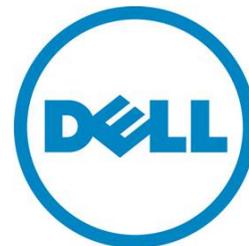

Using VRTX KVM and DVD

This Dell Technical White Paper addresses the usage of KVM and DVD of the VRTX Chassis.

Author(s)

Arun Muthaiyan

Balamurugan Gnanasambandam



Executive summary

The VRTX Chassis is a converged infrastructure solution that combines up to four separate compute nodes, network infrastructure, and a shared storage subsystem. This paper will cover the usage of KVM and DVD.

Contents

Introduction.....	3
KVM Configuration and Selection	3
KVM Configuration from RACADM	3
KVM Configuration from GUI	4
DVD Configuration and Selection	5
USB Mass Storage and Other USB Devices	8
Summary	9



Introduction

The VRTX Chassis is a converged infrastructure solution that combines four separate compute nodes, network infrastructure, and a shared storage subsystem. This paper will cover the usage of KVM and DVD.

With KVM, the user can connect the monitor, keyboard, and mouse to the VRTX Chassis, assign it to one of the servers, and then use them. DVD is an optional module in the VRTX chassis and it can be assigned to one of the servers and used.

KVM Configuration and Selection

In PowerEdge M1000e, the KVM is a pluggable module. But in VRTX Chassis, the KVM is inbuilt in the Chassis and a part of the chassis infrastructure. The KVM can either be unmapped (that is, not assigned to any server), or assigned to one of the servers. It is also possible to enable or disable the KVM availability for each of the server individually. If the KVM is disabled for a server, the KVM cannot be assigned to that server. The KVM configuration or control can be done from LCD on the VRTX Chassis, the CMC Web interface, or running RACADM commands at the command line interface (CLI).

KVM Configuration from RACADM

The current KVM configuration can be viewed using the following command.

```
$ racadm getconfig -g cfgkvminfo

cfgKvmMapping=1

cfgKvmSlot1Enable=1

cfgKvmSlot2Enable=1

cfgKvmSlot3Enable=1

cfgKvmSlot4Enable=1
```

The KVM assignment can be changed by running the following command. The KVM mapping value has to be 0 for Unmapping, and 1–4 for mapping to the corresponding server.

```
$ racadm config -g cfgkvminfo -o cfgKvmMapping 0
Object value modified successfully

$ racadm config -g cfgkvminfo -o cfgKvmMapping 3
Object value modified successfully
```



The KVM can be enabled for a particular slot by using the following command.

```
$ racadm config -g cfgkvminfo -o cfgKvmSlot3Enable 1  
Object value modified successfully
```

The KVM can be disabled for a particular slot using the following command.

```
$ racadm config -g cfgkvminfo -o cfgKvmSlot1Enable 0  
Object value modified successfully
```

KVM Configuration from GUI

To view the KVM properties from the CMC Web interface, click **Chassis Overview > Front Panel**.

