Using VRTX KVM and DVD

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

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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.

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**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*.

![KVM properties](image)

**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*. 
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.

```bash
$ 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.

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.