Will Boot Configuration Checks for UCS

Document ID: 112002

Contents

Introduction Prerequisites Requirements Components Used Conventions Configure Network Diagram Scenarios Configuration Check Verify the Overall Status Check Faults Details View POST Results Verify Related Information Introduction

This document explains how to use the UCS Will Boot feature and the commands to quickly perform configuration status check.

The UCS Will Boot feature allows users to quickly perform a cursory check in order to ensure that the blade is configured properly to allow the BIOS to proceed. The Will Boot configuration check is to verify both CPU and DIMM configuration. This check helps users quickly debug booting problems.

Cisco UCS provides several tools to aid in the Will Boot configuration checks. These tools include: command line **show status** and **show post** commands as well as UCS Manager GUI *Overall Status*, *Faults*, and *View POST Results*.

Prerequisites

Requirements

Cisco recommends that you:

- Have a working knowledge of Cisco UCS Server Blade software and hardware.
- Be familiar with Cisco UCS components and topology.
- Be familiar with Cisco UCS Manager application.

Components Used

The information in this document is based on Cisco Unified Computing System (UCS).

Conventions

Refer to the Cisco Technical Tips Conventions for more information on document conventions.

Configure

The UCS Will Boot feature provides configuration checks for CPU and DIMM. In this section, you are presented with the information with required CPU and DIMM configuration.

Required CPU Configuration (to run)

- B200/B250 Lowest number CPU must be present
- B440 CPU1 or CPU2 (the two lowest) Processor sockets must be installed for the card to run. If CPU1 or CPU2 is installed and works, any other combination runs.

Note: As of now, Cisco supports only 2 or 4 CPU configuration.

• CPU matching is not enforced.

Required DIMM Configuration (to run)

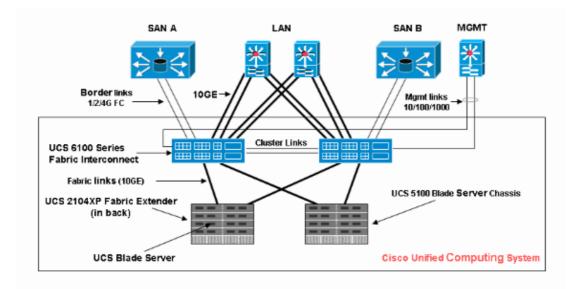
- B200/B250 DIMM in A0, B0 or C0 must be populated.
- B440 One matched DIMM pair on either CPU1 or CPU2. DIMM in lowest bank of any channel with present CPU must be populated.
- DIMM matching is not required. For example, there is no requirement to install DIMM uniformly across CPU.

How to Perform Configuration Check

- Overall Status
- Faults
- View PowerOn Self-Test (POST) Results

Network Diagram

This is a typical topology used with Cisco Unified Computing System (UCS):



Scenarios Configuration Check

Check the Overall Status first, then check Faults and POST Results.

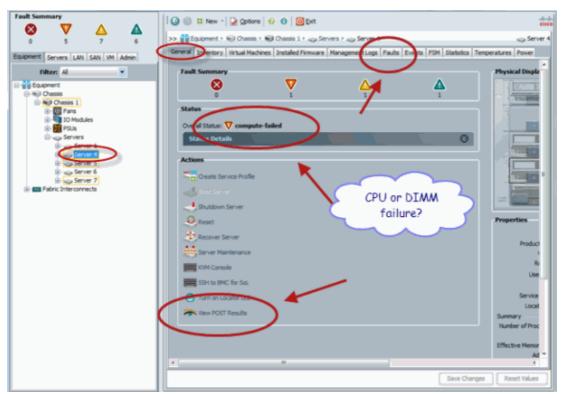
Verify the Overall Status

The first thing to verify is the *Overall Status*. This feature in Cisco UCS allows users to quickly check the overall status of the server. This section explains how to view the overall status and how it looks like when UCS detects CPU or DIMM failures. Complete these steps:

- 1. Log in to Cisco UCS Manager.
- 2. In the navigation pane, choose the **Equipment** tab.
- 3. Choose **Equipment > Chassis > Chassis Number > Servers**, and then choose the server you would like to check the overall status.
- 4. In the work pane to the right, choose General tab. You see Overall Status: in Status.
- 5. In a normal condition, the Overall Status should be displayed ok.



6. If the blade is not configured appropriately and UCS detects CPU or DIMM failures, it shows **compute-failed**. The UCS with overall status compute-failed is shown in this figure.



7. You can also check the Overall Status if you issue the show status command.

UCS-A# scope server 1/4 UCS-A /chassis/server # show status Server Slot Status	Availability overall Status Discovery
1/4 Equipped	Unavailable compute-failed Complete

Check Faults Details

You can view status details for a server blade. This section explains how to view the status details and faults description. If UCS detects part of CPUs/DIMMs inoperable, the Overall Status shows Degraded. As shown here, the UCS Manager displays the blade is in degraded overall status. Complete these steps:

- 1. Log in to Cisco UCS Manager.
- 2. In the navigation pane, choose the **Equipment** tab.
- 3. Choose **Equipment > Chassis > Chassis Number > Servers**, and then choose the server you would like to check the overall status.
- 4. In the work pane to the right, choose General. Check for the overall status under Status.
- 5. Choose the Status Details view window in order to check the status details.