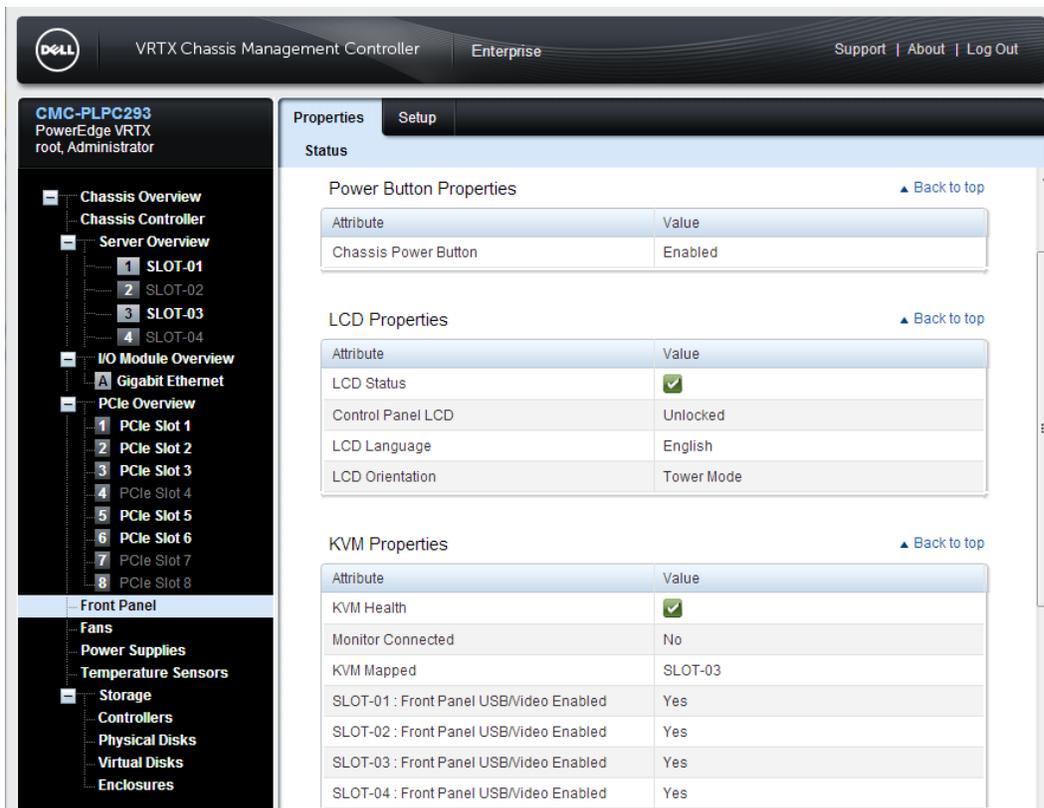


Figure 1. KVM properties

To change the KVM configuration from the CMC Web interface, click **Front Panel**, click **Setup**, change the configuration, and then click **Apply**.



