

MX7000 Quick Deploy and Slot Deployment

Revisions

Date	Description
Jan 2019	Initial release

Acknowledgements

This paper was produced by the following members of the Dell EMC storage engineering team:

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Introduction

The purpose of this whitepaper is to describe the Quick Deploy feature, provide details about the configuration parameters that can be used, and to illustrate different scenarios for which Quick Deploy settings are applied. Quick deployment is applicable for devices occupying one of the chassis slots and to empty chassis slots.

Quick deploy configuration is an important feature that allows us to set initial configuration to an existing devices and/or leave the configuration ready for future devices that will be inserted into the MX7000 chassis slots. There are multiple attribute combinations that can be used during quick deploy settings. More details will be provided in the coming sections of this document.

Navigating to Quick Deploy Settings

The quick deploy settings are found in the chassis setting tab. On the first landing page of the chassis is the overview page and that has a settings tab. In the settings tab there is a Quick deploy section.

Once the quick deploy chevron is expanded the user can start configuring the settings.

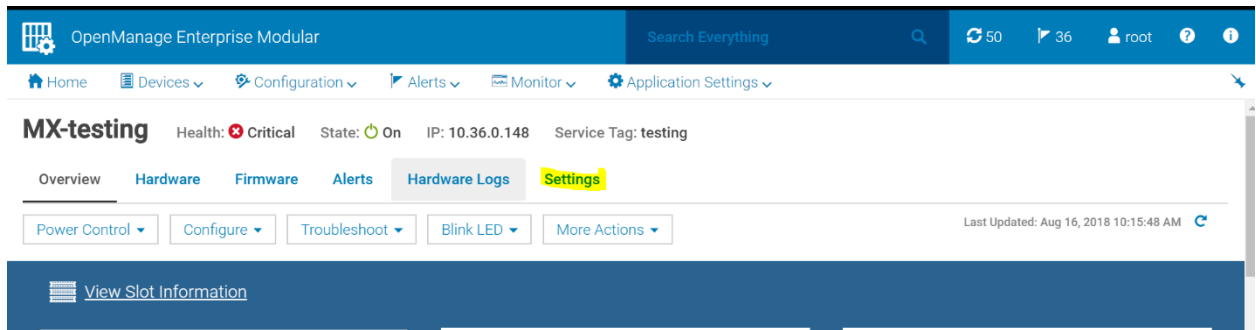


Figure 1 MX7000 Chassis overview page.

