

Troubleshooting UCS blade discovery issues

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Introduction

This document describes on steps to troubleshoot an issue where blade fails to discover due to server power state-MC Error.

Prerequisites

Requirements

Cisco recommends that you have a working knowledge of these topics:

- Cisco Unified Computing System (UCS)
- Cisco Fabric Interconnect (FI)

Components Used

The information in this document is based on these software and hardware versions:

- UCS B420-M3
- UCS B440-M3

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

- Blade firmware upgrade, the server went down after uptime policy reboot.
- Some power event in the data center.

Above could be the possible trigger of the issue.

Problem

This error message occurs upon a reboot or during discovery.

"Unable to change the blade power state"

UCSM reports this alert for a blade that fails to get powered on

Blade rebooted as a part of firmware upgrade or any other maintenance fails to discover /turn-up with below message in FSM:

“Unable to change server power state-MC Error(-20): Management controller cannot or failed in processing request(sam:dme:ComputePhysicalTurnup:Execute)”

SEL Logs show error entries as below:

CIMC | Platform alert POWER_ON_FAIL #0xde | Predictive Failure deasserted | Deasserted

CIMC | Platform alert POWER_ON_FAIL #0xde | Predictive Failure asserted | Asserted

Troubleshoot

From UCSM CLI shell, connect to cimc of the blade and verify the blade power status using **power** command

- ssh FI-IP-ADDR
- connect cimc X
- power

Failure Scenario # 1

```
OP:[ status ]
Power-State:          [ on ]
VDD-Power-Good:      [ inactive ]
Power-On-Fail:       [ active ]
Power-Ctrl-Lock:     [ unlocked ]
Power-System-Status: [ Good ]
Front-Panel Power Button: [ Enabled ]
Front-Panel Reset Button: [ Enabled ]
OP-CCODE:[ Success ]
```

Failure Scenario #2

```
OP:[ status ]
Power-State:          [ off ]
VDD-Power-Good:      [ inactive ]
Power-On-Fail:       [ inactive ]
Power-Ctrl-Lock:     [ permanent lock ] <<<-----
Power-System-Status: [ Bad ]           <<<-----
Front-Panel Power Button: [ Disabled ]
Front-Panel Reset Button: [ Disabled ]
OP-CCODE:[ Success ]
```

Output from working scenario

```
[ help ]# power
OP:[ status ]
Power-State:          [ on ]
VDD-Power-Good:      [ active ]
```

```
Power-On-Fail: [ inactive ]
Power-Ctrl-Lock: [ unlocked ]
Power-System-Status: [ Good ]
Front-Panel Power Button: [ Enabled ]
Front-Panel Reset Button: [ Enabled ]
OP-CCODE:[ Success ]
[ power ]#
```

Verify the sensor value #

```
POWER_ON_FAIL | disc -> | discrete | 0x0200 | na | na | na | na |
na | >>> Non-working
```

Sensor value#

```
POWER_ON_FAIL | disc -> | discrete | 0x0100 | na | na | na | na |
na | >>>> Working
```

Execute **sensors** command and check the values of power and voltage sensors. Compare the output with the same model of the blade is powered on state.

If the Reading or Status, columns are NA for certain sensors, this may not be the hardware failure all the time.

Logs snippet#

```
obfl##
5:2019 Jan 9 06:42:34 GMT:3.1(20b):kernel:--<5>[se_pilot2_wakeup_interrupt]:2563:USB HS: VDD Power = ON
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[1]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[2]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[3]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[4]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[5]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[6]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[7]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[8]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[9]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[a]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[b]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[c]
5:2019 Jan 9 06:42:34 GMT:3.1(20b):IPMI:1686: Pilot3SrvPower.c:481: -> Power State On: LPC RESET is IN RESET; powerOnLPC0ff[d]
```

Sel.log#

CIMC | Platform alert POWER_ON_FAIL #0xde | Predictive Failure asserted | Asserted

power-on-fail.hist inside the tmp/techsupport_pidXXXX/CIMCX_TechSupport-nvram.tar.gz)

```
power-on-fail.hist.log
<FAILURE>Tue Jan 8 20:19:48 2019 >>>>>>>>>> failed state
```