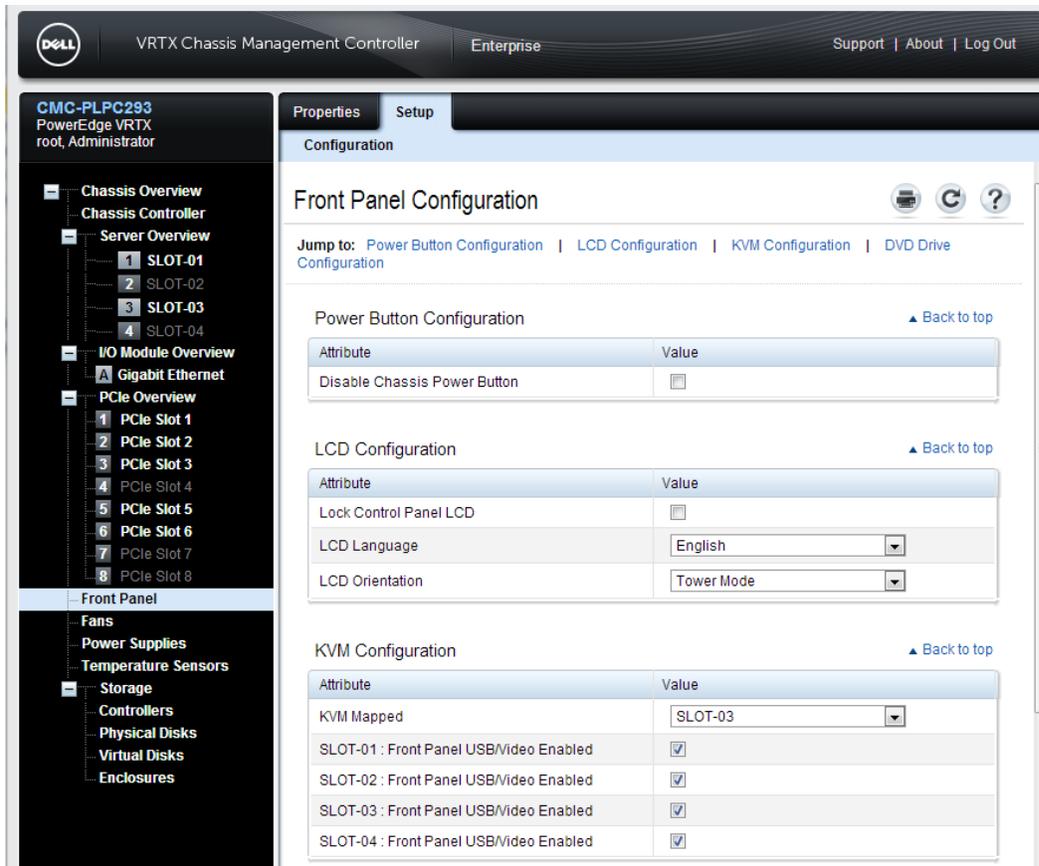


Figure 2. KVM configuration

DVD Configuration and Selection

The VRTX chassis comes with an optional DVD as part of chassis infrastructure. Similar to other infrastructure components, DVD can be assigned to one of the Server. Note that DVD cannot be shared between servers, it can only be assigned and used by one Server at a time. Assignment of DVD to a server is independent of other assignments. For example, KVM can be assigned to Server-3, while DVD can be assigned and used by Server-2. At any time, you can view the current assignment of DVD using the following command.

```
$ getconfig -g cfgDvdInfo
cfgDvdMapping=1
cfgDvdSlot1Enable=1
cfgDvdSlot2Enable=1
cfgDvdSlot3Enable=1
cfgDvdSlot4Enable=1
```



The config variable `cfgDvdMapping` provides the current assignment. The variables `cfgDvdSlotXEnable` allows to permanently disable the use of DVD for some slots. The following are additional commands for use with the DVD.

```
$ config -g cfgDvdInfo -o cfgDvdSlot1Enable 0  
Object value modified successfully
```

```
$ config -g cfgDvdInfo -o cfgDvdMapping 2  
Object value modified successfully
```

```
$ getconfig -g cfgDvdInfo  
cfgDvdMapping=2  
cfgDvdSlot1Enable=0  
cfgDvdSlot2Enable=1  
cfgDvdSlot3Enable=1  
cfgDvdSlot4Enable=1
```



The same thing can be achieved through the VRTX CMC Web interface. After you log in, click **Chassis Overview > Front Panel**, and then click the **DVD Drive Properties**.

The screenshot shows the Dell VRTX Chassis Management Controller (CMC) web interface. The left sidebar contains a navigation tree with the following items: Chassis Overview, Chassis Controller, Server Overview (SLOT-01 to SLOT-04), I/O Module Overview (Gigabit Ethernet), PCIe Overview (PCIe Slot 1 to 8), Front Panel (highlighted), Fans, Power Supplies, Temperature Sensors, Storage, Controllers, Physical Disks, Virtual Disks, and Enclosures. The main content area is titled 'Front Panel' and includes sections for Power Button Properties, LCD Properties, KVM Properties, and DVD Drive Properties. The DVD Drive Properties section is highlighted with a yellow border.

Power Button Properties

Attribute	Value
Chassis Power Button	Enabled

LCD Properties

Attribute	Value
LCD Status	<input checked="" type="checkbox"/>
Control Panel LCD	Unlocked
LCD Language	English
LCD Orientation	Tower Mode

KVM Properties

Attribute	Value
KVM Health	<input checked="" type="checkbox"/>
Monitor Connected	No
KVM Mapped	SLOT-01
SLOT-01 : Front Panel USB/Video Enabled	Yes
SLOT-02 : Front Panel USB/Video Enabled	Yes
SLOT-03 : Front Panel USB/Video Enabled	Yes
SLOT-04 : Front Panel USB/Video Enabled	Yes

DVD Drive Properties

Attribute	Value
DVD Health	
DVD Installed	No
DVD Mapped	SLOT-01
SLOT-01 : DVD Enabled	Yes
SLOT-02 : DVD Enabled	Yes
SLOT-03 : DVD Enabled	Yes
SLOT-04 : DVD Enabled	Yes

Figure 3. DVD properties



For setting up a DVD feature, click **Front Panel > Setup > DVD Drive Configuration**.

