Understanding Legacy Data Structures

This appendix contains information about data structures supported by eStreamer at previous versions of Firepower System products.

If your client uses event stream requests with bits set to request data in older version formats, you can use the information in this appendix to identify the data structures of the data messages you receive.

Note that prior to version 5.0, separate detection engines were assigned IDs. For version 5.0, devices are assigned IDs. Based on the version, data structures reflect this.

Note This appendix describes only data structures from version 4.9 or later of the Firepower System. If you require documentation for structures from earlier data structure versions, contact Cisco Customer Support.

See the following sections for more information:

Legacy Intrusion Data Structures

Intrusion Event (IPv4) Record 5.0.x - 5.1

The fields in the intrusion event (IPv4) record are shaded in the following graphic. The record type is 207.

You request intrusion event records by setting the intrusion event flag or the extended requests flag in the request message. See Request Flags, page 2-11 and Submitting Extended Requests, page 2-4.

For version 5.0.x - 5.1 intrusion events, the event ID, the managed device ID, and the event second form a unique identifier.

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 (207)															
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)																																
Device ID																																
Event ID																																
Event Second																																
Event Microsecond																																
Rule ID (Signature ID)																																
Generator ID																																
Rule Revision																																
Classification ID																																
Priority ID																																
Source IPv4 Address																																
Destination IPv4 Address																																
Source Port																	Destination Port															
IP Protocol ID									Impact Flags								Impact								Blocked							
MPLS Label																																

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
VLAN ID																	Pad															
Policy UUID																																
Policy UUID, continued																																
Policy UUID, continued																																
Policy UUID, continued																																
User ID																																
Web Application ID																																
Client Application ID																																
Application Protocol ID																																
Access Control Rule ID																																
Access Control Policy UUID																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Interface Ingress UUID																																
Interface Ingress UUID, continued																																
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Interface Egress UUID, continued																																
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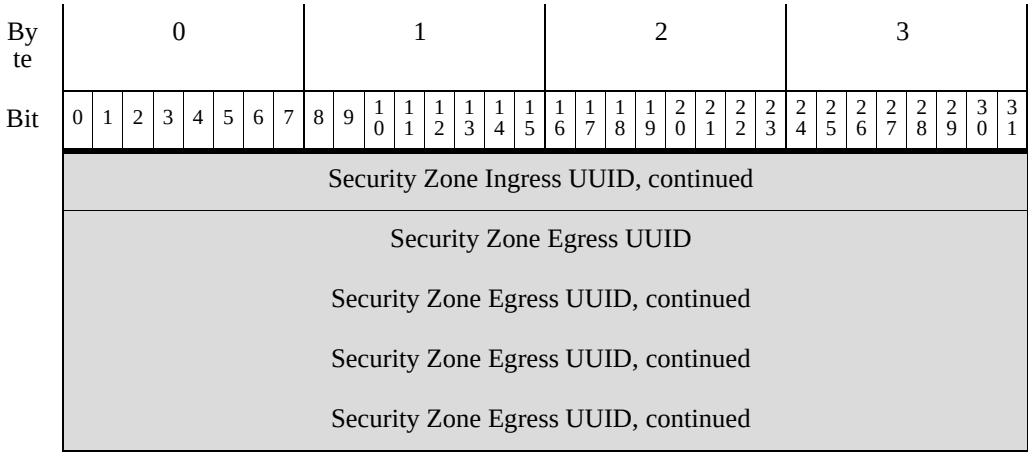
Security Zone Ingress UUID																																
Security Zone Ingress UUID, continued																																
Security Zone Ingress UUID, continued																																



The following table describes each intrusion event record data field.

Table B-1 Intrusion Event (IPv4) Record Fields

Field	Data Type	Description
Device ID	unit32	Contains the identification number of the detecting managed device. You can obtain the managed device name by requesting Version 3 or 4 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Event ID	uint32	Event identification number.
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) of the event's detection.
Event Microsecond	uint32	Microsecond (one millionth of a second) increment of the timestamp of the event's detection.
Rule ID (Signature ID)	uint32	Rule identification number that corresponds with the event.
Generator ID	uint32	Identification number of the Firepower System preprocessor that generated the event.
Rule Revision	uint32	Rule revision number.
Classification ID	uint32	Identification number of the event classification message.
Priority ID	uint32	Identification number of the priority associated with the event.
Source IPv4 Address	uint8[4]	Source IPv4 address used in the event, in address octets.
Destination IPv4 Address	uint8[4]	Destination IPv4 address used in the event, in address octets.
Source Port	uint16	The source port number if the event protocol type is TCP or UDP.
Destination Port	uint16	The destination port number if the event protocol type is TCP or UDP.

Table B-1 Intrusion Event (IPv4) Record Fields (continued)

Field	Data Type	Description
IP Protocol Number	uint8	IANA-specified protocol number. For example: • `0` — IP • `1` — ICMP • `6` — TCP • `17` — UDP
Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • `0x01` (bit 0) — Source or destination host is in a network monitored by the system. • `0x02` (bit 1) — Source or destination host exists in the network map. • `0x04` (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • `0x08` (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • `0x10` (bit 4) — There is a vulnerability mapped to the server detected in the event. • `0x20` (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • `0x40` (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • `0x80` (bit 7) — There is a vulnerability mapped to the client detected in the event. The following impact level values map to specific priorities on the Defense Center. An `X` indicates the value can be `0` or `1`: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` • orange (2, potentially vulnerable): `00X00111` • yellow (3, currently not vulnerable): `00X00011` • blue (4, unknown target): `00X00001`

Table B-1 Intrusion Event (IPv4) Record Fields (continued)

Field	Data Type	Description
Impact	uint8	Impact flag value of the event. Values are: • 1 — Red (vulnerable) • 2 — Orange (potentially vulnerable) • 3 — Yellow (currently not vulnerable) • 4 — Blue (unknown target) • 5 — (unknown impact)
Blocked	uint8	Value indicating whether the event was blocked. • 0 — Not blocked • 1 — Blocked • 2 — Would be blocked (but not permitted by configuration)
MPLS Label	uint32	MPLS label.
VLAN ID	uint16	Indicates the ID of the VLAN where the packet originated.
Pad	uint16	Reserved for future use.
Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the intrusion policy.
User ID	uint32	The internal identification number for the user, if applicable.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.
Access Control Rule ID	uint32	A rule ID number that acts as a unique identifier for the access control rule.
Access Control Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the access control policy.
Ingress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the ingress interface.
Egress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the egress interface.
Ingress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the ingress security zone.
Egress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the egress security zone.

Intrusion Event (IPv6) Record 5.0.x - 5.1

The fields in the intrusion event (IPv6) record are shaded in the following graphic. The record type is 208.

You request intrusion event records by setting the intrusion event flag or the extended requests flag in the request message. See Request Flags, page 2-11 and Submitting Extended Requests, page 2-4.

For version 5.0.x - 5.1 intrusion events, the event ID, the managed device ID, and the event second form a unique identifier.

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 (208)															
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)																																
Device ID																																
Event ID																																
Event Second																																
Event Microsecond																																
Rule ID (Signature ID)																																
Generator ID																																
Rule Revision																																
Classification ID																																
Priority ID																																
Source IPv6 Address																																
Source IPv6 Address, continued																																
Source IPv6 Address, continued																																
Source IPv6 Address, continued																																
Destination IPv6 Address																																
Destination IPv6 Address, continued																																
Destination IPv6 Address, 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
Destination IPv6 Address, continued																																
Source Port/ICMP Type																	Destination Port/ICMP Code															
IP Protocol ID									Impact Flags								Impact								Blocked							
MPLS Label																																
VLAN ID																	Pad															
Policy UUID																																
Policy UUID, continued																																
Policy UUID, continued																																
Policy UUID, continued																																
User ID																																
Web Application ID																																
Client Application ID																																
Application Protocol ID																																
Access Control Rule ID																																
Access Control Policy UUID																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Interface Ingress UUID																																
Interface Ingress UUID, continued																																
Interface Ingress UUID, continued																																
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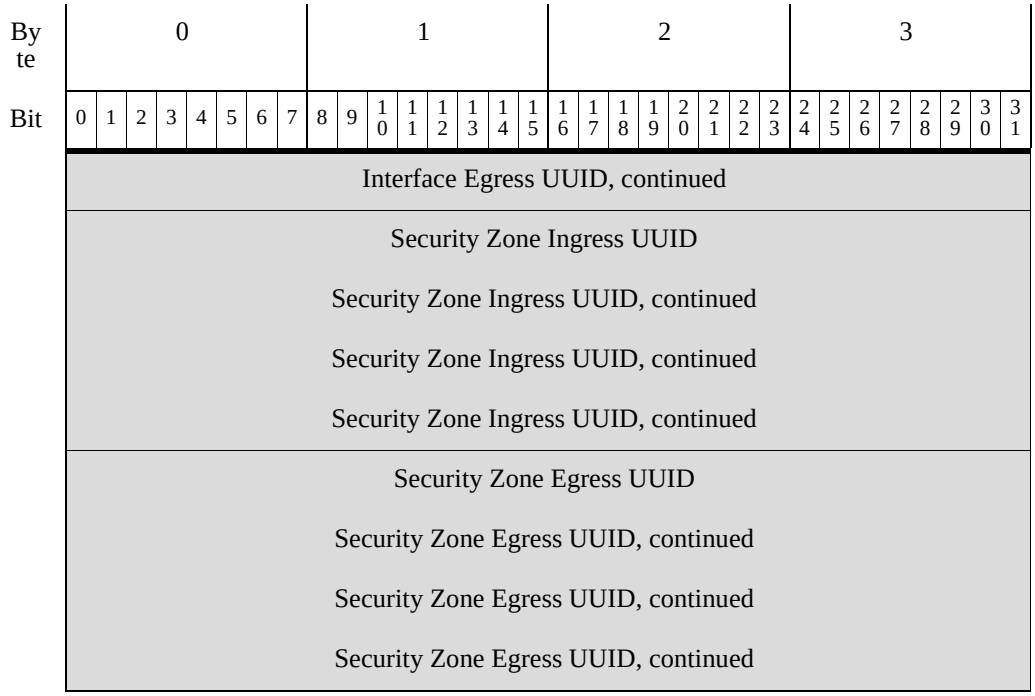
Interface Egress UUID																																
Interface Egress UUID, continued																																
Interface Egress UUID, continued																																



The following table describes each intrusion event record data field.

Table B-2 Intrusion Event (IPv6) Record Fields

Field	Data Type	Description
Device ID	unit32	Contains the identification number of the detecting device. You can obtain the managed device name by requesting Version 3 or 4 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Event ID	uint32	Event identification number.
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) of the event's detection.
Event Microsecond	uint32	Microsecond (one millionth of a second) increment of the timestamp of the event's detection.
Rule ID (Signature ID)	uint32	Rule identification number that corresponds with the event.
Generator ID	uint32	Identification number of the Firepower System preprocessor that generated the event.
Rule Revision	uint32	Rule revision number.
Classification ID	uint32	Identification number of the event classification message.
Priority ID	uint32	Identification number of the priority associated with the event.
Source IPv6 Address	uint8[16]	Source IPv6 address used in the event, in address octets.
Destination IPv6 Address	uint8[16]	Destination IPv6 address used in the event, in address octets.

Table B-2 Intrusion Event (IPv6) Record Fields (continued)

Field	Data Type	Description
Source Port/ICMP Type	uint16	The source port number if the event protocol type is TCP or UDP. If the protocol type is ICMP, this indicates the ICMP type.
Destination Port/ICMP Code	uint16	The destination port number if the event protocol type is TCP or UDP. If the protocol type is ICMP, this indicates the ICMP code.
IP Protocol Number	uint8	IANA-specified protocol number. For example: • `0` — IP • `1` — ICMP • `6` — TCP • `17` — UDP
Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • `0x01` (bit 0) — Source or destination host is in a network monitored by the system. • `0x02` (bit 1) — Source or destination host exists in the network map. • `0x04` (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • `0x08` (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • `0x10` (bit 4) — There is a vulnerability mapped to the server detected in the event. • `0x20` (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • `0x40` (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • `0x80` (bit 7) — There is a vulnerability mapped to the client detected in the event. The following impact level values map to specific priorities on the Defense Center. An `X` indicates the value can be `0` or `1`: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` • orange (2, potentially vulnerable): `00X00111` • yellow (3, currently not vulnerable): `00X00011` • blue (4, unknown target): `00X00001`

Table B-2 Intrusion Event (IPv6) Record Fields (continued)

Field	Data Type	Description
Impact	uint8	Impact flag value of the event. Values are: • 1 — Red (vulnerable) • 2 — Orange (potentially vulnerable) • 3 — Yellow (currently not vulnerable) • 4 — Blue (unknown target) • 5 — (unknown impact)
Blocked	uint8	Value indicating whether the event was blocked. • 0 — Not blocked • 1 — Blocked • 2 — Would be blocked (but not permitted by configuration)
MPLS Label	uint32	MPLS label. (Applies to 4.9+ events only.)
VLAN ID	uint16	Indicates the ID of the VLAN where the packet originated. (Applies to 4.9+ events only.)
Pad	uint16	Reserved for future use.
Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the intrusion policy.
User ID	uint32	The internal identification number for the user, if applicable.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.
Access Control Rule ID	uint32	A rule ID number that acts as a unique identifier for the access control rule.
Access Control Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the access control policy.
Ingress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the ingress interface.
Egress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the egress interface.
Ingress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the ingress security zone.
Egress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the egress security zone.

Intrusion Event Record 5.2.x

The fields in the intrusion event record are shaded in the following graphic. The record type is 400 and the block type is 34 in the series 2 set of data blocks.

You can request 5.2.x intrusion events from eStreamer only by extended request, for which you request event type code 12 and version code 5 in the Stream Request message (see Submitting Extended Requests, page 2-4 for information about submitting extended requests).

For version 5.2.x intrusion events, the event ID, the managed device ID, and the event second form a unique identifier. The connection second, connection instance, and connection counter together form a unique identifier for the connection event associated with the intrusion event.

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 (400)															
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)																																
Block Type (34)																																
Block Length																																
Device ID																																
Event ID																																
Event Second																																
Event Microsecond																																
Rule ID (Signature ID)																																
Generator ID																																
Rule Revision																																
Classification ID																																
Priority 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
Source IP Address																																
Source IP Address, continued																																
Source IP Address, continued																																
Source IP Address, continued																																
Destination IP Address																																
Destination IP Address, continued																																
Destination IP Address, continued																																
Destination IP Address, continued																																
Source Port or ICMP Type																	Destination Port or ICMP Code															
IP Protocol ID									Impact Flags								Impact								Blocked							
MPLS Label																																
VLAN ID																	Pad															
Policy UUID																																
Policy UUID, continued																																
Policy UUID, continued																																
Policy UUID, continued																																
User ID																																
Web Application ID																																
Client Application ID																																
Application Protocol ID																																
Access Control Rule ID																																
Access Control Policy UUID																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Interface Ingress UUID																																

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
Interface Ingress UUID, continued																																
Interface Ingress UUID, continued																																
Interface Ingress UUID, continued																																
Interface Egress UUID																																
Interface Egress UUID, continued																																
Interface Egress UUID, continued																																
Interface Egress UUID, continued																																
Security Zone Ingress UUID																																
Security Zone Ingress UUID, continued																																
Security Zone Ingress UUID, continued																																
Security Zone Ingress UUID, continued																																
Security Zone Egress UUID																																
Security Zone Egress UUID, continued																																
Security Zone Egress UUID, continued																																
Security Zone Egress UUID, continued																																
Connection Timestamp																																
Connection Instance ID																	Connection Counter															
Source Country																	Destination Country															

The following table describes each intrusion event record data field.

Table B-3 Intrusion Event Record 5.2.x Fields

Field	Data Type	Description
Block Type	unint32	Initiates an Intrusion Event data block. This value is always `34`.
Block Length	unint32	Total number of bytes in the Intrusion Event data block, including eight bytes for the Intrusion Event block type and length fields, plus the number of bytes of data that follows.
Device ID	unit32	Contains the identification number of the detecting managed device. You can obtain the managed device name by requesting Version 3 or 4 metadata. See Managed Device Record Metadata, page 3-34 for more information.

Table B-3 Intrusion Event Record 5.2.x Fields (continued)

Field	Data Type	Description
Event ID	uint32	Event identification number.
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) of the event's detection.
Event Microsecond	uint32	Microsecond (one millionth of a second) increment of the timestamp of the event's detection.
Rule ID (Signature ID)	uint32	Rule identification number that corresponds with the event.
Generator ID	uint32	Identification number of the Firepower System preprocessor that generated the event.
Rule Revision	uint32	Rule revision number.
Classification ID	uint32	Identification number of the event classification message.
Priority ID	uint32	Identification number of the priority associated with the event.
Source IP Address	uint8[16]	Source IPv4 or IPv6 address used in the event.
Destination IP Address	uint8[16]	Destination IPv4 or IPv6 address used in the event.
Source Port or ICMP Type	uint16	The source port number if the event protocol type is TCP or UDP, or the ICMP type if the event is caused by ICMP traffic.
Destination Port or ICMP Code	uint16	The destination port number if the event protocol type is TCP or UDP, or the ICMP code if the event is caused by ICMP traffic.
IP Protocol Number	uint8	IANA-specified protocol number. For example: • `0` — IP • `1` — ICMP • `6` — TCP • `17` — UDP

Table B-3 Intrusion Event Record 5.2.x Fields (continued)

Field	Data Type	Description
Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • `0x01` (bit 0) — Source or destination host is in a network monitored by the system. • `0x02` (bit 1) — Source or destination host exists in the network map. • `0x04` (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • `0x08` (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • `0x10` (bit 4) — There is a vulnerability mapped to the server detected in the event. • `0x20` (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • `0x40` (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • `0x80` (bit 7) — There is a vulnerability mapped to the client detected in the event. (version 5.0+ only) The following impact level values map to specific priorities on the Defense Center. An `x` indicates the value can be 0 or 1: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` (version 5.0+ only) • orange (2, potentially vulnerable): `00X0011X` • yellow (3, currently not vulnerable): `00X0001X` • blue (4, unknown target): `00X00001`
Impact	uint8	Impact flag value of the event. Values are: • `1` — Red (vulnerable) • `2` — Orange (potentially vulnerable) • `3` — Yellow (currently not vulnerable) • `4` — Blue (unknown target) • `5` — (unknown impact)
Blocked	uint8	Value indicating whether the event was blocked. • `0` — Not blocked • `1` — Blocked • `2` — Would be blocked (but not permitted by configuration)

Table B-3 Intrusion Event Record 5.2.x Fields (continued)

Field	Data Type	Description
MPLS Label	uint32	MPLS label.
VLAN ID	uint16	Indicates the ID of the VLAN where the packet originated.
Pad	uint16	Reserved for future use.
Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the intrusion policy.
User ID	uint32	The internal identification number for the user, if applicable.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.
Access Control Rule ID	uint32	A rule ID number that acts as a unique identifier for the access control rule.
Access Control Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the access control policy.
Ingress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the ingress interface.
Egress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the egress interface.
Ingress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the ingress security zone.
Egress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the egress security zone.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the connection event associated with the intrusion event.
Connection Instance ID	uint16	Numerical ID of the Snort instance on the managed device that generated the connection event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint 16	Code for the country of the destination host.

Intrusion Event Record 5.3

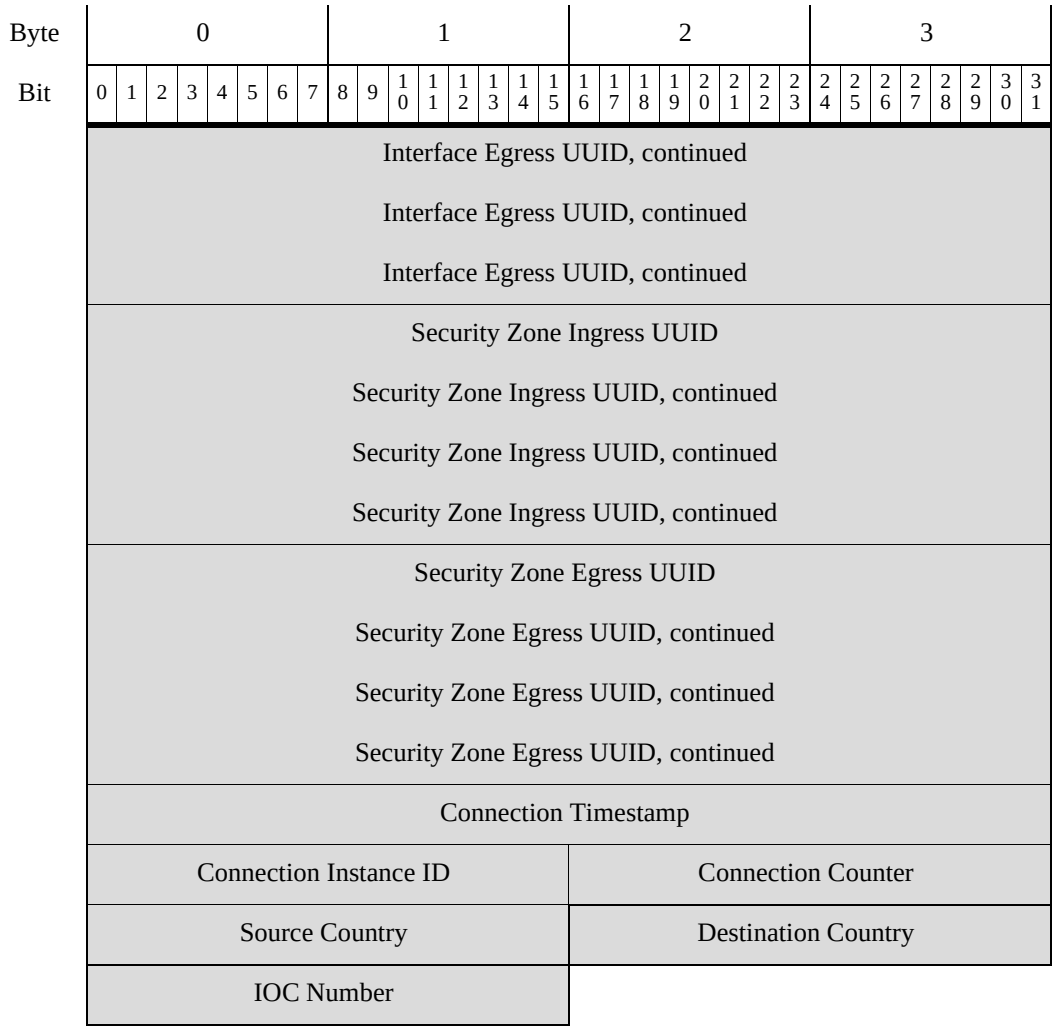
The fields in the intrusion event record are shaded in the following graphic. The record type is 400 and the block type is 41 in the series 2 set of data blocks.

You can request 5.3 intrusion events from eStreamer only by extended request, for which you request event type code 12 and version code 6 in the Stream Request message (see Submitting Extended Requests, page 2-4 for information about submitting extended requests).

For version 5.3 intrusion events, the event ID, the managed device ID, and the event second form a unique identifier. The connection second, connection instance, and connection counter together form a unique identifier for the connection event associated with the intrusion event.

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 (400)															
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)																																
Block Type (41)																																
Block Length																																
Device ID																																
Event ID																																
Event Second																																
Event Microsecond																																
Rule ID (Signature ID)																																
Generator ID																																
Rule Revision																																
Classification ID																																
Priority ID																																
Source IP Address Source IP Address, continued Source IP Address, continued Source IP Address, 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
Destination IP Address																																
Destination IP Address, continued																																
Destination IP Address, continued																																
Destination IP Address, continued																																
Source Port or ICMP Type																	Destination Port or ICMP Code															
IP Protocol ID									Impact Flags								Impact								Blocked							
MPLS Label																																
VLAN ID																	Pad															
Policy UUID																																
Policy UUID, continued																																
Policy UUID, continued																																
Policy UUID, continued																																
User ID																																
Web Application ID																																
Client Application ID																																
Application Protocol ID																																
Access Control Rule ID																																
Access Control Policy UUID																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Interface Ingress UUID																																
Interface Ingress UUID, continued																																
Interface Ingress UUID, continued																																
Interface Ingress UUID, continued																																
Interface Egress UUID																																



The following table describes each intrusion event record data field.

Table B-4 Intrusion Event Record 5.3 Fields

Field	Data Type	Description
Block Type	unint32	Initiates an Intrusion Event data block. This value is always `34`.
Block Length	unint32	Total number of bytes in the Intrusion Event data block, including eight bytes for the Intrusion Event block type and length fields, plus the number of bytes of data that follows.
Device ID	unit32	Contains the identification number of the detecting managed device. You can obtain the managed device name by requesting Version 3 or 4 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Event ID	uint32	Event identification number.
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) of the event's detection.
Event Microsecond	uint32	Microsecond (one millionth of a second) increment of the timestamp of the event's detection.

Table B-4 Intrusion Event Record 5.3 Fields (continued)

Field	Data Type	Description
Rule ID (Signature ID)	uint32	Rule identification number that corresponds with the event.
Generator ID	uint32	Identification number of the Firepower System preprocessor that generated the event.
Rule Revision	uint32	Rule revision number.
Classification ID	uint32	Identification number of the event classification message.
Priority ID	uint32	Identification number of the priority associated with the event.
Source IP Address	uint8[16]	Source IPv4 or IPv6 address used in the event.
Destination IP Address	uint8[16]	Destination IPv4 or IPv6 address used in the event.
Source Port or ICMP Type	uint16	The source port number if the event protocol type is TCP or UDP, or the ICMP type if the event is caused by ICMP traffic.
Destination Port or ICMP Code	uint16	The destination port number if the event protocol type is TCP or UDP, or the ICMP code if the event is caused by ICMP traffic.
IP Protocol Number	uint8	IANA-specified protocol number. For example: • `0` — IP • `1` — ICMP • `6` — TCP • `17` — UDP

Table B-4 Intrusion Event Record 5.3 Fields (continued)

Field	Data Type	Description
Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • `0x01` (bit 0) — Source or destination host is in a network monitored by the system. • `0x02` (bit 1) — Source or destination host exists in the network map. • `0x04` (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • `0x08` (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • `0x10` (bit 4) — There is a vulnerability mapped to the server detected in the event. • `0x20` (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • `0x40` (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • `0x80` (bit 7) — There is a vulnerability mapped to the client detected in the event. (version 5.0+ only) The following impact level values map to specific priorities on the Defense Center. An `X` indicates the value can be `0` or `1`: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` (version 5.0+ only) • orange (2, potentially vulnerable): `00X0011X` • yellow (3, currently not vulnerable): `00X0001X` • blue (4, unknown target): `00X00001`
Impact	uint8	Impact flag value of the event. Values are: • `1` — Red (vulnerable) • `2` — Orange (potentially vulnerable) • `3` — Yellow (currently not vulnerable) • `4` — Blue (unknown target) • `5` — (unknown impact)
Blocked	uint8	Value indicating whether the event was blocked. • `0` — Not blocked • `1` — Blocked • `2` — Would be blocked (but not permitted by configuration)

Table B-4 Intrusion Event Record 5.3 Fields (continued)

Field	Data Type	Description
MPLS Label	uint32	MPLS label.
VLAN ID	uint16	Indicates the ID of the VLAN where the packet originated.
Pad	uint16	Reserved for future use.
Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the intrusion policy.
User ID	uint32	The internal identification number for the user, if applicable.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.
Access Control Rule ID	uint32	A rule ID number that acts as a unique identifier for the access control rule.
Access Control Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the access control policy.
Ingress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the ingress interface.
Egress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the egress interface.
Ingress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the ingress security zone.
Egress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the egress security zone.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the connection event associated with the intrusion event.
Connection Instance ID	uint16	Numerical ID of the Snort instance on the managed device that generated the connection event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint 16	Code for the country of the destination host.
IOC Number	uint16	ID Number of the compromise associated with this event.

Intrusion Event Record 5.1.1.x

The fields in the intrusion event record are shaded in the following graphic. The record type is 400 and the block type is 25.

You can request 5.1.1.x intrusion events from eStreamer only by extended request, for which you request event type code 12 and version code 4 in the Stream Request message (see Submitting Extended Requests, page 2-4 for information about submitting extended requests).

For version 5.1.1.x intrusion events, the event ID, the managed device ID, and the event second form a unique identifier. The connection second, connection instance, and connection counter together form a unique identifier for the connection event associated with the intrusion event.

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 (400)															
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)																																
Block Type (25)																																
Block Length																																
Device ID																																
Event ID																																
Event Second																																
Event Microsecond																																
Rule ID (Signature ID)																																
Generator ID																																
Rule Revision																																
Classification ID																																
Priority ID																																
Source IP Address Source IP Address, continued Source IP Address, continued Source IP Address, 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
Destination IP Address Destination IP Address, continued Destination IP Address, continued Destination IP Address, continued																																
Source Port/ICMP Type																	Destination Port/ICMP Code															
IP Protocol ID									Impact Flags								Impact								Blocked							
MPLS Label																																
VLAN ID																	Pad															
Policy UUID Policy UUID, continued Policy UUID, continued Policy UUID, continued																																
User ID																																
Web Application ID																																
Client Application ID																																
Application Protocol ID																																
Access Control Rule ID																																
Access Control Policy UUID Access Control Policy UUID, continued Access Control Policy UUID, continued Access Control Policy UUID, continued																																
Interface Ingress UUID Interface Ingress UUID, continued Interface Ingress UUID, continued Interface Ingress UUID, 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
Interface Egress UUID																																
Interface Egress UUID, continued																																
Interface Egress UUID, continued																																
Interface Egress UUID, continued																																
Security Zone Ingress UUID																																
Security Zone Ingress UUID, continued																																
Security Zone Ingress UUID, continued																																
Security Zone Ingress UUID, continued																																
Security Zone Egress UUID																																
Security Zone Egress UUID, continued																																
Security Zone Egress UUID, continued																																
Security Zone Egress UUID, continued																																
Connection Timestamp																																
Connection Instance ID																	Connection Counter															

The following table describes each intrusion event record data field.

Table B-5 Intrusion Event Record 5.1.1 Fields

Field	Data Type	Description
Block Type	unint32	Initiates an Intrusion Event data block. This value is always `25`.
Block Length	unint32	Total number of bytes in the Intrusion Event data block, including eight bytes for the Intrusion Event block type and length fields, plus the number of bytes of data that follows.
Device ID	unit32	Contains the identification number of the detecting managed device. You can obtain the managed device name by requesting Version 3 or 4 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Event ID	uint32	Event identification number.
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) of the event's detection.
Event Microsecond	uint32	Microsecond (one millionth of a second) increment of the timestamp of the event's detection.

Table B-5 Intrusion Event Record 5.1.1 Fields (continued)

Field	Data Type	Description
Rule ID (Signature ID)	uint32	Rule identification number that corresponds with the event.
Generator ID	uint32	Identification number of the Firepower System preprocessor that generated the event.
Rule Revision	uint32	Rule revision number.
Classification ID	uint32	Identification number of the event classification message.
Priority ID	uint32	Identification number of the priority associated with the event.
Source IP Address	uint8[16]	Source IPv4 or IPv6 address used in the event.
Destination IP Address	uint8[16]	Destination IPv4 or IPv6 address used in the event.
Source Port/ICMP Type	uint16	The source port number if the event protocol type is TCP or UDP, or the ICMP type if the event is caused by ICMP traffic.
Destination Port/ICMP Code	uint16	The destination port number if the event protocol type is TCP or UDP, or the ICMP code if the event is caused by ICMP traffic.
IP Protocol Number	uint8	IANA-specified protocol number. For example: • `0` — IP • `1` — ICMP • `6` — TCP • `17` — UDP

Table B-5 Intrusion Event Record 5.1.1 Fields (continued)

Field	Data Type	Description
Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • `0x01` (bit 0) — Source or destination host is in a network monitored by the system. • `0x02` (bit 1) — Source or destination host exists in the network map. • `0x04` (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • `0x08` (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • `0x10` (bit 4) — There is a vulnerability mapped to the server detected in the event. • `0x20` (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • `0x40` (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • `0x80` (bit 7) — There is a vulnerability mapped to the client detected in the event. The following impact level values map to specific priorities on the Defense Center. An `X` indicates the value can be `0` or `1`: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` • orange (2, potentially vulnerable): `00X00111` • yellow (3, currently not vulnerable): `00X00011` • blue (4, unknown target): `00X00001`
Impact	uint8	Impact flag value of the event. Values are: • `1` — Red (vulnerable) • `2` — Orange (potentially vulnerable) • `3` — Yellow (currently not vulnerable) • `4` — Blue (unknown target) • `5` — (unknown impact)
Blocked	uint8	Value indicating whether the event was blocked. • `0` — Not blocked • `1` — Blocked • `2` — Would be blocked (but not permitted by configuration)

Table B-5 Intrusion Event Record 5.1.1 Fields (continued)

Field	Data Type	Description
MPLS Label	uint32	MPLS label.
VLAN ID	uint16	Indicates the ID of the VLAN where the packet originated.
Pad	uint16	Reserved for future use.
Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the intrusion policy.
User ID	uint32	The internal identification number for the user, if applicable.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.
Access Control Rule ID	uint32	A rule ID number that acts as a unique identifier for the access control rule.
Access Control Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the access control policy.
Ingress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the ingress interface.
Egress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the egress interface.
Ingress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the ingress security zone.
Egress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the egress security zone.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the connection event associated with the intrusion event.
Connection Instance ID	uint16	Numerical ID of the Snort instance on the managed device that generated the connection event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.

Intrusion Event Record 5.3.1

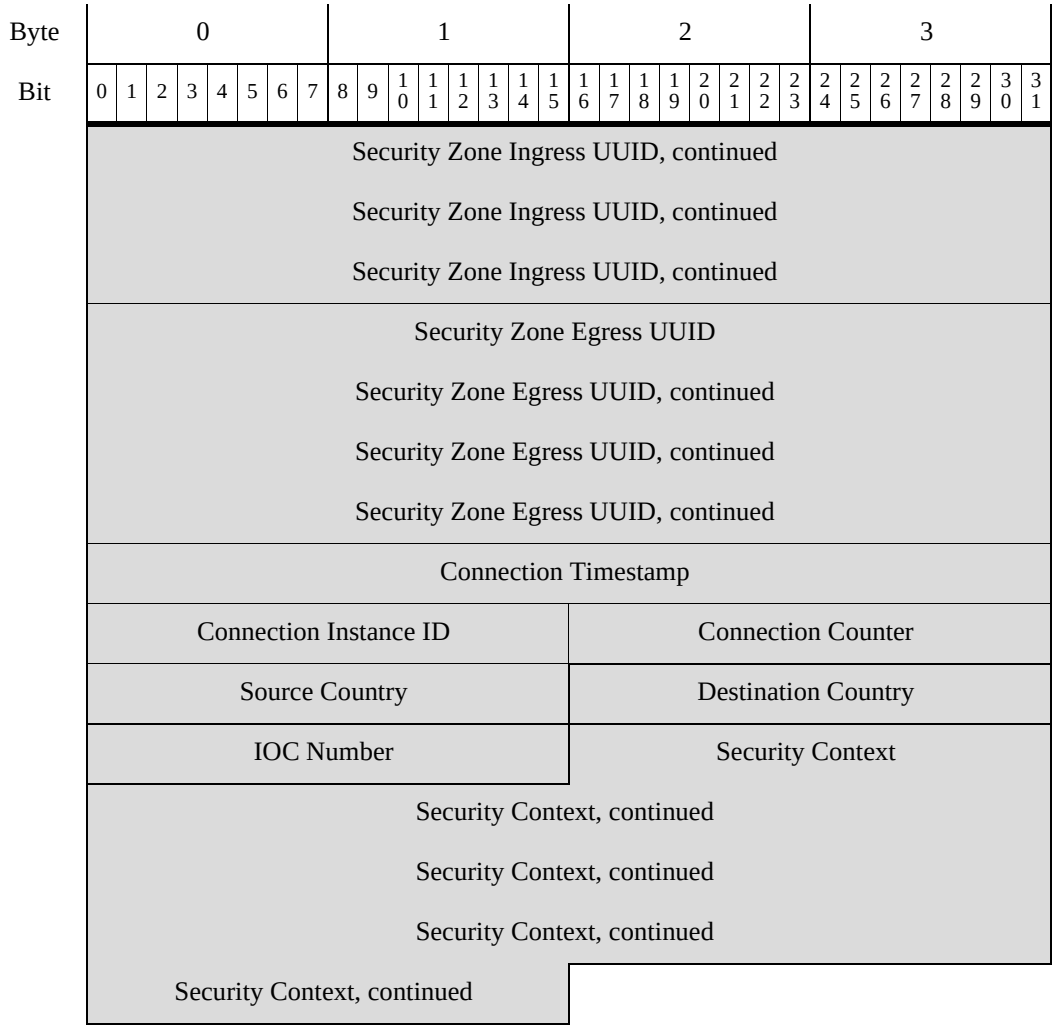
The fields in the intrusion event record are shaded in the following graphic. The record type is 400 and the block type is 42 in the series 2 set of data blocks.

You can request 5.3.1 intrusion events from eStreamer only by extended request, for which you request event type code 12 and version code 7 in the Stream Request message (see Submitting Extended Requests, page 2-4 for information about submitting extended requests).

For version 5.3.1 intrusion events, the event ID, the managed device ID, and the event second form a unique identifier. The connection second, connection instance, and connection counter together form a unique identifier for the connection event associated with the intrusion event.

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 (400)															
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)																																
Block Type (42)																																
Block Length																																
Device ID																																
Event ID																																
Event Second																																
Event Microsecond																																
Rule ID (Signature ID)																																
Generator ID																																
Rule Revision																																
Classification ID																																
Priority ID																																
Source IP Address Source IP Address, continued Source IP Address, continued Source IP Address, continued																																
Destination IP Address Destination IP Address, continued Destination IP Address, continued Destination IP Address, 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
Source Port or ICMP Type																	Destination Port or ICMP Code															
IP Protocol ID									Impact Flags								Impact								Blocked							
MPLS Label																																
VLAN ID																	Pad															
Policy UUID Policy UUID, continued Policy UUID, continued Policy UUID, continued																																
User ID																																
Web Application ID																																
Client Application ID																																
Application Protocol ID																																
Access Control Rule ID																																
Access Control Policy UUID Access Control Policy UUID, continued Access Control Policy UUID, continued Access Control Policy UUID, continued																																
Interface Ingress UUID Interface Ingress UUID, continued Interface Ingress UUID, continued Interface Ingress UUID, continued																																
Interface Egress UUID Interface Egress UUID, continued Interface Egress UUID, continued Interface Egress UUID, continued																																
Security Zone Ingress UUID																																



The following table describes each intrusion event record data field.

Table B-6 Intrusion Event Record 5.3.1 Fields

Field	Data Type	Description
Block Type	unint32	Initiates an Intrusion Event data block. This value is always 42.
Block Length	unint32	Total number of bytes in the Intrusion Event data block, including eight bytes for the Intrusion Event block type and length fields, plus the number of bytes of data that follows.
Device ID	unit32	Contains the identification number of the detecting managed device. You can obtain the managed device name by requesting Version 3 or 4 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Event ID	uint32	Event identification number.
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) of the event's detection.
Event Microsecond	uint32	Microsecond (one millionth of a second) increment of the timestamp of the event's detection.

Table B-6 Intrusion Event Record 5.3.1 Fields (continued)

Field	Data Type	Description
Rule ID (Signature ID)	uint32	Rule identification number that corresponds with the event.
Generator ID	uint32	Identification number of the Firepower System preprocessor that generated the event.
Rule Revision	uint32	Rule revision number.
Classification ID	uint32	Identification number of the event classification message.
Priority ID	uint32	Identification number of the priority associated with the event.
Source IP Address	uint8[16]	Source IPv4 or IPv6 address used in the event.
Destination IP Address	uint8[16]	Destination IPv4 or IPv6 address used in the event.
Source Port or ICMP Type	uint16	The source port number if the event protocol type is TCP or UDP, or the ICMP type if the event is caused by ICMP traffic.
Destination Port or ICMP Code	uint16	The destination port number if the event protocol type is TCP or UDP, or the ICMP code if the event is caused by ICMP traffic.
IP Protocol Number	uint8	IANA-specified protocol number. For example: • 0 — IP • 1 — ICMP • 6 — TCP • 17 — UDP

Table B-6 Intrusion Event Record 5.3.1 Fields (continued)

Field	Data Type	Description
Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • 0x01 (bit 0) — Source or destination host is in a network monitored by the system. • 0x02 (bit 1) — Source or destination host exists in the network map. • 0x04 (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • 0x08 (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • 0x10 (bit 4) — There is a vulnerability mapped to the server detected in the event. • 0x20 (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • 0x40 (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • 0x80 (bit 7) — There is a vulnerability mapped to the client detected in the event. (version 5.0+ only) The following impact level values map to specific priorities on the Defense Center. An `x` indicates the value can be 0 or 1: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` (version 5.0+ only) • orange (2, potentially vulnerable): `00X0011X` • yellow (3, currently not vulnerable): `00X0001X` • blue (4, unknown target): `00X00001`
Impact	uint8	Impact flag value of the event. Values are: • `1` — Red (vulnerable) • `2` — Orange (potentially vulnerable) • `3` — Yellow (currently not vulnerable) • `4` — Blue (unknown target) • `5` — (unknown impact)
Blocked	uint8	Value indicating whether the event was blocked. • `0` — Not blocked • `1` — Blocked • `2` — Would be blocked (but not permitted by configuration)

Table B-6 Intrusion Event Record 5.3.1 Fields (continued)

Field	Data Type	Description
MPLS Label	uint32	MPLS label.
VLAN ID	uint16	Indicates the ID of the VLAN where the packet originated.
Pad	uint16	Reserved for future use.
Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the intrusion policy.
User ID	uint32	The internal identification number for the user, if applicable.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.
Access Control Rule ID	uint32	A rule ID number that acts as a unique identifier for the access control rule.
Access Control Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the access control policy.
Ingress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the ingress interface.
Egress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the egress interface.
Ingress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the ingress security zone.
Egress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the egress security zone.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the connection event associated with the intrusion event.
Connection Instance ID	uint16	Numerical ID of the Snort instance on the managed device that generated the connection event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint 16	Code for the country of the destination host.
IOC Number	uint16	ID number of the compromise associated with this event.
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.

Intrusion Event Record 5.4.x

The fields in the intrusion event record are shaded in the following graphic. The record type is 400 and the block type is 45 in the series 2 set of data blocks. It supersedes block type 42, and is superseded by block type 60. Fields for SSL support and Network Analysis Policy have been added.

You can request 5.4.x intrusion events from eStreamer only by extended request, for which you request event type code 12 and version code 8 in the Stream Request message (see Submitting Extended Requests, page 2-4 for information about submitting extended requests).

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 (400)															
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)																																
Block Type (45)																																
Block Length																																
Device ID																																
Event ID																																
Event Second																																
Event Microsecond																																
Rule ID (Signature ID)																																
Generator ID																																
Rule Revision																																
Classification ID																																
Priority 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
Source IP Address																																
Source IP Address, continued																																
Source IP Address, continued																																
Source IP Address, continued																																
Destination IP Address																																
Destination IP Address, continued																																
Destination IP Address, continued																																
Destination IP Address, continued																																
Source Port or ICMP Type																	Destination Port or ICMP Code															
IP Protocol ID									Impact Flags								Impact								Blocked							
MPLS Label																																
VLAN ID																	Pad															
Policy UUID																																
Policy UUID, continued																																
Policy UUID, continued																																
Policy UUID, continued																																
User ID																																
Web Application ID																																
Client Application ID																																
Application Protocol ID																																
Access Control Rule ID																																
Access Control Policy UUID																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Access Control Policy UUID, continued																																
Interface Ingress UUID																																

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
Interface Ingress UUID, continued																																
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Interface Ingress UUID, continued																																
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Interface Egress UUID, continued																																
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Security Zone Ingress UUID																																
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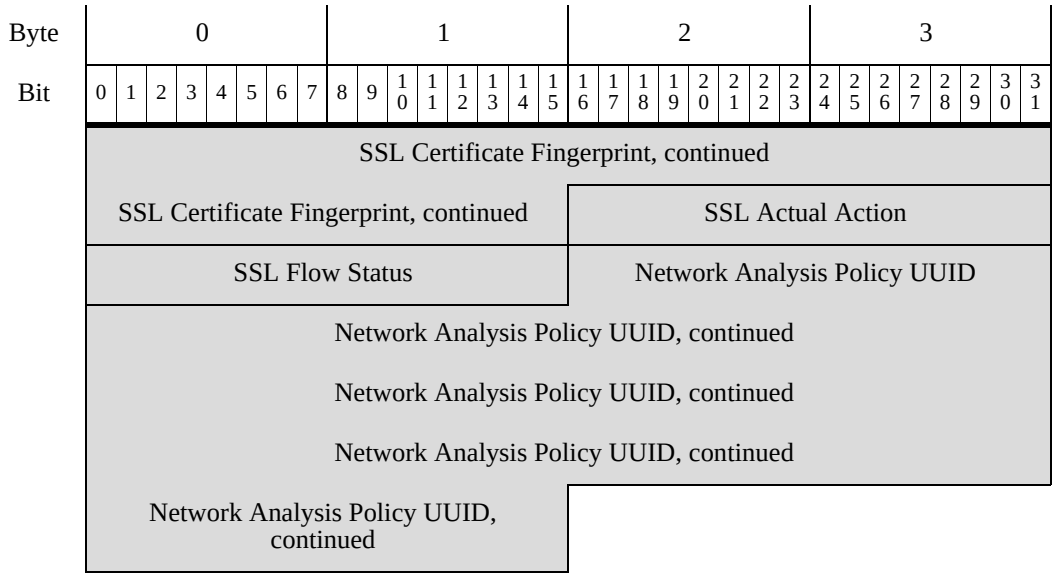
Security Zone Egress UUID, continued																																
Security Zone Egress UUID, continued																																
Connection Timestamp																																
Connection Instance ID																	Connection Counter															
Source Country																	Destination Country															
IOC Number																	Security Context															
Security Context, continued																																
Security Context, continued																																
Security Context, continued																																
Security Context, continued																	SSL Certificate Fingerprint															
SSL Certificate Fingerprint, continued																																
SSL Certificate Fingerprint, continued																																
SSL Certificate Fingerprint, continued																																



The following table describes each intrusion event record data field.

Table B-7 Intrusion Event Record 5.4.x Fields

Field	Data Type	Description
Block Type	unint32	Initiates an Intrusion Event data block. This value is always 45.
Block Length	unint32	Total number of bytes in the Intrusion Event data block, including eight bytes for the Intrusion Event block type and length fields, plus the number of bytes of data that follows.
Device ID	unit32	Contains the identification number of the detecting managed device. You can obtain the managed device name by requesting Version 3 or 4 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Event ID	uint32	Event identification number.
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) of the event's detection.
Event Microsecond	uint32	Microsecond (one millionth of a second) increment of the timestamp of the event's detection.
Rule ID (Signature ID)	uint32	Rule identification number that corresponds with the event.
Generator ID	uint32	Identification number of the Firepower System preprocessor that generated the event.
Rule Revision	uint32	Rule revision number.
Classification ID	uint32	Identification number of the event classification message.
Priority ID	uint32	Identification number of the priority associated with the event.
Source IP Address	uint8[16]	Source IPv4 or IPv6 address used in the event.
Destination IP Address	uint8[16]	Destination IPv4 or IPv6 address used in the event.

Table B-7 Intrusion Event Record 5.4.x Fields (continued)

Field	Data Type	Description
Source Port or ICMP Type	uint16	The source port number if the event protocol type is TCP or UDP, or the ICMP type if the event is caused by ICMP traffic.
Destination Port or ICMP Code	uint16	The destination port number if the event protocol type is TCP or UDP, or the ICMP code if the event is caused by ICMP traffic.
IP Protocol Number	uint8	IANA-specified protocol number. For example: • 0 — IP • 1 — ICMP • 6 — TCP • 17 — UDP
Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • 0x01 (bit 0) — Source or destination host is in a network monitored by the system. • 0x02 (bit 1) — Source or destination host exists in the network map. • 0x04 (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • 0x08 (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • 0x10 (bit 4) — There is a vulnerability mapped to the server detected in the event. • 0x20 (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • 0x40 (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • 0x80 (bit 7) — There is a vulnerability mapped to the client detected in the event. (version 5.0+ only) The following impact level values map to specific priorities on the Defense Center. An `x` indicates the value can be 0 or 1: • gray (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` (version 5.0+ only) • orange (2, potentially vulnerable): `00X0011X` • yellow (3, currently not vulnerable): `00X0001X` • blue (4, unknown target): `00X00001`

Table B-7 Intrusion Event Record 5.4.x Fields (continued)

Field	Data Type	Description
Impact	uint8	Impact flag value of the event. Values are: • 1 — Red (vulnerable) • 2 — Orange (potentially vulnerable) • 3 — Yellow (currently not vulnerable) • 4 — Blue (unknown target) • 5 — Gray (unknown impact)
Blocked	uint8	Value indicating whether the event was blocked. • 0 — Not blocked • 1 — Blocked • 2 — Would be blocked (but not permitted by configuration)
MPLS Label	uint32	MPLS label.
VLAN ID	uint16	Indicates the ID of the VLAN where the packet originated.
Pad	uint16	Reserved for future use.
Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the intrusion policy.
User ID	uint32	The internal identification number for the user, if applicable.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
Application Protocol ID	uint32	The internal identification number for the application protocol, if applicable.
Access Control Rule ID	uint32	A rule ID number that acts as a unique identifier for the access control rule.
Access Control Policy UUID	uint8[16]	A policy ID number that acts as a unique identifier for the access control policy.
Ingress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the ingress interface.
Egress Interface UUID	uint8[16]	An interface ID number that acts as a unique identifier for the egress interface.
Ingress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the ingress security zone.
Egress Security Zone UUID	uint8[16]	A zone ID number that acts as a unique identifier for the egress security zone.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the connection event associated with the intrusion event.
Connection Instance ID	uint16	Numerical ID of the Snort instance on the managed device that generated the connection event.

Table B-7 Intrusion Event Record 5.4.x Fields (continued)

Field	Data Type	Description
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint 16	Code for the country of the destination host.
IOC Number	uint16	ID number of the compromise associated with this event.
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.
SSL Certificate Fingerprint	uint8[20]	SHA1 hash of the SSL Server certificate.
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)'

Table B-7 Intrusion Event Record 5.4.x 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'
Network Analysis Policy UUID	uint8[16]	The UUID of the Network Analysis Policy that created the intrusion event.