Sensor Name	Reading	Unit	Status	LNR	LC	LNC	UNC	UC	UNR
P3V_BAT_SCALED	2.973	Volts	OK	na	2.011	2.403	na	4.005	na
P5V_STBY	na	Volts	na	4.242	4.483	na	na	5.519	5.760
P3V3_STBY	na	Volts	na	2.797	2.955	na	na	3.634	3.808
P1V1_SSB_STBY	na	Volts	na	0.931	0.989	na	na	1.212	1.271
P1V8_STBY	na	Volts	na	1.523	1.610	na	na	1.988	2.076
P1V0_STBY	na	Volts	na	0.844	0.892	na	na	1.106	1.154
P1V5_STBY	na	Volts	na	1.271	1.348	na	na	1.659	1.727
P0V75_STBY	na	Volts	na	0.631	0.669	na	na	0.834	0.863
P12V	na	Volts	na	10.797	11.269	na	na	12.685	13.157
P5V	na	Volts	na	4.493	4.680	na	na	5.288	5.499
P3V3	na	Volts	na	2.964	3.089	na	na	3.494	3.619
P1V5_SSB	na	Volts	na	1.349	1.404	na	na	1.583	1.646
P1V1_SSB	na	Volts	na	0.983	1.030	na	na	1.162	1.209
P1V8_SAS	na	Volts	na	1.615	1.685	na	na	1.907	1.977
P1V5_SAS	na	Volts	na	1.349	1.404	na	na	1.583	1.646
P1V0_SAS	na	Volts	na	0.796	0.842	na	na	1.162	1.217
P1V0A_SAS	na	Volts	na	0.796	0.842	na	na	1.162	1.217
P3V3_SAS	na	Volts	na	2.964	3.089	na	na	3.494	3.619
P12V_SAS	na	Volts	na	10.797	11.269	na	na	12.685	13.157
P0V75_SAS	na	Volts	na	0.679	0.702	na	na	0.796	0.827
P1V05_VTT_P1	na	Volts	na	0.913	0.952	na	na	1.076	1.123
P1V05_VTT_P2	na	Volts	na	0.897	0.936	na	na	1.061	1.108

If the above does not help and as next step, **collect UCSM and Chassis techsupport log bundle.**

It helps to further investigate the issue.

With the previously mentioned symptoms, Try these steps to recover the issue.

Step 1: Verify that blade FSM Status is “Failed” with description “state-MC Error(-20)”.

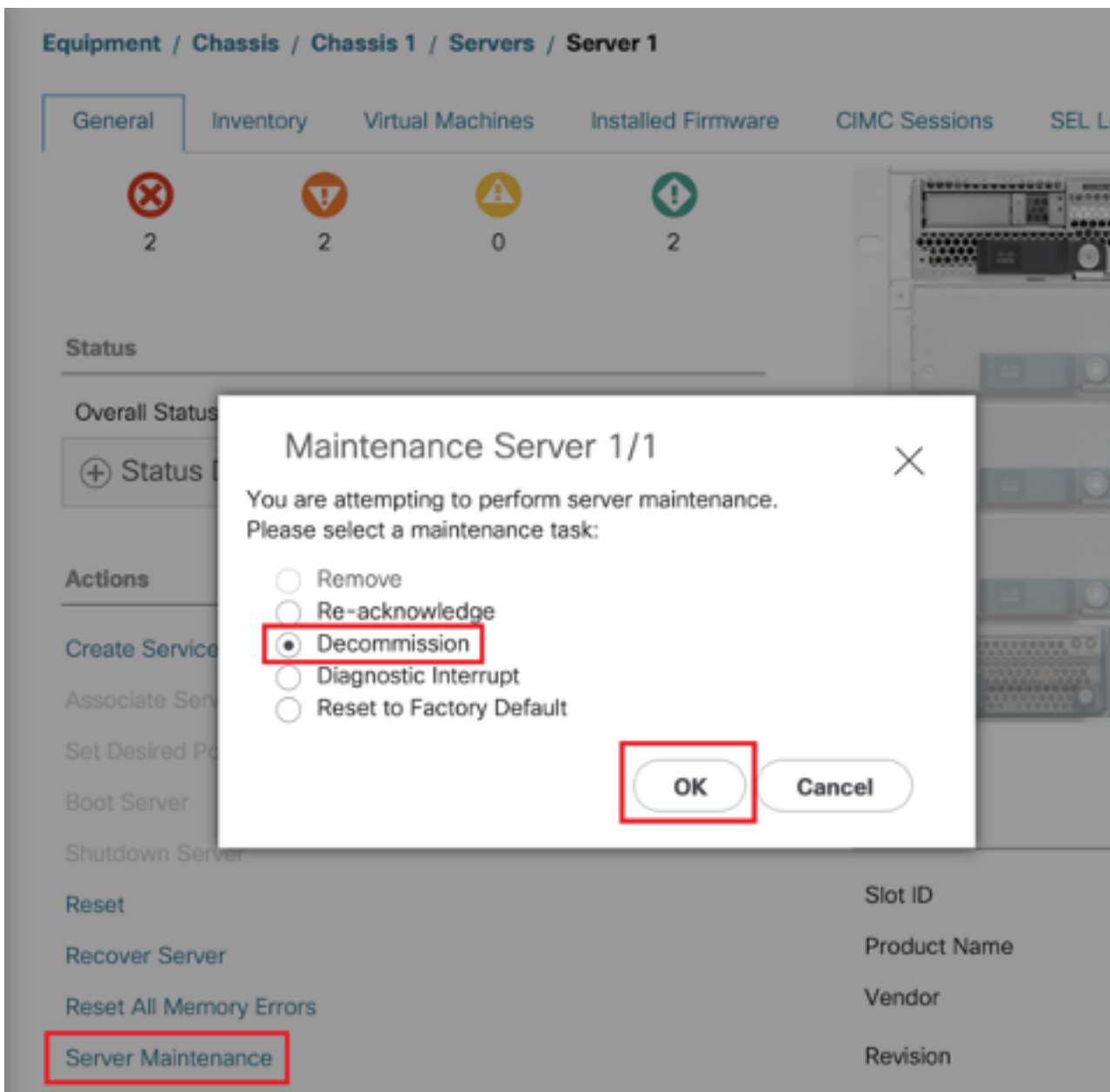
Navigate to **Equipment > Chassis X > Server Y > FSM**



