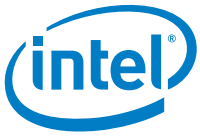


10.5.1.6.3 Set Intel Filters – Manageability to Host Command (Intel Command 0x02, Filter Parameter 0x0A)

This command sets the Mng2Host register. The Mng2Host register controls whether pass-through packets destined to the BMC are also forwarded to the host operating system.

The Mng2Host register has the following structure:

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x02	0x0A	Manageability to Host (3-2)	
24..25	Manageability to Host (1-0)			

Table 10-6 Manageability to Host Field

Bits	Name	Description	Default
0	Decision Filter 0	Determines if packets that have passed Decision Filter 0 are also forwarded to the host operating system.	0b
1	Decision Filter 1	Determines if packets that have passed Decision Filter 1 are also forwarded to the host operating system.	0b
2	Decision Filter 2	Determines if packets that have passed Decision Filter 2 are also forwarded to the host operating system.	0b
3	Decision Filter 3	Determines if packets that have passed Decision Filter 3 are also forwarded to the host operating system.	0b
4	Decision Filter 4	Determines if packets that have passed Decision Filter 4 are also forwarded to the host operating system.	0b
5	Unicast & Mixed	Determines if unicast and mixed packets are also forwarded to the host operating system.	0b
6	Global Multicast	Determines if global multicast packets are also forwarded to the host operating system.	1b
7	Broadcast	Determines if broadcast packets are also forwarded to the host operating system.	1b
31:8	Reserved	Reserved.	N/A

10.5.1.6.4 Set Intel Filters – Manageability to Host Response (Intel Command 0x02, Filter Parameter 0x0A)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..	0x02	0x0A		

10.5.1.6.5 Set Intel Filters – Flex Filter 0/1/2/3 Enable Mask and Length Command (Intel Command 0x02, Filter Parameter 0x10/0x20/0x30/0x40)

The following command sets the Intel flex filters mask and length. Use filter parameters 0x10/0x20/0x30/0x40 for flexible filters 0/1/2/3 accordingly. See Section 10.3.4.1 for details of the programming.

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x02	0x10/ 0x20/ 0x30/ 0x40	Mask Byte 1	Mask Byte 2
24..27	..	..	..	..
28...31	..	..	..	..
32...35	..	..	..	..
35...37	..	Mask Byte 16	Reserved	Reserved
38	Flexible Filter Length (8-128 bytes)			

10.5.1.6.6 Set Intel Filters – Flex Filter 0/1/2/3 Data Command (Intel Command 0x02, Filter Parameter 0x11/0x21/ 0x31/0x41)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x02	0x10/ 0x20/ 0x30/ 0x40		

10.5.1.6.7 Set Intel Filters – Flex Filter 0/1/2/3 Data Command (Intel Command 0x02, Filter Parameter 0x11/0x21/ 0x31/0x41)

The following command sets the Intel flex filters data. Use filter parameters 0x11/0x21/ 0x31/0x41 for flexible filters 0/1/2/3 accordingly.

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..	0x02	0x11/ 0x21/ 0x31/ 0x41	Filter Data Group	Filter Data 1
	..	Filter Data N		

The filter data group parameter defines which bytes of the flex filter are set by this command:

Table 10-7 Filter Data Group

Code	Bytes Programmed	Filter Data Length
0x0	Bytes 0-29	1 - 30
0x1	Bytes 30-59	1 - 30
0x2	Bytes 60-89	1 - 30
0x3	Bytes 90-119	1 - 30
0x4	Bytes 120-127	1 - 8

10.5.1.6.8 Set Intel Filters – Flex Filter 0/1/2/3 Data Response (Intel Command 0x02, Filter Parameter 0x11/0x21/ 0x31/0x41)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x02	0x11/ 0x21/ 0x31/ 0x41		

Note: If filter data length is larger than specified in Table 10-7 an out of range reason code is returned.

10.5.1.6.9 Set Intel Filters – Packet Addition Decision Filter Command (Intel Command 0x02, Filter Parameter 0x61)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x02	0x61	Filter index	Decision Filter (MSB)
24..26	.....		Decision Filter (LSB)	

Filter index range: 0x0..0x4

If the filter index is bigger than four, a command failed response code is returned with no reason.

