# Overview of SDMC

ESCALA Power7

REFERENCE
86 A1 12FH 01

# ESCALA Power7

## Overview of SDMC

The ESCALA Power7 publications concern the following models:

- Bull Escala E5-700 (Power 750 / 8233-E8B)
- Bull Escala M6-700 (Power 770 / 9117-MMB)
- Bull Escala M6-705 (Power 770 / 9117-MMC)
- Bull Escala M7-700 (Power 780 / 9179-MHB)
- Bull Escala M7-705 (Power 780 / 9179-MHC)
- Bull Escala E1-700 (Power 710 / 8231-E2B)
- Bull Escala E1-705 (Power 710 / 8231-E1C)
- Bull Escala E2-700 / E2-700T (Power 720 / 8202-E4B)
- Bull Escala E2-705 / E2-705T (Power 720 / 8202-E4C)
- Bull Escala E3-700 (Power 730 / 8231-E2B)
- Bull Escala E3-705 (Power 730 / 8231-E2C)
- Bull Escala E4-700 / E4-700T (Power 740 / 8205-E6B)
- Bull Escala E4-705 (Power 740 / 8205-E6C)

References to Power 755 / 8236-E8C models are irrelevant.

## Hardware

**October 2011**

BULL CEDOC

357 AVENUE PATTON

B.P.20845

49008 ANGERS CEDEX 01

FRANCE

**REFERENCE**
**86 A1 12FH 01**

Printed in France

Suggestions and criticisms concerning the form, content, and presentation of this book are invited. A form is provided at the end of this book for this purpose.

To order additional copies of this book or other Bull Technical Publications, you are invited to use the Ordering Form also provided at the end of this book.

## Trademarks and Acknowledgements

# Contents

# SDMC concepts

The IBM Systems Director Management Console (SDMC) is the next generation Hardware Management Console (HMC) that combines the functions of the HMC, the simplicity of the Integrated Virtualization Manager (IVM), and the value-add functions of the IBM® Systems Director. The SDMC provides server management and PowerVM™ virtualization management.

The SDMC is a management console for managing IBM Power Systems™ servers and IBM BladeCenter® Power blade servers. The SDMC is an alternative and replacement for the current HMC with enhanced virtualization and hardware management capabilities. The SDMC is an x86-based console. The SDMC manages IBM AIX®, IBM i, or Linux operating systems on IBM Power Systems servers and IBM BladeCenter Power blade servers.

# Comparing HMC and SDMC features

You need to understand the differences between the Hardware Management Console (HMC), Integrated Virtualization Manager (IVM), and IBM Systems Director Management Console (SDMC) environments including terminology, users and roles, supported features, high availability options, and command-line differences.

## Comparing the HMC and SDMC

There are some important differences between the HMC and the SDMC.

With the SDMC, the scope of administered systems spans from POWER blade servers to high-end systems, providing a single, consistent approach to systems administration.

The characteristics of both the HMC and the SDMC, at a high level, follow:

**HMC**

- Is implemented as an external, independent appliance
- Can administer entry-level systems to high-end systems
- Can administer more than one managed system
- Allows for more than one VIOS per managed system

**SDMC**

- SDMC is offered as an appliance in two forms:
  - A hardware appliance similar to the HMC, using essentially the same hardware plus additional memory and disk.
  - A virtual appliance that runs in a VMware partition
- Can administer entry-level systems to high-end systems
- Can administer more than one managed system
- Allows for more than one VIOS per managed system
- Supports entry-level systems to high-end systems plus blades.

## How the SDMC is used

SDMC represents the next generation of management appliances for POWER processor-based systems. The SDMC replaces both the HMC and IVM in POWER processor-based systems administration. Thus, the SDMC can manage POWER systems directly but can also work with the HMC and IVM side by side to ease transition.

SDMC is integrated into the administrative framework of IBM Systems Director. It provides a common interface for systems administration across the data center. If you have used an HMC or IVM, you will already be familiar with SDMC tasks and procedures. The Systems Director provides additional tasks that you might want to explore. Note that these additional Systems Director tasks and navigation options might make it more difficult to find familiar HMC tasks. For more information about navigating the SDMC GUI, see “Navigation differences between the HMC GUI and the SDMC GUI” on page 7.

The SDMC can unify platform management for IBM Systems, providing a consistent interface for common management tasks. By integrating POWER processor-based systems management into the IBM Systems Director framework, you can easily manage many systems of different types. The SDMC also enables the integration of POWER processor-based systems into data center management tools.

As a successor to both the HMC and IVM, the SDMC administrators can work with a high-level view of systems. It organizes tasks in a single window, instead of using different menus. This interface simplifies views on systems and provides faster access to day-to-day tasks.

As it was with older POWER processor-based systems, the transition to the SDMC requires that management for POWER5 and POWER5+ processor based systems continue with either the HMC or IVM. The SDMC can administer the HMC and IVM as well; however, this management console eases transition from older environments into new ones.

## Virtualization enhancements

SDMC has made managing your virtualization environment significantly easier, while maintaining all of the HMC's existing functions.

The enhancements follow:

**Virtual I/O management**
In addition to the HMC's Virtual Storage Management view, The SDMC brings similar simplification to the Create Virtual Server and Manage Virtual Server views. With SDMC, you can see the storage devices attached to a virtual server and need not be concerned about your virtual SCSI device pairs and the VIOS command-line.

**Simplified Create Virtual Server wizard**
Create Virtual Server (known as logical partition on the HMC) wizard asks only what is needed to create the virtual server, and selects reasonable defaults for all other settings. Advanced users who want full control can change the profile after the wizard is completed to control all of their settings, such as min/max values. You can now create a virtual server by simply specifying the name and clicking **Finish**.

**Managing virtual server**
A task called **Manage Virtual Server** displays virtual server properties and I/O device configuration information in one window. With this task, you control the resource assignments for a virtual server directly (whether the virtual server is powered on or off) without using a profile.

## Terminology differences between HMC and SDMC

The HMC and SDMC environments use different terminology.

For integration into IBM Systems Director, SDMC introduces some synonyms that replace familiar HMC terms. The key ones to remember are the following:

- *Virtual Server* (formerly *Partition*)
- *Host* (formerly *Managed System* or *Server*)
- *Power Unit* (formerly *Frame*)

For detailed information about the terminology differences between the HMC and the SDMC, see the following tables.