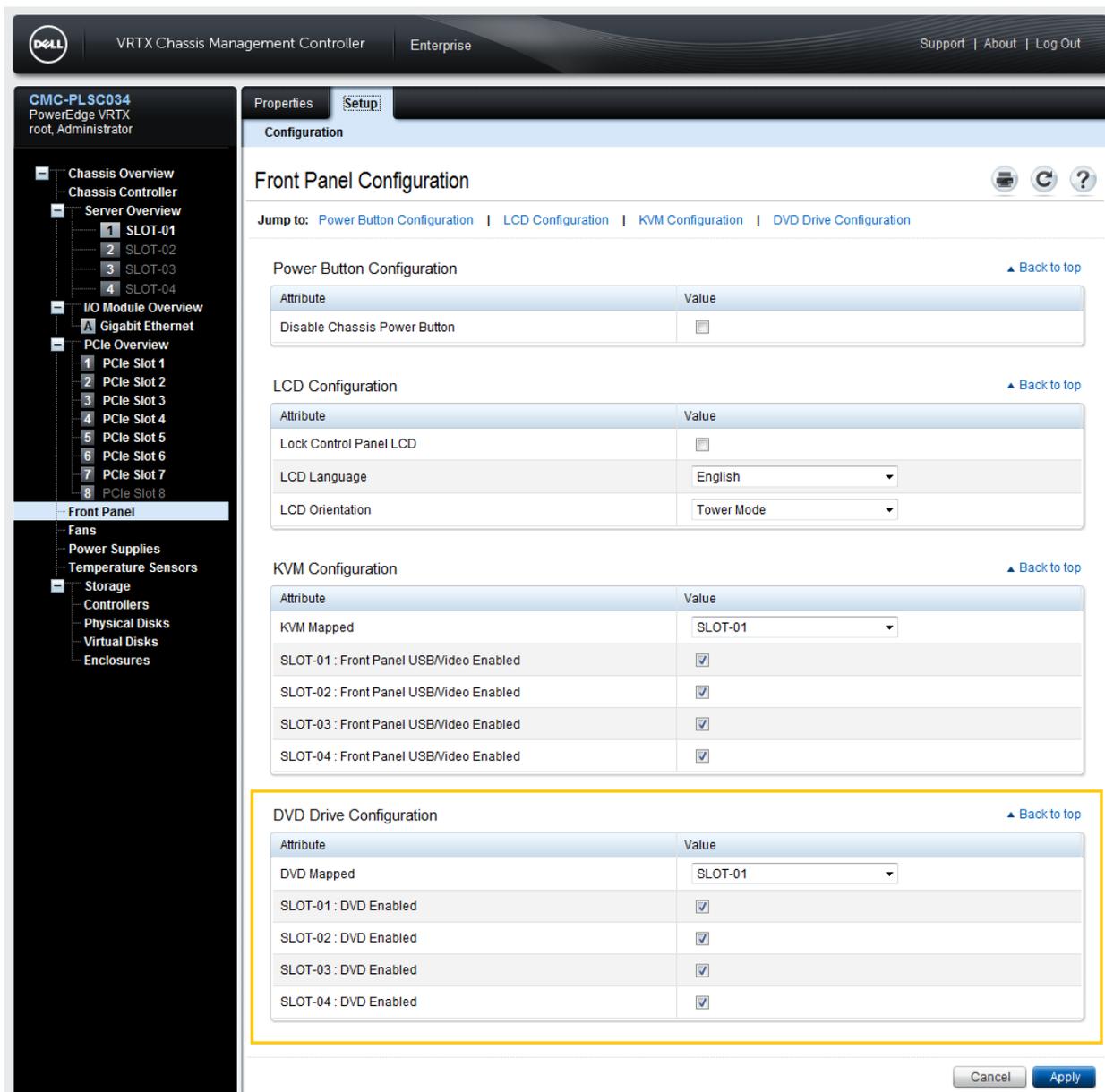


Figure 4. DVD Setup

USB Mass Storage and Other USB Devices

KVM Configuration Section discusses the assignment of KVM ports and assignment to servers. There are two ports given for keyboard and mouse. These ports are designated only for Keyboard and Mouse



use, and as such Dell only supports these ports for keyboard and mouse. You may be able to connect other USB devices and assign them to servers at your own risk.

Summary

VRTX Chassis is a converged infrastructure solution that combines up to four separate compute nodes, network infrastructure, and a shared storage subsystem in one chassis. This paper has discussed how to setup and manage the KVM and its associated USB port, and the DVD in the VRTX chassis.

This document is for informational purposes only and may contain typographical errors and technical inaccuracies. The content is provided as is, without express or implied warranties of any kind.

© 2013 Dell Inc. All rights reserved. Dell and its affiliates cannot be responsible for errors or omissions in typography or photography. Dell and the Dell logo are trademarks of Dell Inc. Microsoft, Windows, and the Windows logo are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Intel and Xeon are registered trademarks of Intel Corporation in the U.S. and other countries. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims proprietary interest in the marks and names of others.

June 2013 | Rev 1.0