Intrusion Impact Alert Data

The Intrusion Impact Alert event contains information about impact events. It is transmitted when an intrusion event is compared to the system network map data and the impact is determined. It uses the standard record header with a record type of 9, followed by an Intrusion Impact Alert data block with a data block type of 20 in the series 1 group of blocks. (The Impact Alert data block is a type of series 1 data block. For more information about series 1 data blocks, see Understanding Discovery (Series 1) Blocks, page 4-57.)

You can request that eStreamer only transmit intrusion impact events by setting bit 5 in the Flags field of the request message. See Event Stream Request Message Format, page 2-10 for more information about request messages. Version 1 of these alerts only handles IPv4. Version 2, introduced in 5.3, handles IPv6 events in addition to IPv4.

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 (9)															
	Record Length																															
	Intrusion Impact Alert Block Type (20)																															
	Intrusion Impact Alert Block Length																															
	Event ID																															
	Device ID																															
	Event Second																															
	Impact																															
	Source IP Address																															
	Destination IP Address																															
Impact Description	String Block Type (0)																															
	String Block Length																															
	Description...																															

The following table describes each data field in an impact event.

Table B-8 Impact Event Data Fields

Field	Data Type	Description
Intrusion Impact Alert Block Type	uint32	Indicates that an intrusion impact alert data block follows. This field will always have a value of `20`. See Intrusion Event and Metadata Record Types, page 3-1.
Intrusion Impact Alert Block Length	uint32	Indicates the length of the intrusion impact alert data block, including all data that follows and 8 bytes for the intrusion impact alert block type and length.
Event ID	uint32	Indicates the event identification number.
Device ID	uint32	Indicates the managed device identification number.
Event Second	uint32	Indicates the second (from 01/01/1970) that the event was detected.
Impact	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • `0x01` (bit 0) — Source or destination host is in a network monitored by the system. • `0x02` (bit 1) — Source or destination host exists in the network map. • `0x04` (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • `0x08` (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • `0x10` (bit 4) — There is a vulnerability mapped to the server detected in the event. • `0x20` (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • `0x40` (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • `0x80` (bit 7) — There is a vulnerability mapped to the client detected in the event. (version 5.0+ only) The following impact level values map to specific priorities on the Defense Center. An `x` indicates the value can be `0` or `1`: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX`, `XXX1XXXX`, `X1XXXXXX`, `1XXXXXXX` (version 5.0+ only) • orange (2, potentially vulnerable): `00X0011X` • yellow (3, currently not vulnerable): `00X0001X` • blue (4, unknown target): `00X00001`

Table B-8 Impact Event Data Fields (continued)

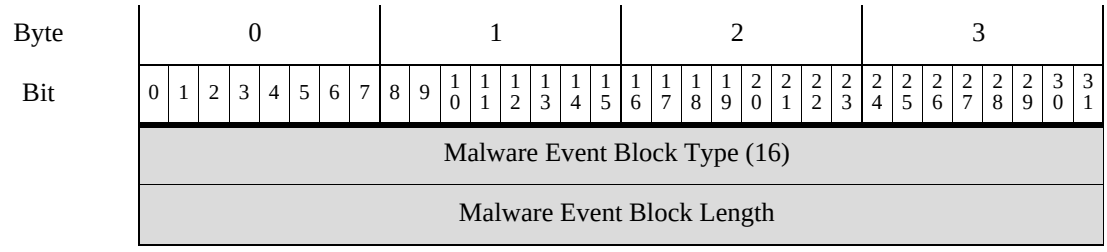
Field	Data Type	Description
Source IP Address	uint8[4]	IP address of the host associated with the impact event, in IP address octets.
Destination IP Address	uint8[4]	IP address of the destination IP address associated with the impact event (if applicable), in IP address octets. This value is 0 if there is no destination IP address.
String Block Type	uint32	Initiates a string data block that contains the impact name. This value is always set to 0. For more information about string blocks, see String Data Block, page 4-66.
String Block Length	uint32	Number of bytes in the event description string block. This includes the four bytes for the string block type, the four bytes for the string block length, and the number of bytes in the description.
Description	string	Description of the impact event.

Legacy Malware Event Data Structures

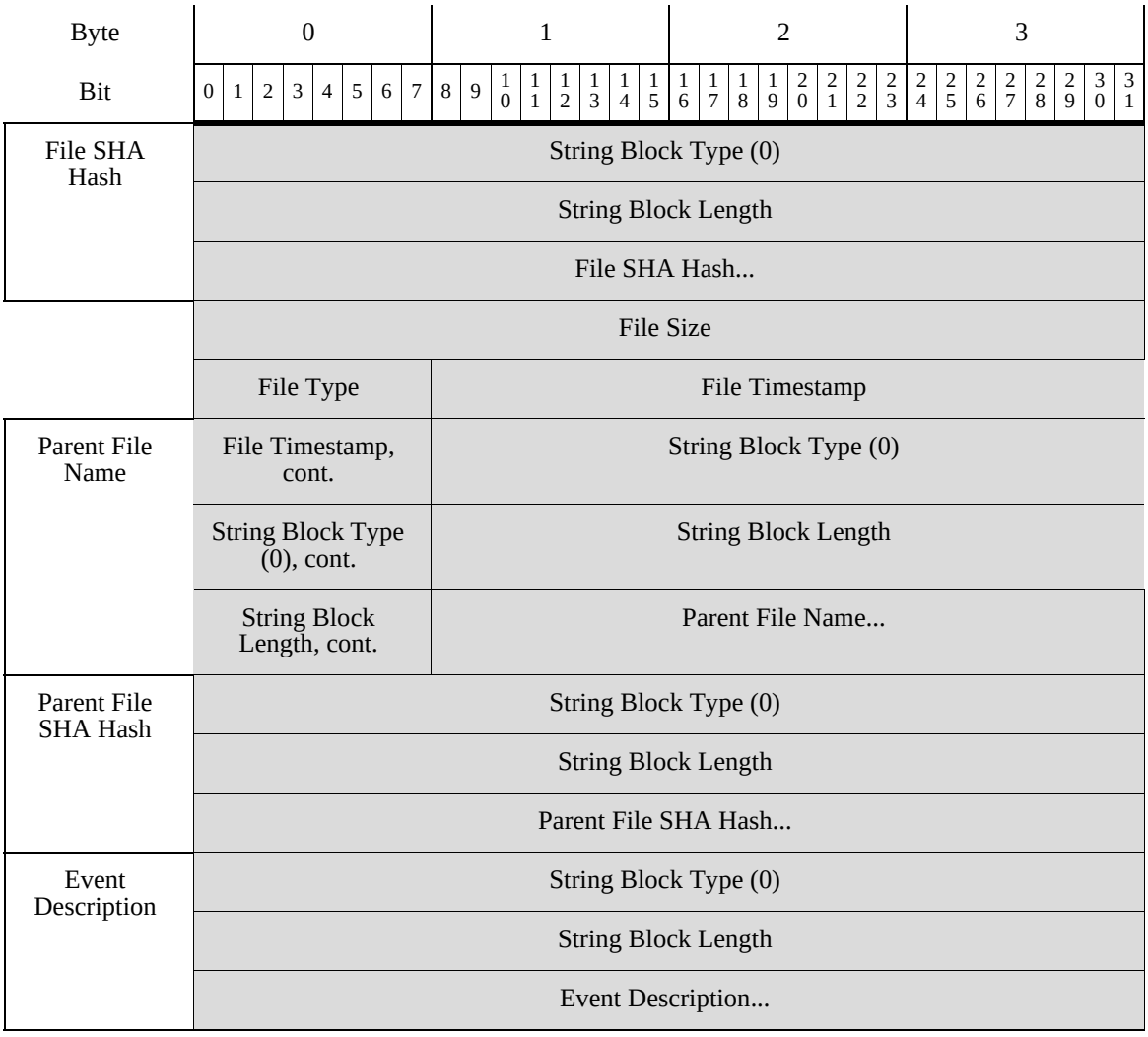
Malware Event Data Block 5.1

The eStreamer service uses the malware event data block to store information on malware events. These events contain information on malware detected or quarantined within a cloud, the detection method, and hosts and users affected by the malware. The malware event data block has a block type of 16 in the series 2 group of blocks. You request the event as part of the malware event record by setting the malware event flag—bit 30 in the request flags field—in the request message with an event version of 1 and an event code of 101.

The following graphic shows the structure of the malware event 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
	Agent UUID																															
	Agent UUID, continued																															
	Agent UUID, continued																															
	Agent UUID, continued																															
	Cloud UUID																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Timestamp																															
	Event Type ID																															
	Event Subtype ID								Host IP Address																							
Detection Name	Host IP Address, cont.								Detector ID								String Block Type (0)															
	String Block Type (0), cont.																String Block Length															
	String Block Length, cont.																Detection Name...															
User	String Block Type (0)																															
	String Block Length																															
	User...																															
File Name	String Block Type (0)																															
	String Block Length																															
	File Name...																															
File Path	String Block Type (0)																															
	String Block Length																															
	File Path...																															



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
File SHA Hash	String Block Type (0)																															
	String Block Length																															
	File SHA Hash...																															
	File Size																															
	File Type								File Timestamp																							
Parent File Name	File Timestamp, cont.								String Block Type (0)																							
	String Block Type (0), cont.								String Block Length																							
	String Block Length, cont.								Parent File Name...																							
Parent File SHA Hash	String Block Type (0)																															
	String Block Length																															
	Parent File SHA Hash...																															
Event Description	String Block Type (0)																															
	String Block Length																															
	Event Description...																															

The following table describes the fields in the malware event data block.

Table B-9 Malware Event Data Block Fields

Field	Data Type	Description
Malware Event Block Type	uint32	Initiates a malware event data block. This value is always `16`.
Malware Event Block Length	uint32	Total number of bytes in the malware event data block, including eight bytes for the malware event block type and length fields, plus the number of bytes of data that follows.
Agent UUID	uint8[16]	The internal unique ID of the AMP for Endpoints agent reporting the malware event.
Cloud UUID	uint8[16]	The internal unique ID of the malware awareness network from which the malware event originated.
Timestamp	uint32	The malware event generation timestamp.
Event Type ID	uint32	The internal ID of the malware event type.

Table B-9 Malware Event Data Block Fields (continued)

Field	Data Type	Description
Event Subtype ID	uint8	The internal ID of the action that led to malware detection.
Host IP Address	uint32	The host IP address associated with the malware event.
Detector ID	uint8	The internal ID of the detection technology that detected the malware.
String Block Type	uint32	Initiates a String data block containing the detection name. This value is always 0.
String Block Length	uint32	The number of bytes included in the Detection Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Detection Name field.
Detection Name	string	The name of the detected or quarantined malware.
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 User String data block, including eight bytes for the block type and header fields plus the number of bytes in the User field.
User	string	The user of the computer where the Cisco Agent is installed and where the malware event occurred. Note that these users are not tied to user discovery.
String Block Type	uint32	Initiates a String data block containing the file name. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Name field.
File Name	string	The name of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file path. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Path String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Path field.
File Path	string	The file path, not including the file name, of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file SHA hash. This value is always 0.
String Block Length	uint32	The number of bytes included in the File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the File SHA Hash field.
File SHA Hash	string	The SHA-256 hash value of the detected or quarantined file.
File Size	uint32	The size in bytes of the detected or quarantined file.
File Type	uint8	The file type of the detected or quarantined file.
File Timestamp	uint32	The creation timestamp of the detected or quarantined file.

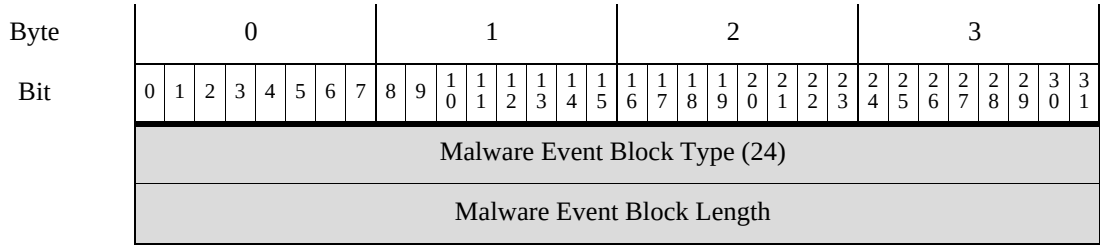
Table B-9 Malware Event Data Block Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the parent file name. This value is always 0.
String Block Length	uint32	The number of bytes included in the Parent File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File Name field.
Parent File Name	string	The name of the file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the parent file SHA hash. This value is always 0.
String Block Length	uint32	The number of bytes included in the Parent File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File SHA Hash field.
Parent File SHA Hash	string	The SHA-256 hash value of the parent file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the event description. This value is always 0.
String Block Length	uint32	The number of bytes included in the Event Description String data block, including eight bytes for the block type and header fields plus the number of bytes in the Event Description field.
Event Description	string	The additional event information associated with the event type.

Malware Event Data Block 5.1.1.x

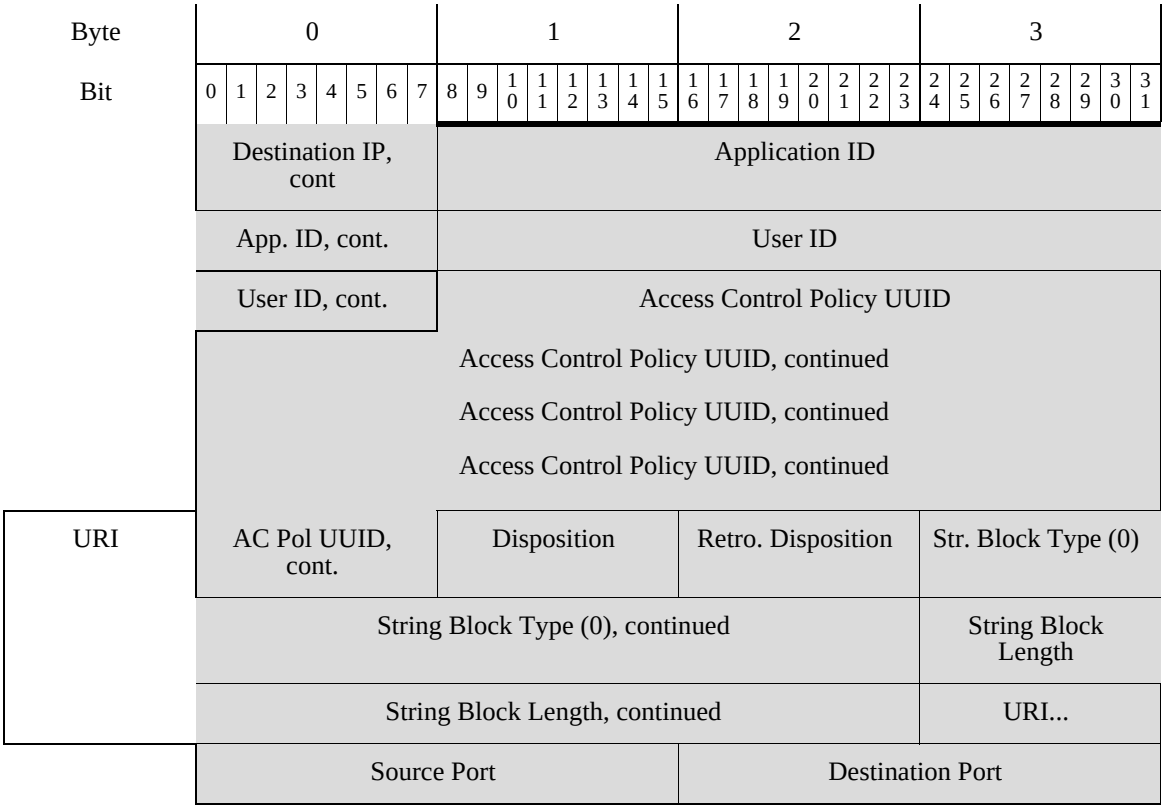
The eStreamer service uses the malware event data block to store information on malware events. These events contain information on malware detected or quarantined within a cloud, the detection method, and hosts and users affected by the malware. The malware event data block has a block type of 24 in the series 2 group of blocks. You request the event as part of the malware event record by setting the malware event flag—bit 30 in the request flags field—in the request message with an event version of 2 and an event code of 101.

The following graphic shows the structure of the malware event 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
	Agent UUID																															
	Agent UUID, continued																															
	Agent UUID, continued																															
	Agent UUID, continued																															
	Cloud UUID																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Malware Event Timestamp																															
	Event Type ID																															
	Event Subtype ID								Host IP Address																							
Detection Name	Host IP Address, cont.								Detector ID								String Block Type (0)															
	String Block Type (0), cont.																String Block Length															
	String Block Length, cont.																Detection Name...															
User	String Block Type (0)																															
	String Block Length																															
	User...																															
File Name	String Block Type (0)																															
	String Block Length																															
	File Name...																															
File Path	String Block Type (0)																															
	String Block Length																															
	File Path...																															

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
File SHA Hash	String Block Type (0)																															
	String Block Length																															
	File SHA Hash...																															
	File Size																															
	File Type								File Timestamp																							
Parent File Name	File Timestamp, cont.								String Block Type (0)																							
	String Block Type (0), cont.								String Block Length																							
	String Block Length, cont.								Parent File Name...																							
Parent File SHA Hash	String Block Type (0)																															
	String Block Length																															
	Parent File SHA Hash...																															
Event Description	String Block Type (0)																															
	String Block Length																															
	Event Description...																															
	Device ID																															
	Connection Instance																Connection Counter															
	Connection Event Timestamp																															
	Direction								Source IP Address																							
	Source IP Address, continued																															
	Source IP Address, continued																															
	Source IP Address, continued																															
	Source IP, cont.								Destination IP Address																							
	Destination IP Address, continued																															
	Destination IP Address, continued																															
	Destination IP Address, continued																															



The following table describes the fields in the malware event data block.

Table B-10 Malware Event Data Block for 5.1.1.x Fields

Field	Data Type	Description
Malware Event Block Type	uint32	Initiates a malware event data block. This value is always `24`.
Malware Event Block Length	uint32	Total number of bytes in the malware event data block, including eight bytes for the malware event block type and length fields, plus the number of bytes of data that follows.
Agent UUID	uint8[16]	The internal unique ID of the AMP for Endpoints agent reporting the malware event.
Cloud UUID	uint8[16]	The internal unique ID of the malware awareness network from which the malware event originated.
Malware Event Timestamp	uint32	The malware event generation timestamp.
Event Type ID	uint32	The internal ID of the malware event type.
Event Subtype ID	uint8	The internal ID of the action that led to malware detection.
Host IP Address	uint32	The host IP address associated with the malware event.
Detector ID	uint8	The internal ID of the detection technology that detected the malware.
String Block Type	uint32	Initiates a String data block containing the detection name. This value is always `0`.

Table B-10 Malware Event Data Block for 5.1.1.x Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the Detection Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Detection Name field.
Detection Name	string	The name of the detected or quarantined malware.
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 User String data block, including eight bytes for the block type and header fields plus the number of bytes in the User field.
User	string	The user of the computer where the Cisco Agent is installed and where the malware event occurred. Note that these users are not tied to user discovery.
String Block Type	uint32	Initiates a String data block containing the file name. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Name field.
File Name	string	The name of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file path. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Path String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Path field.
File Path	string	The file path, not including the file name, of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file SHA hash. This value is always 0.
String Block Length	uint32	The number of bytes included in the File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the File SHA Hash field.
File SHA Hash	string	The rendered string of the SHA-256 hash value of the detected or quarantined file.
File Size	uint32	The size in bytes of the detected or quarantined file.
File Type	uint8	The file type of the detected or quarantined file.
File Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the creation of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the parent file name. This value is always 0.

Table B-10 Malware Event Data Block for 5.1.1.x Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the Parent File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File Name field.
Parent File Name	string	The name of the file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the parent file SHA hash. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Parent File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File SHA Hash field.
Parent File SHA Hash	string	The SHA-256 hash value of the parent file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the event description. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Event Description String data block, including eight bytes for the block type and header fields plus the number of bytes in the Event Description field.
Event Description	string	The additional event information associated with the event type.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or IDS event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Event Timestamp	uint32	Timestamp of the connection event.
Direction	uint8	Indicates whether the file was uploaded or downloaded. Can have the following values: • `1` — Download • `2` — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.
Application ID	uint32	ID number that maps to the application using the file transfer.
User ID	uint32	Identification number for the user logged into the destination host, as identified by the system.

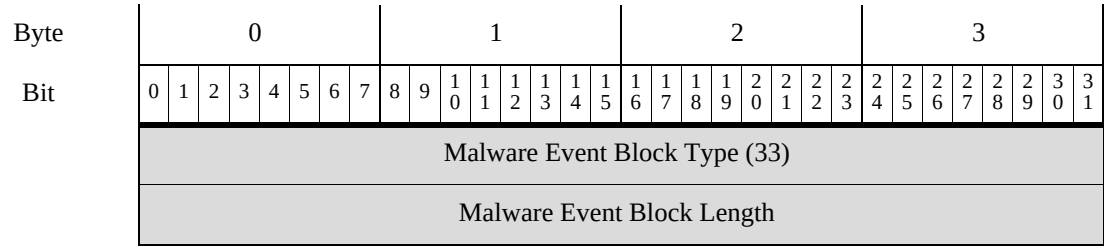
Table B-10 Malware Event Data Block for 5.1.1.x Fields (continued)

Field	Data Type	Description
Access Control Policy UUID	uint8[16]	Identification number that acts as a unique identifier for the access control policy that triggered the event.
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN — The file is clean and does not contain malware. • 2 — UNKNOWN — It is unknown whether the file contains malware. • 3 — MALWARE — The file contains malware. • 4 — CACHE_MISS — The software was unable to send a request to the Cisco cloud for a disposition. • 5 — NO_CLOUD_RESP — The Cisco cloud services did not respond to the request.
Retrospective Disposition	uint8	Disposition of the file if the disposition is updated. If the disposition is not updated, this field contains the same value as the Disposition field. The possible values are the same as the Disposition field.
String Block Type	uint32	Initiates a String data block containing the URI. This value is always 0.
String Block Length	uint32	The number of bytes included in the URI data block, including eight bytes for the block type and header fields plus the number of bytes in the URI field.
URI	string	URI of the connection.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.

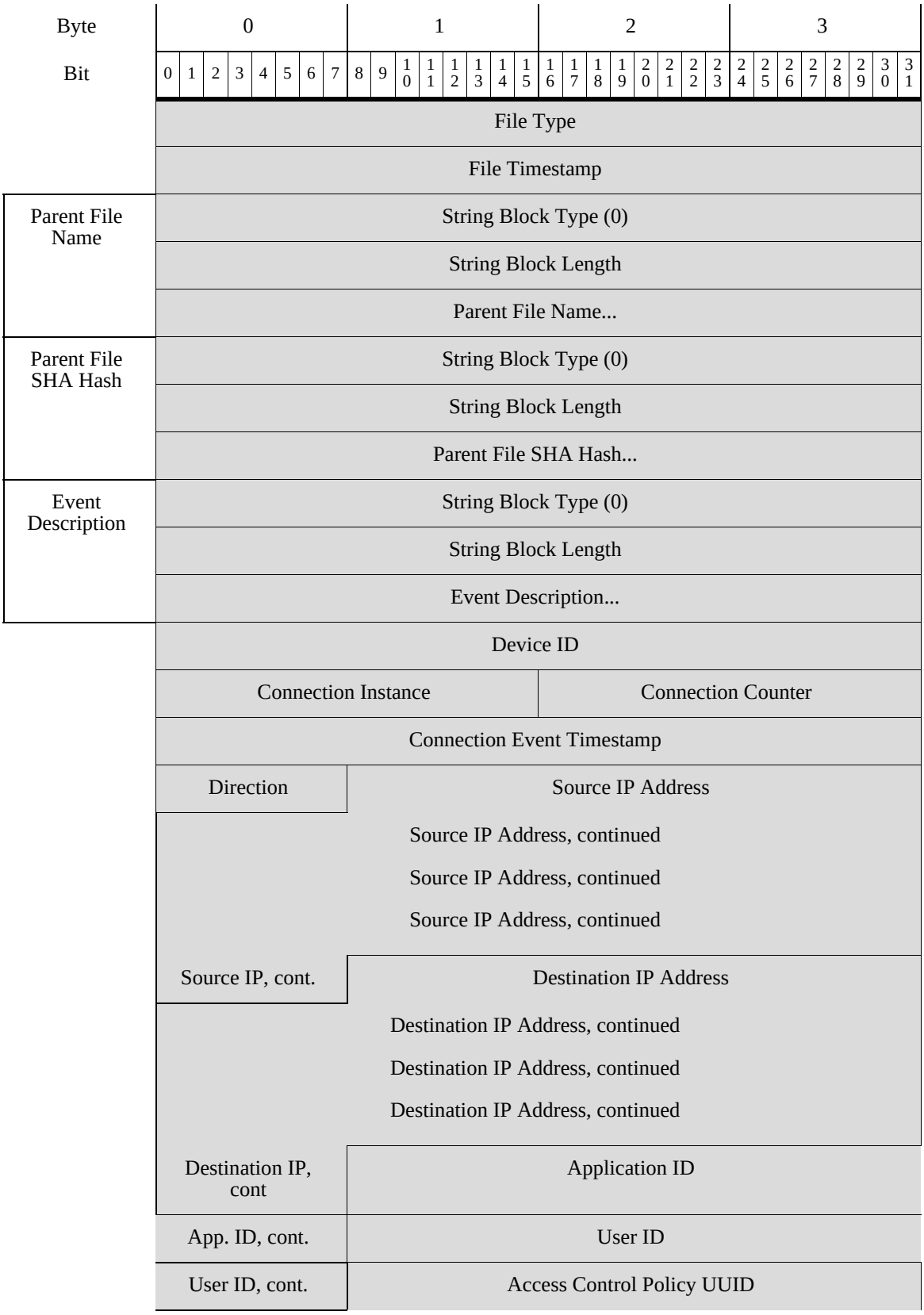
Malware Event Data Block 5.2.x

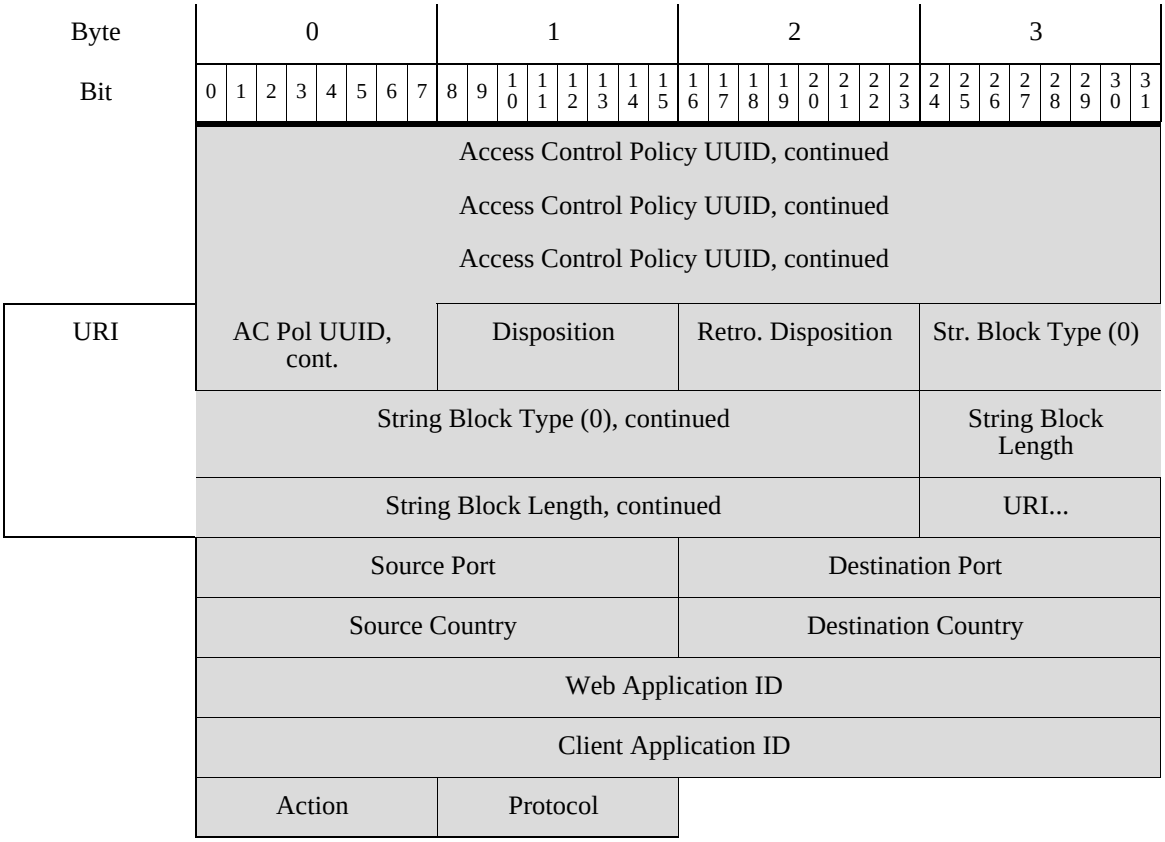
The eStreamer service uses the malware event data block to store information on malware events. These events contain information on malware detected or quarantined within a cloud, the detection method, and hosts and users affected by the malware. The malware event data block has a block type of 33 in the series 2 group of blocks. You request the event as part of the malware event record by setting the malware event flag—bit 30 in the request flags field—in the request message with an event version of 3 and an event code of 101.

The following graphic shows the structure of the malware event 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
	Agent UUID																															
	Agent UUID, continued																															
	Agent UUID, continued																															
	Agent UUID, continued																															
	Cloud UUID																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Malware Event Timestamp																															
	Event Type ID																															
Detection Name	Event Subtype ID								Detector ID								String Block Type (0)															
	String Block Type (0), cont.																String Block Length															
	String Block Length, cont.																Detection Name...															
User	String Block Type (0)																															
	String Block Length																															
	User...																															
File Name	String Block Type (0)																															
	String Block Length																															
	File Name...																															
File Path	String Block Type (0)																															
	String Block Length																															
	File Path...																															
File SHA Hash	String Block Type (0)																															
	String Block Length																															
	File SHA Hash...																															
	File Size																															


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
File Type
File Timestamp
Parent File Name
String Block Type (0)
String Block Length
Parent File Name...
Parent File SHA Hash
String Block Type (0)
String Block Length
Parent File SHA Hash...
Event Description
String Block Type (0)
String Block Length
Event Description...
Device ID
Connection Instance
Connection Counter
Connection Event Timestamp
Direction
Source IP Address
Source IP Address, continued
Source IP Address, continued
Source IP Address, continued
Source IP, cont.
Destination IP Address
Destination IP Address, continued
Destination IP Address, continued
Destination IP Address, continued
Destination IP, cont
Application ID
App. ID, cont.
User ID
User ID, cont.
Access Control Policy UUID



The following table describes the fields in the malware event data block.

Table B-11 Malware Event Data Block for 5.2.x Fields

Field	Data Type	Description
Malware Event Block Type	uint32	Initiates a malware event data block. This value is always 33.
Malware Event Block Length	uint32	Total number of bytes in the malware event data block, including eight bytes for the malware event block type and length fields, plus the number of bytes of data that follows.
Agent UUID	uint8[16]	The internal unique ID of the AMP for Endpoints agent reporting the malware event.
Cloud UUID	uint8[16]	The internal unique ID of the malware awareness network from which the malware event originated.
Malware Event Timestamp	uint32	The malware event generation timestamp.
Event Type ID	uint32	The internal ID of the malware event type.
Event Subtype ID	uint8	The internal ID of the action that led to malware detection.
Detector ID	uint8	The internal ID of the detection technology that detected the malware.
String Block Type	uint32	Initiates a String data block containing the detection name. This value is always 0.

Table B-11 Malware Event Data Block for 5.2.x Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the Detection Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Detection Name field.
Detection Name	string	The name of the detected or quarantined malware.
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 User String data block, including eight bytes for the block type and header fields plus the number of bytes in the User field.
User	string	The user of the computer where the Cisco Agent is installed and where the malware event occurred. Note that these users are not tied to user discovery.
String Block Type	uint32	Initiates a String data block containing the file name. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Name field.
File Name	string	The name of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file path. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Path String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Path field.
File Path	string	The file path, not including the file name, of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file SHA hash. This value is always 0.
String Block Length	uint32	The number of bytes included in the File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the File SHA Hash field.
File SHA Hash	string	The rendered string of the SHA-256 hash value of the detected or quarantined file.
File Size	uint32	The size in bytes of the detected or quarantined file.
File Type	uint32	The file type of the detected or quarantined file.
File Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the creation of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the parent file name. This value is always 0.

Table B-11 Malware Event Data Block for 5.2.x Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the Parent File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File Name field.
Parent File Name	string	The name of the file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the parent file SHA hash. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Parent File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File SHA Hash field.
Parent File SHA Hash	string	The SHA-256 hash value of the parent file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the event description. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Event Description String data block, including eight bytes for the block type and header fields plus the number of bytes in the Event Description field.
Event Description	string	The additional event information associated with the event type.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or IDS event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Event Timestamp	uint32	Timestamp of the connection event.
Direction	uint8	Indicates whether the file was uploaded or downloaded. Can have the following values: • `1` — Download • `2` — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.
Application ID	uint32	ID number that maps to the application using the file transfer.
User ID	uint32	Identification number for the user logged into the destination host, as identified by the system.

Table B-11 Malware Event Data Block for 5.2.x Fields (continued)

Field	Data Type	Description
Access Control Policy UUID	uint8[16]	Identification number that acts as a unique identifier for the access control policy that triggered the event.
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN — The file is clean and does not contain malware. • 2 — NEUTRAL — It is unknown whether the file contains malware. • 3 — MALWARE — The file contains malware. • 4 — CACHE_MISS — The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request.
Retrospective Disposition	uint8	Disposition of the file if the disposition is updated. If the disposition is not updated, this field contains the same value as the Disposition field. The possible values are the same as the Disposition field.
String Block Type	uint32	Initiates a String data block containing the URI. This value is always 0.
String Block Length	uint32	The number of bytes included in the URI data block, including eight bytes for the block type and header fields plus the number of bytes in the URI field.
URI	string	URI of the connection.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint 16	Code for the country of the destination host.
Web Application ID	uint32	The internal identification number of the detected web application, if applicable.
Client Application ID	uint32	The internal identification number of the detected client application, if applicable.

Table B-11 Malware Event Data Block for 5.2.x Fields (continued)

Field	Data Type	Description
Action	uint8	The action taken on the file based on the file type. Can have the following values: • 1 — Detect • 2 — Block • 3 — Malware Cloud Lookup • 4 — Malware Block • 5 — Malware Whitelist
Protocol	uint8	IANA protocol number specified by the user. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP This is currently only TCP.

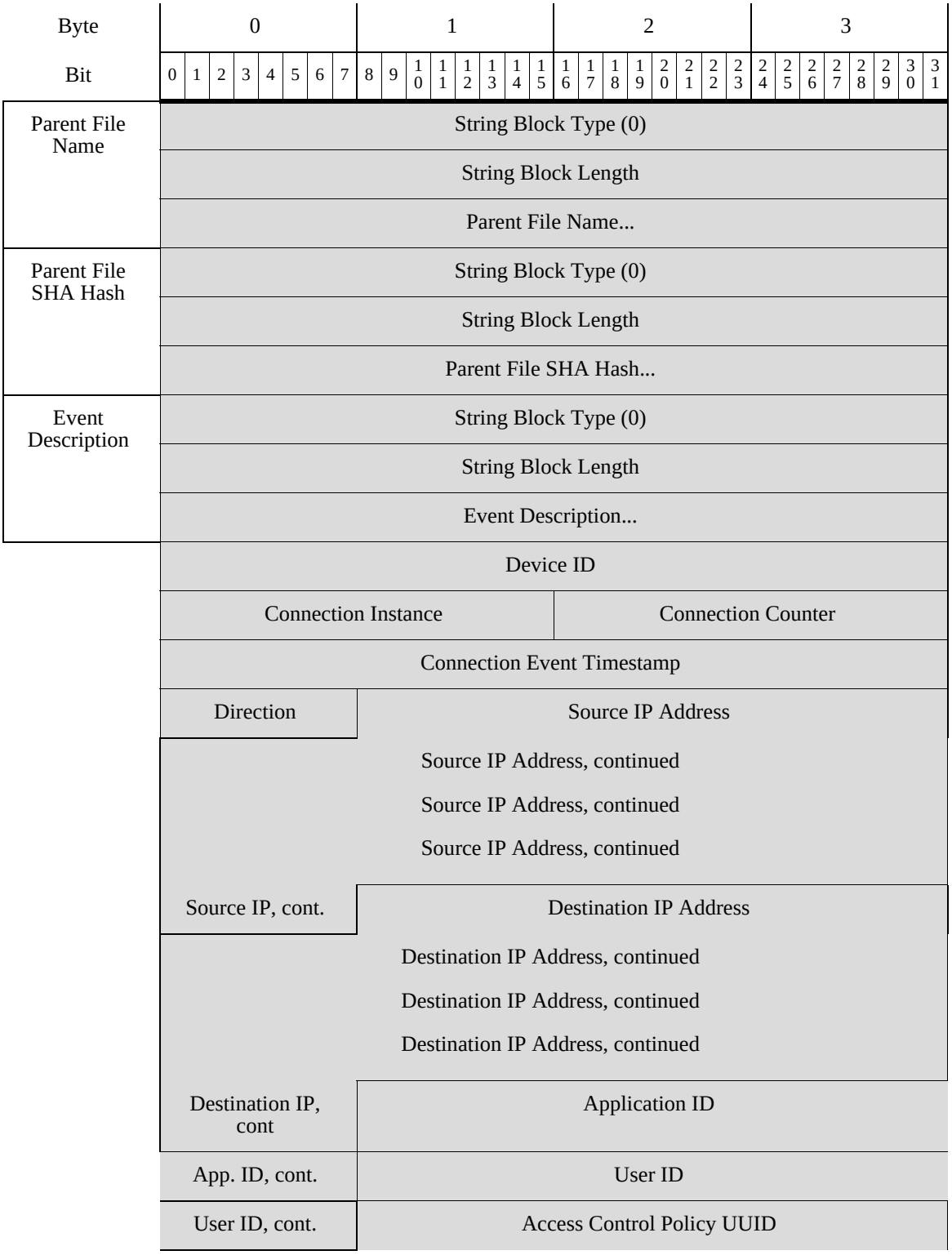
Malware Event Data Block 5.3

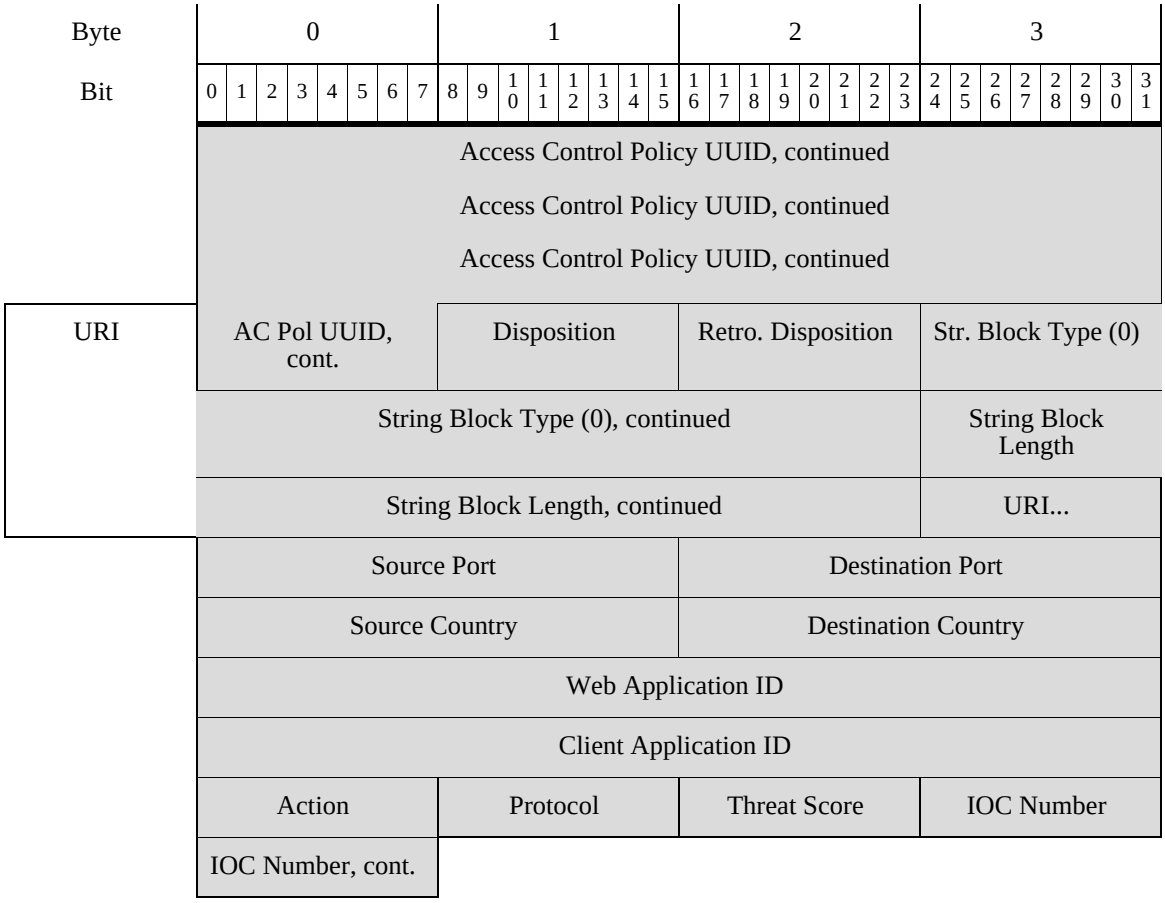
The eStreamer service uses the malware event data block to store information on malware events. These events contain information on malware detected or quarantined within a cloud, the detection method, and hosts and users affected by the malware. The malware event data block has a block type of 35 in the series 2 group of blocks. You request the event as part of the malware event record by setting the malware event flag—bit 30 in the request flags field—in the request message with an event version of 4 and an event code of 101.

The following graphic shows the structure of the malware event 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
Malware Event Block Type (35)																																
Malware Event Block Length																																
Agent UUID																																
Agent UUID, continued																																
Agent UUID, continued																																
Agent UUID, continued																																
Cloud UUID																																
Cloud UUID, 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
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Malware Event Timestamp																															
	Event Type ID																															
	Event Subtype ID																															
Detection Name	Detector ID								String Block Type (0)																							
	String Block Type (0), cont.								String Block Length																							
	String Block Length, cont.								Detection Name...																							
User	String Block Type (0)																															
	String Block Length																															
	User...																															
File Name	String Block Type (0)																															
	String Block Length																															
	File Name...																															
File Path	String Block Type (0)																															
	String Block Length																															
	File Path...																															
File SHA Hash	String Block Type (0)																															
	String Block Length																															
	File SHA Hash...																															
	File Size																															
	File Type																															
	File Timestamp																															


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
Parent File Name
String Block Type (0)
String Block Length
Parent File Name...
Parent File SHA Hash
String Block Type (0)
String Block Length
Parent File SHA Hash...
Event Description
String Block Type (0)
String Block Length
Event Description...
Device ID
Connection Instance
Connection Counter
Connection Event Timestamp
Direction
Source IP Address
Source IP Address, continued
Source IP Address, continued
Source IP Address, continued
Source IP, cont.
Destination IP Address
Destination IP Address, continued
Destination IP Address, continued
Destination IP Address, continued
Destination IP, cont
Application ID
App. ID, cont.
User ID
User ID, cont.
Access Control Policy UUID



The following table describes the fields in the malware event data block.

Table B-12 Malware Event Data Block for 5.3 Fields

Field	Data Type	Description
Malware Event Block Type	uint32	Initiates a malware event data block. This value is always `35`.
Malware Event Block Length	uint32	Total number of bytes in the malware event data block, including eight bytes for the malware event block type and length fields, plus the number of bytes of data that follows.
Agent UUID	uint8[16]	The internal unique ID of the AMP for Endpoints agent reporting the malware event.
Cloud UUID	uint8[16]	The internal unique ID of the malware awareness network from which the malware event originated.
Malware Event Timestamp	uint32	The malware event generation timestamp.
Event Type ID	uint32	The internal ID of the malware event type.
Event Subtype ID	uint32	The internal ID of the action that led to malware detection.
Detector ID	uint8	The internal ID of the detection technology that detected the malware.

Table B-12 Malware Event Data Block for 5.3 Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the detection name. This value is always 0.
String Block Length	uint32	The number of bytes included in the Detection Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Detection Name field.
Detection Name	string	The name of the detected or quarantined malware.
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 User String data block, including eight bytes for the block type and header fields plus the number of bytes in the User field.
User	string	The user of the computer where the Cisco Agent is installed and where the malware event occurred. Note that these users are not tied to user discovery.
String Block Type	uint32	Initiates a String data block containing the file name. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Name field.
File Name	string	The name of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file path. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Path String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Path field.
File Path	string	The file path, not including the file name, of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file SHA hash. This value is always 0.
String Block Length	uint32	The number of bytes included in the File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the File SHA Hash field.
File SHA Hash	string	The rendered string of the SHA-256 hash value of the detected or quarantined file.
File Size	uint32	The size in bytes of the detected or quarantined file.
File Type	uint32	The file type of the detected or quarantined file. The meaning of this field is transmitted in the metadata with this event. See AMP for Endpoints File Type Metadata, page 3-39 for more information.
File Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the creation of the detected or quarantined file.

Table B-12 Malware Event Data Block for 5.3 Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a String data block containing the parent file name. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Parent File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File Name field.
Parent File Name	string	The name of the file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the parent file SHA hash. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Parent File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File SHA Hash field.
Parent File SHA Hash	string	The SHA-256 hash value of the parent file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the event description. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Event Description String data block, including eight bytes for the block type and header fields plus the number of bytes in the Event Description field.
Event Description	string	The additional event information associated with the event type.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or IDS event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Event Timestamp	uint32	Timestamp of the connection event.
Direction	uint8	Indicates whether the file was uploaded or downloaded. Can have the following values: • `1` — Download • `2` — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.
Application ID	uint32	ID number that maps to the application using the file transfer.

Table B-12 Malware Event Data Block for 5.3 Fields (continued)

Field	Data Type	Description
User ID	uint32	Identification number for the user logged into the destination host, as identified by the system.
Access Control Policy UUID	uint8[16]	Identification number that acts as a unique identifier for the access control policy that triggered the event.
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN The file is clean and does not contain malware. • 2 — UNKNOWN It is unknown whether the file contains malware. • 3 — MALWARE The file contains malware. • 4 — UNAVAILABLE The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request. • 5 — CUSTOM SIGNATURE The file matches a user-defined hash, and is treated in a fashion designated by the user.
Retrospective Disposition	uint8	Disposition of the file if the disposition is updated. If the disposition is not updated, this field contains the same value as the Disposition field. The possible values are the same as the Disposition field.
String Block Type	uint32	Initiates a String data block containing the URI. This value is always 0.
String Block Length	uint32	The number of bytes included in the URI data block, including eight bytes for the block type and header fields plus the number of bytes in the URI field.
URI	string	URI of the connection.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint 16	Code for the country of the destination host.
Web Application ID	uint32	The internal identification number of the detected web application, if applicable.
Client Application ID	uint32	The internal identification number of the detected client application, if applicable.

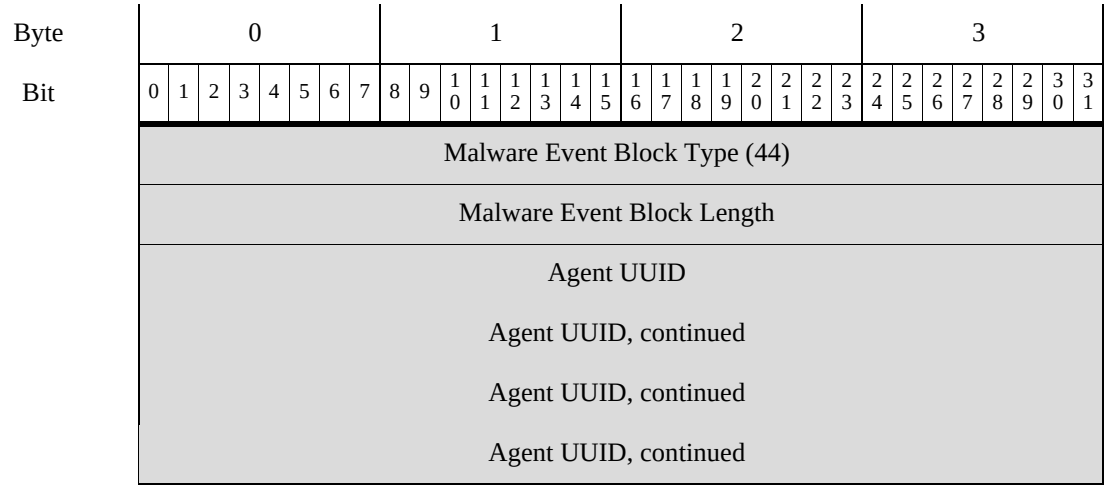
Table B-12 Malware Event Data Block for 5.3 Fields (continued)

Field	Data Type	Description
Action	uint8	The action taken on the file based on the file type. Can have the following values: • 1 — Detect • 2 — Block • 3 — Malware Cloud Lookup • 4 — Malware Block • 5 — Malware Whitelist
Protocol	uint8	IANA protocol number specified by the user. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP This is currently only TCP.
Threat Score	uint8	A numeric value from 0 to 100 based on the potentially malicious behaviors observed during dynamic analysis.
IOC Number	uint16	ID Number of the compromise associated with this event.