*Table 1. Networking terms*

| HMC | SDMC | Description |
|---|---|---|
| Open network | Standard network | The standard network can be connected to a firewall or router for connecting to the Internet. |

*Table 2. Objects*

| HMC | SDMC | Description |
|---|---|---|
| Hardware Management Console (HMC), Integrated Virtualization Manager (IVM) | Platform manager | A platform manager manages one or more hosts and their associated virtual servers and operating systems. For Power Systems servers, the platform managers are HMC and IVM. |
| Frame, bulk power assembly (BPA) | Power unit | The power assembly for processor, memory, FSP, and I/O enclosures. |
| Server, managed system, system, flexible service processor (FSP), central electronics complex (CEC) | Host | A physical server that contains physical processors, memory, and I/O resources. The physical server is often virtualized into virtual servers, also known as logical partitions. |
| Logical partition (LPAR), dynamic LPAR (DLPAR), partition | Virtual server | The collection of processor, memory and I/O resources defined to run an operating system and its applications. |
| Virtual I/O Server (VIOS) | Utility virtual server | A virtual server that provides virtualization capabilities for a particular environment. |
| CEC, Frame, and LPAR states | Director states | |

*Table 3. Tasks*

| HMC | SDMC | Description |
|---|---|---|
| Remove connection – systems | Remove host | The remove tasks removes the host from the directory database. |

*Table 4. Users and roles*

| HMC | SDMC | Description |
|---|---|---|
| hscroot | sysadmin | Predefined administrator user for the platform manager. |
| hscpe | pe | Predefined service and support user for the platform manager. |
| hmcsuperadmin | SMAdministrator (Administrator role) | The Administrator role has full authority to all resources and tasks, including security administration, product installation, and configuration. |
| hmcoperator | SMManager (Manager role) | The Manager role can perform a subset of the tasks that an administrator can perform. Typically, system administration, system health management, and configuration tasks are available. |
| N/A | SMUser (User role) | The User role includes any authenticated user and allows only basic operations such as viewing resources and properties. |

*Table 4. Users and roles (continued)*

| HMC | SDMC | Description |
|---|---|---|
| hmcviewer | SmMonitor (Monitor role) | The Monitor role can access those administrative functions that provide read-only access. Primarily, monitoring, notifications, and status tasks are available. |
| hmcservicerep | SMServiceRep (PE role) | The PE role includes the pe user and gives users the ability to perform only service operations, such as viewing resources, logs, and system status and health. |

*Table 5. Hosts and system states.*

**Note:** SDMC states include operating states, detailed states, and health states.

| HMC states | SDMC operating states | SDMC detailed states | SDMC health states |
|---|---|---|---|
| Operating | Started | N/A | OK |
| Standby | Standby | N/A | OK |
| Power off | Stopped | N/A | OK |
| Service processor failover | Started | Service processor failover | Degraded/warning |
| Power off in progress | Stopping | N/A | OK |
| Initializing | Starting | N/A | OK |
| No connection * (should be handled by Access Point state) | Not available | Unknown | Unknown |
| Pending authentication | Waiting for input | Password updates required | Degraded/warning |
| Failed Authentication * (Should be handled by Access Point state, that is, Failed Access) | Not available | Unknown | Unknown |
| Error | Error | Unknown | Critical failure |
| Error - terminated | Error | Terminated | Critical failure |
| Error - dump in progress | Error | Dump in progress | Critical failure |
| Recovery | Error | Recovery | Critical failure |
| Incomplete | Error | Incomplete | Critical failure |
| Version mismatch | Error | Version mismatch | Major failure |

*Table 6. Virtual server and partition states*

| HMC states | SDMC operating states | SDMC detailed states | SDMC health states |
|---|---|---|---|
| Running | Started | N/A | OK |
| Starting | Starting | N/A | |
| Not activated | Stopped | N/A | Unknown |
| Migrating - not activated | Relocating | N/A | OK |
| Migrating - running | Relocating | N/A | OK |
| Shutting down | Stopping | N/A | OK |
| Open firmware | Waiting for input | Open firmware | OK |

*Table 6. Virtual server and partition states (continued)*

| HMC states | SDMC operating states | SDMC detailed states | SDMC health states |
|---|---|---|---|
| Hardware discovery | Started | Performing hardware discovery | OK |
| Error | Error | Unknown | Major failure |
| Not available | Not available | Unknown | Unknown |

*Table 7. Power unit states*

| HMC state | SDMC Operating State | SDMC Detailed State | SDMC Health State |
|---|---|---|---|
| Standby | Standby | N/A | Degraded |
| Standby/starting | Standby | N/A | OK |
| Starting | Starting | N/A | |
| Pending frame number change | Standby | N/A | Degraded |
| Failed authentication | Not Available | Unknown | Unknown |
| Pending authentication | Waiting for input | Password updates required | Degraded / Warning |
| No connection | Not available | Unknown | Unknown |
| Incomplete | Error | Incomplete | Critical failure |
| Version mismatch | Error | Version mismatch | Major failure |

## Navigation differences between the HMC GUI and the SDMC GUI

This section describes the differences in navigating to commonly used Hardware Management Console (HMC) tasks on the HMC and on the Systems Director Management Console (SDMC).

Because IBM Systems Director manages many different types of objects, it has a generic navigation style. Systems Director groups managed objects and shows general properties for each object. The SDMC interface is quite similar to the HMC interface.

Below is a list of commonly-used HMC tasks, and where they can now be found in the SDMC interface:

### Viewing host (server) properties by using the SDMC interface

The Properties task in SDMC is different from that of the HMC. The SDMC now calls a server a *host*.

To view server properties by using the HMC, complete the following steps:

1. In the navigation pane, select**Systems Management**.
2. Select the server.
3. In the contents pane, select **Tasks** > **Properties**.

To view host properties by using the SDMC, complete the following steps

1. From the Resources page, right-click the host.
2. Select **System Configuration** > **Edit Host**.

### Viewing virtual server (partition) properties by using the SDMC interface

To view partition properties by using the HMC, complete the following steps:

1. In the navigation pane, select**Systems Management**.

2. In the contents pane, expand the server.
3. Select the logical partition.
4. Click **Tasks** > **Properties**.

The SDMC now calls a partition a *virtual server*.

To view virtual server properties using the SDMC, complete the following steps:
1. From the Resources page, select the virtual server.
2. Click **System Configuration** > **Manage Virtual Server**.

## Discovering a system to manage using the SDMC interface

*Discovery* is a general Systems Director concept of finding a system or object to manage. You can use the SDMC interface to discover and manage the following objects:
- Host flexible service processors (FSPs) and host power units
- Bulk power controllers (BPCs) and frames
- Operating systems

If you are using the SDMC as a Dynamic Host Configuration Protocol (DHCP) server for your managed systems, the FSPs and BPCs are discovered automatically. If you are not using the SDMC as a DHCP server, you can discover the resource by entering a host name, an IP address, or a range of IP addresses in the **Discover** section of the GUI or the command-line interface (CLI).

To discover a system to manage by using the HMC, complete the following steps:
1. In the navigation pane, select**Systems Management**.
2. Select the server.

To discover a host to manage by using the SDMC, complete the following steps:
1. On the Resources page, click**Common Tasks** > **System Discovery**.
2. Select a discovery option, IP address, and the resource type to discover.
3. Click **Discover now**.

## Powering a server (host) on or off by using the SDMC interface

To power a server on or off by using the HMC, complete the following steps:
1. In the navigation pane, select**Systems Management**.
2. Select the server.
3. In the contents pane, select **Tasks** > **Operations** > **Power On** or **Tasks** > **Operations** > **Power Off**.

The SDMC now calls a server a *host*.

To power a host on or off by using the SDMC, complete the following steps:
1. From the Resources page, right-click the host.
2. Select **Operations** > **Power on** or **Operations** > **Power off**.

## Creating a logical partition (virtual server) by using the SDMC interface

To create a logical partition by using the HMC, complete the following steps:
1. In the navigation pane, select**Systems Management**.
2. Select the server on which you want to create a logical partition.
3. In the contents pane, select **Tasks** > **Configuration** > **Create logical partition**.

The SDMC calls a partition a *virtual server*. To create a virtual server by using the SDMC, compete the following steps:

1. From the Resources page, right-click the host.
2. Select **Create Virtual Server**.

## Comparing HMC tasks and SDMC tasks

This section provides detailed task information for moving from Hardware Management Console (HMC) to Systems Director Management Console (SDMC) for each HMC task.