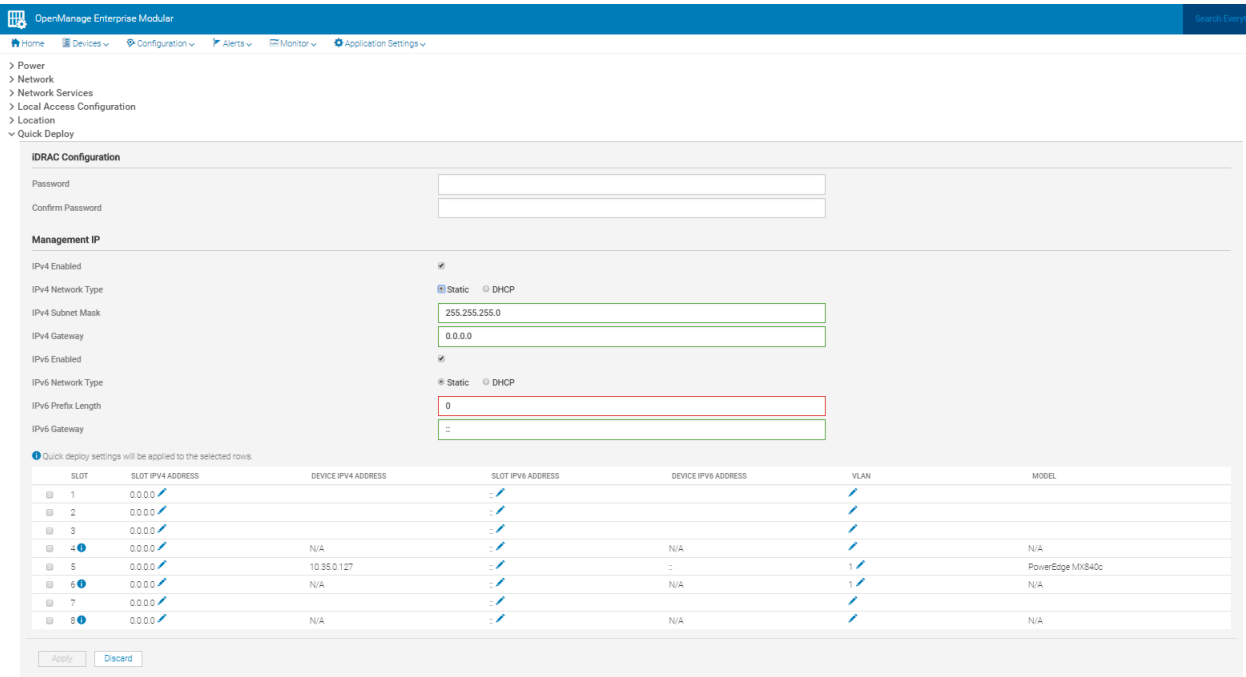


Figure 2 MX7000 Main Quick Deploy Settings Page.

Quick Deploy Settings Details

There are multiple combinations that can be used to perform quick deploy settings to one or more devices. Moreover the user can prepare configurations for empty slots the maybe used in the future.

Listed fields in the UI are described below:

Top Section		
	Field	Description
iDRAC Configuration	<i>Password</i>	Root password to be set (optional).
	<i>Confirm Password</i>	Confirmation for the password to be set (optional).
Management IP	<i>IPv4 Enable</i>	Enable or Disable IPv4.
	<i>IPv4 Network Type</i>	Static or DHCP. If Static, then Subnet mask and Gateway must be set.
	<i>IPv6 Enable</i>	Enable or Disable IPv6.
	<i>IPv6 Network Type</i>	Static or DHCP. If static, then IPv6 Subnet mask and IPv6 Gateway must be set.

Table 1 Top Header Section for Quick Deploy Settings.

In the slots configuration section a slot can be selected by the checkbox, or unselected by unchecking the checkbox. Furthermore slot can be empty or occupied. If a slot is selected that means the configuration will be applied to the empty slot or the device in the slot. When a slot is occupied after saving the quick deploy settings the configurations will be immediately set on the device. If slot is not occupied the configuration will be persisted in the local data base, and when a device is inserted into that slot then the configurations will be applied to the device via a device configuration job.

Following is an outline of the configuration behavior for the quick deploy feature:

- If a device is present in any of the slots and it requires quick deploy settings, then the slot must be selected (checkbox).
- If a slot is empty, but requires quick deploy configuration when a device is inserted, then the slot must be selected (checkbox).
- If no slots are selected then quick deploy will not be performed on an inserted device or an existing device. The configuration details are persisted in the local data base and no other operations are performed.
- If static IP-address is selected in the top section for IPv4 or IPv6 user must know a range of IP-addresses to assign. If same IP-address is assigned to multiple devices or an already in use IP-address is assigned to a device that will cause the device not to obtain an IP-address. Our recommendation is to keep track of assignments and available addresses when using static IP-addresses.