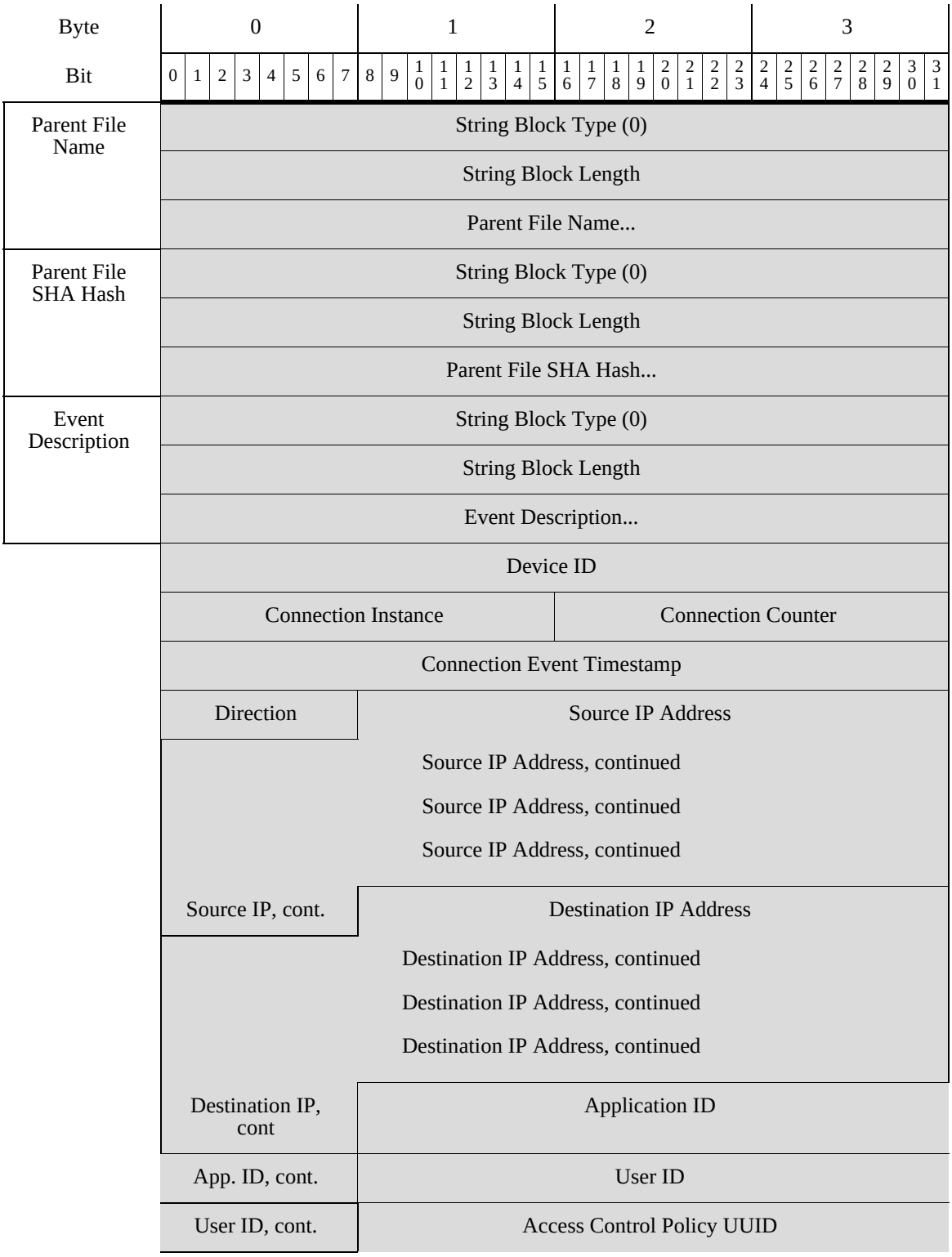
Malware Event Data Block 5.3.1

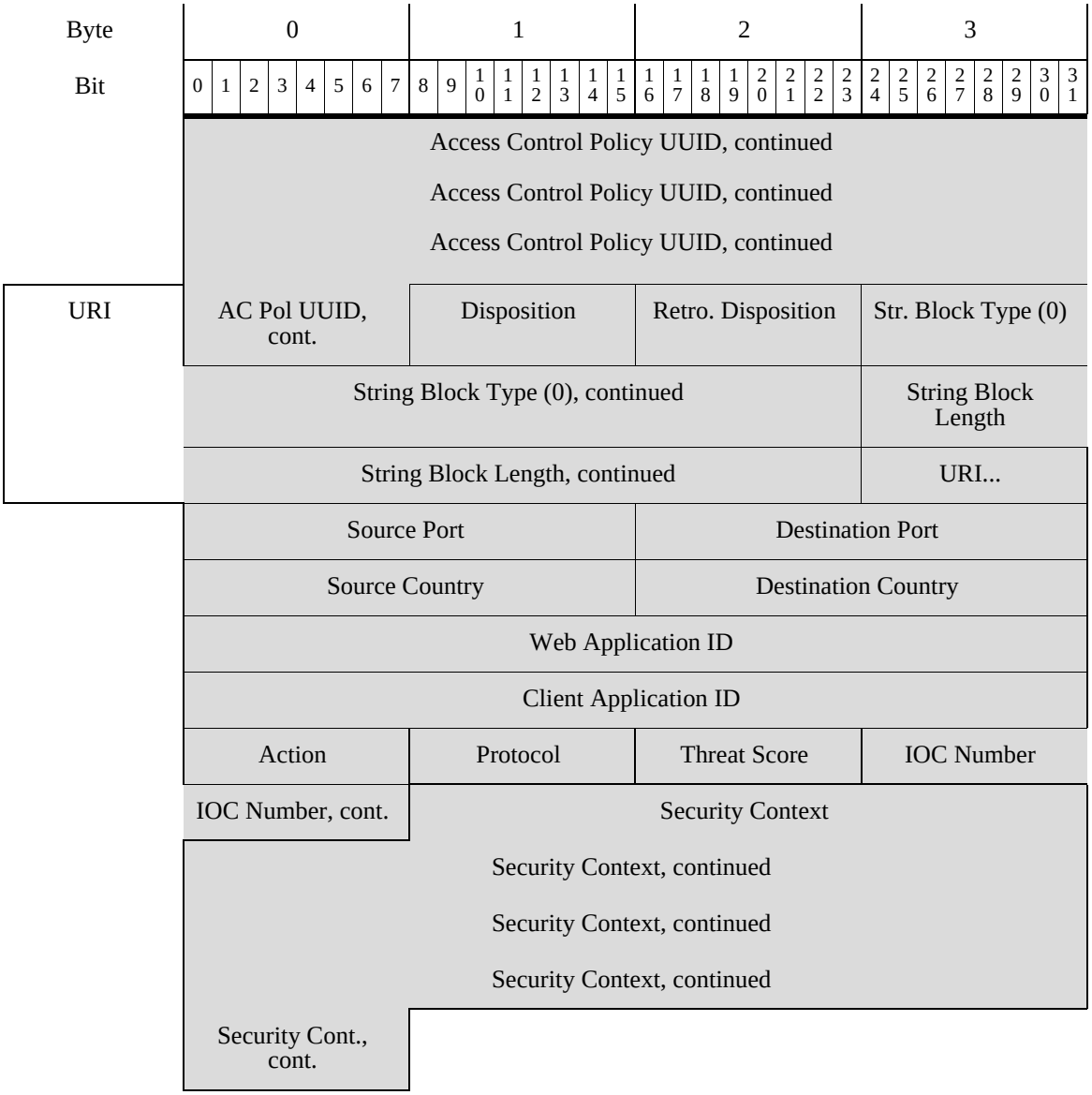
The eStreamer service uses the malware event data block to store information on malware events. These events contain information on malware detected or quarantined within a cloud, the detection method, and hosts and users affected by the malware. The malware event data block has a block type of 44 in the series 2 group of blocks. It supersedes block 35. You request the event as part of the malware event record by setting the malware event flag—bit 30 in the request flags field—in the request message with an event version of 5 and an event code of 101.

The following graphic shows the structure of the malware event 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
	Cloud UUID																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Malware Event Timestamp																															
	Event Type ID																															
	Event Subtype ID																															
Detection Name	Detector ID								String Block Type (0)																							
	String Block Type (0), cont.								String Block Length																							
	String Block Length, cont.								Detection Name...																							
User	String Block Type (0)																															
	String Block Length																															
	User...																															
File Name	String Block Type (0)																															
	String Block Length																															
	File Name...																															
File Path	String Block Type (0)																															
	String Block Length																															
	File Path...																															
File SHA Hash	String Block Type (0)																															
	String Block Length																															
	File SHA Hash...																															
	File Size																															
	File Type																															
	File Timestamp																															


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
Parent File Name
String Block Type (0)
String Block Length
Parent File Name...
Parent File SHA Hash
String Block Type (0)
String Block Length
Parent File SHA Hash...
Event Description
String Block Type (0)
String Block Length
Event Description...
Device ID
Connection Instance
Connection Counter
Connection Event Timestamp
Direction
Source IP Address
Source IP Address, continued
Source IP Address, continued
Source IP Address, continued
Source IP, cont.
Destination IP Address
Destination IP Address, continued
Destination IP Address, continued
Destination IP Address, continued
Destination IP, cont
Application ID
App. ID, cont.
User ID
User ID, cont.
Access Control Policy UUID



The following table describes the fields in the malware event data block.

Table B-13 Malware Event Data Block for 5.3.1 Fields

Field	Data Type	Description
Malware Event Block Type	uint32	Initiates a malware event data block. This value is always `44`.
Malware Event Block Length	uint32	Total number of bytes in the malware event data block, including eight bytes for the malware event block type and length fields, plus the number of bytes of data that follows.
Agent UUID	uint8[16]	The internal unique ID of the AMP for Endpoints agent reporting the malware event.
Cloud UUID	uint8[16]	The internal unique ID of the Cisco Advanced Malware Protection cloud from which the malware event originated.

Table B-13 Malware Event Data Block for 5.3.1 Fields (continued)

Field	Data Type	Description
Malware Event Timestamp	uint32	The malware event generation timestamp.
Event Type ID	uint32	The internal ID of the malware event type.
Event Subtype ID	uint32	The internal ID of the action that led to malware detection.
Detector ID	uint8	The internal ID of the detection technology that detected the malware.
String Block Type	uint32	Initiates a String data block containing the detection name. This value is always 0.
String Block Length	uint32	The number of bytes included in the Detection Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Detection Name field.
Detection Name	string	The name of the detected or quarantined malware.
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 User String data block, including eight bytes for the block type and header fields plus the number of bytes in the User field.
User	string	The user of the computer where the Cisco Agent is installed and where the malware event occurred. Note that these users are not tied to user discovery.
String Block Type	uint32	Initiates a String data block containing the file name. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Name field.
File Name	string	The name of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file path. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Path String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Path field.
File Path	string	The file path, not including the file name, of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file SHA hash. This value is always 0.
String Block Length	uint32	The number of bytes included in the File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the File SHA Hash field.
File SHA Hash	string	The rendered string of the SHA-256 hash value of the detected or quarantined file.

Table B-13 Malware Event Data Block for 5.3.1 Fields (continued)

Field	Data Type	Description
File Size	uint32	The size in bytes of the detected or quarantined file.
File Type	uint32	The file type of the detected or quarantined file. The meaning of this field is transmitted in the metadata with this event. See AMP for Endpoints File Type Metadata, page 3-39 for more information.
File Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the creation of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the parent file name. This value is always 0.
String Block Length	uint32	The number of bytes included in the Parent File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File Name field.
Parent File Name	string	The name of the file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the parent file SHA hash. This value is always 0.
String Block Length	uint32	The number of bytes included in the Parent File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File SHA Hash field.
Parent File SHA Hash	string	The SHA-256 hash value of the parent file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the event description. This value is always 0.
String Block Length	uint32	The number of bytes included in the Event Description String data block, including eight bytes for the block type and header fields plus the number of bytes in the Event Description field.
Event Description	string	The additional event information associated with the event type.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or IDS event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Event Timestamp	uint32	Timestamp of the connection event.

Table B-13 Malware Event Data Block for 5.3.1 Fields (continued)

Field	Data Type	Description
Direction	uint8	Indicates whether the file was uploaded or downloaded. Can have the following values: • 1 — Download • 2 — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.
Application ID	uint32	ID number that maps to the application using the file transfer.
User ID	uint32	Identification number for the user logged into the destination host, as identified by the system.
Access Control Policy UUID	uint8[16]	Identification number that acts as a unique identifier for the access control policy that triggered the event.
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN The file is clean and does not contain malware. • 2 — UNKNOWN It is unknown whether the file contains malware. • 3 — MALWARE The file contains malware. • 4 — UNAVAILABLE The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request. • 5 — CUSTOM SIGNATURE The file matches a user-defined hash, and is treated in a fashion designated by the user.
Retrospective Disposition	uint8	Disposition of the file if the disposition is updated. If the disposition is not updated, this field contains the same value as the Disposition field. The possible values are the same as the Disposition field.
String Block Type	uint32	Initiates a String data block containing the URI. This value is always 0.
String Block Length	uint32	The number of bytes included in the URI data block, including eight bytes for the block type and header fields plus the number of bytes in the URI field.
URI	string	URI of the connection.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint 16	Code for the country of the destination host.

Table B-13 Malware Event Data Block for 5.3.1 Fields (continued)

Field	Data Type	Description
Web Application ID	uint32	The internal identification number of the detected web application, if applicable.
Client Application ID	uint32	The internal identification number of the detected client application, if applicable.
Action	uint8	The action taken on the file based on the file type. Can have the following values: • 1 — Detect • 2 — Block • 3 — Malware Cloud Lookup • 4 — Malware Block • 5 — Malware Whitelist
Protocol	uint8	IANA protocol number specified by the user. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP This is currently only TCP.
Threat Score	uint8	A numeric value from 0 to 100 based on the potentially malicious behaviors observed during dynamic analysis.
IOC Number	uint16	ID number of the compromise associated with this event.
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.

Malware Event Data Block 5.4.x

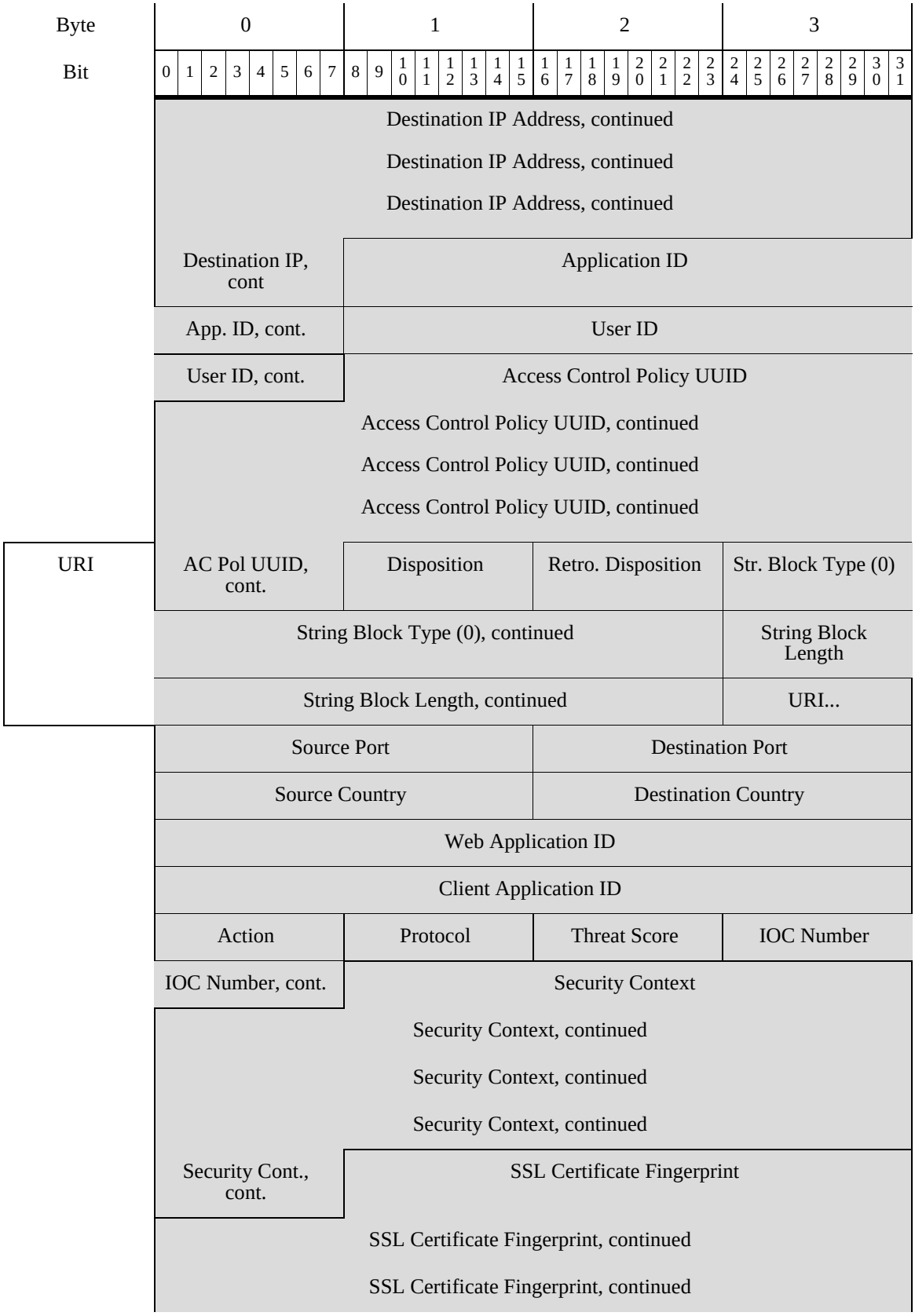
The eStreamer service uses the malware event data block to store information on malware events. These events contain information on malware detected or quarantined within a cloud, the detection method, and hosts and users affected by the malware. The malware event data block has a block type of 47 in the series 2 group of blocks. It supersedes block 44 and is superseded by block . Fields for SSL and file archive support have been added.

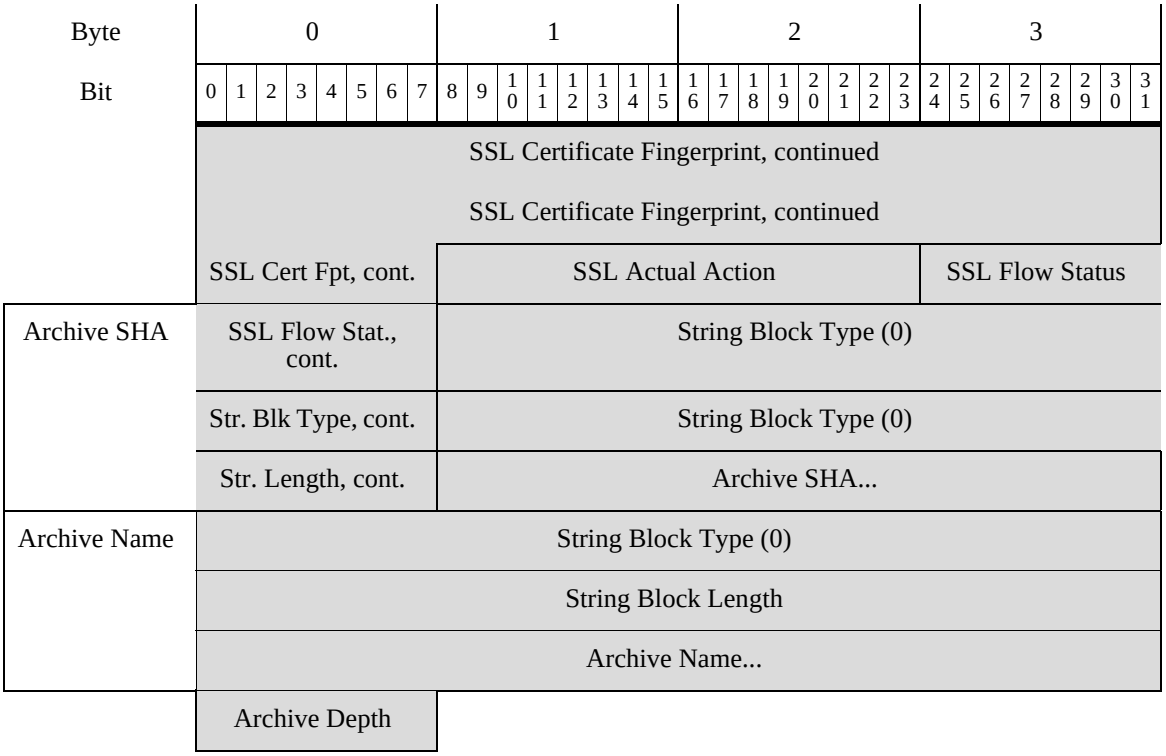
You request the event as part of the malware event record by setting the malware event flag—bit 30 in the request flags field—in the request message with an event version of 6 and an event code of 101.

The following graphic shows the structure of the malware event 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
	Malware Event Block Type (47)																															
	Malware Event Block Length																															
	Agent UUID																															
	Agent UUID, continued																															
	Agent UUID, continued																															
	Agent UUID, continued																															
	Cloud UUID																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Cloud UUID, continued																															
	Malware Event Timestamp																															
	Event Type ID																															
	Event Subtype ID																															
Detection Name	Detector ID								String Block Type (0)																							
	String Block Type (0), cont.								String Block Length																							
	String Block Length, cont.								Detection Name...																							
User	String Block Type (0)																															
	String Block Length																															
	User...																															
File Name	String Block Type (0)																															
	String Block Length																															
	File 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
File Path
String Block Type (0)
String Block Length
File Path...
File SHA Hash
String Block Type (0)
String Block Length
File SHA Hash...
File Size
File Type
File Timestamp
Parent File Name
String Block Type (0)
String Block Length
Parent File Name...
Parent File SHA Hash
String Block Type (0)
String Block Length
Parent File SHA Hash...
Event Description
String Block Type (0)
String Block Length
Event Description...
Device ID
Connection Instance
Connection Counter
Connection Event Timestamp
Direction
Source IP Address
Source IP Address, continued
Source IP Address, continued
Source IP Address, continued
Source IP, cont.
Destination IP 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
Destination IP Address, continued
Destination IP Address, continued
Destination IP Address, continued
Destination IP, cont
Application ID
App. ID, cont.
User ID
User ID, cont.
Access Control Policy UUID
Access Control Policy UUID, continued
Access Control Policy UUID, continued
Access Control Policy UUID, continued
URI
AC Pol UUID, cont.
Disposition
Retro. Disposition
Str. Block Type (0)
String Block Type (0), continued
String Block Length
String Block Length, continued
URI...
Source Port
Destination Port
Source Country
Destination Country
Web Application ID
Client Application ID
Action
Protocol
Threat Score
IOC Number
IOC Number, cont.
Security Context
Security Context, continued
Security Context, continued
Security Context, continued
Security Cont., cont.
SSL Certificate Fingerprint
SSL Certificate Fingerprint, continued
SSL Certificate Fingerprint, continued



The following table describes the fields in the malware event data block.

Table B-14 Malware Event Data Block for 5.4.x Fields

Field	Data Type	Description
Malware Event Block Type	uint32	Initiates a malware event data block. This value is always 47.
Malware Event Block Length	uint32	Total number of bytes in the malware event data block, including eight bytes for the malware event block type and length fields, plus the number of bytes of data that follows.
Agent UUID	uint8[16]	The internal unique ID of the AMP for Endpoints agent reporting the malware event.
Cloud UUID	uint8[16]	The internal unique ID of the Cisco Advanced Malware Protection cloud from which the malware event originated.
Malware Event Timestamp	uint32	The malware event generation timestamp.
Event Type ID	uint32	The internal ID of the malware event type.
Event Subtype ID	uint32	The internal ID of the action that led to malware detection.
Detector ID	uint8	The internal ID of the detection technology that detected the malware.
String Block Type	uint32	Initiates a String data block containing the detection name. This value is always 0.

Table B-14 Malware Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the Detection Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Detection Name field.
Detection Name	string	The name of the detected or quarantined malware.
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 User String data block, including eight bytes for the block type and header fields plus the number of bytes in the User field.
User	string	The user of the computer where the Cisco Agent is installed and where the malware event occurred. Note that these users are not tied to user discovery.
String Block Type	uint32	Initiates a String data block containing the file name. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Name field.
File Name	string	The name of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file path. This value is always 0.
String Block Length	uint32	The number of bytes included in the File Path String data block, including eight bytes for the block type and header fields plus the number of bytes in the File Path field.
File Path	string	The file path, not including the file name, of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the file SHA hash. This value is always 0.
String Block Length	uint32	The number of bytes included in the File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the File SHA Hash field.
File SHA Hash	string	The rendered string of the SHA-256 hash value of the detected or quarantined file.
File Size	uint32	The size in bytes of the detected or quarantined file.
File Type	uint32	The file type of the detected or quarantined file. The meaning of this field is transmitted in the metadata with this event. See AMP for Endpoints File Type Metadata, page 3-39 for more information.
File Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the creation of the detected or quarantined file.
String Block Type	uint32	Initiates a String data block containing the parent file name. This value is always 0.

Table B-14 Malware Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the Parent File Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File Name field.
Parent File Name	string	The name of the file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the parent file SHA hash. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Parent File SHA Hash String data block, including eight bytes for the block type and header fields plus the number of bytes in the Parent File SHA Hash field.
Parent File SHA Hash	string	The SHA-256 hash value of the parent file accessing the detected or quarantined file when detection occurred.
String Block Type	uint32	Initiates a String data block containing the event description. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Event Description String data block, including eight bytes for the block type and header fields plus the number of bytes in the Event Description field.
Event Description	string	The additional event information associated with the event type.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or IDS event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Event Timestamp	uint32	Timestamp of the connection event.
Direction	uint8	Indicates whether the file was uploaded or downloaded. Can have the following values: • `1` — Download • `2` — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.
Application ID	uint32	ID number that maps to the application using the file transfer.
User ID	uint32	Identification number for the user logged into the destination host, as identified by the system.

Table B-14 Malware Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
Access Control Policy UUID	uint8[16]	Identification number that acts as a unique identifier for the access control policy that triggered the event.
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN The file is clean and does not contain malware. • 2 — UNKNOWN It is unknown whether the file contains malware. • 3 — MALWARE The file contains malware. • 4 — UNAVAILABLE The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request. • 5 — CUSTOM SIGNATURE The file matches a user-defined hash, and is treated in a fashion designated by the user.
Retrospective Disposition	uint8	Disposition of the file if the disposition is updated. If the disposition is not updated, this field contains the same value as the Disposition field. The possible values are the same as the Disposition field.
String Block Type	uint32	Initiates a String data block containing the URI. This value is always 0.
String Block Length	uint32	The number of bytes included in the URI data block, including eight bytes for the block type and header fields plus the number of bytes in the URI field.
URI	string	URI of the connection.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint 16	Code for the country of the destination host.
Web Application ID	uint32	The internal identification number of the detected web application, if applicable.
Client Application ID	uint32	The internal identification number of the detected client application, if applicable.

Table B-14 Malware Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
Action	uint8	The action taken on the file based on the file type. Can have the following values: • 1 — Detect • 2 — Block • 3 — Malware Cloud Lookup • 4 — Malware Block • 5 — Malware Whitelist • 6 — Cloud Lookup Timeout • 7 — Custom Detection • 8 — Custom Detection Block • 9 — Archive Block (Depth Exceeded) • 10 — Archive Block (Encrypted) • 11 — Archive Block (Failed to Inspect)
Protocol	uint8	IANA protocol number specified by the user. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP This is currently only TCP.
Threat Score	uint8	A numeric value from 0 to 100 based on the potentially malicious behaviors observed during dynamic analysis.
IOC Number	uint16	ID number of the compromise associated with this event.
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.
SSL Certificate Fingerprint	uint8[20]	SHA1 hash of the SSL Server certificate.

Table B-14 Malware Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
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)'

Table B-14 Malware Event Data Block for 5.4.x 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'
String Block Type	uint32	Initiates a String data block containing the Archive SHA. This value is always 0.

Table B-14 Malware Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the Archive SHA String data block, including eight bytes for the block type and header fields plus the number of bytes in the intrusion policy name.
Archive SHA	string	SHA1 hash of the parent archive in which the file is contained.
String Block Type	uint32	Initiates a String data block containing the Archive Name. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Archive Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the intrusion policy name.
Archive Name	string	Name of the parent archive.
Archive Depth	uint8	Number of layers in which the file is nested. For example, if a text file is in a zip archive, this has a value of `1`.

Legacy Discovery Data Structures

Legacy Discovery Event Header

Discovery Event Header 5.0 - 5.1.1.x

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 4-39.

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																															
	IP Address																															
	MAC Address																															
	MAC Address, continued																Reserved for future use															
	Event Second																															
	Event Microsecond																															
	Reserved (Internal)								Event Type																							
	Event Subtype																															
	File Number (Internal Use Only)																															
	File Position (Internal Use Only)																															

The following table describes the discovery event header.

Table B-15 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.
IP Address	uint32	IP address of the host involved in the event.
MAC Address	uint8[6]	MAC address of the host involved in the event.
Reserved for future use	byte[2]	Two bytes of padding with values set to `0`.
Event Second	uint32	UNIX timestamp (seconds since 01/01/1970) that the system generated the event.

Table B-15 Discovery Event Header Fields (continued)

Field	Data Types	Description
Event Microsecond	uint32	Microsecond (one millionth of a second) increment that the system generated the event.
Reserved (Internal)	byte	Internal data from Cisco and can be disregarded.
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 4-39 for a list of available event types.
Event Subtype	uint32	Event subtype. See Host Discovery Structures by Event Type, page 4-39 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.

Legacy Server Data Blocks

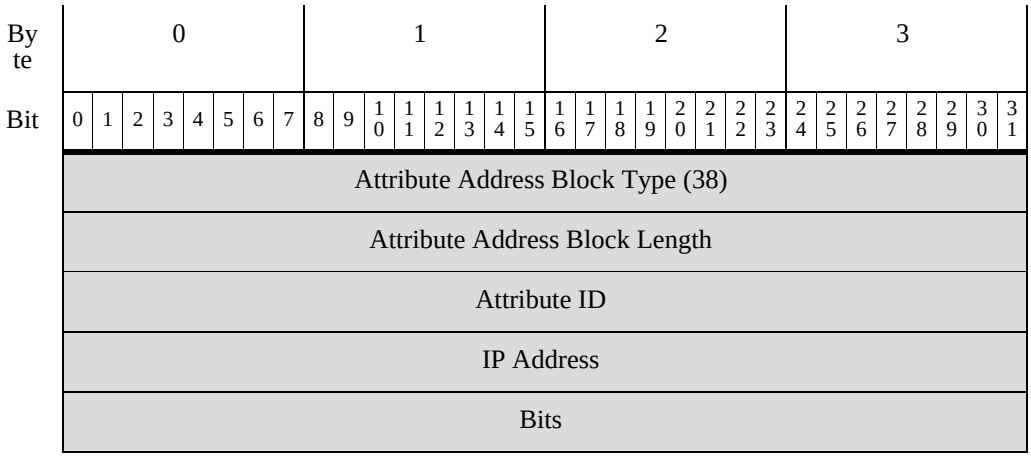
For more information, see the following sections:

- Attribute Address Data Block for 5.0 - 5.1.1.x, page B-90

Attribute Address Data Block for 5.0 - 5.1.1.x

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 38.

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 B-16 Attribute Address Data Block Fields

Field	Data Type	Description
Attribute Address Block Type	uint32	Initiates an Attribute Address data block. This value is always 38.
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[4]	IP address of the host, if the address was automatically assigned, in IP address octets.
Bits	uint32	Contains the significant bits used to calculate the netmask if an IP address was automatically assigned.

Legacy Client Application Data Blocks

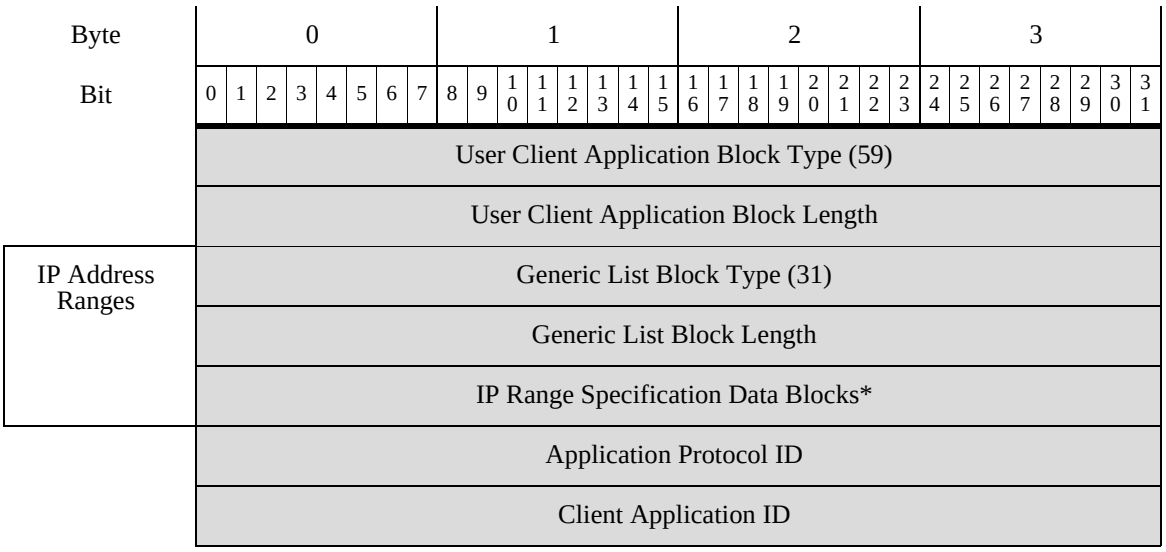
For more information, see the following sections:

- User Client Application Data Block for 5.0 - 5.1, page B-91

User Client Application Data Block for 5.0 - 5.1

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 User Client Application data block has a block type of 59.

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



Version	String Block Type (0)
	String Block Length
	Version...

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

Table B-17 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 .
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 Table 4-55User Server Data Block Fields, page 4-97 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.

Legacy Scan Result Data Blocks

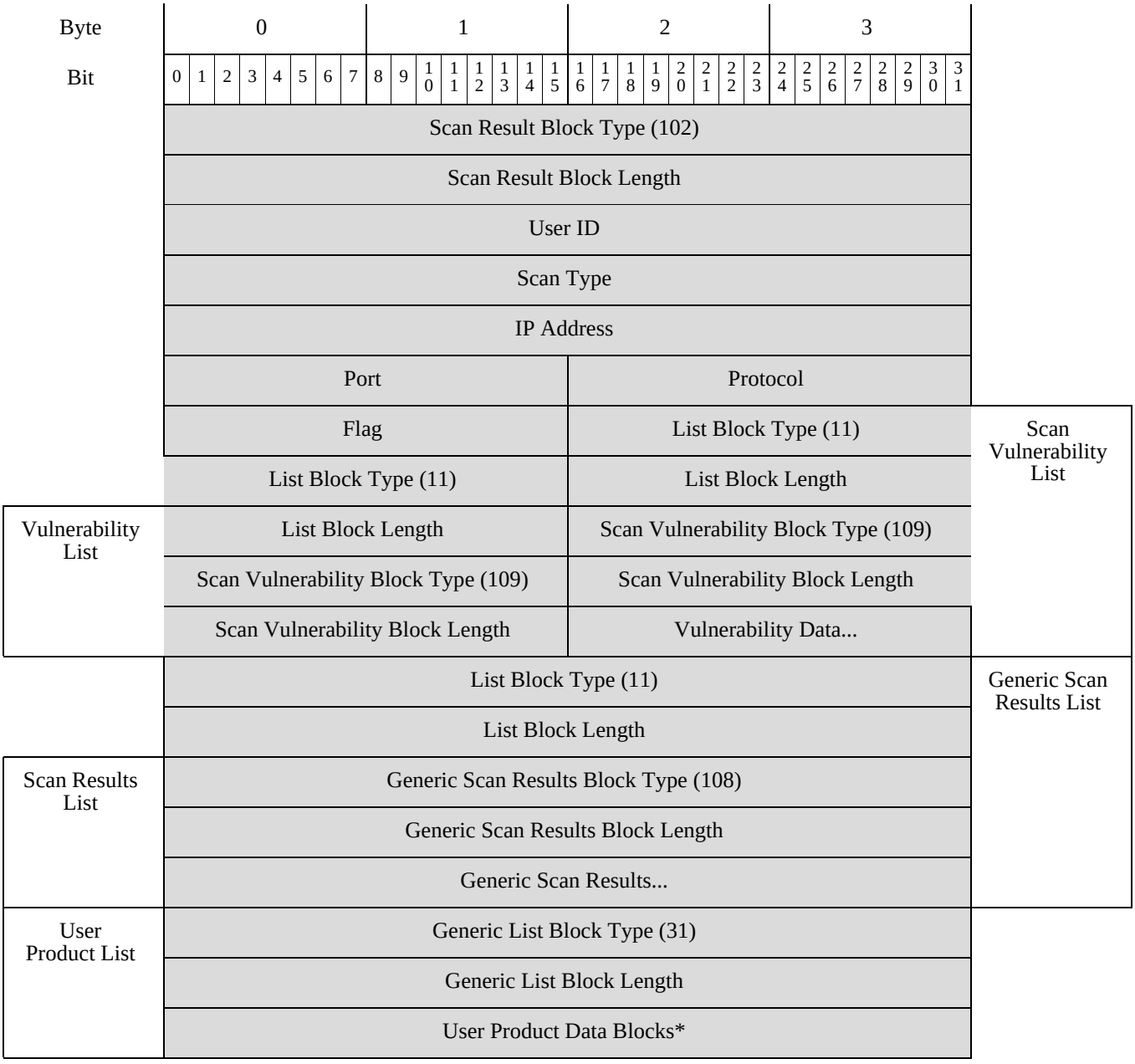
For more information, see the following sections:

- Scan Result Data Block 5.0 - 5.1.1.x, page B-93
- User Product Data Block for 5.0.x, page B-95
- User Information Data Block for 5.x, page B-105

Scan Result Data Block 5.0 - 5.1.1.x

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 102.

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 B-18 Scan Result Data Block Fields

Field	Data Type	Description
Scan Result Block Type	uint32	Initiates a Scan Result data block. This value is always 102.
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	uint32	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. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP
Flag	uint16	Reserved
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.

Table B-18 Scan Result Data Block Fields (continued)

Field	Data Type	Description
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 4-161 for a description of this data block.

User Product Data Block for 5.0.x

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 The following table describes the fields of the Connection Statistics data block for 6.0+., page 4-118. The User Product data block has a block type of 65 for 4.10.x, and a block type of 118 for 5.0 - 5.0.x. The block types 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 (65 | 118)																															
	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*																															

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
	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...																															
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...																															

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
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...																															
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.																															
List of Fixes	Generic List Block Type (31)																															
	Generic List Block Length																															
	Fix List Data Blocks*																															

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

Table B-19 User Product Data Block Fields for 4.10.x, 5.0-5.0.x

Field	Data Type	Description
User Product Data Block Type	uint32	Initiates a User Product data block. This value is `65` for version 4.10.x and `118` for version 5.0 - 5.0.x.
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 of the source that imported the data.
Source Type	uint32	The source type of the source that supplied the data.
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 4-89 for a description of this data block.
Port	uint16	Port specified by the user.
Protocol	uint16	IANA protocol number specified by the user. For example: • `1` — ICMP • `4` — IP • `6` — TCP • `17` — UDP
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.
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`.

Table B-19 User Product Data Block Fields for 4.10.x, 5.0-5.0.x (continued)

Field	Data Type	Description
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 Cisco database.
Server ID	uint32	The Cisco 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 Cisco 3D operating system 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 Cisco 3D operating system definition.
String Block Type	uint32	Initiates a String data block containing the major version number of the Cisco 3D 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 Cisco 3D operating system definition that a third party operating system string is mapped to.
String Block Type	uint32	Initiates a String data block containing the minor version number of the Cisco 3D 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 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 Cisco 3D operating system definition that a third party operating system string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the revision number of the Cisco 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 Cisco 3D operating system definition that a third party operating system string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the last major version of the Cisco 3D operating system definition that a third party operating system string is mapped to. This value is always `0`.

Table B-19 User Product Data Block Fields for 4.10.x, 5.0-5.0.x (continued)

Field	Data Type	Description
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 Cisco 3D operating system definition that a third party operating system string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the last minor version of the Cisco 3D 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 Cisco 3D operating system definition that a third party operating system string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the Last revision number of the Cisco 3D 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 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 Cisco 3D operating system definitions that a third party operating system string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the build number of the Cisco 3D operating system that the third party operating system 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 Cisco 3D operating system that the third party operating system string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the patch number of the Cisco 3D operating system that the third party operating system 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 Cisco 3D operating system that the third party operating system string in the user input is mapped to.
String Block Type	uint32	Initiates a String data block containing the extension number of the Cisco 3D operating system that the third party operating system string is mapped. This value is always `0`.

Table B-19 User Product Data Block Fields for 4.10.x, 5.0-5.0.x (continued)

Field	Data Type	Description
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 Cisco 3D operating system that the third party operating system string in the user input is mapped to.
UUID	uint8 [x16]	Contains the unique identification number for the operating system.
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 4-96 for a description of this data block.

Legacy User Login Data Blocks

See the following sections for more information:

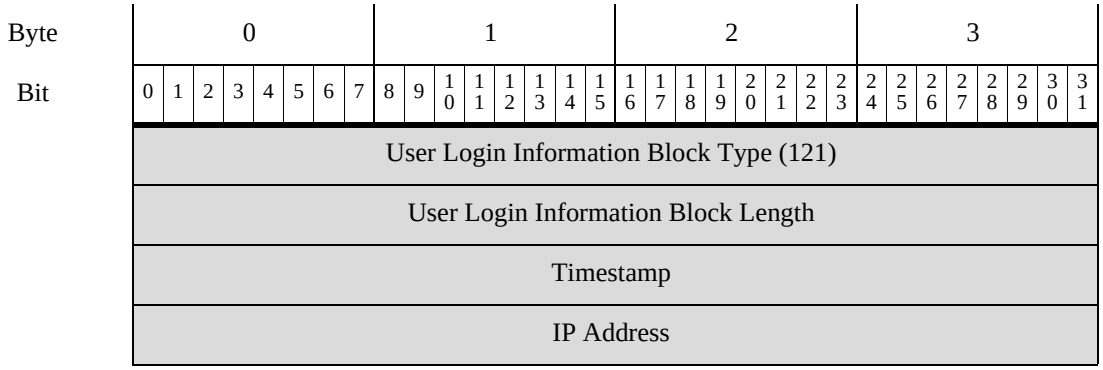
- User Login Information Data Block for 5.0 - 5.0.2, page B-101
- User Login Information Data Block 5.1-5.4.x, page B-103
- User Information Data Block for 5.x, page B-105

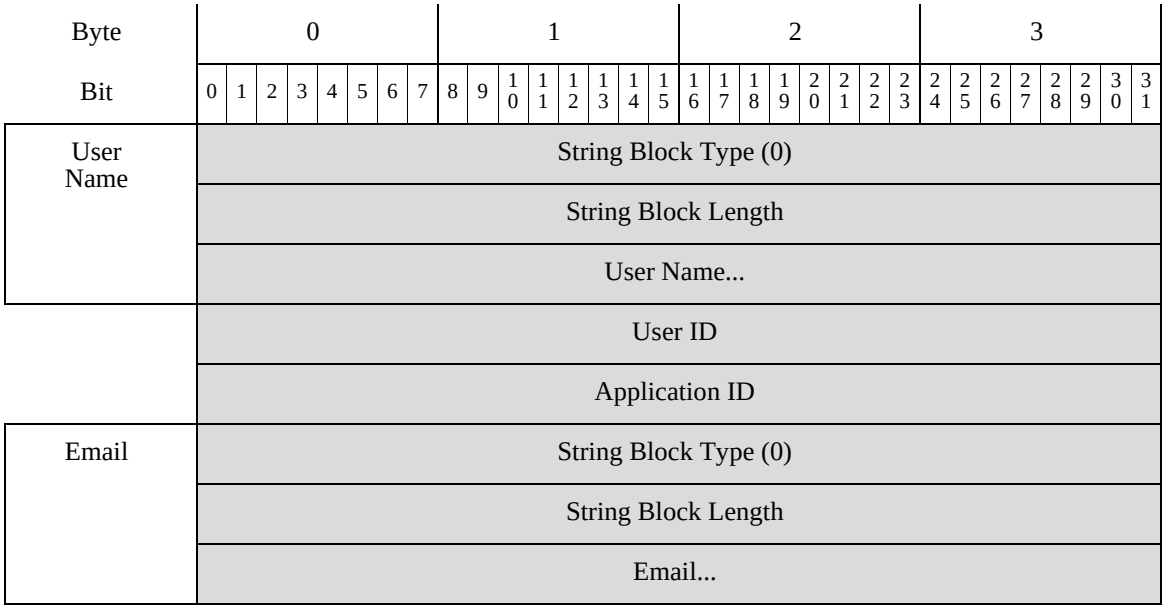
User Login Information Data Block for 5.0 - 5.0.2

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 4-57.

The User Login Information data block has a block type of 121 for version 5.0 - 5.0.2.

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





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

Table B-20 User Login Information Data Block Fields 5.0 - 5.0.2

Field	Data Type	Description
User Login Information Block Type	uint32	Initiates a User Login Information data block. This value is `121` for version 5.0 - 5.0.2.
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.
IP Address	uint8[4]	IP address from the host where the user was detected logging in, in IP address octets.
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.
User ID	uint32	Identification number of the user.
Application ID	uint32	The application ID for the application protocol used in the connection that the login information was derived from.
String Block Type	uint32	Initiates a String data block containing the email address for the user. This value is always `0`.

Table B-20 User Login Information Data Block Fields 5.0 - 5.0.2 (continued)

Field	Data Type	Description
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.

User Login Information Data Block 5.1-5.4.x

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 Account Update Message Data Block, page 4-169.

The User Login Information data block has a block type of 73 for version 4.7 - 4.10.x, a block type of 121 in the series 1 group of blocks for version 5.0 - 5.0.2, and a block type of 127 in the series 1 group of blocks for version 5.1-5.4.x.

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 (127)																															
	User Login Information Block Length																															
	Timestamp																															
	IPv4 Address																															
User Name	String Block Type (0)																															
	String Block Length																															
	User Name...																															
	User ID																															
	Application ID																															
Email	String Block Type (0)																															
	String Block Length																															
	Email...																															
	IPv6 Address																															
	IPv6 Address, continued																															
	IPv6 Address, 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
	IPv6 Address, continued																															
Reported By	Login Type								String Block Type (0)																							
	String Block Type (0), cont.								String Block Length																							
	String Block Length								Reported By...																							

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

Table B-21 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 `127` for version 5.1+.
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 1-4 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.
User ID	uint32	Identification number of the user.
Application ID	uint32	The application ID for the application protocol used in the connection that the login information was derived from.
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.

Table B-21 User Login Information Data Block Fields (continued)

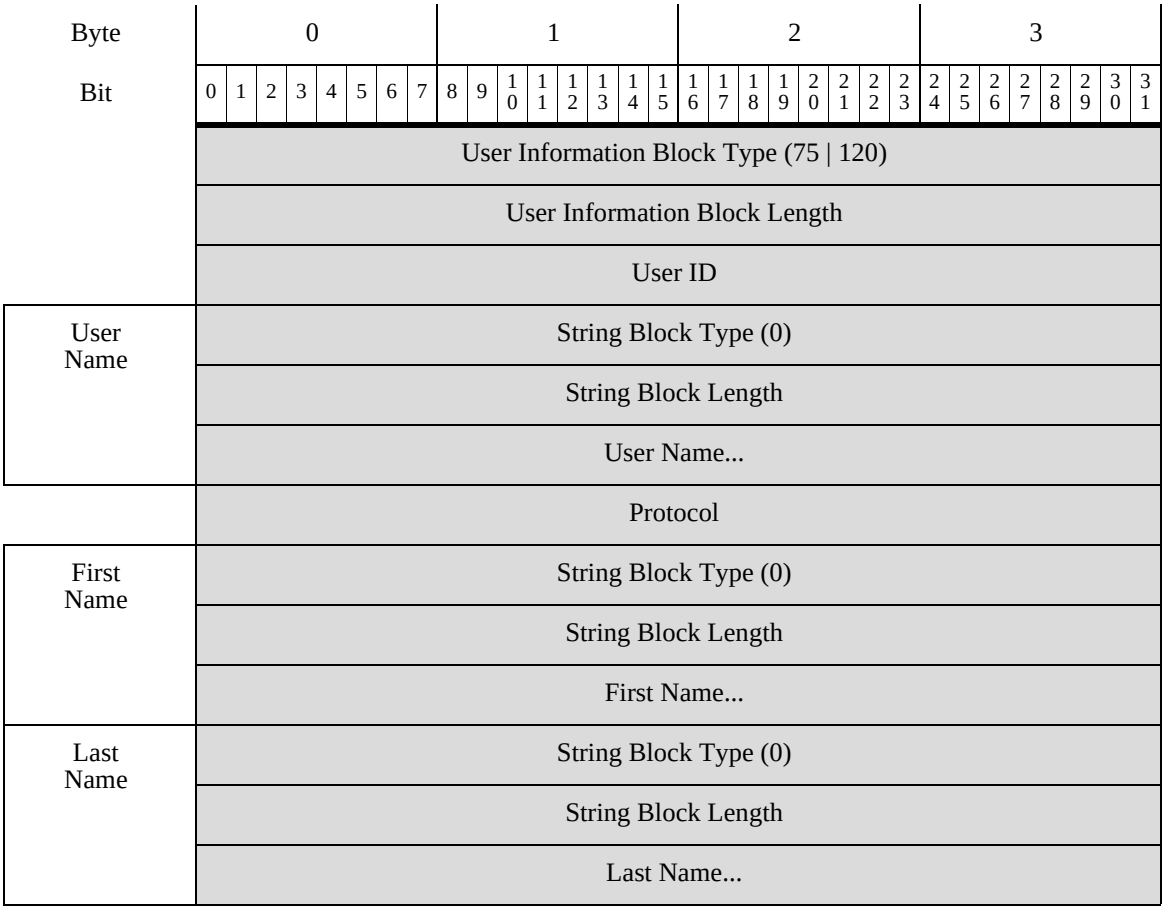
Field	Data Type	Description
Login Type	uint8	The type of user login detected.
String Block Type	uint32	Initiates a String data block containing the Reported By value. This value is always 0.
String Block Length	uint32	Number of bytes in the Reported By String data block, including eight bytes for the block type and length fields, plus the number of bytes in the Reported By field.
Reported By	string	The name of the Active Directory server reporting a login.