Table 10-8 Filter Values

Bit #	Name	Description
0	Unicast (AND)	If set, packets must match a unicast filter.
1	Broadcast (AND)	If set, packets must match the broadcast filter.
2	VLAN (AND)	If set, packets must match a VLAN filter.
3	IP Address (AND)	If set, packets must match an IP filter.

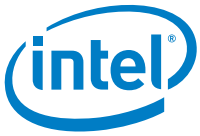


Table 10-8 Filter Values (Continued)

Bit #	Name	Description
4	Unicast (OR)	If set, packets must match a unicast filter or a different OR filter.
5	Broadcast	If set, packets must match the broadcast filter or a different OR filter.
6	Multicast (AND)	If set, packets must match the multicast filter.
7	ARP Request (OR)	If set, packets must match the ARP request filter or a different OR filter.
8	ARP Response (OR)	If set, packets can pass if match the ARP response filter.
9	Neighbor Discovery (OR)	If set, packets can pass if match the neighbor discovery filter.
10	Port 0x298 (OR)	If set, packets can pass if match a fixed TCP/UDP port 0x298 filter.
11	Port 0x26F (OR)	If set, packets can pass if match a fixed TCP/UDP port 0x26F filter.
12	Flex port 0 (OR)	If set, packets can pass if match the TCP/UDP port filter 0.
13	Flex port 1 (OR)	If set, packets can pass if match the TCP/UDP port filter 1.
14	Flex port 2 (OR)	If set, packets can pass if match the TCP/UDP port filter 2.
15	Flex port 3 (OR)	If set, packets can pass if match the TCP/UDP port filter 3.
16	Flex port 4 (OR)	If set, packets can pass if match the TCP/UDP port filter 4.
17	Flex port 5 (OR)	If set, packets can pass if match the TCP/UDP port filter 5.
18	Flex port 6 (OR)	If set, packets can pass if match the TCP/UDP port filter 6.
19	Flex port 7 (OR)	If set, packets can pass if match the TCP/UDP port filter 7.
20	Flex port 8 (OR)	If set, packets can pass if match the TCP/UDP port filter 8.
21	Flex port 9 (OR)	If set, packets can pass if match the TCP/UDP port filter 9.
22	Flex port 10 (OR)	If set, packets can pass if match the TCP/UDP port filter 10.
23	DHCPv6 (OR)	If set, packets can pass if match the DHCPv6 port (0x0223).
24	DHCP Client (OR)	If set, packets can pass if match the DHCP server port (0x0043).
25	DHCP Server (OR)	If set, packets can pass if match the DHCP client port (0x0044).
26	NetBIOS Name Service (OR)	If set, packets can pass if match the NetBIOS name service port (0x0089).
27	NetBIOS Datagram Service (OR)	If set, packets can pass if match the NetBIOS datagram service port (0x008A).
28	Flex TCO 0 (OR)	If set, packets can pass if match the flex 128 TCO filter 0.
29	Flex TCO 1 (OR)	If set, packets can pass if match the flex 128 TCO filter 1.

Table 10-8 Filter Values (Continued)

Bit #	Name	Description
30	Flex TCO 2 (OR)	If set, packets can pass if match the flex 128 TCO filter 2.
31	Flex TCO 3 (OR)	If set, packets can pass if match the flex 128 TCO filter 3.

The filtering is divided into 2 decisions:

Bits 0,1,2,3,6 works in an AND manner.As a result, they all must be true in order for a packet to pass (if any were set).

Bits 5,7-31 operate in an OR manner. Thus, at least one of them must be true for a packet to pass (if any were set).

See Section 10.3.5 for description of the decision filters.

Note: These filter settings operate according to the VLAN mode, as configured according to the DMTF NC-SI specification. After disabling packet reduction filters, the BMC must re-set the VLAN mode using the Set VLAN command.

10.5.1.6.10 Set Intel Filters – Packet Addition Decision Filter Response (Intel Command 0x02, Filter Parameter 0x61)

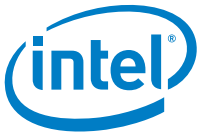
	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x02	0x61		

10.5.1.6.11 Set Intel Filters – Flex TCP/UDP Port Filter Command (Intel Command 0x02, Filter Parameter 0x63)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x02	0x63	Port filter index	TCP/UDP Port MSB
24	TCP/UDP Port LSB			

Filter index range: 0x0..0xA.

If the filter index is bigger than 10, a command failed response code is returned with no reason.



