Data migration of an existing Microsoft Windows CMS to a new Insight Software 6.0 system White Paper

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Introduction

The Insight Software data migration tools (DMT) provide an easy mechanism to migrate an existing Insight Software central management server (CMS) from one hosted environment to another. These tools are designed to relocate a CMS to a new hosted environment when there is a need to change the underlying hardware or operating system of the CMS, without losing any of the customized data located on the CMS. The data migrated to the target CMS environment includes the configuration information such as system credentials, tasks, collections, licenses, and addresses for supplemental management servers, plus management database information which includes discovered systems, performance data, and profiles.

Migration involves export and import operations. First, the export operation runs on the source CMS, which generates a large compressed zip file containing configuration data from the existing CMS database. Then, the import operation decompresses this data and imports it on the new, or target, CMS. The target CMS can be hosted either on a new system in the infrastructure or on the same system.

Note:
HP recommends that a separate server be used for the target CMS. However, you can use the same server as the source and target CMS when new hardware is not available and the OS needs to be reinstalled from a 32-bit version to a 64-bit version.

The migration utility does not copy any program executables or OS level configurations (for example, an OS username and password). Therefore, Insight Software v6.0 must be installed on the target CMS before performing the import. Any existing Insight Software configuration data on the target CMS is overwritten with source CMS information when the data is imported.

There are several scenarios where the migration utility applies:

- Moving from a 32- bit OS installation to a 64- bit OS installation on a new hardware platform.
- Moving from an older 64- bit system to a newer and faster 64- bit system.
- Moving from a 32- bit OS installation to a 64- bit OS installation on the same hardware system.
- Moving from a 32- bit OS installation to a new 32- bit OS installation on a new hardware system.

Migration support matrix

Table1: Insight Software 6.0 support matrix

Source CMS System		Target CMS System Insight Software version 6.0
Insight Software version	Platform OS configuration	Platform OS configuration
3.1 Insight Control, VCEM, or HP SIM only	32 bit OS	32 bit OS
		64 bit OS

6.0 Insight Dynamics, Insight Control, Virtual Connect Enterprise Manager, or HP SIM	32 bit OS	64 bit OS
	64 bit OS	64 bit OS

Migration supports the following databases:

- Local Microsoft SQL Server 2005 Express Edition SP3
- Local Microsoft SQL Server 2008 Express Edition SP1
- Local Microsoft SQL Server 2005 SP3
- Local Microsoft SQL Server 2008 SP1
- Remote Microsoft SQL Server 2005 SP3
- Remote Microsoft SQL Server 2008 SP1

Data migration is supported from default instance to named instance and vice versa.

Note:
Data migration is supported only on the same type of databases. Oracle is not supported.

All Windows operating systems supported by Insight Software are fully supported; or supported operating systems, go to:

http://www.hp.com/go/insightsoftware/docs

Note:
Data migration is not supported for Linux or HPUX CMS operating systems.

Requirements

- The import operation can only be performed on a CMS with Insight Software version 6.0. When performing the import operation, the Administrator must login using the same credentials that were used to install Insight Software v6.0 on the target CMS.

- The same OS user names and credentials defined for use by Insight Software on the source CMS must also be defined on the target CMS.
- The target CMS must have a fresh installation of Insight Software 6.0.
- If Insight Dynamics is installed, you must ensure that you have at least 20GB free space for the export file on both the source and target CMS. File size might vary, depending on the number of discovered systems and on the Insight Software products that are installed. The file can be much smaller, 50MB, if just HP SIM is installed with several hundred systems. If you are using a remote database server, you must have 20GB (varies based on installed products) space in the temporary directory on the remote database for the import operation.

Before you begin

The data migration process enables the target CMS to be hosted on a new system in the infrastructure or on the existing system after an OS upgrade. In either instance, critical OS-level information must be configured on the target CMS. HP recommends for the target CMS to be hosted on a different system. When hosting on a different system, the installation and configuration of the OS and the installation of HP Insight Software on the target CMS must be completed before exporting data or shutting down the source CMS. Completing these installation and configuration steps on the target CMS system reduces the total time the CMS is unavailable for management operations.