User Information Data Block for 5.x

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 4-56

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. The structures are the same for block types 75 and 120.

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
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...																															

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

Table B-22 User Information Data Block Fields

Field	Data Type	Description
User Information Block Type	uint32	Initiates a User Information data block. This value is `75` for version 4.7 - 4.10.x and a value of `120` for 5.0+.
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.
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.
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`.

Table B-22 User Information Data Block Fields (continued)

Field	Data Type	Description
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.

Legacy Host Profile Data Blocks

See the following sections for more information:

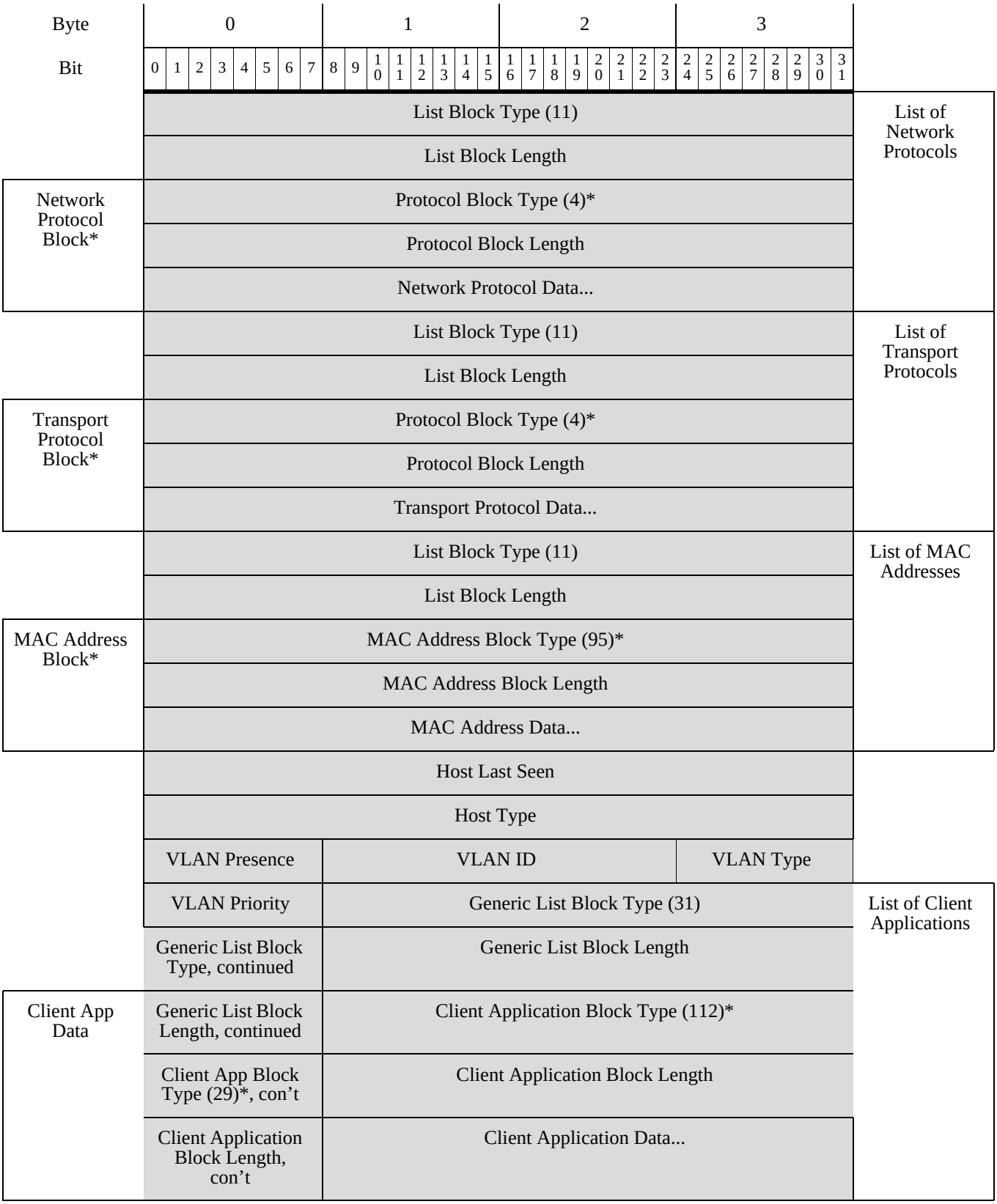
- Host Profile Data Block for 5.0 - 5.0.2, page B-107

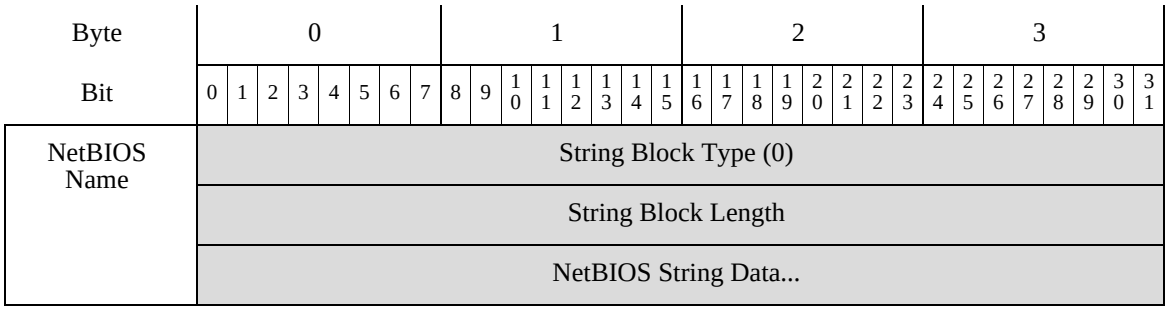
Host Profile Data Block for 5.0 - 5.0.2

The following diagram shows the format of a Host Profile data block in versions 5.0 to 5.0.2. The Host Profile data block also does not include a host criticality value, but does include a VLAN presence indicator. In addition, a Host Profile data block can convey a NetBIOS name for the host. This Host Profile data block has a block type of 91.

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
	Host Profile Block Type (91)																															
	Host Profile Block Length																															
	IP Address																															
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*																															
	List Block Type (11)																															List of TCP Servers
	List Block Length																															
TCP Server Block*	Server Block Type (36)																															
	Server Block Length																															
	TCP Server Data...																															
	List Block Type (11)																															List of UDP Servers
	List Block Length																															
UDP Server Block*	Server Block Type (36)*																															
	Server Block Length																															
	UDP Server Data...																															


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
List Block Type (11)
List Block Length
List of Network Protocols
Network Protocol Block*
Protocol Block Type (4)*
Protocol Block Length
Network Protocol Data...
List Block Type (11)
List Block Length
List of Transport Protocols
Transport Protocol Block*
Protocol Block Type (4)*
Protocol Block Length
Transport Protocol Data...
List Block Type (11)
List Block Length
List of MAC Addresses
MAC Address Block*
MAC Address Block Type (95)*
MAC Address Block Length
MAC Address Data...
Host Last Seen
Host Type
VLAN Presence
VLAN ID
VLAN Type
VLAN Priority
Generic List Block Type (31)
List of Client Applications
Generic List Block Type, continued
Generic List Block Length
Client App Data
Generic List Block Length, continued
Client Application Block Type (112)*
Client App Block Type (29)*, con't
Client Application Block Length
Client Application Block Length, con't
Client Application Data...



The following table describes the fields of the host profile data block returned by version 4.9 to version 5.0.2.

Table B-23 Host Profile Data Block for 5.0 - 5.0.2 Fields

Field	Data Type	Description
Host Profile Block Type	uint32	Initiates the Host Profile data block for 4.9 to 5.0.2. This data block has a block type of `91`.
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[4]	IP address of the host described in the profile, in IP address octets.
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 for 5.0 - 5.0.2, page B-114 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 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.

Table B-23 Host Profile Data Block for 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
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 for 5.0 - 5.0.2, page B-114 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 for 5.0 - 5.0.2, page B-114 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 for 5.0 - 5.0.2, page B-114 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.
Server Block Type	uint32	Initiates a Server data block. This value is always `89`.
Server Block Length	uint32	Number of bytes in the Server data block, including eight bytes for the server block type and length fields, plus the number of bytes of TCP server data that follows.
TCP Server Data	variable	Data fields describing a TCP server (as documented for earlier versions of the product).
List Block Type	uint32	Initiates a List data block comprising Server data blocks conveying UDP server data. This value is always `11`.

Table B-23 Host Profile Data Block for 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
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.
Server Block Type	uint32	Initiates a Server data block describing a UDP server. This value is always `89`.
Server Block Length	uint32	Number of bytes in the Server data block, including eight bytes for the server block type and length fields, plus the number of bytes of UDP server data that follows.
UDP Server Data	variable	Data fields describing a UDP server (as documented for earlier versions of the product).
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.
Protocol Block Type	uint32	Initiates a Protocol data block describing a network protocol. This value is always `4`.
Protocol Block Length	uint32	Number of bytes in the Protocol data block, including eight bytes for the protocol block type and length fields, plus the number of bytes in the protocol data that follows.
Network Protocol Data	uint16	Data field containing a network protocol number, as documented in Protocol Data Block, page 4-70.
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.
Protocol Block Type	uint32	Initiates a Protocol data block describing a transport protocol. This value is always `4`.
Protocol Block Length	uint32	Number of bytes in the protocol data block, including eight bytes for the protocol block type and length, plus the number of bytes in the protocol data that follows.
Transport Protocol Data	variable	Data field containing a transport protocol number, as documented in Protocol Data Block, page 4-70.
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 B-23 Host Profile Data Block for 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
Host MAC Address Block Type	uint32	Initiates a Host MAC Address data block. This value is always 95.
Host MAC Address Block Length	uint32	Number of bytes in the Host MAC Address data block, including eight bytes for the Host MAC address block type and length fields, plus the number of bytes in the Host MAC address data that follows.
Host MAC Address Data	variable	Host MAC address data fields described in Host MAC Address 4.9+, page 4-109.
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)
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.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Client Application data blocks conveying client application 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 client application data blocks.
Client Application Block Type	uint32	Initiates a client application block. This value is always 5.
Client Application Block Length	uint32	Number of bytes in the client application block, including eight bytes for the client application block type and length fields, plus the number of bytes in the client application data that follows.
Client Application Data	variable	Client application data fields describing a client application, as documented in Host Client Application Data Block for 5.0+, page 4-146.
String Block Type	uint32	Initiates a string data block for the NetBIOS name. This value is set to 0 to indicate string data.

Table B-23 Host Profile Data Block for 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
String Block Length	uint32	Indicates the number of bytes in the NetBIOS name data block, including eight bytes for the string block type and length, plus the number of bytes in the NetBIOS name.
NetBIOS String Data	Variable	Contains the NetBIOS name of the host described in the host profile.

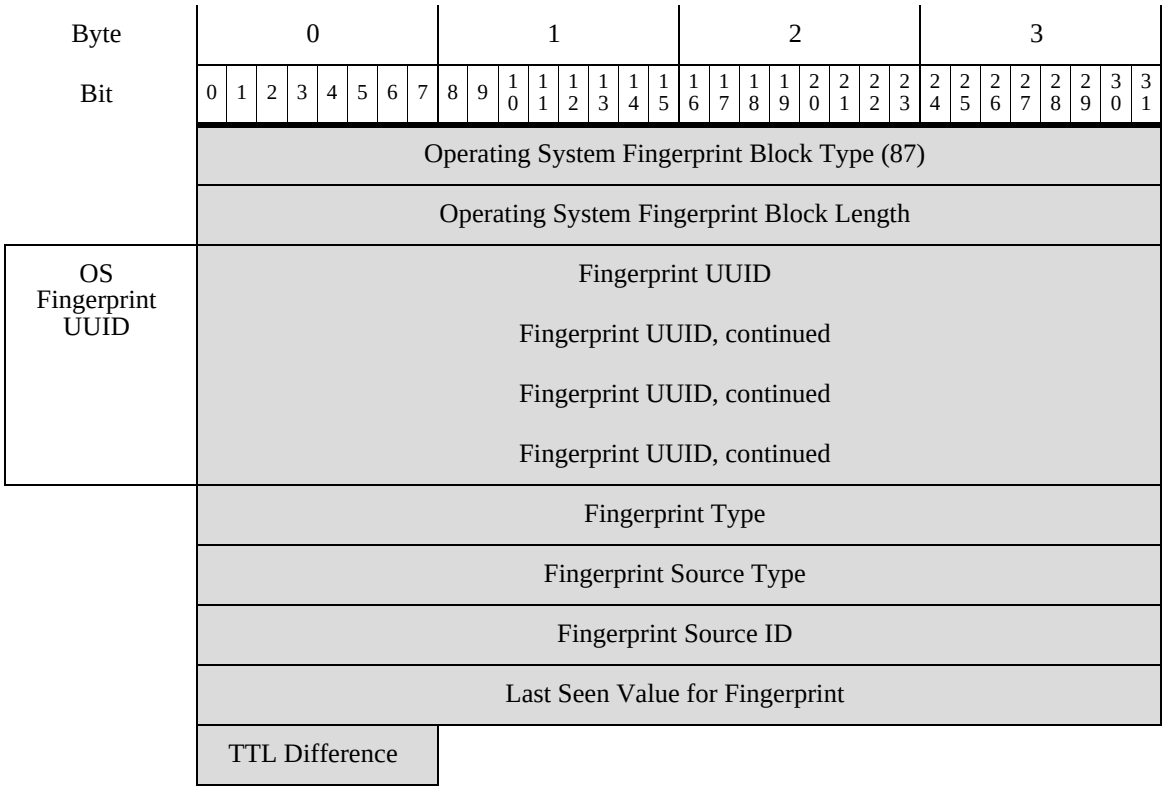
Legacy OS Fingerprint Data Blocks

See the following sections for more information:

- Operating System Fingerprint Data Block for 5.0 - 5.0.2, page B-114

Operating System Fingerprint Data Block for 5.0 - 5.0.2

The Operating System Fingerprint data block has a block type of 87. 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 for version 5.0 to version 5.0.2.



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

Table B-24 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 87.
Operating System Data Block Length	uint32	Number of bytes in the Operating System Fingerprint data block. This value should always be 41: eight bytes for the data block type and length fields, sixteen bytes for the fingerprint UUID value, four bytes for the fingerprint type, four bytes for the fingerprint source type, four bytes for the fingerprint source ID, four bytes for the last seen value, and one byte for the TTL difference.
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.
Fingerprint Source ID	uint32	Indicates the ID of the source 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.

Legacy Connection Data Structures

For more information, see the following sections:

Connection Statistics Data Block 5.0 - 5.0.2

The Connection Statistics data block is used in Connection Data messages. The Connection Statistics data block for version 5.0 - 5.0.2 has a block type of 115.

For more information on the Connection Statistics Data message, see Connection Statistics Data Message, page 4-48.

The following diagram shows the format of a Connection Statistics data block for 5.0 - 5.0.2:

::

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
Connection Data Block Type (115)																																
Connection Data Block Length																																
Device ID																																
Ingress Zone																																
Ingress Zone, continued																																
Ingress Zone, continued																																
Ingress Zone, continued																																
Egress Zone																																
Egress Zone, continued																																
Egress Zone, continued																																
Egress Zone, continued																																
Ingress Interface																																
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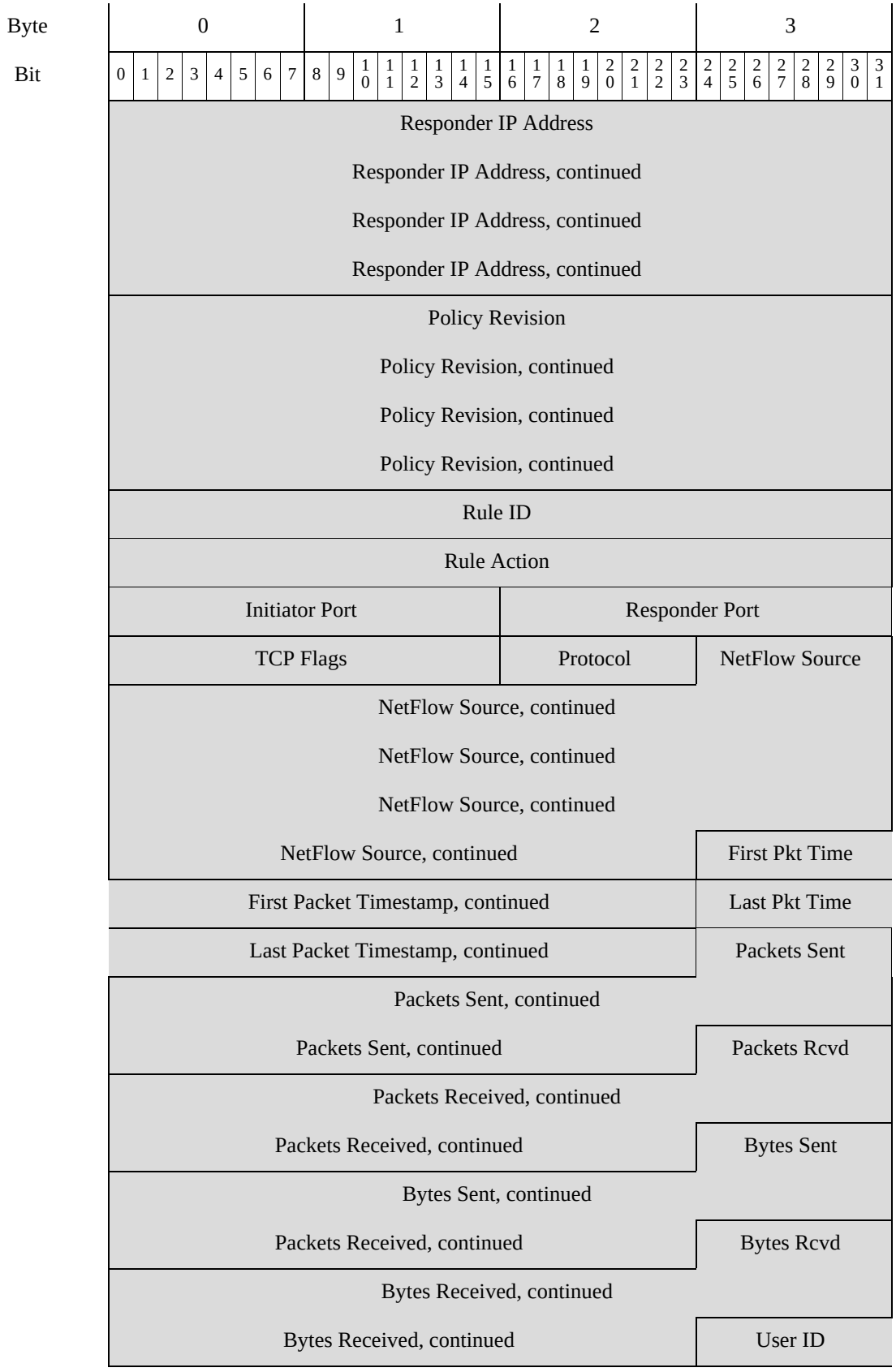
Egress Interface, continued																																
Initiator IP Address																																
Initiator IP Address, continued																																
Initiator IP Address, continued																																
Initiator IP Address, continued																																


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
Responder IP Address
Responder IP Address, continued
Responder IP Address, continued
Responder IP Address, continued
Policy Revision
Policy Revision, continued
Policy Revision, continued
Policy Revision, continued
Rule ID
Rule Action
Initiator Port
Responder Port
TCP Flags
Protocol
NetFlow Source
NetFlow Source, continued
NetFlow Source, continued
NetFlow Source, continued
NetFlow Source, continued
First Pkt Time
First Packet Timestamp, continued
Last Pkt Time
Last Packet Timestamp, continued
Packets Sent
Packets Sent, continued
Packets Sent, continued
Packets Rcvd
Packets Received, continued
Packets Received, continued
Bytes Sent
Bytes Sent, continued
Packets Received, continued
Bytes Rcvd
Bytes Received, continued
Bytes Received, continued
User 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
	User ID, continued																								Application Protocol ID							
	Application Protocol ID, continued																								URL Category							
	URL Category, continued																								URL Reputation							
	URL Reputation, continued																								Client App ID							
	Client Application ID, continued																								Web App ID							
	Web Application ID, continued																								String Block Type (0)							
Client App URL	String Block Type, continued																								String Block Length							
	String Block Length, continued																								Client Application 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...																															

The following table describes the fields of the Connection Statistics data block for 5.0 - 5.0.2.

Table B-25 Connection Statistics Data Block 5.0 - 5.0.2 Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 5.0 to 5.0.2. The value is always `115`.
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.
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.

Table B-25 Connection Statistics Data Block 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
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.
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.
Rule Action	uint32	The action selected in the user interface for that rule (allow, block, and so forth).
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
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.
Packets Sent	uint64	Number of packets transmitted by the initiating host.
Packets Received	uint64	Number of packets transmitted by the responding host.
Bytes Sent	uint64	Number of bytes transmitted by the initiating host.
Bytes Received	uint64	Number of bytes transmitted by the responding host.
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.

Table B-25 Connection Statistics Data Block 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
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`.
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.

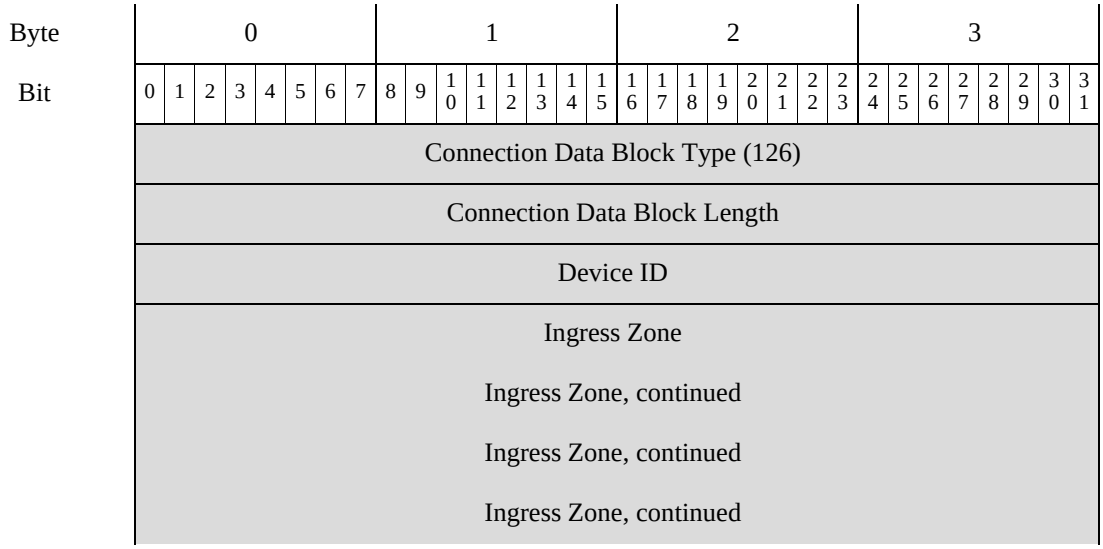
Connection Statistics Data Block 5.1

The Connection Statistics data block is used in Connection Data messages. Changes to the Connection data block between 5.0.2 and 5.1 include the addition of new fields with configuration parameters introduced in 5.1 (rule action reason, monitor rules, Security Intelligence source/destination, Security Intelligence layer). The Connection Statistics data block for version 5.1 has a block type of 126.

For more information on the Connection Statistics Data message, see Connection Statistics Data Message, page 4-48.

The following diagram shows the format of a Connection Statistics data block for 5.1:

::



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
Egress Zone																																
Egress Zone, continued																																
Egress Zone, continued																																
Egress Zone, continued																																
Ingress Interface																																
Ingress Interface, continued																																
Ingress Interface, continued																																
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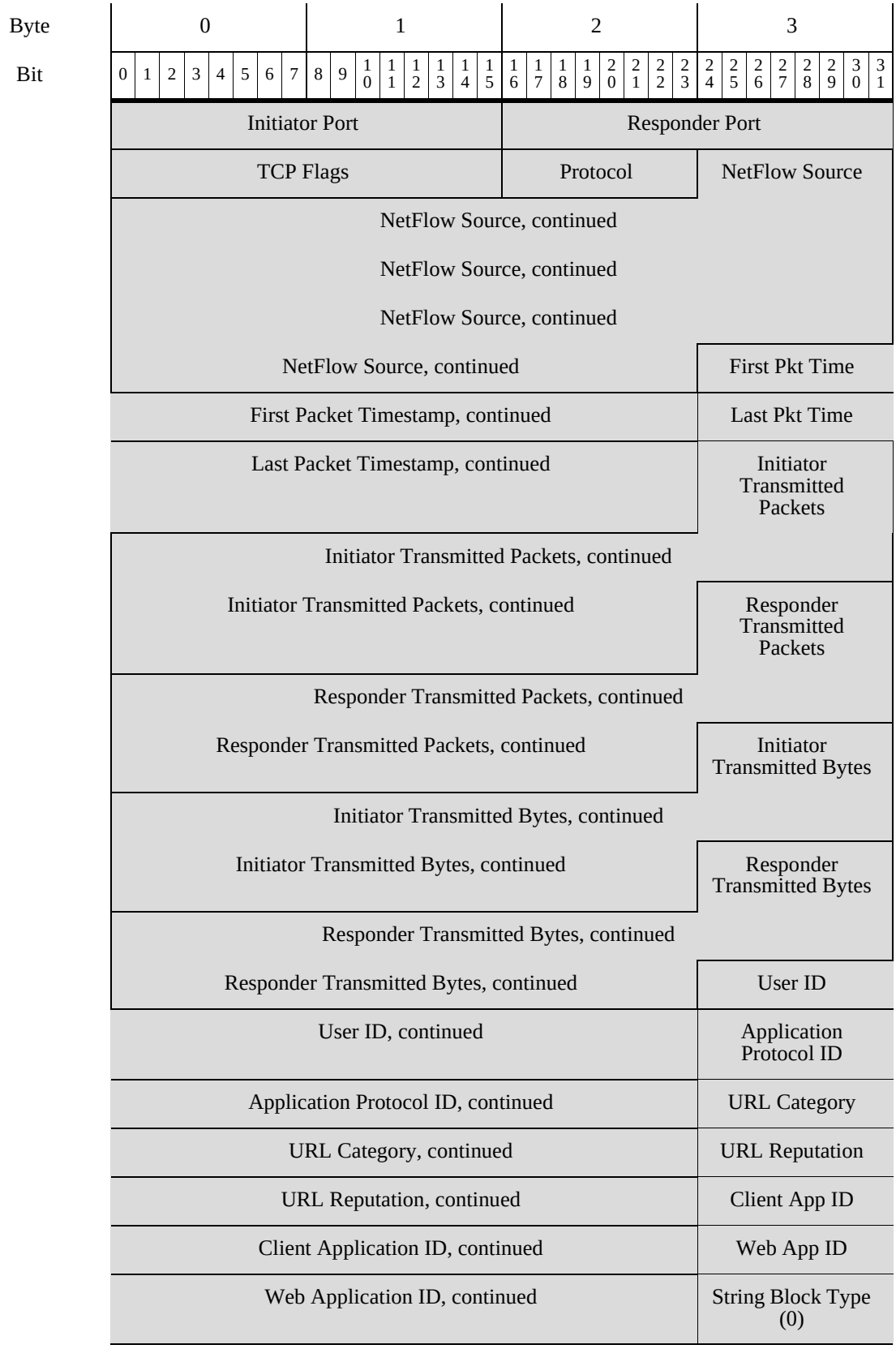
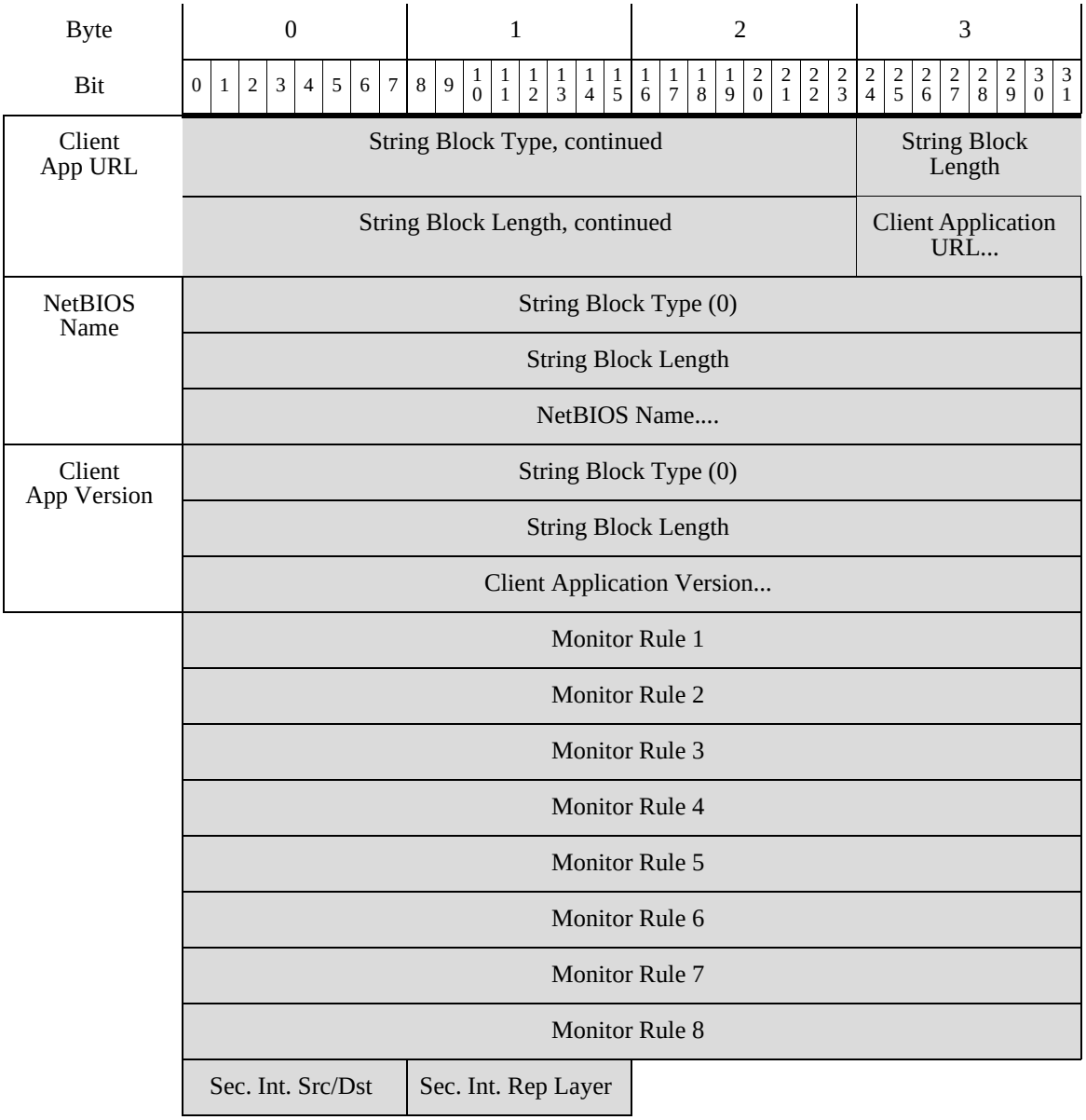
Egress Interface, continued																																
Egress Interface, continued																																
Egress Interface, continued																																
Initiator IP Address																																
Initiator IP Address, continued																																
Initiator IP Address, continued																																
Initiator IP Address, continued																																
Responder IP Address																																
Responder IP Address, continued																																
Responder IP Address, continued																																
Responder IP Address, continued																																
Policy Revision																																
Policy Revision, continued																																
Policy Revision, continued																																
Policy Revision, continued																																
Rule ID																																
Rule Action																	Rule Reason															


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 Port
Responder Port
TCP Flags
Protocol
NetFlow Source
NetFlow Source, continued
NetFlow Source, continued
NetFlow Source, continued
NetFlow Source, continued
First Pkt Time
First Packet Timestamp, continued
Last Pkt Time
Last Packet Timestamp, continued
Initiator Transmitted Packets
Initiator Transmitted Packets, continued
Initiator Transmitted Packets, continued
Responder Transmitted Packets
Responder Transmitted Packets, continued
Responder Transmitted Packets, continued
Initiator Transmitted Bytes
Initiator Transmitted Bytes, continued
Initiator Transmitted Bytes, continued
Responder Transmitted Bytes
Responder Transmitted Bytes, continued
Responder Transmitted Bytes, continued
User ID
User ID, continued
Application Protocol ID
Application Protocol ID, continued
URL Category
URL Category, continued
URL Reputation
URL Reputation, continued
Client App ID
Client Application ID, continued
Web App ID
Web Application ID, continued
String Block Type (0)



The following table describes the fields of the Connection Statistics data block for 5.1.

Table B-26 Connection Statistics Data Block 5.1 Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 5.1. The value is always `126`.
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.
Ingress Zone	uint8[16]	Ingress security zone in the event that triggered the policy violation.

Table B-26 Connection Statistics Data Block 5.1 Fields (continued)

Field	Data Type	Description
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.
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.
Rule Action	uint16	The action selected in the user interface for that rule (allow, block, and so forth).
Rule Reason	uint16	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.
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.
Initiator Transmitted Bytes	uint64	Number of bytes transmitted by the initiating host.
Responder Transmitted Bytes	uint64	Number of bytes transmitted by the responding host.
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.

Table B-26 Connection Statistics Data Block 5.1 Fields (continued)

Field	Data Type	Description
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`.
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.

Table B-26 Connection Statistics Data Block 5.1 Fields (continued)

Field	Data Type	Description
Security Intelligence Source/ Destination	uint8	Whether the source or destination IP address matched the IP block list.
Security Intelligence Layer	uint8	The IP layer that matched the IP block list.

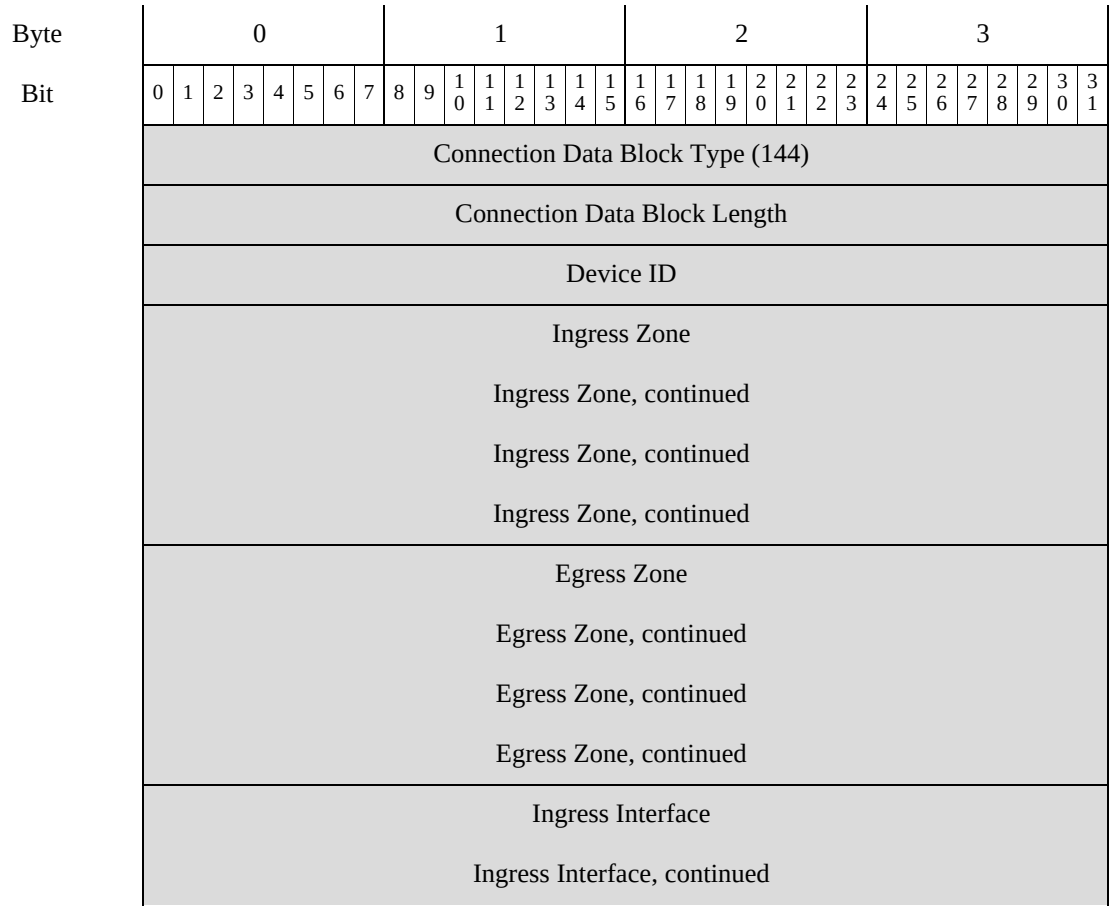
Connection Statistics Data Block 5.2.x

The connection statistics data block is used in connection data messages. Changes to the connection data block between versions 5.1.1 and 5.2 include the addition of new fields to support geolocation. The connection statistics data block for version 5.2.x has a block type of 144 in the series 1 group of blocks. It deprecates block type 137, Connection Statistics Data Block 5.1.1.x, page B-133.

For more information on the Connection Statistics Data message, see Connection Statistics Data Message, page 4-48.

The following diagram shows the format of a Connection Statistics data block for 5.2.x:

::



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, continued																																
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Rule Action																	Rule Reason															
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TCP Flags																	Protocol								NetFlow Source							
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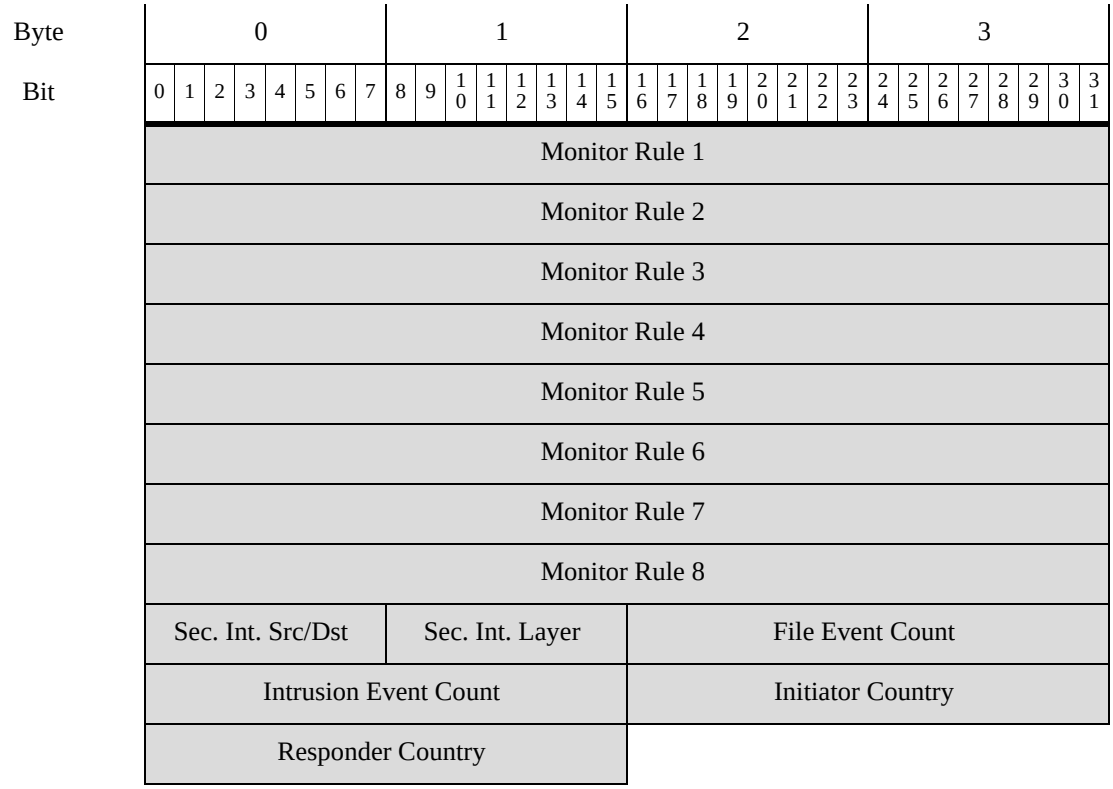
NetFlow Source, continued																																
NetFlow Source, continued																																
NetFlow Source, continued																									Instance ID							

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
	Instance ID, cont.								Connection Counter																First Pkt Time							
	First Packet Timestamp, continued																								Last Pkt Time							
	Last Packet Timestamp, continued																								Initiator Tx Packets							
	Initiator Transmitted Packets, continued																															
	Initiator Transmitted Packets, continued																								Resp. Tx Packets							
	Responder Transmitted Packets, continued																															
	Responder Transmitted Packets, continued																								Initiator Tx Bytes							
	Initiator Transmitted Bytes, continued																															
	Initiator Transmitted Bytes, continued																								Resp. Tx Bytes							
	Responder Transmitted Bytes, continued																															
	Responder Transmitted Bytes, continued																								User ID							
	User ID, continued																								Application Prot. ID							
	Application Protocol ID, continued																								URL Category							
	URL Category, continued																								URL Reputation							
	URL Reputation, continued																								Client App ID							
	Client Application ID, continued																								Web App ID							
Client URL	Web Application ID, continued																								Str. Block Type (0)							
	String Block Type, continued																								String Block Length							
	String Block Length, continued																								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...																															



The following table describes the fields of the Connection Statistics data block for 5.2.x:

Table B-27 Connection Statistics Data Block 5.2.x Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 5.2.x. The value is always `144`.
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.
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.

Table B-27 Connection Statistics Data Block 5.2.x Fields (continued)

Field	Data Type	Description
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.
Rule Action	uint16	The action selected in the user interface for that rule (allow, block, and so forth).
Rule Reason	uint16	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.
Initiator Transmitted Bytes	uint64	Number of bytes transmitted by the initiating host.
Responder Transmitted Bytes	uint64	Number of bytes transmitted by the responding host.
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`.

Table B-27 Connection Statistics Data Block 5.2.x Fields (continued)

Field	Data Type	Description
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`.
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 block list.
Security Intelligence Layer	uint8	The IP layer that matched the IP block list.
File Event Count	uint16	Value used to distinguish between file events that happen during the same second.

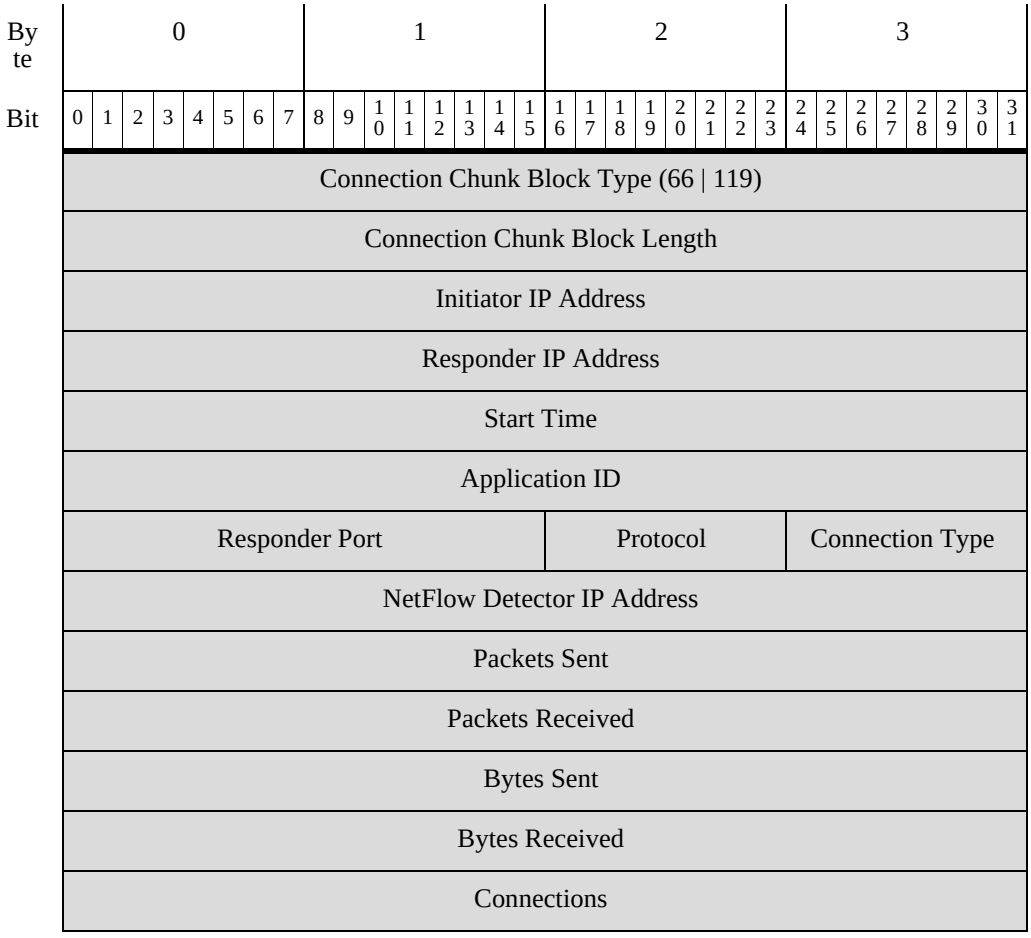
Table B-27 Connection Statistics Data Block 5.2.x Fields (continued)

Field	Data Type	Description
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	uint16	Code for the country of the responding host.

Connection Chunk Data Block for 5.0 - 5.1

The Connection Chunk data block conveys connection data detected by a NetFlow device. The Connection Chunk data block has a block type of 66 for pre-4.10.1 versions. For versions 5.0 - 5.1, it has a block type of 119.

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 B-28 Connection Chunk Data Block Fields

Field	Data Type	Description
Connection Chunk Block Type	uint32	Initiates a Connection Chunk data block. This value is `66` for versions before 4.10.1 and a value of `119` for version 5.0.
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 host that initiated the connection, in IP address octets.
Responder IP Address	uint8[4]	IP address of the host responding in the connection, in IP address octets.
Start Time	uint32	The starting time for the connection chunk.
Application ID	uint32	Application identification number for the application 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.
Source Device IP Address	uint8[4]	IP address of the NetFlow device that detected the connection, in IP address octets.
Packets Sent	uint32	The number of packets sent in the connection chunk.
Packets Received	uint32	The number of packets received in the connection chunk.
Bytes Sent	uint32	The number of bytes sent in the connection chunk.
Bytes Received	uint32	The number of bytes received in the connection chunk.
Connections	uint32	The number of sessions made in the connection chunk.

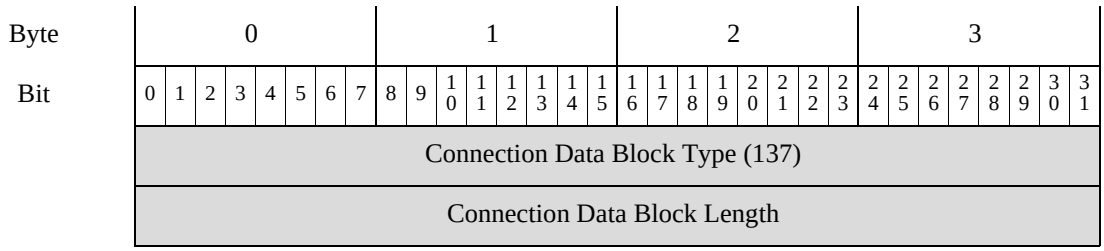
Connection Statistics Data Block 5.1.1.x

The connection statistics data block is used in connection data messages. Changes to the connection data block between versions 5.1 and 5.1.1 include the addition of new fields to identify associated intrusion events. The connection statistics data block for version 5.1.1.x has a block type of 137. It deprecates block type 126, Connection Statistics Data Block 5.1, page B-120.

For more information on the Connection Statistics Data message, see Connection Statistics Data Message, page 4-48.