10.5.1.6.12 Set Intel Filters – Flex TCP/UDP Port Filter Response (Intel Command 0x02, Filter Parameter 0x63)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x02	0x63		

10.5.1.6.13 Set Intel Filters – IPv4 Filter Command (Intel Command 0x02, Filter Parameter 0x64)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x02	0x64	IP filter index	IPv4 Address (MSB)
24..26	...		IPv4 Address (LSB)	

Note: The filters index range can vary according to the IPv4/IPv6 mode setting in the Filters Control command

IPv4 Mode: Filter index range: 0x0..0x3.

IPv6 Mode: This command should not be used in IPv6 mode.

10.5.1.6.14 Set Intel Filters – IPv4 Filter Response (Intel Command 0x02, Filter Parameter 0x64)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x02	0x64		

If the IP filter index is bigger than three, a command failed response code is returned with no reason.

10.5.1.6.15 Set Intel Filters – IPv6 Filter Command (Intel Command 0x02, Filter Parameter 0x65)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x02	0x65	IP filter index	IPv6 Address (MSB, byte 15)
24..27	..	..	..	..
28..31	..	..	..	..
32..35	..	..	..	..
36..38	..	..	IPv6 Address (LSB, byte 0)	

Note: The filters index range can vary according to the IPv4/IPv6 mode setting in the Filters Control command

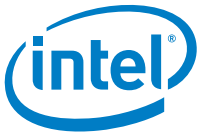
IPv4 Mode: Filter index range: 0x1..0x3.

IPv6 Mode: Filter index range: 0x0..0x3.

10.5.1.6.16 Set Intel Filters – IPv6 Filter Response (Intel Command 0x02, Filter Parameter 0x65)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x02	0x65		

If the IP filter index is bigger than three, a command failed response code is returned with no reason.



10.5.1.6.17 Set Intel Filters – EtherType Filter Command (Intel Command 0x02, Filter Parameter 0x67)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x02	0x67	EtherType Filter Index	EtherType Filter MSB
24..27	..	..	EtherType Filter LSB	

Where the EtherType filter has the format as described in Section 8.2.3.25.3.

Table 10-9 Ethertype Usage

Filter #	Usage	Note
0-1	Reserved	Not available for generic use.
2	User defined	
3	User defined	

10.5.1.6.18 Set Intel Filters - EtherType Filter Response (Intel Command 0x02, Filter Parameter 0x67)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x02	0x67		

If the Ethertype filter index is different than two or three, a command failed response code is returned with no reason.

10.5.1.6.19 Set Intel Filters – Packet Addition Extended Decision Filter Command (Intel Command 0x02, Filter Parameter 0x68)

DecisionFilter0 Bits 5,7-31 and DecisionFilter1 bits 8..10 work in an OR manner. Thus, at least one of them must be true for a packet to pass (if any were set).

See Figure 10-3 for description of the decision filters structure.

Note: The command must overwrite any previously stored value.

Previous Set Intel Filters – Packet Addition Decision Filter command (0x61) should be kept and supported. For legacy reasons, if previous Decision Filter command is called, it should set the Decision Filter 0 as provided and set the extended Decision Filter to 0x0.

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x02	0x68	Extended Decision filter Index	Extended Decision filter 1 MSB
24..27	..	..	Extended Decision filter 1 LSB	Extended Decision filter 0 MSB
28..30	..	..	Extended Decision filter 0 LSB	

Extended decision filter index range: 0..4.

Filter 0: See Table 10-8.

Filter 1: See the following table:

Table 10-10 Extended Filter 1 Values

Bit #	Name	Description
0	Ethertype 0x88F8	AND filter
1	Ethertype 0x8808	AND filter
3:2	Ethertype 2 -3	AND filters
7:4	Reserved	Reserved
8	Ethertype 0x88F8	OR filter
9	Ethertype 0x8808	OR filter
11:10	Ethertype 2 -3	OR filters
31:12	Reserved	Reserved

10.5.1.6.20 Set Intel Filters – Packet Addition Extended Decision Filter Response (Intel Command 0x02, Filter Parameter 0x68)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x02	0x68		

If the extended decision filter index is bigger than five, a command failed response code is returned with no reason.

