



Intelligent Platform Management Interface on C3000/C5000 Controllers



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Intelligent Platform Management Interface on C3000/C5000 Controllers
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PART 1

Overview

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CHAPTER 1

IPMI Overview

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IPMI Overview

Intelligent Platform Management Interface (IPMI) is a message-based hardware management interface that enables remote monitoring, management, and recovery capabilities, regardless of the status of the server. It defines a set of interfaces that are common to computer hardware and firmware that you can use to monitor system health and manage the system.

IPMI operates independently of the operating system (OS) and allows you to manage a system remotely even in the absence of the OS or the system management software, or even if the monitored system is not powered on. IPMI can also function when the OS has started.

IPMI version 2.0 and later can send out alerts by means of a direct serial connection, a LAN, or a serial over LAN (SOL) connection to a remote client. You can then query controller status, review hardware logs, or issue other requests from a remote console through the same connections.

Related Documentation

- [Commands to Manage an IPMI Interface \(SRC CLI\) on page 15](#)
- [Configuring IPMI \(SRC CLI\) on page 7](#)
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PART 2

Configuration

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CHAPTER 2

IPMI Configuration Tasks

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Configuring IPMI (SRC CLI)

For the C3000 and C5000 models, an IPMI configuration includes an IP address assigned to the IPMI interface and a gateway IP address.

Use the following configuration statements to configure an IPMI interface on a C Series Controller:

```
system ipmi {  
    address address;  
    gateway gateway;  
    user name;  
}
```

To configure IPMI on an interface:

1. From configuration mode, access the configuration statement that configures an IPMI interface.

```
user@host# edit system ipmi
```

2. Set the IP address.

```
[edit system ipmi]  
user@host# set address address/destination prefix
```

An IP address is required for both the C3000 and C5000 models.

3. Set the default gateway IP address. A default gateway is a node on a network that serves as an access point to another network.

```
[edit system ipmi]  
user@host# set gateway gateway
```

4. Verify the configuration.

```
[edit system ipmi]
user@host# show
address 10.227.7.145/24;
gateway 10.227.7.1;
```

**Related
Documentation**

- IPMI Overview on page 3
- Configuring IPMI (C-Web Interface) on page 8
- Creating an IPMI User Account (SRC CLI) on page 8
- Commands to Manage an IPMI Interface (SRC CLI) on page 15

Configuring IPMI (C-Web Interface)

For the C3000 and C5000 models, an IPMI configuration includes an IP address assigned to the IPMI interface and a gateway IP address.

To configure IPMI using the C-Web interface:

1. Click **Configure**, expand **System**, and then click **IPMI**.

The IPMI pane appears.

2. In the Address box, enter an IP address.

- An IP address is required for both the C3000 and C5000 models.
- **address** is in the format IP address/destination prefix, such as 10.227.7.145/24.

3. In the Gateway box, enter the default gateway IP address.

A default gateway is a node on a network that serves as an access point to another network.

4. Click **Apply**.

The IPMI pane displays the new attributes.

**Related
Documentation**

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- Configuring IPMI (SRC CLI) on page 7
- Viewing IPMI User Accounts (C-Web Interface) on page 21
- Commands to Manage an IPMI Interface (SRC CLI) on page 15

Creating an IPMI User Account (SRC CLI)

An IPMI username and password are required to connect to a remote IPMI interface. You can define new IPMI user accounts using the CLI.

To create an IPMI user account using the SRC CLI:

1. From configuration mode, access the configuration statement that configures an IPMI interface.

```
user@host# edit system ipmi
```

2. Set a plain-text password that is autoencrypted by the CLI.

```
[edit system ipmi]
user@host# set user name plain-text-password
```

For example:

```
user@host#set user johndoe plain-text password
New password: xyz123 (text will not appear)
Re-type new password: xyz123 (text will not appear)
```

3. Verify the configuration.

```
[edit system ipmi]
admin@gnome# show
address 10.227.1.145/24;
gateway 10.227.7.1;
user admin {
    encrypted-password *****;
}
user jdoe {
    encrypted-password *****;
}
```

Related Documentation

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Creating an IPMI User Account (C-Web Interface)

An IPMI username and password are required to connect to an IPMI interface. You can create new IPMI user accounts so that IPMI authentication can occur.

To create an IPMI user account using the C-Web interface:

1. Click **Configure**, expand **System**, and then click **IPMI**.

The IPMI pane appears.