The following diagram shows the format of a Connection Statistics data block for 5.1.1:

::



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
Device ID																																
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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
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Policy Revision, continued																																
Policy Revision, continued																																
Rule ID																																
Rule Action																	Rule Reason															
Initiator Port																	Responder Port															
TCP Flags																	Protocol								NetFlow Source							
NetFlow Source, continued																																
NetFlow Source, continued																																
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NetFlow Source, continued																									Instance ID							
Instance ID, cont.									Connection Counter																First Pkt Time							
First Packet Timestamp, continued																									Last Pkt Time							
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Initiator Transmitted Packets, continued																																
Initiator Transmitted Packets, continued																									Resp. Tx Packets							
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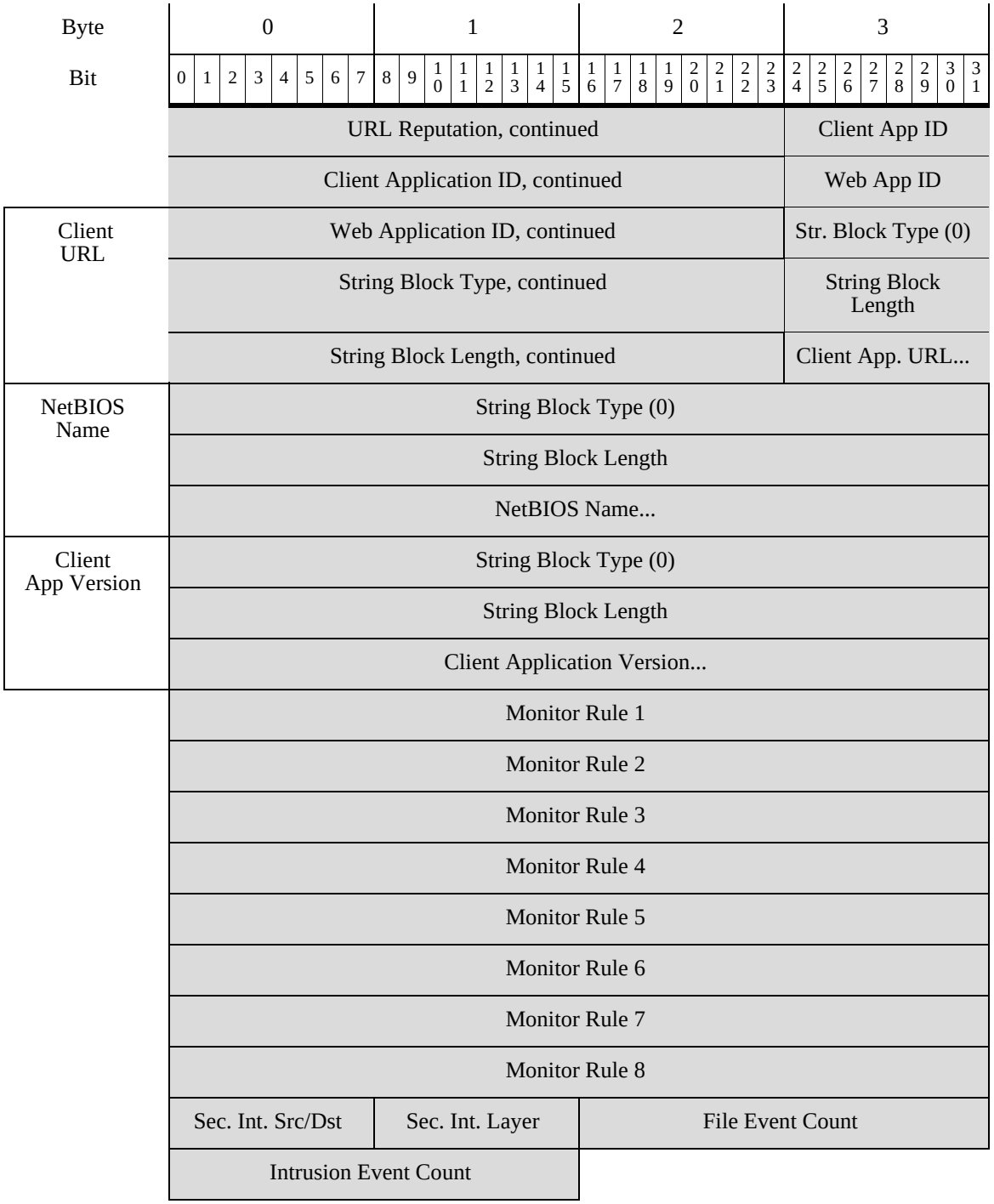
Responder Transmitted Packets, continued																									Initiator Tx Bytes							
Initiator Transmitted Bytes, continued																																
Initiator Transmitted Bytes, continued																									Resp. Tx Bytes							
Responder Transmitted Bytes, continued																																
Responder Transmitted Bytes, continued																									User ID							
User ID, continued																									Application Prot. ID							
Application Protocol ID, continued																									URL Category							
URL Category, continued																									URL Reputation							



The following table describes the fields of the Connection Statistics data block for 5.1.1.x.

Table B-29 Connection Statistics Data Block 5.1.1.x Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 5.1.1.x. The value is always `137`.
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.
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.
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.
Rule Action	uint16	The action selected in the user interface for that rule (allow, block, and so forth).
Rule Reason	uint16	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.

Table B-29 Connection Statistics Data Block 5.1.1.x Fields (continued)

Field	Data Type	Description
Initiator Transmitted Packets	uint64	Number of packets transmitted by the initiating host.
Responder Transmitted Packets	uint64	Number of packets transmitted by the responding host.
Initiator Transmitted Bytes	uint64	Number of bytes transmitted by the initiating host.
Responder Transmitted Bytes	uint64	Number of bytes transmitted by the responding host.
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`.
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.

Table B-29 Connection Statistics Data Block 5.1.1.x Fields (continued)

Field	Data Type	Description
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 block list.
Security Intelligence Layer	uint8	The IP layer that matched the IP block list.
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.

Connection Statistics Data Block 5.3

The connection statistics data block is used in connection data messages. Changes to the connection data block between versions 5.2.x and 5.3 include the addition of new fields for NetFlow information. The connection statistics data block for version 5.3 has a block type of 152 in the series 1 group of blocks. It deprecates block type 144, Connection Statistics Data Block 5.2.x, page B-126.

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 10 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 4-48.

The following diagram shows the format of a Connection Statistics data block for 5.3+:

::

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
Connection Data Block Type (152)																																
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Device ID																																
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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
Responder IP Address, continued																																
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Policy Revision, continued																																
Policy Revision, continued																																
Policy Revision, continued																																
Rule ID																																
Rule Action																	Rule Reason															
Initiator Port																	Responder Port															
TCP Flags																	Protocol								NetFlow Source							
NetFlow Source, continued																																
NetFlow Source, continued																																
NetFlow Source, continued																																
NetFlow Source, continued																									Instance ID							
Instance ID, cont.									Connection Counter																First Pkt Time							
First Packet Timestamp, continued																									Last Pkt Time							
Last Packet Timestamp, continued																									Initiator Tx Packets							
Initiator Transmitted Packets, continued																																
Initiator Transmitted Packets, continued																									Resp. Tx Packets							
Responder Transmitted Packets, continued																																
Responder Transmitted Packets, continued																									Initiator Tx Bytes							
Initiator Transmitted Bytes, continued																																
Initiator Transmitted Bytes, continued																									Resp. Tx Bytes							
Responder Transmitted Bytes, continued																																
Responder Transmitted Bytes, continued																									User 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
	User ID, continued																								Application Prot. ID							
	Application Protocol ID, continued																								URL Category							
	URL Category, continued																								URL Reputation							
	URL Reputation, continued																								Client App ID							
	Client Application ID, continued																								Web App ID							
Client URL	Web Application ID, continued																								Str. Block Type (0)							
	String Block Type, continued																								String Block Length							
	String Block Length, continued																								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...																															
	Monitor Rule 1																															
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	Monitor Rule 3																															
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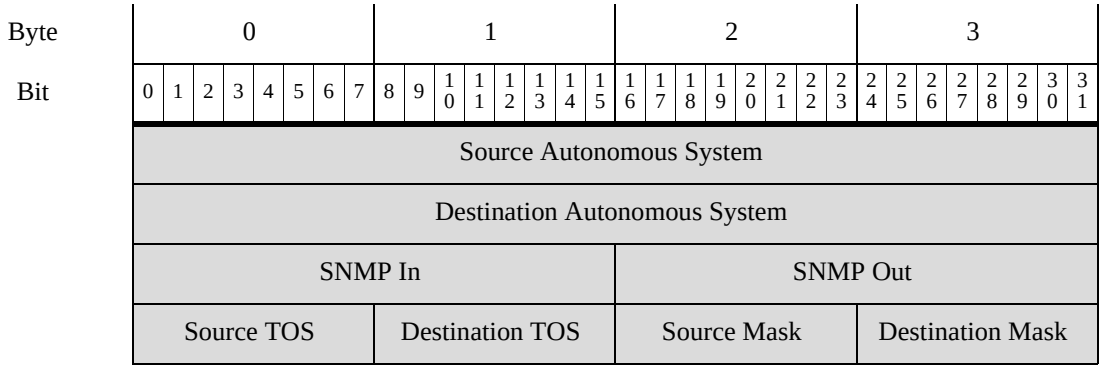
	Monitor Rule 6																															
	Monitor Rule 7																															
	Monitor Rule 8																															
	Sec. Int. Src/Dst								Sec. Int. Layer								File Event Count															
	Intrusion Event Count																Initiator Country															
	Responder Country																IOC Number															



The following table describes the fields of the Connection Statistics data block for 5.3.

Table B-30 Connection Statistics Data Block 5.3+ Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 5.3. The value is always `152`.
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.
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.
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.
Rule Action	uint16	The action selected in the user interface for that rule (allow, block, and so forth).
Rule Reason	uint16	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.

Table B-30 Connection Statistics Data Block 5.3+ Fields (continued)

Field	Data Type	Description
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.
Initiator Transmitted Bytes	uint64	Number of bytes transmitted by the initiating host.
Responder Transmitted Bytes	uint64	Number of bytes transmitted by the responding host.
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.

Table B-30 Connection Statistics Data Block 5.3+ Fields (continued)

Field	Data Type	Description
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.
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 block list.
Security Intelligence Layer	uint8	The IP layer that matched the IP block list.
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.
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 B-30 Connection Statistics Data Block 5.3+ 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.

Connection Statistics Data Block 5.3.1

The connection statistics data block is used in connection data messages. The only changes to the connection data block between versions 5.3 and 5.3.1 is the addition of a security context field. The connection statistics data block for version 5.3.1 has a block type of 154 in the series 1 group of blocks. It deprecates block type 152, Connection Statistics Data Block 5.3, page B-139.

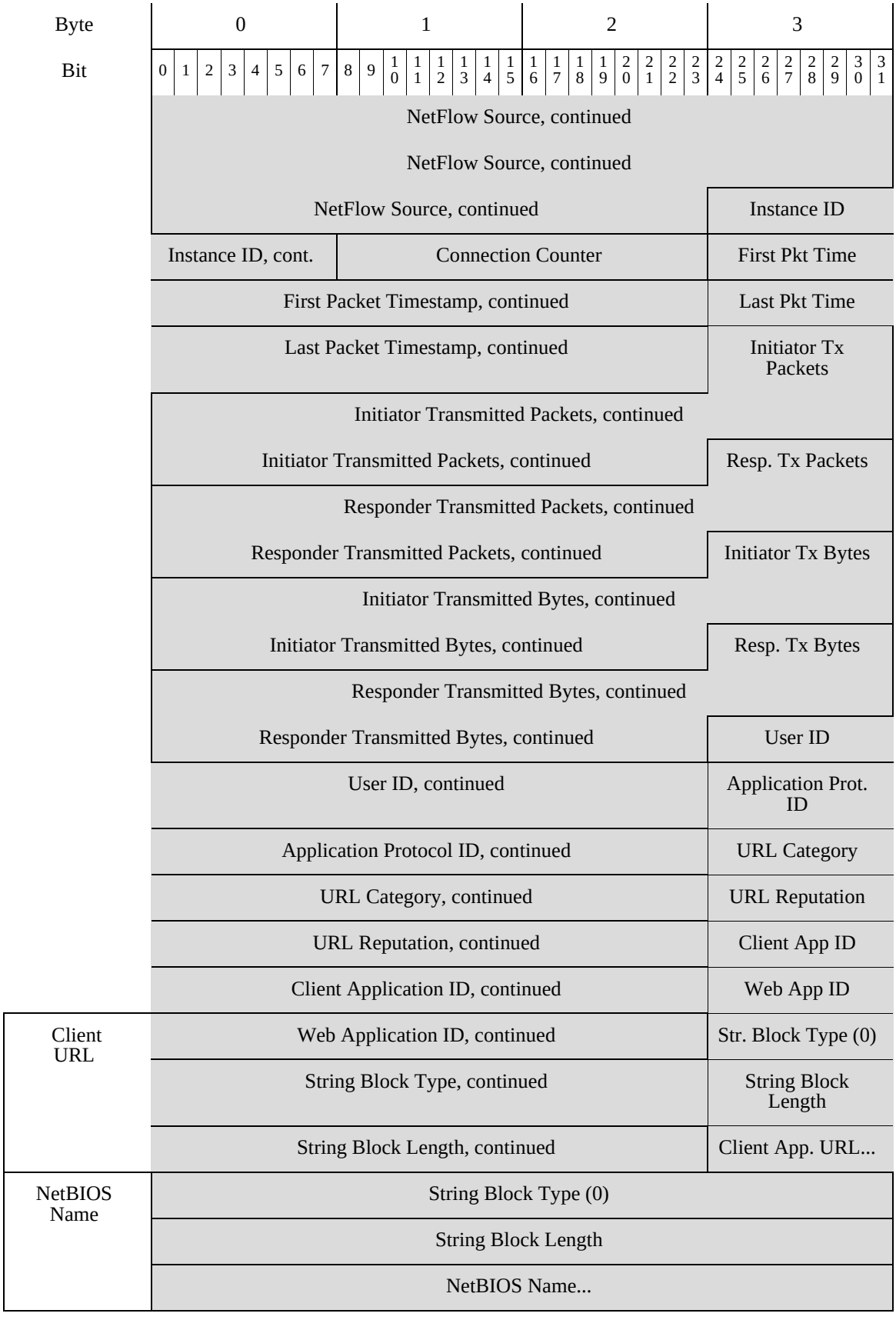
You request connection event records by setting the extended event flag—bit 30 in the Request Flags field—in the request message with an event version of 11 and an event code of 71. See Request Flags, page 2-11. If you enable bit 23, an extended event header is included in the record.For more information on the Connection Statistics Data message, see Connection Statistics Data Message, page 4-48.

The following diagram shows the format of a Connection Statistics data block for 5.3.1:

::

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
Connection Data Block Type (154)																																
Connection Data Block Length																																
Device ID																																
Ingress Zone Ingress Zone, continued Ingress Zone, continued Ingress Zone, continued																																
Egress Zone Egress Zone, continued Egress Zone, 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
Egress Zone, continued																																
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																																
Policy Revision																																
Policy Revision, continued																																
Policy Revision, continued																																
Policy Revision, continued																																
Rule ID																																
Rule Action																	Rule Reason															
Initiator Port																	Responder Port															
TCP Flags																	Protocol								NetFlow Source							
NetFlow Source, 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
NetFlow Source, continued
NetFlow Source, continued
NetFlow Source, continued
Instance ID
Instance ID, cont.
Connection Counter
First Pkt Time
First Packet Timestamp, continued
Last Pkt Time
Last Packet Timestamp, continued
Initiator Tx Packets
Initiator Transmitted Packets, continued
Initiator Transmitted Packets, continued
Resp. Tx Packets
Responder Transmitted Packets, continued
Responder Transmitted Packets, continued
Initiator Tx Bytes
Initiator Transmitted Bytes, continued
Initiator Transmitted Bytes, continued
Resp. Tx Bytes
Responder Transmitted Bytes, continued
Responder Transmitted Bytes, continued
User ID
User ID, continued
Application Prot. ID
Application Protocol ID, continued
URL Category
URL Category, continued
URL Reputation
URL Reputation, continued
Client App ID
Client Application ID, continued
Web App ID
Client URL
Web Application ID, continued
Str. Block Type (0)
String Block Type, continued
String Block Length
String Block Length, continued
Client App. URL...
NetBIOS Name
String Block Type (0)
String Block Length
NetBIOS 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
Client App Version	String Block Type (0)																															
	String Block Length																															
	Client Application Version...																															
	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																IOC Number															
	Source Autonomous System																															
	Destination Autonomous System																															
	SNMP In																SNMP Out															
	Source TOS								Destination TOS								Source Mask								Destination Mask							
	Security Context Security Context, continued Security Context, continued Security Context, continued																															

The following table describes the fields of the Connection Statistics data block for 5.3.1.

Table B-31 Connection Statistics Data Block 5.3.1 Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 5.3.1+. The value is always 154.
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.
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.
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.
Rule Action	uint16	The action selected in the user interface for that rule (allow, block, and so forth).
Rule Reason	uint16	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.

Table B-31 Connection Statistics Data Block 5.3.1 Fields (continued)

Field	Data Type	Description
Initiator Transmitted Packets	uint64	Number of packets transmitted by the initiating host.
Responder Transmitted Packets	uint64	Number of packets transmitted by the responding host.
Initiator Transmitted Bytes	uint64	Number of bytes transmitted by the initiating host.
Responder Transmitted Bytes	uint64	Number of bytes transmitted by the responding host.
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.
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.

Table B-31 Connection Statistics Data Block 5.3.1 Fields (continued)

Field	Data Type	Description
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 block list.
Security Intelligence Layer	uint8	The IP layer that matched the IP block list.
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.
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.
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.

Table B-31 Connection Statistics Data Block 5.3.1 Fields (continued)

Field	Data Type	Description
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.

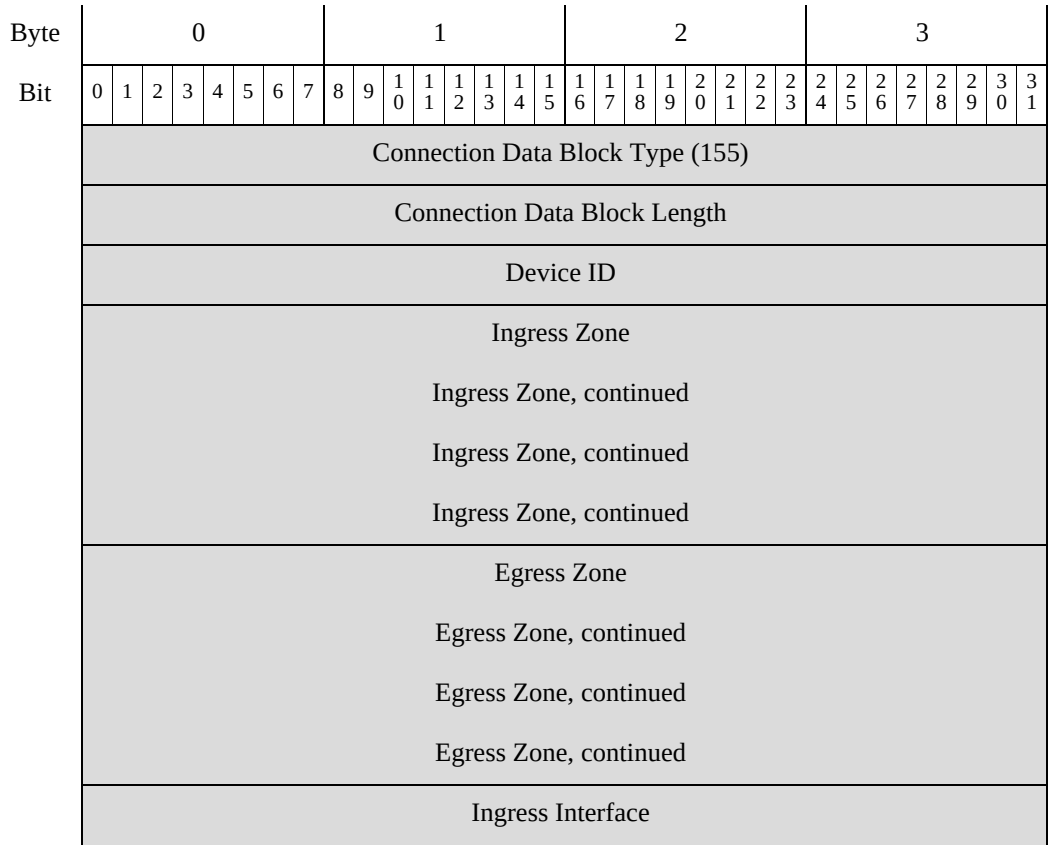
Connection Statistics Data Block 5.4

The connection statistics data block is used in connection data messages. Several new fields have been added to the Connection Statistics Data Block for 5.4. Fields have been added to support SSL connections, HTTP redirection, and network analysis policies. The connection statistics data block for version 5.4 has a block type of 155 in the series 1 group of blocks. It deprecates block type 154, Connection Statistics Data Block 5.3.1, page B-146.

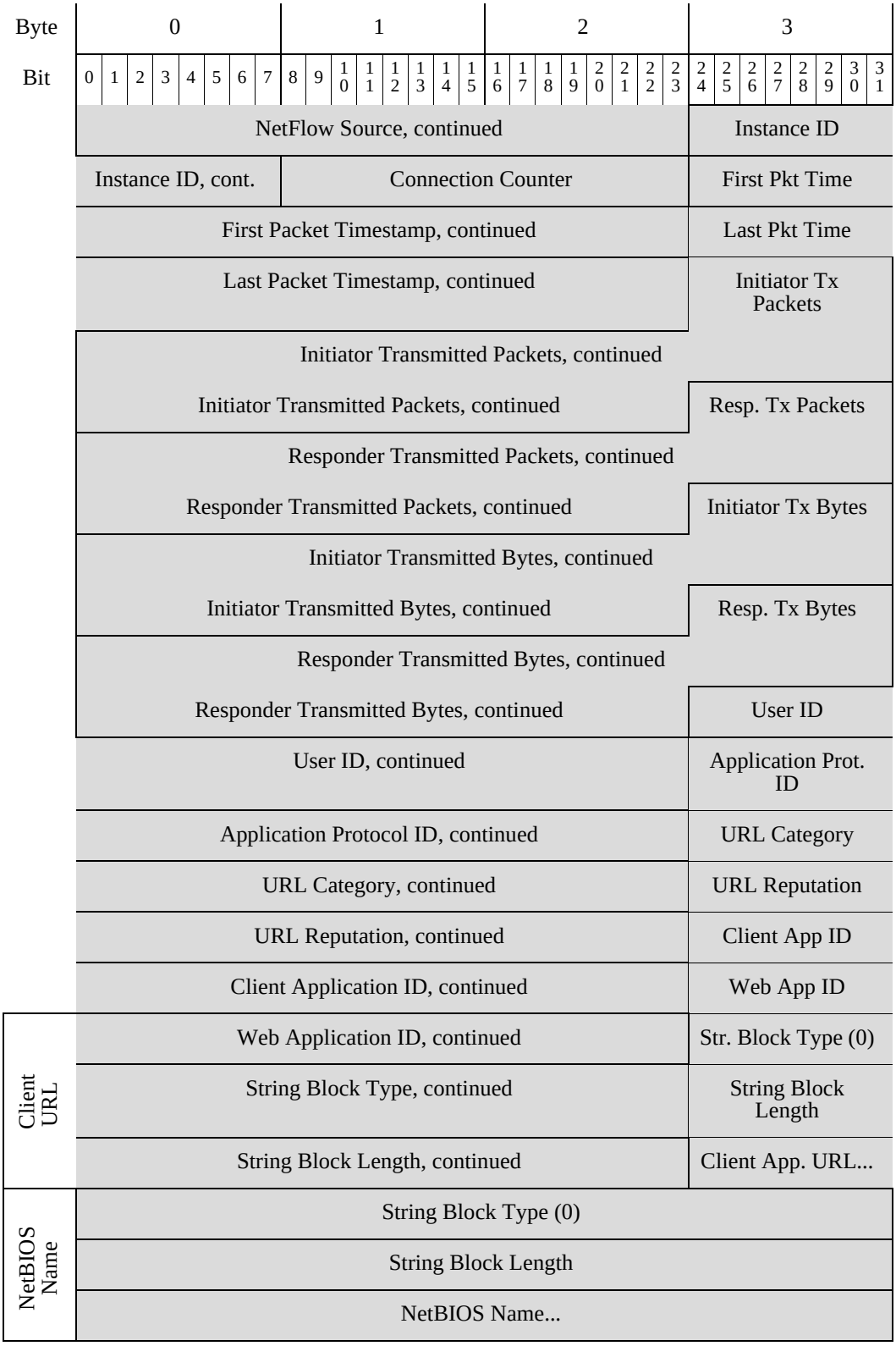
You request connection event records by setting the extended event flag—bit 30 in the Request Flags field—in the request message with an event version of 12 and an event code of 71. See Request Flags, page 2-11. If you enable bit 23, an extended event header is included in the record.

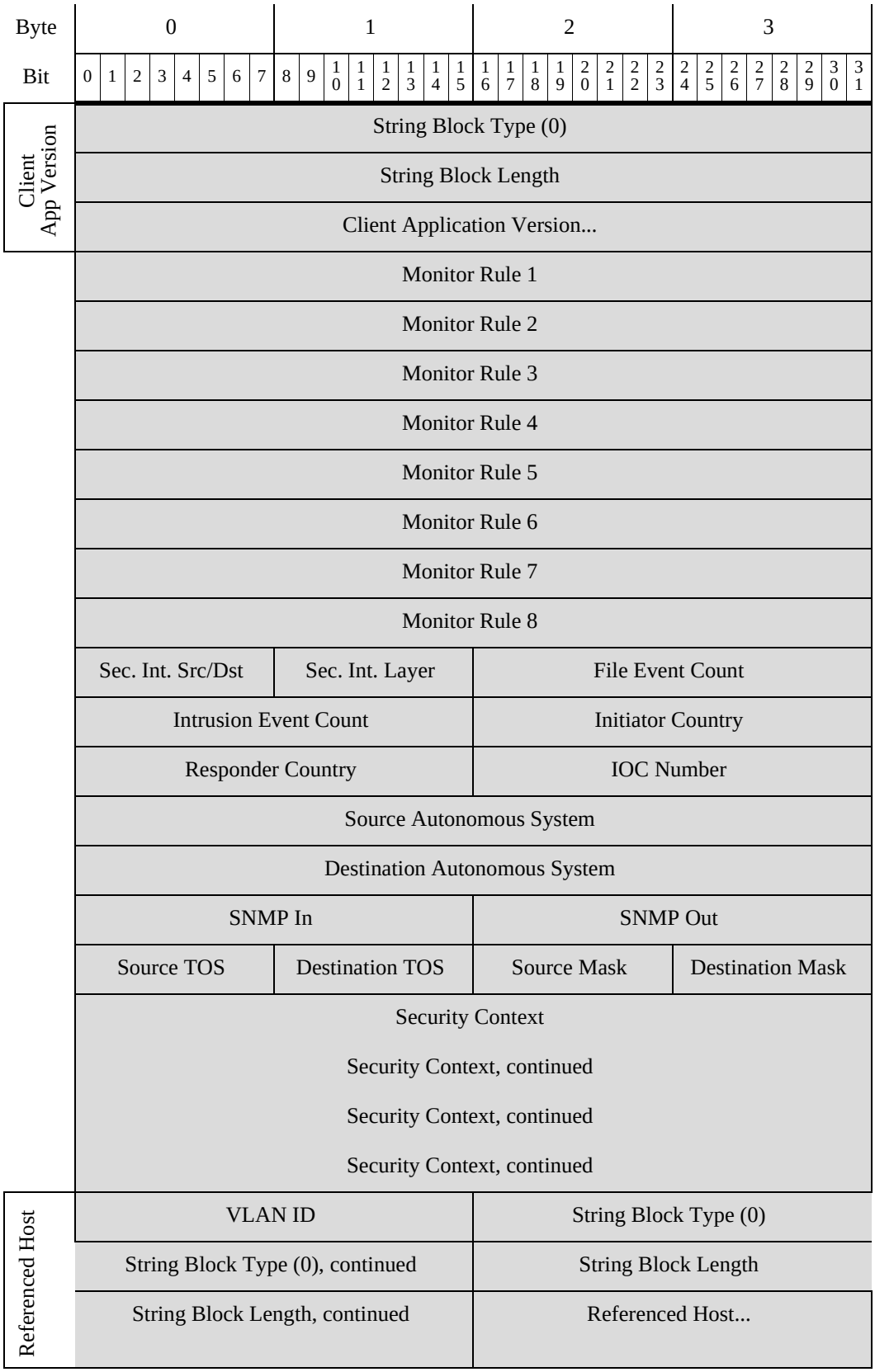
For more information on the Connection Statistics Data message, see Connection Statistics Data Message, page 4-48.

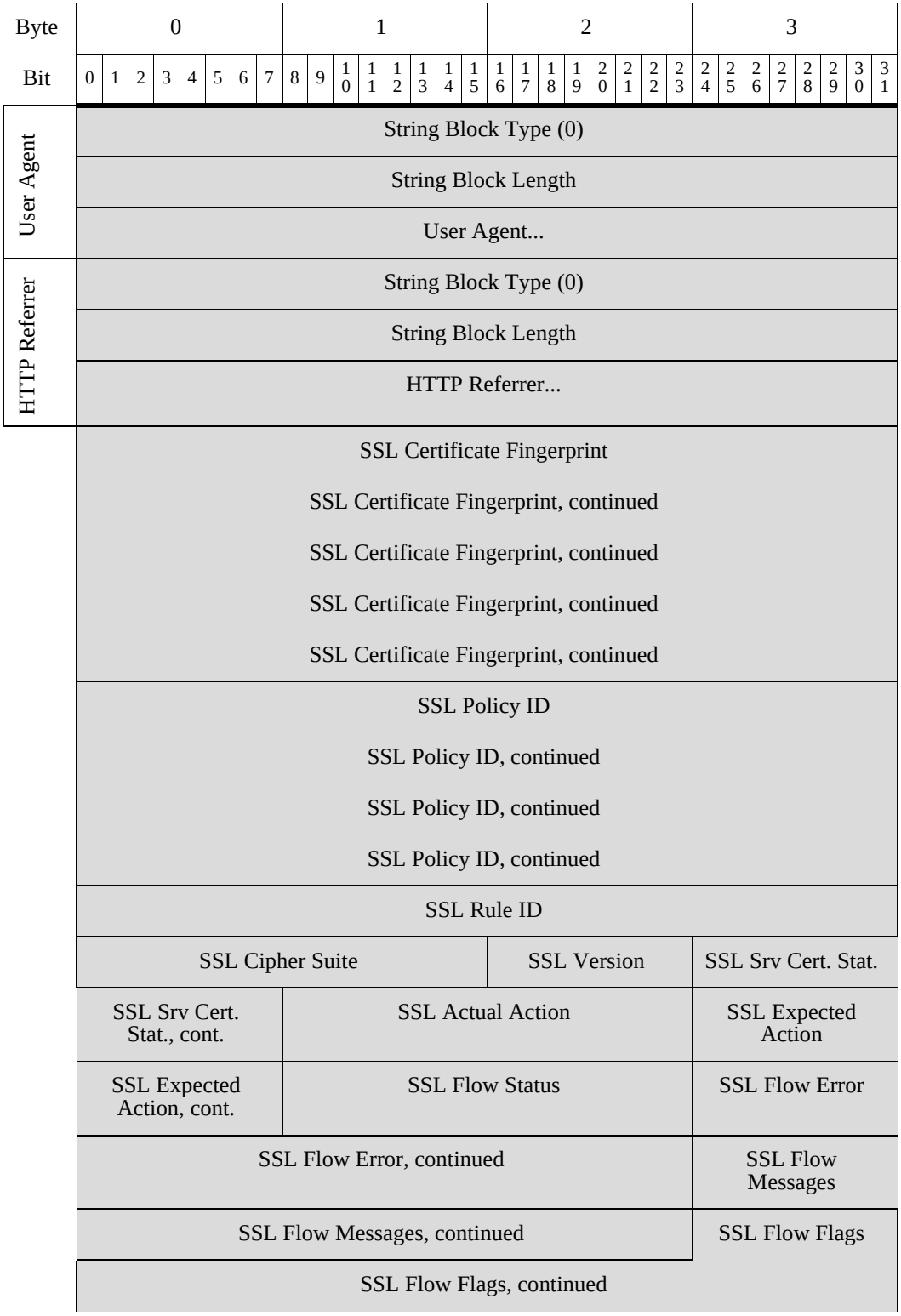
The following diagram shows the format of a Connection Statistics data block for 5.4:

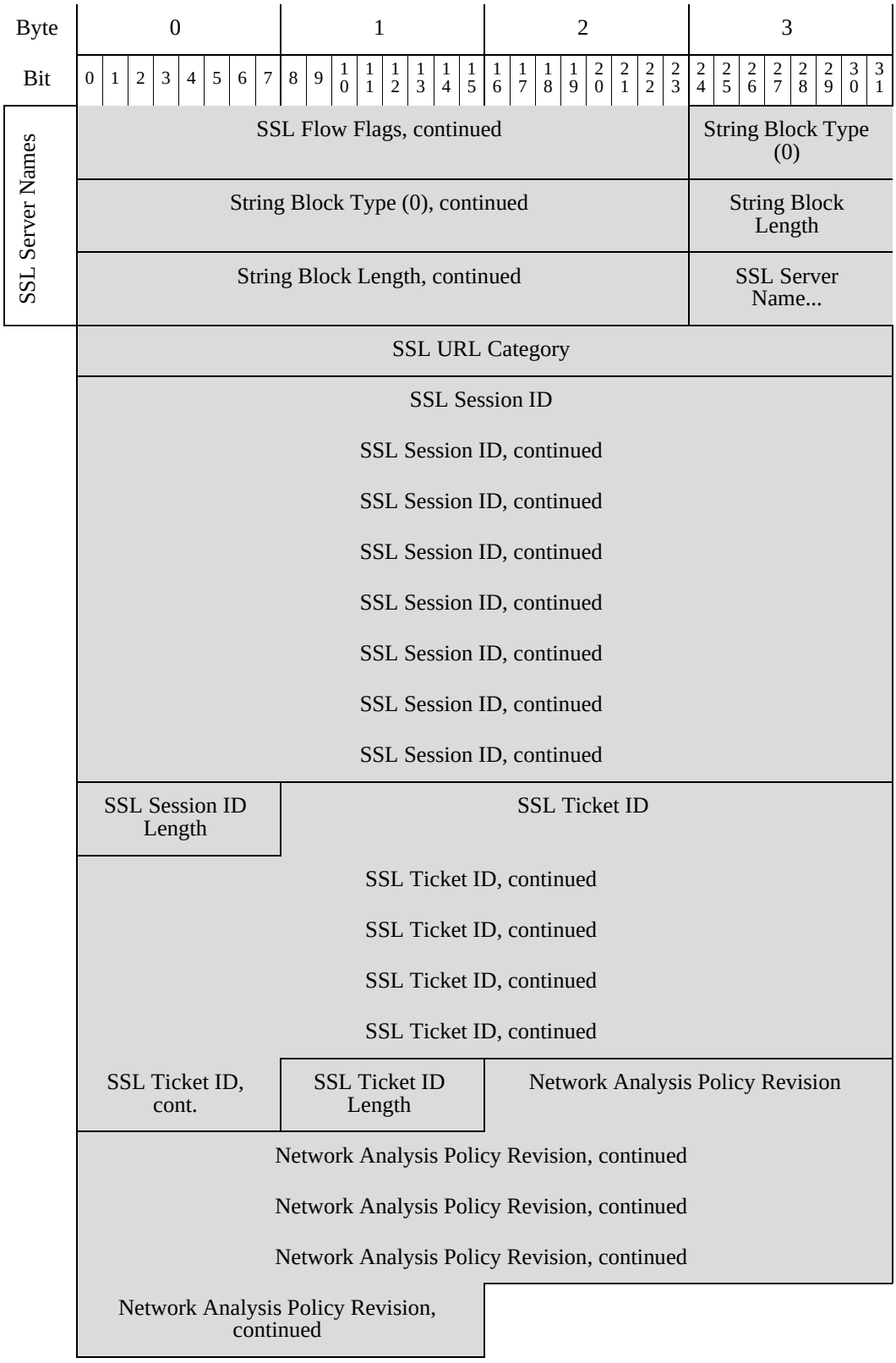


Byte	0								1								2								3							
Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Ingress Interface, continued																																
Ingress Interface, continued																																
Ingress Interface, continued																																
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																																
Policy Revision																																
Policy Revision, continued																																
Policy Revision, continued																																
Policy Revision, continued																																
Rule ID																																
Rule Action																	Rule Reason															
Initiator Port																	Responder Port															
TCP Flags																	Protocol								NetFlow Source							
NetFlow Source, continued																																
NetFlow Source, continued																																
NetFlow Source, 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
NetFlow Source, continued
Instance ID
Instance ID, cont.
Connection Counter
First Pkt Time
First Packet Timestamp, continued
Last Pkt Time
Last Packet Timestamp, continued
Initiator Tx Packets
Initiator Transmitted Packets, continued
Resp. Tx Packets
Responder Transmitted Packets, continued
Initiator Tx Bytes
Initiator Transmitted Bytes, continued
Resp. Tx Bytes
Responder Transmitted Bytes, continued
User ID
User ID, continued
Application Prot. ID
Application Protocol ID, continued
URL Category
URL Category, continued
URL Reputation
URL Reputation, continued
Client App ID
Client Application ID, continued
Web App ID
Client URL
Web Application ID, continued
Str. Block Type (0)
String Block Type, continued
String Block Length
String Block Length, continued
Client App. URL...
NetBIOS Name
String Block Type (0)
String Block Length
NetBIOS 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
Client App Version
String Block Type (0)
String Block Length
Client Application Version...
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
IOC Number
Source Autonomous System
Destination Autonomous System
SNMP In
SNMP Out
Source TOS
Destination TOS
Source Mask
Destination Mask
Security Context
Security Context, continued
Security Context, continued
Security Context, continued
Referenced Host
VLAN ID
String Block Type (0)
String Block Type (0), continued
String Block Length
String Block Length, continued
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 Expected Action
SSL Expected Action, cont.
SSL Flow Status
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

The following table describes the fields of the Connection Statistics data block for 5.4+.

Table B-32 Connection Statistics Data Block 5.4+ Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 5.4+. The value is always `155`.
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.
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.
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.
Rule Action	uint16	The action selected in the user interface for that rule (allow, block, and so forth).
Rule Reason	uint16	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.

Table B-32 Connection Statistics Data Block 5.4+ Fields (continued)

Field	Data Type	Description
Initiator Transmitted Packets	uint64	Number of packets transmitted by the initiating host.
Responder Transmitted Packets	uint64	Number of packets transmitted by the responding host.
Initiator Transmitted Bytes	uint64	Number of bytes transmitted by the initiating host.
Responder Transmitted Bytes	uint64	Number of bytes transmitted by the responding host.
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`.
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.

Table B-32 Connection Statistics Data Block 5.4+ Fields (continued)

Field	Data Type	Description
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 block list.
Security Intelligence Layer	uint8	The IP layer that matched the IP block list.
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.
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.
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.

Table B-32 Connection Statistics Data Block 5.4+ Fields (continued)

Field	Data Type	Description
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.
SSL Version	uint8	The SSL or TLS protocol version used to encrypt the connection.

Table B-32 Connection Statistics Data Block 5.4+ Fields (continued)

Field	Data Type	Description
SSL Server Certificate Status	uint16	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 B-32 Connection Statistics Data Block 5.4+ 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 B-32 Connection Statistics Data Block 5.4+ 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 B-32 Connection Statistics Data Block 5.4+ 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.

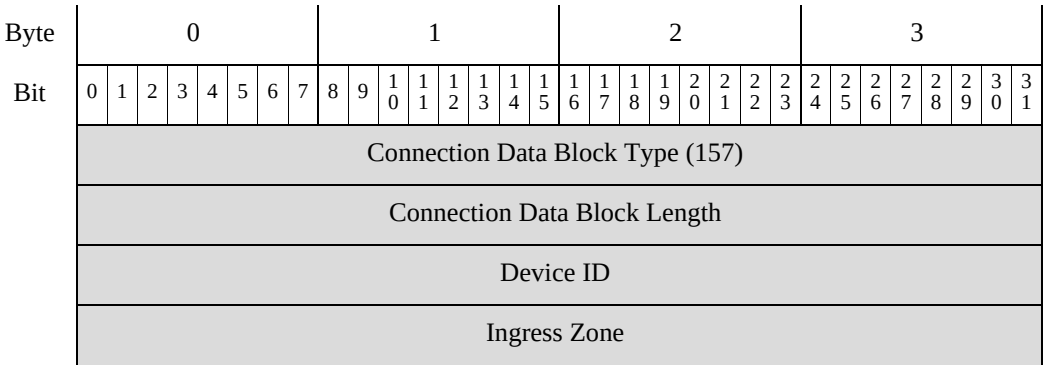
Connection Statistics Data Block 5.4.1

The connection statistics data block is used in connection data messages. Several new fields have been added to the Connection Statistics Data Block for 5.4. Fields have been added to support SSL connections, HTTP redirection, and network analysis policies. The connection statistics data block for version 5.4+ has a block type of 157 in the series 1 group of blocks. It deprecates block type 155, Connection Statistics Data Block 5.3.1, page B-146.

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 12 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 4-48.

The following diagram shows the format of a Connection Statistics data block for 5.4+:



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 Zone, continued																																
Ingress Zone, continued																																
Ingress Zone, continued																																
Egress Zone																																
Egress Zone, continued																																
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Initiator IP Address, continued																																
Responder IP Address																																
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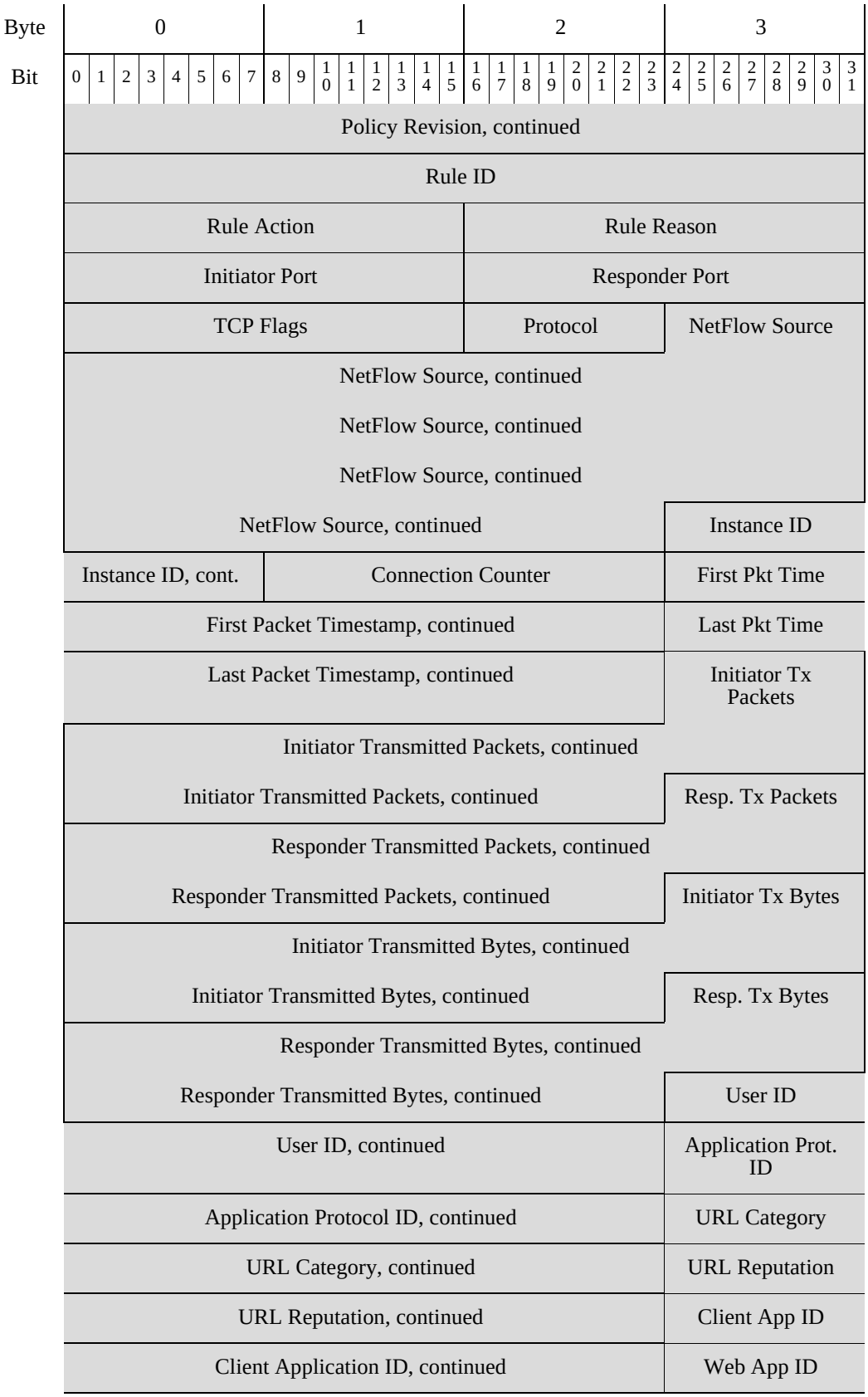
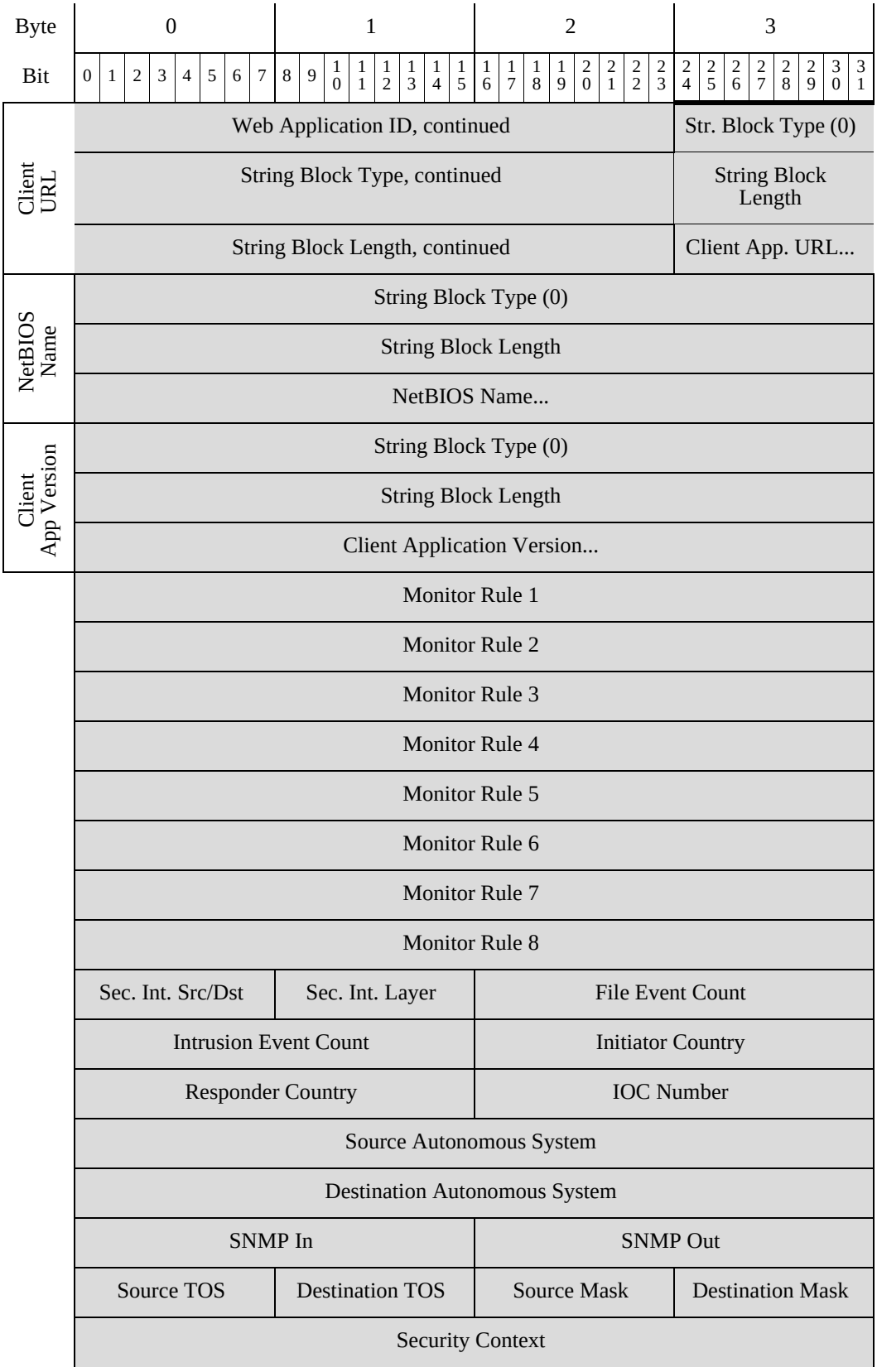
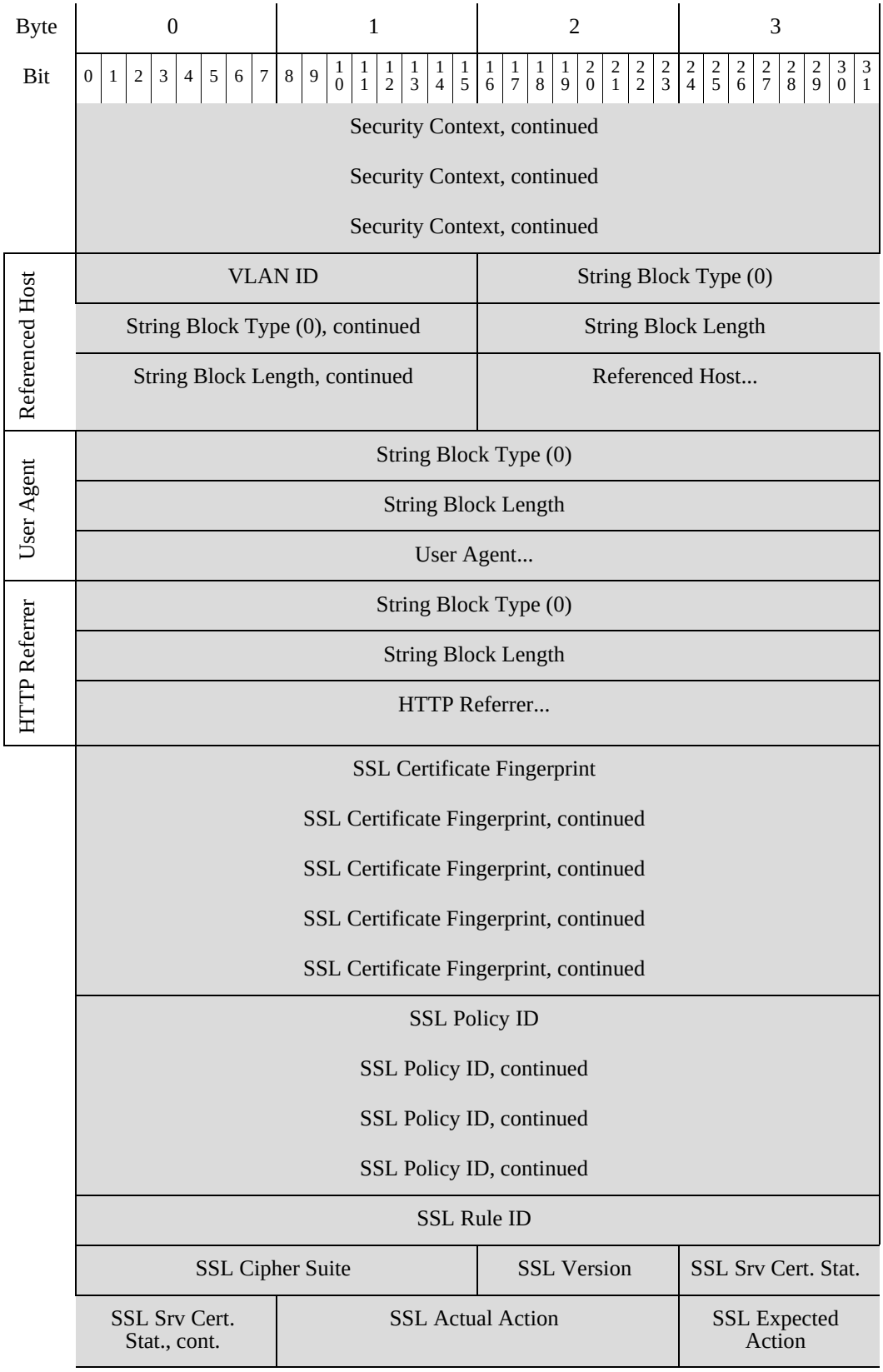
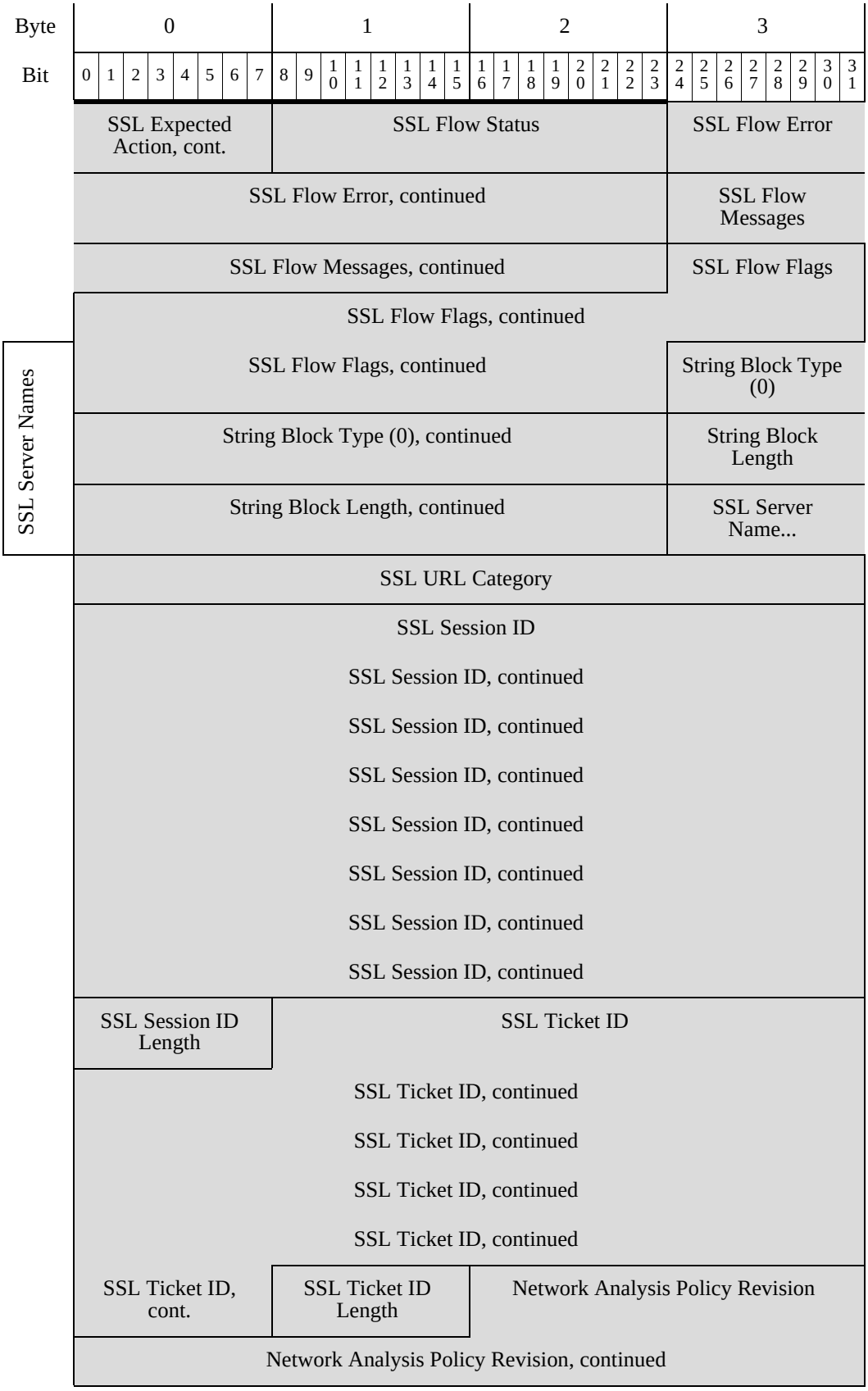
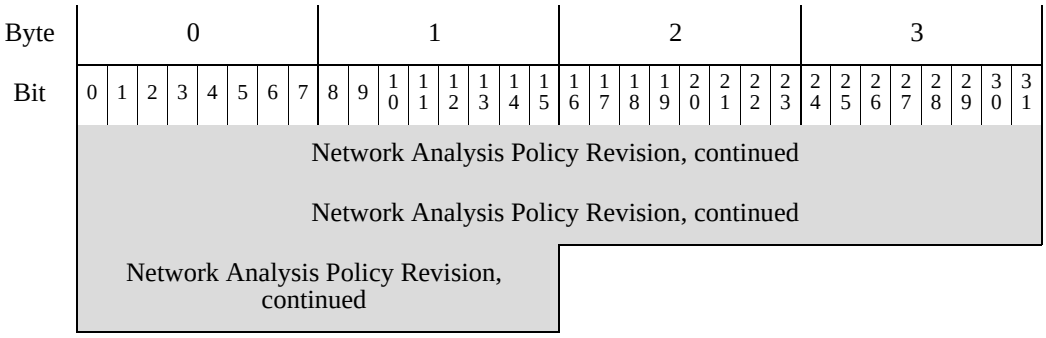
Responder IP Address, continued																																
Responder IP Address, continued																																
Policy Revision																																
Policy Revision, continued																																
Policy Revision, continued																																


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
Policy Revision, continued
Rule ID
Rule Action
Rule Reason
Initiator Port
Responder Port
TCP Flags
Protocol
NetFlow Source
NetFlow Source, continued
NetFlow Source, continued
NetFlow Source, continued
NetFlow Source, continued
Instance ID
Instance ID, cont.
Connection Counter
First Pkt Time
First Packet Timestamp, continued
Last Pkt Time
Last Packet Timestamp, continued
Initiator Tx Packets
Initiator Transmitted Packets, continued
Initiator Transmitted Packets, continued
Resp. Tx Packets
Responder Transmitted Packets, continued
Responder Transmitted Packets, continued
Initiator Tx Bytes
Initiator Transmitted Bytes, continued
Initiator Transmitted Bytes, continued
Resp. Tx Bytes
Responder Transmitted Bytes, continued
Responder Transmitted Bytes, continued
User ID
User ID, continued
Application Prot. ID
Application Protocol ID, continued
URL Category
URL Category, continued
URL Reputation
URL Reputation, continued
Client App ID
Client Application ID, continued
Web App 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
Client URL
Web Application ID, continued
Str. Block Type (0)
String Block Type, continued
String Block Length
String Block Length, continued
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...
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
IOC Number
Source Autonomous System
Destination Autonomous System
SNMP In
SNMP Out
Source TOS
Destination TOS
Source Mask
Destination Mask
Security Context


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
Security Context, continued
Security Context, continued
Security Context, continued
Referenced Host
VLAN ID
String Block Type (0)
String Block Type (0), continued
String Block Length
String Block Length, continued
Referenced Host...
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 Expected Action


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 Expected Action, cont.
SSL Flow Status
SSL Flow Error
SSL Flow Error, continued
SSL Flow Messages
SSL Flow Messages, continued
SSL Flow Flags
SSL Flow Flags, continued
SSL Flow Flags, continued
String Block Type (0)
SSL Server Names
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



The following table describes the fields of the Connection Statistics data block for 5.4+.

