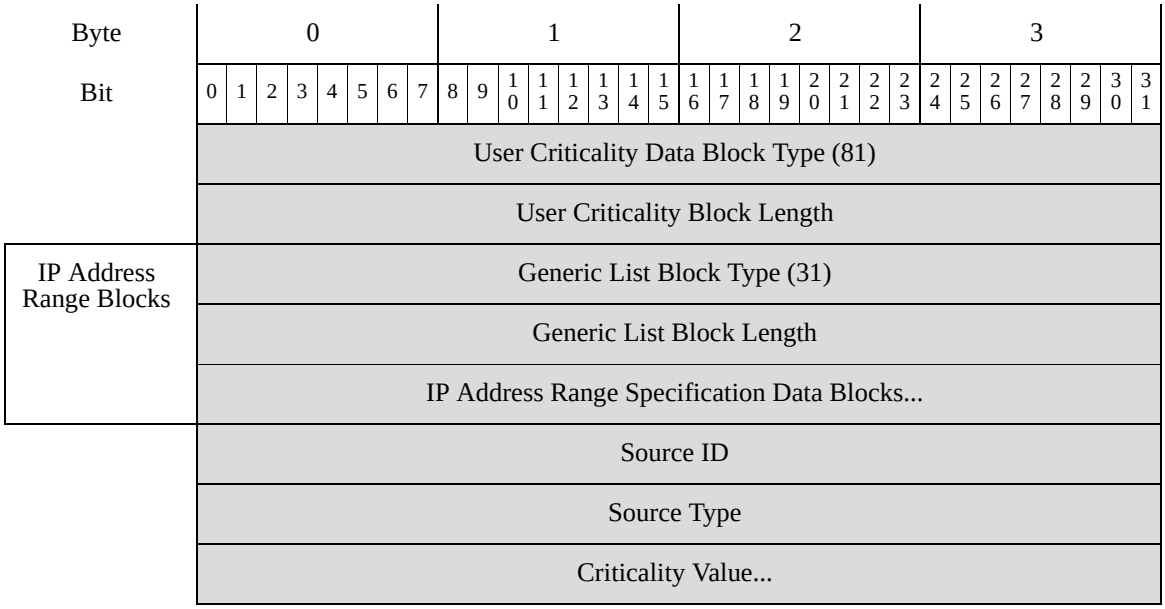
Field	Number of Bytes	Description
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
User Vulnerability Data Blocks	variable	Encapsulated User Vulnerability data blocks up to the maximum number of bytes in the list block length. For more information, see User Vulnerability Data Block 5.0+, page 4-153.

User Criticality Change Data Block 4.7+

The User Criticality data block is used to contain a list of IP address range specifications for hosts where the host criticality changed, the identification number for the user who updated the criticality value, information about the source that supplied the criticality value, and the criticality value. The User Criticality data block has a block type of 81 in the series 1 group of blocks. Changes from the previous User Criticality data block include a new source type field and the use of the Generic list data block instead of the List data block to store IP addresses.

The User Criticality data block is used in user set host criticality messages as documented in User Set Host Criticality Messages, page 4-55.

The following diagram shows the basic structure of a User Criticality data block:



The following table describes the fields of the User Criticality data block.

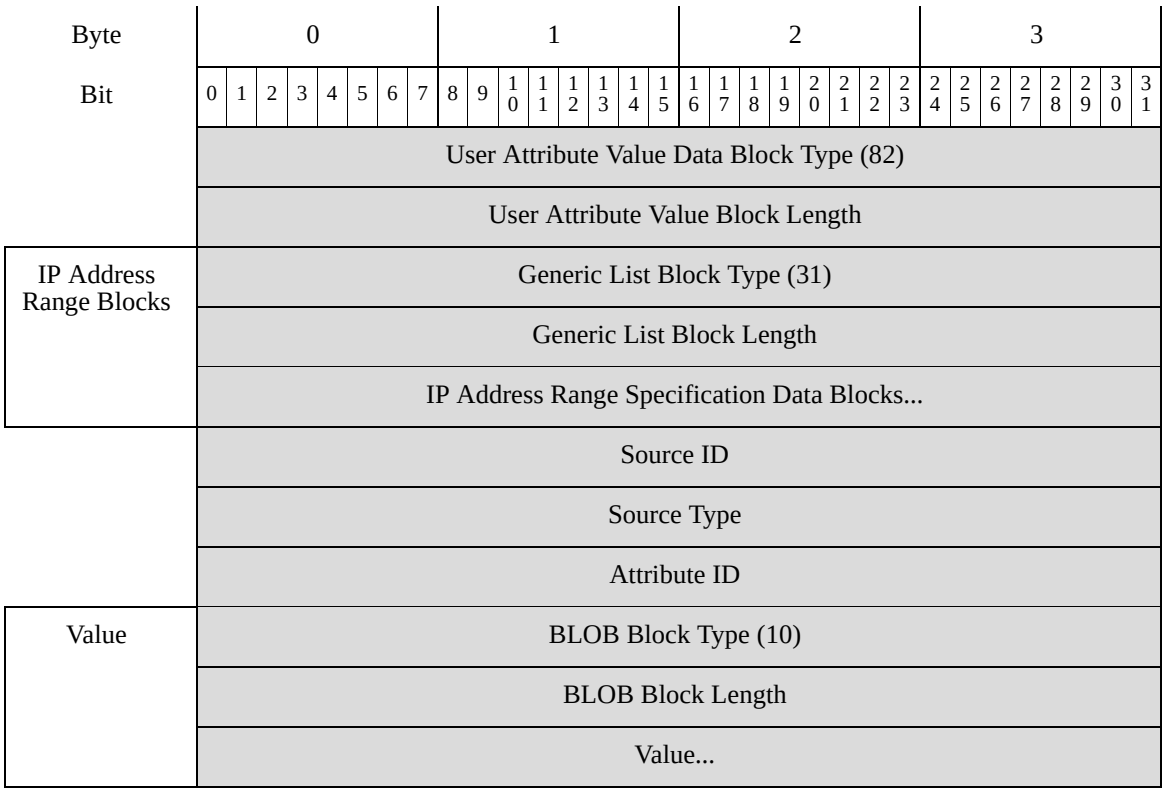
Table 4-62 User Criticality Data Block Fields

Field	Number of Bytes	Description
User Criticality Data Block Type	uint32	Initiates a User Criticality data block. This value is always `81`.
User Criticality Block Length	uint32	Total number of bytes in the User Criticality data block, including eight bytes for the user criticality block type and length fields, plus the number of bytes of user criticality data that follows.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
IP Address Range Specification Data Blocks	variable	Encapsulated IP Address Range Specification data blocks up to the maximum number of bytes in the list block length.
Source ID	uint32	Identification number that maps to the source that updated or added the user criticality value. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
Source Type	uint32	Number that maps to the type of data source: • `0` if the user criticality value was provided by RNA • `1` if the user criticality value was provided by a user • `2` if the user criticality value was provided by a third-party scanner • `3` if the user criticality value was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Criticality Value	uint32	User criticality value.

User Attribute Value Data Block 4.7+

The User Attribute Value data block contains a list of IP address ranges that indicate the hosts where the attribute value has changed, together with the identification number for the user who added the attribute value, information about the source that supplied the attribute value, and the BLOB data block containing the attribute value. The User Attribute Value data block has a block type of 82 in the series 1 group of blocks. Changes from the previous User Attribute Value data block include a new source type field and the use of the Generic list data block instead of the List data block to store IP addresses.

The following diagram shows the structure of a User Attribute Value data block:



The following table describes the fields of the User Attribute Value data block.

Table 4-63 User Attribute Value Data Block Fields

Field	Number of Bytes	Description
User Attribute Value Data Block Type	uint32	Initiates a User Attribute Value data block. This value is always `82`.
User Attribute Value Block Length	uint32	Total number of bytes in the Attribute Value data block, including eight bytes for the user attribute value block type and length fields, plus the number of bytes of user attribute value data that follows.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
IP Address Range Specification Data Blocks	variable	IP Address Range Specification data blocks (each with a start IP address and end IP address) up to the maximum number of bytes in the list block length.
Source ID	uint32	Identification number that maps to the source that added or updated the attribute data. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.

Table 4-63 User Attribute Value Data Block Fields (continued)

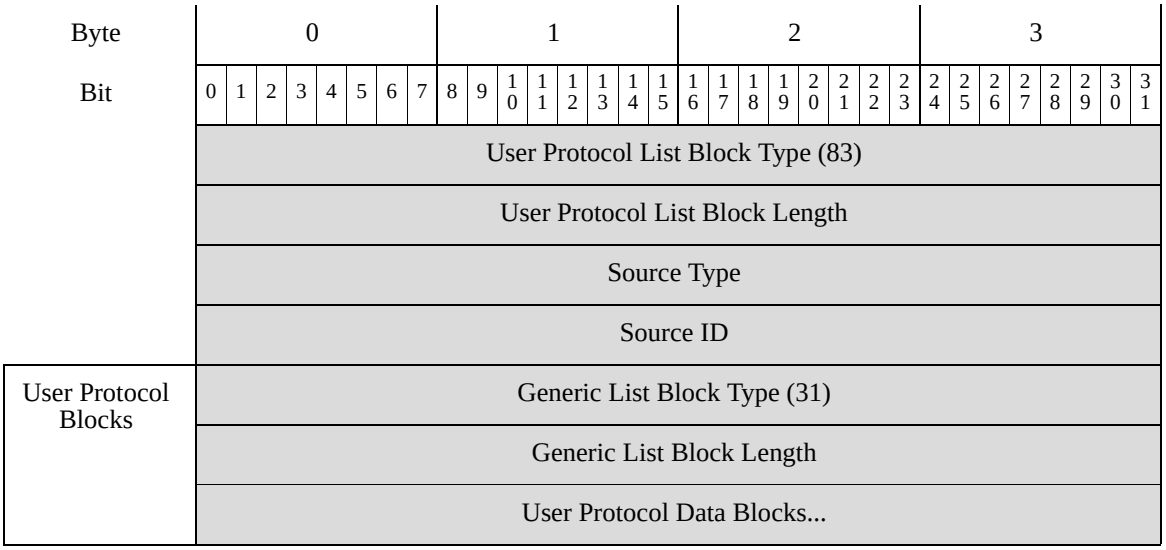
Field	Number of Bytes	Description
Source Type	uint32	Number that maps to the type of data source: • `0` if the user attribute value was provided by RNA • `1` if the user attribute value was provided by a user • `2` if the user attribute value was provided by a third-party scanner • `3` if the user attribute value was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Attribute ID	uint32	Identification number of the updated attribute.
BLOB Block Type	uint32	Initiates a BLOB data block. This value is always `10`.
BLOB Block Length	uint32	Number of bytes in the BLOB data block, including eight bytes for the BLOB block type and length fields, plus the length of the binary data that follows.
Value	variable	Contains the user attribute value, in binary format.

User Protocol List Data Block 4.7+

The User Protocol List data block is used to contain information about the source of the protocol data, the identification number for the user who added the data, and the lists of user protocol data blocks. The User Protocol List data block has a block type of 83 in the series 1 group of blocks. For more information on User Protocol data blocks, see User Protocol Data Block, page 4-88.

The User Protocol List data block is used in user protocol messages, as documented in User Protocol Messages, page 4-57.

The following diagram shows the basic structure of a User Protocol List data block:



The following table describes the fields of the Generic List data block.

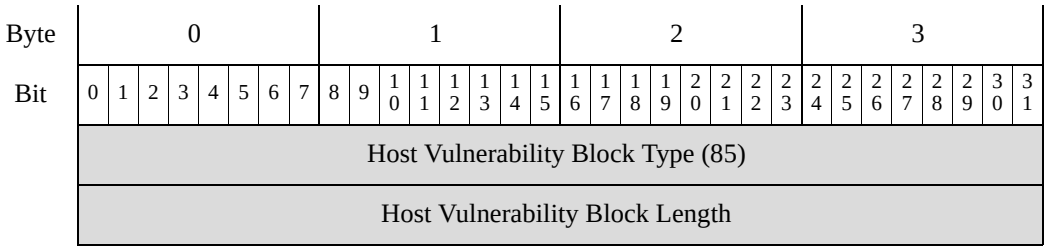
Table 4-64 User Protocol List Data Block Fields

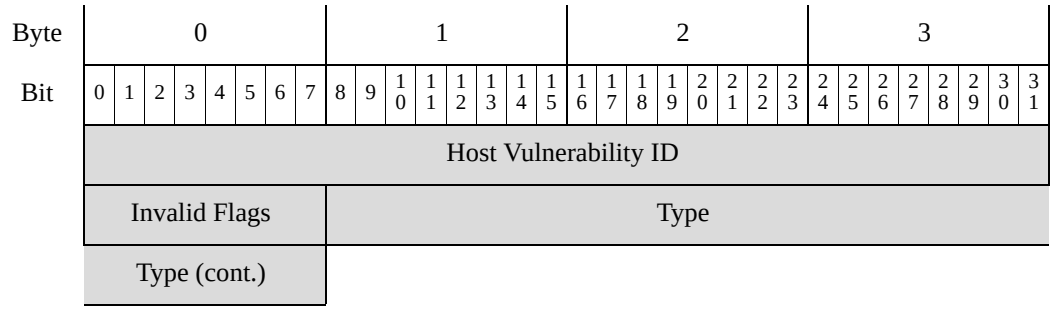
Field	Number of Bytes	Description
User Protocol List Block Type	uint32	Initiates a User Protocol List data block. This value is always `83`.
User Protocol List Block Length	uint32	Total number of bytes in the User Protocol List data block, including eight bytes for the user protocol list block type and length fields, plus the number of bytes of user protocol list data that follows.
Source Type	uint32	Number that maps to the type of data source: • `0` if the protocol data was provided by RNA • `1` if the protocol data was provided by a user • `2` if the protocol data was provided by a third-party scanner • `3` if the protocol data was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Source ID	uint32	Identification number that maps to the source of the affected protocols. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
User Protocol Data Blocks	variable	Encapsulated User Protocol data blocks up to the maximum number of bytes in the list block length.

Host Vulnerability Data Block 4.9.0+

The Host Vulnerability data block conveys vulnerabilities that apply to a host. Each Host Vulnerability data block describes one vulnerability for a host in an event. Host Vulnerability data blocks appear in the Full Host Profile, Full Host Server, and Full Sub-Server data blocks. The Host Vulnerability data block has a block type of 85 in the series 1 group of blocks.

The following diagram shows the format of the Host Vulnerability data block:





The following table describes the components of the Host Vulnerability data block.

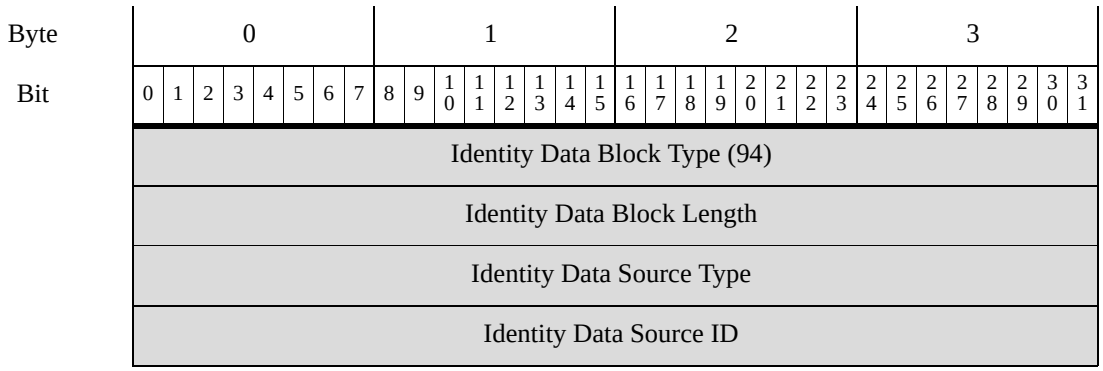
Table 4-65 Host Vulnerability Data Block Fields

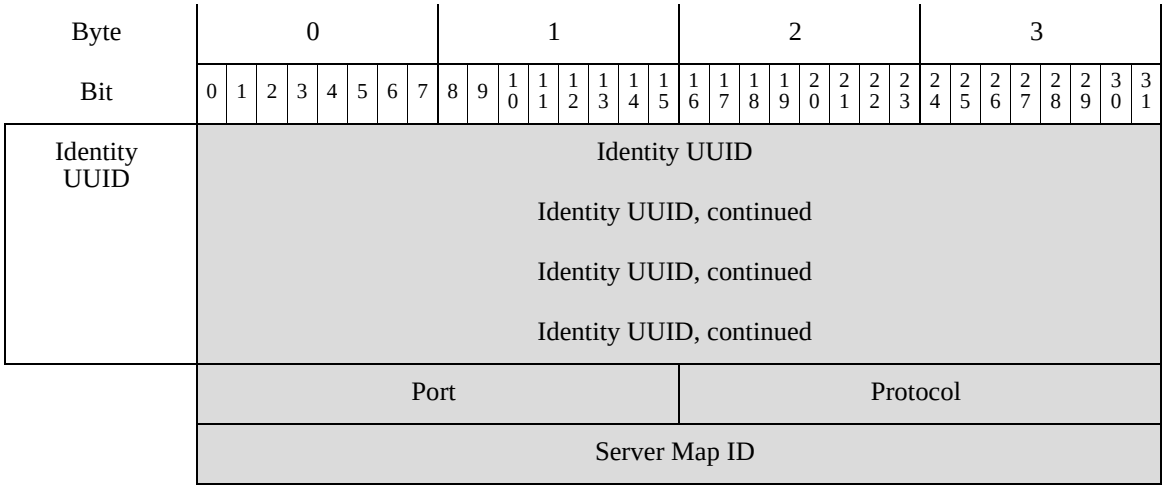
Field	Data Type	Description
Host Vulnerability Block Type	uint32	Initiates an Host Vulnerability data block. This value is always 85.
Host Vulnerability Block Length	uint32	Total number of bytes in the Host Vulnerability data block, including eight bytes for the host vulnerability block type and length fields, plus the number of bytes of host vulnerability data that follows.
Host Vulnerability ID	uint32	The identification number for the vulnerability.
Invalid Flags	uint8	A value indicating whether the vulnerability is valid for the host.
Type	uint32	The type of vulnerability.

Identity Data Block

The identity data block has a block type of 94 in the series 1 group of blocks. Identity data blocks are used in identity conflict and identity timeout messages, which indicate when the identities of an operating system or server fingerprint source conflict or time out. The data block describes reported identities that have been identified as being in conflict with active source identities (user, scanner, or application). For more information, see Identity Conflict and Identity Timeout System Messages, page 4-59.

The following diagram shows the format of an identity data block for 4.9+.





The following table describes the fields of the Cisco identity data block.

Table 4-66 Identity Data Block Fields

Field	Data Type	Description
Identity Data Block Type	uint32	Initiates the Identity data block. This value is always `94`.
Identity Data Block Length	uint32	Number of bytes in the Identity data block. This value should always be 40: sixteen bytes for the data block type and length fields and the source type and ID fields, sixteen bytes for the fingerprint UUID value, two bytes for the port, two bytes for the protocol, and four bytes for the SM ID.
Identity Data Source Type	uint32	Number that maps to the type of data source: • `0` if the fingerprint data was provided by RNA • `1` if the fingerprint data was provided by a user • `2` if the fingerprint data was provided by a third-party scanner • `3` if the fingerprint data was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Identity Data Source ID	uint32	Identification number that maps to the source of the fingerprint data. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
UUID	uint8[16]	If the identity is an operating system identity, the identification number, in octets, that acts as a unique identifier for the fingerprint.
Port	uint16	If the identity is a server identity, indicates the port used by the packet containing the server data.

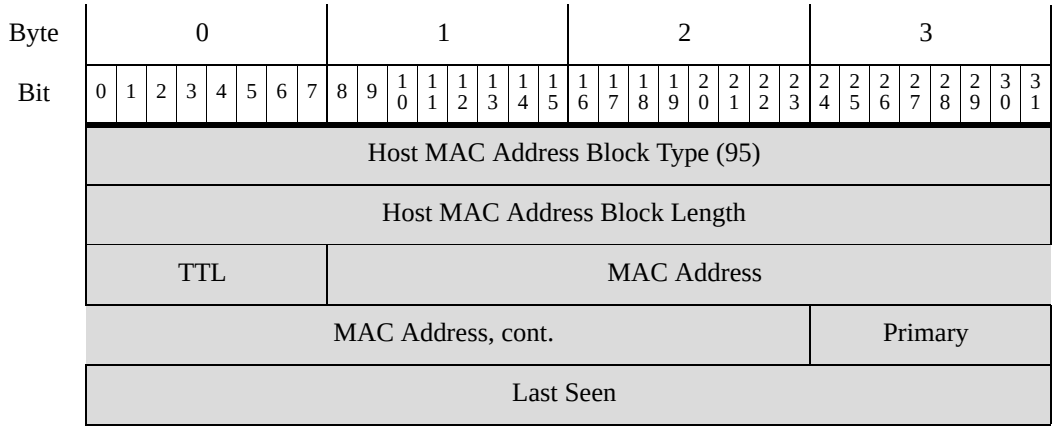
Table 4-66 Identity Data Block Fields (continued)

Field	Data Type	Description
Protocol	uint16	If the identity is a server identity, indicates the IANA number of the network protocol or Ethertype used by the packet containing the server data. This is handled differently for Transport and Network layer protocols. Transport layer protocols are identified by the IANA protocol number. For example: • 6 — TCP • 7 — UDP Network layer protocols are identified by the decimal form of the IEEE Registration Authority Ethertype. For example: • 2048 — IP
Server Map ID	uint32	If the identity is a server identity, indicates the server map ID, representing the combination of ID, vendor, and version for the server.

Host MAC Address 4.9+

The host MAC address data block has a block type of 95 in the series 1 group of blocks. The block includes the time-to-live value for the host data, as well as the MAC address, the primary subnet of the host, and the last seen value for the host.

The following diagram shows the format of a host MAC address data block in 4.9+:



The following table describes the fields of the Host MAC Address data block.

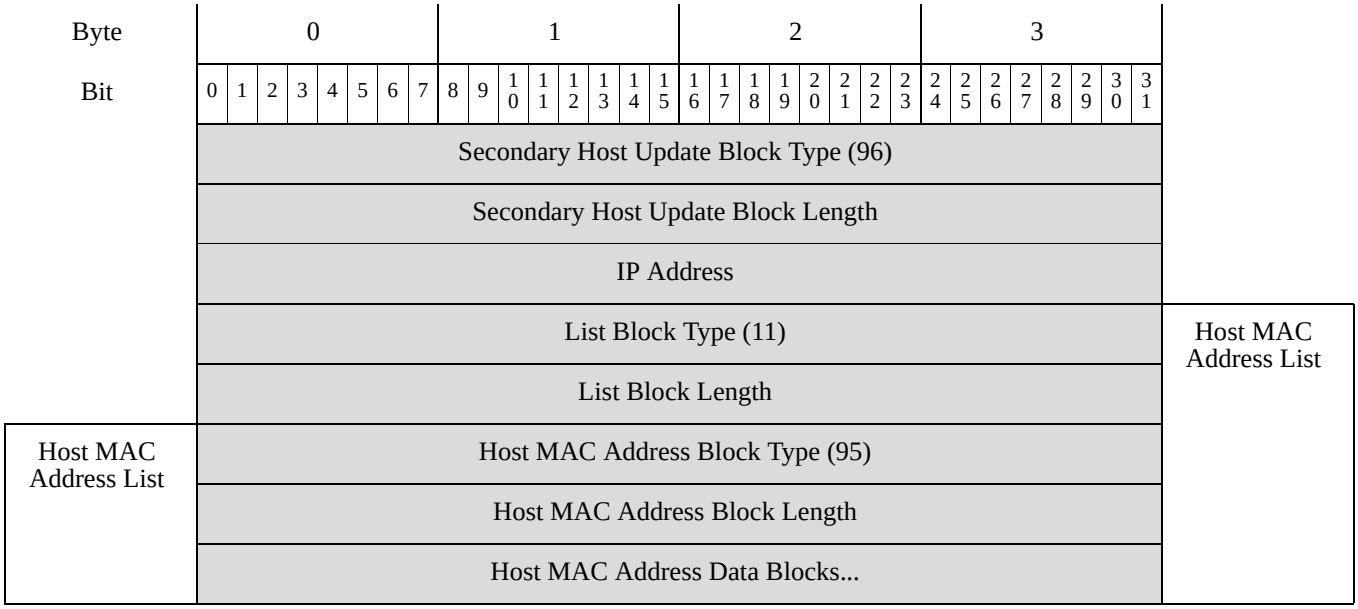
Table 4-67 Host MAC Address Data Block Fields

Field	Data Type	Description
Host MAC Address Data Block Type	uint32	Initiates the Host MAC Address data block. This value is always 95.
Host MAC Address Data Block Length	uint32	Number of bytes in the Host MAC Address data block. This value should always be 20: eight bytes for the data block type and length fields, one byte for the TTL value, 6 bytes for the MAC address, one byte for the primary subnet, and four bytes for the last seen value.
TTL	uint8	Indicates the difference between the TTL value in the packet used to fingerprint the host.
MAC Address	uint8 [6]	Indicates the MAC address of the host.
Primary	uint8	Indicates the primary subnet of the host.
Last Seen	uint32	Indicates when the host was last seen in traffic.