SLOT	SLOT IPV4 ADDRESS	DEVICE IPV4 ADDRESS	SLOT IPV6 ADDRESS	DEVICE IPV6 ADDRESS	VLAN	MODEL
<input type="checkbox"/> 1	0.0.0.0		-	-	1	
<input type="checkbox"/> 2	0.0.0.0		-	-	1	
<input type="checkbox"/> 3	0.0.0.0		-	-	1	
<input type="checkbox"/> 4	0.0.0.0		-	-	1	
<input type="checkbox"/> 5	0.0.0.0	10.35.0.127	-	-	1	PowerEdge MX840c
<input checked="" type="checkbox"/> 6	0.0.0.0	N/A	-	N/A	1	N/A
<input type="checkbox"/> 7	0.0.0.0		-	-	1	
<input type="checkbox"/> 8	0.0.0.0		-	-	1	

Figure 3 Slot section for Quick deploy Settings.

- The user can also select VLAN for each slot. If VLAN is selected the slot device will not have a public IP-address. The user will not be allowed to specify a public IP-address.

Applying Quick Deploy Settings to Occupied Slots

After navigating to Settings->Quick Deploy settings from the Chassis page, the user can start applying required configurations to occupied slot(s).

Here are the quick deployment steps:

- Set credentials: Allows the user to specify iDRAC credentials for all sleds present in a slot. This is an optional step, if no credentials are provided then by default 'calvin' is used and this will be set in all selected slots.
- Select the type of management: IPv4, IPv6 or both
- If management is static, then subnet mask and gateway must be provided for IPv4/IPv6 or both. If DHCP, then it is not required.
- Once the top level configurations have been created then user selects the slots with devices that require Quick Deploy Settings to be applied. If one requires to set a device IP-address to a known static IP
 - Select the device slot
 - Change the IP-address
- Apply Quick Deploy Settings.

Applying Quick Deploy Settings to Occupied Slots

IDRAC Configuration

Password:
Confirm Password:

Management IP

IPv4 Enabled:
IPv4 Network Type: Static DHCP
IPv6 Enabled:

Quick deploy settings will be applied to the selected rows.

SLOT	SLOT IPV4 ADDRESS	DEVICE IPV4 ADDRESS	SLOT IPV6 ADDRESS	DEVICE IPV6 ADDRESS	VLAN	MODEL
<input type="checkbox"/> 1	<DHCP>		Disabled		1	
<input type="checkbox"/> 2	<DHCP>		Disabled		1	
<input type="checkbox"/> 3	<DHCP>		Disabled		1	
<input type="checkbox"/> 4	<DHCP>		Disabled		1	
<input checked="" type="checkbox"/> 5	<DHCP>	10.35.0.127	Disabled		1	PowerEdge MX840c
<input checked="" type="checkbox"/> 6	<DHCP>	N/A	Disabled	N/A	1	N/A
<input type="checkbox"/> 7	<DHCP>		Disabled		1	
<input type="checkbox"/> 8	<DHCP>		Disabled		1	

Apply Discard

Figure 4 Quick Deploy Settings for Occupied Slots.

A job will be created for Quick Deploy Settings, this Job will apply the requested settings in the selected slot(s) with seated device(s). Job details can be confirmed in the jobs section: *Monitor->Jobs*

OpenManage Enterprise Modular

Home Devices Configuration Alerts Monitor Application Settings

Monitor

Audit Logs Jobs

Run Now Stop Enable Disable Delete

Advanced Filters

JOB STATUS	STATE	JOB NAME	JOB TYPE	DESCRIPTION	LAST RUN
<input checked="" type="checkbox"/> Completed	Enabled	Quick Deploy	Quick Deploy	New Quick Deploy Configuration	Aug 16, 2018 11:08:37 AM

1 item(s) found, 0 item(s) selected. Displaying items 1 - 1.

Quick Deploy

View Details

Detailed Description
New Quick Deploy Configuration

Created By
root

Last Run Date/Time
Aug 16, 2018 11:08:37 AM

Figure 5 Quick Deploy Job executed for occupied slot(s).

More details of the job can be seen when View Details button is selected. The details will display the device(s) for which Quick Deploy Settings are being applied. The user may need to check the successful application of the settings and the state for each device selected and that is done via the job execution details.