Table B-33 Connection Statistics Data Block 5.4+ Fields

Field	Data Type	Description
Connection Statistics Data Block Type	uint32	Initiates a Connection Statistics data block for 5.4+. The value is always `157`.
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.
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.
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.
Rule Action	uint16	The action selected in the user interface for that rule (allow, block, and so forth).
Rule Reason	uint16	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.

Table B-33 Connection Statistics Data Block 5.4+ Fields (continued)

Field	Data Type	Description
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.
Initiator Transmitted Bytes	uint64	Number of bytes transmitted by the initiating host.
Responder Transmitted Bytes	uint64	Number of bytes transmitted by the responding host.
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.

Table B-33 Connection Statistics Data Block 5.4+ Fields (continued)

Field	Data Type	Description
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.
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 block list.
Security Intelligence Layer	uint8	The IP layer that matched the IP block list.
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.
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 B-33 Connection Statistics Data Block 5.4+ 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 B-33 Connection Statistics Data Block 5.4+ Fields (continued)

Field	Data Type	Description
SSL Version	uint8	The SSL or TLS protocol version used to encrypt the connection.
SSL Server Certificate Status	uint16	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 B-33 Connection Statistics Data Block 5.4+ 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 B-33 Connection Statistics Data Block 5.4+ 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 B-33 Connection Statistics Data Block 5.4+ 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.

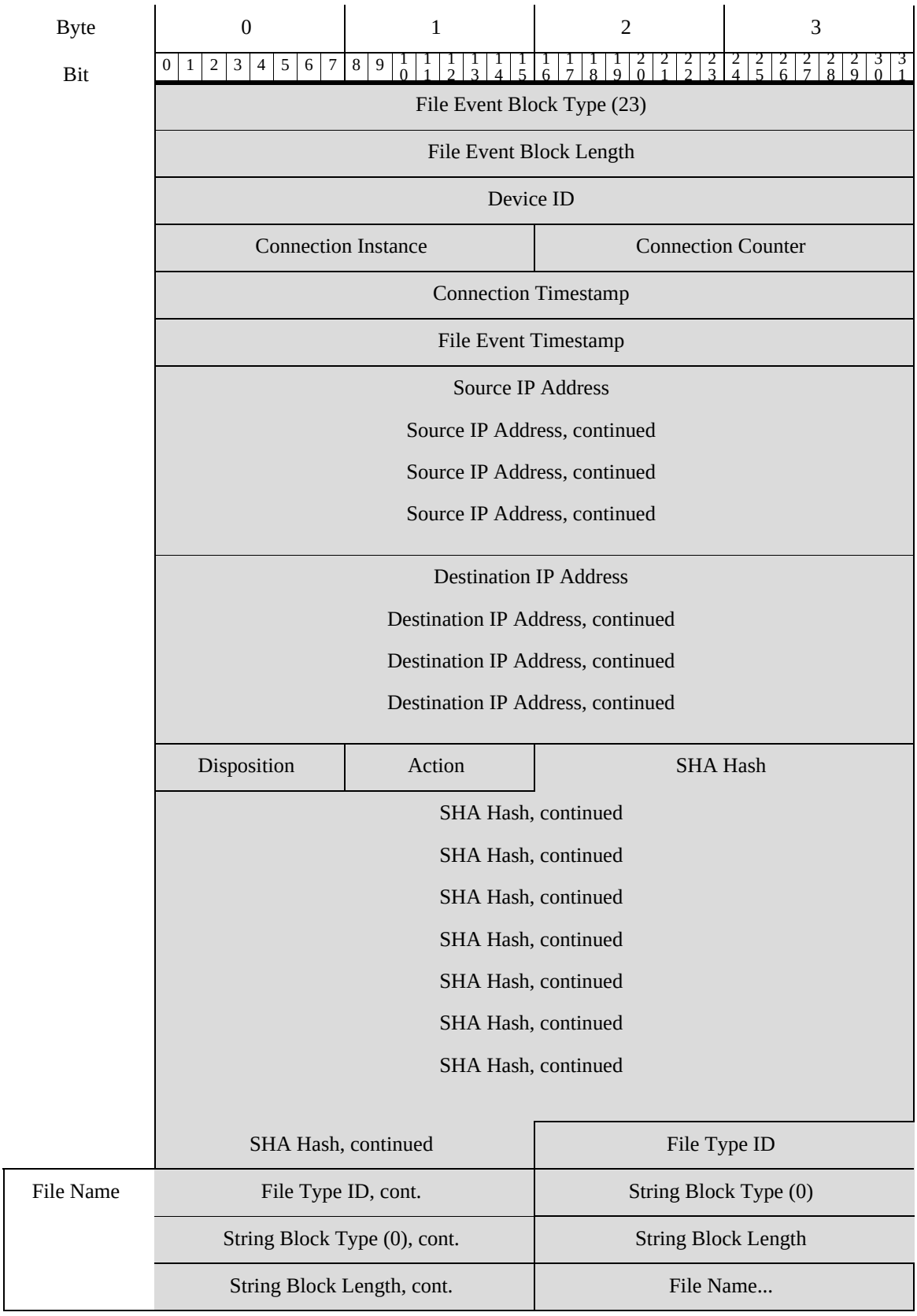
Legacy File Event Data Structures

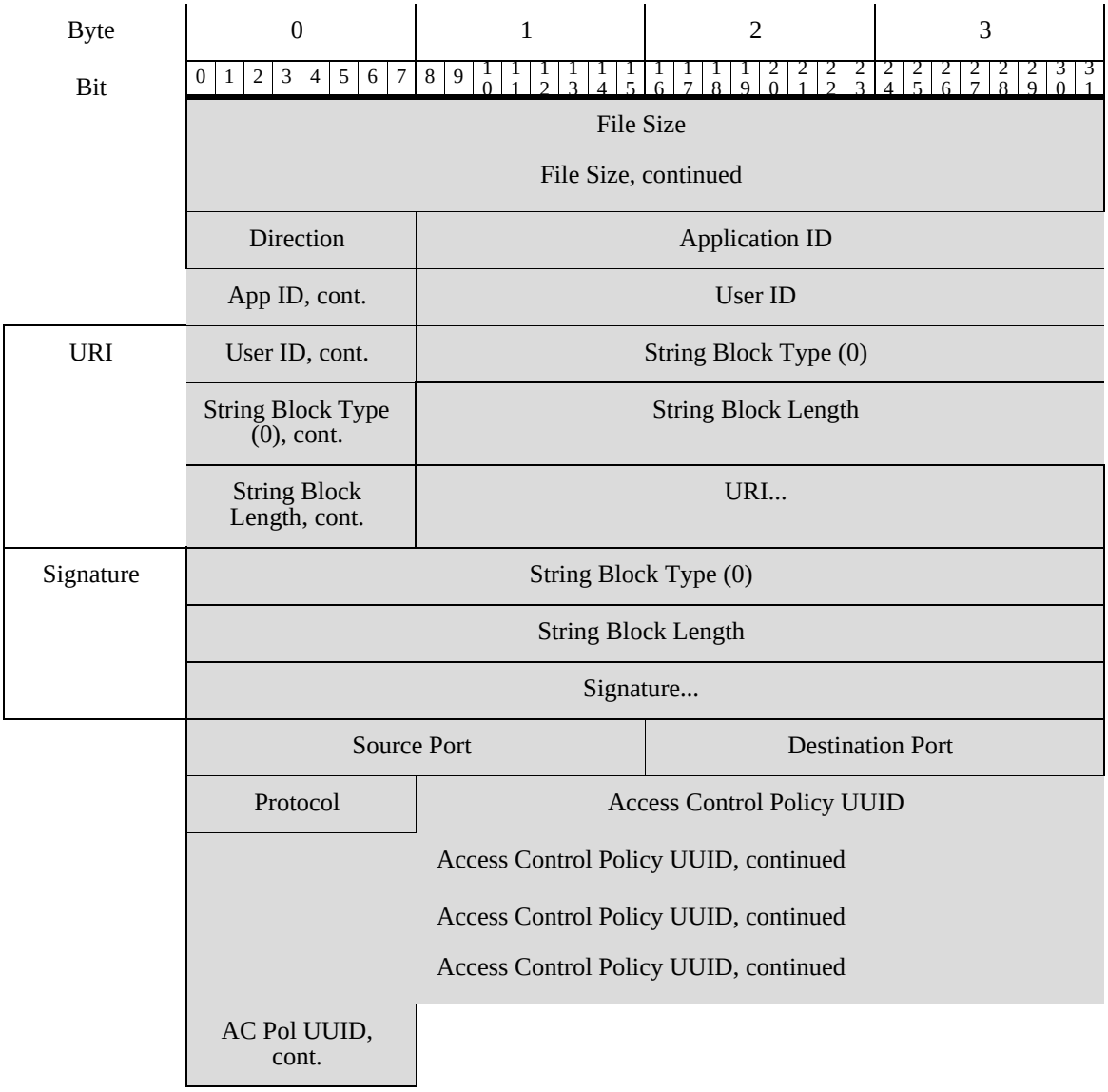
The following topics describe other legacy file event data structures:

File Event for 5.1.1.x

The file event contains information on files that are sent over the network. This includes the connection information, whether the file is malware, and specific information to identify the file. The file event has a block type of 23 in the series 2 group of blocks.

The following graphic shows the structure of the File Event 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
File Event Block Type (23)
File Event Block Length
Device ID
Connection Instance
Connection Counter
Connection Timestamp
File Event Timestamp
Source IP Address
Source IP Address, continued
Source IP Address, continued
Source IP Address, continued
Destination IP Address
Destination IP Address, continued
Destination IP Address, continued
Destination IP Address, continued
Disposition
Action
SHA Hash
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
File Type ID
File Name
File Type ID, cont.
String Block Type (0)
String Block Type (0), cont.
String Block Length
String Block Length, cont.
File Name...



The following table describes the fields in the file event data block:

Table B-34 File Event Data Block Fields

Field	Data Type	Description
File Event Block Type	uint32	Initiates whether file event data block. This value is always `23`.
File Event Block Length	uint32	Total number of bytes in the file event block, including eight bytes for the file event block type and length fields, plus the number of bytes of data that follows.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or intrusion event.

Table B-34 File Event Data Block Fields (continued)

Field	Data Type	Description
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the associated connection event.
File Event Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of when the file type is identified and the file event generated.
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN — The file is clean and does not contain malware. • 2 — UNKNOWN — It is unknown whether the file contains malware. • 3 — MALWARE — The file contains malware. • 4 — CACHE_MISS — The software was unable to send a request to the Cisco cloud for a disposition. • 5 — NO_CLOUD_RESP — The Cisco cloud services did not respond to the request.
Action	uint8	The action taken on the file based on the file type. Can have the following values: • 1 — Detect • 2 — Block • 3 — Malware Cloud Lookup • 4 — Malware Block • 5 — Malware Whitelist
SHA Hash	uint8[32]	SHA-256 hash of the file, in binary format.
File Type ID	uint32	ID number that maps to the file type.
File Name	string	Name of the file.
File Size	uint64	Size of the file in bytes.
Direction	uint8	Value that indicates whether the file was uploaded or downloaded. Can have the following values: • 1 — Download • 2 — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Application ID	uint32	ID number that maps to the application using the file transfer.

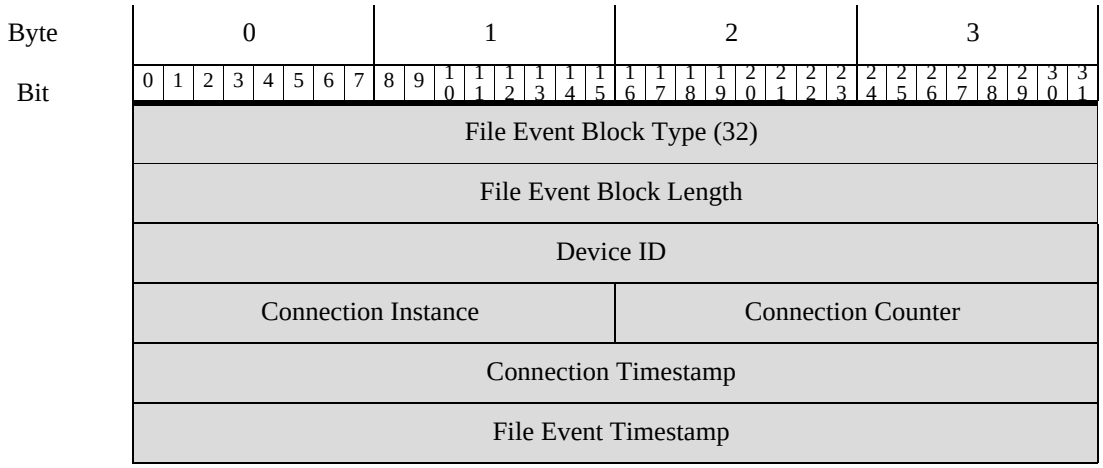
Table B-34 File Event Data Block Fields (continued)

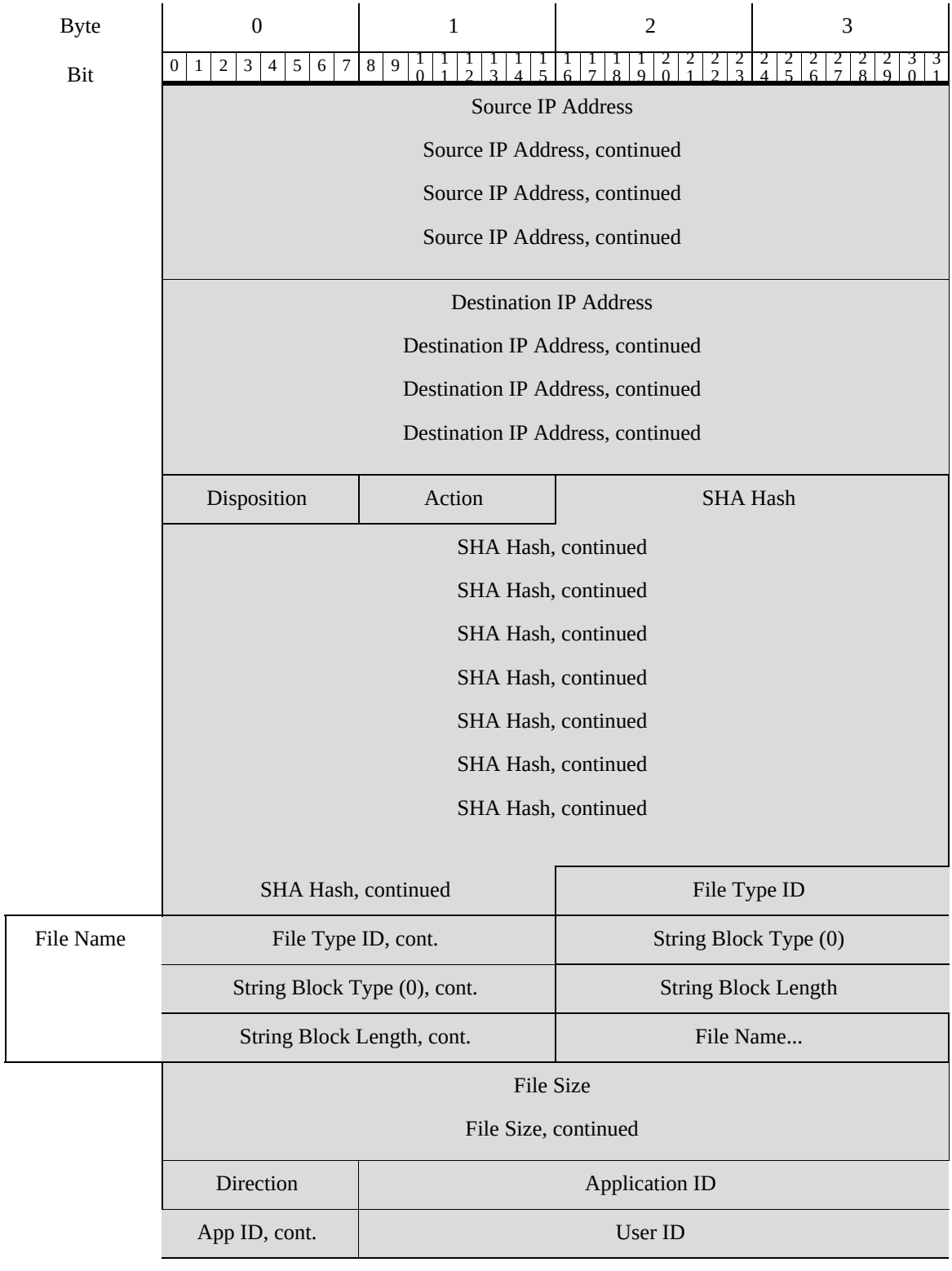
Field	Data Type	Description
User ID	uint32	ID number for the user logged into the destination host, as identified by the system.
URI	string	Uniform Resource Identifier (URI) of the connection.
Signature	string	SHA-256 hash of the file, in string format.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Protocol	uint8	IANA protocol number specified by the user. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP This is currently only TCP.
Access Control Policy UUID	uint8[16]	Unique identifier for the access control policy that triggered the event.

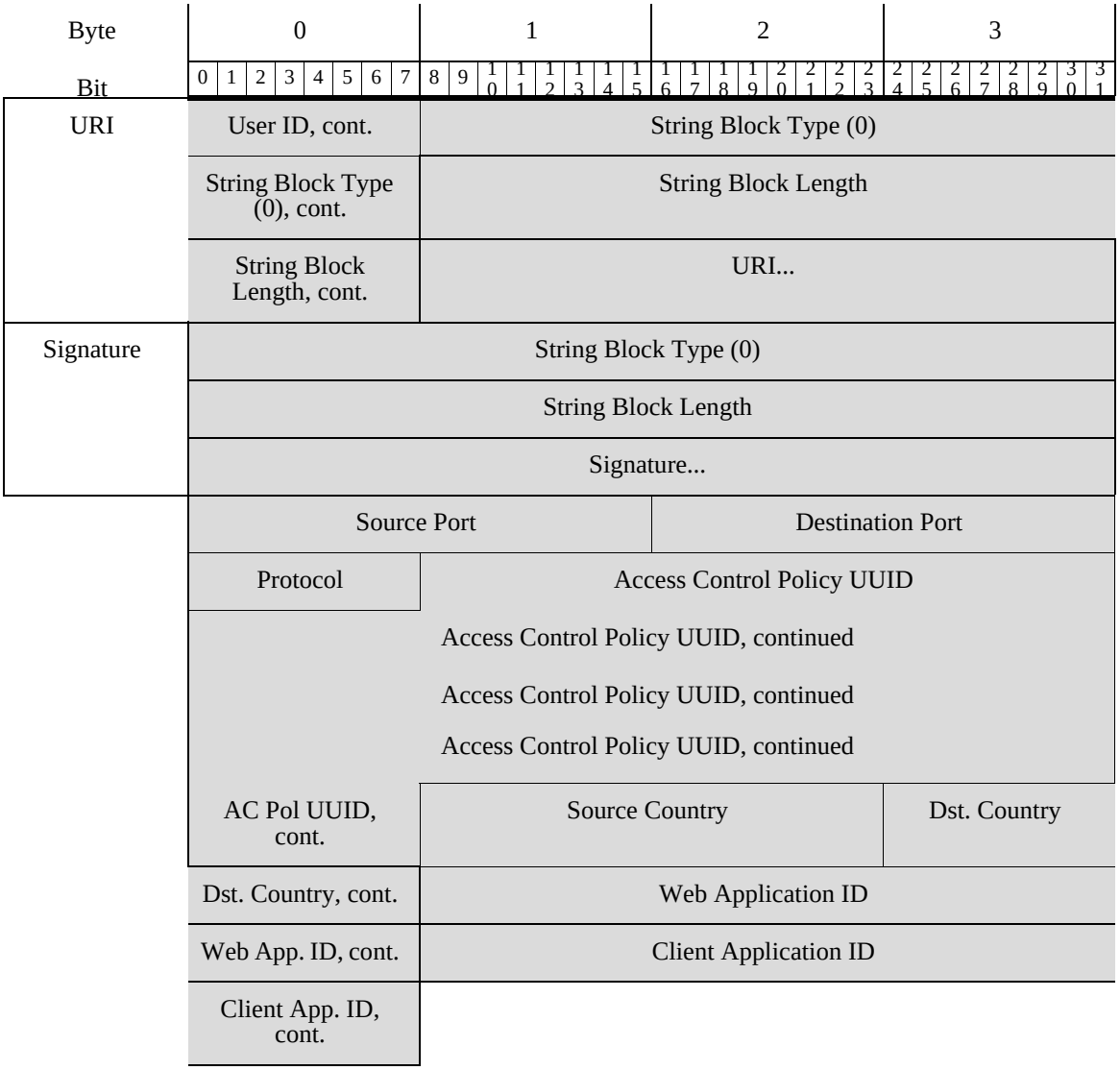
File Event for 5.2.x

The file event contains information on files that are sent over the network. This includes the connection information, whether the file is malware, and specific information to identify the file. The file event has a block type of 32 in the series 2 group of blocks. It supersedes block type 23. New fields have been added to track source and destination country, as well as the client and web application instances.

The following graphic shows the structure of the File Event 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
Source IP Address
Source IP Address, continued
Source IP Address, continued
Source IP Address, continued
Destination IP Address
Destination IP Address, continued
Destination IP Address, continued
Destination IP Address, continued
Disposition
Action
SHA Hash
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
File Type ID
File Name
File Type ID, cont.
String Block Type (0)
String Block Type (0), cont.
String Block Length
String Block Length, cont.
File Name...
File Size
File Size, continued
Direction
Application ID
App ID, cont.
User ID



The following table describes the fields in the file event data block:

Table B-35 File Event Data Block Fields

Field	Data Type	Description
File Event Block Type	uint32	Initiates whether file event data block. This value is always `23`.
File Event Block Length	uint32	Total number of bytes in the file event block, including eight bytes for the file event block type and length fields, plus the number of bytes of data that follows.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or intrusion event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.

Table B-35 File Event Data Block Fields (continued)

Field	Data Type	Description
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the associated connection event.
File Event Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of when the file type is identified and the file event generated.
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN — The file is clean and does not contain malware. • 2 — NEUTRAL — It is unknown whether the file contains malware. • 3 — MALWARE — The file contains malware. • 4 — CACHE_MISS — The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request.
Action	uint8	The action taken on the file based on the file type. Can have the following values: • 1 — Detect • 2 — Block • 3 — Malware Cloud Lookup • 4 — Malware Block • 5 — Malware Whitelist
SHA Hash	uint8[32]	SHA-256 hash of the file, in binary format.
File Type ID	uint32	ID number that maps to the file type.
File Name	string	Name of the file.
File Size	uint64	Size of the file in bytes.
Direction	uint8	Value that indicates whether the file was uploaded or downloaded. Can have the following values: • 1 — Download • 2 — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Application ID	uint32	ID number that maps to the application using the file transfer.
User ID	uint32	ID number for the user logged into the destination host, as identified by the system.
URI	string	Uniform Resource Identifier (URI) of the connection.
Signature	string	SHA-256 hash of the file, in string format.

Table B-35 File Event Data Block Fields (continued)

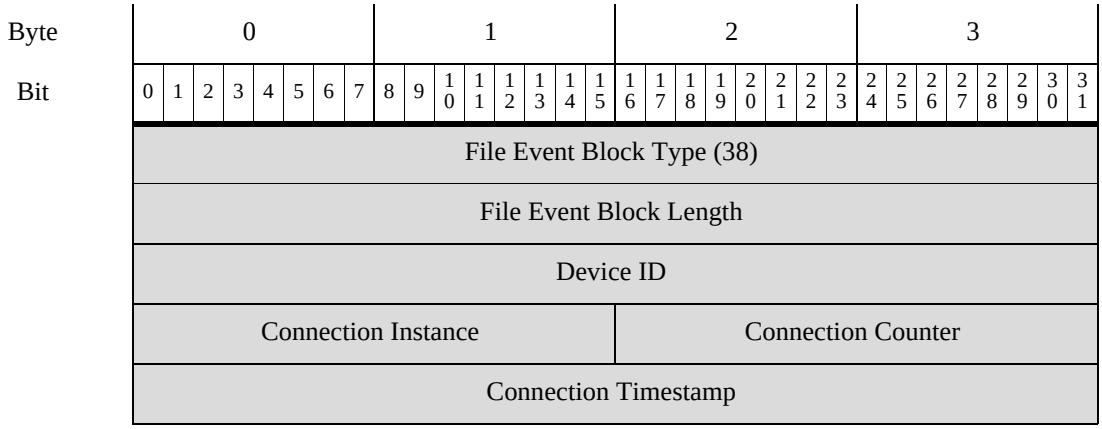
Field	Data Type	Description
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Protocol	uint8	IANA protocol number specified by the user. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP This is currently only TCP.
Access Control Policy UUID	uint8[16]	Unique identifier for the access control policy that triggered the event.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint16	Code for the country of the destination host.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.

File Event for 5.3

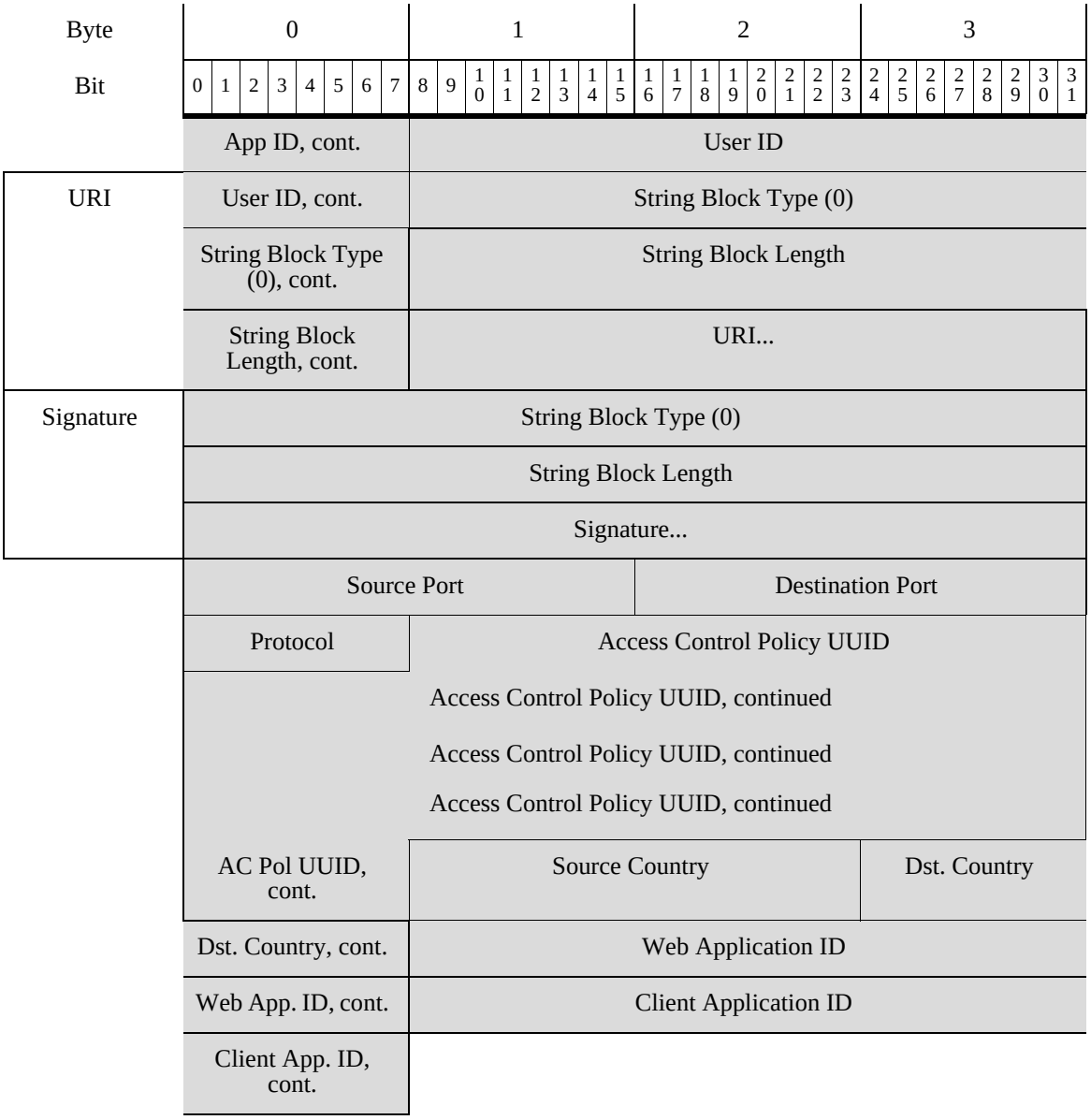
The file event contains information on files that are sent over the network. This includes the connection information, whether the file is malware, and specific information to identify the file. The file event has a block type of 38 in the series 2 group of blocks. It supersedes block type 32. New fields have been added to track dynamic file analysis and file storage.

You request file event records by setting the file event flag—bit 30 in the Request Flags field—in the request message with an event version of 3 and an event code of 111. See Request Flags, page 2-11. If you enable bit 23, an extended event header is included in the record.

The following graphic shows the structure of the File Event 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
	File Event Timestamp			
	Source IP Address			
	Source IP Address, continued			
	Source IP Address, continued			
	Source IP Address, continued			
	Destination IP Address			
	Destination IP Address, continued			
	Destination IP Address, continued			
	Destination IP Address, continued			
	Disposition	SPERO Disposition	File Storage Status	File Analysis Status
	Archive File Status	Threat Score	Action	SHA Hash
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			File Type ID
File Name	File Type ID, cont.			String Block Type (0)
	String Block Type (0), cont.			String Block Length
	String Block Length, cont.			File Name...
	File Size			
	File Size, continued			
	Direction	Application ID		



The following table describes the fields in the file event data block.

Table B-36 File Event Data Block Fields

Field	Data Type	Description
File Event Block Type	uint32	Initiates whether file event data block. This value is always 23.
File Event Block Length	uint32	Total number of bytes in the file event block, including eight bytes for the file event block type and length fields, plus the number of bytes of data that follows.
Device ID	uint32	ID for the device that generated the event.

Table B-36 File Event Data Block Fields (continued)

Field	Data Type	Description
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or intrusion event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the associated connection event.
File Event Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of when the file type is identified and the file event generated.
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN The file is clean and does not contain malware. • 2 — UNKNOWN It is unknown whether the file contains malware. • 3 — MALWARE The file contains malware. • 4 — UNAVAILABLE The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request. • 5 — CUSTOM SIGNATURE The file matches a user-defined hash, and is treated in a fashion designated by the user.
SPERO Disposition	uint8	Indicates whether the SPERO signature was used in file analysis. If the value is 1, 2, or 3, SPERO analysis was used. If there is any other value SPERO analysis was not used.

Table B-36 File Event Data Block Fields (continued)

Field	Data Type	Description
File Storage Status	uint8	The storage status of the file. Possible values are: • 1 — File Stored • 2 — File Stored • 3 — Unable to Store File • 4 — Unable to Store File • 5 — Unable to Store File • 6 — Unable to Store File • 7 — Unable to Store File • 8 — File Size is Too Large • 9 — File Size is Too Small • 10 — Unable to Store File • 11 — File Not Stored, Disposition Unavailable

Table B-36 File Event Data Block Fields (continued)

Field	Data Type	Description
File Analysis Status	uint8	Indicates whether the file was sent for dynamic analysis. Possible values are: • 0 — File Not Sent for Analysis • 1 — Sent for Analysis • 2 — Sent for Analysis • 4 — Sent for Analysis • 5 — Failed to Send • 6 — Failed to Send • 7 — Failed to Send • 8 — Failed to Send • 9 — File Size is Too Small • 10 — File Size is Too Large • 11 — Sent for Analysis • 12 — Analysis Complete • 13 — Failure (Network Issue) • 14 — Failure (Rate Limit) • 15 — Failure (File Too Large) • 16 — Failure (File Read Error) • 17 — Failure (Internal Library Error) • 19 — File Not Sent, Disposition Unavailable • 20 — Failure (Cannot Run File) • 21 — Failure (Analysis Timeout) • 22 — Sent for Analysis • 23 — File Not Supported
Archive File Status	uint8	This is always 0.
Threat Score	uint8	A numeric value from 0 to 100 based on the potentially malicious behaviors observed during dynamic analysis.
Action	uint8	The action taken on the file based on the file type. Can have the following values: • 1 — Detect • 2 — Block • 3 — Malware Cloud Lookup • 4 — Malware Block • 5 — Malware Whitelist
SHA Hash	uint8[32]	SHA-256 hash of the file, in binary format.

Table B-36 File Event Data Block Fields (continued)

Field	Data Type	Description
File Type ID	uint32	ID number that maps to the file type. The meaning of this field is transmitted in the metadata with this event. See AMP for Endpoints File Type Metadata, page 3-39 for more information.
File Name	string	Name of the file.
File Size	uint64	Size of the file in bytes.
Direction	uint8	Value that indicates whether the file was uploaded or downloaded. Can have the following values: • 1 — Download • 2 — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Application ID	uint32	ID number that maps to the application using the file transfer.
User ID	uint32	ID number for the user logged into the destination host, as identified by the system.
URI	string	Uniform Resource Identifier (URI) of the connection.
Signature	string	SHA-256 hash of the file, in string format.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Protocol	uint8	IANA protocol number specified by the user. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP This is currently only TCP.
Access Control Policy UUID	uint8[16]	Unique identifier for the access control policy that triggered the event.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint16	Code for the country of the destination host.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.

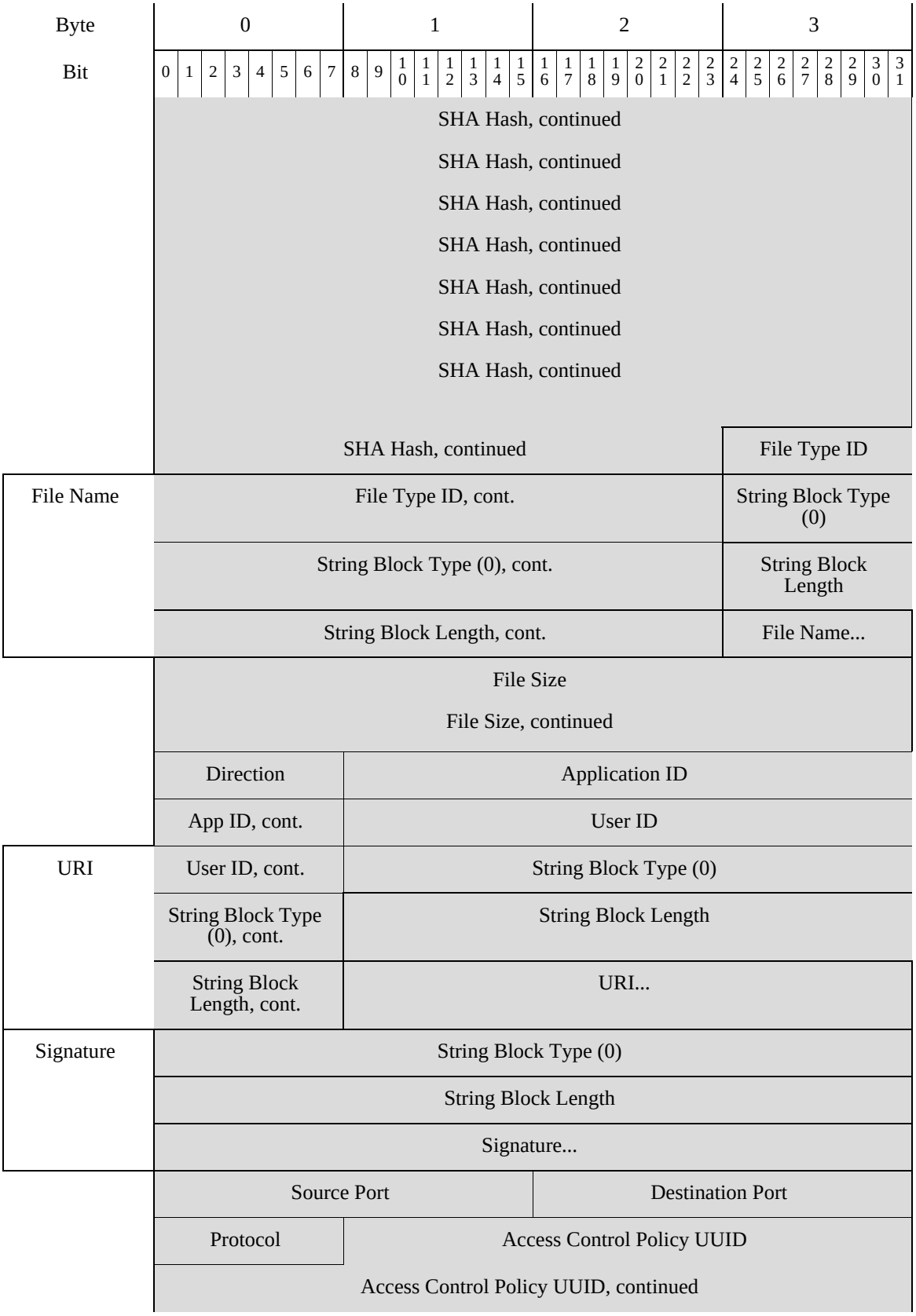
File Event for 5.3.1

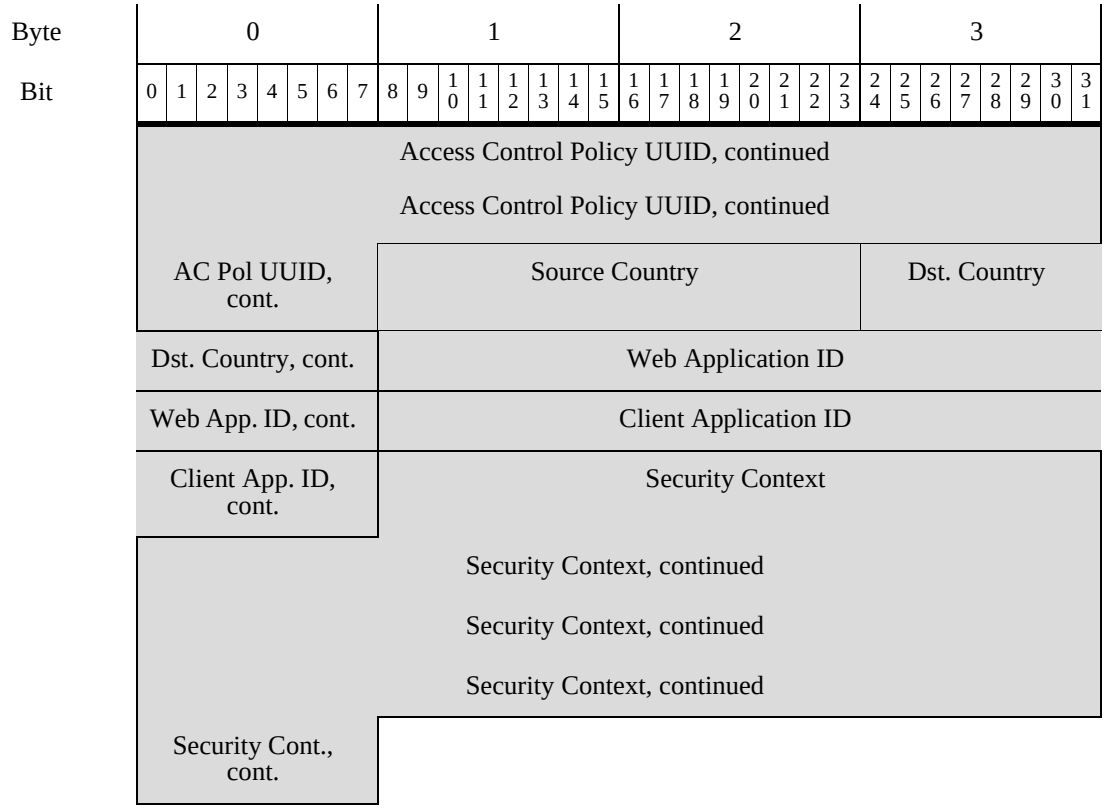
The file event contains information on files that are sent over the network. This includes the connection information, whether the file is malware, and specific information to identify the file. The file event has a block type of 43 in the series 2 group of blocks. It supersedes block type 38. A security context field has been added.

You request file event records by setting the file event flag—bit 30 in the Request Flags field—in the request message with an event version of 4 and an event code of 111. See Request Flags, page 2-11. If you enable bit 23, an extended event header is included in the record.

The following graphic shows the structure of the File Event 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
File Event Block Type (43)																																
File Event Block Length																																
Device ID																																
Connection Instance																	Connection Counter															
Connection Timestamp																																
File Event Timestamp																																
Source IP Address Source IP Address, continued Source IP Address, continued Source IP Address, continued																																
Destination IP Address Destination IP Address, continued Destination IP Address, continued Destination IP Address, continued																																
Disposition									SPERO Disposition								File Storage Status								File Analysis Status							
Archive File Status									Threat Score								Action								SHA Hash							


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
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
SHA Hash, continued
File Type ID
File Name
File Type ID, cont.
String Block Type (0)
String Block Type (0), cont.
String Block Length
String Block Length, cont.
File Name...
File Size
File Size, continued
Direction
Application ID
App ID, cont.
User ID
URI
User ID, cont.
String Block Type (0)
String Block Type (0), cont.
String Block Length
String Block Length, cont.
URI...
Signature
String Block Type (0)
String Block Length
Signature...
Source Port
Destination Port
Protocol
Access Control Policy UUID
Access Control Policy UUID, continued



The following table describes the fields in the file event data block.

Table B-37 File Event Data Block Fields

Field	Data Type	Description
File Event Block Type	uint32	Initiates whether file event data block. This value is always `43`.
File Event Block Length	uint32	Total number of bytes in the file event block, including eight bytes for the file event block type and length fields, plus the number of bytes of data that follows.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or intrusion event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the associated connection event.
File Event Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of when the file type is identified and the file event generated.
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.