Secondary Host Update

The Secondary Host Update data block contains information for a host sent as a secondary host update from a device monitoring a subnet other than that where the host resides. It is used within Change Secondary Update events (event type 1001, subtype 31). The Secondary Host Update data block has a block type of 96 in the series 1 group of blocks.

The following diagram shows the format of a Secondary Host Update data block:



The following table describes the fields of the Secondary Host Update data block.

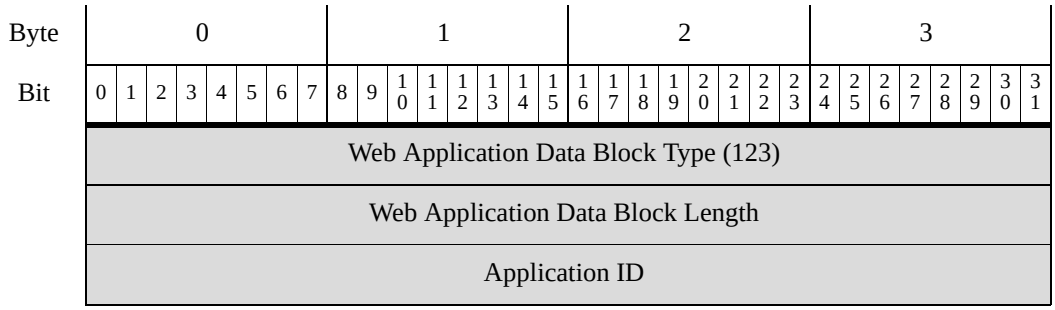
Table 4-68 Secondary Host Update Data Block Fields

Field	Data Type	Description
Secondary Host Update Block Type	uint32	Initiates a Secondary Host Update data block. This value is always `96`.
Secondary Host Update Block Length	uint32	Number of bytes in the Secondary Host Update data block, including eight bytes for the secondary host update block type and length fields, plus the number of bytes of secondary host update data that follows.
IP Address	uint8[4]	IP address of the host described in the update, in IP address octets.
List Block Type	uint32	Initiates a List data block comprising Host MAC Address data blocks conveying host MAC address data. This value is always `11`.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Host MAC Address data blocks. This field is followed by zero or more Host MAC Address data blocks.
Host MAC Address Block Type	uint32	Initiates a Host MAC Address data block describing the secondary host. This value is always `95`.
Host MAC Address Data Block Length	uint32	Number of bytes in the Host MAC Address data block. This value should always be `20`: eight bytes for the data block type and length fields, one byte for the TTL value, six bytes for the MAC address, one byte for the primary subnet, and four bytes for the last seen value.
Host MAC Address Data Blocks	string	Information related to MAC addresses of hosts in the update.

Web Application Data Block for 5.0+

The Web Application data block for 5.0+ has a block type of 123 in the series 1 group of blocks. The data block describes the web application from detected HTTP client requests.

The following diagram shows the format of a Web Application data block in 5.0+.



The following table describes the fields of the Web Application data block.

Table 4-69 Web Application Data Block Fields

Field	Data Type	Description
Web Application Data Block Type	uint32	Initiates the Web Application data block. This value is always `123`.
Web Application Data Block Length	uint32	Number of bytes in the Web Application data block, including eight bytes for the Web Application data block type and length, plus the number of bytes in the application ID field that follows.
Application ID	uint32	Application ID of the web application.

Connection Statistics Data Block 6.2+

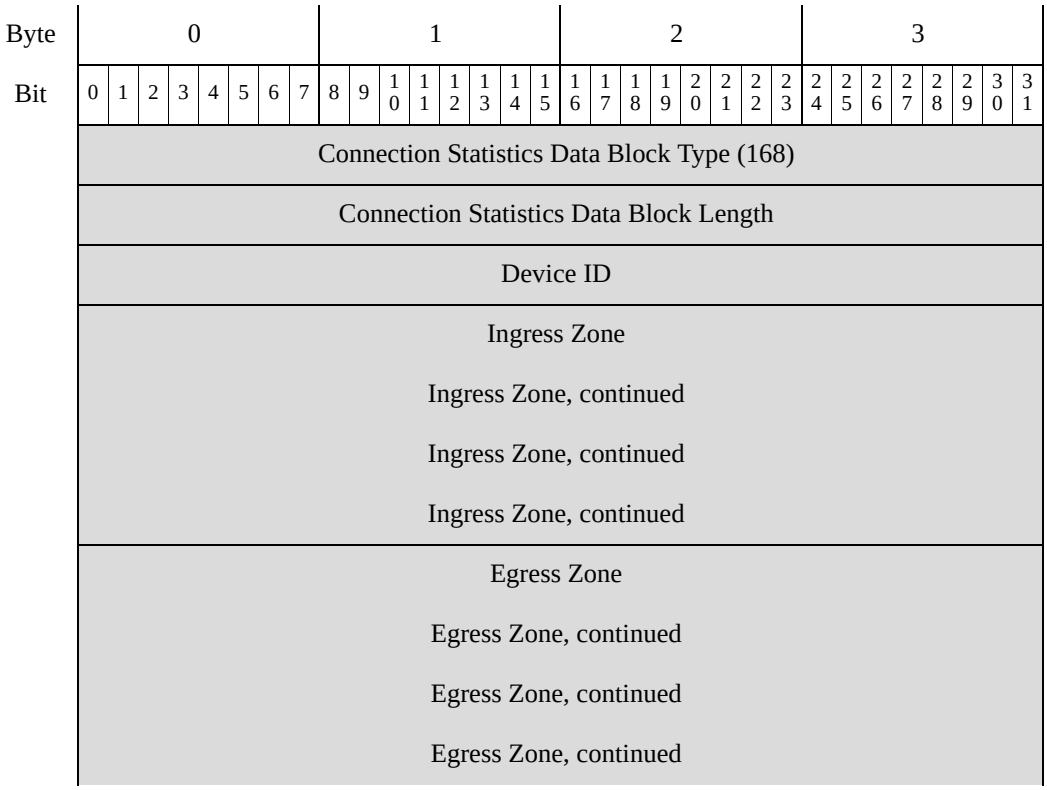
The connection statistics data block is used in connection data messages. A third Security Intelligence field has been added to Connection Statistics Data Block for 6.2+. The connection statistics data block for version 6.2+ has a block type of 168 in the series 1 group of blocks. It supersedes block type 163, Connection Statistics Data Block 6.1.x, page B-204.

You request connection event records by setting the extended event flag—bit 30 in the Request Flags field—in the request message with an event version of 13 and an event code of 71. See Request Flags, page 2-11. If you enable bit 23, an extended event header is included in the record.

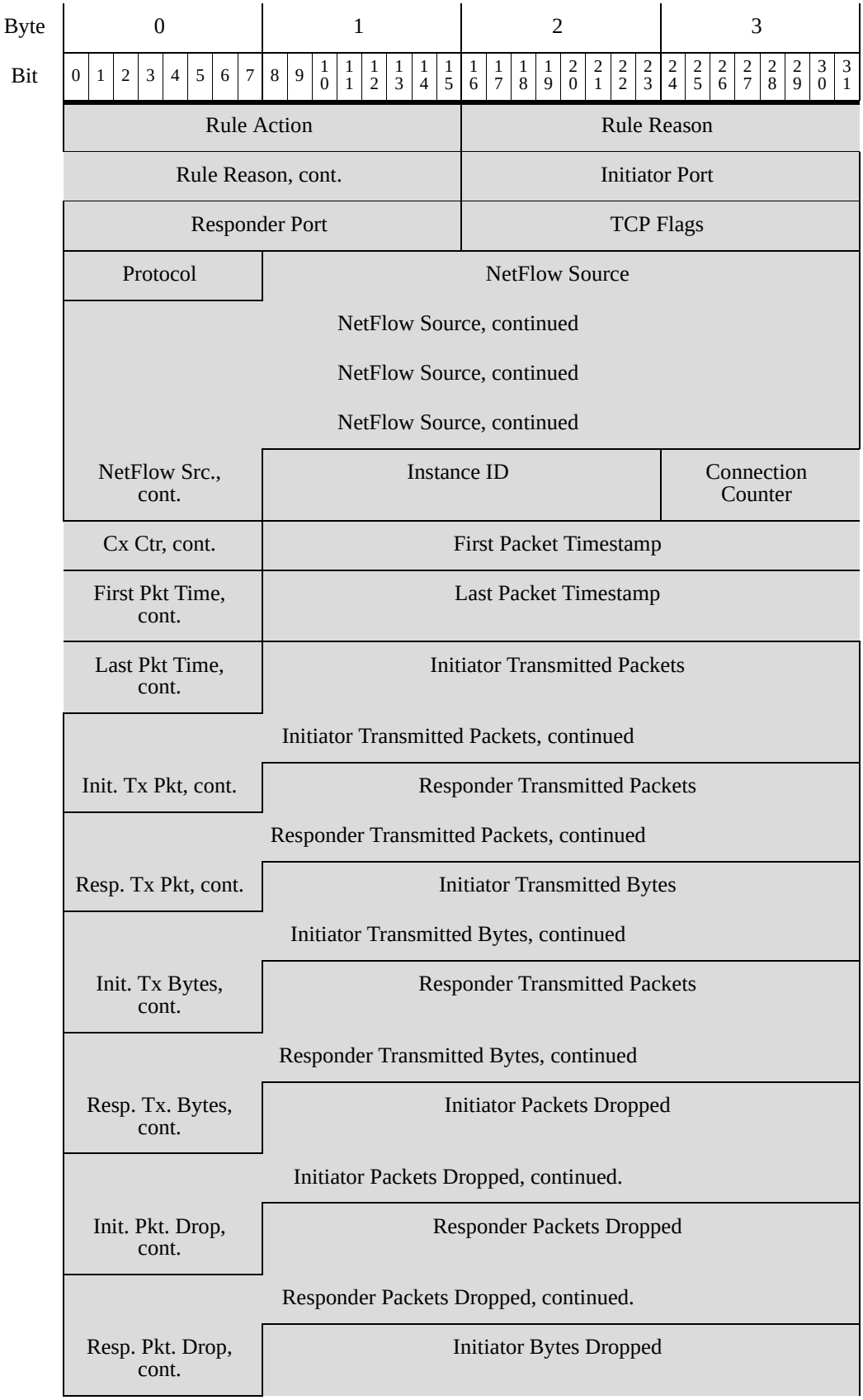
For more information on the Connection Statistics Data message, see Connection Statistics Data Message, page 4-52.

The following diagram shows the format of a Connection Statistics data block for 6.2+:

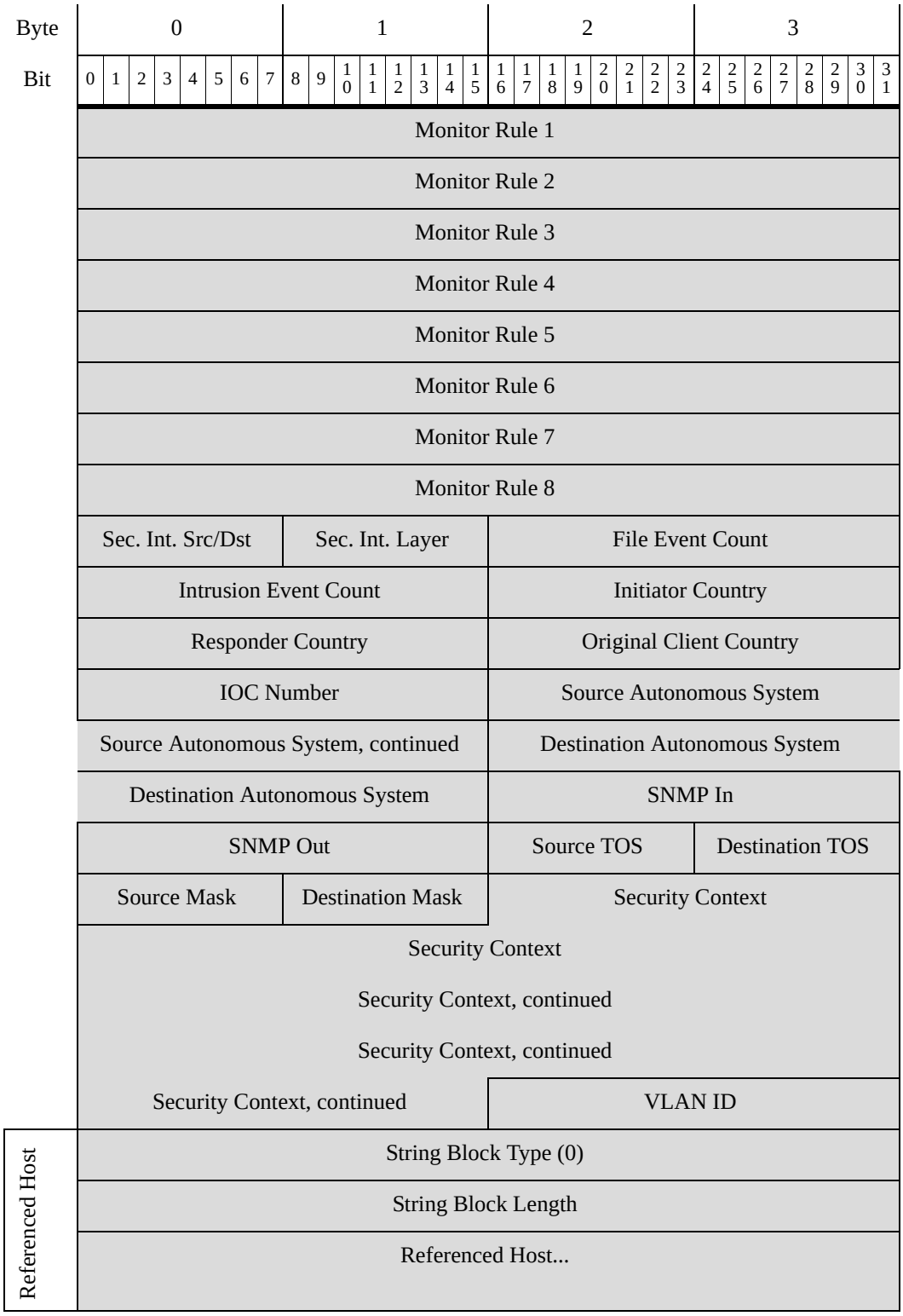
7

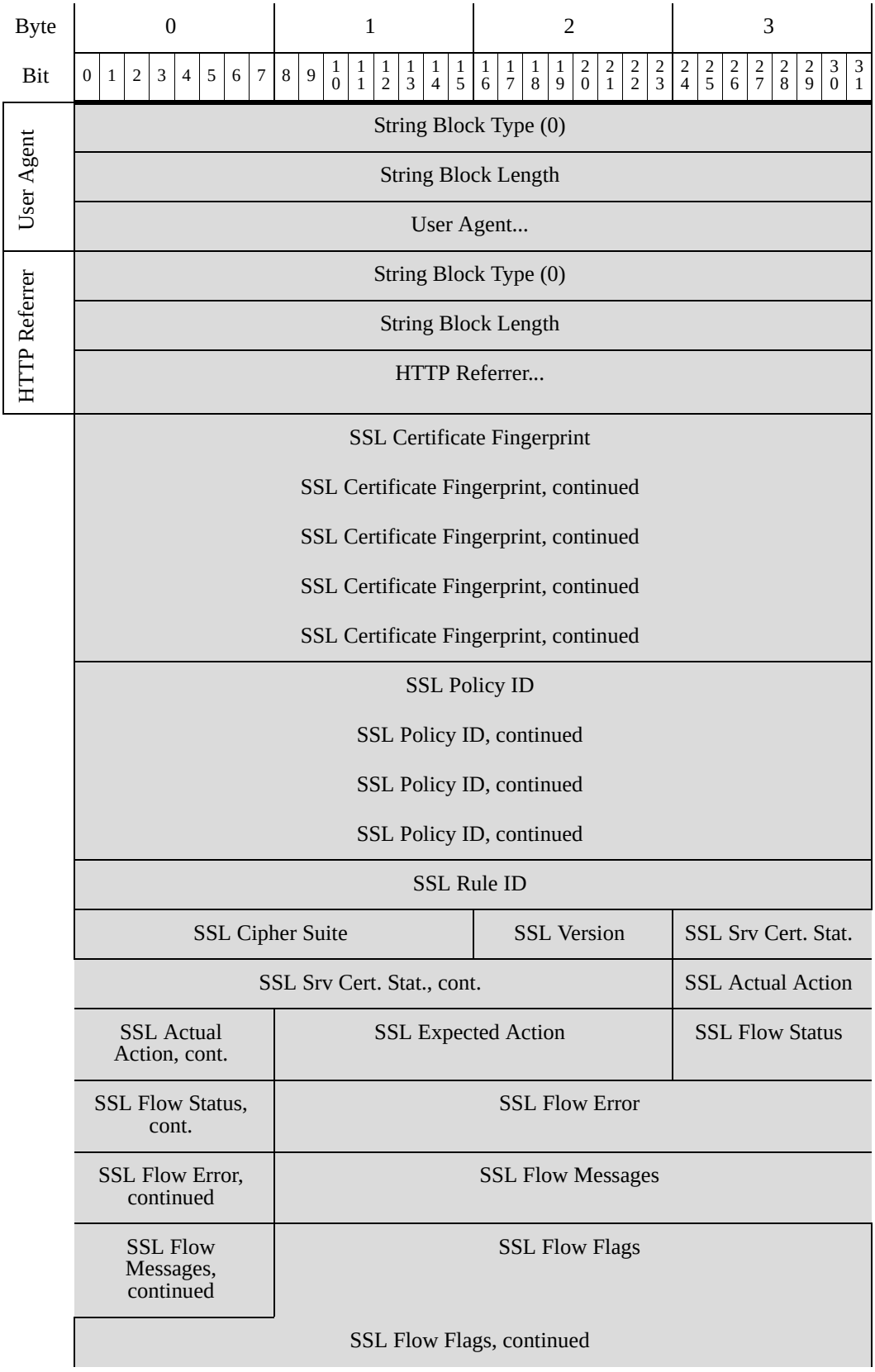


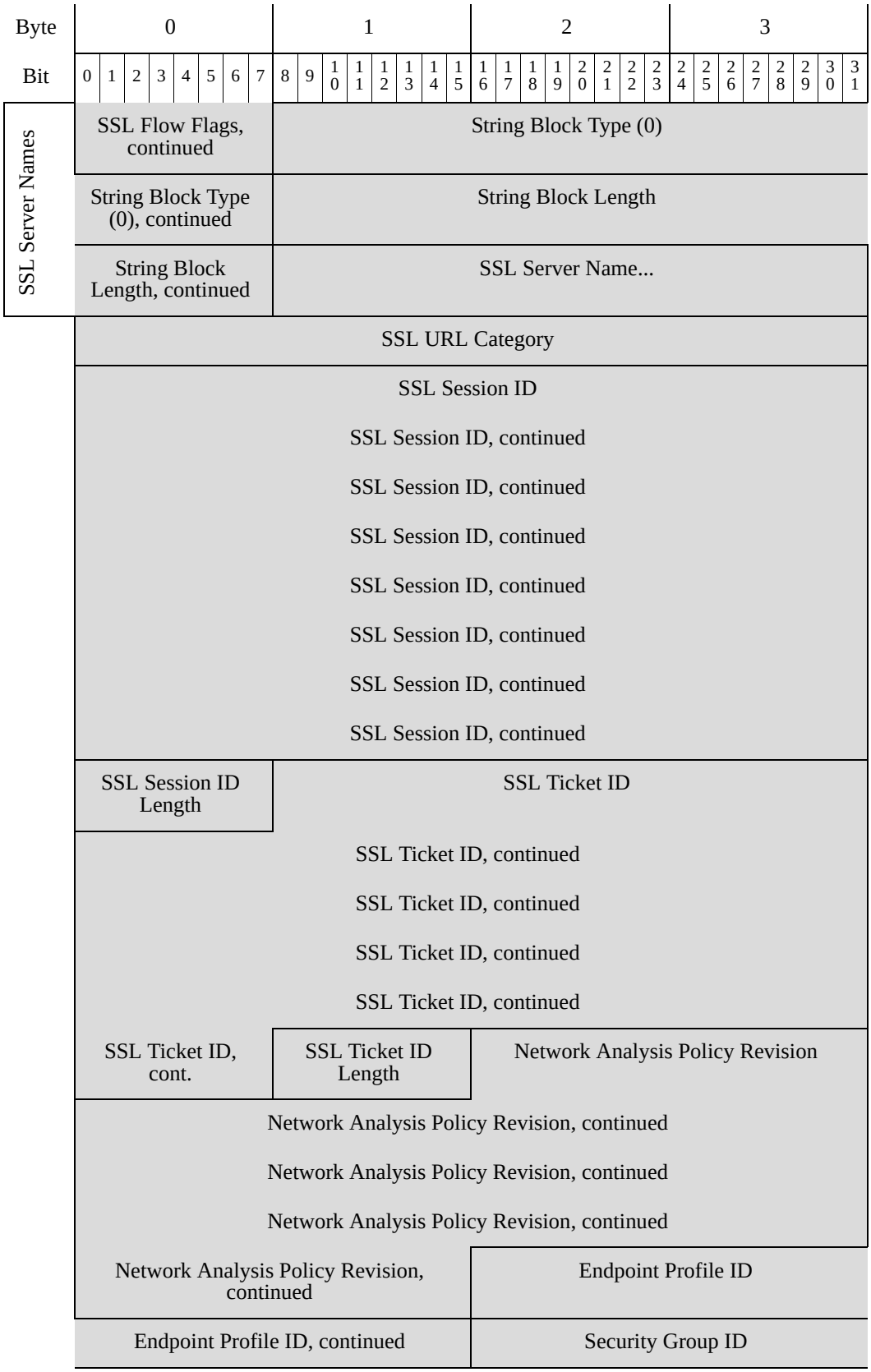
Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Ingress Interface																																
Ingress Interface, continued																																
Ingress Interface, continued																																
Ingress Interface, continued																																
Egress Interface																																
Egress Interface, continued																																
Egress Interface, continued																																
Egress Interface, continued																																
Initiator IP Address																																
Initiator IP Address, continued																																
Initiator IP Address, continued																																
Initiator IP Address, continued																																
Responder IP Address																																
Responder IP Address, continued																																
Responder IP Address, continued																																
Responder IP Address, continued																																
Original Client IP Address																																
Original Client IP Address, continued																																
Original Client IP Address, continued																																
Original Client IP Address, continued																																
Policy Revision																																
Policy Revision, continued																																
Policy Revision, continued																																
Policy Revision, continued																																
Rule ID																																
Tunnel Rule ID																																