10.5.1.7 Get Intel Filters Formats

10.5.1.7.1 Get Intel Filters Command (Intel Command 0x03)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..21	0x03	Filter Parameter		

10.5.1.7.2 Get Intel Filters Response (Intel Command 0x03)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x03	Filter Parameter	Optional Return Data	

10.5.1.7.3 Get Intel Filters – Manageability to Host Command (Intel Command 0x03, Filter Parameter 0x0A)

This command retrieves the Mng2Host register. The Mng2Host register controls whether pass-through packets destined to the BMC are also forwarded to the host operating system.

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..21	0x03	0x0A		

10.5.1.7.4 Get Intel Filters – Manageability to Host Response (Intel Command 0x03, Filter Parameter 0x0A)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x03	0x0A	Manageability to Host (MSB)	
28..29	Manageability to Host (LSB)			

The Mng2Host register has the following structure:

Table 10-11 Mng2Host Structure

Bits	Description	Default
0	Decision Filter 0	Determines if packets that have passed Decision Filter 0 are also forwarded to the host operating system.
1	Decision Filter 1	Determines if packets that have passed Decision Filter 1 are also forwarded to the host operating system.
2	Decision Filter 2	Determines if packets that have passed Decision Filter 2 are also forwarded to the host operating system.
3	Decision Filter 3	Determines if packets that have passed Decision Filter 3 are also forwarded to the host operating system.
4	Decision Filter 4	Determines if packets that have passed Decision Filter 4 are also forwarded to the host operating system.
5	Unicast & Mixed	Determines if unicast and mixed packets are also forwarded to the host operating system.

Table 10-11 Mng2Host Structure (Continued)

Bits	Description	Default
6	Global Multicast	Determines if global multicast packets are also forwarded to the host operating system.
7	Broadcast	Determines if broadcast packets are also forwarded to the host operating system.
31:8	Reserved	Reserved

10.5.1.7.5 Get Intel Filters – Flex Filter 0/1/2/3 Enable Mask and Length Command (Intel Command 0x03, Filter Parameter 0x10/0x20/0x30/0x40)

The following command retrieves the Intel flex filters mask and length. Use filter parameters 0x10/0x20/0x30/0x40 for flexible filters 0/1/2/3 accordingly. See Section 10.3.4.1 for details of the values returned by this command.

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..21	0x03	0x10/ 0x20/ 0x30/ 0x40		

10.5.1.7.6 Get Intel Filters – Flex Filter 0/1/2/3 Enable Mask and Length Response (Intel Command 0x03, Filter Parameter 0x10/0x20/0x30/0x40)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x03	0x10/ 0x20/ 0x30/ 0x40	Mask Byte 1	Mask Byte 2
28..31	..	..	..	..
32..35	..	..	..	..
36..39	..	..	..	..
40..43	..	Mask Byte 16	Reserved	Reserved
44	Flexible Filter Length			

10.5.1.7.7 Get Intel Filters – Flex Filter 0/1/2/3/4 Data Command (Intel Command 0x03, Filter Parameter 0x11/0x21/0x31/0x41)

The following command retrieves the Intel flex filters data. Use filter parameters 0x11/0x21/0x31/0x41 for flexible filters 0/1/2/3 accordingly.

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..22	0x03	0x11/ 0x21/ 0x31/ 0x41	Filter Data Group 0..4	

The filter data group parameter defines which bytes of the flex filter are returned by this command:

Table 10-12 Filter Data Group

Code	Bytes Returned
0x0	Bytes 0-29
0x1	Bytes 30-59
0x2	Bytes 60-89
0x3	Bytes 90-119
0x4	Bytes 120-127

10.5.1.7.8 Get Intel Filters – Flex Filter Data Response (Intel Command 0x03, Filter Parameter 0x11)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..	0x03	0x11/ 0x21/ 0x31/ 0x41	Filter Data Group	Filter Data 1
	..	Filter Data N		

If the filter group number is bigger than four, a command failed response code is returned with no reason.

10.5.1.7.9 Get Intel Filters – Packet Addition Decision Filter Command (Intel Command 0x03, Filter Parameter 0x61)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..22	0x03	0x61	Decision filter index	

Filter index range: 0x0..0x4.

10.5.1.7.10 Get Intel Filters – Packet Addition Decision Filter Response (Intel Command 0x03, Filter Parameter 0x0A)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x03	0x61	Decision Filter (MSB)	
28..29	Decision Filter (LSB)			

The decision filter structure returned is listed in Table 10-8.

