



Managing Network-Related Settings

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Configuring Network Settings

CIMC provides options to configure network parameters, including NIC properties, Port properties, VLAN properties, and IPv4 and IPv6 properties. You can configure a server NIC when you want to set the NIC mode and NIC redundancy.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** menu, and click **Networking**.
- Step 2** In the work pane, click the **Network** tab.
- Step 3** Review and update the following information:

Table 1: NIC Properties Menu

Name	Description
NIC Mode drop-down	The NIC mode setting determines which ports can reach the Cisco IMC. The following network mode options are available, depending on your platform: <ul style="list-style-type: none">• Dedicated—The management port that is used to access the CIMC.• Shared LOM—The LOM (LAN On Motherboard) ports are used to access the CIMC.

Name	Description
NIC Redundancy drop-down	The available NIC redundancy options depend on the selected NIC mode and the model of the server that you are using. If you do not see a particular option, it is not available for the selected mode or server model. This value is set to None .
NIC Interface field	The network interface that is selected in the NIC Mode field.
MAC Address field	The MAC address of the Cisco IMC network interface that is selected in the NIC Mode field.

Table 2: Common Properties Menu

Name	Description
Management Hostname field	The user-defined management hostname of the system that manages the various components of Cisco IMC.
Dynamic DNS check box	If checked, updates the resource records to the DNS from the Cisco IMC.
Dynamic DNS Update Domain field	The domain name that is appended to a hostname for a Dynamic DNS (DDNS) update. If left blank, only a hostname is sent to the DDNS update request.
Dynamic DNS Refresh Interval field	The refresh interval for the dynamic DNS, in hours. Value can be set between 0 and 8736 hours.

Table 3: IPv4 Properties Menu

Name	Description
Enable IPv4 check box	If checked, IPv4 is enabled.
Use DHCP check box	If checked, the Cisco IMC uses DHCP.
Management IP Address field	The management IP address. An external virtual IP address that helps manage the CIMC.
Subnet Mask field	The subnet mask for the IP address.
Gateway field	The gateway for the IP address.
Obtain DNS Server Addresses from DHCP check box	If checked, the Cisco IMC retrieves the DNS server addresses from DHCP. Note You can use this option only when the Use DHCP option is enabled.

Name	Description
Preferred DNS Server field	The IP address of the primary DNS server.
Alternate DNS Server field	The IP address of the secondary DNS server.

Table 4: Port Properties Menu

Name	Description
Port Profile field	<p>The port profile that the Cisco IMC uses to configure the management interface, the virtual Ethernet, and the VIF on supported adapter cards.</p> <p>You can enter up to 80 alphanumeric characters. You cannot use spaces or other special characters except for - (hyphen) and _ (underscore). In addition, the port profile name cannot begin with a hyphen.</p> <p>Note The port profile must be defined on the switch to which this server is connected.</p>
Auto Negotiation check box	<p>Using this option, you can either set the network port speed and duplex values for the switch, or allow the system to automatically derive the values from the switch. This option is available for dedicated mode only.</p> <ul style="list-style-type: none"> • If checked, the network port speed and duplex settings are ignored by the system and the Cisco IMC retains the speed at which the switch is configured. • If unchecked, you can configure the network port speed and duplex values.

Name	Description
<p>Admin Mode Area</p>	<p>Network Port Speed field</p> <p>The network speed of the port. This can be one of the following:</p> <ul style="list-style-type: none"> • 10 Mbps • 100 Mbps • 1 Gbps <p>The default value is 100 Mbps. In the Dedicated mode, if you disable Auto Negotiation, you can configure the network speed and duplex values.</p> <p>Note Before changing the port speed, ensure that the device you connected to has the same port speed.</p> <p>Duplex drop-down list</p> <p>The duplex mode for the Cisco IMC management port.</p> <p>This can be one of the following:</p> <ul style="list-style-type: none"> • Half • Full <p>By default, the duplex mode is set to Full.</p>
<p>Operation Mode Area</p>	<p>Displays the operation network port speed and duplex values.</p> <p>If you checked the Auto Negotiation check box, the network port speed and duplex details of the switch are displayed. If unchecked, the network port speed and duplex values that you set at the Admin Mode are displayed.</p>

Note You can configure a VLAN or a port profile, but you cannot use both. If you want to use a port profile, make sure that the **Enable VLAN** check box in the **VLAN Properties** area is not checked.

Table 5: VLAN Properties Menu

Name	Description
<p>Enable VLAN check box</p>	<p>If checked, the Cisco IMC is connected to a virtual LAN.</p> <p>Note You can configure a VLAN or a port profile, but you cannot use both. If you want to use a port profile, make sure that this check box is not checked.</p>

Name	Description
VLAN ID field	The VLAN ID.
Priority field	The priority of this system on the VLAN.