Step 1: Choosing the appropriate time for CMS migration

The migration might take 2 to 8 hours, depending on the number of systems managed, the number of Insight Software components being migrated, and whether a separate target CMS host is used. The CMS is not available for management activities during this migration process, and therefore the configuration of the managed environment must remain unchanged during the migration process. HP recommends performing the migration at a time when changing the configuration of the managed environment is not expected or required. Limited feedback is sent to the command line interface, so let the export process proceed and give it plenty of time.

Step 2: Collecting OS level user names and passwords from old CMS

The same OS user names and credentials defined for use by Insight Software on the source CMS must also be defined on the target CMS. If domain accounts are used, ensure the target system has joined the Windows domain.

Step 3: Saving any customer created scripts or executables

The migration utility does not export or import non-HP created scripts or other executables. These files will need to be copied to the target CMS after the import operation has successfully completed. Copy the following data to a safe location that will be accessible after the import on the target CMS has been completed.

- Custom scripts, executables, or other non HP Insight Software files created on the source CMS. For instance, there might be a command-line tool that needs to be saved. You will be instructed to copy these files to the same location on the target CMS after the import has completed.
- The **Install PSP** directory— this directory is created during the Initial PSP Install task and is found under the Systems Insight Manager directory. You will be instructed to copy this directory to the System Insight Manager directory on the target CMS after the import has completed.
- Other configurations on the source CMS that are necessary for the execution of script, for instance, a storage device may contain additional data or repositories, if so the target CMS will need to be configured to use the same or similar storage device.

Note:
The safe location is mentioned several times in this document. If the source CMS is to be retained and not used as the target CMS, then the source CMS itself can be the safe location. These files can then be copied later, directly from the source CMS. If the target CMS is also the source CMS, then locate some shared storage that can host the copies of the various customer-specific files noted in this document.

Step 4: Creating space for new/target CMS system

- Ensure at least 20GB free disk space exists for the export file on both the source and target CMS if Insight Dynamics is installed. The file size might vary, depending on the number of discovered systems and on the Insight Software products that are installed. The file can be much smaller, 50MB, if just HP SIM is installed with several hundred systems.
- If there is a remote database server, you must have 20GB space in the temporary directory on the remote database server for the import operation.

Configuring the target CMS for migration

If the target CMS is to be the same physical system as the source CMS, you will need to complete the export process on the CMS before installing and configuring the target CMS. To avoid a loss of data, complete the steps defined in the *Exporting the source CMS configuration data* section before proceeding with the setup process for the target CMS.

If the source CMS system uses a remote database, then the data from the remote database is extracted as part of the export process. After the export operation has completed, the remote database can then be reconfigured for use with the target CMS.

Step 1: Selecting new host name and IP address for a new system as the target CMS

A new CMS installed on a new Windows system requires a new host name and IP address, so you must configure this in the OS.

Step 2: (Optional) Upgrading memory and firmware on the target CMS system

Verify hardware requirements for Insight Software 6.0 at http://www.hp.com/go/insightsoftware/docs and ensure the new CMS is properly configured.

Step 3: Installing and pre-configuring the target CMS

1. Install a supported version of Windows operating system on the target CMS which meets Insight Software requirements.
- The target system must not have its UTC system time set earlier than the source. For example, ensure the system time is synchronized for the source and target CMS.
- The target CMS OS must be the same locale as the source CMS.
- The target CMS must either be on the same LAN as the source CMS, or it must have access to all the managed systems reachable by the source CMS.
- The target CMS must have the same DNS configuration settings as the source CMS. At a minimum, the target CMS must be able to resolve the same set of forward and reverse DNS lookups supported by the source CMS.
2. Configure the target CMS with a new host name and IP address, and then add this new host to the network at the desired location in the infrastructure.
3. Using Windows utilities, join the Windows domain and configure the set of OS usernames and passwords on the target CMS, which include all usernames and passwords defined for use by Insight Software on the source CMS.
4. Ensure the database software is running a version supported by Insight Software v6.0.

Step 4: Installing version 6.0 Insight Software on the target CMS

- Only the installation of Insight Software is needed; no additional discovery, etc.
- If the same remote database server is to be used, either a new instance must be configured or the old databases must be dropped for Insight Software to install.
- Follow the instructions in the Insight Software Installation and Configuration Guide, chapter 2, to install the software products of your choosing.
- The post-installation configuration of the target CMS is not needed, so you do not have to run the steps listed in chapter 3 for configuration of the CMS from the Insight Software Installation and Configuration Guide:

http://www.hp.com/go/insightsoftware/docs

Step 5: Launching the console on the target CMS

This step just verifies that the target CMS is functioning as expected.