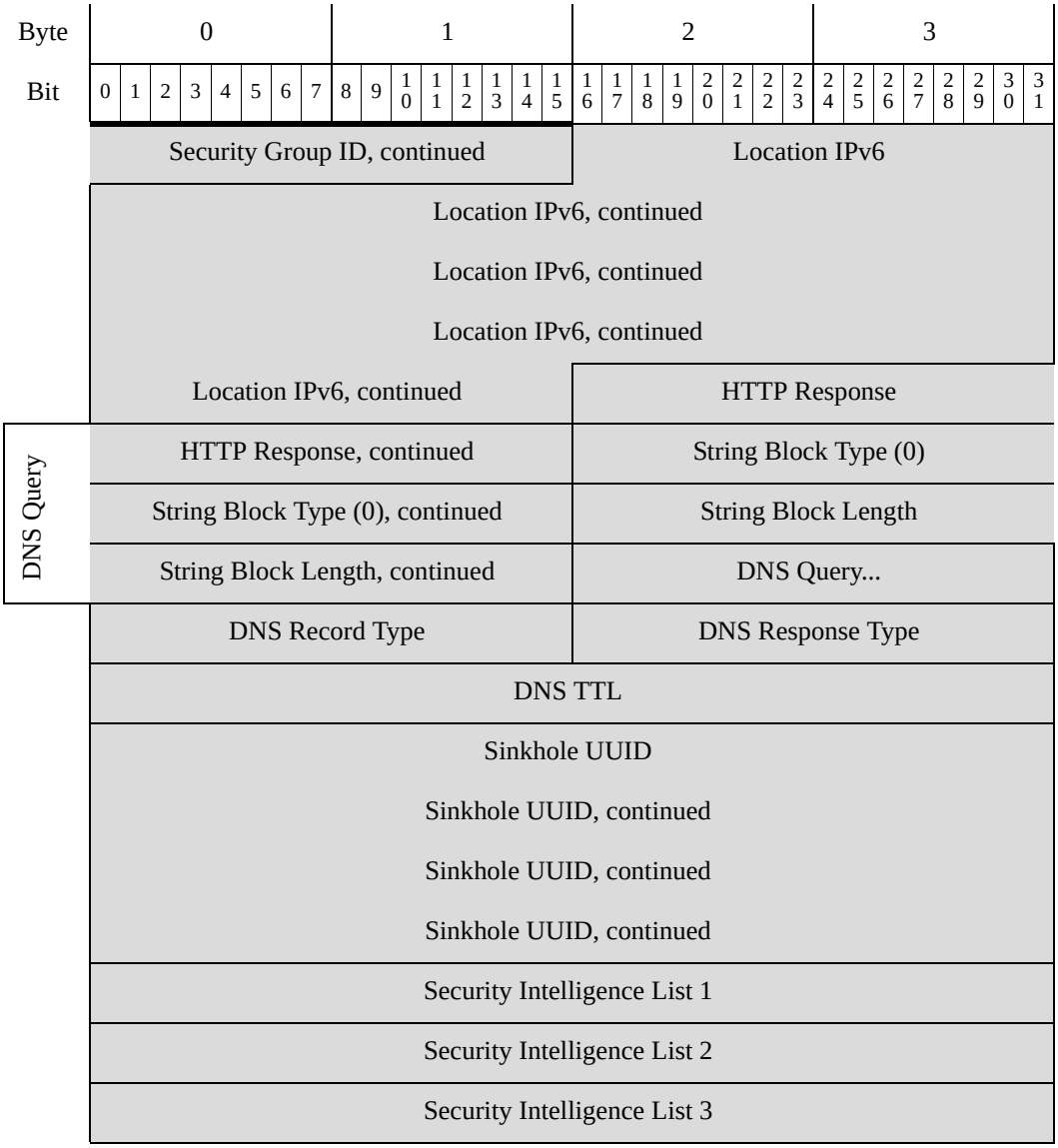

Byte
0
1
2
3
Bit
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Rule Action
Rule Reason
Rule Reason, cont.
Initiator Port
Responder Port
TCP Flags
Protocol
NetFlow Source
NetFlow Source, continued
NetFlow Source, continued
NetFlow Source, continued
NetFlow Src., cont.
Instance ID
Connection Counter
Cx Ctr, cont.
First Packet Timestamp
First Pkt Time, cont.
Last Packet Timestamp
Last Pkt Time, cont.
Initiator Transmitted Packets
Initiator Transmitted Packets, continued
Init. Tx Pkt, cont.
Responder Transmitted Packets
Responder Transmitted Packets, continued
Resp. Tx Pkt, cont.
Initiator Transmitted Bytes
Initiator Transmitted Bytes, continued
Init. Tx Bytes, cont.
Responder Transmitted Packets
Responder Transmitted Bytes, continued
Resp. Tx. Bytes, cont.
Initiator Packets Dropped
Initiator Packets Dropped, continued.
Init. Pkt. Drop, cont.
Responder Packets Dropped
Responder Packets Dropped, continued.
Resp. Pkt. Drop, cont.
Initiator Bytes Dropped

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Initiator Bytes Dropped, continued.																															
	Init. Byte Drop, cont.								Responder Bytes Dropped																							
	Responder Bytes Dropped, continued.																															
	Rsp. Byte Drop, cont.								QOS Applied Interface																							
	QOS Applied Interface, continued																															
	QOS Applied Interface, continued																															
	QOS Applied Interface, continued																															
	QOS Intf., cont.								QOS Rule ID																							
	QOS Rule ID, cont.								User ID																							
	User ID, cont.								Application Protocol ID																							
	App Prot. ID, cont.								URL Category																							
	URL Category, cont.								URL Reputation																							
	URL Rep., cont.								Client Application ID																							
	Client App ID, cont.								Web Application ID																							
Client URL	Web App. ID, cont.								Str. Block Type (0)																							
	Str. Block Type, cont.								String Block Length																							
	Str. Block Len., cont.								Client App. URL...																							
NetBIOS Name	String Block Type (0)																															
	String Block Length																															
	NetBIOS Name...																															
Client App Version	String Block Type (0)																															
	String Block Length																															
	Client Application Version...																															


Byte
0
1
2
3
Bit
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Monitor Rule 1
Monitor Rule 2
Monitor Rule 3
Monitor Rule 4
Monitor Rule 5
Monitor Rule 6
Monitor Rule 7
Monitor Rule 8
Sec. Int. Src/Dst
Sec. Int. Layer
File Event Count
Intrusion Event Count
Initiator Country
Responder Country
Original Client Country
IOC Number
Source Autonomous System
Source Autonomous System, continued
Destination Autonomous System
Destination Autonomous System
SNMP In
SNMP Out
Source TOS
Destination TOS
Source Mask
Destination Mask
Security Context
Security Context
Security Context, continued
Security Context, continued
Security Context, continued
VLAN ID
Referenced Host
String Block Type (0)
String Block Length
Referenced Host...


Byte
0
1
2
3
Bit
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
User Agent
String Block Type (0)
String Block Length
User Agent...
HTTP Referrer
String Block Type (0)
String Block Length
HTTP Referrer...
SSL Certificate Fingerprint
SSL Certificate Fingerprint, continued
SSL Certificate Fingerprint, continued
SSL Certificate Fingerprint, continued
SSL Certificate Fingerprint, continued
SSL Policy ID
SSL Policy ID, continued
SSL Policy ID, continued
SSL Policy ID, continued
SSL Rule ID
SSL Cipher Suite
SSL Version
SSL Srv Cert. Stat.
SSL Srv Cert. Stat., cont.
SSL Actual Action
SSL Actual Action, cont.
SSL Expected Action
SSL Flow Status
SSL Flow Status, cont.
SSL Flow Error
SSL Flow Error, continued
SSL Flow Messages
SSL Flow Messages, continued
SSL Flow Flags
SSL Flow Flags, continued


Byte
0
1
2
3
Bit
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
SSL Server Names
SSL Flow Flags, continued
String Block Type (0)
String Block Type (0), continued
String Block Length
String Block Length, continued
SSL Server Name...
SSL URL Category
SSL Session ID
SSL Session ID, continued
SSL Session ID, continued
SSL Session ID, continued
SSL Session ID, continued
SSL Session ID, continued
SSL Session ID, continued
SSL Session ID, continued
SSL Session ID Length
SSL Ticket ID
SSL Ticket ID, continued
SSL Ticket ID, continued
SSL Ticket ID, continued
SSL Ticket ID, continued
SSL Ticket ID, cont.
SSL Ticket ID Length
Network Analysis Policy Revision
Network Analysis Policy Revision, continued
Network Analysis Policy Revision, continued
Network Analysis Policy Revision, continued
Network Analysis Policy Revision, continued
Endpoint Profile ID
Endpoint Profile ID, continued
Security Group ID



The following table describes the fields of the Connection Statistics data block for 6.2+.

Table 4-70 Connection Statistics Data Block 6.2+ Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 6.2+. The value is always `168`.
Connection Statistics Data Block Length	uint32	Number of bytes in the Connection Statistics data block, including eight bytes for the connection statistics block type and length fields, plus the number of bytes in the connection data that follows.
Device ID	uint32	The device that detected the connection event.

Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

Field	Data Type	Description
Ingress Zone	uint8[16]	Ingress security zone in the event that triggered the policy violation.
Egress Zone	uint8[16]	Egress security zone in the event that triggered the policy violation.
Ingress Interface	uint8[16]	Interface for the inbound traffic.
Egress Interface	uint8[16]	Interface for the outbound traffic.
Initiator IP Address	uint8[16]	IP address of the host that initiated the session described in the connection event, in IP address octets.
Responder IP Address	uint8[16]	IP address of the host that responded to the initiating host, in IP address octets.
Original Client IP Address	uint8[16]	IP address of the host behind the proxy that originated the request, in IP address octets.
Policy Revision	uint8[16]	Revision number of the rule associated with the triggered correlation event, if applicable.
Rule ID	uint32	Internal identifier for the rule that triggered the event, if applicable.
Tunnel Rule ID	uint32	Internal identifier for the tunnel rule that triggered the event, if applicable.
Rule Action	uint16	The action selected in the user interface for that rule (allow, block, and so forth).
Rule Reason	uint32	The reason the rule triggered the event.
Initiator Port	uint16	Port used by the initiating host.
Responder Port	uint16	Port used by the responding host.
TCP Flags	uint16	Indicates any TCP flags for the connection event.
Protocol	uint8	The IANA-specified protocol number.
NetFlow Source	uint8[16]	IP address of the NetFlow-enabled device that exported the data for the connection.
Instance ID	uint16	Numerical ID of the Snort instance on the managed device that generated the event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
First Packet Timestamp	uint32	UNIX timestamp of the date and time the first packet was exchanged in the session.
Last Packet Timestamp	uint32	UNIX timestamp of the date and time the last packet was exchanged in the session.
Initiator Transmitted Packets	uint64	Number of packets transmitted by the initiating host.
Responder Transmitted Packets	uint64	Number of packets transmitted by the responding host.

Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

Field	Data Type	Description
Initiator Transmitted Bytes	uint64	Number of bytes transmitted by the initiating host.
Responder Transmitted Bytes	uint64	Number of bytes transmitted by the responding host.
Initiator Packets Dropped	uint64	Number of packets dropped from the session initiator due to rate limiting.
Responder Packets Dropped	uint64	Number of packets dropped from the session responder due to rate limiting.
Initiator Bytes Dropped	uint64	Number of bytes dropped from the session initiator due to rate limiting.
Responder Bytes Dropped	uint64	Number of bytes dropped from the session responders due to rate limiting.
QOS Applied Interface	uint8[16]	For rate-limited connections, the name of the interface on which rate limiting is applied.
QOS Rule ID	uint32	Internal ID number of the Quality of Service rule applied to the connection, if applicable.
User ID	uint32	Internal identification number for the user who last logged into the host that generated the traffic.
Application Protocol ID	uint32	Application ID of the application protocol.
URL Category	uint32	The internal identification number of the URL category.
URL Reputation	uint32	The internal identification number for the URL reputation.
Client Application ID	uint32	The internal identification number of the detected client application, if applicable.
Web Application ID	uint32	The internal identification number of the detected web application, if applicable.
String Block Type	uint32	Initiates a String data block for the client application URL. This value is always `0`.
String Block Length	uint32	Number of bytes in the client application URL String data block, including eight bytes for the string block type and length fields, plus the number of bytes in the client application URL string.
Client Application URL	string	URL the client application accessed, if applicable (`/files/index.html`, for example).
String Block Type	uint32	Initiates a String data block for the host NetBIOS name. This value is always `0`.
String Block Length	uint32	Number of bytes in the String data block, including eight bytes for the string block type and length fields, plus the number of bytes in the NetBIOS name string.
NetBIOS Name	string	Host NetBIOS name string.
String Block Type	uint32	Initiates a String data block for the client application version. This value is always `0`.

Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

Field	Data Type	Description
String Block Length	uint32	Number of bytes in the String data block for the client application version, including eight bytes for the string block type and length, plus the number of bytes in the version.
Client Application Version	string	Client application version.
Monitor Rule 1	uint32	The ID of the first monitor rule associated with the connection event.
Monitor Rule 2	uint32	The ID of the second monitor rule associated with the connection event.
Monitor Rule 3	uint32	The ID of the third monitor rule associated with the connection event.
Monitor Rule 4	uint32	The ID of the fourth monitor rule associated with the connection event.
Monitor Rule 5	uint32	The ID of the fifth monitor rule associated with the connection event.
Monitor Rule 6	uint32	The ID of the sixth monitor rule associated with the connection event.
Monitor Rule 7	uint32	The ID of the seventh monitor rule associated with the connection event.
Monitor Rule 8	uint32	The ID of the eighth monitor rule associated with the connection event.
Security Intelligence Source/ Destination	uint8	Whether the source or destination IP address matched the IP blacklist.
Security Intelligence Layer	uint8	The IP layer that matched the IP blacklist.
File Event Count	uint16	Value used to distinguish between file events that happen during the same second.
Intrusion Event Count	uint16	Value used to distinguish between intrusion events that happen during the same second.
Initiator Country	uint16	Code for the country of the initiating host.
Responder Country	uint 16	Code for the country of the responding host.
Original Client Country	uint 16	Code for the country of the host behind the proxy which originated the request.
IOC Number	uint16	ID Number of the compromise associated with this event.
Source Autonomous System	uint32	Autonomous system number of the source, either origin or peer.

Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

Field	Data Type	Description
Destination Autonomous System	uint32	Autonomous system number of the destination, either origin or peer.
SNMP Input	uint16	SNMP index of the input interface.
SNMP Output	uint16	SNMP index of the output interface.
Source TOS	uint8	Type of Service byte setting for the incoming interface.
Destination TOS	uint8	Type of Service byte setting for the outgoing interface.
Source Mask	uint8	Source address prefix mask.
Destination Mask	uint8	Destination address prefix mask.
Security Context	uint8(16)	ID number for the security context (virtual firewall) that the traffic passed through. Note that the system only populates this field for ASA FirePOWER devices in multi-context mode.
VLAN ID	uint16	VLAN identification number that indicates which VLAN the host is a member of.
String Block Type	uint32	Initiates a String data block containing the Referenced Host. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Referenced Host String data block, including eight bytes for the block type and header fields plus the number of bytes in the Referenced Host field.
Referenced Host	string	Host name information provided in HTTP or DNS.
String Block Type	uint32	Initiates a String data block containing the User Agent. This value is always `0`.
String Block Length	uint32	The number of bytes included in the User Agent String data block, including eight bytes for the block type and header fields plus the number of bytes in the User Agent field.
User Agent	string	Information from the UserAgent header field in the session.
String Block Type	uint32	Initiates a String data block containing the HTTP Referrer. This value is always `0`.
String Block Length	uint32	The number of bytes included in the HTTP Referrer String data block, including eight bytes for the block type and header fields plus the number of bytes in the HTTP Referrer field.
HTTP Referrer	string	The site from which a page originated. This is found int he Referred header information in HTTP traffic.
SSL Certificate Fingerprint	uint8[20]	SHA1 hash of the SSL Server certificate.
SSL Policy ID	uint8[16]	ID number of the SSL policy that handled the connection.
SSL Rule ID	uint32	ID number of the SSL rule or default action that handled the connection.
SSL Cipher Suite	uint16	Encryption suite used by the SSL connection. The value is stored in decimal format. See `www.iana.org/assignments/tls-parameters/tls-parameters.xhtml` for the cipher suite designated by the value.

Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

Field	Data Type	Description
SSL Version	uint8	The SSL or TLS protocol version used to encrypt the connection.
SSL Server Certificate Status	uint32	The status of the SSL certificate. Possible values include: • 0 — Not checked — The server certificate status was not evaluated. • 1 — Unknown — The server certificate status could not be determined. • 2 — Valid — The server certificate is valid. • 4 — Self-signed — The server certificate is self-signed. • 16 — Invalid Issuer — The server certificate has an invalid issuer. • 32 — Invalid Signature — The server certificate has an invalid signature. • 64 — Expired — The server certificate is expired. • 128 — Not valid yet — The server certificate is not yet valid. • 256 — Revoked — The server certificate has been revoked.
SSL Actual Action	uint16	The action performed on the connection based on the SSL Rule. This may differ from the expected action, as the action as specified in the rule may be impossible. Possible values include: • 0 — 'Unknown' • 1 — 'Do Not Decrypt' • 2 — 'Block' • 3 — 'Block With Reset' • 4 — 'Decrypt (Known Key)' • 5 — 'Decrypt (Replace Key)' • 6 — 'Decrypt (Resign)'
SSL Expected Action	uint16	The action which should be performed on the connection based on the SSL Rule. Possible values include: • 0 — 'Unknown' • 1 — 'Do Not Decrypt' • 2 — 'Block' • 3 — 'Block With Reset' • 4 — 'Decrypt (Known Key)' • 5 — 'Decrypt (Replace Key)' • 6 — 'Decrypt (Resign)'

Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

Field	Data Type	Description
SSL Flow Status	uint16	Status of the SSL Flow. These values describe the reason behind the action taken or the error message seen. Possible values include: • 0 — 'Unknown' • 1 — 'No Match' • 2 — 'Success' • 3 — 'Uncached Session' • 4 — 'Unknown Cipher Suite' • 5 — 'Unsupported Cipher Suite' • 6 — 'Unsupported SSL Version' • 7 — 'SSL Compression Used' • 8 — 'Session Undecryptable in Passive Mode' • 9 — 'Handshake Error' • 10 — 'Decryption Error' • 11 — 'Pending Server Name Category Lookup' • 12 — 'Pending Common Name Category Lookup' • 13 — 'Internal Error' • 14 — 'Network Parameters Unavailable' • 15 — 'Invalid Server Certificate Handle' • 16 — 'Server Certificate Fingerprint Unavailable' • 17 — 'Cannot Cache Subject DN' • 18 — 'Cannot Cache Issuer DN' • 19 — 'Unknown SSL Version' • 20 — 'External Certificate List Unavailable' • 21 — 'External Certificate Fingerprint Unavailable' • 22 — 'Internal Certificate List Invalid' • 23 — 'Internal Certificate List Unavailable' • 24 — 'Internal Certificate Unavailable' • 25 — 'Internal Certificate Fingerprint Unavailable' • 26 — 'Server Certificate Validation Unavailable' • 27 — 'Server Certificate Validation Failure' • 28 — 'Invalid Action'
SSL Flow Error	uint32	Detailed SSL error code. These values may be needed for support purposes.

Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

Field	Data Type	Description
SSL Flow Messages	uint32	The messages exchanged between client and server during the SSL handshake. See http://tools.ietf.org/html/rfc5246 for more information. • `0x00000001` — NSE_MT__HELLO_REQUEST • `0x00000002` — NSE_MT__CLIENT_ALERT • `0x00000004` — NSE_MT__SERVER_ALERT • `0x00000008` — NSE_MT__CLIENT_HELLO • `0x00000010` — NSE_MT__SERVER_HELLO • `0x00000020` — NSE_MT__SERVER_CERTIFICATE • `0x00000040` — NSE_MT__SERVER_KEY_EXCHANGE • `0x00000080` — NSE_MT__CERTIFICATE_REQUEST • `0x00000100` — NSE_MT__SERVER_HELLO_DONE • `0x00000200` — NSE_MT__CLIENT_CERTIFICATE • `0x00000400` — NSE_MT__CLIENT_KEY_EXCHANGE • `0x00000800` — NSE_MT__CERTIFICATE_VERIFY • `0x00001000` — NSE_MT__CLIENT_CHANGE_CIPHER_SPEC • `0x00002000` — NSE_MT__CLIENT_FINISHED • `0x00004000` — NSE_MT__SERVER_CHANGE_CIPHER_SPEC • `0x00008000` — NSE_MT__SERVER_FINISHED • `0x00010000` — NSE_MT__NEW_SESSION_TICKET • `0x00020000` — NSE_MT__HANDSHAKE_OTHER • `0x00040000` — NSE_MT__APP_DATA_FROM_CLIENT • `0x00080000` — NSE_MT__APP_DATA_FROM_SERVER
SSL Flow Flags	uint64	The debugging level flags for an encrypted connection. Possible values include: • `0x00000001` — NSE_FLOW__VALID - must be set for other fields to be valid • `0x00000002` — NSE_FLOW__INITIALIZED - internal structures ready for processing • `0x00000004` — NSE_FLOW__INTERCEPT - SSL session has been intercepted
String Block Type	uint32	Initiates a String data block containing the SSL Server Name. This value is always `0`.

Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the SSL Server Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the SSL Server Name field.
SSL Server Name	string	Name provided in the server name indication in the SSL Client Hello.
SSL URL Category	uint32	Category of the flow as identified from the server name and certificate common name.
SSL Session ID	uint8[32]	Value of the session ID used during the SSL handshake when the client and server agree to do session reuse
SSL Session ID Length	uint8	Length of the SSL Session ID. While the session ID cannot exceed 32 bytes, it may be less than 32 bytes.
SSL Ticket ID	uint8[20]	Hash of the session ticket used when the client and server agree to use a session ticket.
SSL Ticket ID Length	uint8	Length of the SSL Ticket ID. While the ticket ID cannot exceed 20 bytes, it may be less than 20 bytes.
Network Analysis Policy revision	uint8[16]	Revision of the Network Analysis Policy associated with the connection event.
Endpoint Profile ID	uint32	ID number of the type of device used by the connection endpoint as identified by ISE. This is unique for each DC and resolved in metadata.
Security Group ID	uint32	ID number assigned to the user by ISE based on policy.
Location IPv6	uint8[16]	IP address of the interface communicating with ISE. Can be IPv4 or IPv6.
HTTP Response	uint32	Response code of the HTTP Request.
String Block Type	uint32	Initiates a String data block for the DNS query. This value is always `0`.
String Block Length	uint32	Number of bytes in the String data block, including eight bytes for the string block type and length fields, plus the number of bytes in the DNS query string.
DNS Query	string	The content of the query sent to the DNS server.
DNS Record Type	uint16	The numerical value for the type of DNS record.
DNS Response Type	uint16	The numerical value for the type of DNS response.
DNS TTL	uint32	The time to live for the DNS response, in seconds.
Sinkhole UUID	uin8[16]	Revision UUID associated with this sinkhole object.
Security Intelligence List 1	uint32	Security Intelligence List associated with the event. This maps to a Security Intelligence list in associated metadata. There may be three Security Intelligence lists associated with the connection.