Table B-37 File Event Data Block Fields (continued)

Field	Data Type	Description
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN The file is clean and does not contain malware. • 2 — UNKNOWN It is unknown whether the file contains malware. • 3 — MALWARE The file contains malware. • 4 — UNAVAILABLE The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request. • 5 — CUSTOM SIGNATURE The file matches a user-defined hash, and is treated in a fashion designated by the user.
SPERO Disposition	uint8	Indicates whether the SPERO signature was used in file analysis. If the value is 1, 2, or 3, SPERO analysis was used. If there is any other value SPERO analysis was not used.
File Storage Status	uint8	The storage status of the file. Possible values are: • 1 — File Stored • 2 — File Stored • 3 — Unable to Store File • 4 — Unable to Store File • 5 — Unable to Store File • 6 — Unable to Store File • 7 — Unable to Store File • 8 — File Size is Too Large • 9 — File Size is Too Small • 10 — Unable to Store File • 11 — File Not Stored, Disposition Unavailable

Table B-37 File Event Data Block Fields (continued)

Field	Data Type	Description
File Analysis Status	uint8	Indicates whether the file was sent for dynamic analysis. Possible values are: • 0 — File Not Sent for Analysis • 1 — Sent for Analysis • 2 — Sent for Analysis • 4 — Sent for Analysis • 5 — Failed to Send • 6 — Failed to Send • 7 — Failed to Send • 8 — Failed to Send • 9 — File Size is Too Small • 10 — File Size is Too Large • 11 — Sent for Analysis • 12 — Analysis Complete • 13 — Failure (Network Issue) • 14 — Failure (Rate Limit) • 15 — Failure (File Too Large) • 16 — Failure (File Read Error) • 17 — Failure (Internal Library Error) • 19 — File Not Sent, Disposition Unavailable • 20 — Failure (Cannot Run File) • 21 — Failure (Analysis Timeout) • 22 — Sent for Analysis • 23 — File Not Supported • 23 —File Transmit File Capacity Handled — File capacity handled (stored on the sensor) because file could not be submitted to the sandbox for analysis • 25 — File Transmit Server Limited Exceeded Capacity Handled — File capacity handled due to rate limiting on server • 26 — Communication Failure — File capacity handled due to cloud connectivity failure • 27 — Not Sent — File not sent due to configuration • 28 — Preclass No Match —File not sent for dynamic analysis since pre-classification didn't find any embedded or suspicious object in the file • 29 — Transmit Sent Sandbox Private Cloud — File sent to the private cloud for dynamic analysis • 30 — Transmit Not Send Sendbox Private Cloud - File not send to the private cloud for analysis

Table B-37 File Event Data Block Fields (continued)

Field	Data Type	Description
Archive File Status	uint8	This is always `0`.
Threat Score	uint8	A numeric value from 0 to 100 based on the potentially malicious behaviors observed during dynamic analysis.
Action	uint8	The action taken on the file based on the file type. Can have the following values: • `1` — Detect • `2` — Block • `3` — Malware Cloud Lookup • `4` — Malware Block • `5` — Malware Whitelist
SHA Hash	uint8[32]	SHA-256 hash of the file, in binary format.
File Type ID	uint32	ID number that maps to the file type. The meaning of this field is transmitted in the metadata with this event. See AMP for Endpoints File Type Metadata, page 3-39 for more information.
File Name	string	Name of the file.
File Size	uint64	Size of the file in bytes.
Direction	uint8	Value that indicates whether the file was uploaded or downloaded. Can have the following values: • `1` — Download • `2` — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Application ID	uint32	ID number that maps to the application using the file transfer.
User ID	uint32	ID number for the user logged into the destination host, as identified by the system.
URI	string	Uniform Resource Identifier (URI) of the connection.
Signature	string	SHA-256 hash of the file, in string format.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Protocol	uint8	IANA protocol number specified by the user. For example: • `1` — ICMP • `4` — IP • `6` — TCP • `17` — UDP This is currently only TCP.

Table B-37 File Event Data Block Fields (continued)

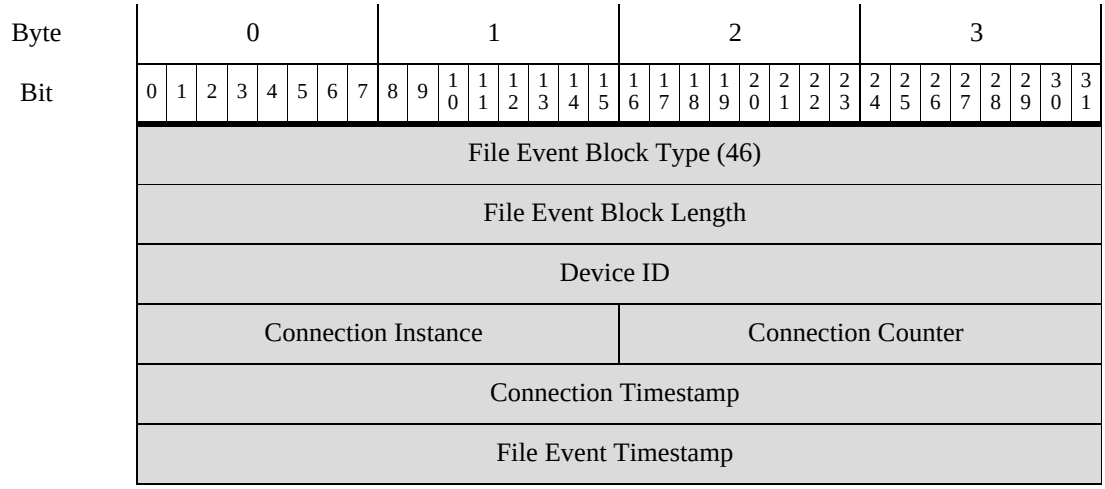
Field	Data Type	Description
Access Control Policy UUID	uint8[16]	Unique identifier for the access control policy that triggered the event.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint16	Code for the country of the destination host.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
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.

File Event for 5.4.x

The file event contains information on files that are sent over the network. This includes the connection information, whether the file is malware, and specific information to identify the file. The file event has a block type of 46 in the series 2 group of blocks. It supersedes block type 43. Fields for SSL and file archive support have been added.

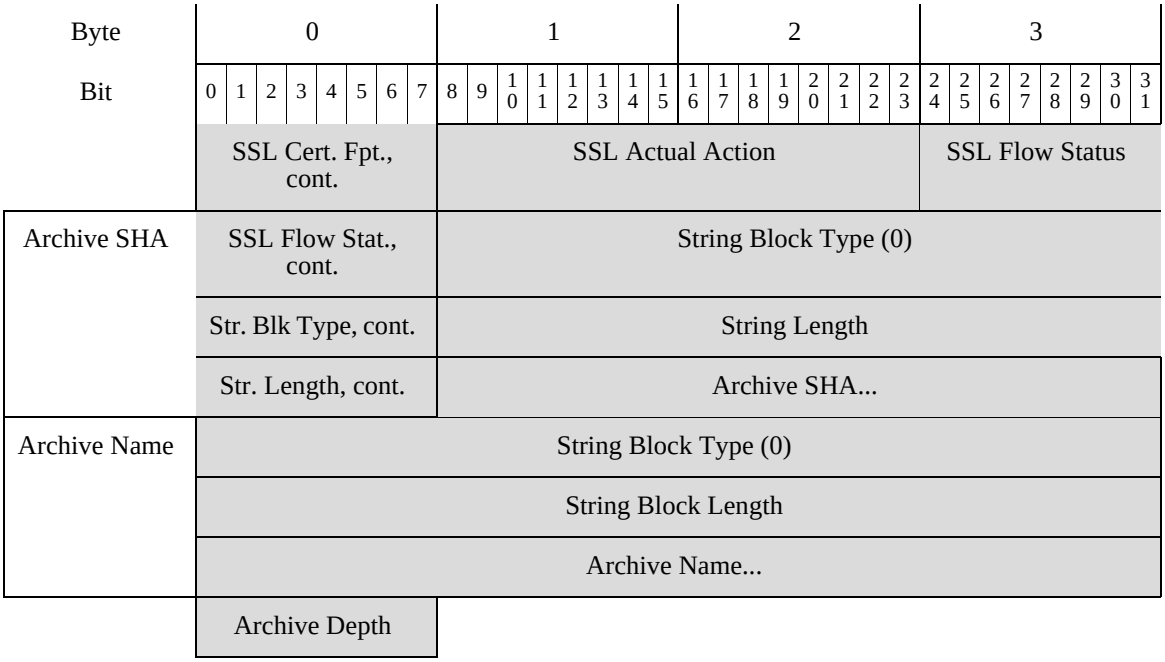
You request file event records by setting the file event flag—bit 30 in the Request Flags field—in the request message with an event version of 5 and an event code of 111. See Request Flags, page 2-11. If you enable bit 23, an extended event header is included in the record.

The following graphic shows the structure of the File Event 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
	Source IP Address			
	Source IP Address, continued			
	Source IP Address, continued			
	Source IP Address, continued			
	Destination IP Address			
	Destination IP Address, continued			
	Destination IP Address, continued			
	Destination IP Address, continued			
	Disposition	SPERO Disposition	File Storage Status	File Analysis Status
	Archive File Status	Threat Score	Action	SHA Hash
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			
	SHA Hash, continued			File Type ID
File Name	File Type ID, cont.			String Block Type (0)
	String Block Type (0), cont.			String Block Length
	String Block Length, cont.			File Name...
	File Size			
	File Size, continued			
	Direction	Application ID		
	App ID, cont.	User 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
URI	User ID, cont.								String Block Type (0)																							
	String Block Type (0), cont.								String Block Length																							
	String Block Length, cont.								URI...																							
Signature	String Block Type (0)																															
	String Block Length																															
	Signature...																															
	Source Port																Destination Port															
	Protocol								Access Control Policy UUID																							
	Access Control Policy UUID, continued																															
	Access Control Policy UUID, continued																															
	Access Control Policy UUID, continued																															
	AC Pol UUID, cont.								Source Country																Dst. Country							
	Dst. Country, cont.								Web Application ID																							
	Web App. ID, cont.								Client Application ID																							
	Client App. ID, cont.								Security Context																							
	Security Context, continued																															
	Security Context, continued																															
	Security Context, continued																															
	Security Cont., cont.								SSL Certificate Fingerprint																							
	SSL Certificate Fingerprint, continued																															
	SSL Certificate Fingerprint, continued																															
	SSL Certificate Fingerprint, continued																															
	SSL Certificate Fingerprint, continued																															



The following table describes the fields in the file event data block.

Table B-38 File Event Data Block for 5.4.x Fields

Field	Data Type	Description
File Event Block Type	uint32	Initiates whether file event data block. This value is always 46.
File Event Block Length	uint32	Total number of bytes in the file event block, including eight bytes for the file event block type and length fields, plus the number of bytes of data that follows.
Device ID	uint32	ID for the device that generated the event.
Connection Instance	uint16	Snort instance on the device that generated the event. Used to link the event with a connection or intrusion event.
Connection Counter	uint16	Value used to distinguish between connection events that happen during the same second.
Connection Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of the associated connection event.
File Event Timestamp	uint32	UNIX timestamp (seconds since 01/01/1970) of when the file type is identified and the file event generated.
Source IP Address	uint8[16]	IPv4 or IPv6 address for the source of the connection.
Destination IP Address	uint8[16]	IPv4 or IPv6 address for the destination of the connection.

Table B-38 File Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
Disposition	uint8	The malware status of the file. Possible values include: • 1 — CLEAN The file is clean and does not contain malware. • 2 — UNKNOWN It is unknown whether the file contains malware. • 3 — MALWARE The file contains malware. • 4 — UNAVAILABLE The software was unable to send a request to the Cisco cloud for a disposition, or the Cisco cloud services did not respond to the request. • 5 — CUSTOM SIGNATURE The file matches a user-defined hash, and is treated in a fashion designated by the user.
SPERO Disposition	uint8	Indicates whether the SPERO signature was used in file analysis. If the value is 1, 2, or 3, SPERO analysis was used. If there is any other value SPERO analysis was not used.
File Storage Status	uint8	The storage status of the file. Possible values are: • 1 — File Stored • 2 — File Stored • 3 — Unable to Store File • 4 — Unable to Store File • 5 — Unable to Store File • 6 — Unable to Store File • 7 — Unable to Store File • 8 — File Size is Too Large • 9 — File Size is Too Small • 10 — Unable to Store File • 11 — File Not Stored, Disposition Unavailable

Table B-38 File Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
File Analysis Status	uint8	Indicates whether the file was sent for dynamic analysis. Possible values are: • 0 — File Not Sent for Analysis • 1 — Sent for Analysis • 2 — Sent for Analysis • 4 — Sent for Analysis • 5 — Failed to Send • 6 — Failed to Send • 7 — Failed to Send • 8 — Failed to Send • 9 — File Size is Too Small • 10 — File Size is Too Large • 11 — Sent for Analysis • 12 — Analysis Complete • 13 — Failure (Network Issue) • 14 — Failure (Rate Limit) • 15 — Failure (File Too Large) • 16 — Failure (File Read Error) • 17 — Failure (Internal Library Error) • 19 — File Not Sent, Disposition Unavailable • 20 — Failure (Cannot Run File) • 21 — Failure (Analysis Timeout) • 22 — Sent for Analysis • 23 — File Not Supported

Table B-38 File Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
Archive File Status	uint8	The status of an archive being inspected. Can have the following values: • 0 — N/A — File is not being inspected as an archive • 1 — Pending — Archive is being inspected • 2 — Extracted — Successfully inspected without any problems • 3 — Failed — Failed to inspect, insufficient system resources • 4 — Depth Exceeded — Successful, but archive exceeded the nested inspection depth • 5 — Encrypted — Partially Successful, Archive was or contains an archive that is encrypted • 6 — Not Inspectable — Partially Successful, File is possibly Malformed or Corrupt
Threat Score	uint8	A numeric value from 0 to 100 based on the potentially malicious behaviors observed during dynamic analysis.
Action	uint8	The action taken on the file based on the file type. Can have the following values: • 1 — Detect • 2 — Block • 3 — Malware Cloud Lookup • 4 — Malware Block • 5 — Malware Whitelist • 6 — Cloud Lookup Timeout • 7 — Custom Detection • 8 — Custom Detection Block • 9 — Archive Block (Depth Exceeded) • 10 — Archive Block (Encrypted) • 11 — Archive Block (Failed to Inspect)
SHA Hash	uint8[32]	SHA-256 hash of the file, in binary format.
File Type ID	uint32	ID number that maps to the file type. The meaning of this field is transmitted in the metadata with this event. See AMP for Endpoints File Type Metadata, page 3-39 for more information.
File Name	string	Name of the file.
File Size	uint64	Size of the file in bytes.

Table B-38 File Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
Direction	uint8	Value that indicates whether the file was uploaded or downloaded. Can have the following values: • 1 — Download • 2 — Upload Currently the value depends on the protocol (for example, if the connection is HTTP it is a download).
Application ID	uint32	ID number that maps to the application using the file transfer.
User ID	uint32	ID number for the user logged into the destination host, as identified by the system.
URI	string	Uniform Resource Identifier (URI) of the connection.
Signature	string	SHA-256 hash of the file, in string format.
Source Port	uint16	Port number for the source of the connection.
Destination Port	uint16	Port number for the destination of the connection.
Protocol	uint8	IANA protocol number specified by the user. For example: • 1 — ICMP • 4 — IP • 6 — TCP • 17 — UDP This is currently only TCP.
Access Control Policy UUID	uint8[16]	Unique identifier for the access control policy that triggered the event.
Source Country	uint16	Code for the country of the source host.
Destination Country	uint16	Code for the country of the destination host.
Web Application ID	uint32	The internal identification number for the web application, if applicable.
Client Application ID	uint32	The internal identification number for the client application, if applicable.
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.
SSL Certificate Fingerprint	uint8[20]	SHA1 hash of the SSL Server certificate.

Table B-38 File Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
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)'

Table B-38 File Event Data Block for 5.4.x 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'
String Block Type	uint32	Initiates a String data block containing the Archive SHA. This value is always 0.

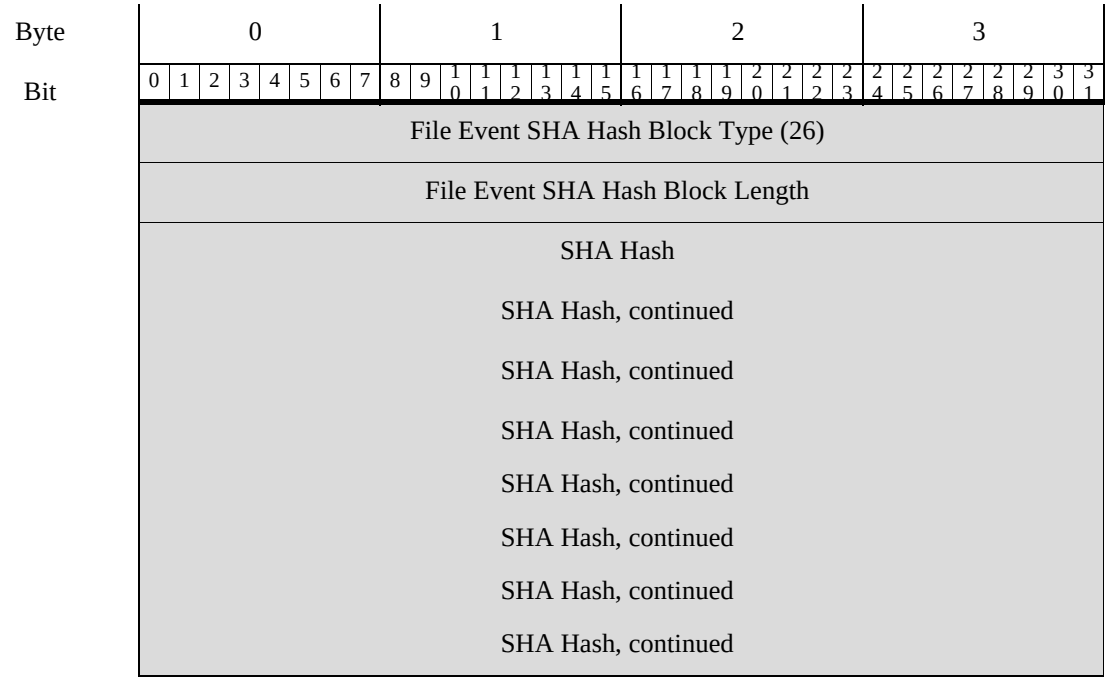
Table B-38 File Event Data Block for 5.4.x Fields (continued)

Field	Data Type	Description
String Block Length	uint32	The number of bytes included in the Archive SHA String data block, including eight bytes for the block type and header fields plus the number of bytes in the intrusion policy name.
Archive SHA	string	SHA1 hash of the parent archive in which the file is contained.
String Block Type	uint32	Initiates a String data block containing the Archive Name. This value is always `0`.
String Block Length	uint32	The number of bytes included in the Archive Name String data block, including eight bytes for the block type and header fields plus the number of bytes in the intrusion policy name.
Archive Name	string	Name of the parent archive.
Archive Depth	uint8	Number of layers in which the file is nested. For example, if a text file is in a zip archive, this has a value of `1`.

File Event SHA Hash for 5.1.1-5.2.x

The eStreamer service uses the File Event SHA Hash data block to contain metadata of the mapping of the SHA hash of a file to its filename. The block type is 26 in the series 2 list of data blocks. It can be requested if file log events have been requested in the extended requests—event code 111—and either bit 20 is set or metadata is requested with an event version of 4 and an event code of 21.

The following diagram shows the structure of a file event hash data block:



File Name	String Block Type (0)
	String Block Length
	File Name or Disposition...

The following table describes the fields in the file event SHA hash data block.

Table B-39 File Event SHA Hash 5.1.1-5.2.x Data Block Fields

Field	Data Type	Description
File Event SHA Hash Block Type	uint32	Initiates a File Event SHA Hash block. This value is always `26`.
File Event SHA Hash Block Length	uint32	Total number of bytes in the File Event SHA Hash block, including eight bytes for the File Event SHA Hash block type and length fields, plus the number of bytes of data that follows.
SHA Hash	uint8[32]	The SHA-256 hash of the file in binary format.
String Block Type	uint32	Initiates a String data block containing the descriptive name associated with the file. 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.
File Name or Disposition	string	The descriptive name or disposition of the file. If the file is clean, this value is `Clean`. If the file's disposition is unknown, the value is `Neutral`. If the file contains malware, the file name is given.

Legacy Correlation Event Data Structures

The following topics describe other legacy correlation (compliance) data structures:

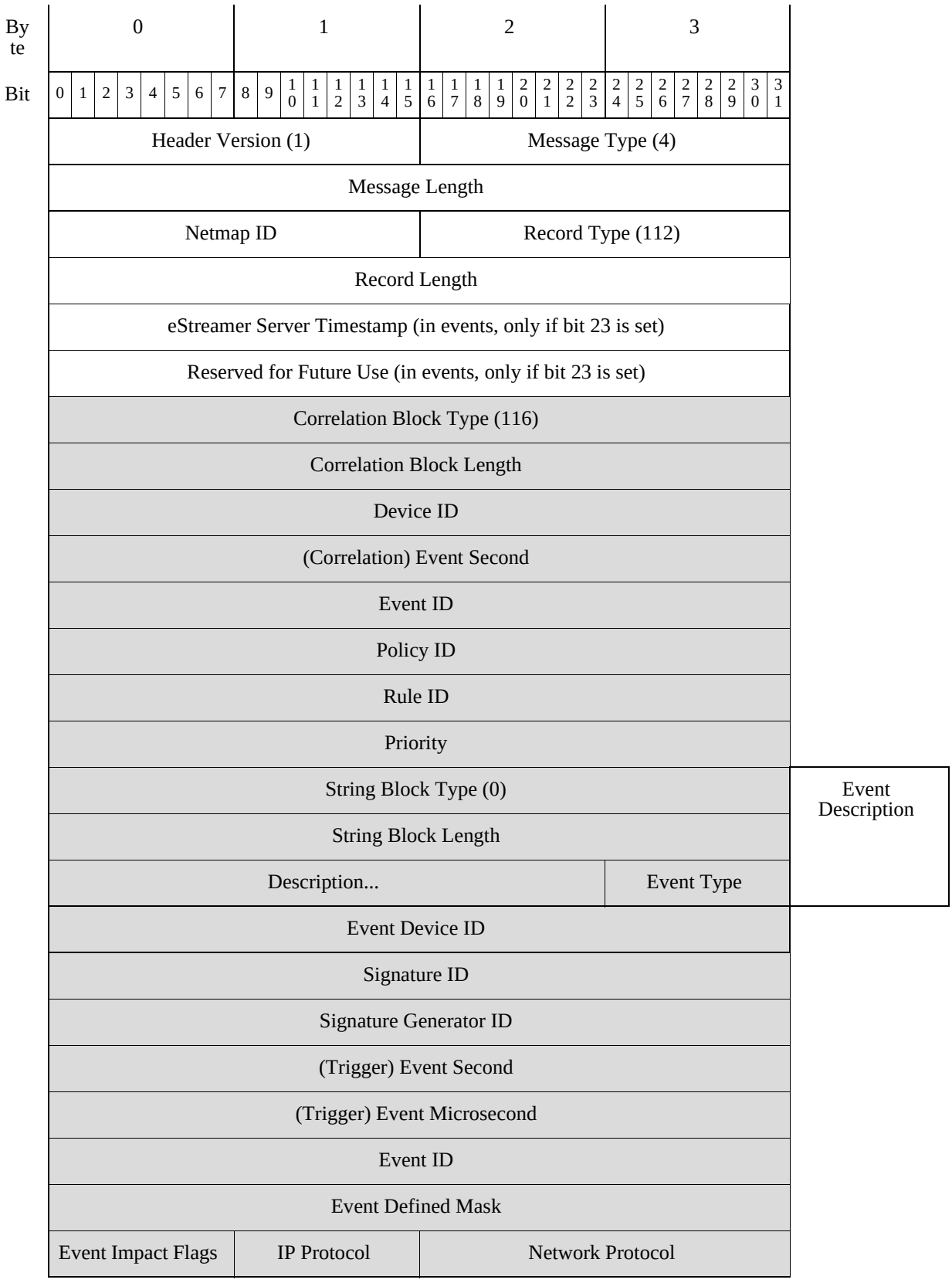
- Correlation Event for 5.0 - 5.0.2, page B-211
- Correlation Event for 5.1-5.3.x, page B-219

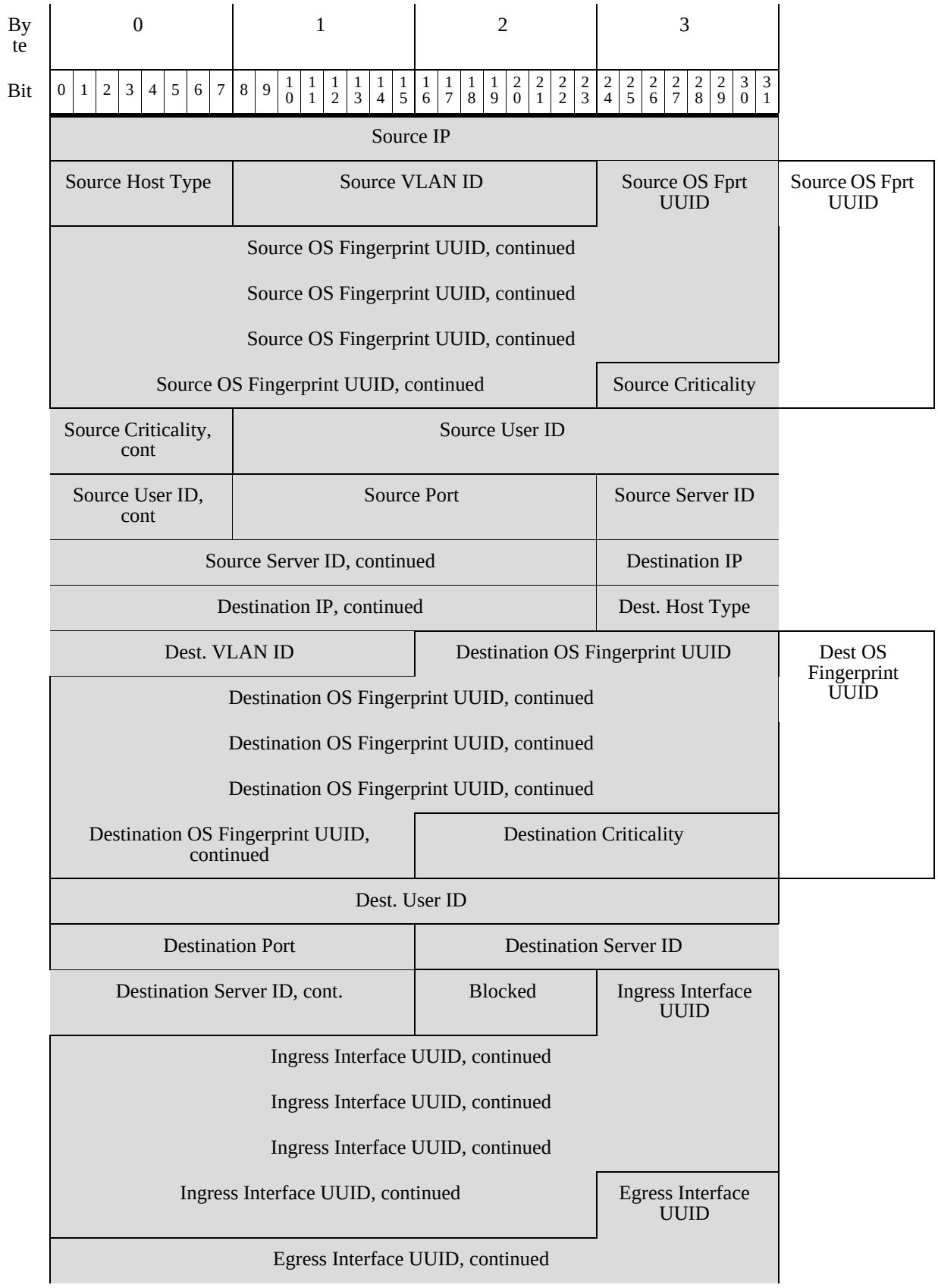
Correlation Event for 5.0 - 5.0.2

Correlation events (called compliance events in pre-5.0 versions) contain information about correlation policy violations. This message uses the standard eStreamer message header and specifies a record type of 112, followed by a correlation data block of type 116. Data block type 116 differs from its predecessor (block type 107) in including additional information about the associated security zone and interface.

You can request 5.0 correlation events from eStreamer only by extended request, for which you request event type code 31 and version code 7 in the Stream Request message (see Submitting Extended Requests, page 2-4 for information about submitting extended requests). You can optionally enable bit 23 in the flags field of the initial event stream request message, to include the extended event header. You can also enable bit 20 in the flags field to include user metadata.

Note that the record structure includes a String block type, which is a block in series 1. For information about series 1 blocks, see Understanding Discovery (Series 1) Blocks, page 4-57.


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 (112)
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)
Correlation Block Type (116)
Correlation Block Length
Device ID
(Correlation) Event Second
Event ID
Policy ID
Rule ID
Priority
String Block Type (0)
String Block Length
Description...
Event Type
Event Description
Event Device ID
Signature ID
Signature Generator ID
(Trigger) Event Second
(Trigger) Event Microsecond
Event ID
Event Defined Mask
Event Impact Flags
IP Protocol
Network Protocol


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
Source IP
Source Host Type
Source VLAN ID
Source OS Fprt UUID
Source OS Fprt UUID
Source OS Fingerprint UUID, continued
Source OS Fingerprint UUID, continued
Source OS Fingerprint UUID, continued
Source OS Fingerprint UUID, continued
Source Criticality
Source Criticality, cont
Source User ID
Source User ID, cont
Source Port
Source Server ID
Source Server ID, continued
Destination IP
Destination IP, continued
Dest. Host Type
Dest. VLAN ID
Destination OS Fingerprint UUID
Dest OS Fingerprint UUID
Destination OS Fingerprint UUID, continued
Destination OS Fingerprint UUID, continued
Destination OS Fingerprint UUID, continued
Destination OS Fingerprint UUID, continued
Destination Criticality
Dest. User ID
Destination Port
Destination Server ID
Destination Server ID, cont.
Blocked
Ingress Interface UUID
Ingress Interface UUID, continued
Ingress Interface UUID, continued
Ingress Interface UUID, continued
Ingress Interface UUID, continued
Egress Interface UUID
Egress Interface UUID, continued

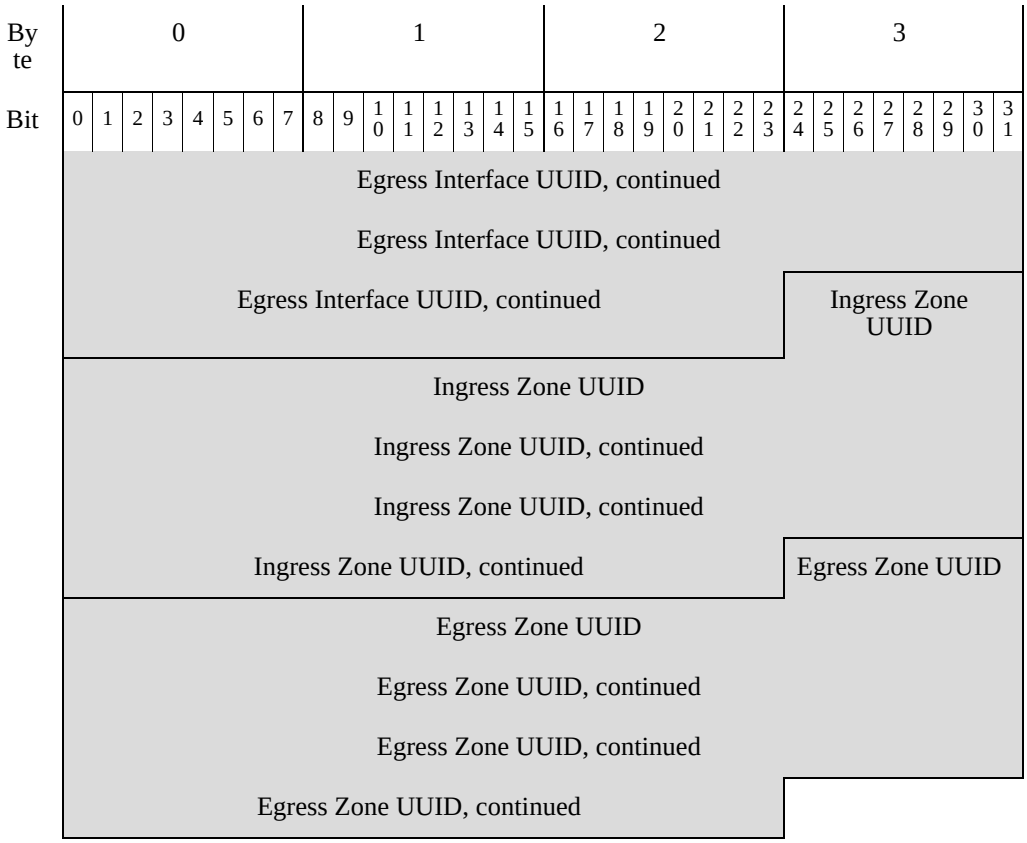


Table B-40 Correlation Event 5.0 - 5.0.2 Data Fields

Field	Data Type	Description
Correlation Block Type	uint32	Indicates a correlation event data block follows. This field always has a value of `107`. See Understanding Discovery (Series 1) Blocks, page 4-57.
Correlation Block Length	uint32	Length of the correlation data block, which includes 8 bytes for the correlation block type and length plus the correlation data that follows.
Device ID	uint32	Internal identification number of the managed device or Defense Center that generated the correlation event. A value of zero indicates the Defense Center. You can obtain managed device names by requesting Version 3 metadata. See Managed Device Record Metadata, page 3-34 for more information.
(Correlation) Event Second	uint32	UNIX timestamp indicating the time that the correlation event was generated (in seconds from 01/01/1970).
Event ID	uint32	Correlation event identification number.
Policy ID	uint32	Identification number of the correlation policy that was violated. See Server Record, page 4-14 for information about how to obtain policy identification numbers from the database.
Rule ID	uint32	Identification number of the correlation rule that triggered to violate the policy. See Server Record, page 4-14 for information about how to obtain policy identification numbers from the database.

Table B-40 Correlation Event 5.0 - 5.0.2 Data Fields (continued)

Field	Data Type	Description
Priority	uint32	Priority assigned to the event. This is an integer value from `0` to `5`.
String Block Type	uint32	Initiates a string data block that contains the correlation violation event description. This value is always set to `0`. For more information about string blocks, see String Data Block, page 4-66.
String Block Length	uint32	Number of bytes in the event description string block, which includes four bytes for the string block type and four bytes for the string block length, plus the number of bytes in the description.
Description	string	Description of the correlation event.
Event Type	uint8	Indicates whether the correlation event was triggered by an intrusion, host discovery, or user event: • `1` — Intrusion • `2` — Host discovery • `3` — User
Event Device ID	uint32	Identification number of the device that generated the event that triggered the correlation event. You can obtain device name by requesting Version 3 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Signature ID	uint32	If the event was an intrusion event, indicates the rule identification number that corresponds with the event. Otherwise, the value is `0`.
Signature Generator ID	uint32	If the event was an intrusion event, indicates the ID number of the Firepower System preprocessor or rules engine that generated the event.
(Trigger) Event Second	uint32	UNIX timestamp indicating the time of the event that triggered the correlation policy rule (in seconds from 01/01/1970).
(Trigger) Event Microsecond	uint32	Microsecond (one millionth of a second) increment that the event was detected.
Event ID	uint32	Identification number of the event generated by the device.
Event Defined Mask	bits[32]	Set bits in this field indicate which of the fields that follow in the message are valid. See Table B-41 on page B-218 for a list of each bit value.

Table B-40 Correlation Event 5.0 - 5.0.2 Data Fields (continued)

Field	Data Type	Description
Event Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • `0x01` (bit 0) — Source or destination host is in a network monitored by the system. • `0x02` (bit 1) — Source or destination host exists in the network map. • `0x04` (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • `0x08` (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • `0x10` (bit 4) — There is a vulnerability mapped to the server detected in the event. • `0x20` (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • `0x40` (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red (bit 6). The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • `0x80` (bit 7) — There is a vulnerability mapped to the client detected in the event. The following impact level values map to specific priorities on the Defense Center. An `x` indicates the value can be 0 or 1: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` • orange (2, potentially vulnerable): `00X00111` • yellow (3, currently not vulnerable): `00X00011` • blue (4, unknown target): `00X00001`
IP Protocol	uint8	Identifier of the IP protocol associated with the event, if applicable.
Network Protocol	uint16	Network protocol associated with the event, if applicable.
Source IP	uint8[4]	IP address of the source host in the event, in IP address octets.
Source Host Type	uint8	Source host's type: • `0` — Host • `1` — Router • `2` — Bridge
Source VLAN ID	uint16	Source host's VLAN identification number, if applicable.

Table B-40 Correlation Event 5.0 - 5.0.2 Data Fields (continued)

Field	Data Type	Description
Source OS Fingerprint UUID	uint8[16]	A fingerprint ID number that acts a unique identifier for the source host's operating system. See Server Record, page 4-14 for information about obtaining the values that map to the fingerprint IDs.
Source Criticality	uint16	User-defined criticality value for the source host: • 0 — None • 1 — Low • 2 — Medium • 3 — High
Source User ID	uint32	Identification number for the user logged into the source host, as identified by the system.
Source Port	uint16	Source port in the event.
Source Server ID	uint32	Identification number for the server running on the source host.
Destination IP Address	uint8[4]	IP address of the destination host associated with the policy violation (if applicable). This value will be 0 if there is no destination IP address.
Destination Host Type	uint8	Destination host's type: • 0 — Host • 1 — Router • 2 — Bridge
Destination VLAN ID	uint16	Destination host's VLAN identification number, if applicable.
Destination OS Fingerprint UUID	uint8[16]	A fingerprint ID number that acts as a unique identifier for the destination host's operating system. See Server Record, page 4-14 for information about obtaining the values that map to the fingerprint IDs.
Destination Criticality	uint16	User-defined criticality value for the destination host: • 0 — None • 1 — Low • 2 — Medium • 3 — High
Destination User ID	uint32	Identification number for the user logged into the destination host, as identified by the system.
Destination Port	uint16	Destination port in the event.
Destination Service ID	uint32	Identification number for the server running on the source host.

Table B-40 Correlation Event 5.0 - 5.0.2 Data Fields (continued)

Field	Data Type	Description
Blocked	uint8	Value indicating what happened to the packet that triggered the intrusion event. • 0 — Intrusion event not dropped • 1 — Intrusion event was dropped (drop when deployment is inline, switched, or routed) • 2 — The packet that triggered the event would have been dropped, if the intrusion policy had been applied to a device in inline, switched, or routed deployment.
Ingress Interface UUID	uint8[16]	An interface ID that acts as the unique identifier for the ingress interface associated with correlation event.
Egress Interface UUID	uint8[16]	An interface ID that acts as the unique identifier for the egress interface associated with correlation event.
Ingress Zone UUID	uint8[16]	A zone ID that acts as the unique identifier for the ingress security zone associated with correlation event.
Egress Zone UUID	uint8[16]	A zone ID that acts as the unique identifier for the egress security zone associated with correlation event.

The following table describes each Event Defined Mask value.

Table B-41 Event Defined Values

Description	Mask Value
Event Impact Flags	0x00000001
IP Protocol	0x00000002
Network Protocol	0x00000004
Source IP	0x00000008
Source Host Type	0x00000010
Source VLAN ID	0x00000020
Source Fingerprint ID	0x00000040
Source Criticality	0x00000080
Source Port	0x00000100
Source Server	0x00000200
Destination IP	0x00000400
Destination Host Type	0x00000800
Destination VLAN ID	0x00001000
Destination Fingerprint ID	0x00002000
Destination Criticality	0x00004000
Destination Port	0x00008000
Destination Server	0x00010000

Table B-41 Event Defined Values (continued)

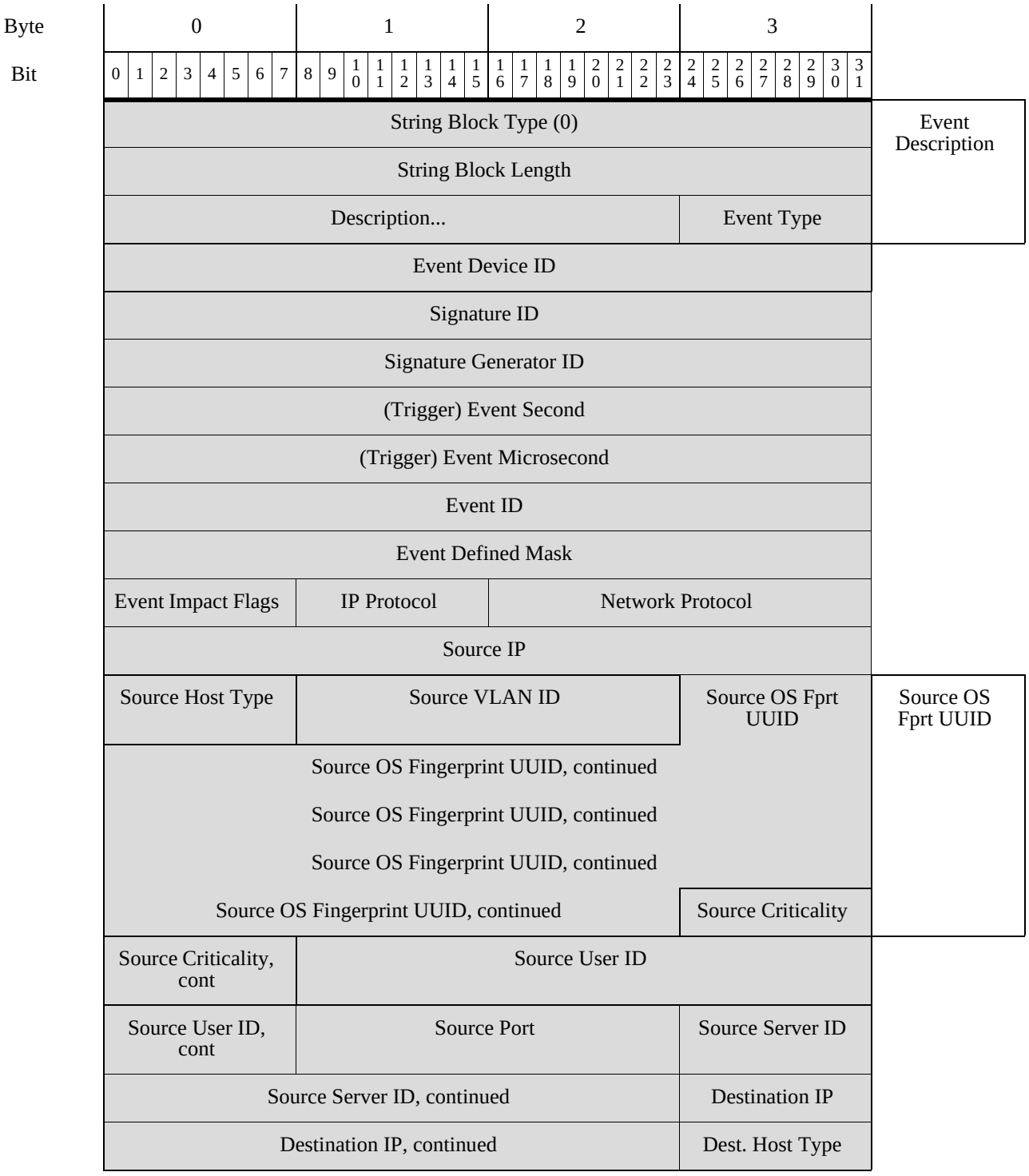
Description	Mask Value
Source User	0x00020000
Destination User	0x00040000

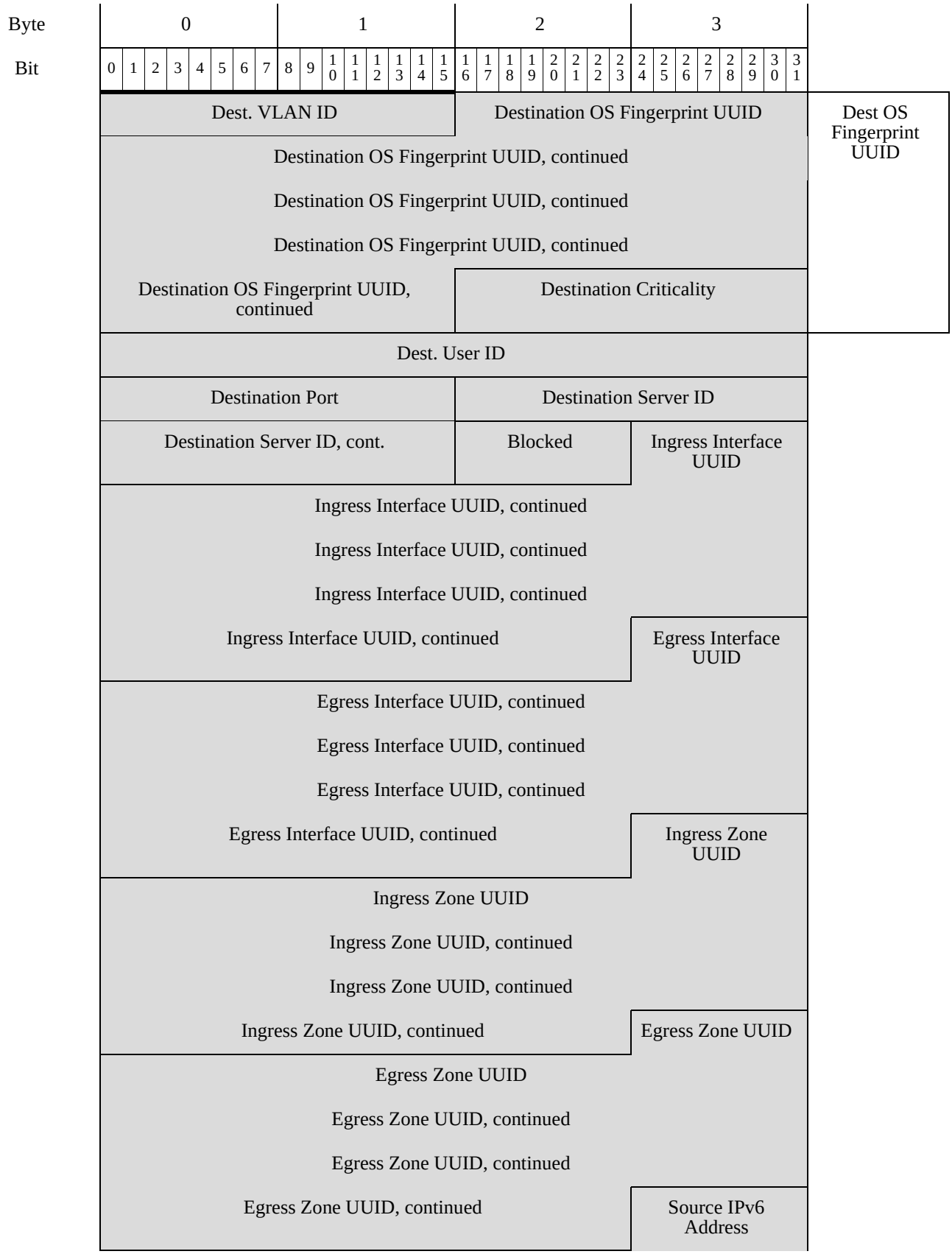
Correlation Event for 5.1-5.3.x

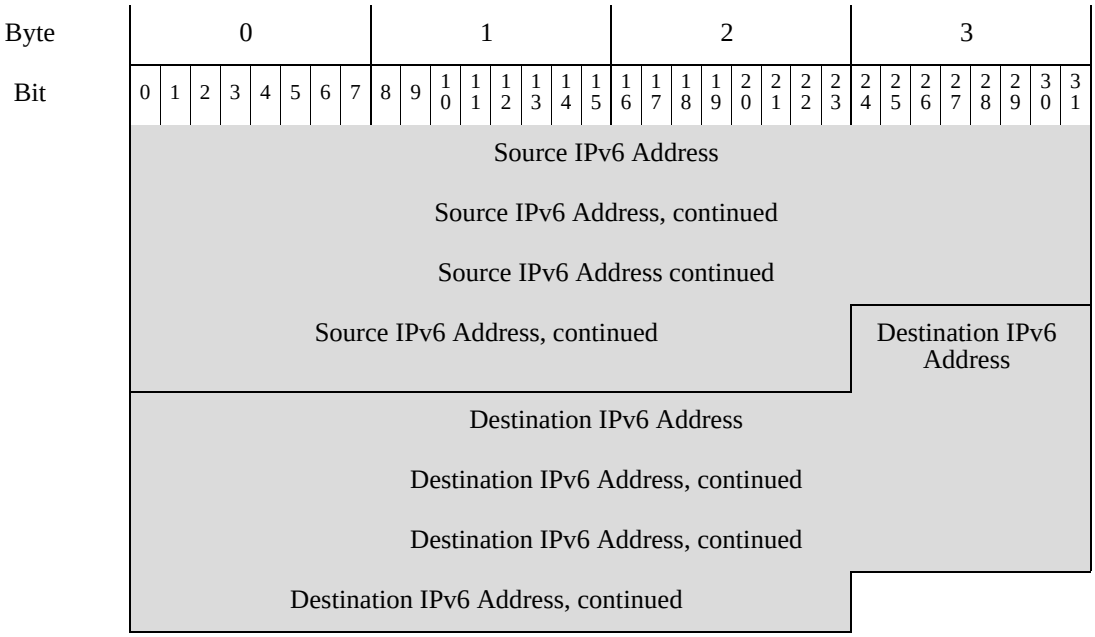
Correlation events (called compliance events in pre-5.0 versions) contain information about correlation policy violations. This message uses the standard eStreamer message header and specifies a record type of 112, followed by a correlation data block of type 128 in the series 1 set of data blocks. Data block type 128 differs from its predecessor (block type 116) in including IPv6 support.

You can request 5.1-5.3.x correlation events from eStreamer only by extended request, for which you request event type code 31 and version code 8 in the Stream Request message (see Submitting Extended Requests, page 2-4 for information about submitting extended requests). You can optionally enable bit 23 in the flags field of the initial event stream request message, to include the extended event header. You can also enable bit 20 in the flags field to include user metadata.