## Server (host) tasks

This topic provides server task information for moving from HMC to SDMC. Servers are known as *hosts* on the SDMC.

The following task mapping information is available in this topic:

- Server (host) properties task mapping
- Server (host) operations task mapping
- Server (host configuration task mapping
- Server (host) connections task mapping
- Server (host) hardware information task mapping
- Server (host) updates task mapping
- Server (host) serviceability task mapping
- Server (host) Capacity on Demand task mapping

*Table 8. Server (host) properties task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| View Properties | System Configuration > Edit Host | Yes | The properties task on SDMC is different from that on the HMC.<br><br>For more information about performing this task, see Changing host properties. |

*Table 9. Server (host) operations task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Power On and Power Off | Operations > Power On / Power Off | No | The function is the same, but the interface is different.<br><br>For more information about performing this task, see Powering on the host. |
| Power Management | Operations > Power Management | No | The function is the same, but the interface is different.<br><br>For more information about performing this task, see Performing POWER management operations. |

*Table 9. Server (host) operations task mapping (continued)*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| LED Status > Deactivate Attention LED | Service and Support > Hardware > System Attention LED | Yes | For more information about performing this task, see Activating and deactivating the Attention LED. |
| LED Status > Identify LED | Service and Support > Hardware > Identify LED | Yes | For more information about performing this task, see Locating parts with the Identify LED. |
| LED Status > Test LED | Service and Support > Hardware > LED Lamp Test | Yes | For more information about performing this task, see Performing an LED lamp test. |
| Schedule Operations | Operations > Schedule Operations | No | The function is the same, but the interface is different.<br><br>For more information about performing this task, see Scheduling host operations. |
| Launch Advanced System Management (ASM) | Operations > Launch Advanced System Management (ASM) | No | The function is the same, but the interface is different.<br><br>For more information about performing this task, see Launching Advanced System Management. |
| Utilization Data > Change Sampling Rate | Operations > Utilization Data > Change Sampling Rate | Yes | For more information about performing this task, see Changing the sampling rate for utilization data. |
| Utilization Data > View | Operations > Utilization Data > View Utilization Data | Yes | For more information about performing this task, see Viewing host utilization data. |
| Rebuild | Operations > Rebuild Managed System | No | The function is the same, but the interface is different.<br><br>For more information about performing this task, see Rebuilding a managed system. |
| Change Password | Operations > Change Password | No | The function is the same, but the interface is different.<br><br>For more information about performing this task, see Changing host passwords |

*Table 10. Server (host) configuration task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Create Logical Partition | System Configuration > Create Virtual Server | No | The HMC has 3 separate tasks. The SDMC combines these tasks into one task.<br><br>For more information about performing this task, see Creating virtual servers. |
| System Plans > Create/Deploy | System Configuration > Manage System Plans | Mostly | The SDMC task places all system plan function under the Manage System Plans task.<br><br>For more information about performing this task, see Creating a system plan by using the SDMC. |
| View Workload Management Groups | System Configuration > View Workload Management Groups | Yes | |
| Manage Profile Data > Restore/Initialize/Backup/ Delete | System Configuration > Manage Virtual Server Data > Restore/Initialize/ Backup/Delete | Yes | For more information about performing this task, see Managing profiles for virtual servers. |
| Manage System Profiles | System Configuration > Manage System Profiles | Yes | For more information about performing this task, see Managing system profiles. |
| Virtual Resources > Virtual Storage Management | System Configuration > Virtual Resources > Virtual Storage Management | | |
| Virtual Resources > Virtual Network Management | System Configuration > Virtual Resources > Virtual Network Management | Yes | |

*Table 11. Server (host) connections task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Service Processor Status | System Configuration > Edit Host | Yes | |
| Reset or Remove Connection | Security > Revoke Access, Security > Request Access, Remove | | Revoke access removes the connection. Request access reestablishes it. The remove operation is the equivalent to Remove Connection.<br><br>For more information about performing this task, see Revoking connection access. |
| Disconnect Another Management Console | Service and Support > Reset Other Management Console Connection | | |

*Table 11. Server (host) connections task mapping (continued)*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| • Add Managed System<br>• Update Password | • Common Tasks > System Discovery<br>• Security > Request Access | | Adding a system is a two-step process on SDMC. First, discover the system, and then request access. On the HMC it can be done in one step.<br><br>For more information about performing this task, see Adding hosts to the SDMC. |

*Table 12. Server (host) hardware information task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Adapters > Host Ethernet | Hardware Information > Adapter > Host Ethernet | Yes | |
| Adapters > Host Channel | Hardware Information > Adapter > Host Channel | Yes | |
| View Hardware Topology | Hardware Information > View Hardware Topology | Yes | |

*Table 13. Server (host) updates task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Change Licensed Internal Code | Release Management > See notes | No | The HMC uses a wizard for updates, whereas the SDMC has separate steps for updates. Update tasks are under the Release Management menu.<br><br>For more information about performing this task, see Updating the host. |
| Upgrade Licensed Internal Code | Release Management > See notes | No | Upgrade, change, and update operations have the same user flow on SDMC.<br><br>For more information about performing this task, see Updating the host. |
| Check System Readiness | Release Management > Readiness Check | No | |
| View System Information | Release Management > Power Firmware Management | No | In SDMC, power-specific update tasks are under the **Power Firmware Management** task.<br><br>For more information about performing this task, see Managing Power system firmware. |

*Table 14. Server (host) serviceability task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Manage Serviceable Events | Properties > Active Status > Category: Service Status | No | For more information about performing this task, see Managing serviceable problems by using Service and Support Manager. |
| Create Serviceable Event | Service and Support > Submit Service Request | No | For more information about performing this task, see Submitting service request using Service and Support Manager. |
| Reference Code History | Service and Support > Reference Code History | Yes | For more information about performing this task, see Reference Code History. |
| Control Panel Functions > (20) Type, Model, Feature | Service and Support > Control Panel Functions > (20) Type, Model, Feature | Yes | For more information about performing this task, see Control Panel Functions. |
| Hardware > Prepare For Hot Repair/Upgrade | Service and Support > Hardware > Prepare For Hot Repair/Upgrade | Yes | For more information about performing this task, see Preparing for Hot Repair or Upgrade. |
| Hardware > Exchange FRU | Service and Support > Hardware > Exchange FRU | Yes | For more information about performing this task, see Exchange FRU. |
| Hardware > Power On/Off Unit | Service and Support > Hardware > Power On/Off Unit | Yes | For more information about performing this task, see Power On/Off Unit. |
| Hardware > MES Tasks | Service and Support > Hardware > MES Tasks | Yes | For more information about performing this task, see MES tasks. |
| Manage Dumps | Service and Support > Support Files | No | For more information about performing this task, see Managing support files by using Service and Support Manager. |
| Manage Dumps > System Dump Parameters | Service and Support > Dump Settings | No | For more information about performing this task, see Managing support files by using Service and Support Manager. |
| Collect VPD | Inventory > View and Collect Inventory | No | |
| FSP Failover > Setup/Initiate | Service and Support > FSP Failover > Failover Initiate/Failover Setup | Yes | For more information about performing this task, see FSP Failover. |

*Table 15. Server (host) Capacity on Demand task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| All Tasks | System Configuration > Capacity on Demand (CoD) | No | SDMC has combined all CoD functions into one Manage task.<br><br>For more information about performing this task, see Capacity on Demand for SDMC. |

## Partition (virtual server) tasks

This topic provides partition task information for moving from HMC to SDMC. Partitions are known as *virtual servers* on the SDMC..