2. Select **User** from the drop-down list, enter the name of the user in the pop-up dialog box, and click **OK**.

The IPMI / User: (username) pane appears.

3. Enter a password. When the user account is created, the password is encrypted with a Base64 encoding scheme.
4. Click **Apply**.

The IPMI user appears in the side pane under IPMI.

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Deleting an IPMI User Account (C-Web Interface)

To delete an IPMI user account:

1. Click **Configure**, expand **System**, and then click **IPMI**.
2. In the side pane under IPMI, select the user account you want to delete.
The IPMI / User: (username) pane appears.
3. Click the user account and then click **Delete** in the IPMI / User: (username) pane.
The user account is deleted.

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 - Viewing IPMI User Accounts (C-Web Interface) on page 21

Renaming an IPMI User Account (C-Web Interface)

To rename an IPMI user account:

1. Click **Configure**, expand **System**, and then click **IPMI**.
2. In the navigation tree under IPMI, select the user account you want to rename.
The IPMI / User: (username) pane appears.
3. Click the user account and then click **Rename** in the IPMI / User: (username) pane.
The user account is deleted.
4. Type a new name and click **OK**.
The user account is renamed.

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PART 3

Administration

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CHAPTER 3

IPMI Management

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Commands to Manage an IPMI Interface (SRC CLI)

You can use the following operational mode commands to manage IPMI interfaces:

- **ipmisol open**
- **ipmisol close remote-session**
- **ipmisol close local-session**

For detailed information about each command, see the *SRC PE CLI Command Reference*.

Powering the Local Controller On and Off Using IPMI (SRC CLI)

You can power on or off, and reset the C Series Controller you are currently logged in to.

To execute a power command in the local controller using IPMI:

1. Log in to the C Series Controller.
2. Enter the **request ipmi power** command.

user@host>request ipmi power (on | off | soft-off | reset| cycle)

- **on**—Power on a C Series Controller.
- **off**—Power off a C Series Controller. This command does not initiate a clean shutdown of the operating system before powering off the system.
- **soft-off**—Power off a C Series Controller softly. This command initiates a soft shutdown of the operating system before powering off the system.

- **reset**—Perform a hard reset on a C Series Controller.
- **cycle**—Power off and then power on a C Series Controller.

For example:

```
user@host>request ipmi power off
```

**Related
Documentation**

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Powering a Remote Controller On and Off Using IPMI (SRC CLI)

You can power on or off, and reset a remote C Series Controller.

To execute a power command on a remote controller using IPMI:

1. Log in to the C Series Controller.
2. Enter the **request ipmi host user power** command.

```
user@host>request ipmi host host user user power (on | off | soft-off | reset| cycle)
```

where:

- **host**—IP address of the remote IPMI module.
- **user**—IPMI user account name.

For example:

```
user@host>request ipmi host 10.10.10.30 user johndoe power reset
```

3. When prompted, enter the IPMI password configured on the remote system.

**Related
Documentation**

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Connecting to a Serial Console Using IPMI Serial over LAN (SOL) (SRC CLI)

IPMI SOL enables a remote user to monitor and manage a C Series Controller through a serial console by means of an IPMI session. IPMI SOL redirects the C Series Controller's serial port input and output over IP. To connect to a remote serial console using IPMI SOL, the remote system must have IPMI configured. Only one IPMI SOL connection is allowed per IPMI interface.



NOTE: On C3000 and C5000 Controllers, the IPMI SOL connection overrides the serial connection available on the front panel. Therefore, if you have a terminal directly connected through the serial port, then IPMI SOL disconnects that terminal and takes over the connection.

To connect to a serial host using IPMI SOL:

- From operational mode, enter the **ipmisol open** command to connect to a serial console.

```
user@host>ipmisol open host host user user
```

- host*—IP address of the remote host IPMI interface.
- user*—IPMI username configured in the remote host.

For example:

```
user@host>ipmisol open host 10.10.10.30 user johndoe
```

To exit the current IPMI SOL session, enter ~.



NOTE: ~ is the default escape sequence for SSH, which means it may terminate the SSH CLI session instead of terminating the IPMI SOL session. We recommend that you use either an SSH client that does not use this escape sequence, or the command-line option **-e** to specify an alternative escape character (see the documentation of your SSH client).

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Disconnecting from a Serial Console Using IPMI Serial over LAN (SOL) (SRC CLI)

Only one IPMI SOL connection is allowed per IPMI interface. You can close the active IPMI connection to a local host or a remote host.