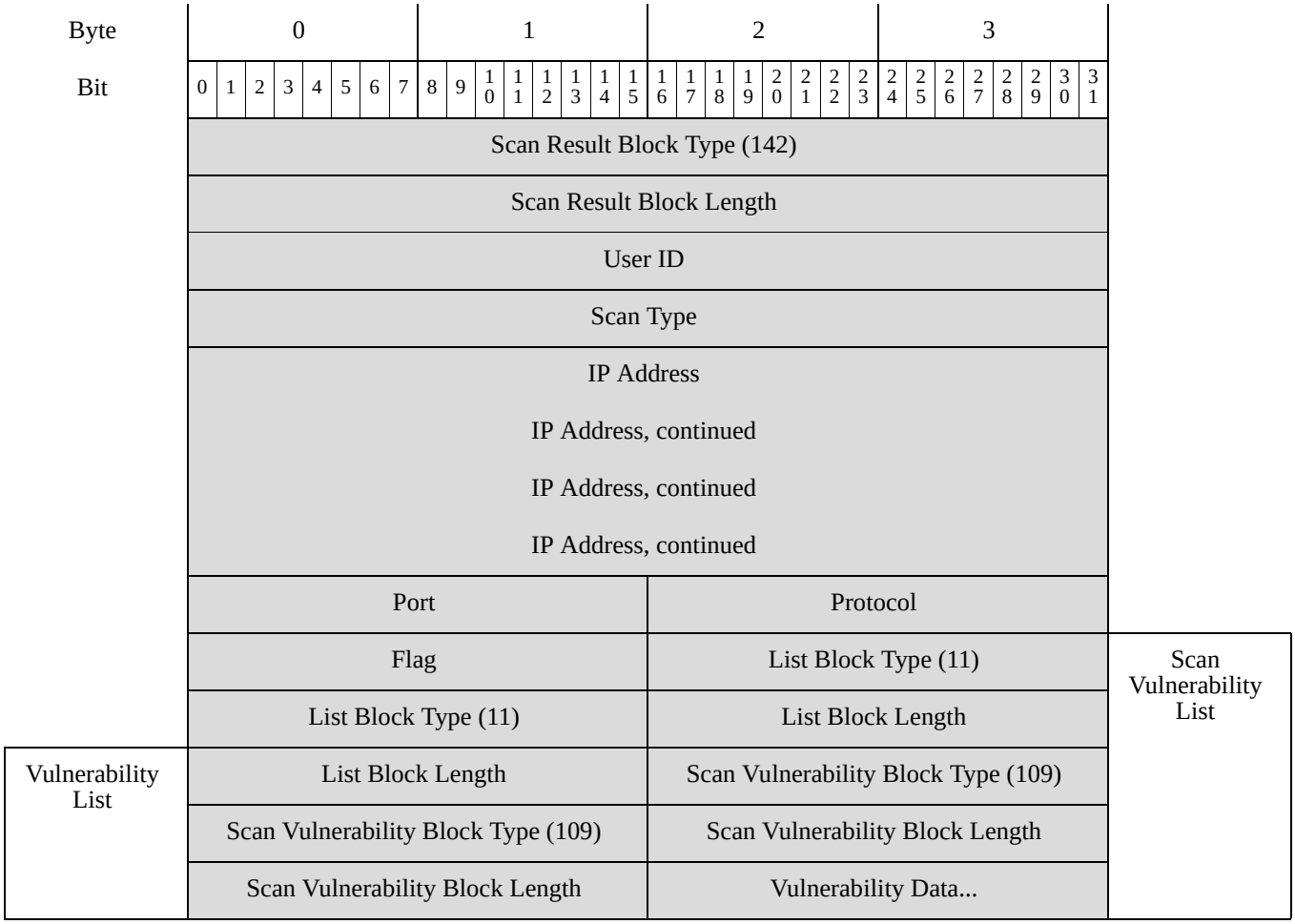
Table 4-70 Connection Statistics Data Block 6.2+ Fields (continued)

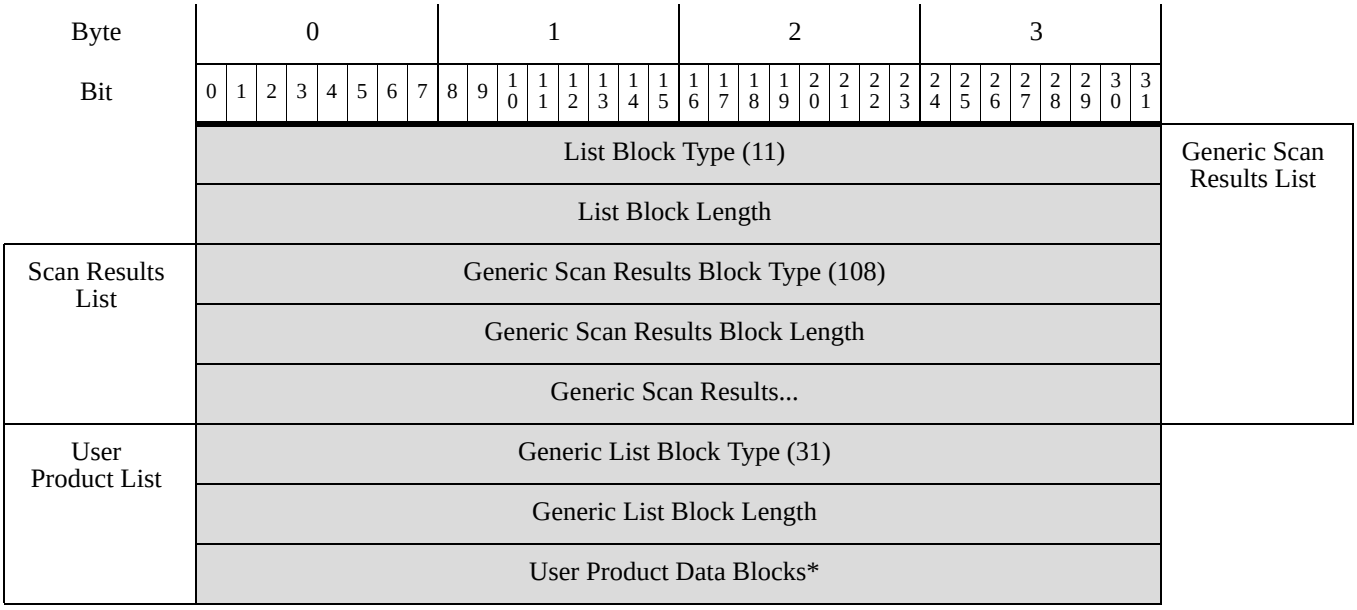
Field	Data Type	Description
Security Intelligence List 2	uint32	Security Intelligence List associated with the event. This maps to a Security Intelligence list in associated metadata. There may be three Security Intelligence lists associated with the connection.
Security Intelligence List 3	uint32	Security Intelligence List associated with the event. This maps to a Security Intelligence list in associated metadata. There may be three Security Intelligence lists associated with the connection.

Scan Result Data Block 5.2+

The Scan Result data block describes a vulnerability and is used within Add Scan Result events (event type 1002, subtype 11). The Scan Result data block has a block type of 142 in the series 1 group of blocks. It supersedes block type 102. The IP address field was increased to 16 bytes for version 5.2.

The following diagram shows the format of a Scan Result data block:





The following table describes the fields of the Scan Result data block.

Table 4-71 Scan Result Data Block Fields

Field	Data Type	Description
Scan Result Block Type	uint32	Initiates a Scan Result data block. This value is always `142`.
Scan Result Block Length	uint32	Number of bytes in the Scan Vulnerability data block, including eight bytes for the scan vulnerability block type and length fields, plus the number of bytes of scan vulnerability data that follows.
User ID	uint32	Contains the user identification number for the user who imported the scan result or ran the scan that produced the scan result.
Scan Type	uint32	Indicates how the results were added to the system.
IP Address	uint8[16]	IP address of the host affected by the vulnerabilities in the result, in IP address octets.
Port	uint16	Port used by the sub-server affected by the vulnerabilities in the results.
Protocol	uint16	IANA protocol number or Ethertype. This is handled differently for Transport and Network layer protocols. Transport layer protocols are identified by the IANA protocol number. For example: • `6` — TCP • `17` — UDP Network layer protocols are identified by the decimal form of the IEEE Registration Authority Ethertype. For example: • `2048` — IP
Flag	uint16	Reserved

Table 4-71 Scan Result Data Block Fields (continued)

Field	Data Type	Description
List Block Type	uint32	Initiates a List data block comprising Scan Vulnerability data blocks conveying transport Scan Vulnerability data. This value is always `11`.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Scan Vulnerability data blocks. This field is followed by zero or more Scan Vulnerability data blocks.
Scan Vulnerability Block Type	uint32	Initiates a Scan Vulnerability data block describing a vulnerability detected during a scan. This value is always `109`.
Scan Vulnerability Block Length	uint32	Number of bytes in the Scan Vulnerability data block, including eight bytes for the scan vulnerability block type and length fields, plus the number of bytes in the scan vulnerability data that follows.
Vulnerability Data	string	Information relating to each vulnerability.
List Block Type	uint32	Initiates a List data block comprising Scan Vulnerability data blocks conveying transport Scan Vulnerability data. This value is always `11`.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Scan Vulnerability data blocks. This field is followed by zero or more Scan Vulnerability data blocks.
Generic Scan Results Block Type	uint32	Initiates a Generic Scan Results data block describing server and operating system data detected during a scan. This value is always `108`.
Generic Scan Results Block Length	uint32	Number of bytes in the Generic Scan Results data block, including eight bytes for the generic scan results block type and length fields, plus the number of bytes in the scan result data that follows.
Generic Scan Results Data	string	Information relating to each scan result.
Generic List Block Type	uint32	Initiates a Generic List data block comprising User Product data blocks conveying host input data from a third-party application. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated User Product data blocks.
User Product Data Blocks *	variable	User Product data blocks containing host input data. See User Product Data Block 5.1+, page 4-166 for a description of this data block.

Host Server Data Block 4.10.0+

The Host Server data block conveys information about the detected servers on a host. It contains a block for each detected server, and also includes a list of web application data blocks for the web applications the server is running. Host Server data blocks are contained in messages for new and changed TCP and UDP servers. For more information, see Server Messages, page 4-45. The Host Server data block has a block type of 103 in the series 1 group of blocks.

Note An asterisk(*) next to a data block name in the following diagram indicates that multiple instances of the data block may occur.

The following diagram shows the format of the Host Server data block:

	Byte	0								1								2								3							
	Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
		Server Block Type (103)																															
		Server Block Length																															
		Port																Hits															
		Hits, continued																Last Used															
Sub-Server Information		Last Used, continued																Generic List Block Type (31)															
		Generic List Block Type, continued																Generic List Block Length															
		Generic List Block Length, continued																Server Information Block Type (117)*															
		Confidence																															
		Generic List Block Type (31)																															
		Generic List Block Length																															
Web Application		Web Application Block Type (123)*																															
		Web Application Block Length																															
		Web Application Data...																															

The following table describes the fields of the Host Server data block.

Table 4-72 Host Server Data Block Fields

Field	Data Type	Description
Host Server Block Type	uint32	Initiates a Host Server data block. This value is always `103`.
Host Server Block Length	uint32	Total number of bytes in the Host Server data block, including the eight bytes in the Host Server block type and length fields, plus the number of bytes of data that follows.
Port	uint16	Port number where the server runs.
Hits	uint32	Number of hits the server has received.
Last Used	uint32	UNIX timestamp that represents the last time the system detected the server in use.

Table 4-72 Host Server Data Block Fields (continued)

Field	Data Type	Description
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always 31.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated sub-server information data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
Server Information Data Blocks*	variable	Server information data blocks up to the maximum number of bytes in the list block length. For details, see Server Information Data Block for 4.10.x, 5.0 - 5.0.2, page 4-140.
Confidence	uint32	Confidence percentage.
Generic List Block Type	uint32	Initiates a Generic data block. This value is always 31.
Generic List Block Length	uint32	Number of bytes in the Generic block and encapsulated web application data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated web application data blocks.
Web Application Data Blocks*	variable	Encapsulated web application data blocks up to the maximum number of bytes in the list block length. For details, see Web Application Data Block for 5.0+, page 4-115.

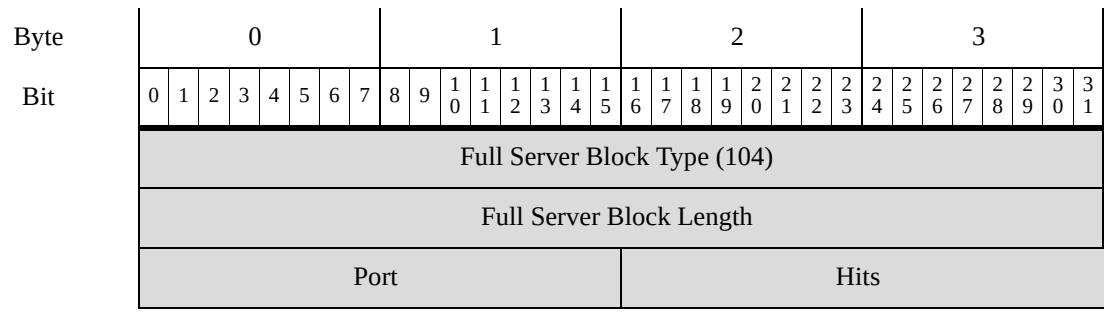
Full Host Server Data Block 4.10.0+

The Full Host Server data block conveys information about a server, including the server port, the frequency of use and most recent update, confidence of data accuracy, and Cisco and third-party vulnerabilities related to that server for the host. The Full Host Server data block contains a Full Sub-Server Information data block for each sub-server on the server. Each Full Host Profile data block contains a Full Host Server data block for each TCP and UDP server on the host. The Full Host Server data block has a block type of 104 in the series 1 group of blocks.

Note An asterisk(*) next to a series 1 data block name in the following diagram indicates that multiple instances of the data block may occur.

The following diagram shows the format of the Full Server data block:

::



Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Sub-Servers - Cisco	Hits, continued																Generic List Block Type (31)																
	Generic List Block Type, continued																Generic List Block Length																
	Generic List Block Length, continued																Full Server Information Data Blocks (106)*																
Sub-Servers - User	Generic List Block Type (31)																															
	Generic List Block Length																															
	Full Server Information Data Block Type (106)*																															
Sub-Servers - Scanner	Generic List Block Type (31)																															
	Generic List Block Length																															
	Full Server Information Data Blocks (106)*																															
Sub-Servers - Application	Generic List Block Type (31)																															
	Generic List Block Length																															
	Full Server Information Data Blocks (106)*																															
	Confidence																															
Server Banner	BLOB Block Type (10)																															
	BLOB Block Length																															
	Server Banner Data...																															
VDB Vulnerability	Generic List Block Type (31)																															
	Generic List Block Length																															
	(VDB) Host Vulnerability Data Blocks (85)*																															
Third Pty/VDB Vulnerability	Generic List Block Type (31)																															
	Generic List Block Length																															
	(Third Party/VDB) Host Vulnerability Data Blocks (85)*																															
Third Pty Host Vulnerability	Generic List Block Type (31)																															
	Generic List Block Length																															
	(Third Party) Host Vulnerability Data Blocks (85)*																															

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Web Application	Generic List Block Type (31)																															
	Generic List Block Length																															
	Web Application Data (123)*																															

The following table describes the components of the Full Server data block.

Table 4-73 Full Server Data Block 4.10.0+ Fields

Field	Data Type	Description
Full Server Block Type	uint32	Initiates a Full Server data block. This value is always `104`.
Full Server Block Length	uint32	Total number of bytes in the Full Server data block, including eight bytes for the full server block type and length fields, plus the number of bytes of full server data that follows.
Port	uint16	Server port number.
Hits	uint32	Number of hits the server has received.
Generic List Block Type	uint32	Initiates a Generic List data block comprising data blocks of detected sub-server data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated sub-server information data blocks.
Sub-Server Information - Cisco Data Blocks *	variable	Full Server Information data blocks containing information about sub-servers for a host server detected by Cisco. See Full Server Information Data Block, page 4-142 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising sub-server information data blocks conveying sub-server data added by a user. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated server information data blocks.
Sub-Server Information- User Added Data Blocks *	variable	Full Server Information data blocks containing information about sub-servers on a host added by a user. See Full Server Information Data Block, page 4-142 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising sub-server information data blocks conveying sub-server data added by a scanner. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated sub-server information data blocks.

Table 4-73 Full Server Data Block 4.10.0+ Fields (continued)

Field	Data Type	Description
Sub-Server Information- Scan Added Data Blocks *	variable	Full Server Information data blocks containing information about sub-servers on a host added by a scanner. See Full Server Information Data Block, page 4-142 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising sub-server information data blocks conveying sub-server data added by an application. This value is always 31.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated sub-server information data blocks.
Sub-Server Information - Application Added Data Blocks *	variable	Full Server Information data blocks containing information about sub-servers on a host added by an application. See Full Server Information Data Block, page 4-142 for a description of this data block.
Confidence	uint32	Percentage of confidence of Cisco in correct identification of the full server data.
BLOB Block Type	uint32	Initiates a BLOB data block, which contains banner data. This value is always 10.
BLOB Block Length	uint32	Total number of bytes in the BLOB data block, including eight bytes for the block type and length fields, plus the number of bytes in the banner.
Server Banner Data	byte[*n*]	First *n* bytes of the packet involved in the server event, where *n* is equal to or less than 256.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Host Vulnerability data blocks conveying Cisco vulnerability data. This value is always 31.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Host Vulnerability data blocks.
(VDB) Host Vulnerability Data Blocks *	variable	Host Vulnerability data blocks containing information about host vulnerabilities in the vulnerability database (VDB). See Host Vulnerability Data Block 4.9.0+, page 4-110 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Host Vulnerability data blocks conveying third-party host vulnerability data sourced from a third-party scanner and containing vulnerability information already cataloged in the VDB. This value is always 31.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Host Vulnerability data blocks.
(Third Party/VDB) Host Vulnerability Data Blocks *	variable	Host Vulnerability data blocks sourced from a third-party scanner and containing information about host vulnerabilities cataloged in the vulnerability database (VDB). See Host Vulnerability Data Block 4.9.0+, page 4-110 for a description of this data block.

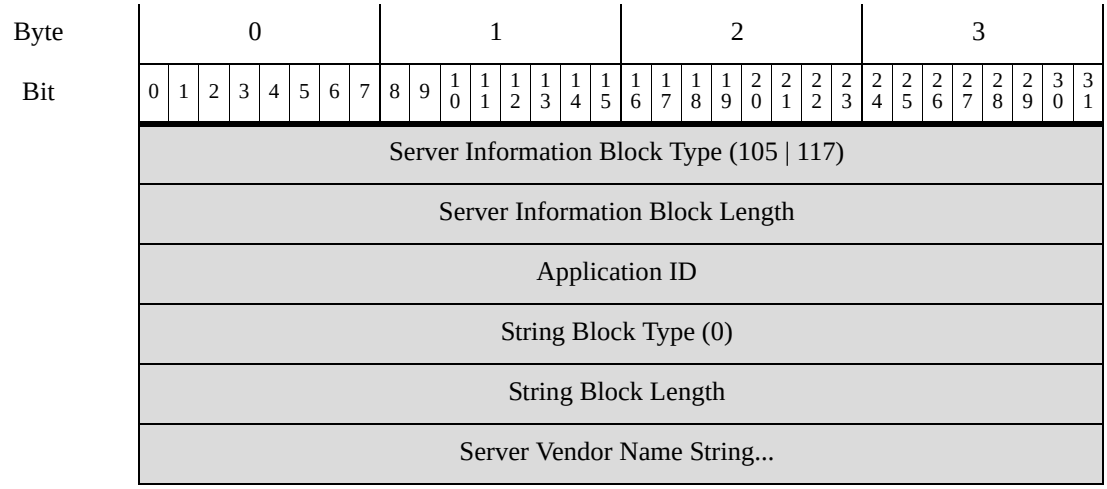
Table 4-73 Full Server Data Block 4.10.0+ Fields (continued)

Field	Data Type	Description
Generic List Block Type	uint32	Initiates a Generic List data block comprising Host Vulnerability data blocks conveying third-party host vulnerability data generated by a third-party scanner. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Host Vulnerability data blocks.
Third Party Scan Host Vulnerability Data Blocks *	variable	Host Vulnerability data blocks containing third-party vulnerability data for vulnerabilities identified by a third-party scanner but not cataloged in the VDB. See Host Vulnerability Data Block 4.9.0+, page 4-110 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated Web Application data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
Web Application Data Blocks*	variable	Encapsulated Web Application data blocks up to the maximum number of bytes in the list block length.

Server Information Data Block for 4.10.x, 5.0 - 5.0.2

The Server Information data block conveys information about a server, including the server ID, server vendor and version, and source information. The Server Information data block has a block type of 105 in the series 1 group of blocks for 4.10.x and a block type of 117 in the series 1 group of blocks for 5.0 - 5.0.2. Server information data blocks are conveyed in lists within Host Server blocks and Full Host server data blocks. For more information see Host Server Data Block 4.10.0+, page 4-134 and Full Host Server Data Block 4.10.0+, page 4-136.

The following diagram shows the format of the Server Information data block:



	Byte	0								1								2								3							
	Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	String Block Type (0)																																
	String Block Length																																
	Server Version String...																																
	Last Used																																
	Source Type																																
	Source ID																																
	List Block Type (11)																																
	List Block Length																																
Sub-Servers	Sub-Server Block Type (1) *																																
	Sub-Server Block Length																																
	Sub-Server Data...																																

The following table describes the components of the Server Information data block.

Table 4-74 Server Information Data Block Fields

Field	Data Type	Description
Server Information Block Type	uint32	Initiates a Server Information data block. The block type is `105` for 4.10.x and 117 for 5.0+.
Server Information Block Length	uint32	Total number of bytes in the Server Information data block, including eight bytes for the Server Information block type and length fields, four bytes for the server ID, eight bytes for the vendor name block type and length, another four for the vendor name, eight bytes for the version string block type and length, another four for the version string, and four bytes each for the last used, source type, and source ID fields.
Application ID	uint32	The application ID for the application protocol running on the detected server.
String Block Type	uint32	Initiates a String data block containing the server vendor's name. This value is always `0`.
String Block Length	uint32	Number of bytes in the vendor name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the server vendor name.
Server Vendor Name	string	Name of the server vendor.
String Block Type	uint32	Initiates a String data block that contains the server version. This value is always `0`.

Table 4-74 Server Information Data Block Fields (continued)

Field	Data Type	Description
String Block Length	uint32	Number of bytes in the server version String data block, including eight bytes for the block type and length fields, plus the number of bytes in the server version.
Server Version	string	Server version.
Last Time Used	uint32	Indicates when the server information was last used in traffic.
Source Type	uint32	Number that maps to the type of data source: • `0` if the server data was provided by RNA • `1` if the server data was provided by a user • `2` if the server data was provided by a third-party scanner • `3` if the server data was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Source ID	uint32	Identification number that maps to the source of the server data. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
List Block Type	uint32	Initiates a list of Sub-Server data blocks. This value is always `11`.
List Block Length	uint32	Number of bytes in the List data block, including eight bytes for the list block type and length fields, plus the number of bytes in the encapsulated Sub-Server data blocks that follow.
Sub-Server Block Type	uint32	Initiates the first Sub-Server data block. This data block can be followed by other Sub-Server data blocks up to the limit defined in the list block length field.
Sub-Server Block Length	uint32	Total number of bytes in each Sub-Server data block, including the eight bytes in the Sub-Server block type and length fields, plus the number of bytes of data that follows.
Sub-Server Data	variable	Sub-server data as documented in Sub-Server Data Block, page 4-73.

Full Server Information Data Block

The Full Server Information data block conveys information about a server detected on a host, including the server's application protocol, vendor, and version, and the list of its associated sub-servers. For each sub-server, information is included by a Full Sub-Server data block (see Full Sub-Server Data Block, page 4-81). The Full Server Information data block has a block type of 106 in the series 1 group of blocks.

Note An asterisk(*) next to a series 1 data block name in the following diagram indicates that multiple instances of the data block may occur.

The following diagram shows the format of the Full Server Information data block:

	Byte	0								1								2								3							
	Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Full Server Block Type (106)																																
	Full Server Block Length																																
	Application Protocol ID																																
Vendor	String Block Type (0)																																
	String Block Length																																
	Vendor Name String...																																
Version	String Block Type (0)																																
	String Block Length																																
	Version String...																																
	Last Used																																
	Source Type																																
	Source ID																																
	List Block Type (11)																																
	List Block Length																																
Sub-Servers	Full Sub-Server Block Type (51) *																																
	Full Sub-Server Block Length																																
	Full Sub-Server Data...																																

The following table describes the components of the Full Server Information data block.

Table 4-75 Full Server Information Data Block Fields

Field	Data Type	Description
Full Server Information Block Type	uint32	Initiates a Full Server Information data block. This value is always `106`.
Full Server Information Block Length	uint32	Total number of bytes in the Full Server Information data block, including eight bytes for the full server block type and length fields, plus the number of bytes in the full server data that follows.
Application Protocol ID	uint32	The application ID of the application protocol running on the server.

Table 4-75 Full Server Information Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the application protocol vendor's name. This value is always `0`.
String Block Length	uint32	Number of bytes in the vendor name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the vendor name.
Vendor Name	string	Name of the server vendor.
String Block Type	uint32	Initiates a String data block that contains the application protocol version. This value is always `0`.
String Block Length	uint32	Number of bytes in the String data block, including eight bytes for the block type and length fields, plus the number of bytes in the version.
Version	string	The version of the server.
Last Used	uint32	UNIX timestamp that represents the last time the system detected the server in use.
Source Type	uint32	Number that maps to the type of data source: • `0` if the server data was provided by RNA • `1` if the server data was provided by a user • `2` if the client data was provided by a third-party scanner • `3` if the server data was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Source ID	uint32	Identification number that maps to the source of the server data. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
List Block Type	uint32	Initiates a List data block comprising Full Server Information data blocks conveying sub-server data. This value is always `11`.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Full Sub-Server data blocks. This field is followed by zero or more Full Sub-Server data blocks.
Full Sub-Server Block Type	uint32	Initiates the first Full Sub-Server data block. This data block can be followed by other Full Sub-Server data blocks up to the limit defined in the list block length field.
Full Sub-Server Block Length	uint32	Total number of bytes in each Full Sub-Server data block, including the eight bytes in the Full Sub-Server block type and length fields, plus the number of bytes of data that follows.
Full Sub-Server Data Blocks *	uint32	Full Sub-Server data blocks containing sub-servers for the server. See Full Sub-Server Data Block, page 4-81 for a description of this data block.

Generic Scan Results Data Block for 4.10.0+

The Generic Scan Results data block contains scan results and is used in the Scan Result Data Block 5.2+, page 4-132. The Generic Scan Results data block has a block type of 108 in the series 1 group of blocks.

The following diagram shows the basic structure of a Generic Scan Results data block:

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Generic Scan Results Data Block Type (108)																															
	Generic Scan Results Block Length																															
	Port																Protocol															
Scan Result Sub-Servers	String Block Type (0)																															
	String Block Length																															
	Scan Result Sub-Server String...																															
Scan Result Value	String Block Type (0)																															
	String Block Length																															
	Scan Result Value...																															
Scan Result Sub-Server	String Block Type (0)																															
	String Block Length																															
	Scan Result Sub-Server (unformatted) String...																															
Scan Result Value	String Block Type (0)																															
	String Block Length																															
	Scan Result Value...																															

The following table describes the fields of the Generic Scan Results data block.

