Cisco IOS Software Command Reference—Cisco ISR 4000 Series

This chapter provides the new Cisco IOS commands that were introduced for the E-Series Servers installed in the Cisco ISR 4000 series.

Note The Cisco IOS commands are sometimes updated after original publication; therefore, for updated content, review the *Cisco IOS Interface and Hardware Component Command Reference* at http://www.cisco.com/en/US/docs/ios-xml/ios/interface/command/ir-cr-book.html.

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debug platform software ucse

To debug the Cisco UCS E-Series Server platform software and display debug messages, use the **debug platform software ucse** command in privileged EXEC mode. To disable debug, use the **no** form of this command.

debug platform software ucse {**all** | **error** | **normal**}
no debug platform software ucse {**all** | **error** | **normal**}

Syntax Description

all	Displays all platform debug messages.

error	Displays error debug messages.
normal	Displays normal debug messages.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).

Usage Guidelines

After you use the **debug platform software ucse all** command, use the appropriate **ucse** command to display debug messages.

Examples

The following example shows how to display debug messages for the **ucse subslot imc password-reset** command:

```
Router# debug platform software ucse all
Router#
Router# ucse subslot 2/0 imc password-reset
 ucse2/0/0
Password reset command sent.
Router#
 IMC ACK: UCSE password reset successful for IMC
 ACK received for UCSE: Password Reset Command
```

hw-module subslot session

To start or close a Cisco Integrated Management Controller (CIMC) session or host server module session, use the **hw-module subslot session** command in privileged EXEC mode.

hw-module subslot *slot*/*subslot* **session** {**imc** | **server**}

Syntax Description

slot/	Number of the router slot in which the server module is installed. **Note** For the NIM E-Series NCE, the slot number is 0.
subslot	Number of the subslot in which the server module is installed. **Note** For Cisco UCS E-Series Servers and the SM E-Series NCE, the subslot number is 0.
imc	Starts a session with CIMC.
server	Starts a session with the host server module.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).
Cisco IOS XE Release 3.15S	This command was supported on an additional platform: the NIM E-Series Network Compute Engine (NIM E-Series NCE) installed in a Cisco ISR 4000 series.

Usage Guidelines

Only one active session is allowed on the CIMC or server module at any time.

Examples

The following example shows how to start a CIMC session in an E-Series Server installed in a Cisco ISR 4000 series:

```
Router# hardware-module subslot 1/0 session imc
```

The following example shows how to start a server module session in an E-Series Server installed in a Cisco ISR 4000 series:

```
Router# hardware-module subslot 1/0 session server
```

imc ip dhcp

To configure a DHCP IP address for the Cisco Integrated Management Controller (CIMC), use the **imc ip dhcp** command in UCSE configuration mode. To remove the DHCP IP address, use the **no** form of this command.

imc ip dhcp
no imc ip dhcp

Syntax Description

This command has no arguments or keywords.

Command Modes

UCSE configuration (config-ucse)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).

Examples

The following example shows how to configure a dynamic IP address for CIMC:

```
Router# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# ucse subslot 1/0
```

```
Router(config-ucse)# imc ip dhcp
Router(config-ucse)#
 IMC ACK: DHCP enable received for IMC.

 IMC ACK: UCSE setting DHCP enable for IMC successful.
```

platform switchport

To enable the Switch Virtual Interface (SVI) configuration on a UCS E series server, use the **platform switchport svi** command in privileged EXEC mode. To disable the configuration, use the **no** form of this command.

platform switchport *ucse interface* **svi**

Syntax Description

ucse interface	Number of the UCSE interface. For Cisco UCS E-Series Servers, the UCSE interface number can be 0 or 1.

Command Modes

UCSE Config Mode (config-ucse)#

Command History

Release	Modification
Cisco IOS XE Release 3.15S	This command was introduced on Cisco ISR4000 Series Routers.

Usage Guidelines

Enabling or disabling the SVI configuration on a UCS-E subslot interface requires a module OIR or router reload after you save the configuration.