If the decision filter index is bigger than four, a command failed response code is returned with no reason.

10.5.1.7.11 Get Intel Filters – Flex TCP/UDP Port Filter Command (Intel Command 0x03, Filter Parameter 0x63)

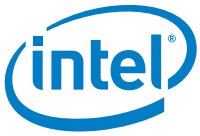
	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..22	0x03	0x63	TCP/UDP Filter Index	

Filter index range: 0x0..0xA.

10.5.1.7.12 Get Intel Filters – Flex TCP/UDP Port Filter Response (Intel Command 0x03, Filter Parameter 0x63)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x03	0x63	TCP/UDP Filter Index	TCP/UDP Port (1)
28	TCP/UDP Port (0)			

Filter index range: 0x0..0xA.



If the TCP/UDP filter index is bigger than 10, a command failed response code is returned with no reason.

10.5.1.7.13 Get Intel Filters – IPv4 Filter Command (Intel Command 0x03, Filter Parameter 0x64)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..22	0x03	0x64	IPv4 Filter Index	

Note: The filters index range can vary according to the IPv4/IPv6 mode setting in the Filters Control command

IPv4 Mode: Filter index range: 0x0..0x3.

IPv6 Mode: This command should not be used in IPv6 mode.

10.5.1.7.14 Get Intel Filters – IPv4 Filter Response (Intel Command 0x03, Filter Parameter 0x64)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x03	0x64	IPv4 Filter Index	IPv4 Address (3)
28..29	IPv4 Address (2-0)			

If the IPv4 filter index is bigger than three, a command failed response code is returned with no reason.

10.5.1.7.15 Get Intel Filters – IPv6 Filter Command (Intel Command 0x03, Filter Parameter 0x65)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..22	0x03	0x65	IPv6 Filter Index	

Note: The filters index range can vary according to the IPv4/IPv6 mode setting in the Filters Control command.

IPv4 Mode: Filter index range: 0x0..0x2.

IPv6 Mode: Filter index range: 0x0..0x3.

10.5.1.7.16 Get Intel Filters – IPv6 Filter Response (Intel Command 0x03, Filter Parameter 0x65)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x03	0x65	IPv6 Filter Index	IPv6 Address (MSB, Byte 16)
28..31	..	..	..	..
32..35	..	..	..	..
36..39	..	..	..	..
40..42	..	..	IPv6 Address (LSB, Byte 0)	

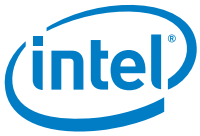
If the IPv6 filter index is bigger than three, a command failed response code is returned with no reason.

10.5.1.7.17 Get Intel Filters – EtherType Filter Command (Intel Command 0x03, Filter Parameter 0x67)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..22	0x03	0x67	EtherType Filter Index	

Valid indices: 2..3.

See Table 10-9 for a list of the various Ethertype filters usage.



10.5.1.7.18 Get Intel Filters - EtherType Filter Response (Intel Command 0x03, Filter Parameter 0x67)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x03	0x67	EtherType Filter Index	EtherType Filter MSB
28..30	..	..	EtherType Filter LSB	

If the Ethertype filter index is different than two or three, a command failed response code is returned with no reason.

10.5.1.7.19 Get Intel Filters – Packet Addition Extended Decision Filter Command (Intel Command 0x03, Filter Parameter 0x68)

This command enables the BMC to retrieve the extended decision filter.

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..22	0x03	0x68	Extended Decision Filter Index	

10.5.1.7.20 Get Intel Filters – Packet Addition Extended Decision Filter Response (Intel Command 0x03, Filter Parameter 0x68)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x03	0x68	Decision Filter Index	Decision Filter 1 MSB
28..31	..	..	Decision Filter 1 LSB	Decision Filter 0 MSB
32..34	..	..	Decision Filter 0 LSB	

Where Decision Filter 0 and Decision Filter 1 have the structure as detailed in the respective Set commands.

If the extended decision filter index is bigger than four, a command failed response code is returned with no reason.

10.5.1.8 Set Intel Packet Reduction Filters Formats

10.5.1.8.1 Set Intel Packet Reduction Filters Command (Intel Command 0x04)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x04	Filter Parameter	Optional Data	

Note: It is recommended that the BMC only uses the Extended Packet Reduction commands.