Table 6: IPv6 Properties Menu

Name	Description
Enable IPv6 check box	If checked, IPv6 is enabled.
Use DHCP check box	If checked, the Cisco IMC uses DHCP.
Management IP Address field	The management IPv6 address. Note Only global unicast addresses are supported.
Prefix Length field	The prefix length for the IPv6 address. Enter a value within the range 1 to 127. The default value is 64.
Gateway field	The gateway for the IPv6 address. Note Only global unicast addresses are supported.
Obtain DNS Server Addresses from DHCP check box	If checked, the Cisco IMC retrieves the DNS server addresses from DHCP. Note You can use this option only when the Use DHCP option is enabled.
Preferred DNS Server field	The IPv6 address of the primary DNS server.
Alternate DNS Server field	The IPv6 address of the secondary DNS server.
Link Local Address field	The link local address for the IPv6 address.
SLAAC Address field	The Stateless Address Auto Configuration (SLAAC) depends on the Router Advertisement (RA) of the network.

Step 4 Click **Save Changes** to save your changes, or **Reset Values** to reset the parameters to previous values.

Configuring Network Security

The CIMC uses IP blocking as network security. IP blocking prevents the connection between a server or website, and certain IP addresses or ranges of addresses. IP blocking effectively bans undesired connections from those computers to a website, mail server, or other Internet servers.

IP filtering is commonly used to protect against denial of service (DoS) attacks. You can filter IP addresses by enabling the configuration, and setting up the filters.

Before you begin

You must log in as a user with admin privileges to perform this task.

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** menu, and click **Networking**.
- Step 2** In the work pane, click the **Network Security** tab.
- Step 3** Review and update the following properties:

Table 7: IP Blocking Properties Area

Name	Description
Enable IP Blocking check box	Check this box to enable IP blocking.
IP Blocking Fail Count field	<p>The number of times a user can attempt to log in unsuccessfully before the system locks that user out for a specified length of time.</p> <p>The number of unsuccessful login attempts must occur within the time frame specified in the IP Blocking Fail Window field.</p> <p>Enter an integer between 3 and 10.</p>
IP Blocking Fail Window field	<p>The length of time, in seconds, in which the unsuccessful login attempts must occur in order for the user to be locked out.</p> <p>Enter an integer between 60 and 120.</p>
IP Blocking Penalty Time field	<p>The number of seconds the user remains locked out if they exceed the maximum number of login attempts within the specified time window.</p> <p>Enter an integer between 300 and 900.</p>

Table 8: IP Filtering Area

Name	Description
Enable IP Filtering check box	Check this box to enable IP filtering.

Name	Description
IP Filter field	To provide secure access to the server, you can now set a filter to allow only a selected set of IPs to access it. This option provides four slots for storing IP addresses (IP Filter 1, 2, 3, and 4). You can either assign a single IP address or a range of IP addresses while setting the IP filters. Once you set the IP filter, you would be unable to access the server using any other IP address.
+ button	+ button to add multiple IP Filter fields. Up to 20 fields can be added.

Step 4 Click **Save Changes** to save your changes, or **Reset Values** to reset the parameters to previous values.

Configuring Network Time Protocol (NTP) Settings

By default, when CIMC is reset, it synchronizes the time with the host. With the introduction of the NTP service, you can configure to synchronize the time with an NTP server. The NTP server does not run in by default.

You must enable and configure the NTP service by specifying the IP/DNS address of at least one server or a maximum of four servers that function as NTP servers or time source servers. When you enable the NTP service, CIMC synchronizes the time with the configured NTP server. The NTP service can be modified only through CIMC.



Note To enable the NTP service, it is preferable to specify the IP address of a server rather than the DNS address.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

Step 1 In the **Navigation** pane, click the **Admin** menu, and click **Networking**.

Step 2 In the work pane, click the **NTP Settings** tab.

Step 3 Review and update the following information:

Table 9: Common Properties Menu

Name	Description
NTP Enabled check box	Check this box to enable the NTP service.

Name	Description
Server 1 field	The IP/DNS address of one of the four servers that act as an NTP server or the time source server.
Server 2 field	The IP/DNS address of one of the four servers that act as an NTP server or the time source server.
Server 3 field	The IP/DNS address of one of the four servers that act as an NTP server or the time source server.
Server 4 field	The IP/DNS address of one of the four servers that act as an NTP server or the time source server.
Status field	<p>Indicates whether or not the server is able to synchronize its time with the remote NTP server. This can be one of the following:</p> <ul style="list-style-type: none"> • synchronized to NTP server (RefID) at stratum 7— When the NTP service is enabled and multiple or individual IPv4 or IPv6 based NTP servers are added. • unsynchronized — When the NTP service is enabled and an unknown or unreachable server is added. • NTP service disabled — When the NTP service is disabled. <p>Note If you move the mouse over the help icon, a pop-up is displayed that explains what Stratum stands for.</p>

Step 4 Click **Save Changes** to save your changes, or **Reset Values** to reset the parameters to previous values.