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 (112)															
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)																																
Correlation Block Type (128)																																
Correlation Block Length																																
Device ID																																
(Correlation) Event Second																																
Event ID																																
Policy ID																																
Rule ID																																
Priority																																


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
Description...
Event Type
Event Description
Event Device ID
Signature ID
Signature Generator ID
(Trigger) Event Second
(Trigger) Event Microsecond
Event ID
Event Defined Mask
Event Impact Flags
IP Protocol
Network Protocol
Source IP
Source Host Type
Source VLAN ID
Source OS Fprt UUID
Source OS Fprt UUID
Source OS Fingerprint UUID, continued
Source OS Fingerprint UUID, continued
Source OS Fingerprint UUID, continued
Source OS Fingerprint UUID, continued
Source Criticality
Source Criticality, cont
Source User ID
Source User ID, cont
Source Port
Source Server ID
Source Server ID, continued
Destination IP
Destination IP, continued
Dest. Host Type


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
Dest. VLAN ID
Destination OS Fingerprint UUID
Dest OS Fingerprint UUID
Destination OS Fingerprint UUID, continued
Destination OS Fingerprint UUID, continued
Destination OS Fingerprint UUID, continued
Destination OS Fingerprint UUID, continued
Destination Criticality
Dest. User ID
Destination Port
Destination Server ID
Destination Server ID, cont.
Blocked
Ingress Interface UUID
Ingress Interface UUID, continued
Ingress Interface UUID, continued
Ingress Interface UUID, continued
Ingress Interface UUID, continued
Egress Interface UUID
Egress Interface UUID, continued
Egress Interface UUID, continued
Egress Interface UUID, continued
Egress Interface UUID, continued
Ingress Zone UUID
Ingress Zone UUID
Ingress Zone UUID, continued
Ingress Zone UUID, continued
Ingress Zone UUID, continued
Egress Zone UUID
Egress Zone UUID
Egress Zone UUID, continued
Egress Zone UUID, continued
Egress Zone UUID, continued
Source IPv6 Address



Note that the record structure includes a String block type, which is a block in series 1. For information about series 1 blocks, see Understanding Discovery (Series 1) Blocks, page 4-57.

Table B-42 Correlation Event 5.1-5.3.x Data Fields

Field	Data Type	Description
Correlation Block Type	uint32	Indicates a correlation event data block follows. This field always has a value of 128. See Understanding Discovery (Series 1) Blocks, page 4-57.
Correlation Block Length	uint32	Length of the correlation data block, which includes 8 bytes for the correlation block type and length plus the correlation data that follows.
Device ID	uint32	Internal identification number of the managed device or Defense Center that generated the correlation event. A value of zero indicates the Defense Center. You can obtain managed device names by requesting Version 3 metadata. See Managed Device Record Metadata, page 3-34 for more information.
(Correlation) Event Second	uint32	UNIX timestamp indicating the time that the correlation event was generated (in seconds from 01/01/1970).
Event ID	uint32	Correlation event identification number.
Policy ID	uint32	Identification number of the correlation policy that was violated. See Server Record, page 4-14 for information about how to obtain policy identification numbers from the database.
Rule ID	uint32	Identification number of the correlation rule that triggered to violate the policy. See Server Record, page 4-14 for information about how to obtain policy identification numbers from the database.
Priority	uint32	Priority assigned to the event. This is an integer value from 0 to 5.

Table B-42 Correlation Event 5.1-5.3.x Data Fields (continued)

Field	Data Type	Description
String Block Type	uint32	Initiates a string data block that contains the correlation violation event description. This value is always set to 0. For more information about string blocks, see String Data Block, page 4-66.
String Block Length	uint32	Number of bytes in the event description string block, which includes four bytes for the string block type and four bytes for the string block length, plus the number of bytes in the description.
Description	string	Description of the correlation event.
Event Type	uint8	Indicates whether the correlation event was triggered by an intrusion, host discovery, or user event: • 1 — Intrusion • 2 — Host discovery • 3 — User
Event Device ID	uint32	Identification number of the device that generated the event that triggered the correlation event. You can obtain device name by requesting Version 3 metadata. See Managed Device Record Metadata, page 3-34 for more information.
Signature ID	uint32	If the event was an intrusion event, indicates the rule identification number that corresponds with the event. Otherwise, the value is 0.
Signature Generator ID	uint32	If the event was an intrusion event, indicates the ID number of the Firepower System preprocessor or rules engine that generated the event.
(Trigger) Event Second	uint32	UNIX timestamp indicating the time of the event that triggered the correlation policy rule (in seconds from 01/01/1970).
(Trigger) Event Microsecond	uint32	Microsecond (one millionth of a second) increment that the event was detected.
Event ID	uint32	Identification number of the event generated by the Cisco device.
Event Defined Mask	bits[32]	Set bits in this field indicate which of the fields that follow in the message are valid. See Table B-41 on page B-218 for a list of each bit value.

Table B-42 Correlation Event 5.1-5.3.x Data Fields (continued)

Field	Data Type	Description
Event Impact Flags	bits[8]	Impact flag value of the event. The low-order eight bits indicate the impact level. Values are: • 0x01 (bit 0) — Source or destination host is in a network monitored by the system. • 0x02 (bit 1) — Source or destination host exists in the network map. • 0x04 (bit 2) — Source or destination host is running a server on the port in the event (if TCP or UDP) or uses the IP protocol. • 0x08 (bit 3) — There is a vulnerability mapped to the operating system of the source or destination host in the event. • 0x10 (bit 4) — There is a vulnerability mapped to the server detected in the event. • 0x20 (bit 5) — The event caused the managed device to drop the session (used only when the device is running in inline, switched, or routed deployment). Corresponds to blocked status in the Firepower System web interface. • 0x40 (bit 6) — The rule that generated this event contains rule metadata setting the impact flag to red. The source or destination host is potentially compromised by a virus, trojan, or other piece of malicious software. • 0x80 (bit 7) — There is a vulnerability mapped to the client detected in the event. (version 5.0+ only) The following impact level values map to specific priorities on the Defense Center. An `x` indicates the value can be 0 or 1: • (0, unknown): `00X00000` • red (1, vulnerable): `XXXX1XXX, XXX1XXXX, X1XXXXXX, 1XXXXXXX` (version 5.0+ only) • orange (2, potentially vulnerable): `00X0011X` • yellow (3, currently not vulnerable): `00X0001X` • blue (4, unknown target): `00X00001`
IP Protocol	uint8	Identifier of the IP protocol associated with the event, if applicable.
Network Protocol	uint16	Network protocol associated with the event, if applicable.
Source IP Address	uint8[4]	This field is reserved but no longer populated. The Source IPv4 address is stored in the Source IPv6 Address field. See IP Addresses, page 1-4 for more information.
Source Host Type	uint8	Source host's type: • 0 — Host • 1 — Router • 2 — Bridge

Table B-42 Correlation Event 5.1-5.3.x Data Fields (continued)

Field	Data Type	Description
Source VLAN ID	uint16	Source host's VLAN identification number, if applicable.
Source OS Fingerprint UUID	uint8[16]	A fingerprint ID number that acts a unique identifier for the source host's operating system. See Server Record, page 4-14 for information about obtaining the values that map to the fingerprint IDs.
Source Criticality	uint16	User-defined criticality value for the source host: • 0 — None • 1 — Low • 2 — Medium • 3 — High
Source User ID	uint32	Identification number for the user logged into the source host, as identified by the system.
Source Port	uint16	Source port in the event.
Source Server ID	uint32	Identification number for the server running on the source host.
Destination IP Address	uint8[4]	This field is reserved but no longer populated. The Destination IPv4 address is stored in the Destination IPv6 Address field. See IP Addresses, page 1-4 for more information.
Destination Host Type	uint8	Destination host's type: • 0 — Host • 1 — Router • 2 — Bridge
Destination VLAN ID	uint16	Destination host's VLAN identification number, if applicable.
Destination OS Fingerprint UUID	uint8[16]	A fingerprint ID number that acts as a unique identifier for the destination host's operating system. See Server Record, page 4-14 for information about obtaining the values that map to the fingerprint IDs.
Destination Criticality	uint16	User-defined criticality value for the destination host: • 0 — None • 1 — Low • 2 — Medium • 3 — High
Destination User ID	uint32	Identification number for the user logged into the destination host, as identified by the system.
Destination Port	uint16	Destination port in the event.
Destination Service ID	uint32	Identification number for the server running on the source host.

Table B-42 Correlation Event 5.1-5.3.x Data Fields (continued)

Field	Data Type	Description
Blocked	uint8	Value indicating what happened to the packet that triggered the intrusion event. • 0 — Intrusion event not dropped • 1 — Intrusion event was dropped (drop when deployment is inline, switched, or routed) • 2 — The packet that triggered the event would have been dropped, if the intrusion policy had been applied to a device in inline, switched, or routed deployment.
Ingress Interface UUID	uint8[16]	An interface ID that acts as the unique identifier for the ingress interface associated with correlation event.
Egress Interface UUID	uint8[16]	An interface ID that acts as the unique identifier for the egress interface associated with correlation event.
Ingress Zone UUID	uint8[16]	A zone ID that acts as the unique identifier for the ingress security zone associated with correlation event.
Egress Zone UUID	uint8[16]	A zone ID that acts as the unique identifier for the egress security zone associated with correlation event.
Source IPv6 Address	uint8[16]	IP address of the source host in the event, in IPv6 address octets.
Destination IPv6 Address	uint8[16]	IP address of the destination host in the event, in IPv6 address octets.

Legacy Host Data Structures

To request these structures, you must use a Host Request Message. To request a legacy structure, the Host Request Message must use an older format. See Host Request Message Format, page 2-25 for more information.

The following topics describe legacy host data structures, including both host profile and full host profile structures:

Full Host Profile Data Block 5.0 - 5.0.2

The Full Host Profile data block for version 5.0 - 5.0.2 contains a full set of data describing one host. It has the format shown in the graphic below and explained in the following table. Note that, except for List data blocks, the graphic does not show the fields of the encapsulated data blocks. These encapsulated data blocks are described separately in Understanding Discovery & Connection Data Structures, page 4-1. The Full Host Profile data block a block type value of 111.

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

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 Profile Data Block (111)																															
	Data Block Length																															
	IP Address																															
	Hops								Generic List Block Type (31)																							
	Generic List Block Type, continued								Generic List Block Length																							
OS Derived Fingerprints	Generic List Block Length, continued								Operating System Fingerprint Block Type (130)*																							
	OS Fingerprint Block Type (130)*, con't								Operating System Fingerprint Block Length																							
	OS Fingerprint Block Length, con't								Operating System Derived Fingerprint Data...																							
	Generic List Block Type (31)																															
	Generic List Block Length																															
Server Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Server Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															

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
Client Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Client Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
VDB Native Fingerprints 1	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System VDB Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
VDB Native Fingerprints 2	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System VDB Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
User Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System User Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Scan Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Scan Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															

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
Application Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Application Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Conflict Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Conflict Fingerprint Data...																															
(TCP) Full Server Data	List Block Type (11)...																															
	List Block Length...																															
	(TCP) Full Server Data Blocks (104)*																															
(UDP) Full Server Data	List Block Type (11)																															
	List Block Length																															
	(UDP) Full Server Data Blocks (104)*																															
Network Protocol Data	List Block Type (11)																															
	List Block Length																															
	(Network) Protocol Data Blocks (4)*																															
Transport Protocol Data	List Block Type (11)																															
	List Block Length																															
	(Transport) Protocol Data Blocks (4)*																															
MAC Address Data	List Block Type (11)																															
	List Block Length																															
	Host MAC Address Data Blocks (95)*																															
	Last Seen																															
	Host Type																															
	Business Criticality																VLAN 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
	VLAN Type								VLAN Priority								Generic List Block Type (31)															
Host Client Data	Generic List Block Type, continued																Generic List Block Length															
	Generic List Block Length, continued																Full Host Client Application Data Blocks (112)*															
NetBIOS Name	String Block Type (0)																															
	String Block Length																															
	NetBIOS Name String...																															
Notes Data	String Block Type (0)																															
	String Block Length																															
	Notes String....																															
(VDB) Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(VDB) Host Vulnerability Data Blocks (85)*																															
3rd Pty/VDB) Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(Third Party/VDB) Host Vulnerability Data Blocks (85)*																															
3rd Pty Scan Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(Third Party Scan) Host Vulnerability Data Blocks with Original Vuln IDs (85)*																															
Attribute Value Data	List Block Type (11)																															
	List Block Length																															
	Attribute Value Data Blocks *																															

The following table describes the components of the Full Host Profile for 5.0 - 5.0.2 record.

Table B-43 Full Host Profile Record 5.0 - 5.0.2 Fields

Field	Data Type	Description
IP Address	uint8[4]	IP address of the host, in IP address octets.
Hops	uint8	Number of network hops from the host to the device.

Table B-43 Full Host Profile Record 5.0 - 5.0.2 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 derived from the existing fingerprints for the host. 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 Derived Fingerprint Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host derived from the existing fingerprints for the host. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 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 4-150 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 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 4-150 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 Cisco VDB 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 B-43 Full Host Profile Record 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
Operating System Fingerprint (VDB) Native Fingerprint 1) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using the fingerprints in the Cisco vulnerability database (VDB). See Operating System Fingerprint Data Block 5.1+, page 4-150 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 Cisco VDB 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 (VDB) Native Fingerprint 2) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using the fingerprints in the Cisco vulnerability database (VDB). See Operating System Fingerprint Data Block 5.1+, page 4-150 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 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 Operating System Fingerprint data blocks.
Operating System Fingerprint (User Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by a user. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 added by a vulnerability 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 Operating System Fingerprint data blocks.
Operating System Fingerprint (Scan Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by a vulnerability scanner. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 added by an application. This value is always `31`.

Table B-43 Full Host Profile Record 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
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 (Application Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by an application. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 selected through fingerprint conflict resolution. 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 (Conflict Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host selected through fingerprint conflict resolution. See Operating System Fingerprint Data Block 5.1+, page 4-150 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Full Server data blocks conveying TCP service 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 the length of all encapsulated Full Server data blocks.
(TCP) Full Server Data Blocks *	variable	List of Full Server data blocks conveying data about the TCP services on the host. See Full Host Server Data Block 4.10.0+, page 4-131 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Full Server data blocks conveying UDP service 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 the length of all encapsulated Full Server data blocks.
(UDP) Full Server Data Blocks *	variable	List of Full Server data blocks conveying data about the UDP sub-servers on the host. See Full Host Server Data Block 4.10.0+, page 4-131 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 the length of all encapsulated Protocol data blocks.
(Network) Protocol Data Blocks *	variable	List of Protocol data blocks conveying data about the network protocols on the host. See Protocol Data Block, page 4-70 for a description of this data block.

Table B-43 Full Host Profile Record 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
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 the length of all encapsulated Protocol data blocks.
(Transport) Protocol Data Blocks *	variable	List of Protocol data blocks conveying data about the transport protocols on the host. See Protocol Data Block, page 4-70 for a description of this data block.
List Block Type	uint32	Initiates a List data block containing Host 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 Host MAC Address data blocks.
Host MAC Address Data Blocks *	variable	List of Host MAC Address data blocks. See Host MAC Address 4.9+, page 4-109 for a description of this data block.
Last Seen	uint32	UNIX timestamp that represents the last time the system detected host activity.
Host Type	uint32	Indicates host type. Values include: • `0` — Host • `1` — Router • `2` — Bridge • `3` — NAT (network address translation device) • `4` — LB (load balancer)
Business Criticality	uint16	Indicates criticality of host to business.
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.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Host Vulnerability data blocks conveying Client Application 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 Client Application data blocks.
Full Host Client Application Data Blocks *	variable	List of Client Application data blocks. See Full Host Client Application Data Block 5.0+, page 4-145 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.

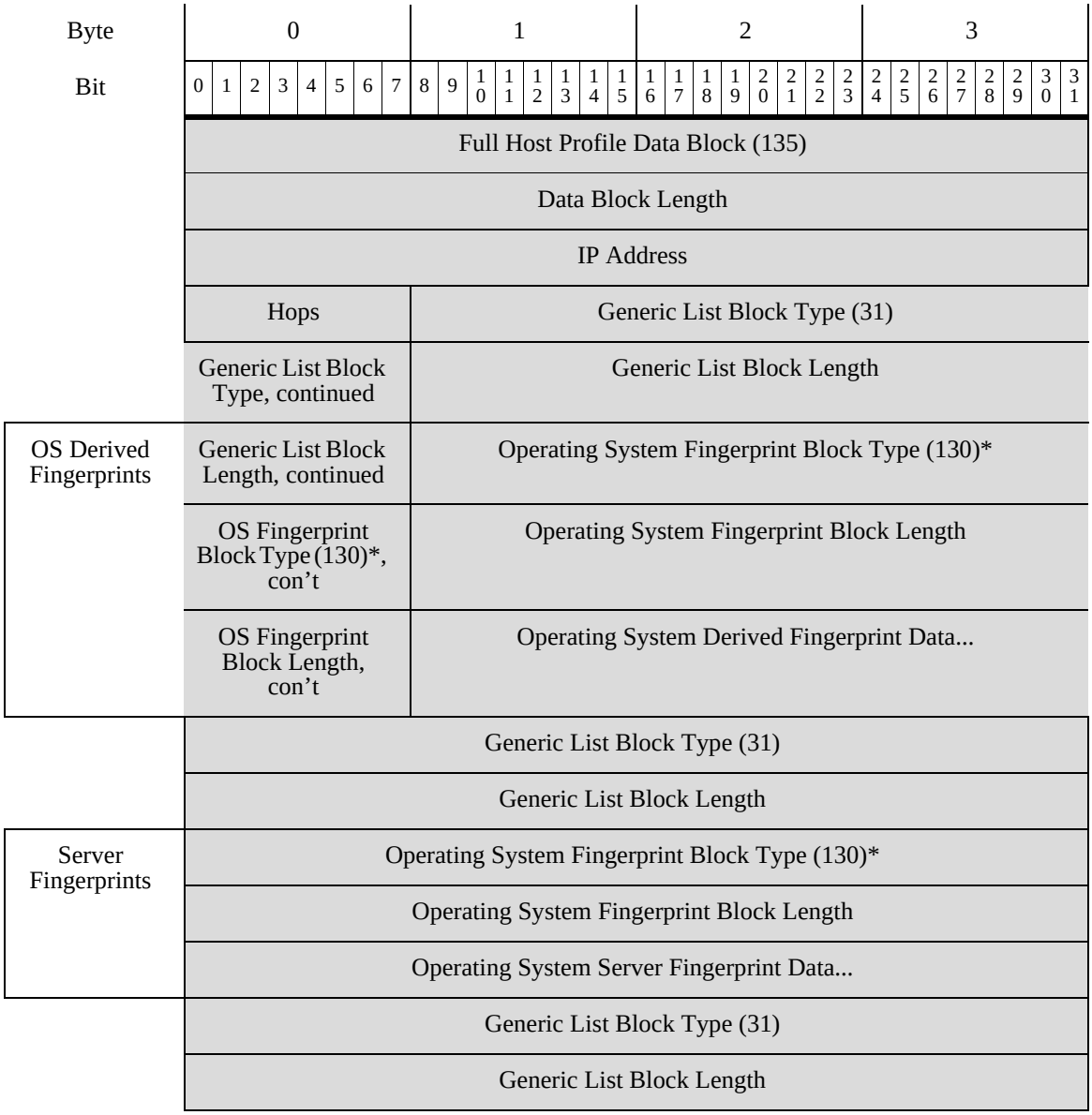
Table B-43 Full Host Profile Record 5.0 - 5.0.2 Fields (continued)

Field	Data Type	Description
NetBIOS Name	string	Host NetBIOS name string.
String Block Type	uint32	Initiates a String data block for host notes. This value is always `0`.
String Block Length	uint32	Number of bytes in the notes String data block, including eight bytes for the string block type and length fields, plus the number of bytes in the notes string.
Notes	string	Contains the contents of the Notes host attribute for the host.
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 data blocks.
(VDB) Host Vulnerability Data Blocks *	variable	List of Host Vulnerability data blocks for vulnerabilities identified in the Cisco vulnerability database (VDB). See Host Vulnerability Data Block 4.9.0+, page 4-106 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 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 Cisco vulnerability database (VDB). See Host Vulnerability Data Block 4.9.0+, page 4-106 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 data blocks.
(Third Party Scan) Host Vulnerability Data Blocks *	variable	Host Vulnerability data blocks sourced from a third party scanner. Note that the host vulnerability IDs for these data blocks are the third party scanner IDs, not Cisco-detected IDs. See Host Vulnerability Data Block 4.9.0+, page 4-106 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Attribute Value data blocks conveying attribute data. This value is always `11`.
List Block Length	uint32	Number of bytes in the List data block, including the list header and all encapsulated data blocks.
Attribute Value Data Blocks *	variable	List of Attribute Value data blocks. See Attribute Value Data Block, page 4-76 for a description of the data blocks in this list.

Full Host Profile Data Block 5.1.1

The Full Host Profile data block for version 5.1.1 contains a full set of data describing one host. It has the format shown in the graphic below and explained in the following table. Note that, except for List data blocks, the graphic does not show the fields of the encapsulated data blocks. These encapsulated data blocks are described separately in Understanding Discovery & Connection Data Structures, page 4-1. The Full Host Profile data block a block type value of 135. It deprecates data block 111.

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



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
Client Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Client Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
VDB Native Fingerprints 1	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System VDB Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
VDB Native Fingerprints 2	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System VDB Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
User Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System User Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Scan Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Scan Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															

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
Application Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Application Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Conflict Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Conflict Fingerprint Data...																															
(TCP) Full Server Data	List Block Type (11)...																															
	List Block Length...																															
	(TCP) Full Server Data Blocks (104)*																															
(UDP) Full Server Data	List Block Type (11)																															
	List Block Length																															
	(UDP) Full Server Data Blocks (104)*																															
Network Protocol Data	List Block Type (11)																															
	List Block Length																															
	(Network) Protocol Data Blocks (4)*																															
Transport Protocol Data	List Block Type (11)																															
	List Block Length																															
	(Transport) Protocol Data Blocks (4)*																															
MAC Address Data	List Block Type (11)																															
	List Block Length																															
	Host MAC Address Data Blocks (95)*																															
	Last Seen																															
	Host Type																															
	Business Criticality																VLAN 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
	VLAN Type								VLAN Priority								Generic List Block Type (31)																
Host Client Data	Generic List Block Type, continued																Generic List Block Length															
	Generic List Block Length, continued																Full Host Client Application Data Blocks (112)*															
NetBIOS Name	String Block Type (0)																															
	String Block Length																															
	NetBIOS Name String...																															
Notes Data	String Block Type (0)																															
	String Block Length																															
	Notes String....																															
(VDB) Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(VDB) Host Vulnerability Data Blocks (85)*																															
3rd Pty/VDB) Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(Third Party/VDB) Host Vulnerability Data Blocks (85)*																															
3rd Pty Scan Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(Third Party Scan) Host Vulnerability Data Blocks with Original Vuln IDs (85)*																															
Attribute Value Data	List Block Type (11)																															
	List Block Length																															
	Attribute Value Data Blocks *																															
	Mobile								Jailbroken								VLAN Presence															

The following table describes the components of the Full Host Profile for 5.1.1 record.

Table B-44 Full Host Profile Record 5.1.1 Fields

Field	Data Type	Description
IP Address	uint8[4]	IP address of the host, in IP address octets.
Hops	uint8	Number of network hops from the host to the device.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data derived from the existing fingerprints for the host. 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 Derived Fingerprint Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host derived from the existing fingerprints for the host. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 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 4-150 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 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 4-150 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 Cisco VDB 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 (VDB) Native Fingerprint 1) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using the fingerprints in the Cisco vulnerability database (VDB). See Operating System Fingerprint Data Block 5.1+, page 4-150 for a description of this data block.

Table B-44 Full Host Profile Record 5.1.1 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 Cisco VDB 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 (VDB) Native Fingerprint 2) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using the fingerprints in the Cisco vulnerability database (VDB). See Operating System Fingerprint Data Block 5.1+, page 4-150 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 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 Operating System Fingerprint data blocks.
Operating System Fingerprint (User Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by a user. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 added by a vulnerability 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 Operating System Fingerprint data blocks.
Operating System Fingerprint (Scan Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by a vulnerability scanner. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 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 Operating System Fingerprint data blocks.
Operating System Fingerprint (Application Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by an application. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 selected through fingerprint conflict resolution. This value is always 31.

Table B-44 Full Host Profile Record 5.1.1 Fields (continued)

Field	Data Type	Description
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 (Conflict Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host selected through fingerprint conflict resolution. See Operating System Fingerprint Data Block 5.1+, page 4-150 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Full Server data blocks conveying TCP service 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 the length of all encapsulated Full Server data blocks.
(TCP) Full Server Data Blocks *	variable	List of Full Server data blocks conveying data about the TCP services on the host. See Full Host Server Data Block 4.10.0+, page 4-131 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Full Server data blocks conveying UDP service 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 the length of all encapsulated Full Server data blocks.
(UDP) Full Server Data Blocks *	variable	List of Full Server data blocks conveying data about the UDP sub-servers on the host. See Full Host Server Data Block 4.10.0+, page 4-131 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 the length of all encapsulated Protocol data blocks.
(Network) Protocol Data Blocks *	variable	List of Protocol data blocks conveying data about the network protocols on the host. See Protocol Data Block, page 4-70 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 the length of all encapsulated Protocol data blocks.
(Transport) Protocol Data Blocks *	variable	List of Protocol data blocks conveying data about the transport protocols on the host. See Protocol Data Block, page 4-70 for a description of this data block.
List Block Type	uint32	Initiates a List data block containing Host 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 Host MAC Address data blocks.

Table B-44 Full Host Profile Record 5.1.1 Fields (continued)

Field	Data Type	Description
Host MAC Address Data Blocks *	variable	List of Host MAC Address data blocks. See Host MAC Address 4.9+, page 4-109 for a description of this data block.
Last Seen	uint32	UNIX timestamp that represents the last time the system detected host activity.
Host Type	uint32	Indicates host type. Values include: • 0 — Host • 1 — Router • 2 — Bridge • 3 — NAT (network address translation device) • 4 — LB (load balancer)
Business Criticality	uint16	Indicates criticality of host to business.
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.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Host Vulnerability data blocks conveying Client Application 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 Client Application data blocks.
Full Host Client Application Data Blocks *	variable	List of Client Application data blocks. See Full Host Client Application Data Block 5.0+, page 4-145 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.
String Block Type	uint32	Initiates a String data block for host notes. This value is always 0.
String Block Length	uint32	Number of bytes in the notes String data block, including eight bytes for the string block type and length fields, plus the number of bytes in the notes string.
Notes	string	Contains the contents of the Notes host attribute for the host.
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 data blocks.

Table B-44 Full Host Profile Record 5.1.1 Fields (continued)

Field	Data Type	Description
(VDB) Host Vulnerability Data Blocks *	variable	List of Host Vulnerability data blocks for vulnerabilities identified in the Cisco vulnerability database (VDB). See Host Vulnerability Data Block 4.9.0+, page 4-106 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 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 Cisco vulnerability database (VDB). See Host Vulnerability Data Block 4.9.0+, page 4-106 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 data blocks.
(Third Party Scan) Host Vulnerability Data Blocks *	variable	Host Vulnerability data blocks sourced from a third party scanner. Note that the host vulnerability IDs for these data blocks are the third party scanner IDs, not Cisco-detected IDs. See Host Vulnerability Data Block 4.9.0+, page 4-106 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Attribute Value data blocks conveying attribute data. This value is always 11.
List Block Length	uint32	Number of bytes in the List data block, including the list header and all encapsulated data blocks.
Attribute Value Data Blocks *	variable	List of Attribute Value data blocks. See Attribute Value Data Block, page 4-76 for a description of the data blocks in this list.
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.
VLAN Presence	uint8	Indicates whether a VLAN is present: • 0 — Yes • 1 — No

Full Host Profile Data Block 5.2.x

The Full Host Profile data block for version 5.2.x contains a full set of data describing one host. It has the format shown in the graphic below and explained in the following table. Note that, except for List data blocks, the graphic does not show the fields of the encapsulated data blocks. These encapsulated data blocks are described separately in Understanding Discovery & Connection Data Structures, page 4-1. The Full Host Profile data block a block type value of 140. It supersedes the prior version, which has a block type of 135.

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

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 Profile Data Block (140)																															
	Data Block Length																															
	Host ID Host ID, continued Host ID, continued Host ID, continued																															
IP Addresses	List Block Type (11)																															
	List Block Length																															
	IP Address Data Blocks (143)*																															
	Hops								Generic List Block Type (31)																							
	Generic List Block Type, continued								Generic List Block Length																							
OS Derived Fingerprints	Generic List Block Length, continued								Operating System Fingerprint Block Type (130)*																							
	OS Fingerprint Block Type (130)*, con't								Operating System Fingerprint Block Length																							
	OS Fingerprint Block Length, con't								Operating System Derived Fingerprint Data...																							
	Generic List Block Type (31)																															
	Generic List Block Length																															
Server Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Server Fingerprint Data...																															
	Generic List Block Type (31)																															

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 List Block Length																															
Client Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Client Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
VDB Native Fingerprints 1	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System VDB Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
VDB Native Fingerprints 2	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System VDB Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
User Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System User Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Scan Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Scan Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															

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
Application Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Application Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Conflict Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Conflict Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Mobile Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Mobile Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
IPv6 Server Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System IPv6 Server Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
Ipv6 Client Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System Ipv6 Client Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															

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	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System IPv6 DHCP Fingerprint Data...																															
	Generic List Block Type (31)																															
	Generic List Block Length																															
User Agent Fingerprints	Operating System Fingerprint Block Type (130)*																															
	Operating System Fingerprint Block Length																															
	Operating System User Agent Fingerprint Data...																															
(TCP) Full Server Data	List Block Type (11)...																															
	List Block Length...																															
	(TCP) Full Server Data Blocks (104)*																															
(UDP) Full Server Data	List Block Type (11)																															
	List Block Length																															
	(UDP) Full Server Data Blocks (104)*																															
Network Protocol Data	List Block Type (11)																															
	List Block Length																															
	(Network) Protocol Data Blocks (4)*																															
Transport Protocol Data	List Block Type (11)																															
	List Block Length																															
	(Transport) Protocol Data Blocks (4)*																															
MAC Address Data	List Block Type (11)																															
	List Block Length																															
	Host MAC Address Data Blocks (95)*																															
	Last Seen																															
	Host Type																															
	Business Criticality																VLAN 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
	VLAN Type								VLAN Priority								Generic List Block Type (31)																
Host Client Data	Generic List Block Type, continued																Generic List Block Length															
	Generic List Block Length, continued																Full Host Client Application Data Blocks (112)*															
NetBios Name	String Block Type (0)																															
Name	String Block Length																															
	NetBIOS Name String...																															
Notes Data	String Block Type (0)																															
	String Block Length																															
	Notes String....																															
(VDB) Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(VDB) Host Vulnerability Data Blocks (85)*																															
3rd Pty/VDB) Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(Third Party/VDB) Host Vulnerability Data Blocks (85)*																															
3rd Pty Scan Host Vulns	Generic List Block Type (31)																															
	Generic List Block Length																															
	(Third Party Scan) Host Vulnerability Data Blocks with Original Vuln IDs (85)*																															
Attribute Value Data	List Block Type (11)																															
	List Block Length																															
	Attribute Value Data Blocks *																															
	Mobile								Jailbroken																							

The following table describes the components of the Full Host Profile for 5.2.x record.

Table B-45 Full Host Profile Record 5.2.x Fields

Field	Data Type	Description
Host ID	uint8[16]	Unique ID number of the host. This is a UUID.
List Block Type	uint32	Initiates a List data block comprising IP address data blocks conveying TCP service 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 the length of all encapsulated IP address data blocks.
IP Address	variable	IP addresses of the host and when each IP address was last seen. See Host IP Address Data Block, page 4-91 for a description of this data block.
Hops	uint8	Number of network hops from the host to the device.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Operating System Fingerprint data blocks conveying fingerprint data derived from the existing fingerprints for the host. 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 Derived Fingerprint Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host derived from the existing fingerprints for the host. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 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 4-150 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 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 4-150 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 Cisco VDB fingerprint. This value is always 31.

Table B-45 Full Host Profile Record 5.2.x Fields (continued)

Field	Data Type	Description
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 (VDB) Native Fingerprint 1) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using the fingerprints in the Cisco vulnerability database (VDB). See Operating System Fingerprint Data Block 5.1+, page 4-150 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 Cisco VDB 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 (VDB) Native Fingerprint 2) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host identified using the fingerprints in the Cisco vulnerability database (VDB). See Operating System Fingerprint Data Block 5.1+, page 4-150 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 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 Operating System Fingerprint data blocks.
Operating System Fingerprint (User Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by a user. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 added by a vulnerability 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 Operating System Fingerprint data blocks.
Operating System Fingerprint (Scan Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by a vulnerability scanner. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 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 Operating System Fingerprint data blocks.

Table B-45 Full Host Profile Record 5.2.x Fields (continued)

Field	Data Type	Description
Operating System Fingerprint (Application Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host added by an application. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 selected through fingerprint conflict resolution. 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 (Conflict Fingerprint) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a host selected through fingerprint conflict resolution. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 mobile device fingerprint 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 Operating System Fingerprint data blocks.
Operating System Fingerprint (Mobile) Data Blocks *	variable	Operating System Fingerprint data blocks containing information about the operating system on a mobile device host. See Operating System Fingerprint Data Block 5.1+, page 4-150 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 Fingerprint) 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 4-150 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.

Table B-45 Full Host Profile Record 5.2.x Fields (continued)

Field	Data Type	Description
Operating System Fingerprint (IPv6 Client Fingerprint) 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 4-150 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) 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 4-150 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.
Operating System Fingerprint (User Agent) 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 4-150 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Full Server data blocks conveying TCP service 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 the length of all encapsulated Full Server data blocks.
(TCP) Full Server Data Blocks *	variable	List of Full Server data blocks conveying data about the TCP services on the host. See Full Host Server Data Block 4.10.0+, page 4-131 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Full Server data blocks conveying UDP service 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 the length of all encapsulated Full Server data blocks.
(UDP) Full Server Data Blocks *	variable	List of Full Server data blocks conveying data about the UDP sub-servers on the host. See Full Host Server Data Block 4.10.0+, page 4-131 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.

Table B-45 Full Host Profile Record 5.2.x Fields (continued)

Field	Data Type	Description
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 the length of all encapsulated Protocol data blocks.
(Network) Protocol Data Blocks *	variable	List of Protocol data blocks conveying data about the network protocols on the host. See Protocol Data Block, page 4-70 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 the length of all encapsulated Protocol data blocks.
(Transport) Protocol Data Blocks *	variable	List of Protocol data blocks conveying data about the transport protocols on the host. See Protocol Data Block, page 4-70 for a description of this data block.
List Block Type	uint32	Initiates a List data block containing Host 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 Host MAC Address data blocks.
Host MAC Address Data Blocks *	variable	List of Host MAC Address data blocks. See Host MAC Address 4.9+, page 4-109 for a description of this data block.
Last Seen	uint32	UNIX timestamp that represents the last time the system detected host activity.
Host Type	uint32	Indicates host type. Values include: • `0` — Host • `1` — Router • `2` — Bridge • `3` — NAT (network address translation device) • `4` — LB (load balancer)
Business Criticality	uint16	Indicates criticality of host to business.
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.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Host Vulnerability data blocks conveying Client Application 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 Client Application data blocks.

Table B-45 Full Host Profile Record 5.2.x Fields (continued)

Field	Data Type	Description
Full Host Client Application Data Blocks *	variable	List of Client Application data blocks. See Full Host Client Application Data Block 5.0+, page 4-145 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.
String Block Type	uint32	Initiates a String data block for host notes. This value is always 0.
String Block Length	uint32	Number of bytes in the notes String data block, including eight bytes for the string block type and length fields, plus the number of bytes in the notes string.
Notes	string	Contains the contents of the Notes host attribute for the host.
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 data blocks.
(VDB) Host Vulnerability Data Blocks *	variable	List of Host Vulnerability data blocks for vulnerabilities identified in the Cisco vulnerability database (VDB). See Host Vulnerability Data Block 4.9.0+, page 4-106 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 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 Cisco vulnerability database (VDB). See Host Vulnerability Data Block 4.9.0+, page 4-106 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 data blocks.
(Third Party Scan) Host Vulnerability Data Blocks *	variable	Host Vulnerability data blocks sourced from a third party scanner. Note that the host vulnerability IDs for these data blocks are the third party scanner IDs, not Cisco-detected IDs. See Host Vulnerability Data Block 4.9.0+, page 4-106 for a description of this data block.
List Block Type	uint32	Initiates a List data block comprising Attribute Value data blocks conveying attribute data. This value is always 11.

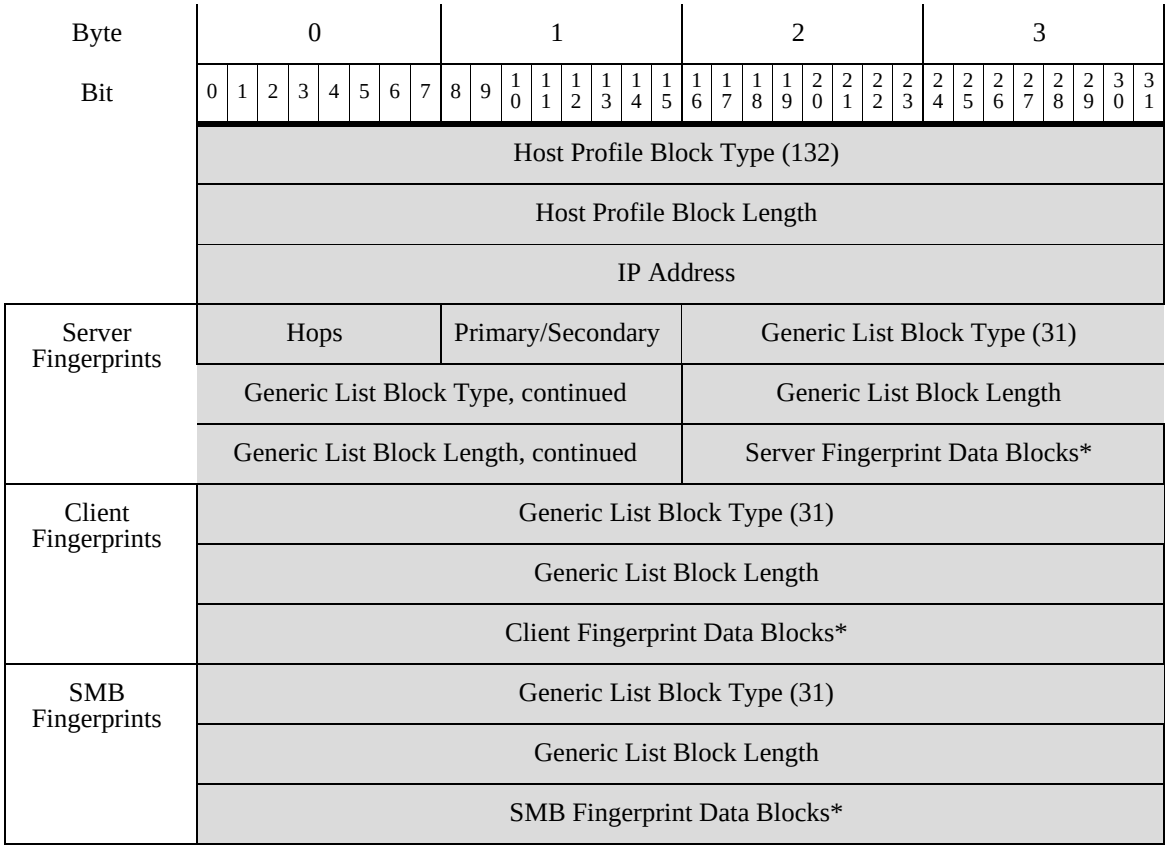
Table B-45 Full Host Profile Record 5.2.x Fields (continued)

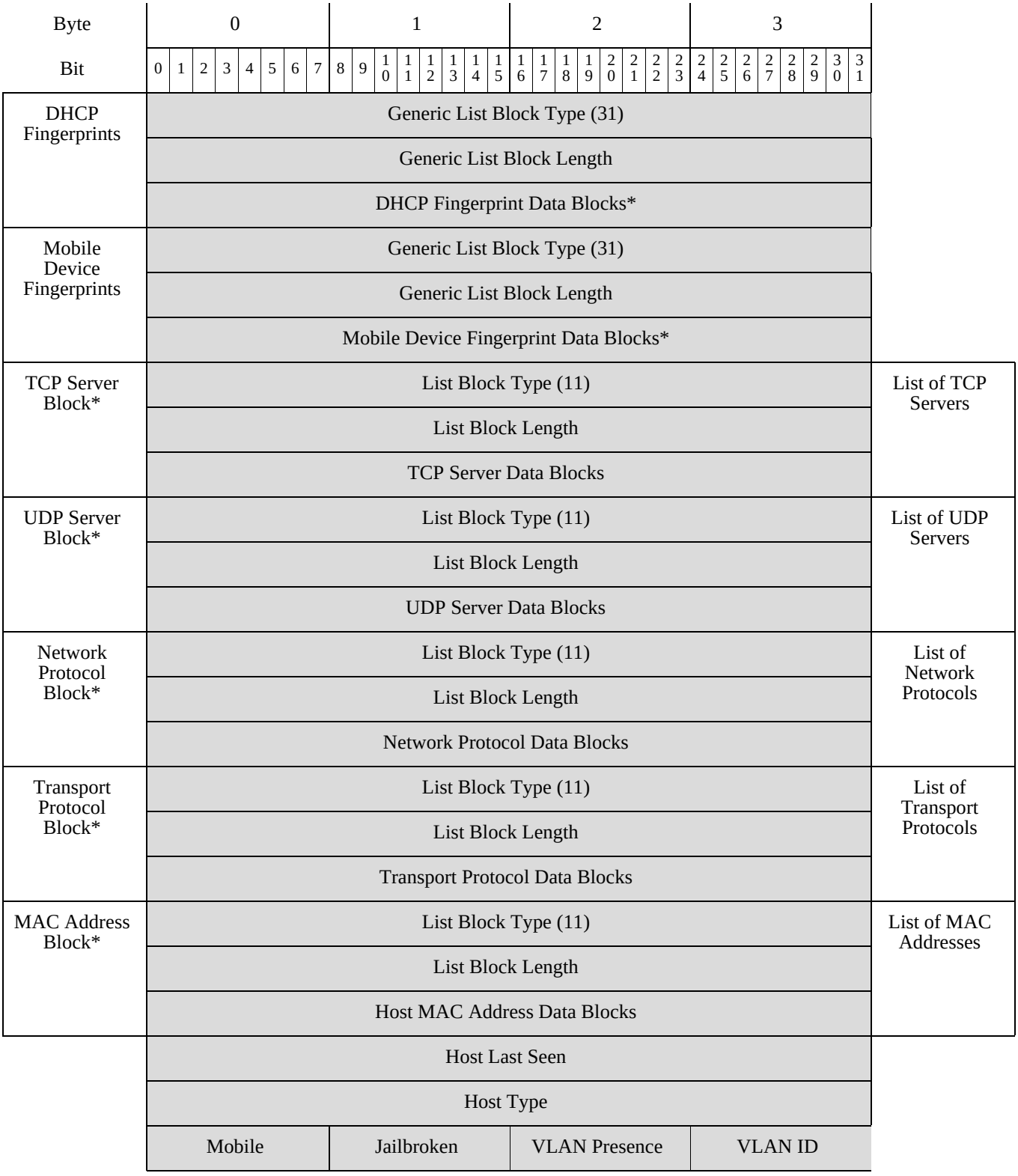
Field	Data Type	Description
List Block Length	uint32	Number of bytes in the List data block, including the list header and all encapsulated data blocks.
Attribute Value Data Blocks *	variable	List of Attribute Value data blocks. See Attribute Value Data Block, page 4-76 for a description of the data blocks in this list.
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.

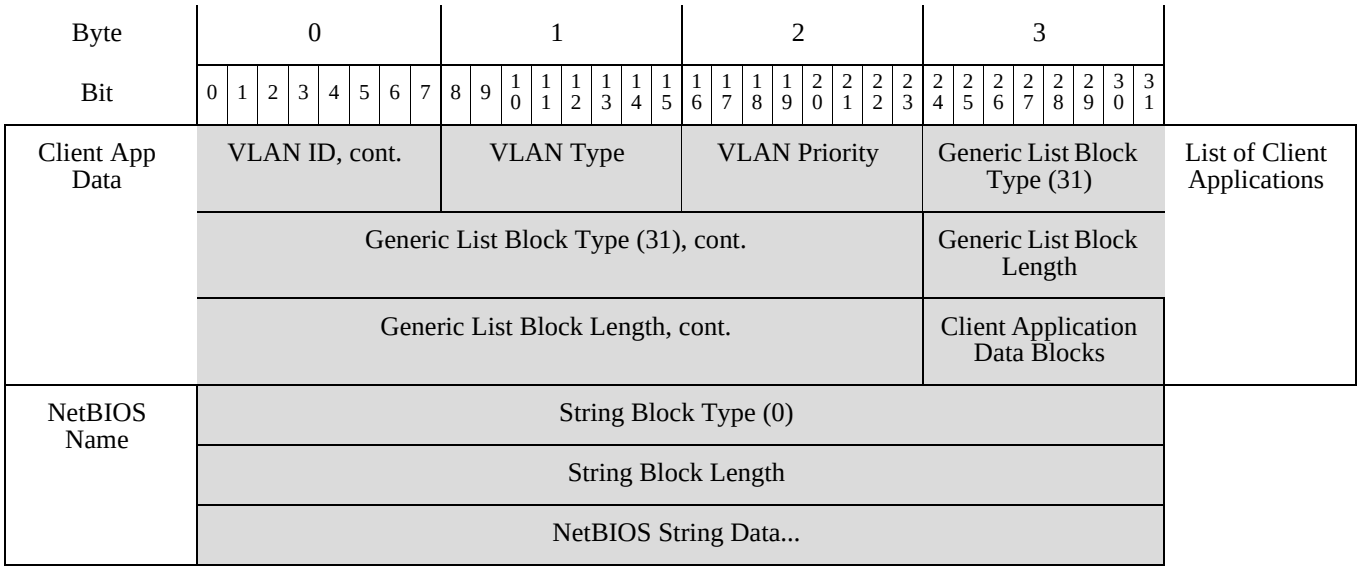
Host Profile Data Block for 5.1.x

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 132.

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
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*
TCP Server Block*
List Block Type (11)
List Block Length
TCP Server Data Blocks
List of TCP Servers
UDP Server Block*
List Block Type (11)
List Block Length
UDP Server Data Blocks
List of UDP Servers
Network Protocol Block*
List Block Type (11)
List Block Length
Network Protocol Data Blocks
List of Network Protocols
Transport Protocol Block*
List Block Type (11)
List Block Length
Transport Protocol Data Blocks
List of Transport Protocols
MAC Address Block*
List Block Type (11)
List Block Length
Host MAC Address Data Blocks
List of MAC Addresses
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 version 5.1.x

Table B-46 Host Profile Data Block 5.1.x Fields

Field	Data Type	Description
Host Profile Block Type	uint32	Initiates the Host Profile data block for 5.1.x. This value is always `132`.
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[4]	IP address of the host described in the profile, in IP address octets.
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 4-150 for a description of this data block.

Table B-46 Host Profile Data Block 5.1.x 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 4-150 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 4-150 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 4-150 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.

Table B-46 Host Profile Data Block 5.1.x Fields (continued)

Field	Data Type	Description
Operating System Fingerprint (Mobile Device Fingerprint) 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 4-150 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 (as documented for earlier versions of the product).
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 (as documented for earlier versions of the product).
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 4-70 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 4-70 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.

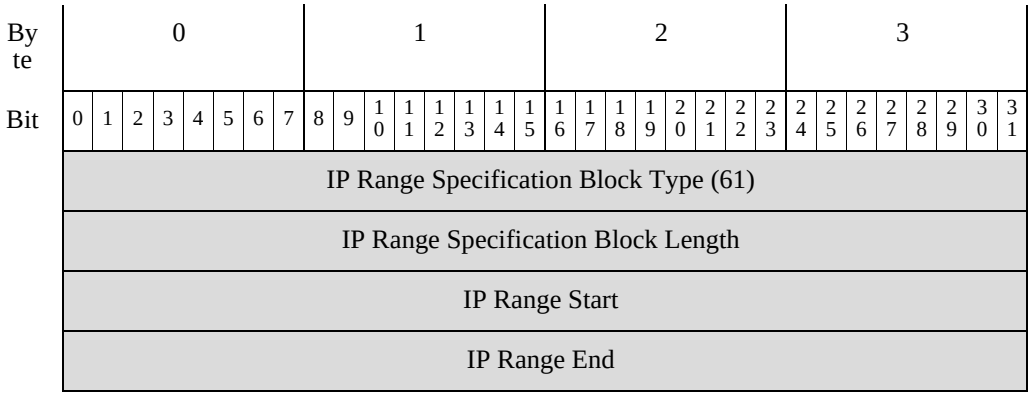
Table B-46 Host Profile Data Block 5.1.x Fields (continued)

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 4-109 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.
Generic List Block Type	uint32	Initiates a Generic List data block comprising Client Application data blocks conveying client application 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 client application data blocks.
Client Application Data Blocks	uint32	Client application data blocks describing a client application. See Full Host Client Application Data Block 5.0+, page 4-145 for a description of this data block.
String Block Type	uint32	Initiates a string data block for the NetBIOS name. This value is set to 0 to indicate string data.
String Block Length	uint32	Indicates the number of bytes in the NetBIOS name data block, including eight bytes for the string block type and length, plus the number of bytes in the NetBIOS name.
NetBIOS String Data	Variable	Contains the NetBIOS name of the host described in the host profile.

IP Range Specification Data Block for 5.0 - 5.1.1.x

The IP Range Specification data block conveys a range of IP addresses. IP Range Specification 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 Range Specification data block has a block type of 61.

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



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

Table B-47 IP Range Specification Data Block Fields

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

Access Control Policy Rule Reason Data Block

The eStreamer service uses the Access Control Rule Policy Rule Reason Data block to contain information about access control policy rule IDs. This data block has a block type of 21 in series 2.

The following diagram shows the structure of the Access Control Policy Rule ID metadata 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
	Access Control Policy Rule Reason Data Block Type (21)																															
	Access Control Policy Rule Reason Data Block Length																															
Description	Reason																String Block Type (0)															
	String Block Type (0), continued																String Block Length															
	String Block Length, continued																Description...															

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

Table B-48 Access Control Policy Rule Reason Data Block Fields

Field	Data Type	Description
Access Control Policy Rule Reason Data Block Type	uint32	Initiates an Access Control Policy Rule Reason data block. This value is always `21`.
Access Control Policy Rule Reason Data Block Length	uint32	Total number of bytes in the Access Control Policy Rule Reason data block, including eight bytes for the Access Control Policy Rule Reason data block type and length fields, plus the number of bytes of data that follows.
Reason	uint16	The number of the reason for the rule that triggered the event.
String Block Type	uint32	Initiates a String data block containing the description of the access control policy 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 reason for the rule.