Examples

Before you use this command, you have to set the spanning tree mode. The following example shows how to set the spanning tree mode:

```
spanning-tree vlan 1-4094 priority 24576
```

The following example shows how to enable Switch Virtual Interface (SVI) configuration on a UCS E series server:

```
ISR4k(config-ucse)#platform switchport 1 svi
Ena/Dis SVI on UCSE needs a OIR or Router reload
```

Examples

After you use this command, the UCS-E interface shows up in the show spanning-tree command output:

```
SR4451-1#show spanning-tree

G0:VLAN0001
  Spanning tree enabled protocol rstp
  Root ID    Priority    24577
             Address     f07f.06bc.c0b1
             This bridge is the root
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
```

```
  Bridge ID  Priority    24577  (priority 24576 sys-id-ext 1)
             Address     f07f.06bc.c0b1
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time 300

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
uc1/0/0             Desg FWD 4         128.257  P2p
uc1/0/1             Desg FWD 4         128.258  P2p


G0:VLAN0003
  Spanning tree enabled protocol rstp
  Root ID    Priority    24579
             Address     f07f.06bc.c0b1
             This bridge is the root
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    24579  (priority 24576 sys-id-ext 3)
             Address     f07f.06bc.c0b1
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time 300

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
uc1/0/0             Desg FWD 4         128.257  P2p
uc1/0/1             Desg FWD 4         128.258  P2p

ISR4451-1#
```

show interfaces ucse

To display Cisco UCS E-Series Server interface statistics, use the **show interfaces ucse** command in privileged EXEC mode.

show interfaces ucse *slot/subslot/ucse-interface* [{**accounting** | **controller** | **counters** | **crb** | **dampening** | **description** | **etherchannel** | **history** | **irb** | **mac-accounting** | **monitor** | **mpls-exp** | **precedence** | **stats** | **summary** | **switchport**}]

Syntax Description

slot/	Number of the router slot in which the server module is installed. **Note** For the NIM E-Series NCE, the slot number is 0.
subslot	Number of the subslot in which the server module is installed. **Note** For Cisco UCS E-Series Servers and the SM E-Series NCE, the subslot number is 0.
ucse-interface	Number of the UCSE interface. **Note** For Cisco UCS E-Series Servers, the UCSE interface number can be 0 or 1.
accounting	(Optional) Displays the number of packets of each protocol type that have been sent through the interface.

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controller	(Optional) Displays the interface, configuration, and controller status.
counters	(Optional) Displays the interface counters.
crb	(Optional) Displays interface routing or bridging information.
dampening	(Optional) Displays interface dampening information.
description	(Optional) Displays the interface description.
etherchannel	(Optional) Displays interface Ether Channel information.
history	(Optional) Displays interface history.
irb	(Optional) Displays interface routing or bridging information.
mac-accounting	(Optional) Displays interface MAC accounting information.
monitor	(Optional) Displays interface continuously.
mpls-exp	(Optional) Displays interface Multiprotocol Label Switching (MPLS) experimental accounting information.
precedence	(Optional) Displays interface precedence accounting information.
stats	(Optional) Displays the switching path, the packets in and packets out, and the characters in and characters out.
summary	(Optional) Displays the interface summary.
switchport	(Optional) Displays the switch port interface information.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).
Cisco IOS XE Release 3.15S	This command was supported on an additional platform: the NIM E-Series Network Compute Engine (NIM E-Series NCE) installed in a Cisco ISR 4000 Series.

Examples

The following example provides sample output from the **show interfaces ucse** *slot*/**0/0 switchport** command in an E-Series Server installed in a Cisco ISR 4000 series:

```
Router# show interfaces ucse 1/0/0 switchport

 Name: ucse 1/0/0
 Switchport: Enabled
 Administrative mode: trunk
 Operational Mode: trunk
```

```
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: native
Negotiation of Trunking: Disabled
Trunking Native Mode VLAN: 2352
Trunking VLANs Enabled: 1-2349,2450-4094
Voice VLAN: none
```

ucse subslot imc password-reset

To reset the Cisco Integrated Management Controller (CIMC) password, use the **ucse subslot imc password-reset** command in privileged EXEC mode.

ucse subslot *slot*/*subslot* **imc password-reset**

Syntax Description

slot/	Number of the router slot in which the server module is installed. **Note** For the NIM E-Series NCE, the slot number is 0.
subslot	Number of the subslot in which the server module is installed. **Note** For Cisco UCS E-Series Servers and the SM E-Series NCE, the subslot number is 0.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).
Cisco IOS XE Release 3.15S	This command was supported on an additional platform: the NIM E-Series Network Compute Engine (NIM E-Series NCE) installed in a Cisco ISR 4000 Series.

Usage Guidelines

After you enter this command, at the next login, the system requests that you set a new password to access CIMC.