The *Packet Reduction Data* field has the following structure:

Table 10-13 Packet Reduction Data

Bit #	Name	Description
2:0	Reserved	
3	IP Address	If set, all packets must also match an IP filter.
9:4	Reserved	
10	Port 0x298	If set, all packets can pass if match a fixed TCP/UDP port 0x298 filter.
11	Port 0x26F	If set, all packets can pass if match a fixed TCP/UDP port 0x26F filter.
12	Flex port 0	If set, all packets can pass if match the TCP/UDP port filter 0.
13	Flex port 1	If set, all packets can pass if match the TCP/UDP port filter 1.
14	Flex port 2	If set, all packets can pass if match the TCP/UDP port filter 2.
15	Flex port 3	If set, all packets can pass if match the TCP/UDP port filter 3.
16	Flex port 4	If set, all packets can pass if match the TCP/UDP port filter 4.
17	Flex port 5	If set, all packets can pass if match the TCP/UDP port filter 5.
18	Flex port 6	If set, all packets can pass if match the TCP/UDP port filter 6.

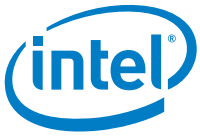


Table 10-13 Packet Reduction Data (Continued)

Bit #	Name	Description
19	Flex port 7	If set, all packets can pass if match the TCP/UDP port filter 7.
20	Flex port 8	If set, all packets can pass if match the TCP/UDP port filter 8.
21	Flex port 9	If set, all packets can pass if match the TCP/UDP port filter 9.
22	Flex port 10	If set, all packets can pass if match the TCP/UDP port filter 10.
27:23	Reserved	
28	Flex TCO 0	If set, all packets can pass if match the Flex 128 TCO filter 0.
29	Flex TCO 1	If set, all packets can pass if match the Flex 128 TCO filter 1.
30	Flex TCO 2	If set, all packets can pass if match the Flex 128 TCO filter 2.
31	Flex TCO 3	If set, all packets can pass if match the Flex 128 TCO filter 3.

For the Extended Packet Reduction command, the following fields should also be programmed.

Table 10-14 Extended Packet Reduction Format

Bit #	Name	Description
0..1	Reserved	Used by the regular NC-SI commands.
2	EtherType2 (AND)	If set, packets must also match the EtherType filter 2.
3	EtherType3 (AND)	If set, packets must also match the EtherType filter 3.
4..7	Reserved	
8..9	Reserved	Used by the regular NC-SI commands
10	EtherType2 (OR)	If set, packets can pass if it match the EtherType filter 2.
11	EtherType3 (OR)	If set, packets can pass if it match the EtherType filter 2.
12..31	Reserved	

The filtering is divided into two decisions:

Unicast Reduction Filter — Bit 3 and *Extended Unicast Reduction Filter* bits 0..2 work in an AND manner. Thus, they all must be true in order for a packet to pass (if any were set).

Unicast Reduction Filter bits 5, 7-31 and *Extended Unicast Reduction Filter* bits 8..10 work in an OR manner, Thus, at least one of them must be true for a packet to pass (if any were set).

See Section 10.3.5 for description of the decision filters.

10.5.1.8.2 Set Intel Packet Reduction Filters Response (Intel Command 0x04)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..	0x04	Filter Parameter	Optional Return Data	

10.5.1.8.3 Set Unicast/Multicast/Broadcast packet Reduction Command (Intel Command 0x04, Filter Parameter 0x00/0x01/0x02)

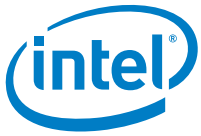
	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x04	0x00 / 0x01 / 0x02	Packet Reduction Table (MSB)	
24..25	Packet Reduction Table (LSB)			

This command must cause the network controller to filter packets that have passed due to the unicast/multicast/broadcast filter. Note that unicast filtering might be affected by other filters, as specified in the DMTF NC-SI.

The filtering of these packets are done such that the BMC might add a logical condition that a packet must match, or it must be discarded.

Note: Packets that might have been blocked can still pass due to other decision filters.

In order to disable unicast/multicast/broadcast packet reduction, the BMC should set all reductions filters to 0b. Following such a setting, the network controller forwards to the BMC all packets that have passed the unicast Ethernet MAC address/global multicast/broadcast filters as specified in the DMTF NC-SI.