Applying Quick Deploy Settings to Empty Slots

The screenshot shows the 'Job Details' section of a management interface. It includes a navigation bar with 'Home', 'Devices', 'Configuration', 'Alerts', 'Monitor', and 'Application Settings'. The 'Job Details' section shows the job name 'Quick Deploy', job type 'Quick Deploy', description 'New Quick Deploy Configuration', and status 'Completed'. There are buttons for 'Restart Job' and 'Export'. Below this is the 'Execution History' section, which contains a table with columns for STATUS, START TIME, END TIME, ELAPSED, and PERCENTAGE COMPLETE. The table shows one completed job on Aug 16, 2018, at 11:08:37 AM, ending at 11:09:13 AM, with an elapsed time of 00:00:35 and 100% completion. Below the table, it says '1 item(s) found. Displaying items 1 - 1.' The 'Execution Details' section is also visible, showing a table with columns for STATUS, TARGET SYSTEM, START TIME, END TIME, and ELAPSE. The table shows one completed job on 'Sled-5' on Aug 16, 2018, at 11:08:38 AM, ending at 11:09:12 AM, with an elapsed time of 00:00:34. Below this table, it says '1 item(s) found. Displaying items 1 - 1.' To the right of the 'Execution Details' table is a 'Results' section showing 'Target System: Sled-5' and a 'Messages' section with the following text: 'Running', 'Updating Settings.', 'IPv4.1#Enable --> The command was successful.', 'Users.2#Password --> The command was successful.', 'NIC.1#VlanEnable --> The command was successful.', 'NIC.1#VlanID --> The command was successful.', 'IPv4.1#DHCPEnable --> The command was successful.', 'IPv6.1#Enable --> The command was successful.', 'Committing the update.', 'Commit Command Status --> The command was successful.', 'Completed.'

Figure 6 Quick deploy job details for occupied slot selection.

Applying Quick Deploy Settings to Empty Slots

After navigating Settings->Quick Deploy settings from the Chassis page, we can start applying settings to an empty slot(s).

The following steps must be followed:

- Set credentials. This is an optional step, if no credentials are provided then by default 'calvin' is used and this will be set in all selected slots with seated devices.
- Select the type of management: IPv4, IPv6 or both
- If management is static, then subnet mask and gateway must be provided for IPv4/ IPv6 or both. If DHCP, then is not required.
- Select empty slots for which it is required to apply Quick Deploy Settings after device insertion.