Equipment Servers LAN SAN VM Admin	General Inventory Virtual Machines Installed Firmware	Management Logs Faults Events FSM Statistics
Filter: Al	Fault Summary	Physical Display
Equipment Chassis Chassis Chassis Chassis Chassis Chassis Servers Server 1 Server 2 Server 2 Server 3 Server 5 Server 5 Server 5 Server 5 Server 5 Server 5 Server 7 Server 5 Server 7 Server 5 Server 7 Server 5 Server 7 Server 5 Server 7 Server 5 Server 7 Server 5 Server 7 Server 5 Server 5 Server 5 Server 5 Server 7 Server 5 Server 7 Server 7 Se	Value Summary V 0 2 0 Status Overal Status Status Status Configuration Error: memory-inoperable Admin State: in service Discovery State: complete Avail State: in ne Power State: on Skot Status: equipped Check. Point: discovered	Properties Six ID: 7 Product Name: Cisco B440-M1
		Vendor: Cisco Systems Inc

6. Click **Faults** tab in order to view the faults description and details.

Equipment Servers LAN SAN VM Admin Filter: Al	General Inventory Wrtual Machines Instaled Pirmware Management Log Faults PSM Statistics Temperatures Power Image: Provide the state of the st
te =	Seve Code ID Affected object Cause Last Tra Description V F0185 50272 sys(chassis-1(b equipm 2010-05-12(1 DMM 1/16 on server 1/7 operability: inoperable V F0185 50271 sys(chassis-1(b equipm 2010-05-12(1 DMM 1/16 on server 1/7 operability: inoperable
Pape Chessis P	F0461 28261 sys(chassis-t_tb]og-cap 2010-05-12T0 Log captety on Management Controller on server t/7 is very-low
Server 1 Server 2 Server 3 Server 5 Server 5	Contical Tomajor A minor A warning info (1) condition (2) cleared (2) flapping (2) soaking Details Summary
	Severity: V major Lest Transition: 2010-05-12T18:28:13 ID: 50272 Cause: equipment-inoperable
	Actions Code: F0185

7. The detailed status also can be viewed if you use the **show status details** command.

UCS-B /	scope server 1/7 /chassis/server # show status Slot Status	Availability	Overall Status	Discovery
1/7	Equipped	Available	Degraded	Complete
Server Slo Cor Mar Ava Adr Ove Ope	/chassis/server & show status detai 1/7: ot Status: Equipped nn Path: A,B naging Instance: B ailability: Available min State: In Service erall Status: Degraded er Qualifier: Memory Inoperable scovery: Complete rrent Task:			

View POST Results

You can view any error collected during the Power On Self–Test process for a server blade. This section explains how to view the POST Results. Complete these steps:

- 1. In the Navigation pane, click the **Equipment** tab.
- 2. On the **Equipment** tab, choose **Equipment** > **Chassis** > **Chassis** Number > **Servers**.
- 3. Choose the server for which you want to view the POST results.

- 4. In the Work pane, click the **General** tab.
- 5. In the Actions area, click View POST Results.

The POST Results dialog box lists the POST results for the server blade.

Fault Summary	• •	i 🕒 🔘 🕮 New - 🔛 Options 😥 🕢 🥘 Dot	
		>> 🙀 Equipment + 🛞 Chassis + 📢 Chassis 1.1 🚓 Servers + 🚓 Server 4	- sp Server 4
Equipment Servers LA	POST Results	The loss sectors extends there is the in the sector	Power
	Filter - Export	; Print	cal Displa
	Affected object	ID Type Code Created at Severity Decomposition	100 E
Mill Chassis 1	ys/chassis-1/blade-4	608 server: Osco Systems Inc SA-GOODDIG POST-0608 2010-03-11T19:48:38 ontical Divald DIMM configuration	D. AND
	Details		
B B PSUs B	General		
8 - up Server	ID: 608	Local ID: 413	
B up Server		r: Cisco Systems Jinc SA-GO00ING Code: POST-0608 03-11T19:48:38 Severity: critical	
Bings Server Bings Server	Recoverable: recover	erable Recoverable Action: none	
Borne Pabric Interconned	Description: Jacob	4 ntref configuration	
	a not conf	OK Apply Cancel Heb	prties
	e not conf	-	Product
a a	ppropriate		R
	•	554 to (MC for So.	Use
	\checkmark	Tum an Locator LID	Service
		Wew POST Results	Locat
		50	mary mber of Proc
			Ad *
		Seve Changes 5	Reset values

- 6. Click **OK** in order to close the POST Results dialog box.
- 7. You can also view POST Results if you use **show post** command.

UCS-A# scope server 1/4 UCS-A /chassis/server & show post	>	
POST: Global ID Code Severity	Affected object	Description
608 Post 0608 Info	sys/chassis-1/blade-4	Invalid DIMM Configuration
		1

Verify

There is currently no verification procedure available for this configuration.

Related Information

- Cisco UCS Manager Architecture
- Technical Support & Documentation Cisco Systems

Contacts & Feedback | Help | Site Map