The following task mapping information is available in this topic:

- Partition (virtual server) task mapping
- Partition (virtual server) operations task mapping
- Partition (virtual server) configuration task mapping
- Partition (virtual server) hardware configuration task mapping
- Partition (virtual server) Dynamic Logical Partitioning (DLPAR) task mapping
- Partition (virtual server) console window task mapping
- Partition (virtual server) serviceability task mapping

*Table 16. Partition (virtual server) task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Properties | System Configuration > Manage Virtual Server | No | SDMC has combined Properties and dynamic logical partitioning (DLPAR) tasks into the Manage Virtual Server task.<br><br>For more information about performing this task, see Manage virtual server operations. |
| Change Default Profile | N/A | | SDMC has removed this task. |

*Table 17. Partition (virtual server) operations task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Activate > Profile | Operations > Activate > Profile | Yes | For more information about performing this task, see Activating a virtual server based on its current configuration. |
| Activate > Current Configuration | Operations > Activate > Current Configuration | Yes | For more information about performing this task, see Activating a virtual server. |

*Table 17. Partition (virtual server) operations task mapping (continued)*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Restart | Operations > Restart | Yes | For more information about performing this task, see Shutting down and restarting virtual servers. |
| Shutdown | Operations > Shutdown | Yes | For more information about performing this task, see Shutting down and restarting virtual servers. |
| Deactivate Attention LED | Service and Support > Hardware > System Attention LED | Yes | |
| Schedule Operations | Operations > Schedule Operations | No | This task in SDMC is done on the server (host), not the partition (virtual server) |
| Delete | Operations > Delete | Yes | For more information about performing this task, see Deleting a virtual server profile. |
| Mobility > Migrate | Operations > Mobility > Migrate | Yes | For more information about performing this task, see Moving the virtual server with SDMC. |
| Mobility > Validate | Operations > Mobility > Validate | Yes | For more information about performing this task, see Validating the configuration for virtual server mobility. |
| Mobility > Recover | Operations > Mobility > Recover | Yes | |
| Suspend Operations > Recover | Operations > Suspend Operations > Recover | Yes | For more information about performing this task, see Recovering a suspended virtual server. |
| Suspend Operations > Suspend | Operations > Suspend Operations > Suspend | Yes | For more information about performing this task, see Suspending a virtual server. |

*Table 18. Partition (virtual server) configuration task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Manage Profiles | System Configuration > Manage Profiles | Yes | The Create Profile wizard has been removed and is replaced with the Copy Profile which launches into the edit profile function for changing the profile.<br><br>For more information about performing this task, see Managing profiles for virtual servers. |
| Manage Custom Groups | Add To > Existing Group / Create Group System | No | For more information about performing this task, see Managing users. |

*Table 18. Partition (virtual server) configuration task mapping (continued)*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Save Current Configuration | Configuration > Save Current Configuration | Yes | For more information about performing this task, see Saving the current configuration of a virtual server. |

*Table 19. Partition (virtual server) hardware configuration task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| All Tasks | System Configuration > Manage Virtual Server | No | For SDMC, I/O adapter management is done under the **Manage Virtual Server** task.<br><br>For more information about performing this task, see Manage virtual server operations. |

*Table 20. Partition (virtual server) dynamic logical partitioning (DLPAR) task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| All Tasks | System Configuration > Manage Virtual Server | No | For SDMC, DLPAR tasks are done under the **Manage Virtual Server** task. Note that DLPAR Move tasks from the GUI are a two-step process (remove and add).<br><br>For more information about performing this task, see Managing virtual servers. |

*Table 21. Partition (virtual server) console window task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Open Terminal Window | Operations > Console Window > Open Terminal Console | No | The TTY terminal applet requires you to authenticate to SDMC. |
| Close Terminal Connection | Operations > Console Window > Close Terminal Console | No | |
| Open Dedicated 5250 Console (Local Only) | Operations > Console Window > Open Dedicated 5250 Console (Local Only) | Yes | Launches x-Windows IBM 5250 emulator to the virtual server in dedicated mode. |
| Open Shared 5250 Console (Local Only) | Operations > Console Window > Open Shared 5250 Console (Local Only) | Yes | Launches x-Windows IBM 5250 emulator to the virtual server in shared mode. |

*Table 22. Partition (virtual server) serviceability task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Manage Serviceable Events | Properties > Active Status > Category: Service Status | No | For more information about performing this task, see Managing serviceable problems by using Service and Support Manager. |
| Reference Code History | Service and Support > Reference Code History | Yes | For more information about performing this task, see Reference Code History. |
| Control Panel Functions | Service and Support > Control Panel Functions | No | For SDMC, all functions are available in one task.<br><br>For more information about performing this task, see Control Panel Functions. |

## Frame (power unit) tasks

This topic provides frame task information for moving from HMC to SDMC. Frames are known as *power units* on the SDMC.

The following task mapping information is available in this topic:

- Frame properties task mapping
- Frame connections task mapping
- Frame serviceability task mapping
- Frame operations task mapping

*Table 23. Frame properties task mapping*

| HMC Task | SDMC Task | Is the task identical? | Notes |
|---|---|---|---|
| Frame Properties | Edit Power Unit | No | For more information about performing this task, see Changing power unit properties. |

*Table 24. Frame connections task mapping*

| HMC Task | SDMC Task | Is the task identical? | Notes |
|---|---|---|---|
| Bulk Power Assembly (BPA) | Connections > Bulk Power Assembly (BPA) Status | No | For more information about performing this task, see Viewing the bulk power assembly status. |
| Status Reset | Security > Revoke Access, Security > Request Access, Revoke | No | Revoke access removes the connection. Request access re-establishes it.<br><br>For more information about performing this task, see Requesting connection access and Revoking connection access. |

*Table 25. Frame serviceability task mapping*

| HMC Task | SDMC Task | Is the task identical? | Notes |
|---|---|---|---|
| Manage Serviceable Events | Properties > Active Status > Category: | No | For more information about performing this task, see Managing serviceable problems by using Service and Support Manager. |
| Hardware > Exchange FRU | Service Status Service and Support > Hardware > Exchange FRU | Yes | For more information about performing this task, see Replace FRU. |
| Hardware > MES Tasks | Service and Support > Hardware > MES Tasks | Yes | For more information about performing this task, see Performing MES tasks. |

*Table 26. Frame operations task mapping*

| HMC Task | SDMC Task | Is the task identical? | Notes |
|---|---|---|---|
| Initialize | Operations > Initialize Power Unit | No | For more information about performing this task, see Initializing the power unit. |
| Launch Advanced System Management (ASM) | Operations > Launch Advanced System Management (ASM) | No | For more information about performing this task, see Launching Advanced System Manager. |
| Change Password | Operations > Change Password | No | For more information about performing this task, see Changing power unit passwords. |
| Rebuild | Operations > Rebuild | No | For more information about performing this task, see Rebuilding the power unit. |
| View VLAN Network Data | Service and Support > View VLAN Network Data | Yes | For more information about performing this task, see Viewing VLAN network data. |

## HMC and SDMC management tasks

This topic provides console or appliance task information for moving from HMC to SDMC.