Table 4-76 Generic Scan Result Data Block Fields

Field	Number of Bytes	Description
Generic Scan Results Data Block Type	uint32	Initiates a Generic Scan Results data block. This value is always `108`.
Generic Scan Results Block Length	uint32	Total number of bytes in the Generic Scan Results data block, including eight bytes for the generic scan results block type and length fields, plus the number of bytes of scan results data that follows.
Port	uint16	Port used by the server affected by the vulnerabilities in the results.
Protocol	uint16	IANA protocol number or Ethertype. This is handled differently for Transport and Network layer protocols. Transport layer protocols are identified by the IANA protocol number. For example: • `6` — TCP • `17` — UDP Network layer protocols are identified by the decimal form of the IEEE Registration Authority Ethertype. For example: • `2048` — IP
String Block Type	uint32	Initiates a String data block that contains the sub-server. This value is always `0`.
String Block Length	uint32	Number of bytes in the sub-server String data block, including eight bytes for the block type and length fields, plus the number of bytes in the sub-server.
Scan Result Sub-Server	string	Sub-server.
String Block Type	uint32	Initiates a String data block that contains the value. This value is always `0`.
String Block Length	uint32	Number of bytes in the value String data block, including eight bytes for the block type and length fields, plus the number of bytes in the value.
Scan result value	string	Scan result value.
String Block Type	uint32	Initiates a String data block that contains the sub-server. This value is always `0`.
String Block Length	uint32	Number of bytes in the sub-server String data block, including eight bytes for the block type and length fields, plus the number of bytes in the sub-server.
Scan Result Sub-Server	string	Sub-server (unformatted).
String Block Type	uint32	Initiates a String data block that contains the value. This value is always `0`.

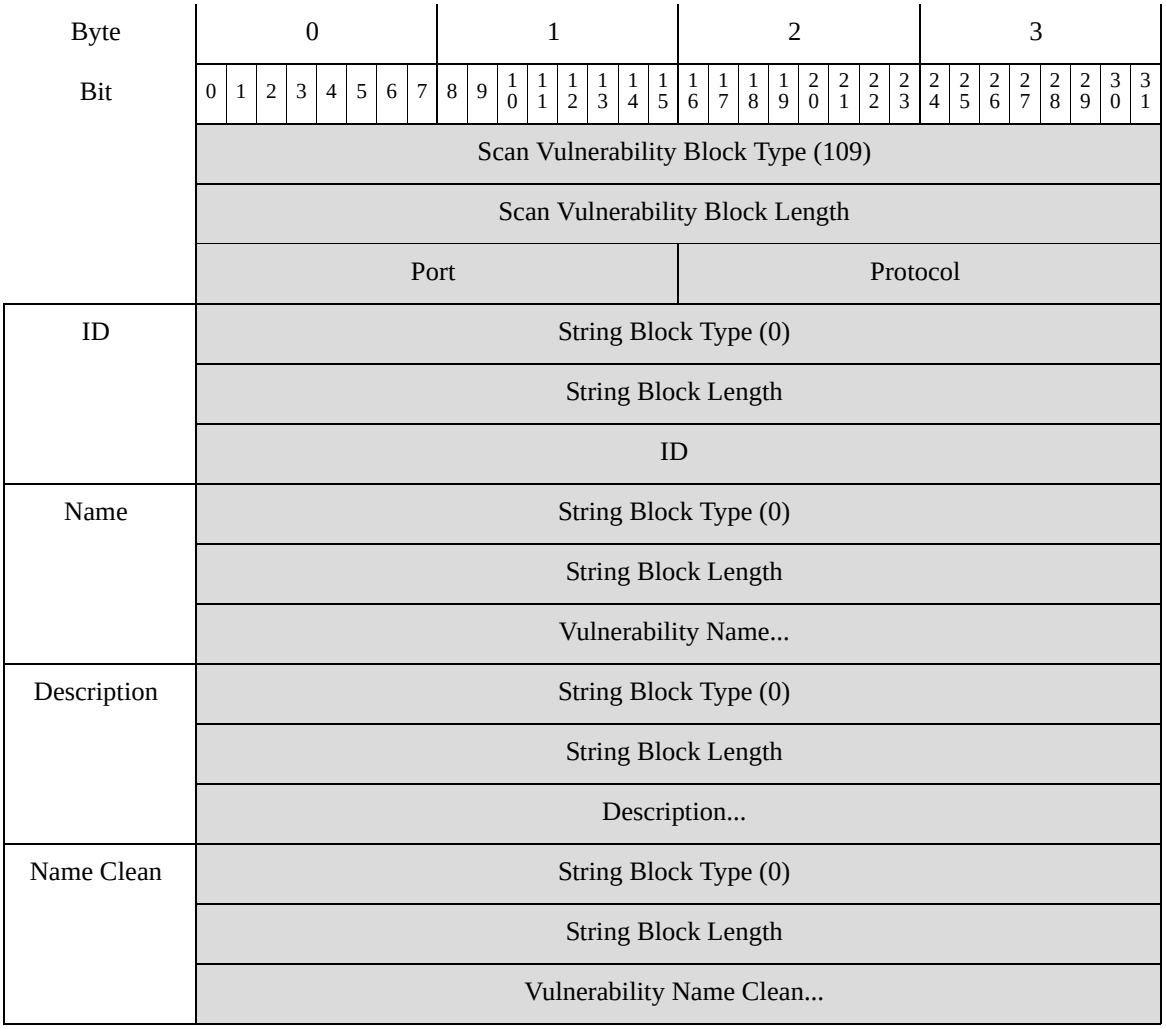
Table 4-76 Generic Scan Result Data Block Fields (continued)

Field	Number of Bytes	Description
String Block Length	uint32	Number of bytes in the value String data block, including eight bytes for the block type and length fields, plus the number of bytes in the value.
Scan Result Value	string	Scan result value (unformatted).

Scan Vulnerability Data Block for 4.10.0+

The Scan Vulnerability data block describes a vulnerability and is used within Scan Result data blocks, which in turn are used in Add Scan Result events (event type 1002, subtype 11). For more information, see Scan Result Data Block 5.2+, page 4-132 and Add Scan Result Messages, page 4-58. The Scan Vulnerability data block has a block type of 109 in the series 1 group of blocks.

The following diagram shows the format of a Scan Vulnerability data block:



Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Description Clean	String Block Type (0)																															
	String Block Length																															
	Description Clean...																															
Bugtraq ID	List Block Type (11)																															
	List Block Length																															
	Integer Data Blocks (Bugtraq IDs)...																															
CVE ID	List Block Type (11)																															
	List Block Length																															
	CVE ID...																															

The following table describes the fields of the Scan Vulnerability data block.

Table 4-77 Scan Vulnerability Data Block Fields

Field	Data Type	Description
Scan Vulnerability Block Type	uint32	Initiates a Scan Vulnerability data block. This value is always `109`.
Scan Vulnerability Block Length	uint32	Number of bytes in the Scan Vulnerability data block, including eight bytes for the scan vulnerability block type and length fields, plus the number of bytes of scan vulnerability data that follows.
Port	uint16	Port used by the sub-server affected by the vulnerability.
Protocol	uint16	IANA protocol number or Ethertype. This is handled differently for Transport and Network layer protocols. Transport layer protocols are identified by the IANA protocol number. For example: • `6` — TCP • `17` — UDP Network layer protocols are identified by the decimal form of the IEEE Registration Authority Ethertype. For example: • `2048` — IP
String Block Type	uint32	Initiates a String data block for the ID.
String Block Length	uint32	Number of bytes in the String data block for the ID, including eight bytes for the string block type and length, plus the number of bytes in the ID.

Table 4-77 Scan Vulnerability Data Block Fields (continued)

Field	Data Type	Description
ID	string	The ID for the reported vulnerability as specified by the scan utility that detected it. For a vulnerability detected by a Qualys scan, for example, this field indicates the Qualys ID.
String Block Type	uint32	Initiates a String data block for the vulnerability name.
String Block Length	uint32	Number of bytes in the String data block for the vulnerability name, including eight bytes for the string block type and length, plus the number of bytes in the vulnerability name.
Name	string	Name of the vulnerability.
String Block Type	uint32	Initiates a String data block for the vulnerability description.
String Block Length	uint32	Number of bytes in the String data block for the vulnerability description, including eight bytes for the string block type and length, plus the number of bytes in the vulnerability description.
Description	string	Description of the vulnerability.
String Block Type	uint32	Initiates a String data block for the vulnerability name.
String Block Length	uint32	Number of bytes in the String data block for the vulnerability name, including eight bytes for the string block type and length, plus the number of bytes in the vulnerability name.
Name Clean	string	Name of the vulnerability (unformatted).
String Block Type	uint32	Initiates a String data block for the vulnerability description.
String Block Length	uint32	Number of bytes in the String data block for the vulnerability description, including eight bytes for the string block type and length, plus the number of bytes in the vulnerability description.
Description Clean	string	Description of the vulnerability (unformatted).
List Block Type	uint32	Initiates a List data block for the list of Bugtraq identification numbers.
List Block Length	uint32	Number of bytes in the List data block for the list of Bugtraq identification numbers, including eight bytes for the string block type and length, plus the number of bytes in the Integer data blocks containing the Bugtraq IDs.
Bugtraq ID	string	Contains zero or more Integer (INT32) data blocks that form a list of Bugtraq identification numbers. For more information on these data blocks, see Integer (INT32) Data Block, page 4-75.
List Block Type	uint32	Initiates a List data block for the list of Common Vulnerability Exposure (CVE) identification numbers.
List Block Length	uint32	Number of bytes in the List data block for the CVE identification number, including eight bytes for the string block type and length, plus the number of bytes in the CVE identification number.
CVE ID	string	Contains zero or more String Information data blocks that form a list of CVE identification numbers. For more information on these data blocks, see String Information Data Block, page 4-77.

Full Host Client Application Data Block 5.0+

The Full Host Client Application data block for version 5.0+ describes a client application, plus an appended list of associated web applications and vulnerabilities. The Full Host Client Application data block is used within the Full Host Profile data block (type 111). It has a block type of 112 in the series 1 group of blocks.

The following diagram shows the basic structure of a Full Host Client Application data block for 5.0+:

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Full Host Client Application Block Type (112)																															
	Full Host Client Application Block Length																															
	Hits																															
	Last Used																															
	Application ID																															
Version	String Block Type (0)																															
	String Block Length																															
	Version...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Web Application	Web Application Block Type (123)*																															
	Web Application Block Length																															
	Web Application Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Vulnerability	Vulnerability Block Type (85)*																															
	Vulnerability Block Length																															
	Vulnerability Data...																															

The following table describes the fields of the Full Host Client Application data block.

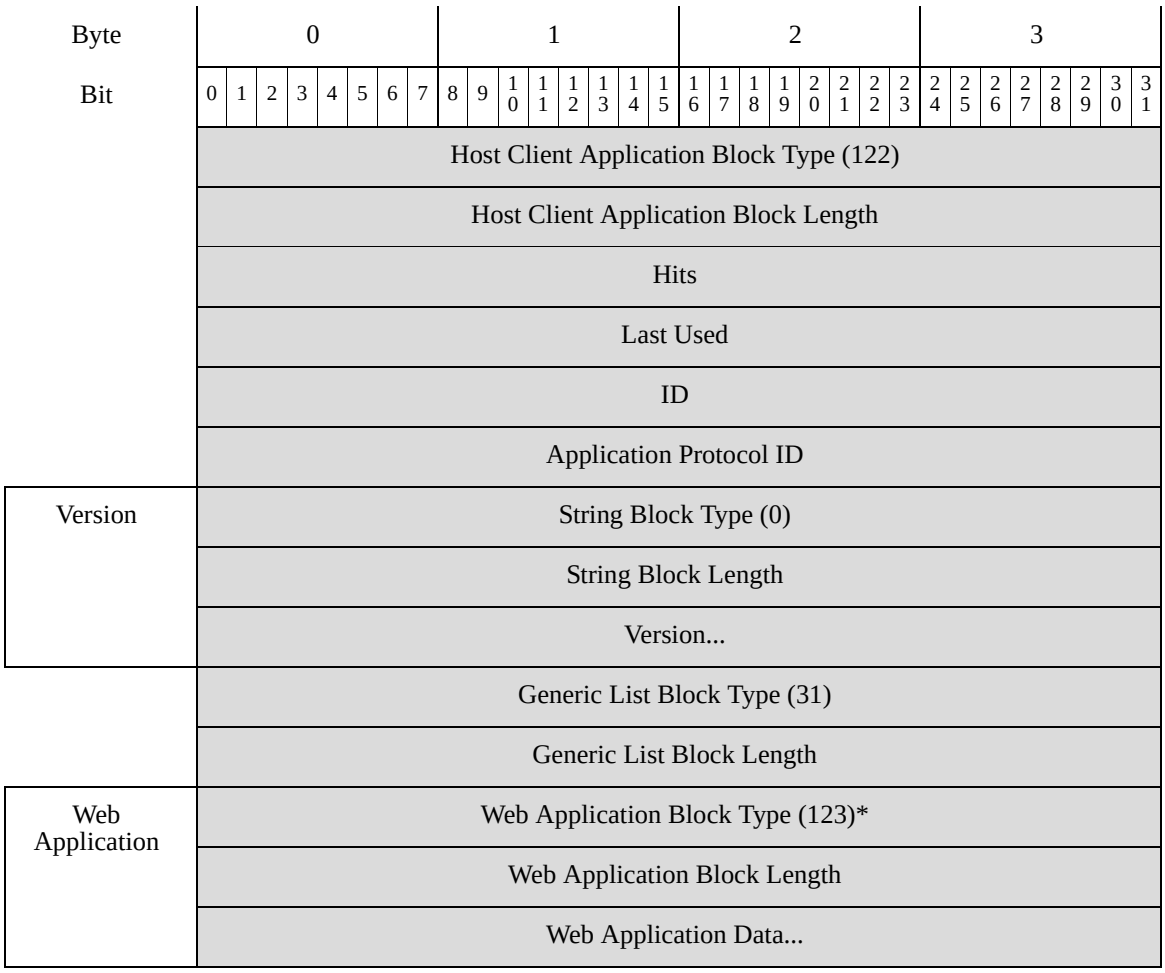
Table 4-78 Full Host Client Application Data Block 5.0+ Fields

Field	Data Type	Description
Full Host Client Application Block Type	uint32	Initiates a Full Host Client Application data block. This value is always `112`.
Full Host Client Application Block Length	uint32	Number of bytes in the Full Host Client Application data block, including eight bytes for the client application block type and length, plus the number of bytes in the client application data that follows.
Hits	uint32	Number of times the system has detected the client application in use.
Last Used	uint32	UNIX timestamp that represents the last time the system detected the client in use.
Application ID	uint32	Application ID of the detected client application, if applicable.
String Block Type	uint32	Initiates a String data block for the client application version. This value is always `0`.
String Block Length	uint32	Number of bytes in the String data block for the client application name, including eight bytes for the string block type and length, plus the number of bytes in the client application version.
Version	string	Client application version.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and the encapsulated Web Application data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
Web Application Data Blocks	variable	Encapsulated Web Application data blocks up to the maximum number of bytes in the generic list block length.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated Vulnerability data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated Vulnerability data blocks.
Vulnerability Data Blocks	variable	Encapsulated Vulnerability data blocks up to the maximum number of bytes in the generic list block length.

Host Client Application Data Block for 5.0+

The Host Client Application data block for 5.0+ describes a client application and is used within New Client Application events (event type 1000, subtype 7), Client Application Timeout events (event type 1001, subtype 20), and Client Application Update events (event type 1001, subtype 32). The Host Client Application data block for 4.10.2+ has a block type of 122 in the series 1 group of blocks.

The following diagram shows the basic structure of a Host Client Application data block for 5.0+:



The following table describes the fields of the Host Client Application data block.

Table 4-79 Host Client Application Data Block Fields

Field	Data Type	Description
Client Application Block Type	uint32	Initiates a Host Client Application data block. This value is always `122`.
Client Application Block Length	uint32	Number of bytes in the Client Application data block, including eight bytes for the client application block type and length, plus the number of bytes in the client application data that follows.
Hits	uint32	Number of times the system has detected the client application in use.
Last Used	uint32	UNIX timestamp that represents the last time the system detected the client in use.
ID	uint32	Identification number of the detected client application, if applicable.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.

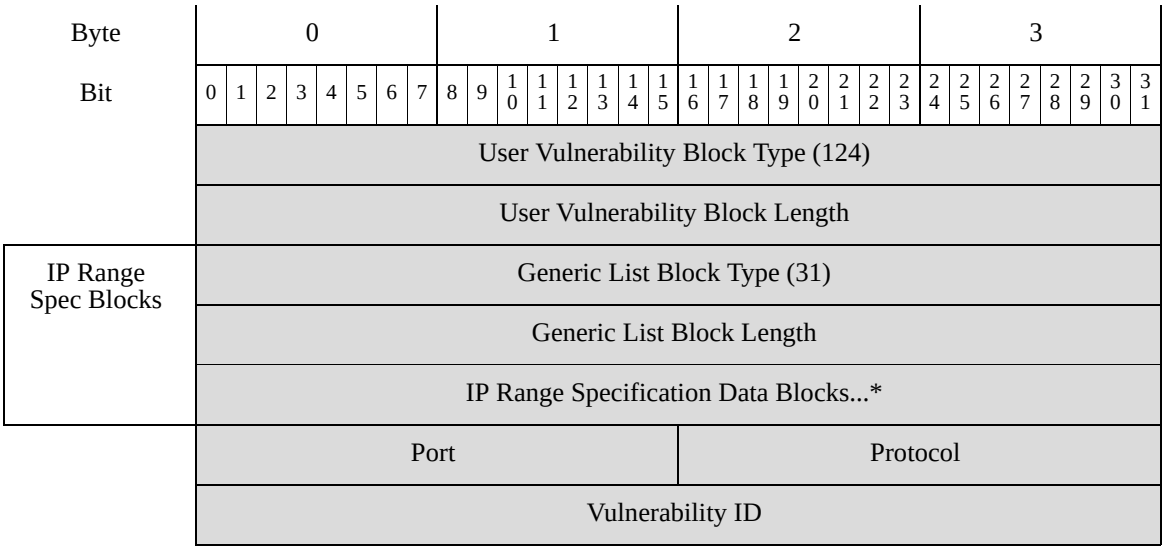
Table 4-79 Host Client Application Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block for the client application version. This value is always `0`.
String Block Length	uint32	Number of bytes in the String data block for the client application version, including eight bytes for the string block type and length, plus the number of bytes in the client application version.
Version	string	Client application version.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated Web Application data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
Web Application Data Blocks	variable	Encapsulated Web Application data blocks up to the maximum number of bytes in the list block length. See Web Application Data Block for 5.0+, page 4-115 for information on the encapsulated data blocks (block type 123).

User Vulnerability Data Block 5.0+

The User Vulnerability data block describes a vulnerability and is used within User Vulnerability Change data blocks. These in turn are used in User Set Valid Vulnerabilities events and User Set Invalid Vulnerabilities events. The User Vulnerability data block for 5.0+ has a block type of 124 in the series 1 group of blocks. It supersedes block type 79. For more information on User Vulnerability Change data blocks, see User Vulnerability Change Data Block 4.7+, page 4-104.

The following diagram shows the format of a User Vulnerability data block:



Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
3rd Party Vuln UUID	Third-Party Vulnerability UUID																															
	UUID continued																															
	UUID continued																															
	UUID continued																															
	String Block Type (0)																															
	String Block Length																															
	Vulnerability String...																															
	Client Application ID																															
	Application Protocol ID																															
	String Block Type (0)																															
	String Block Length																															
	Version String...																															

The following table describes the fields of the User Vulnerability data block.

Table 4-80 User Vulnerability Data Block Fields

Field	Data Type	Description
User Vulnerability Block Type	uint32	Initiates a User Vulnerability data block. This value is always `124`.
User Vulnerability Block Length	uint32	Number of bytes in the User Vulnerability data block, including eight bytes for the user vulnerability block type and length fields, plus the number of bytes of user vulnerability data that follows.
Generic List Block Type	uint32	Initiates a Generic List data block comprising IP Range Specification data blocks conveying IP address range data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated IP Range Specification data blocks.
IP Range Specification Data Blocks *	variable	IP address ranges from user input. See IP Address Range Data Block for 5.2+, page 4-93 for a description of this data block.
Port	uint16	Port used by the server affected by the vulnerability. For client application vulnerabilities, the value is `0`.

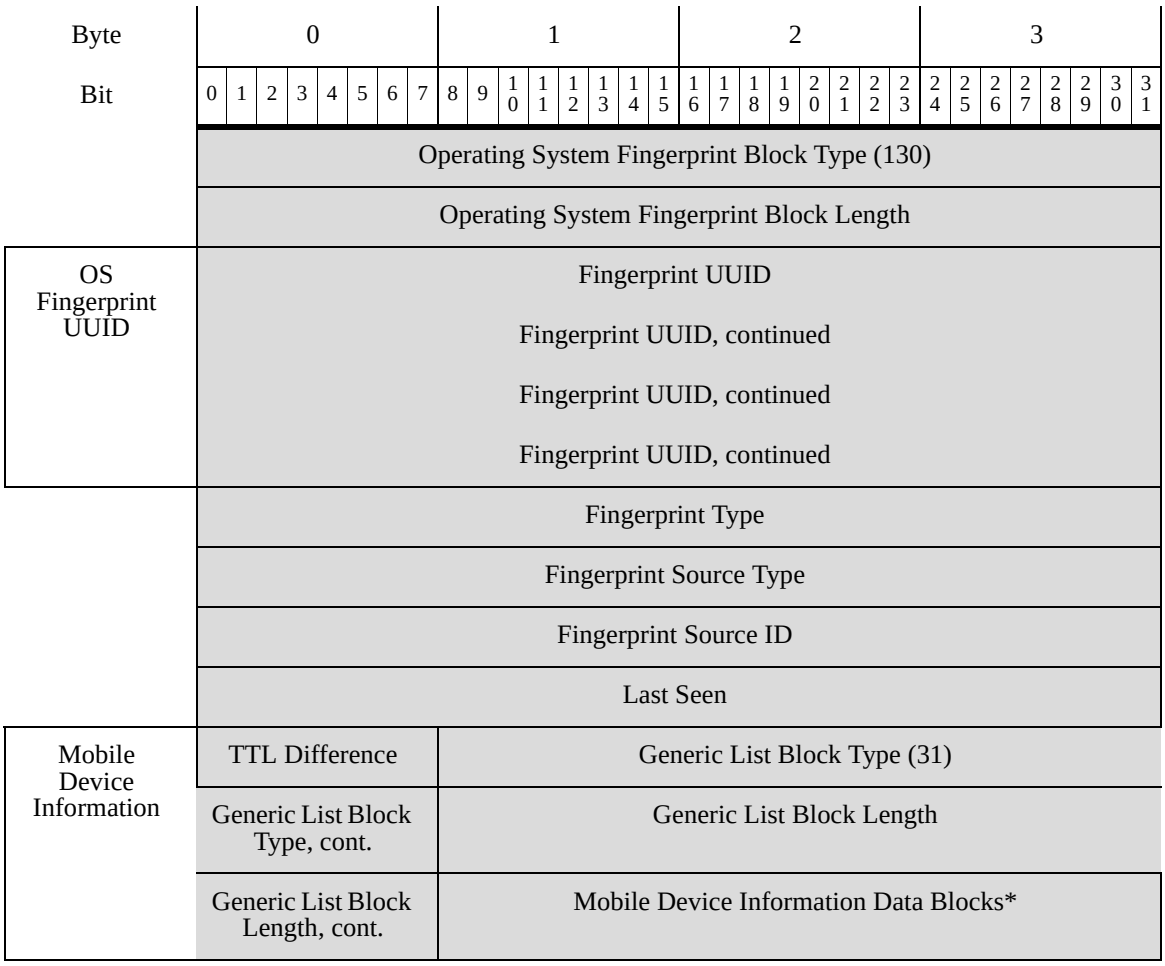
Table 4-80 User Vulnerability Data Block Fields (continued)

Field	Data Type	Description
Protocol	uint16	IANA protocol number or Ethertype for the protocol used by the server affected by the vulnerability. This is handled differently for Transport and Network layer protocols. Transport layer protocols are identified by the IANA protocol number. For example: • 6 — TCP • 17 — UDP Network layer protocols are identified by the decimal form of the IEEE Registration Authority Ethertype. For example: • 2048 — IP For client application vulnerabilities, the value is 0.
Vulnerability ID	uint32	The Cisco vulnerability ID.
Third-Party Vulnerability UUID	uint8 [16]	A unique ID number for the third-party vulnerability, if one exists. Otherwise, the value is 0.
String Block Type	uint32	Initiates a String data block for the vulnerability name. The value is always 0.
String Block Length	uint32	The number of bytes in the String data block for the vulnerability name, including eight bytes for the string block type and length, plus the number of bytes in the vulnerability name.
Vulnerability Name	string	The vulnerability name.
Client Application ID	uint32	The application ID of the client application. For server vulnerabilities, the value is 0.
Application Protocol ID	uint32	The application ID of the application protocol used by client application. For server vulnerabilities, the value is 0.
String Block Type	uint32	Initiates a String data block for the version string. The value is always 0.
String Block Length	uint32	The number of bytes in the String data block for the version, including eight bytes for the string block type and length, plus the number of bytes in the client application version string.
Version	string	The client application version. For server vulnerabilities, the value is 0.