To disconnect from a local host using IPMI SOL:

- From operational mode, enter the **ipmisol close local-session** command to close the active IPMI connection to a local host.

```
user@host>ipmisol close local-session host
```

To disconnect from a remote host using IPMI SOL:

- From operational mode, enter the **ipmisol close remote-session** command to close the active IPMI connection to a remote host.

```
user@host>ipmisol close remote-session host host user user
```

- *host*—IP address of the remote host IPMI interface.
- *user*—IPMI username configured in the remote host.

For example:

```
user@host>ipmisol close remote-session host 10.10.10.30 user johndoe
```

**Related
Documentation**

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CHAPTER 4

IPMI Monitoring

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- Viewing IPMI User Accounts (SRC CLI) on page 21
- Viewing IPMI User Accounts (C-Web Interface) on page 21

Viewing IPMI Information on a Local Chassis (SRC CLI)

Purpose To display the IPMI chassis information on the local C Series Controller.

- Action**
1. Log in to the C Series Controller.
 2. Enter the **show ipmi chassis** command.

For example:

```
user@host>show ipmi chassis
```

```
user@host> show ipmi chassis
```

```
System Power           : on
Power Overload          : false
Power Interlock         : inactive
Main Power Fault        : false
Power Control Fault     : false
Power Restore Policy    : always-off
Last Power Event        : command
Chassis Intrusion       : inactive
Front-Panel Lockout     : inactive
Drive Fault             : false
Cooling/Fan Fault       : false
Front Panel Control     : none
```

- Related Documentation**
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 - Commands to Manage an IPMI Interface (SRC CLI) on page 15
 - Viewing IPMI Information on a Remote Chassis (SRC CLI) on page 20

- Configuring IPMI (C-Web Interface) on page 8

Viewing IPMI Information on a Remote Chassis (SRC CLI)

Purpose To display the IPMI chassis information on a remote C Series Controller.

- Action**
1. Log in to the C Series Controller.
 2. Enter the **show ipmi host chassis** command.

```
user@host>show ipmi host host user user chassis
```

- host—IP address of the remote host IPMI interface.
- user—IPMI username configured on the remote host.

For example:

```
user@host>show ipmi host 10.10.10.30 user johndoe chassis
```

- Related Documentation**
- IPMI Overview on page 3
 - Commands to Manage an IPMI Interface (SRC CLI) on page 15
 - Viewing IPMI Information on a Local Chassis (SRC CLI) on page 19
 - Configuring IPMI (C-Web Interface) on page 8

Viewing the Power Status of the Local Controller Using IPMI (SRC CLI)

Purpose To display the power status (on or off) of the local controller using IPMI.

- Action**
1. Log in to the C Series Controller.
 2. Enter the **show ipmi power** command.

For example:

```
user@host>show ipmi power
```

```
Chassis Power is on
```

- Related Documentation**
- IPMI Overview on page 3
 - Commands to Manage an IPMI Interface (SRC CLI) on page 15
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Viewing the Power Status of a Remote Controller Using IPMI (SRC CLI)

Purpose To display the power status (on or off) of a remote controller using IPMI.

- Action**
1. Log in to the C Series Controller.

2. Enter the **show ipmi host power** command.

```
user@host>show ipmi host host user user power
```

- host—IP address of the remote host IPMI interface.
- user—IPMI username configured in the remote host.

For example:

```
user@host>show ipmi host 10.10.10.30 user johndoe power
```

- Related Documentation**
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Viewing IPMI User Accounts (SRC CLI)

Purpose To display the IPMI user accounts.

Action From configuration mode, enter the **show** command to display all IPMI user accounts.

```
[edit system ipmi]
admin@gnome# show
address 10.227.1.145/24;
gateway 10.227.7.1;
user admin {
    encrypted-password *****;
}
user jdoe {
    encrypted-password *****;
}
```

- Related Documentation**
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 - Viewing IPMI User Accounts (C-Web Interface) on page 21

Viewing IPMI User Accounts (C-Web Interface)

Purpose To display the IPMI user accounts.

Action Click **Configure**, expand **System**, and then click **IPMI>User**.

IPMI user accounts are listed in the main pane.

- Related Documentation**
- [IPMI Overview](#) on page 3
 - [Commands to Manage an IPMI Interface \(SRC CLI\)](#) on page 15
 - [Viewing IPMI User Accounts \(SRC CLI\)](#) on page 21
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