Log in to the HP SIM GUI, and verify the expected software is installed, using **Help→About.** No additional configuration of the CMS is necessary.

Step 6: Upgrading to version 6.0 or installing migration software on the source CMS

If the source CMS has Insight Dynamics suite from the Insight Software DVD version 3.0 or 3.1installed, you must upgrade to Insight Software v6.0 prior to starting the migration process.

- The Insight Software DVD 3.0 or 3.1 contains Insight Dynamics-VSE v4.1.x, which does not support a direct migration to the Insight Software v6.0 setup, and therefore must be upgraded to v6.0 first. The version of Insight Dynamics that is installed on the source CMS can be verified through the source CMS console **Help→About** menu.
- Upgrade the source CMS to Insight Software v6.0, making sure to include the Insight Dynamics version 6.0 suite. For detailed steps on how to upgrade from 3.x to 6.0, see the *Insight Software Installation and Configuration Guide* or the *Matrix Update Guide* found at http://www.hp.com/go/insightsoftware/docs .

If the source CMS does not contain any of the Insight Dynamics product features and only has Insight Control version 3.1 or HP SIM version 5.3.x installed, a direct migration to the v6.0 software can be performed. However, the migration tools have to be installed first.

Perform the following steps to install the migration software on the source CMS.

1. Sign in to the source CMS with OS administrative privileges.
2. Obtain the migration utility installation. The migration utility is included as part of the v6.0 Insight Software installation, however for same server migrations this utility will not be immediately available from an install, but instead can be downloaded from the hp.com FTP server.

> Option 1: Copy the contents of the `migration` folder from the target CMS where HP SIM was installed to the source CMS. For example, copy `C:\Program Files\HP\HP Systems Insight Manager\migration` from the target CMS to the source CMS `C:\Program Files\HP\Systems Insight Manager\migration` folder, you may need to create the migration folder on the source CMS.

Option 2: Download the migration.exe file from the following ftp location
ftp://hp.com/pub/softlib2/software1/pubsw-windows/p197989050/v60563.
Create a folder on the Source CMS called migration here: `c:\Program Files\HP\Systems Insight Manager\migration`. Copy this file to the `c:\Program Files\HP\Systems Insight Manager\migration` folder.

Note:
OS administrative privileges are required for the signed in user on the source CMS.

3. On the source CMS, run the `migration.exe` installer from `c:\Program Files\HP\Systems Insight Manager\migration` to install the migration software.

Exporting the source CMS configuration data

Before the export operation can be performed, a number of steps must be performed to prepare the source CMS, such as quiescing the Insight Software and stopping Insight Software services. If the target CMS and the source CMS are on different servers, then to reduce downtime, Insight Software should be installed on the target CMS prior to proceeding with this section.. Refer to the sections "Before you begin" and "Configuring the target CMS for migration" in this paper for additional details.

This section describes the step to perform the export on the source CMS.

The export operation compresses and encrypts all configuration data related to Insight Software into a single zip file.

IMPORTANT:
Changes must not be made to the managed environment after an export operation has been done. If changes must be made prior to importing, another export must be run. Insight Software will make its best attempt to resynchronize to the environment when possible.

Step 1: Backing up your CMS and database

This step only applies when the target CMS is the same system as the source CMS.

HP recommends making a new system available separate from the source CMS for the import. However, if the target CMS will be the same as the source CMS, you must back up your CMS and database as a precaution. This way if an unexpected error occurs, you can restore your CMS and database.

Before running an export operation, complete the following:

1. Make a full system backup of the source CMS and, if applicable, the remote database.

2. Refer to Appendix A to validate service information.

Step 2: (Optional) Recording key data items to be used for import verification

1. View the All Systems system list, and record the total number of systems.

2. Obtain the number of users. Go to **Options→Security→Users and Authorizations**.

3. Count the number of scheduled tasks. Go to **Tasks and Logs→Scheduled tasks**.

4. Review the set of collections. Go to the left navigation pane, and select **Customize** to view all collections and the details.

Note:
Command line interfaces are a good way to validate nodes. For instance, you can export node lists with mxnode –lf and save it off to compare post migration.