Operating System Fingerprint Data Block 5.1+

The Operating System Fingerprint data block has a block type of 130 in the series 1 group of blocks. The block includes a fingerprint Universally Unique Identifier (UUID), as well as the fingerprint type, the fingerprint source type, and the fingerprint source ID.

The following diagram shows the format of an Operating System Fingerprint data block in 5.1+.



The following table describes the fields of the operating system fingerprint data block.

Table 4-81 Operating System Fingerprint Data Block Fields

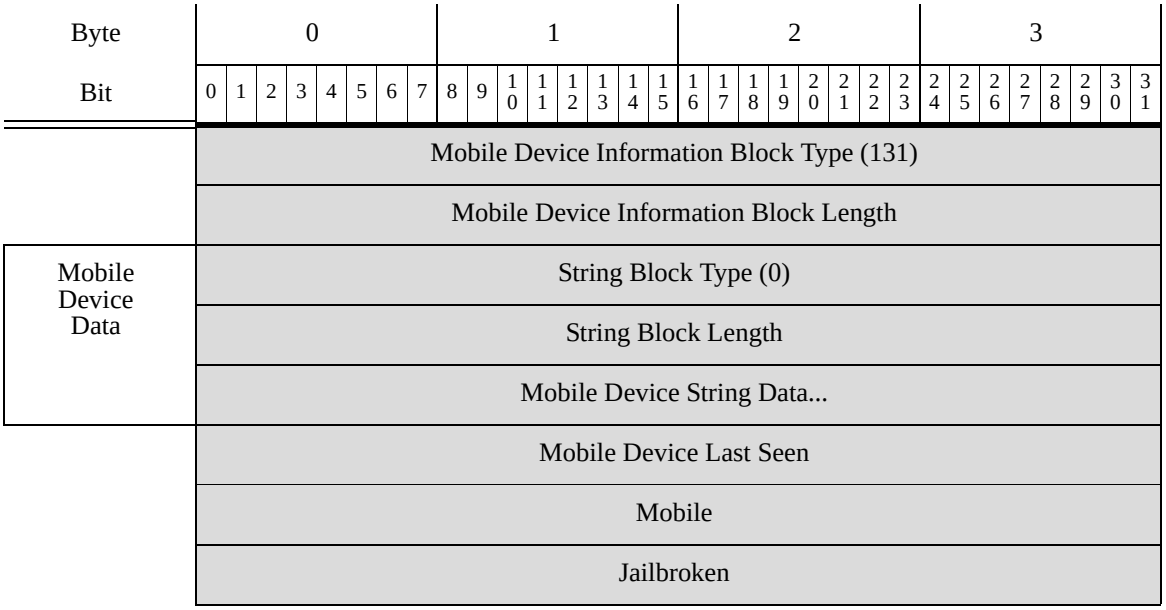
Field	Data Type	Description
Operating System Fingerprint Data Block Type	uint32	Initiates the operating system data block. This value is always `130`.
Operating System Data Block Length	uint32	Number of bytes in the Operating System Fingerprint data block, including eight bytes for the Operating System Fingerprint Data Block block type and length, plus the number of bytes in the Operating System Fingerprint data that follows.
Fingerprint UUID	uint8[16]	Fingerprint identification number, in octets, that acts as a unique identifier for the operating system. The fingerprint UUID maps to the operating system name, vendor, and version in the vulnerability database (VDB).
Fingerprint Type	uint32	Indicates the type of fingerprint.
Fingerprint Source Type	uint32	Indicates the type (i.e., user or scanner) of the source that supplied the operating system fingerprint.

Table 4-81 Operating System Fingerprint Data Block Fields (continued)

Field	Data Type	Description
Fingerprint Source ID	uint32	Identification number that maps to the login name of the user that supplied the operating system fingerprint.
Last Seen	uint32	Indicates when the fingerprint was last seen in traffic.
TTL Difference	uint8	Indicates the difference between the TTL value in the fingerprint and the TTL value seen in the packet used to fingerprint the host.
Generic List Block Type	uint32	Initiates a Generic List data block. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List block and encapsulated data blocks. This number includes the eight bytes of the generic list block header fields, plus the number of bytes in all of the encapsulated data blocks.
Mobile Device Information Data Blocks	variable	Encapsulated Mobile Device Information data blocks up to the maximum number of bytes in the list block length. See Mobile Device Information Data Block for 5.1+, page 4-157 for a description of this data block.

Mobile Device Information Data Block for 5.1+

The following diagram shows the format of a Mobile Device Information data block. The data block contains the last time the host was detected, mobile device information, and whether the mobile device is jailbroken. The Mobile Device Information data block has a block type of 131 in the series 1 group of blocks.



The describes the fields of the Mobile Device Information data block returned by 5.1+.

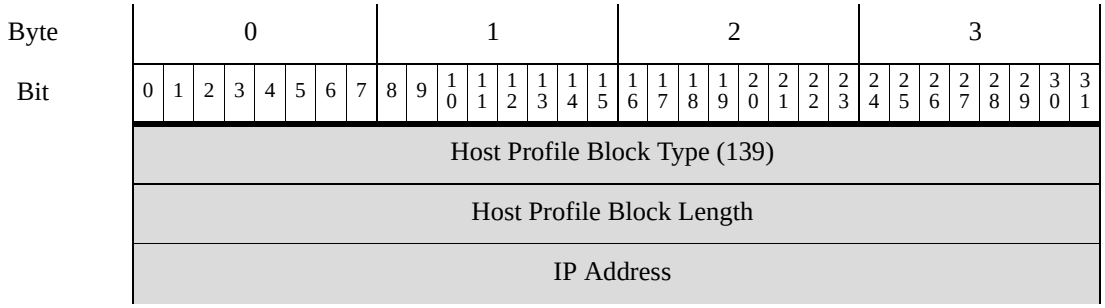
Table 4-82 Mobile Device Information Data Block 5.1+ Fields

Field	Data Type	Description
Mobile Device Information Block Type (131)	uint32	Initiates the operating system data block. This value is always `131`.
Mobile Device Information Block Length	uint32	Number of bytes in the Mobile Device Information data block, including eight bytes for the Mobile Device Information Data Block block type and length, plus the number of bytes in the Mobile Device Information data that follows.
String Block Type	uint32	Initiates a string data block for the mobile device string. This value is set to `0` to indicate string data.
String Block Length	uint32	Indicates the number of bytes in the mobile device string data block, including eight bytes for the string block type and length fields, plus the number of bytes in the mobile device string data that follows.
Mobile Device String Data	Variable	Contains the mobile device hardware information of the host detected.
Mobile Device Last Seen	uint32	Contains the time stamp the mobile device was last seen.
Mobile	uint32	True-false flag indicating whether the host is a mobile device.
Jailbroken	uint32	True-false flag indicating whether the host is a mobile device that is jailbroken.

Host Profile Data Block for 5.2+

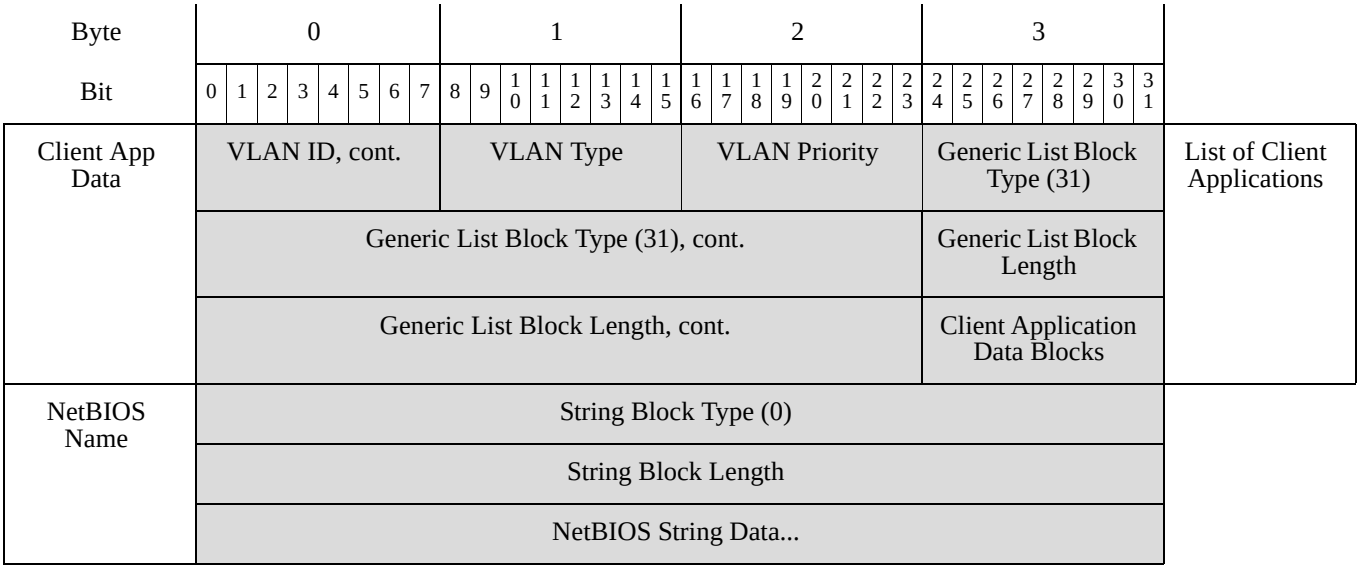
The following diagram shows the format of a Host Profile data block. The data block also does not include a host criticality value, but does include a VLAN presence indicator. In addition, a data block can convey a NetBIOS name for the host. The Host Profile data block has a block type of 139 in the series 1 group of blocks. The data block now supports IPv6 addresses, and client application data blocks have been added.

Note An asterisk(*) next to a block type field in the following diagram indicates the message may contain zero or more instances of the series 1 data block.



Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	IP Address, continued																															
	IP Address, continued																															
	IP Address, continued																															
Server Fingerprints	Hops								Primary/Secondary								Generic List Block Type (31)															
	Generic List Block Type, continued																Generic List Block Length															
	Generic List Block Length, continued																Server Fingerprint Data Blocks*															
Client Fingerprints	Generic List Block Type (31)																															
	Generic List Block Length																															
	Client Fingerprint Data Blocks*																															
SMB Fingerprints	Generic List Block Type (31)																															
	Generic List Block Length																															
	SMB Fingerprint Data Blocks*																															
DHCP Fingerprints	Generic List Block Type (31)																															
	Generic List Block Length																															
	DHCP Fingerprint Data Blocks*																															
Mobile Device Fingerprints	Generic List Block Type (31)																															
	Generic List Block Length																															
	Mobile Device Fingerprint Data Blocks*																															
IPv6 Sever Fingerprints	Generic List Block Type (31)																															
	Generic List Block Length																															
	Ipv6 Server Fingerprint Data Blocks*																															
IPv6 Client Fingerprints	Generic List Block Type (31)																															
	Generic List Block Length																															
	IPv6 Client Fingerprint Data Blocks*																															

Byte	0								1								2								3									
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
IPv6 DHCP Fingerprints	Generic List Block Type (31)																																	
	Generic List Block Length																																	
	IPv6 DHCP Fingerprint Data Blocks*																																	
User Agent Fingerprints	Generic List Block Type (31)																																	
	Generic List Block Length																																	
	User Agent Fingerprint Data Blocks*																																	
TCP Server Block*	List Block Type (11)																																List of TCP Servers	
	List Block Length																																	
	TCP Server Data Blocks																																	
UDP Server Block*	List Block Type (11)																																List of UDP Servers	
	List Block Length																																	
	UDP Server Data Blocks																																	
Network Protocol Block*	List Block Type (11)																																List of Network Protocols	
	List Block Length																																	
	Network Protocol Data Blocks																																	
Transport Protocol Block*	List Block Type (11)																																List of Transport Protocols	
	List Block Length																																	
	Transport Protocol Data Blocks																																	
MAC Address Block*	List Block Type (11)																																List of MAC Addresses	
	List Block Length																																	
	Host MAC Address Data Blocks																																	
	Host Last Seen																																	
	Host Type																																	
	Mobile								Jailbroken								VLAN Presence								VLAN ID									



The following table describes the fields of the host profile data block returned by 5.2+.

Table 4-83 Host Profile Data Block 5.2+ Fields

Field	Data Type	Description
Host Profile Block Type	uint32	Initiates the Host Profile data block for 5.2+. This value is always `139`.
Host Profile Block Length	uint32	Number of bytes in the Host Profile data block, including eight bytes for the host profile block type and length fields, plus the number of bytes included in the host profile data that follows.
IP Address	uint8(16)	IP Address of the host. This can be IPv4 or IPv6.
Hops	uint8	Number of hops from the host to the device.
Primary/ Secondary	uint8	Indicates whether the host is in the primary or secondary network of the device that detected it: • `0` — Host is in the primary network. • `1` — Host is in the secondary network.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using a server fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.
Operating System Fingerprint (Server Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using a server fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.

Table 4-83 Host Profile Data Block 5.2+ Fields (continued)

Field	Data Type	Description
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using a client fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.
Operating System Fingerprint (Client Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using a client fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using an SMB fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.
Operating System Fingerprint (SMB Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using an SMB fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using a DHCP fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.
Operating System Fingerprint (DHCP Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using a DHCP fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using a mobile device fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.

Table 4-83 Host Profile Data Block 5.2+ Fields (continued)

Field	Data Type	Description
Operating System Fingerprint Mobile) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using a mobile device fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using an IPv6 server fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.
Operating System Fingerprint (IPv6 Server) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using an IPv6 server fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using an IPv6 client fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.
Operating System Fingerprint (IPv6 Client) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using an IPv6 client fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using an IPv6 DHCP fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.
Operating System Fingerprint (IPv6 DHCP Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using an IPv6 DHCP fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data identified using a user agent fingerprint. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Operating System Fingerprint data blocks.

Table 4-83 Host Profile Data Block 5.2+ Fields (continued)

Field	Data Type	Description
Operating System Fingerprint (User Agent Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using a user agent fingerprint. See Operating System Fingerprint Data Block 5.1+, page 4-155 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Server data blocks conveying TCP server data. This value is always 11.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Server data blocks. This field is followed by zero or more Server data blocks.
TCP Server Data Blocks	variable	Host server data blocks describing a TCP server. See Host Server Data Block 4.10.0+, page 4-134 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Server data blocks conveying UDP server data. This value is always 11.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Server data blocks. This field is followed by zero or more Server data blocks.
UDP Server Data Blocks	uint32	Host server data blocks describing a UDP server. See Host Server Data Block 4.10.0+, page 4-134 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Protocol data blocks conveying network protocol data. This value is always 11.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Protocol data blocks. This field is followed by zero or more Protocol data blocks.
Network Protocol Data Blocks	uint32	Protocol data blocks describing a network protocol. See Protocol Data Block, page 4-74 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Protocol data blocks conveying transport protocol data. This value is always 11.
List Block Length	uint32	Number of bytes in the list. This number includes the eight bytes of the list block type and length fields, plus all encapsulated Protocol data blocks. This field is followed by zero or more transport protocol data blocks.
Transport Protocol Data Blocks	uint32	Protocol data blocks describing a transport protocol. See Protocol Data Block, page 4-74 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising MAC Address data blocks. This value is always 11.
List Block Length	uint32	Number of bytes in the list, including the list header and all encapsulated MAC Address data blocks.

Table 4-83 Host Profile Data Block 5.2+ Fields (continued)

Field	Data Type	Description
Host MAC Address Data Blocks	uint32	Host MAC Address data blocks describing a host MAC address. See Host MAC Address 4.9+, page 4-113 for a description of this data block.
Host Last Seen	uint32	UNIX timestamp that represents the last time the system detected host activity.
Host Type	uint32	Indicates the host type. The following values may appear: • 0 — Host • 1 — Router • 2 — Bridge • 3 — NAT device • 4 — LB (load balancer)
Mobile	uint8	True-false flag indicating whether the host is a mobile device.
Jailbroken	uint8	True-false flag indicating whether the host is a mobile device that is also jailbroken.
VLAN Presence	uint8	Indicates whether a VLAN is present: • 0 — Yes • 1 — No
VLAN ID	uint16	VLAN identification number that indicates which VLAN the host is a member of.
VLAN Type	uint8	Type of packet encapsulated in the VLAN tag.
VLAN Priority	uint8	Priority value included in the VLAN tag.
String Block Type	uint32	Initiates a String data block for the host client application data. This value is always 112.
String Block Length	uint32	Number of bytes in the String data block, including eight bytes for the string block type and length fields, plus the number of bytes in the host client application data.
Host Client Application Data Blocks	variable	List of Client Application data blocks. See Full Host Client Application Data Block 5.0+, page 4-150 for a description of this data block.
String Block Type	uint32	Initiates a String data block for the host NetBIOS name. This value is always 0.
String Block Length	uint32	Number of bytes in the String data block, including eight bytes for the string block type and length fields, plus the number of bytes in the NetBIOS name string.
NetBIOS Name	string	Host NetBIOS name string.

User Product Data Block 5.1+

The User Product data block conveys host input data imported from a third-party application, including third-party application string mappings. This data block is used in Scan Result Data Block 5.2+, page 4-132 and User Server and Operating System Messages, page 4-56. The User Product data block has a block type of 65 in the series 1 group of blocks for versions up to 4.7-4.10.1, a block type of 118 for 4.10.2-5.0.x, and a block type of 134 in the series 1 group of blocks for 5.1+. Block types 65 and 118 have the same structure.

Note An asterisk(*) next to a data block name in the following diagram indicates that multiple instances of the data block may occur.

The following diagram shows the format of the User Product data block:

	Byte	0								1								2								3							
	Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	User Product Data Block Type (134)																																
	User Product Block Length																																
	Source ID																																
	Source Type																																
IP Address Ranges	Generic List Block Type (31)																																
	Generic List Block Length																																
	IP Range Specification Data Blocks*																																
	Port																	Protocol															
	Drop User Product																																
Custom Vendor String	String Block Type (0)																																
	String Block Length																																
	Custom Vendor String...																																
Custom Product String	String Block Type (0)																																
	String Block Length																																
	Custom Product String...																																

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Custom Version String	String Block Type (0)																															
	String Block Length																															
	Custom Version String...																															
	Software ID																															
	Server ID																															
	Vendor ID																															
	Product ID																															
Major Version String	String Block Type (0)																															
	String Block Length																															
	Major Version String...																															
Minor Version String	String Block Type (0)																															
	String Block Length																															
	Minor Version String...																															
Revision String	String Block Type (0)																															
	String Block Length																															
	Revision String...																															
To Major String	String Block Type (0)																															
	String Block Length																															
	To Major Version String...																															
To Minor String	String Block Type (0)																															
	String Block Length																															
	To Minor Version String...																															
To Revision String	String Block Type (0)																															
	String Block Length																															
	To Revision String...																															

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Build String	String Block Type (0)																															
	String Block Length																															
	Build String...																															
Patch String	String Block Type (0)																															
	String Block Length																															
	Patch String...																															
Extension String	String Block Type (0)																															
	String Block Length																															
	Extension String...																															
OS UUID	Operating System UUID																															
	Operating System UUID cont.																															
	Operating System UUID cont.																															
	Operating System UUID cont.																															
Device String	String Block Type (0)																															
	String Block Length																															
	Device String...																															
List of Fixes	Mobile								Jailbroken								Generic List Block Type (31)															
	Generic List Block Type (31) cont.																Generic List Block Length															
	Generic List Block Length cont.																Fix List Data Blocks*															
	Fix List Data Blocks* cont.																															

The following table describes the components of the User Product data block.

Table 4-84 User Product Data Block Fields

Field	Data Type	Description
User Product Data Block Type	uint32	Initiates a User Product data block. This value is `134` for 5.1+.
User Product Block Length	uint32	Total number of bytes in the User Product data block, including eight bytes for the user product block type and length fields, plus the number of bytes in the user product data that follows.
Source ID	uint32	Identification number that maps to the source that imported the data. Depending on the source type, this may map to RNA, a user, a scanner, or a third-party application.
Source Type	uint32	Number that maps to the type of data source: • `0` if the data was provided by RNA • `1` if the data was provided by a user • `2` if the data was provided by a third-party scanner • `3` if the data was provided by a command line tool such as `nmimport.pl` or the Host Input API client
Generic List Block Type	uint32	Initiates a Generic List data block comprising IP Range Specification data blocks conveying IP address range data. This value is always `31`.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated IP Range Specification data blocks.
IP Range Specification Data Blocks *	variable	IP Range Specification data blocks containing information about the IP address ranges for the user input. See IP Address Range Data Block for 5.2+, page 4-93 for a description of this data block.
Port	uint16	Port specified by the user.
Protocol	uint16	IANA protocol number or Ethertype. This is handled differently for Transport and Network layer protocols. Transport layer protocols are identified by the IANA protocol number. For example: • `6` — TCP • `17` — UDP Network layer protocols are identified by the decimal form of the IEEE Registration Authority Ethertype. For example: • `2048` — IP
Drop User Product	uint32	Indicates whether the user OS definition was deleted from the host: • `0` — No • `1` — Yes
String Block Type	uint32	Initiates a String data block containing the custom vendor name specified in the user input. This value is always `0`.
String Block Length	uint32	Number of bytes in the custom vendor String data block, including eight bytes for the block type and length fields, plus the number of bytes in the vendor name.

Table 4-84 User Product Data Block Fields (continued)

Field	Data Type	Description
Custom Vendor Name	string	The custom vendor name specified in the user input.
String Block Type	uint32	Initiates a String data block containing the custom product name specified in the user input. This value is always 0.
String Block Length	uint32	Number of bytes in the custom product String data block, including eight bytes for the block type and length fields, plus the number of bytes in the product name.
Custom Product Name	string	The custom product name specified in the user input.
String Block Type	uint32	Initiates a String data block containing the custom version specified in the user input. This value is always 0.
String Block Length	uint32	Number of bytes in the custom version String data block, including eight bytes for the block type and length fields, plus the number of bytes in the version.
Custom Version	string	The custom version specified in the user input.
Software ID	uint32	The identifier for a specific revision of a server or operating system in the database.
Server ID	uint32	The Firepower System application identifier for the application protocol on the host server specified in user input.
Vendor ID	uint32	The identifier for the vendor of a third-party operating system specified when the third-party operating system is mapped to a Firepower System OS definition.
Product ID	uint32	The product identification string of a third-party operating system string specified when the third-party operating system string is mapped to a Firepower System OS definition.
String Block Type	uint32	Initiates a String data block containing the major version number of the Firepower System operating system definition that a third-party operating system string in the user input is mapped to. This value is always 0.
String Block Length	uint32	Number of bytes in the major String data block, including eight bytes for the block type and length fields, plus the number of bytes in the version.
Major Version	string	Major version of the Firepower System operating system definition that a third-party OS string is mapped to.
String Block Type	uint32	Initiates a String data block containing the minor version number of the Firepower System operating system definition that a third-party OS string is mapped to. This value is always 0.
String Block Length	uint32	Number of bytes in the minor String data block, including eight bytes for the block type and length fields, plus the number of bytes in the version.
Minor Version	string	Minor version number of the Firepower System operating system definition that a third-party OS string in the user input is mapped to.

Table 4-84 User Product Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the revision number of the Firepower System operating system definition that a third-party operating system string in the user input is mapped to. This value is always 0.
String Block Length	uint32	Number of bytes in the revision String data block, including eight bytes for the block type and length fields, plus the number of bytes in the revision number.
Revision	string	Revision number of the Firepower System operating system definition that a third-party OS string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the last major version of the Firepower System operating system definition that a third-party operating system string is mapped to. This value is always 0.
String Block Length	uint32	Number of bytes in the To Major String data block, including eight bytes for the block type and length fields, plus the number of bytes in the version.
To Major	string	Last version number in a range of major version numbers of the Firepower System operating system definition that a third-party OS string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the last minor version of the Firepower System operating system definition that a third-party operating system string is mapped to. This value is always 0.
String Block Length	uint32	Number of bytes in the To Minor String data block, including eight bytes for the block type and length fields, plus the number of bytes in the version.
To Minor	string	Last version number in a range of minor version numbers of the Firepower System operating system definition that a third-party OS string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the Last revision number of the Firepower System operating system definition that a third-party OS string is mapped to. This value is always 0.
String Block Length	uint32	Number of bytes in the To Revision String data block, including eight bytes for the block type and length fields, plus the number of bytes in the revision number.
To Revision	string	Last revision number in a range of revision numbers of the Firepower System operating system definitions that a third-party OS string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the build number of the Firepower System operating system that the third-party OS string is mapped. This value is always 0.
String Block Length	uint32	Number of bytes in the build String data block, including eight bytes for the block type and length fields, plus the number of bytes in the build number.
Build	string	Build number of the Firepower System operating system that the third-party OS string in the user input is mapped to.