The following task mapping information is available in this topic:

- Update the HMC (SDMC) task mapping
- HMC (SDMC) management: operations task mapping
- HMC (SDMC) management: administration task mapping

*Table 27. Update the HMC (SDMC) task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Update HMC | Welcome > Settings > Update SDMC | No | If you do not have a connection to the Internet, click Stop, and manually import the updates from a local file system or from a File Transfer Protocol (FTP) server.<br><br>For more information about performing this task, see Updating the SDMC. |

*Table 28. HMC (SDMC) management: Operations task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| View HMC Events | System Status and Health > Event Log Welcome | No | |
| Shut Down or Restart | System Status and Health > Event Log Welcome > Settings > Restart SDMC | No | The Restart task has an option to simply shut down as well.<br><br>For more information about performing this task, see Restarting the IBM Systems Director Management Console. |
| View Trace Logs (HSCPE Only) | Welcome > Settings > Serviceability Tasks > View Trace Logs (PE Only) | Yes | |
| Schedule Operations | Task Management > Active and Scheduled Jobs | No | |
| Format Media | N/A | No | There is no equivalent function in the SDMC |
| Back Up HMC Data | CLI: backup(hardware appliance only) | No | The SDMC only has a CLI for backup. This task is available only on the hardware appliance. The virtual appliance can be backed up with hypervisor disk snapshots.<br><br>For more information about performing this task, see Backing up and restoring the SDMC and Using the SDMC remote command line. |

*Table 28. HMC (SDMC) management: Operations task mapping (continued)*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Restore HMC Data | CLI: restore(Hardware Appliance Only) | No | SDMC only has a CLI for restore. This task available only on the hardware appliance. The virtual appliance can be restored from hypervisor disk snapshots.<br><br>For more information about performing this task, see Backing up and restoring the SDMC and Using the SDMC remote command line. |
| Save Upgrade Data | N/A | No | SDMC upgrades do not need a separate save upgrade step. |
| Change Network Settings | Welcome > Settings > Configuration Tasks > Configure Network | No | For more information about performing this task, see Configuring the network. |
| Test Network Connectivity | N/A | No | There is no equivalent UI function in SDMC. For ping and routing information, the user can the appropriate command.<br><br>For more information about performing this task, see Using the SDMC remote command line. |
| View Network Topology | N/A | No | There is no equivalent function in SDMC. |
| Tip of the Day | N/A | No | There is no equivalent function in SDMC. |
| Change Default User Interface Setting | N/A | No | There is no equivalent function in SDMC. |
| Change Date and Time | Welcome > Settings > Configuration Tasks > Configure Date/Time | No | For more information about performing this task, see Configuring date and time. |
| Launch Guided Setup Wizard | N/A | No | The setup wizard is only shown on initial configuration. |

*Table 29. HMC (SDMC) management: Administration task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Change User Password | Welcome > Settings > Change user account password | No | For more information about performing this task, see Changing user accounts and passwords. |

*Table 29. HMC (SDMC) management: Administration task mapping (continued)*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Manage User Profiles and Access | Welcome > Settings > Create user accounts<br><br>Welcome > Settings > View user accounts<br><br>Security > Users | No | For more information about performing this task, see Managing users and passwords. |
| Manage Tasks and Resource Roles | Security > Roles | No | For more information about performing this task, see Managing users and passwords. |
| Manage Users and Tasks | Security > Users | No | In SDMC, you can view running tasks in the Task Management area of the GUI.<br><br>For more information about performing this task, see Managing users and passwords. |
| Manage Certificates | CLI: mkcert and updcert | No | CLI only.<br><br>For more information about performing this task, see Using the SDMC remote command line. |
| Configure KDC | Welcome > Settings > Security Tasks > Configure Kerberos Client | No | For more information about performing this task, see Configuring the SDMC as a Kerberos client. |
| Configure LDAP | Welcome > Settings > Security Tasks > Configure LDAP Client | No | For more information about performing this task, see Configuring the SDMC as an LDAP client. |
| Remote Command Execution | N/A | No | SDMC enables Secure Shell (SSH) by default. You can control this only by using the firewall.<br><br>For more information about performing this task, see Using the SDMC remote command line. |
| Remote Virtual Terminal | N/A | No | SDMC has removed the remote VTTY port, and requires SSH instead for remote console connections. The SDMC GUI vterm applet now uses SSH. |

*Table 29. HMC (SDMC) management: Administration task mapping (continued)*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Remote Operation | N/A | No | SDMC enables remote access to the web interface by default. You can control this only by using the firewall.<br><br>For more information about performing this task, see Configuring the network. |
| Change Language and Locale | CLI: `chconfig –l` | No | The SDMC GUI can be controlled with the web browser locale settings. The console can be controlled with only the CLI.<br><br>For more information about performing this task, see Using the SDMC remote command line. |
| Create Welcome Text | N/A | No | There is no equivalent function in SDMC.<br><br>For more information about performing this task, see Create welcome text. |
| Manage Data Replication | N/A | No | There is no equivalent function in SDMC. |
| Manage Install Resources | N/A | No | There is no equivalent function in SDMC. |

## Service management

This topic provides service management task information for moving from HMC to SDMC.

The following task mapping information is available in this topic:

- Service management task mapping
- Service management: connectivity task mapping

*Table 30. Service management task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Create Serviceable Event | Welcome > Manage > Service and Support Manager > Open a service request | No | For more information about performing this task, see Submitting service request using Service and Support Manager. |
| Manage Serviceable Events | Welcome > Manage > Service and Support Manager > Serviceable Problems | No | For more information about performing this task, see Managing serviceable problems by using Service and Support Manager. |
| Manage Remote Connections | N/A | No | There is no equivalent function in SDMC. |

*Table 30. Service management task mapping (continued)*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Manage Remote Support Requests | N/A | No | There is no equivalent function in SDMC. |
| Format Media | N/A | No | There is no equivalent function in SDMC. |
| Manage Dumps | Welcome > Manage > Service and Support Manager > Manage Support Files | No | For more information about performing this task, see Managing support files by using Service and Support Manager. |

*Table 31. Service management: connectivity task mapping*

| HMC task | SDMC task | Is the task identical? | Notes |
|---|---|---|---|
| Transmit Service Information | Welcome > Manage > Service and Support Manager > Settings | No | For more information about performing this task, see Activating the service and support manager. |
| Enable Electronic Service Agent | Welcome > Manage > Service and Support Manager > Settings | No | For more information about performing this task, see Activating the service and support manager. |
| Manage Outbound Connectivity | Welcome > Manage > Service and Support Manager > Settings | No | For more information about performing this task, see Activating the service and support manager. |
| Manage Inbound Connectivity | Welcome > Settings > Configure VPN | No | |
| Manage Customer Information | Welcome > Manage > Service and Support Manager > Manage your system contacts | No | For more information about performing this task, see Managing serviceable problems by using Service and Support Manager. |
| Authorize User | Welcome > Manage > Service and Support Manager > Settings | No | For more information about performing this task, see Authorizing user. |
| Manage Serviceable Event Notification | Welcome > Manage > Service and Support Manager > Settings (click the **learn more about automation plans** link) | No | SDMC supports email notification only. SNMP trap notification is not supported. |
| Manage Connection Monitoring | N/A | | There is no equivalent function in SDMC. |
| Manage POWER4 Service | N/A | | There is no equivalent function in SDMC. |
| Agent Electronic Service Agent Setup Wizard | Welcome > Settings > Serviceability Tasks > Service and Support Manager Getting Started Wizard | | |

## Functional differences between the HMC, IVM, and SDMC

There are functional differences between the Hardware Management Console (HMC) and Integrated Virtualization Manager environments and the Systems Director Management Console (SDMC) environment.