Step 3: Undeploying the existing Shared Resource Domains

Required migration pre-export actions for gWLM:

- Undeploy all Shared Resource Domains.

Note:
If the import cannot be completed and the source CMS must be used again, steps 3, 4a and 5 above must be undone. See steps 12 and 9 in the post import operations section.

Step 4: Reconfiguring Insight Control server deployment agents

This first step may be skipped if the source and target CMS are configured to use the same IP address and host name. Before shutting down the source CMS, the deployment agents must be reconfigured to interact with the target CMS. To reconfigure the agents:

1. On the source CMS, select the desired servers in the server deployment console.
2. Right-click, and select **Change Agent Settings→Production Agent**.
3. Enter the IP address of the target CMS so agents will connect to the target CMS.

As the deployment agents on the servers selected above connect to the target CMS, the selected servers will be added to the deployment console.

If you have customized deployment jobs on the source CMS, you must export the jobs from the source CMS for later import to the target CMS.

To export your custom jobs on the source CMS:

1. In the deployment console, select the desired jobs for export
2. Right-click your mouse, and then select **Export…**
3. Specify a name for the exported job file.
4. Copy this exported job file and any customized script files to a safe location.

> **Note:**
> The deployment job history for managed computers cannot be migrated. Be sure to select the desired operating systems when installing server deployment on your target CMS.

Step 5: Un-securing communications on the CMS when Insight Dynamics Global Workload Manager (gWLM) is in use

This step may be skipped if you are not using the CMS to manage gWLM nodes.

If secure communications are in use, please unsecure communications on the CMS and all managed nodes. Secure communications must be in the same state [enabled or disabled] for the CMS and all gWLM managed nodes.

To unsecure communications:

1. Select **SIM Configure→ID Agents→Reset Communications**. You are prompted for a list of systems.
2. Provide a complete list of all the managed systems from all Shared Resource Domains (SRDs), either all at once or SRD by SRD.

Step 6: Quiescing running services on the source CMS

Prior to stopping the Insight Software services, which is required before the export can run, the Insight Software services must be quiesced.

See Appendix A: Quiescing services for a pre v6.0 CMS for details.

Step 7: Stopping Insight Software services on the source CMS

The following services on the source CMS must be stopped in the order listed, using the Windows Services applet before running the export tool.

Table 2: Stop order of services

Stop Order	HP Insight Software Component	Service Display Name
1	HP Insight Dynamics infrastructure orchestration	HP Insight Orchestration
2	HP Insight Dynamics configuration management	HP Logical Server Automation
3	HP Insight Dynamics configuration management	HP Storage Provisioning Manager*
4	HP Insight Dynamics configuration management	HP Extensible Storage & Server Adapter
5	HP Insight Dynamics infrastructure orchestration	RSCentral
6	HP Insight Dynamics infrastructure orchestration	RSJRAS
7	HP Insight Dynamics infrastructure orchestration	RSScheduler
8	HP Insight Dynamics configuration management	HP Application Discovery
9	HP Insight Dynamics capacity planning	HP Agentless Collection for Linux Systems
10	HP Insight Dynamics capacity planning	HP Agentless Data Collector Service
11	HP Insight Control virtual machine management	HP Insight Control virtual machine management
12	HP Systems Insight Manager	HP Systems Insight Manager

13	HP Insight Dynamics – VSE Workload Management for HP Integrity servers	HP Global Workload Manager Central Management Server
14	HP Insight Control server migration	HP Insight Control server migration Application Service
15	HP Insight Control server migration	HP Insight Control server migration Web Service

*These services are not present in IS 3.1

Step 8: Configure the mxexport batch file for larger CMS installs

Edit the mxexport.bat file to increase the memory allocated to the export processes. In the Systems Insight Manager installation bin directory, for example `C:\program files\HP\Systems Insight Manager\bin`, edit `mxexport.bat` with any text editor change the line that starts with java and add `–Xmx512m`. For example the line should look like the following.

```
java –Xmx1024m -Dora.home=%ORA_HOME% -cp %MYPT%
   com.hp.mx.migration.cli.CLIWrapper mxexport %*
```

Step 9: Running the export utility on the source CMS

The export utility is a command line interface (CLI) command that must be run from a standard command prompt on a Windows operating system. The export utility must be executed by a user that has OS-level Administrative privileges, and should be the same user that installed the Insight Software on the source CMS