Table 4-84 User Product Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the patch number of the Firepower System operating system that the third-party OS string is mapped to. This value is always 0.
String Block Length	uint32	Number of bytes in the patch String data block, including eight bytes for the block type and length fields, plus the number of bytes in the patch number.
Patch	string	Patch number of the Firepower System operating system that the third-party OS string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the extension number of the Firepower System OS that the third-party operating system string is mapped. This value is always 0.
String Block Length	uint32	Number of bytes in the extension String data block, including eight bytes for the block type and length fields, plus the number of bytes in the extension number.
Extension	string	Extension number of the Firepower System operating system that the third-party OS string in the user input is mapped to.
UUID	uint8 [x16]	Contains the unique identification number for the operating system.
String Block Type	uint32	Initiates a String data block containing the device hardware information in the user input. This value is always 0.
String Block Length	uint32	Number of bytes in the build String data block, including eight bytes for the block type and length fields, plus the number of bytes in the build number.
Device String	string	Mobile device hardware information.
Mobile	uint8	A true-false flag indicating whether the operating system is running on a mobile device.
Jailbroken	uint8	A true-false flag indicating whether the mobile device operating system is jailbroken.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Fix List data blocks conveying user input data regarding what fixes have been applied to hosts in the specified IP address ranges. This value is always 31.
Generic List Block Length	uint32	Number of bytes in the Generic List data block, including the list header and all encapsulated Fix List data blocks.
Fix List Data Blocks *	variable	Fix List data blocks containing information about fixes applied to the hosts. See Fix List Data Block, page 4-100 for a description of this data block.

User Data Blocks

User data blocks appear in user event messages. They are a subset of the series 1 data blocks. For information on the general format of series 1 data blocks, see Understanding Discovery (Series 1) Blocks, page 4-61.

Note The data block length field of the user data block header contains the number of bytes in the data block, including the eight bytes of the two data block header fields.

The following table lists the user data blocks that can appear in user event messages. Data blocks are listed by data block type. Current data blocks are the latest versions. Legacy blocks are supported but not produced by the current version of the Firepower System.

Table 4-85 User Data Block Type

Type	Content	Data Block Category	Description
73	User Login Information	Legacy	Contains changes in login information for users detected by the system. See User Login Information Data Block for 5.0 - 5.0.2, page B-100 for more information. The successor block type introduced for version 5.0 has the same structure as block type 73 but with different data in the fields.
74	User Account Update Message	Current	Contains changes in user account information. See User Account Update Message Data Block, page 4-174 for more information.
75	User Information for 4.7 - 4.10.x	Legacy	Contains changes in information for users detected by the system. See User Information Data Block for 5.x, page B-114 for more information. The successor block introduced for version 6.0 has block type 158.
120	User Information for 5.x	Current	Contains changes in information for users detected by the system. See User Information Data Block for 5.x, page B-114 for more information. Supersedes block type 75. It is superseded by block type 158.
121	User Login Information	Legacy	Contains changes in login information for users detected by the system. See User Login Information Data Block for 5.0 - 5.0.2, page B-100 for more information. Differs from block 73 in the content of the Protocol field, which stores the Version 5.0+ application ID for the application protocol ID detected in the event. The successor block introduced for version 5.1 has block type 127.
127	User Login Information	Legacy	Contains changes in login information for users detected by the system. See User Login Information Data Block 5.1-5.4.x, page B-102 for more information. It supersedes block type 121. The successor block introduced for 6.0 has block type 159.
150	IOC State	Current	Contains information about compromises. See IOC State Data Block for 5.3+, page 4-32 for more information.
158	User Information for 6.0+	Current	Contains changes in information for users detected by the system. See User Information Data Block for 6.0+, page 4-183 for more information. Supersedes block type 120.

Table 4-85 User Data Block Type (continued)

Type	Content	Data Block Category	Description
159	User Login Information	Legacy	Contains changes in login information for users detected by the system. See User Login Information Data Block 6.0.x, page B-104 for more information. It supersedes block type 127.
165	User Login Information	Legacy	Contains changes in login information for users detected by the system. See User Login Information Data Block 6.1.x, page B-110 for more information. It supersedes block type 159. It is superseded by block type 167.
166	VPN Session Information	Current	Contains information on VPN sessions detected by the system. See VPN Session Data Block for 6.2+, page 4-186 for more information.
167	User Login Information	Current	Contains changes in login information for users detected by the system. See User Login Information Data Block 6.2+, page 4-188 for more information. It supersedes block type 165.

User Account Update Message Data Block

The User Account Update Message data block conveys information about updates to a user's account information.

The User Account Update Message data block has a block type of 74 in the series 1 group of blocks.

The following diagram shows the format of the User Account Update Message data block:

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	User Account Update Message Block Type (74)																															
	User Account Update Message Block Length																															
User Name	String Block Type (0)																															
	String Block Length																															
	User Name...																															
First Name	String Block Type (0)																															
	String Block Length																															
	First Name...																															

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Middle Initials	String Block Type (0)																															
	String Block Length																															
	Middle Initials...																															
Last Name	String Block Type (0)																															
	String Block Length																															
	Last Name...																															
Full Name	String Block Type (0)																															
	String Block Length																															
	Full Name...																															
Title	String Block Type (0)																															
	String Block Length																															
	Title...																															
Staff Identity	String Block Type (0)																															
	String Block Length																															
	Staff Identity...																															
Address	String Block Type (0)																															
	String Block Length																															
	Address...																															
City	String Block Type (0)																															
	String Block Length																															
	City...																															
State	String Block Type (0)																															
	String Block Length																															
	State...																															

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Country/ Region	String Block Type (0)																															
	String Block Length																															
	Country/Region...																															
Postal Code	String Block Type (0)																															
	String Block Length																															
	Postal Code...																															
Building	String Block Type (0)																															
	String Block Length																															
	Building...																															
Location	String Block Type (0)																															
	String Block Length																															
	Location...																															
Room	String Block Type (0)																															
	String Block Length																															
	Room...																															
Company	String Block Type (0)																															
	String Block Length																															
	Company...																															
Division	String Block Type (0)																															
	String Block Length																															
	Division...																															
Dept	String Block Type (0)																															
	String Block Length																															
	Department...																															

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Office	String Block Type (0)																															
	String Block Length																															
	Office...																															
Mailstop	String Block Type (0)																															
	String Block Length																															
	Mailstop...																															
Email	String Block Type (0)																															
	String Block Length																															
	Email...																															
Phone	String Block Type (0)																															
	String Block Length																															
	Phone...																															
IP Phone	String Block Type (0)																															
	String Block Length																															
	IP Phone...																															
User 1	String Block Type (0)																															
	String Block Length																															
	User 1...																															
User 2	String Block Type (0)																															
	String Block Length																															
	User 2...																															
User 3	String Block Type (0)																															
	String Block Length																															
	User 3...																															

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
User 4	String Block Type (0)																															
	String Block Length																															
	User 4...																															
Email Alias 1	String Block Type (0)																															
	String Block Length																															
	Email Alias 1...																															
Email Alias 2	String Block Type (0)																															
	String Block Length																															
	Email Alias 2...																															
Email Alias 3	String Block Type (0)																															
	String Block Length																															
	Email Alias 3...																															

The following table describes the components of the User Account Update Message data block.

Table 4-86 User Account Update Message Data Block Fields

Field	Data Type	Description
User Account Update Message Block Type	uint32	Initiates a User Account Update Message data block. This value is always 74.
User Account Update Message Block Length	uint32	Total number of bytes in the User Account Update Message data block, including eight bytes for the user account update message block type and length fields, plus the number of bytes in the user account update message data that follows.
String Block Type	uint32	Initiates a String data block containing the username for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the username String data block, including eight bytes for the block type and length fields, plus the number of bytes in the username.
Username	string	The username for the user.
String Block Type	uint32	Initiates a String data block containing the first name for the user. This value is always 0.

Table 4-86 User Account Update Message Data Block Fields (continued)

Field	Data Type	Description
String Block Length	uint32	Number of bytes in the first name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the first name.
First Name	string	The first name for the user.
String Block Type	uint32	Initiates a String data block containing the middle initials for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the middle initials String data block, including eight bytes for the block type and length fields, plus the number of bytes in the middle initials.
Middle Initials	string	The middle initials for the user.
String Block Type	uint32	Initiates a String data block containing the last name for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the last name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the last name.
Last Name	string	The last name for the user.
String Block Type	uint32	Initiates a String data block containing the full name for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the full name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the full name.
Full Name	string	The full name for the user.
String Block Type	uint32	Initiates a String data block containing the title for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the title String data block, including eight bytes for the block type and length fields, plus the number of bytes in the title.
Title	string	The title for the user.
String Block Type	uint32	Initiates a String data block containing the staff identification for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the staff identity String data block, including eight bytes for the block type and length fields, plus the number of bytes in the staff identity.
Staff Identity	string	The staff identity for the user.
String Block Type	uint32	Initiates a String data block containing the address for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the address String data block, including eight bytes for the block type and length fields, plus the number of bytes in the address.
Address	string	The address for the user.
String Block Type	uint32	Initiates a String data block containing the city from the user's address. This value is always 0.

Table 4-86 User Account Update Message Data Block Fields (continued)

Field	Data Type	Description
String Block Length	uint32	Number of bytes in the city String data block, including eight bytes for the block type and length fields, plus the number of bytes in the city.
City	string	The city from the user's address.
String Block Type	uint32	Initiates a String data block containing the state from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the state String data block, including eight bytes for the block type and length fields, plus the number of bytes in the state.
State	string	The state for the user.
String Block Type	uint32	Initiates a String data block containing the country or region from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the country or region String data block, including eight bytes for the block type and length fields, plus the number of bytes in the country or region.
Country or Region	string	The country or region from the user's address.
String Block Type	uint32	Initiates a String data block containing the postal code from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the postal code String data block, including eight bytes for the block type and length fields, plus the number of bytes in the postal code.
Postal Code	string	The postal code from the user's address.
String Block Type	uint32	Initiates a String data block containing the building from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the building String data block, including eight bytes for the block type and length fields, plus the number of bytes in the building name.
Building	string	The building from the user's address.
String Block Type	uint32	Initiates a String data block containing the location from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the location String data block, including eight bytes for the block type and length fields, plus the number of bytes in the location name.
Location	string	The location from the user's address.
String Block Type	uint32	Initiates a String data block containing the room from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the room String data block, including eight bytes for the block type and length fields, plus the number of bytes in the room.
Room	string	The room from the user's address.

Table 4-86 User Account Update Message Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the company from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the company String data block, including eight bytes for the block type and length fields, plus the number of bytes in the company name.
Company	string	The company from the user's address.
String Block Type	uint32	Initiates a String data block containing the division from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the division String data block, including eight bytes for the block type and length fields, plus the number of bytes in the division name.
Division	string	The division from the user's address.
String Block Type	uint32	Initiates a String data block containing the department from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the department String data block, including eight bytes for the block type and length fields, plus the number of bytes in the department.
Department	string	The department from the user's address.
String Block Type	uint32	Initiates a String data block containing the office from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the office String data block, including eight bytes for the block type and length fields, plus the number of bytes in the office.
Office	string	The office from the user's address.
String Block Type	uint32	Initiates a String data block containing the mailstop from the user's address. This value is always 0.
String Block Length	uint32	Number of bytes in the mailstop String data block, including eight bytes for the block type and length fields, plus the number of bytes in the mailstop.
Mailstop	string	The mailstop from the user's address.
String Block Type	uint32	Initiates a String data block containing the email address for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the email address String data block, including eight bytes for the block type and length fields, plus the number of bytes in the email address.
Email	string	The email address for the user.
String Block Type	uint32	Initiates a String data block containing the phone number for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the phone number String data block, including eight bytes for the block type and length fields, plus the number of bytes in the phone number.
Phone	string	The phone number for the user.

Table 4-86 User Account Update Message Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the Internet phone number for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the Internet phone number String data block, including eight bytes for the block type and length fields, plus the number of bytes in the Internet phone number.
Internet Phone	string	The Internet phone number for the user.
String Block Type	uint32	Initiates a String data block containing an alternate user name for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the user String data block, including eight bytes for the block type and length fields, plus the number of bytes in the username.
User 1	string	An alternate user name for the user.
String Block Type	uint32	Initiates a String data block containing an alternate user name for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the user String data block, including eight bytes for the block type and length fields, plus the number of bytes in the username.
User 2	string	An alternate user name for the user.
String Block Type	uint32	Initiates a String data block containing an alternate user name for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the user String data block, including eight bytes for the block type and length fields, plus the number of bytes in the username.
User 3	string	An alternate user name for the user.
String Block Type	uint32	Initiates a String data block containing an alternate user name for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the user String data block, including eight bytes for the block type and length fields, plus the number of bytes in the username.
User 4	string	An alternate user name for the user.
String Block Type	uint32	Initiates a String data block containing an email alias for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the email alias String data block, including eight bytes for the block type and length fields, plus the number of bytes in the email alias.
Email alias 1	string	An email alias for the user.
String Block Type	uint32	Initiates a String data block containing an email alias for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the email alias String data block, including eight bytes for the block type and length fields, plus the number of bytes in the email alias.
Email alias 2	string	An email alias for the user.

Table 4-86 User Account Update Message Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing an email alias for the user. This value is always `0`.
String Block Length	uint32	Number of bytes in the email alias String data block, including eight bytes for the block type and length fields, plus the number of bytes in the email alias.
Email alias 3	string	An email alias for the user.

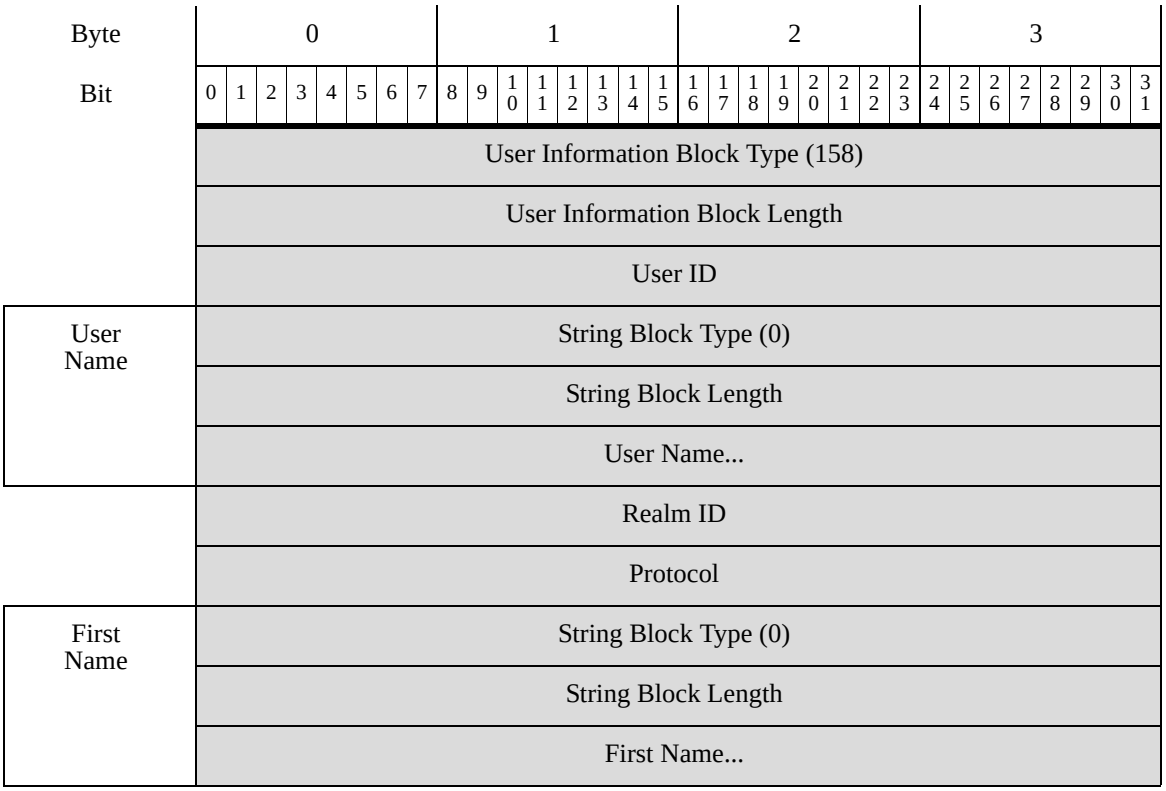
User Information Data Block for 6.0+

The User Information data block is used in User Modification messages and conveys information for a user detected, removed, or dropped. For more information, see User Modification Messages, page 4-60

The User Information data block has a block type of 158 in the series 1 group of blocks for version 6.0+. It has new endpoint profile, Security Intelligence, and IPv6 fields.

The User Information data block has a block type of 75 in the series 1 group of blocks for version 4.7 - 4.10.x and a block type of 120 in the series 1 group of blocks for 5.x. See User Information Data Block for 5.x, page B-114 for more information.

The following diagram shows the format of the User Information data block.



Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Last Name	String Block Type (0)																															
	String Block Length																															
	Last Name...																															
Email	String Block Type (0)																															
	String Block Length																															
	Email...																															
Department	String Block Type (0)																															
	String Block Length																															
	Department...																															
Phone	String Block Type (0)																															
	String Block Length																															
	Phone...																															
	Endpoint Profile ID																															
	Security Group ID																															
	Location IPv6 Address Location IPv6 Address, continued Location IPv6 Address, continued Location IPv6 Address, continued																															

The following table describes the components of the User Information data block.

Table 4-87 User Information Data Block Fields

Field	Data Type	Description
User Information Block Type	uint32	Initiates a User Information data block. This value is `158`.
User Information Block Length	uint32	Total number of bytes in the User Information data block, including eight bytes for the user information block type and length fields plus the number of bytes in the user information data that follows.
User ID	uint32	Identification number of the user.

Table 4-87 User Information Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the username for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the username String data block, including eight bytes for the block type and length fields plus the number of bytes in the username.
Username	string	The username for the user.
Realm ID	uint32	Integer ID which corresponds to an identity realm.
Protocol	uint32	The protocol for the packet containing the user information.
String Block Type	uint32	Initiates a String data block containing the first name of the user. This value is always 0.
String Block Length	uint32	Number of bytes in the first name String data block, including eight bytes for the block type and length fields plus the number of bytes in the first name.
First Name	string	The first name for the user.
String Block Type	uint32	Initiates a String data block containing the last name for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the user last name String data block, including eight bytes for the block type and length fields, plus the number of bytes in the last name.
Last Name	string	The last name for the user.
String Block Type	uint32	Initiates a String data block containing the email address for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the email address String data block, including eight bytes for the block type and length fields, plus the number of bytes in the email address.
Email	string	The email address for the user.
String Block Type	uint32	Initiates a String data block containing the department for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the department String data block, including eight bytes for the block type and length fields, plus the number of bytes in the department.
Department	string	The department for the user.
String Block Type	uint32	Initiates a String data block containing the phone number for the user. This value is always 0.
String Block Length	uint32	Number of bytes in the phone number String data block, including eight bytes for the block type and length fields, plus the number of bytes in the phone number.
Phone	string	The phone number for the user.

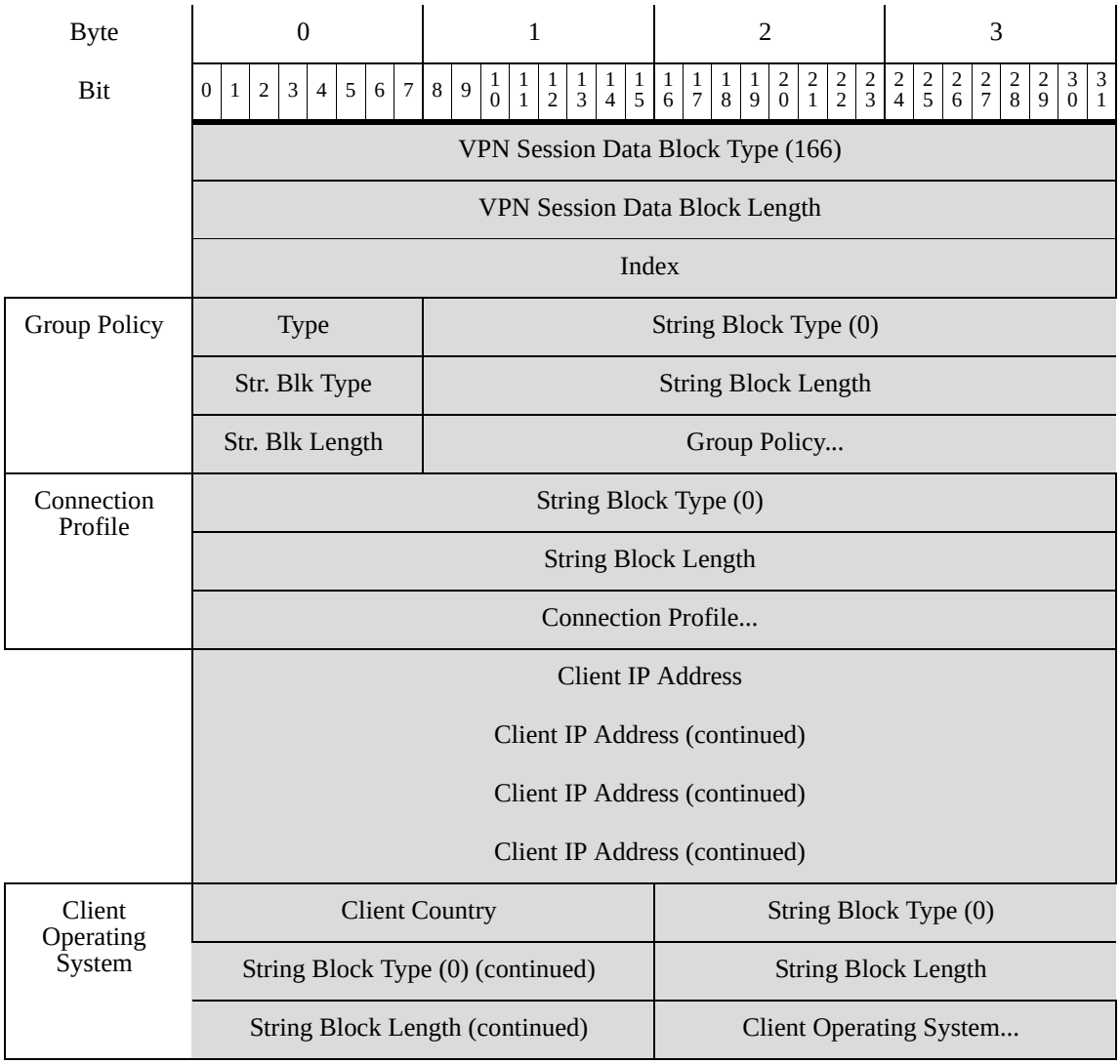
Table 4-87 User Information Data Block Fields (continued)

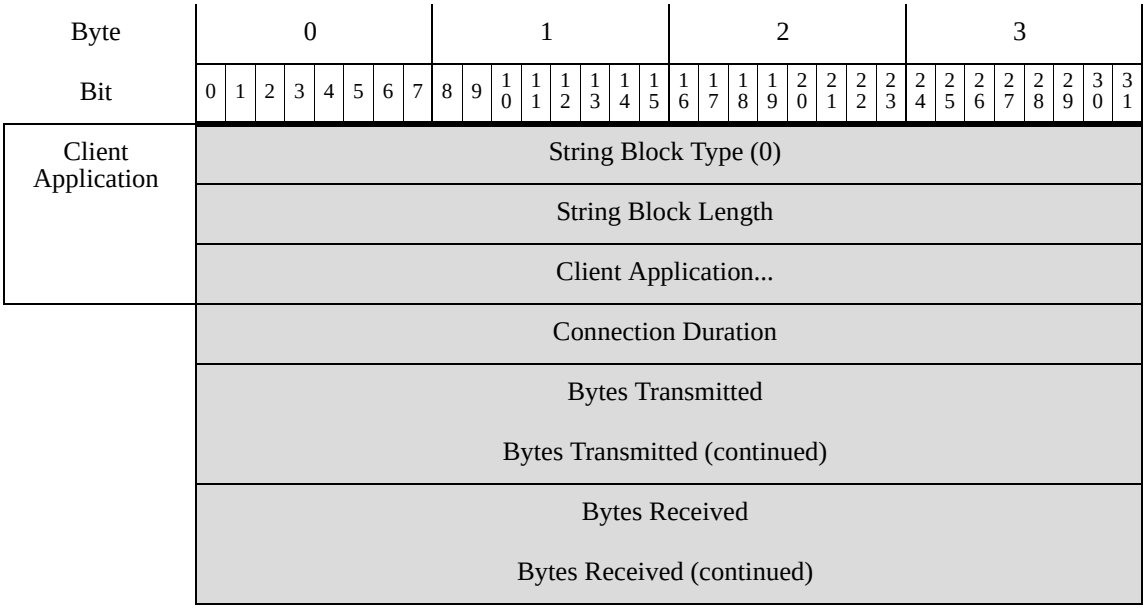
Field	Data Type	Description
Endpoint Profile ID	uint32	ID number of the type of device used by the connection endpoint. This is unique for each defense center and is resolved in metadata.
Security Group ID	uint32	ID number of the network traffic group.
Location IPv6 Address	uint16[8]	IP address of the interface communicating with ISE. Can be IPv4 or IPv6.