Applying Quick Deploy Settings to Empty Slots

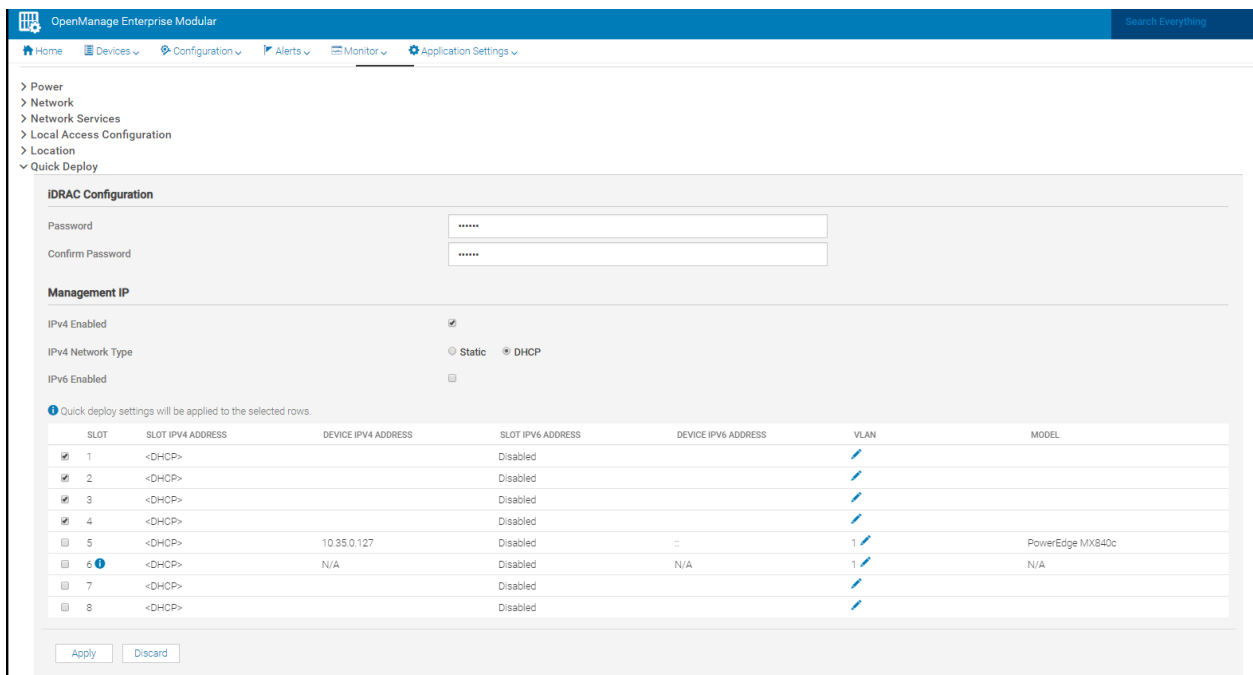


Figure 7 Quick deploy settings for empty slots.

- Apply Quick Deploy Settings.

A job will be created for Quick Deploy Settings. Job details can be verified in the section: *Monitor->Jobs*

In the job details it will be indicated that the configuration has been saved since there is no device operations.

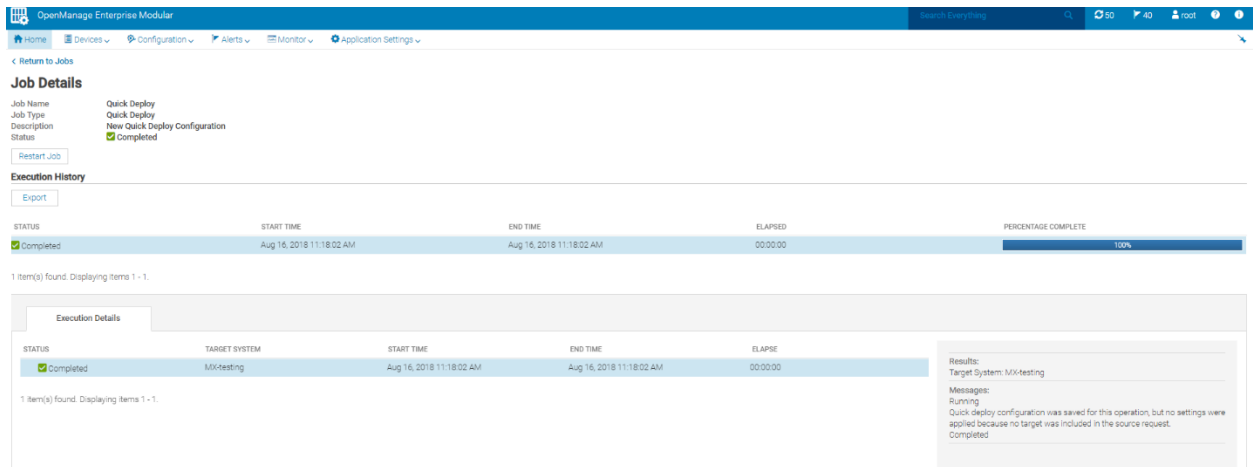


Figure 8 Quick deploy job details for empty slot selection.

Quick Deploy settings for occupied and empty slots can be combined. The steps to follow are the same as indicated above for occupied and empty slot(s) quick deploy. The difference is that the job that will run for quick deploy will set quick deploy in the selected slot device(s) and it will persist the details of the selected empty slots in the Data Base.