Examples

The following example shows how to reset the CIMC password in an E-Series Server installed in a Cisco ISR 4000 series:

```
Router# ucse subslot 1/0 imc password-reset
Router#
 IMC ACK: UCSE password reset successful for IMC
```

ucse subslot server

To reload, reset, start, or stop the hardware on the server module, use the **ucse subslot server** command in privileged EXEC mode.

ucse subslot *slot/subslot* **server** {**reload** | **reset** | **start** | **stop**}

Syntax Description

slot/	Number of the router slot in which the server module is installed. **Note** For the NIM E-Series NCE, the slot number is 0.
subslot	Number of the subslot in which the server module is installed. **Note** For Cisco UCS E-Series Servers and the SM E-Series NCE, the subslot number is 0.
reload	Powers down the server module and then powers it on. **Note** The **reload** keyword is not supported on the NIM E-Series-NCE. Instead, we recommend that you use the following commands from the router: **1.** Router # **ucse subslot** *slot/subslot* **shutdown** **2.** Router # **ucse subslot** *slot/subslot* **start** If a reload is necessary, use the following command: Router # **hw-module subslot 0/***NIM-slot-number* **reload** **Note** This command power-cycles the module. The CIMC and server reboot.
reset	Resets the hardware on the server module.
start	Powers on the server module.
stop	Immediately powers down the server module. **Note** The **stop** keyword is not supported on the NIM E-Series-NCE. Instead, we recommend that you use the following command from the router: Router # **ucse subslot** *slot/subslot* **shutdown** If it is necessary to do an immediate power down of the server, use the following command: Router # **hw-module subslot 0/***NIM-slot-number* **stop** **Note** This command powers down the module. The CIMC and server power off.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).
Cisco IOS XE Release 3.15S	This command was supported on an additional platform: the NIM E-Series Network Compute Engine (NIM E-Series NCE) installed in a Cisco ISR 4000 Series.

Usage Guidelines

Use the **reset** keyword only to recover from a shutdown or failed state.

Caution Using the **reset** keyword does *not* provide an orderly software shutdown and may impact file operations that are in progress.

Examples

The following example shows how to reload the E-Series Server installed in a Cisco ISR 4000 series:

```
Router# ucse subslot 1/0 server reload
Router#
 IMC ACK: UCSE Server reload successful.
```

The following example shows how to reset the E-Series Server installed in a Cisco ISR 4000 series:

```
Router# ucse subslot 1/0 server reset
Router#
 IMC ACK: UCSE Server reset successful.
```

The following example shows how to start the E-Series Server installed in a Cisco ISR 4000 series:

```
Router# ucse subslot 1/0 server start
Router#
 IMC ACK: UCSE Server start successful.
```

The following example shows how to stop the E-Series Server installed in a Cisco ISR 4000 series:

```
Router# ucse subslot 1/0 server stop
Router#
 IMC ACK: UCSE Server stop successful.
```

ucse subslot server password-reset

To reset the BIOS or RAID password, use the **ucse subslot server password-reset** command in privileged EXEC mode.

ucse subslot *slot/subslot* **server password-reset** {**BIOS** | **RAID**}

Syntax Description

slot/	Number of the router slot in which the server module is installed. **Note** For the NIM E-Series NCE, the slot number is 0.
subslot	Number of the subslot in which the server module is installed. **Note** For Cisco UCS E-Series Servers and the SM E-Series NCE, the subslot number is 0.
BIOS	Resets the BIOS password.
RAID	Resets the RAID password. **Note** RAID is not supported on the NIM E-Series NCE.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).
Cisco IOS XE Release 3.15S	This command was supported on an additional platform: the NIM E-Series Network Compute Engine (NIM E-Series NCE) installed in a Cisco ISR 4000 Series.

Usage Guidelines

After you enter this command, at the next login, the system requests that you set a new password to access BIOS or configure RAID.

Examples

The following example shows how to reset the BIOS password in an E-Series Server installed in a Cisco ISR 4000 series:

```
Router# ucse subslot 1/0 server password-reset BIOS
Router#
 IMC ACK: UCSE password reset successful for BIOS
```

The following example shows how to reset the RAID password in an E-Series Server installed in a Cisco ISR 4000 series:

```
Router# ucse subslot 1/0 server password-reset RAID
Router#
 IMC ACK: UCSE password reset successful for RAID
```

ucse subslot shutdown

To gracefully shut down the server module, use the **ucse subslot shutdown** command in privileged EXEC mode.

ucse subslot *slot*/*subslot* **shutdown**

Syntax Description

slot/	Number of the router slot in which the server module is installed. **Note** For the NIM E-Series NCE, the slot number is 0.
subslot	Number of the subslot in which the server module is installed. **Note** For Cisco UCS E-Series Servers and the SM E-Series NCE, the subslot number is 0.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).
Cisco IOS XE Release 3.15S	This command was supported on an additional platform: the NIM E-Series Network Compute Engine (NIM E-Series NCE) installed in a Cisco ISR 4000 Series.