VPN Session Data Block for 6.2+

The VPN Session data block for 6.2+ has a block type of 166 in the series 1 group of blocks. The data block describes VPN Session information.

The following diagram shows the format of a VPN Session data block in 6.2+.





The following table describes the fields of the VPN Session data block.

Table 4-88 VPN Session Data Block Fields

Field	Data Type	Description
VPN Session Data Block Type	uint32	Initiates the VPN Session data block. This value is always `166`.
VPN Session Block Length	uint32	Number of bytes in the VPN Session data block, including eight bytes for the VPN Session data block type and length, plus the number of bytes in the VPN Session data fields that follow.
Index	uint32	A number generated by the VPN device to identify the session.
Type	uint8	Type of VPN session. Possibly values are: • `0` - Unknown • `1`- Cisco IKEv1 Client • `2`- AnyConnect IKEv1 Client • `3` - AnyConnect SSL • `4` - WebVPN Clientless • `5` - Site to Site IKEv2 • `6` - Site to Site IKEv2 • `7` - Generic IKEv2 RA Client
String Block Type	uint32	Initiates a String data block containing the Group Policy for the VPN Session. This value is always `0`.
String Block Length	uint32	Number of bytes in the username String data block, including eight bytes for the block type and length fields, plus the number of bytes in the group policy.
Group Policy	string	The name of the group policy assigned to the client when the VPN session is established.

Table 4-88 VPN Session Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the Connection Profile for the VPN session. This value is always 0.
String Block Length	uint32	Number of bytes in the username String data block, including eight bytes for the block type and length fields, plus the number of bytes in the connection profile.
Connection Profile	string	The name of the connection profile (tunnel group) used by the VPN session.
Client IP Address	uint8[16]	IP address of the VPN client device.
Client Country	uint16	Code for the country of the VPN client.
String Block Type	uint32	Initiates a String data block containing the operating system used by the client device. This value is always 0.
String Block Length	uint32	Number of bytes in the username String data block, including eight bytes for the block type and length fields, plus the number of bytes in the operating system name.
Client Operating System	string	The operating system for the client device.
String Block Type	uint32	Initiates a String data block containing the VPN application used by the client device. This value is always 0.
String block Length	uint32	Number of bytes in the username String data block, including eight bytes for the block type and length fields, plus the number of bytes in the VPN application.
Client Application	string	The VPN application for the client device.
Connection Duration	uint32	Duration of the VPN session in seconds. Only specified for VPN logout actions, otherwise the value is 0.
Bytes Transmitted	uint64	Number of bytes transmitted to the VPN client during the VPN session. Only specified for VPN logout actions, otherwise the value is 0.
Bytes Received	uint64	Number of bytes received from the VPN client during the VPN session. Only specified for VPN logout actions, otherwise the value is 0.

User Login Information Data Block 6.2+

The User Login Information data block is used in User Information Update messages and conveys changes in login information for a detected user. For more information, see User Information Update Message Block, page 4-61.

The User Login Information data block has a block type of 167 in the series 1 group of blocks for version 6.2+. It has new fields for VPN support. It supersedes block type 165. See User Login Information Data Block 6.1.x, page B-107 for more information.

The graphic below shows the format of the User Login Information data block:

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	User Login Information Block Type (167)																															
	User Login Information Block Length																															
	Timestamp																															
	IPv4 Address																															
User Name	String Block Type (0)																															
	String Block Length																															
	User Name...																															
Domain	String Block Type (0)																															
	String Block Length																															
	Domain...																															
	User ID																															
	Realm ID																															
	Endpoint Profile ID																															
	Security Group ID																															
	Protocol																															
	Port																Range Start															
	Start Port																End Port															
Email	String Block Type (0)																															
	String Block Length																															
	Email...																															
	IPv6 Address IPv6 Address, continued IPv6 Address, continued IPv6 Address, continued																															
	Location IPv6 Address																															

Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	Location IPv6 Address, continued																															
	Location IPv6 Address, continued																															
	Location IPv6 Address, continued																															
Reported By	Login Type								Auth. Type								String Block Type (0)															
	String Block Type (0), cont.																String Block Length															
	String Block Length, cont.																Reported By...															
Description	String Block Type (0)																															
	String Block Length																															
	Description...																															
VPN Session	VPN Session Data Block Type (166)																															
	VPN Session Data Block Length																															
	VPN Session...																															

The following table describes the components of the User Login Information data block.

Table 4-89 User Login Information Data Block Fields

Field	Data Type	Description
User Login Information Block Type	uint32	Initiates a User Login Information data block. This value is `167` for version 6.2+.
User Login Information Block Length	uint32	Total number of bytes in the User Login Information data block, including eight bytes for the user login information block type and length fields, plus the number of bytes in the user login information data that follows.
Timestamp	uint32	Timestamp of the event.
IPv4 Address	uint32	This field is reserved but no longer populated. The IPv4 address is stored in the IPv6 Address field. See IP Addresses, page 1-5 for more information.
String Block Type	uint32	Initiates a String data block containing the username for the user. This value is always `0`.
String Block Length	uint32	Number of bytes in the username String data block, including eight bytes for the block type and length fields, plus the number of bytes in the username.
Username	string	The user name for the user.

Table 4-89 User Login Information Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the domain. This value is always `0`.
String Block Length	uint32	Number of bytes in the username String data block, including eight bytes for the block type and length fields, plus the number of bytes in the domain.
Domain	string	Domain in which the user logged in.
User ID	uint32	Identification number of the user.
Realm ID	uint32	Integer ID which corresponds to an identity realm.
Endpoint Profile ID	uint32	ID number of the type of device used by the connection endpoint. This is unique for each DC and resolved in metadata.
Security Group ID	uint32	ID number of the network traffic group.
Protocol	uint32	Protocol used to detect or report the user. Possible values are: • `165` - FTP • `426` - SIP • `547` - AOL Instant Messenger • `683` - IMAP • `710` - LDAP • `767` - NTP • `773` - Oracle Database • `788` - POP3 • `1755` - MDNS
Port	uint16	The port number on which the user was detected.
Range Start	uint16	The start port in the port range used by the TS Agent.
Start Port	uint16	The start port in the range the TS Agent assigned to the individual user.
End Port	uint16	The end port in the range the TS Agent assigned to the individual user.
String Block Type	uint32	Initiates a String data block containing the email address for the user. This value is always `0`.
String Block Length	uint32	Number of bytes in the email address String data block, including eight bytes for the block type and length fields, plus the number of bytes in the email address.
Email	string	The email address for the user.
IPv6 Address	uint8[16]	IPv6 address from the host where the user was detected logging in, in IP address octets.
Location IPv6 Address	uint8[16]	Most recent IP address on which the user logged in. Can be either an IPv4 or IPv6 address.
Login Type	uint8	The type of user login detected.

Table 4-89 User Login Information Data Block Fields (continued)

Field	Data Type	Description
Authentication Type	uint8	Type of authentication used by the user. Values may be: • 0 - no authorization required • 1 - passive authentication, AD agent, or ISE session • 2 - captive portal successful authentication • 3 - captive portal guest authentication • 4 - captive portal failed authentication
String Block Type	uint32	Initiates a String data block containing the Reported By value. This value is always 0.
String Block Length	uint32	Number of bytes in the Reported By String data block, including eight bytes for the block type and length fields, plus the number of bytes in the Reported By field.
Reported By	string	The reporter of this activity, such as the name of the Active Directory server.
String Block Type	uint32	Initiates a String data block containing the Description value. This value is always 0.
String Block Length	uint32	Number of bytes in the Description String data block, including eight bytes for the block type and length fields, plus the number of bytes in the Description field.
Description	string	The Description of the login or logoff activity.
VPN Session Block Type	uint32	Initiates a VPN Session data block containing the VPN session data. This value is always 166.
VPN Session Data Block Length	uint32	Number of bytes in the VPN Session data block, including eight bytes for the block type and length fields, plus the number of bytes in the VPN Session data block.
VPN Session data	VPN Session Data	Information regarding the detected VPN session, if the login was associated with a VPN session. This is only used when there is a VPN session.

Discovery and Connection Event Series 2 Data Blocks

In the following table, the Data Block Status field indicates whether the block is current (the latest version) or legacy (used in an older version and can still be requested through eStreamer).

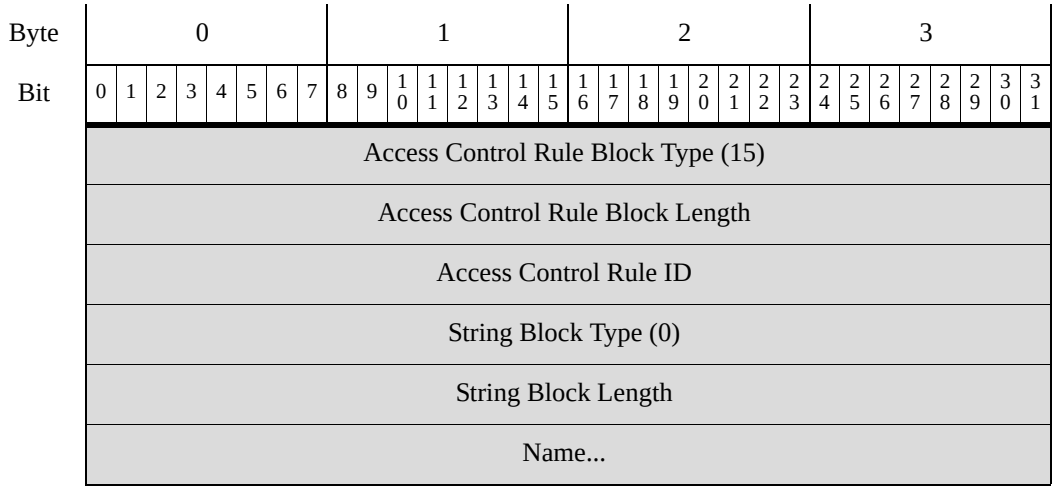
Table 4-90 Discovery and Connection Event Series 2 Block Types

Type	Content	Data Block Status	Description
15	Access Control Rule	Current	Used by access control rule metadata messages to map policy UUID and rule ID values to a descriptive string. See Access Control Rule Data Block, page 4-193.
21	Access Control Rule Reason	Current	Used by access control rule metadata messages to map access control rule reasons to a descriptive string. See Access Control Rule Reason Data Block 5.1+, page 4-194.
22	Security Intelligence Category	Current	Used to store Security Intelligence information. See Security Intelligence Category Data Block 5.1+, page 4-195.
57	User Data	Current	Used by the User Record metadata messages to provide the user ID number, protocol on which the user was detected, and the user name. See User Data Block, page 4-196.

Access Control Rule Data Block

The eStreamer service uses the Access Control Rule data block in access control rule metadata messages to map policy UUID and rule ID combinations to a descriptive string. The Access Control Rule data block has a block type of 15 in the series 2 group of blocks.

The following graphic shows the structure of the Access Control Rule data block:



The following table describes the fields in the Access Control Rule data block.

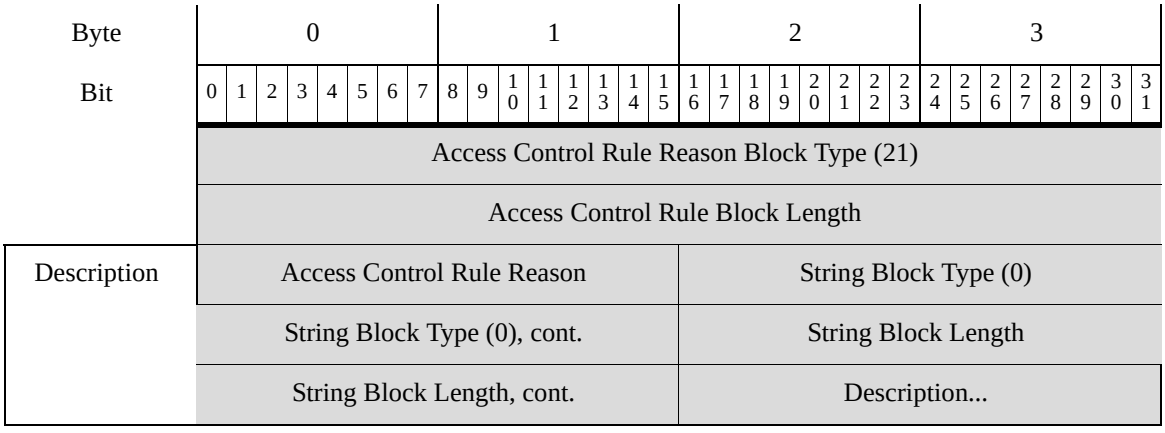
Table 4-91 Access Control Rule Data Block Fields

Field	Data Type	Description
Access Control Rule Block Type	uint32	Initiates an Access Control Rule block. This value is always 15.
Access Control Rule Block Length	uint32	Total number of bytes in the Access Control Rule block, including eight bytes for the Access Control Rule block type and length fields, plus the number of bytes of data that follows.
Access Control Rule ID	uint32	The internal Cisco identifier for the access control rule.
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the access control rule UUID and access control rule ID. This value is always 0.
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Name field.
Name	string	The descriptive name.

Access Control Rule Reason Data Block 5.1+

The eStreamer service uses the Access Control Rule Reason data block in Access Control Rule Reason metadata messages to map Access Control reasons to a descriptive string. The Access Control Rule Reason data block has a block type of 21 in the series 2 group of blocks.

The following graphic shows the structure of the Access Control Rule Reason data block:



The following table describes the fields in the Access Control Rule Reason data block.

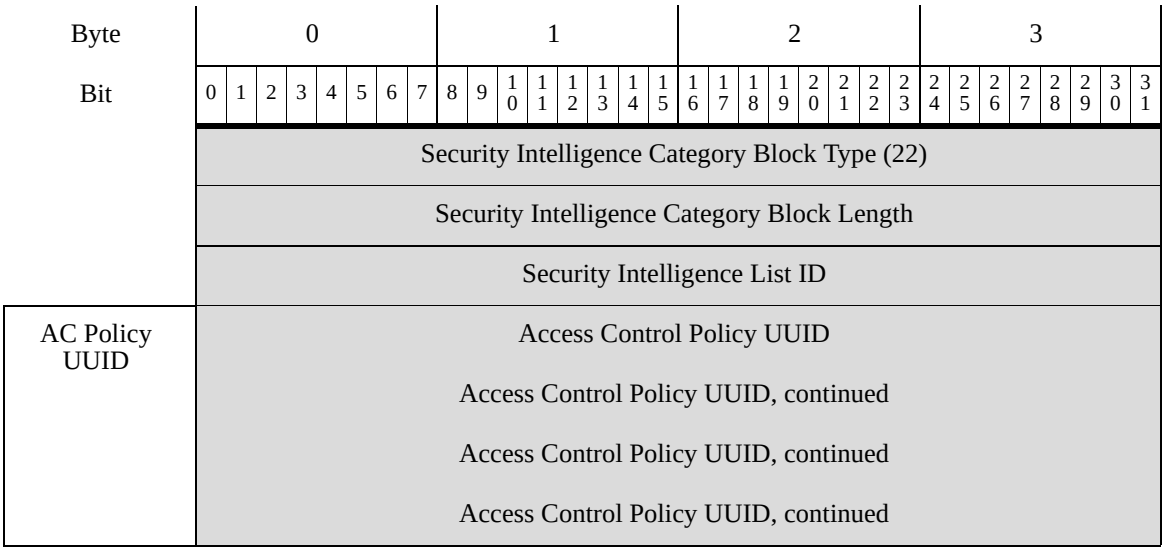
Table 4-92 Access Control Rule Reason Data Block Fields

Field	Data Type	Description
Access Control Rule Reason Block Type	uint32	Initiates an Access Control Rule Reason block. This value is always `21`.
Access Control Rule Reason Block Length	uint32	Total number of bytes in the Access Control Rule Reason block, including eight bytes for the Access Control Rule Reason block type and length fields, plus the number of bytes of data that follows.
Access Control Rule Reason	uint16	The reason the Access Control rule logged the connection.
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the access control rule reason. This value is always `0`.
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Description field.
Description	string	Description of the Access Control rule reason.

Security Intelligence Category Data Block 5.1+

The eStreamer service uses the Security Intelligence Category data block in access control rule metadata messages to stream Security Intelligence information. The Security Intelligence Category data block has a block type of 22 in the series 2 group of blocks.

The following graphic shows the structure of the Security Intelligence Category data block:



Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Rule Name	String Block Type (0)																															
	String Block Length																															
	Security Intelligence List Name...																															

The following table describes the fields in the Security Intelligence Category data block:

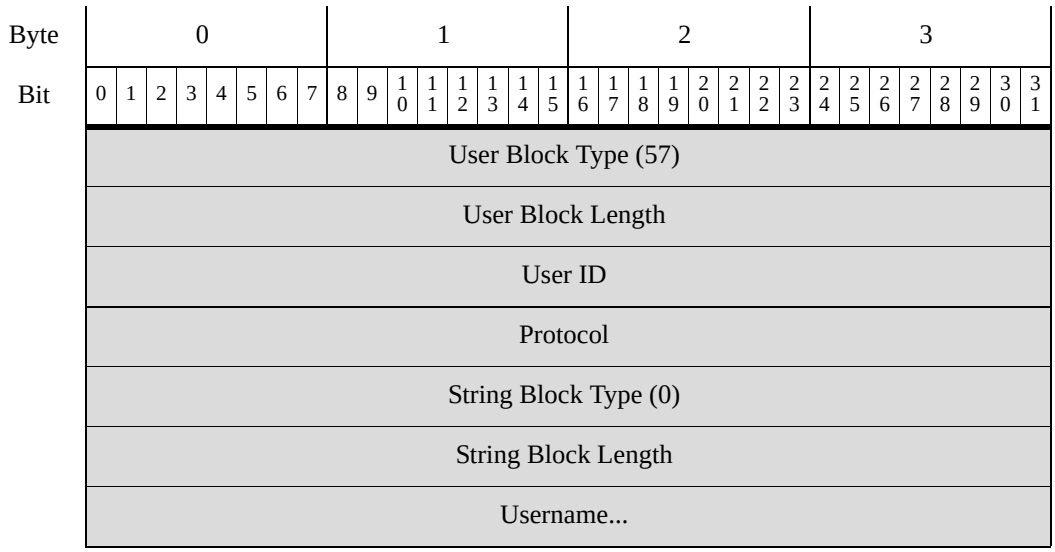
Table 4-93 Security Intelligence Category Data Block fields

Field	Data Type	Description
Security Intelligence Category Block Type	uint32	Initiates an Security Intelligence Category data block. This value is always `22`.
Security Intelligence Category Block Length	uint32	Total number of bytes in the Security Intelligence Category block, including eight bytes for the Security Intelligence Category block type and length fields, plus the number of bytes of data that follows.
Security Intelligence List ID	uint32	The ID of the IP blacklist or whitelist triggered by the connection.
Access Control Policy UUID	uint8[16]	The UUID of the access control policy configured for Security Intelligence.
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the access control rule reason. This value is always `0`.
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Security Intelligence List Name field.
Security Intelligence List Name	string	The name of the Security Intelligence category IP blacklist or whitelist triggered by the connection.

User Data Block

The eStreamer service uses the User data block in User Record metadata messages to provide the user ID number, protocol on which the user was detected, and the user name. The User data block has a block type of 57 in the series 2 group of blocks.

The following graphic shows the structure of the User data block:



The following table describes the fields in the User data block.

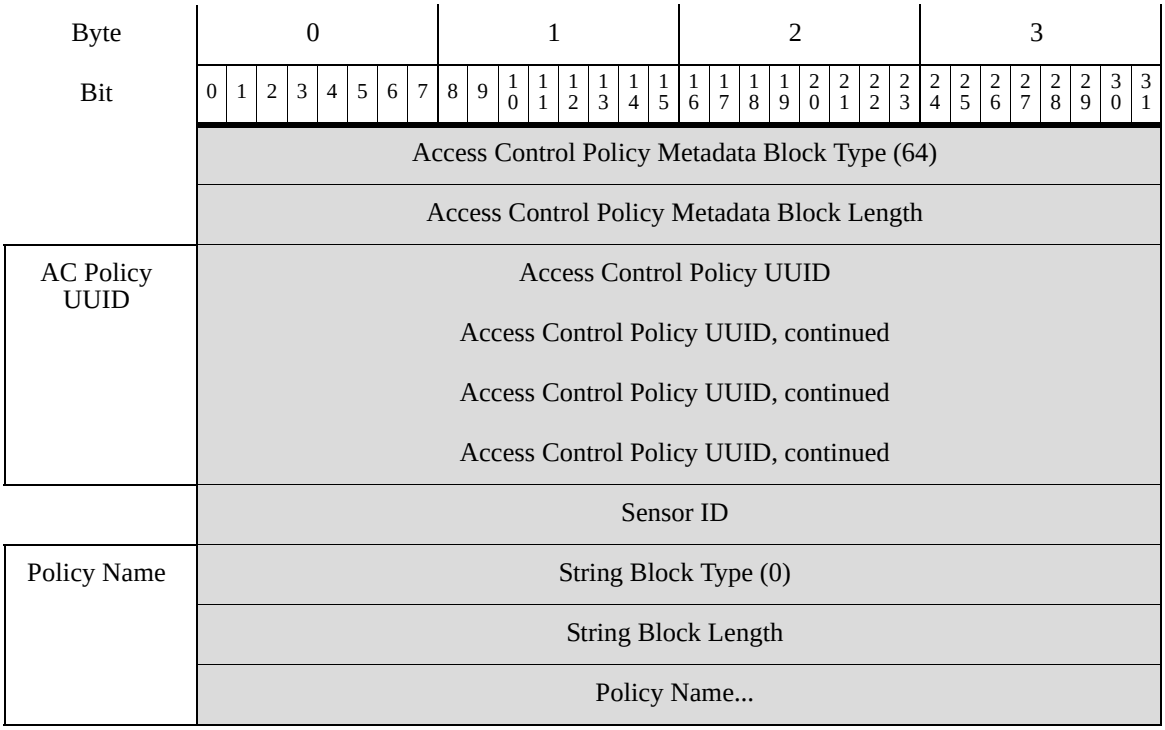
Table 4-94 User Data Block Fields

Field	Data Type	Description
User Block Type	uint32	Initiates a User block. This value is always `57`.
User Block Length	uint32	Total number of bytes in the User block, including eight bytes for the User block type and length fields, plus the number of bytes of data that follows.
User ID	uint32	The unique identifier for the user.
Protocol	uint32	Protocol used to detect or report the user. Possible values are: • `165` - FTP • `426` - SIP • `547` - AOL Instant Messenger • `683` - IMAP • `710` - LDAP • `767` - NTP • `773` - Oracle Database • `788` - POP3 • `1755` - MDNS
String Block Type	uint32	Initiates a String data block containing the username. This value is always `0`.
String Block Length	uint32	The number of bytes included in the username String data block, including eight bytes for the block type and header fields plus the number of bytes in the Username field.
Username	string	The name of the user

Access Control Policy Metadata Block 6.0+

The eStreamer service uses the Access Control Policy Metadata data block in Access Control Policy metadata messages to provide Access Control Policy information. The Access Control Rule Policy metadata block has a block type of 64 in the series 2 group of blocks.

The following graphic shows the structure of the Access Control Policy metadata block:



The following table describes the fields in the Access Control Rule Reason data block.

Table 4-95 Access Control Rule Reason Data Block Fields

Field	Data Type	Description
Access Control Policy Metadata Block Type	uint32	Initiates an Access Control Policy metadata block. This value is always `64`.
Access Control Policy Metadata Block Length	uint32	Total number of bytes in the Access Control Policy Metadata block, including eight bytes for the Access Control Policy Metadata block type and length fields, plus the number of bytes of data that follows.
Access Control Policy UUID	uint8[16]	UUID of the Access Control Policy
Sensor ID	uint32	ID Number of the Sensor associated with the Access Control policy
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the access control policy. This value is always `0`.

Table 4-95 Access Control Rule Reason Data Block Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Name field.
Name	string	Name of the Access Control policy.