10.5.1.8.4 Set Unicast/Multicast/Broadcast Packet Reduction Response (Intel Command 0x04, Reduction Filter Parameter 0x00/0x01/0x02)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x04	0x00 / 0x01 / 0x02		

10.5.1.8.5 Set Unicast/Multicast/Broadcast Extended Packet Reduction Command (Intel Command 0x04, Filter Parameter 0x10/0x11/0x12)

In Set Intel Reduction Filters, add another parameter Unicast Extended Packet Reduction (Intel Command 0x04, Filter parameter 0x10) such that the byte count is 0xE. The command must have the following format:

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..23	0x04	0x10 /0x11 / 0x12	Extended Reduction Filter MSB	..
24..27	..	Extended Reduction Filter LSB	Reduction Filter Table (MSB)	..
28..29	..	Reduction Filter Table (LSB)		

The command must overwrite any previously stored value.

Note: See Table 10-13 and Table 10-14 for a list of the unicast extended packet reduction format.

10.5.1.8.6 Set Unicast/Multicast/Broadcast Extended Packet Reduction Response (Intel Command 0x04, Reduction Filter Index 0x10 / 0x11 / 0x12)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x04	0x10 / 0x11 / 0x12		

10.5.1.9 Get Intel Packet Reduction Filters Formats

10.5.1.9.1 Get Intel Packet Reduction Filters Command (Intel Command 0x05)

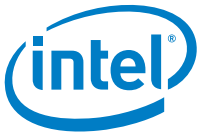
	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..21	0x05	Filter Parameter		

10.5.1.9.2 Get Intel Packet Reduction Filters Response (Intel Command 0x05)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..	0x05	Filter Parameter	Optional Return Data	

10.5.1.9.3 Get Unicast/Multicast/Broadcast Packet Reduction Command & Response (Intel Command 0x05, Filter Parameter 0x00/0x01/0x02)

This command retrieves the requested packet reduction filter. The format of the optional return data follows the structure of the Unicast Packet Reduction command described in Section 10.5.1.8.3.



10.5.1.9.4 Get Unicast/Multicast/Broadcast Extended Packet Reduction Command & Response (Intel Command 0x05, Filter Parameter 0x00/0x01/0x02)

This command retrieves the requested extended packet reduction filter. The format of the optional return data follows the structure of the Unicast Extended Packet Reduction command described in Section 10.5.1.8.5.

10.5.1.10 System Ethernet MAC Address

10.5.1.10.1 Get System Ethernet MAC Address Command (Intel Command 0x06)

In order to support a system configuration that requires the network controller to hold the Ethernet MAC address for the BMC (such as shared Ethernet MAC address mode), the following command is provided to enable the BMC to query the network controller for a valid Ethernet MAC address.

The network controller must return the system Ethernet MAC addresses. The BMC should use the returned Ethernet MAC addressing as a shared Ethernet MAC address by setting it using the Set Ethernet MAC Address command as defined in NC-SI 1.0.

It is also recommended that the BMC uses the Packet Reduction and Manageability-to-Host command to set the proper filtering method.

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20	0x06			

10.5.1.10.2 Get System Ethernet MAC Address Response (Intel Command 0x06)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..27	0x06	Ethernet MAC Address		
28..30	Ethernet MAC Address			

The MAC address is returned in network order.

10.5.1.11 Set Intel Management Control Formats

10.5.1.11.1 Set Intel Management Control Command (Intel Command 0x20)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Manufacturer ID (Intel 0x157)			
20..22	0x20	0x00	Intel Management Control	

The Intel management control byte is defined in the following table:

Bit #	Default	Description
0	0b	Enable Critical Session Mode (the *Keep PHY Link Up* and *Veto* bits) 0b = Disabled 1b = Enabled When critical session mode is enabled, the PHY is not reset on PE_RST# nor PCIe resets (in-band and link drop). Other reset events are not affected — LAN Power Good reset, Device Disable, Force TCO, and PHY reset by software. The PHY does not change its power state. As a result, link speed does not change. The device does not initiate configuration of the PHY to avoid losing link.
1…7	0x0	Reserved.

10.5.1.11.2 Set Intel Management Control Response (Intel Command 0x20)

	Bits			
Bytes	**31..24**	**23..16**	**15..08**	**07..00**
00..15	NC-SI Header			
16..19	Response Code		Reason Code	
20..23	Manufacturer ID (Intel 0x157)			
24..25	0x20	0x00		