Usage Guidelines

The NIM E-Series NCE might take up to 60 seconds to shut down. After two or three shut down attempts, if the NIM E-Series NCE does not shut down, enter the following commands from the router:

1. Router # **hw-module subslot 0/***NIM-slot-number* **stop**
2. Router # **hw-module subslot 0/***NIM-slot-number* **start**

Examples

The following example shows how to shut down an E-Series Server installed in a Cisco ISR 4000 series:

```
Router# ucse subslot 1/0 shutdown
Router#
 IMC ACK: UCSE Server shutdown successful.
```

ucse subslot statistics

To display or clear server module statistics, use the **ucse subslot statistics** command in privileged EXEC mode.

ucse subslot *slot*/*subslot* **statistics** [**clear**]

Syntax Description

slot/	Number of the router slot in which the server module is installed. **Note** For the NIM E-Series NCE, the slot number is 0.

subslot	Number of the subslot in which the server module is installed. **Note** For Cisco UCS E-Series Servers and the SM E-Series NCE, the subslot number is 0.
clear	(Optional) Clears the server module statistics.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).
Cisco IOS XE Release 3.15S	This command was supported on an additional platform: the NIM E-Series Network Compute Engine (NIM E-Series NCE) installed in a Cisco ISR 4000 Series.

Examples

The following example shows how to display the statistics of an E-Series Server:

```
Router# ucse subslot 1/0 statistics
 Count of number of shutdowns command : 1
 Count of number of status commands : 0
 Count of number of server raid password  : 1
 Count of number of imc password-reset : 2
 Count of number of server bios password reset : 1
 Count of number of server reload : 1
 Count of number of server reset : 1
 Count of number of server start : 1
 Count of number of server stop : 1
 Count of number of vlan commands : 0
 Count of number of access-port commands : 1
 Count of number of IMC configured IP or DHCP commands: 1
```

ucse subslot status

To display configuration information related to the hardware and software on the server module, use the **ucse subslot status** command in privileged EXEC mode.

ucse subslot *slot*/*subslot* **status** [**detailed**]

Syntax Description

slot/	Number of the router slot in which the server module is installed. **Note** For the NIM E-Series NCE, the slot number is 0.
subslot	Number of the subslot in which the server module is installed. **Note** For Cisco UCS E-Series Servers and the SM E-Series NCE, the subslot number is 0.

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detailed	(Optional) Displays detailed information about the server module, such as its status and settings of the reset and heartbeat-reset flags.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced on the Cisco UCS E-Series Servers installed in the Cisco 4400 Series Integrated Services Router (ISR).
Cisco IOS XE Release 3.15S	This command was supported on an additional platform: the NIM E-Series Network Compute Engine (NIM E-Series NCE) installed in a Cisco ISR 4000 Series.

Examples

The following example shows how to display the status of an E-Series Server:

```
Router#  ucse subslot 1/0 status
CPU info
        Name         Cores    Version
        ------------ -------- --------------------------------------------------
        CPU1         4        Intel(R) Xeon(R) CPU E5-2418L 0 @ 2.00GHz

Memory info
        Name                 Capacity        Channel Speed (MHz) Channel Type
        -------------------- --------------- ------------------- ---------------
        Node0_Dimm0          Not Installed   Unknown             Unknown
        Node0_Dimm1          16384 MB        1333                DDR3
        Node0_Dimm2          8192 MB         1333                DDR3

Hard drive info
        Slot Number Controller Status                Manufacturer   Model          Drive
Firmware Coerced Size   Type  SED
        ----------- ---------- ---------------------- -------------- --------------
-------------- -------------- ----- -----
        1           SLOT-5     online                 ATA            ST91000640NS   CC02
         952720 MB      HDD   false
        2           SLOT-5     online                 ATA            ST91000640NS   CC02
         952720 MB      HDD   false
        3           SLOT-5     online                 ATA            ST91000640NS   CC02
         952720 MB      HDD   false

Virtual drive info
        Virtual Drive  Status               Name                     Size       RAID Level

        -------------- -------------------- ------------------------ ---------- ----------

        0              Optimal                                       1905440 MB RAID 5


PCI card info
        Name                 Slot       Vendor ID            Device ID            Product
Name
        -------------------- ---------- -------------------- --------------------
-------------------------
        PCIe Adapter1        0          0xe414               0x5716               Broadcom
 5719 1 Gbps 4...
```

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```
       PCIe Adapter2       2          0x0010              0x7300              LSI 9240-8i
 MegaRAID S...

Network Setting
            IPv4 Address: 10.1.1.2
            IPv4 Netmask: 255.255.255.0
            IPv4 Gateway: 10.1.1.1

            NIC Mode: shared_lom
            NIC Redundancy: none
            NIC Interface: ge1
```