The SDMC incorporates most functions of the HMC. This has been done through direct mapping of commands or by replacing functions that are present already in IBM Systems Director. Some functions are not currently available for the SDMC, such the ability to handle system plans. For a complete listing of functions, see Comparing HMC tasks and SDMC tasks

Although the SDMC retains most of the functions that are available in the HMC, a few functional differences exist between the SDMC and the HMC. These differences are directed toward adapting to the IBM Systems Director environment and also toward improving the user interface.

The command-line interface (CLI) is essentially the same. On the SDMC, most of the commands are just preceded by smcli. This might require changes to existing scripts that use the HMC.

### Enhanced virtualization management

The following are some of the key enhancements in virtualization management that are available in the SDMC:

- SDMC offers a simplistic IVM kind of user interface for virtualization functions, such as creating a virtual server.
- The views of virtual server properties and dynamic logical partitioning (DLPAR) are combined to present a single view from where you can perform all virtual server operations.
- SDMC provides the ability to change the resource assignment of your virtual servers even when they are in the Stopped state.
- SDMC can manage virtual slots automatically.

### Users and roles

The concepts of users and roles in the SDMC remain the same as in the HMC. The user interfaces for creating and managing users and roles are different in the SDMC. SDMC follows the IBM Systems Director way of creating and managing users and roles. SDMC supports the use of LDAP and Kerberos servers. You can create users who use Lightweight Directory Access Protocol (LDAP) or Kerberos for authentication. Resource roles in HMC are referred to as *groups*in SDMC. Also, the session time-out and the idle time-out settings are global and not configured per user.

For more information about user and roles in the SDMC environment, see Predefined user IDs and passwords and SDMC roles

### User interface enhancements

SDMC provides a user interface that is integrated with the broader IBM Systems Director user interface. Most of the tasks in SDMC have the same flow as in the HMC with slight enhancements to present an IBM Systems Director appearance.

### Redundancy model

The existing redundancy model available in HMC is available in the SDMC as well. You can connect two SDMCs to a managed system in which one of the SDMCs acts as the redundant SDMC. You can also use an HMC for redundant management. Apart from this redundancy model, IBM Systems Director provides an active-passive availability model that is optional for the SDMC users. In this model, two SDMC nodes can manage a single server, of which one node is used (active) and the other is not used (passive),

waiting for a failover condition. The existing HMC active-active redundancy model is available in addition to the active-passive availability model, both provided by the IBM Systems Director.

### Backup and Restore

SDMC provides the capability to back up the entire virtual machine to removable media or to a remote File Transfer Protocol (FTP) server. You can restore using the backup file from the removable media or from a remote FTP server. The restore operation is a full image deployment and all existing files are replaced from the backup file. Unlike the HMC, SDMC backs up the entire disk instead of individual files.

For more information about performing a backup and restore of the SDMC environment, see Backing up and restoring the SDMC

### Additional functions

The SDMC includes the IBM Systems Director base management functions which offers you additional capabilities to manage your heterogeneous and large homogeneous infrastructure better. These capabilities include:

- Automation manager
- Update manager
- Status manager

## SDMC supported and unsupported systems

Support for POWER processor-based systems with either software or hardware appliance depends on the type of POWER system you have. This topic provides a complete listing of which appliance is supported with which system.

*Table 32. POWER7 support by SDMC*

| POWER7 models | Machine types | SDMC |
|---|---|---|
| 795 | 9119-FHB | Hardware appliance only |
| 780 | 9179-MHB | Hardware appliance only |
| 770 | 9117-MMB | Hardware appliance only |
| 755 | 8236-E8C | Hardware or software appliance |
| 750 | 8233-E8B | Hardware or software appliance |
| 720 | 8202-E4B | Hardware or software appliance |
| 740 | 8205-E6B | Hardware or software appliance |
| 710/730 | 8231-E2B | Hardware or software appliance |
| PS701 | 8406-71Y | Hardware or software appliance |
| PS700 | 8406-70Y | Hardware or software appliance |

*Table 33. POWER6 support by SDMC*

| POWER6 Models | Machine types | SDMC |
|---|---|---|
| 595 | 9119-FHA | Hardware appliance only |
| 575 | 9125-F2A | Hardware appliance only |
| 570 | 9117-MMA | Hardware appliance only |
| 570 | 9406-MMA | Hardware appliance only |
| 560 | 8234-EMA | Hardware appliance only |

*Table 33. POWER6 support by SDMC (continued)*

| POWER6 Models | Machine types | SDMC |
|---|---|---|
| 550 | 8204-E8A | Hardware or software appliance |
| 550 | 9409-M50 | Hardware or software appliance |
| 520 | 8203-E4A | Hardware or software appliance |
| 520-SB (IBM Smart Cube) | 8261-E4S | Hardware or software appliance |
| 520 | 9408-M25 | Hardware or software appliance |
| 520 | 9407-M15 | Hardware or software appliance |
| JS23/43 | 7778-23X | Hardware or software appliance |
| JS22 | 7998-61X | Hardware or software appliance |
| JS12 | 7998-60X | Hardware or software appliance |

## Supported configurations

You can connect your SDMC to host systems in a variety of ways.

The following topic describes the different ways you can manage host systems using the SDMC.

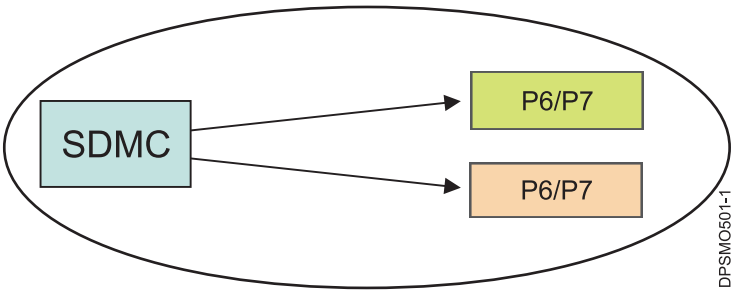


*Figure 1. SDMC managing multiple Power Systems servers*

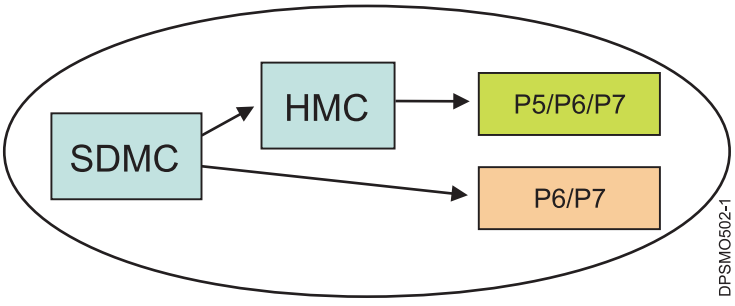


*Figure 2. SDMC managing two different Power systems, where one is managed by an HMC*