Step 2: Note down impacted blade Serial number and Decommission the Blade.

<<< **IMP:** Note down Problem blade serial number from General tab before decommissioning it. It will required at later stage in Step-4 >>>

Navigate to **Equipment > Chassis X > Server Y > General > Server Maintenance > Decommission > Ok.**



Step 3. FI-A/B# reset slot x/y

For Example #Chassis2-Server 1 is impacted.

FI-A# **reset slot 2/1**

Wait for 30-40 seconds after running the above command

```
[FI-A# reset slot 1/1  
FI-A# █
```

Example of Chassis 1 Server 1

Step-4: Recommission the Blade that has been decommissioned.

Navigate to **Equipment > Decommissioned > Servers > Look for the server we decommissioned** (*Find correct blade with Serial number Noted in Step-2 before decommissioning*) > **Check Recommission Tick box against correct Blade** (*Validate with Serial number*) > **Save Changes**.

The screenshot shows the 'Equipment' management interface, specifically the 'Decommissioned' tab under 'Servers'. The table below lists decommissioned servers. A red box highlights the 'Recommission' checkbox for the 'Blade Server UCSB-B420-M3' row. A red arrow points from this checkbox to a text box labeled 'Step-2: Check the tick-box to recommission the Blade'. Another red arrow points from the 'Serial' column of the same row to a text box labeled 'Step-1: Find the Blade with Serial Number that was decommissioned'. At the bottom, a red arrow points from a text box labeled 'Step-3: Save Changes' to the 'Save Changes' button.

Name	Recommission	ID	Vendor	PID	Model	Serial
Chassis						
FEX						
Rack-Mounts						
Servers						
Blade Server UCSB-B420-M3	<input checked="" type="checkbox"/>	N/A	Cisco Systems Inc	UCSB-B420-M3	Cisco UCS B420 M3	[REDACTED]

Step-2: Check the tick-box to recommission the Blade

Step-1: Find the Blade with Serial Number that was decommissioned

Step-3: Save Changes


Save Changes Reset Values

Step-5: Resolve Slot, if observed.

Navigate to **Equipment > Chassis X > Server Y**.


If you get “Resolve Slot Issue” pop-up for the blade that you recommissioned, then verify its serial number and click “**here**” to accept the server in slot.

Resolve Slot Issue

Present Server	Provisioned Server
Slot ID : 1	Slot ID :
Presence : Mismatch	Presence :
Vendor : Cisco Systems Inc	Vendor :
PID : UCSB-B420-M3	PID :
Serial : XXXXXXXXXX 	Serial :
Server :	Server :

Situation
This slot contains a server that is provisioned for a different slot.
Click [here](#) to accept the server in this slot.

Re-acknowledge Slot

 Are you sure you want to re-acknowledge this slot?
This operation will trigger a discovery of the server in this slot.

Blade discovery should start now.

Wait till Server Discovery gets completed. Monitor the progress in Server FSM tab.

Step 6. If step one to five don't help and FSM again **fails**, then decommission the blade and try to RESEAT it physically.

If still server is unable to discover reach out to Cisco TAC if this is a hardware issue.

NOTE: If you have B200 M4 blade and notice failure scenario #2 , please refer following bug and

Contact TAC

[CSCuv90289](#)

B200 M4 fails to power on due to POWER_SYS_FLT

Related information

[Procedure to discover chassis](#)

[UCSM server management guide](#)