# Auto Upgrade Blade Firmware Revision in UCS Environment

Document ID: 110341

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#### Introduction Prerequisites Requirements Components Used Network Diagram Conventions Main Task Create Service Profile for Autoconfig Policies Create Autoconfig Policies Verify Troubleshoot Related Information Introduction

Cisco Unified Computing System (UCS) has the concept of an automatic policy called Autoconfiguration Policies. This policy is applied to any new blade that is installed in the UCS system. This policy is to allow you to upgrade blades to your desired firmware revisions automatically, which eliminates the need to worry that new or replaced hardware will need to be upgraded or downgraded to meet organizational needs.

This document illustrates how this is done by:

- Creating a Service Profile
- Creating Autoconfiguration Policies and add these Autoconfiguration Policies to the Service Profile created

# Prerequisites

#### Requirements

Cisco recommends that you have a working knowledge of the Cisco UCS hardware and software.

#### **Components Used**

The information in this document is based on Cisco UCS.

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 default configuration. If your network is live, make sure that you understand the potential impact of any command.

#### **Network Diagram**

A typical Cisco UCS topology looks like this:



#### Conventions

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

# Main Task

#### **Create Service Profile for Autoconfig Policies**

Perform these steps:

- 1. In the navigation pane, select the **Servers** tab.
- 2. Right-click Service Profile Template and select Create Service Profile.

Fault Summary	🔄 🌑 🖽 New 🚽 🕞 Options 🛛 🕐 🕦 🚺 Exit
😣 🔻 🛆 🔺	>>
12 9 71 43	Service Profile Templates
Filter: All	Address       Name       Address       ⊡
Gervice Profile Templates     Service Profile Templates	ce Profile Template

3. Fill out the Name and Description in the Create Service Profile Template pop-up window.

4. Click Next.



- 5. If needed, assign any Storage and Networking to this Service Profile.
- 6. Click Next.

# **Unified Computing System Manager**

Create Service Profile Template 1. √Identify Service Profile	N	etworking Optionally specify LAN configuration inform	nation.	0
1     1       2     V Storage       3     V Networking       4.     VNIC/vHBA Placement       5.     1       Server Boot Order		Dynamic vNIC Connection Policy: Select a Policy to us	se (no Dynamic vNIC Policy by default) 💌 🚮 Gr	*e
6. □ <u>Server Assignment</u> 7. □ <u>Operational Policies</u>	s	How would you like to pecify the virtual network interface cards (VNICs) tha ore than two VNICs, select the Expert configuration r VNIC 0 (Fabric A)	t server should use to connect to a LAN. To specify mode.	er
		VARNUING: there are not enough MAC addresses available in the default pool. This vNIC will be created with an invalid MAC address.	Name: eth1 Select VLAN: VLAN default (1) Create VLAN WARNING: there are not enough MAC addresses available in the default pool. This vNIC will be created with an invalid MAC address.	
	<	Ш		>
			<prev next=""> Finish Cance</prev>	

7. If needed, assign Server Boot Order to this Service Profile.

8. Click Next.

# **Unified Computing System Manager**

Create Service Profile Template 1. ✓Identify Service Profile	Server Boot Order Optionally specify the boot policy for this service profile.	9			
Template 2. ✓ <u>Storage</u> 3. ✓ <u>Networking</u> 4. ✓ <u>vNIC/vHBA Placement</u> 5. <b>© Server Boot Order</b> 6. □ <u>Server Assignment</u>	Select a boot policy. Boot Policy Create Boot Policy	1			
7. D <u>Operational Policies</u>	Name: Boot_Order Description: Reboot on Boot Order Change: no Note: reconfiguration of boot devices will always cause a reboot on non-virtualized adapters. Enforce vNIC/vHBA Name: no WARNINGS: The type (primary/secondary) does not indicate a boot order presence. The effective order of boot devices within the same device class (LAN/Storage) is determined by PCIe bu If Enforce vNIC/vHBA Name is selected and the vNIC/vHBA does not exist, a config error will be repo If it is not selected, the vNICS/vHBAs are selected if they exist, otherwise the vNIC/vHBA with the lowes Boot Order				
	Name Order vNIC/VHBA Type Lun ID Storage 1 Local Disk OCD-ROM 2 < Prev Next > Finish Cancel				

- 9. In Server Assignment, choose the Host firmware and Managament firmware to be applied to the blades.
- 10. Click Next.