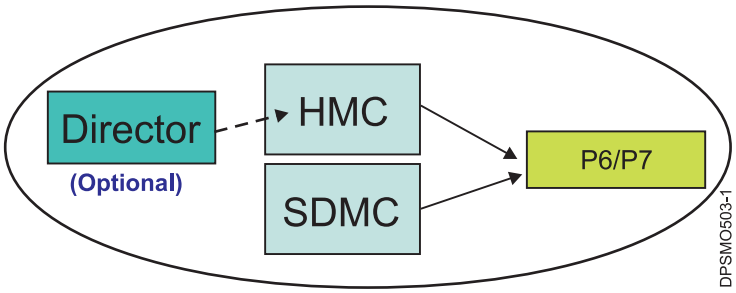


*Figure 3. HMC and SDMC managing the same server at the same time*

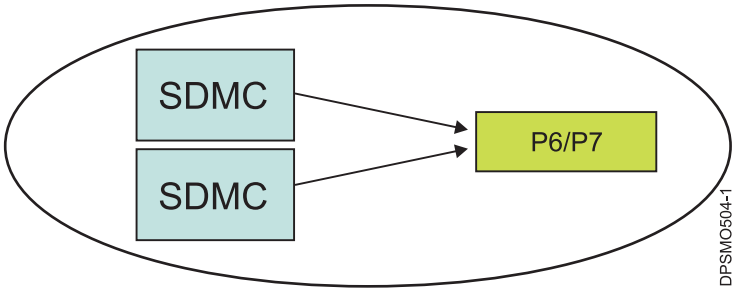


*Figure 4. Two SDMCs managing the same server at the same time*

## SDMC redundancy and high availability features

Implementing SDMC in a high availability (HA) or a redundant setup can provide improved serviceability to the SDMC appliance and provides backup to the system in case of a disaster.

### SDMC HA versus redundant setup

If you are familiar with redundant HMC setup in your Power Systems environment, you can do the same with SDMC, because multiple SDMCs can connect to and actively manage a single host.

For more information about the tasks associated with SDMC redundancy and high availability, see SDMC installation and configuration scenarios and Configuring high availability.

You can also implement SDMC HA, which provides active/passive failover capability, with one active SDMC and one passive SDMC on standby to take over in case of failure.

In addition to providing the management capabilities currently in the HMC for the managed Power Systems hosts, the SDMC also can manage the operating systems of the hosts themselves by connecting to the Common Agent Services (CAS) agent on the managed systems through an agent manager. However, the CAS agent has the limitation of only a single connection to an agent manager and is not capable of a redundant connection. Therefore, the SDMC HA feature is provided to eliminate this limitation as a single point of failure if you require high availability for this functionality.

The choice between a redundant setup versus an active/passive HA implementation depends on your planned usage of the SDMC:

- In an environment where the SDMC is being used for HMC-like management functions, the redundant setup provides the most availability and is the easiest to set up and administrate. Both SDMCs will be active and can continue to provide functions for the managed systems should one of them have a failure. The setup of a redundant SDMC environment only involves adding the managed system to both SDMCs.

- For an environment where the SDMC is being used for agent OS management and there is a high availability requirement for that function, SDMC HA is needed. If your active SDMC fails, the passive standby SDMC automatically takes over and management functions for the managed systems are restored in about 10 minutes. Some extra planning, setup, and administrative steps are required to implement SDMC HA. For more information about the planning tasks associated with implementing high availability, see Planning for high availability, redundancy, and failover.

The following table shows the differences between redundant HMCs and IBM Systems Director high availability setup.

*Table 34. Differences between a redundant and a replication HA environment*

| | **HMC** | **SDMC with redundancy** | **Systems Director or SDMC with HA** |
|---|---|---|---|
| **Type of environment** | Redundant | Redundant | Replication |
| **High availability topology** | Active/active: Both consoles are active at the same time. | Active/active: Both consoles are active at the same time. | Active/passive: Only one console is active at a time. |
| **Data** | Data is not identical. | Data is not identical. | All data is identical on the two nodes. |
| **Management console** | HMC | Systems Director | Systems Director |
| **Console versions** | Can be different | Can be different | Must be the same |

In a redundant setup, it is also possible to have one SDMC point to another SDMC's agent manager, which would allow both SDMCs to manage the agents at the same time. However, since the agent manager is running on only one of the SDMCs, this setup is a single point of failure. If this SDMC goes down, the other SDMC loses contact with the agents.

## Active/passive HA overview

In a high availability environment, two SDMCs operate as synchronized nodes in an active/passive cluster. One node in the environment is kept active at all times, and a second passive node is kept in close synchronization. If your active node fails, the passive node (on standby, waiting for a failure of the active node) takes over in about 10 minutes.

The internal software components that make up SDMC HA are transparent to you and do not need to be directly configured. Floating IP addresses used to connect to the active SDMC can be moved between the nodes, by using the active node. The OS on the passive node is started, but the software stack is not.

Running the Guided Setup wizard or the command-line interface commands on the SDMC that is designated to be the primary node configures the internal HA components on both the primary and secondary SDMCs.

## High availability terminology

Refer to this list of terms to help you better understand high availability concepts:

**Node** A node is an SDMC that is configured to be part of a high availability environment.

**Active node**
An active node manages your environment. Only one node is active at a time.

**Passive node**
The passive node is not currently active. Any changes you make to the active node are replicated to the passive node.

**Primary node**
This is the node you use to set up high availability. It is initially the active node. When you set up a high availability cluster, the IBM Systems Director data, remote authentication configuration settings, users, and firewall settings on this node are replicated to the secondary node.

**Secondary node**
This is the node that you set up to take over if the primary node fails. It is initially the passive node, but takes over as the active node if the primary node is detected to have failed.

**Network status IP address**
The cluster nodes use this IP address to determine which node is connected to the network. If they cannot contact each other, the node that can connect to this IP address becomes the active node.

**Floating IP address**
This address is always assigned to the active node. Always access this address so that you do not have to know which node is active. It also enables you to use IBM Systems Director Common Agent with high availability.

## Active/passive HA mirrored directories

The following directories that are replicated and synchronized between the active SDMC and the passive SDMC in the HA cluster.

*Table 35. Replicated and synchronized SDMC directories*

| Directory | Description |
|---|---|
| /opt/ibm/director/data | Director data |
| /home/db2inst1 | DB2 data |
| /opt/ibm/director/keys | License keys |
| /opt/ibm/director/lwi/conf/overrides | Director property overrides |
| /opt/ibm/director/lwi/runtime/agentmanager/eclipse/plugins/com.ibm.tivo li.cas.manager/config | CAS agent manager config |
| /opt/ibm/director/lwi/runtime/agentmanager/eclipse/plugins/com.ibm.tivo li.cas.manager/certs | CAS agent manager certificates |
| /opt/ibm/director/lwi/runtime/core/DATABASE | CAS agent manager database |
| /opt/ibm/director/lwi/runtime/agentmanager/toolkit/certs | CAS agent manager toolkit certificates |
| /opt/ibm/director/lwi/runtime/agentmanager/toolkit/config | CAS agent manager toolkit configuration files |
| /var/lib/dhcp | Dynamic Host Configuration Protocol (DHCP) server |
| config /dump | Flexible service processor (FSP) dump files |
| /var/hsc/log | SDMC log files |
| /var/hsc/profiles | Profile files |
| /opt/hsc/data/utilization | Utilization files |

## SDMC HA synchronized data

The following data changes on the active SDMC are synchronized to the standby SDMC:

- User ID additions
- User ID modifications
- User ID deletions

- Firewall changes
- Network Time Protocol (NTP) configuration
- Kerberos and Lightweight Directory Access Protocol (LDAP) configuration
- Initial HA configuration
  - Distributed Replicated Block Device (DRBD) configuration
  - Users
  - Authentication files
  - LDAP and Kerberos
  - Firewall settings
  - Domain Name System (DNS) resolver
  - NTP configuration

### SDMC HA processes monitored

The following processes are monitored by the SDMC HA for a redundant takeover:

- Director
- DB2
- DRBD
- CIM server
- HA MQ daemon – MQ server
- HA daemon – Processes MQ messages
- NTP server
- DHCP server

### Active/passive HA: Log location

The locations of the HA log files follow:

- /opt/ibm/director/ha/logs/daemon0-x.log

*Table 36. daemon0-x.log file description*

| Log file | Description |
|---|---|
| daemon0-x.log | HA daemon log |
| mq0-x.log | ActiveMQ log |
| smha.log | TSA monitor log |
| init0-x.log | Initial configuration initiated from outside the Director process |

- /opt/ibm/director/lwi/logs

  HA task logs captured in the Systems Director HA configuration task.
- The daemon log and mq log are rolling logs with up to five log files, where *x* is the log file number. Each log file can contain approximately 10 MB of data.