The export command-line (CLI) command and syntax is:
```
mxexport [-f <filename>] [-p pass]
```

Where the parameters are listed in the following:

-f—Optional. Can be used to specify a different filename or path for the export archive. The default file name is Products.zip and is placed in the `<SIM Install Path>\data\configdata-export` directory
-p—Optional. Enables the password to be passed in on the command line for non-interactive operations such as a script. This is the password that will be used to encrypt the exported file, `Products.zip`. If –p is not specified, the user is prompted to enter the password in a secure fashion. HP recommends not specifying the password on the command line. The password must be at least 8 characters long, but should not be your domain password.

For example:

```
mxexport –f c:\export.zip –p somepassword
```

In this example, the compressed file is saved to the root directory of the C: drive and is called `export.zip`. Since the password of "`somepassword`" was provided, future prompts for the password will not be seen.

1. Sign in to the source CMS with OS-level administrative privileges. Make sure this is the same user that installed the Insight Software.
2. Open a command prompt:

a. Navigate to **Start menu→Run**.

b. Type `cmd`, and then click **OK**. The command prompt window appears.

In the command prompt window, execute the export command:

```
mxexport
```

You will be prompted to enter the password. The password will not be displayed in clear text in this case, enter the password when prompted.

IMPORTANT:
Be sure to retain the password, because it must be provided during the import operation.

Note:
A customized location can be provided to store the exported data. See the export parameter table.

Note:
Do not reboot the source CMS until the migration can be completed, because this will restart the Insight Software services. HP Suggest setting the auto start mode for the services listed above to manual.

Upon a successful export operation the default export file, `Products.zip`, is created in `<HPSIM install Path>\data\configdata-export`. For an example of a successful exportation operation, see Figure 1.

Since changes made to the managed environment after the export is done are not part of the exported file, the source CMS Insight Software services should not be restarted to help ensure that no changes are made from the source CMS. If changes are made after an export operation, HP recommends rerunning the export utility. Failure to do so might result with the target CMS being out of sync with the managed environment. If needed, the export operation can be executed multiple times on the source CMS. The export file is overwritten each time.

Figure 1: Example export execution

```
C:\>mxexport

:-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-::-:-
:-:-:-:-:-:-:-:
:-:-:-:-:-:-:-:-:-:  HPSIM Data Export Tool Launcher  :-:-:-:-:-:-:-:-:-:-:-:-:-
:-:-:-:-:-:-:-:
:-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-::-:-
:-:-:-:-:-:-:-:

Lookup HPSIM InstallPath (x86)
HPSIM InstallPath:  C:\Program Files\HP\Systems Insight Manager
Lookup succeeded
Data encryption password:

*
vcem version: 6.0

Exporting data..
APPLICATIONDISCOVERY completed successfully.
CAPACITYADVISOR completed successfully.
GWLM completed successfully.
HPIO completed successfully.
HPIOP2 completed successfully.
HPSIM completed successfully.
IPM completed successfully.
LSM completed successfully.
MSSW completed successfully.
PMP completed successfully.
vcem version: 6.0
vcem version: 6.0
VCEM completed successfully.
VMM completed successfully.

Export is successful. The exported data file is C:/Program Files/HP/Systems Insi
ght Manager/data/configdata-export\Products.zip

C:\>_
```

Importing the data to the target CMS

The import utility checks for installed software dependencies and imports the data in a predefined order. As part of the import operation, some data from the export operation is replaced with data to match the target system, such as the CMS name and IP address. This enables a migration to a new CMS with a different host name and IP address. Other environmental changes might occur for the CMS, such as a local or remote database. The initial installation of the Insight Software on the target CMS configures database connections and any other local disks and or file systems needed for the import operation.

After the importation process has completed additional manual steps will need to be performed in order to ensure the managed environment is consistent with the imported data on the target CMS.

If the new CMS has not been configured and Insight Software loaded and started on the new CMS system, perform those steps before proceeding with the following steps. See "Configuring the target CMS for migration." After preparing the target CMS continue with these steps.

Note:
The import operation replaces the configuration data on the system where
the import is done.

Step 1: Ensuring the target CMS is prepared for an import operation

1. Review the "Before you begin" section.

2. Ensure the steps in the "Configuring the target CMS for migration" section have been performed.
3. Ensure the steps in the Exporting the source CMS configuration data have been performed.