Unified C	Computing System Manager	
Create Service Profile Template 1. √Identify Service Profile	Server Assignment Optionally specify a server or server pool for this service profile.	0
Template 2. ✓ <u>Storage</u> 3. ✓ <u>Networking</u> 4. ✓ <u>vNIC/\+BA Placement</u> 5. ✓ <u>Server Boot Order</u>	Server Assignment Assign Later	~
6. ✓ <u>Server Assignment</u> 7. □ <u>Operational Policies</u>	The service profile is not automatically associated with a server. Either select a server from the list or associate the service profile manually later.	
	Firmware Management (BIOS, Disk Controller, Adapter)	
	If you select a next or management firmware policy for this service profile, the profile will update the firmware on the server that is is associated with. Otherware the system was the firmware already installed on the associated server. Host Pirmware ServerUpgradeTes 🔹 🔛 Create Host Pirmware Package	
	Management Firmware Content Constant	*
	Control Con	9

11. Click Finish.

#### **Create Autoconfig Policies**

After you have created the Service Profile, the next task is to create the Autoconfig Policies to apply to this Service Profile. Perform these steps:

- 1. Log in to Cisco UCS Manager.
- 2. In the navigation pane, select the **Equipment** tab.
- 3. Select the **Policies** tab in the work pane.
- 4. Select Autoconfig Policies.
- 5. Click +.

The Create Autoconfiguration Policy window pops up.

Fault Summary	🗄 🕝 🌑 🗳 New 👻 🄀 Options 🛛 😢 🕕 🚺 💆 Exit	ahaha <mark>cisco</mark>
	>> 👸 Equipment	Equipment
Equipment Dervers LAN SAN VM Admin	Main Topology View Eabric Interconnects	ers / Thermal des 7 Faults
Filter: Al 🗸	Server Inheritance Policies Server Discovery Policies	SEL Policy
Equipment     Chassis     Section 2 - Environment	4 Filter ⇒ Export ⊗ Print	
ar said rabit interconnects	Name Org Template Qualific	ation 🕄
	S Autoconfig org-root	
	Save Changes	Reset Values
100 Logged in as admin@10.193.66.93	System Time: 2010-	04-05T00:18

6. Fill in the required fields within the Create Autoconfiguration Policy pop-up window.

7. Make sure you tie this Autoconfiguration Policy to the Service Profile you have created.8. Click **OK**.

🚖 Create Auto-configuration Policy	X
Create Auto-configuration Policy	0
Name 45I-autopolicy Description: autipolicy to upgarde new blade to 45I	
Qualification: all-chassis  Org: root	
Service Profile Template Name: AutoConfig_temp	
	OK Cancel

# Verify

All new UCS Blades inserted into the UCS will automatically get associated to the Autoconfiguration Policy. UCS will upgrade all firmware on the newly inserted blade to what was defined in the firmware policies.

Fault Summary	😧 🌒 🖽 New - 🎴 Option	ns 😢 🕕 🚺 Exit		abab. CISCO
	>> Equipment			Equipment
Equipment Dervers LAN SAN VM Admin	Main Topology View	Fabric Interco	nnects Server	Thermal
Filter: Al	Global Policies Autoconfig Polici	Server Inheritance Polic	ies Server Discovery Policie	s SEL Policy
E Cupment	🕰 Filter 👄 Export 😸 Print			
- Eabric Interconnects	Name	Org	Template	Qualification
	Autoconfig 45I-autopolicy	org-root <	AutoConfig_template	al-chassis 🔥
	Stoconfig jen	org-root		
	5			
C >			Save Changes	Reset Values
Budged in as admin@10.193.66.93			System Time: 2	2010-04-05000:30

### Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

### **Related Information**

#### • Technical Support & Documentation – Cisco Systems

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