## SDMC and HMC command-line differences

There are differences between the HMC commands and the SDMC commands.

Commands used to manage the Power Systems servers such as lssyscfg, lshwres, and chhwres that are all supported and virtually identical to the commands in the HMC. Any scripts that you may have that use these commands should continue to work with no changes.

To see all of the HMC commands that are supported on the SDMC, run the smcli lsbundle command. The commands that have been carried over from the HMC are in the psm bundle.

The following topic describes how to run SDMC commands. Commands for managing Power Systems resources can be run in exactly the same way as on an HMC. However, to integrate into the Systems Director way of doing commands, there are additional ways to issue commands. The following commands are all equivalent:

- `lssyscfg –r sys`
- `smcli lssyscfg –r sys`
- `smcli psm lssyscfg –r sys`
- The commands that have been carried over from the HMC are aliased. Therefore, you can run the command in three ways from the command line: lssyscfg, smcli lssyscfg,, or smcli psm lssyscfg .
- `Add managed system` (mksysconn) in SDMC has been replaced by the smcli discover and smcli accesssys Systems Director commands.
- Two attributes, **primary_state** and **detailed_state**, are introduced to the lssyscfg and lssysconn commands to indicate the respective Systems Director state mapping. The **state** field is deprecated. It is only shown when the **-F** option is used.
- Man pages for the SDMC commands can be displayed by running either `man command_name` or `man psm.command_name`.

The following tables compare HMC command-line interface (CLI) function with SDMC CLI function. These tables display only the changes, and all functions not shown can be assumed to be similar.

*Table 37. Power Systems management commands*

| HMC tasks and commands | SDMC commands | Notes |
|---|---|---|
| Add Managed System: `mksysconn –r sys/frame` | `smcli discover –H smcli accesssys` | Discover and access are two separate steps on SDMC. Make sure you specify the IP or hostname in SDMC; otherwise, by default, it discovers everything on your subnet. If SDMC is acting as the DHCP server, systems must be automatically discovered. You must request access. |
| Remove Managed System: `rmsysconn –o remove` | `smcli rmsys` | You can disconnect by using the `smcli revokeaccesssys` command; however, to completely remove the system, you must use `smcli rmsys`. |
| List system or partition states: `lssyscfg –r sys/lpar –F state` | `lssyscfg –r sys/lpar –F primary_state,detailed_state` | Although the HMC state option is supported, to view the states as the SDMC GUI displays them, you need to view the `primary_state` and `detailed_state`. |
| List serviceable events: `lssvcevents` | `smcli lssvcproblem` | |

*Table 38. Appliance (SDMC) management commands*

| HMC tasks and commands | SDMC commands | Notes |
|---|---|---|
| List and change HMC information such as version and locale: `lshmc / chhmc` | `lsconfig / chconfig` | |
| List and change HMC network settings: `lshmc –n / chhmc` | `lsnetcfg / chnetcfg` | |

*Table 38. Appliance (SDMC) management commands (continued)*

| HMC tasks and commands | SDMC commands | Notes |
|---|---|---|
| Backup and restore console data: `bkconsdata` | `backup / restore` | Hardware appliance only |
| LDAP configuration: `chhmcldap / lshmcldap` | `cfgldap / lsldap` | |
| Shut down and restart HMC; `hmcshutdown` | `smshutdown` | |
| Create and list HMC users: `ls/mk/ch/rmhmcuser` | `mksmusr / chsmusr / rmsmusr / smcli lsuser` | |
| Save and restore upgrade data: `saveupgdata / rstupgdata` | N/A | This is not needed on SDMC because the save/restore process happens automatically as part of an upgrade. |
| Manage password policies: `mk/ch/ls/rmpwdpolicy` | N/A | SDMC does not support password policy profiles. |
| Manage access control: `mk/ch/ls/rmaccfg` | `smcli mk/ch/ls/rmrole` | |
| Monitor HMC: `monhmc` | N/A | |

## Systems Director Management Console limitations

Learn about IBM Systems Director Management Console (SDMC) limitations.

Consider the following limitations when you plan to migrate from Hardware Management Console (HMC) to SDMC:

- Replication of user data, groups data, LDAP or Kerberos configuration data, and outbound connectivity configuration data is not supported in SDMC.
- Management of POWER5™ technology-based systems is not supported in SDMC.
- Modem or VPN support for Call home function is not available in SDMC. The Call home function is supported only on a network connection over SSL.
- Users cannot disconnect and reconnect to old sessions of SDMC.
- No Advanced Manager support in SDMC.

# Notices

This information was developed for products and services offered in the U.S.A.

The manufacturer may not offer the products, services, or features discussed in this document in other countries. Consult the manufacturer's representative for information on the products and services currently available in your area. Any reference to the manufacturer's product, program, or service is not intended to state or imply that only that product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any intellectual property right of the manufacturer may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any product, program, or service.

The manufacturer may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to the manufacturer.

For license inquiries regarding double-byte character set (DBCS) information, contact the Intellectual Property Department in your country or send inquiries, in writing, to the manufacturer.

**The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:** THIS INFORMATION IS PROVIDED "AS IS " WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. The manufacturer may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to websites not owned by the manufacturer are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this product and use of those websites is at your own risk.

The manufacturer may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact the manufacturer.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, IBM License Agreement for Machine Code, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the

same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning products not produced by this manufacturer was obtained from the suppliers of those products, their published announcements or other publicly available sources. This manufacturer has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to products not produced by this manufacturer. Questions on the capabilities of products not produced by this manufacturer should be addressed to the suppliers of those products.

All statements regarding the manufacturer's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

The manufacturer's prices shown are the manufacturer's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to the manufacturer, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. The manufacturer, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. The manufacturer shall not be liable for any damages arising out of your use of the sample programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. _enter the year or years_.

If you are viewing this information in softcopy, the photographs and color illustrations may not appear.

## Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at Copyright and trademark information at www.ibm.com/legal/copytrade.shtml.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Other product and service names might be trademarks of IBM or other companies.

## Terms and conditions

Permissions for the use of these publications is granted subject to the following terms and conditions.

**Personal Use:** You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative works of these publications, or any portion thereof, without the express consent of the manufacturer.

**Commercial Use:** You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of the manufacturer.

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

The manufacturer reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by the manufacturer, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

THE MANUFACTURER MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THESE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.