Step 2: Copying saved files to the target CMS

1. Copy the zip file created during the export operation on the source CMS to the target CMS folder located at `<HP SIM Install path>\data\configdata-import`. If the export file is placed in a different location, the location can be specified on the command line when the import operation is done.
2. Copy the saved scripts and/or custom executables that were put in the safe location from "Step 3: Saving any customer created scripts or executables" in the **Before you Begin** section to the target CMS in the appropriate location.
3. Copy the install PSP directory from the same safe location to the `<siminstalldir>/Install PSP` directory on the target CMS.

Step 3: Stopping services on the target CMS

The installation of the Insight Software on the new CMS left the Insight Software services running.

The following services on the source CMS must be stopped in the order listed, using the Windows Services applet before running the import tool.

Note:
No quiescing of the services is needed on the target system since it is a clean installation and is not currently used for managing systems.

Table 3: Stop order of services

Stop Order	HP Insight Software Component	Service Display Name
1	HP Insight Dynamics infrastructure orchestration	HP Insight Orchestration
2	HP Insight Dynamics configuration management	HP Logical Server Automation
3	HP Insight Dynamics configuration management	HP Storage Provisioning Manager*
4	HP Insight Dynamics configuration management	HP Extensible Storage & Server Adapter
5	HP Insight Dynamics infrastructure orchestration	RSCentral
6	HP Insight Dynamics infrastructure orchestration	RSJRAS
7	HP Insight Dynamics infrastructure orchestration	RSScheduler
8	HP Insight Dynamics configuration management	HP Application Discovery
9	HP Insight Dynamics capacity planning	HP Agentless Collection for Linux Systems
10	HP Insight Dynamics capacity planning	HP Agentless Data Collector Service
11	HP Insight Control virtual machine management	HP Insight Control virtual machine management
12	HP Systems Insight Manager	HP Systems Insight Manager
13	HP Insight Dynamics – VSE Workload Management for HP Integrity servers	HP Global Workload Manager Central Management Server
14	HP Insight Control server migration	HP Insight Control server migration Application Service

| 15 | HP Insight Control server migration | HP Insight Control server migration Web Service |

*These services are not present in Insight Software 3.1

Step 4: Configuring a remote database access for the import operation to the target CMS

The following steps must be performed only if the target CMS is configured with a remote SQL server database. This configuration enables the remote SQL server to have access to import the database information that is embedded in the export file located on the target CMS (with SQL server BCP tools). When the import operation is complete on the target CMS, you can remove or disable this file sharing.

1. The source CMS, target CMS, and the remote SQL server must be in the same Windows domain.
2. The folder, configdata-import, under <HPSIM installation directory>\Systems Insight Manager\data on the target CMS must be shared with full permissions granted to the database server for the user running the import tool. The share name must be the default, configdata-import.

Note:
If any difficulties arise on import, set permissions to full control for
Everyone.

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3. The SQL service account must be configured to run as a domain user or administrator user that would have access to the configdata-import share named above.
4. On the target CMS set folder permissions on the `<HPSIM installation directory>\Systems Insight Manager\data\configdata-import` to full control for authenticatedUsers.
5. The temporary directory, `c:\temp`, must be present at the remote database server. This directory is generally provided by your Windows operation system.
6. The `xp_cmdshell` must be enabled on the remote database.

   a. For SQL 2005, open SQL Surface Area Configuration, select the Database instance used for the installation, select `xp_cmdshell` and click the check box to enable.
   b. For SQL 2008, open Microsoft SQL Server Management Studio, select the database instance used for install, then right click and select Facets. Select "**Surface area Configuration**" from the pulldown and set **XPCmdShellEnabled** to true.

Note:
Be sure to disable `xp_cmdshell` and stop sharing once the import process
is complete.

Step 5: Configure the mximport batch file for larger CMS installs

Edit the mximport.bat file to increase the memory allocated to the export processes. In the Systems Insight Manager installation bin directory, for example `C:\Program Files\HP\Systems`

`Insight Manager\bin`, edit `mximport.bat` with any text editor change the line that starts with java and add `-Xmx512m`. For example the line should look like the following.

```
java -Xmx1024m -Dora.home=%ORA_HOME% -cp %MYPT%
    com.hp.mx.migration.cli.CLIWrapper mximport %*
```

Step 6: Running the import utility on the target CMS

The import utility is a command-line interface (CLI) command that must be run from a standard command prompt on a Windows operating system. The import utility must be executed by a user that has OS-level Administrative privileges, and ideally be the same user that installed the Insight Software on the target CMS. In addition, if Insight Dynamics Global Workload Manager is installed, this user must also have SQL Server administrative rights to the database.

The import command-line (CLI) command is:

```
mximport [-f<filename>] [-p pass]
```

Where the parameters are listed in the following:

-f—Optional. Can be used to specify a different filename or path for the export archive. The default file name is `Products.zip` and is placed in the `<SIM Install Path>\data\configdata-export` directory
-p—Optional. Enables the password to be passed in on the command line for non-interactive operations such as a script. This must be the same password that was used to encrypt the exported file. If –p is not specified, the user is prompted to enter the password, HP recommends not specifying –p on the command line for greater security.

For example:

```
mximport -f c:\export.zip -p somepassword
```

In the example, the export archive file is read from the root directory of the C: drive and is called `export.zip`. Since the password was provided, the user will not be prompted for the password.

1. Sign in to the target CMS with OS-level administrative privileges. Make sure this is the same user that installed the Insight Software.
2. Open a command prompt:
    a. Navigate to Start menu→Run.
    b. Type `cmd`, and then click **OK**. The command prompt window will appear.
3. In the command prompt window, execute the import command:
    ```
    mximport
    ```
    You will be prompted to enter the password. The password will not be displayed on the screen in clear text.

IMPORTANT:
The password provided must be identical to the one used when the export
utility was run, otherwise the exported file cannot be read.

A warning message will be displayed indicating that the import will wipe out all data from the database.

4.   Press **Y** to the import process, or press **N** to terminate the import process.

Note:
The import process will clear the data on the target system and database before it actually imports any data into the target CMS.

Note:
If the target CMS had been previously discovered by the source CMS that record will be removed, and the original CMS record will remain intact. The original CMS record will be renamed to that of the target and the IP addresses will be updated.

See Figure 2 for an example of a successful importation.

Figure 2: Example import tool operation

```
C:\Documents and Settings\Administrator>mximport

:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-::
:-:-:-:-:-:-:-:-:   HPSIM Data Import Tool Launcher   :-:-:-:-:-:-:-:-:
:-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-::-:-:-:-:-:-:-:-::

Lookup HPSIM InstallPath (x86)
HPSIM InstallPath:  C:\Program Files\HP\Systems Insight Manager
Lookup succeeded

Data encryption password:

*

WARNING! Import wipes out all data from the database.
Do you want to proceed (y/n):  y
Extracting the zip file C:/Program Files/HP/Systems Insight Manager/data/config
zip

Importing data..
HPSIM completed successfully.
IPM completed successfully.
MSSW completed successfully.
GWLM completed successfully.
CAPACITYADVISOR completed successfully.
PMP completed successfully.
HPIR completed successfully.
APPLICATIONDISCOVERY completed successfully.
vcem version: 6.0
Start Vcem postImport process.
VCEM completed successfully.
HPIOAUX completed successfully.
LSM completed successfully.
VMM completed successfully.

Import is successful.
```

Step 7: Configure Insight Dynamics Global Workload Manager property file

This step may be skipped if you are not using the CMS to manage gWLM. Users of Insight Dynamics Global Workload Manager must perform several additional steps. For complete information, see the *Insight Dynamics Global Workload Manager 6.0 Users Guide*.

1.   Verify the following property in the Insight Dynamics Global Workload Manager agent property file.
   a.   GWLM agent property file: `C:\Program Files\HP\Virtual Server Environment\conf\gwlmagent.properties`
   b.   The property is "`com.hp.gwlm.security.virtualLocalHostName`" (host name or IP address associated with the LAN card on which to receive communications from all managed nodes. It is a global for all managed nodes). If this property is set incorrectly, then the Insight Dynamics Global Workload Manager CMS daemon fails to restart correctly. Any change is to this property must be made before any SRDs are deployed.
2.   Ensure both forward an reverse DNS is setup for Insight Dynamics Global Workload Manager managed nodes, for example:
   a.   If DNS does not resolve targets, put entries in the target CMS host files for Insight Dynamics Global Workload Manager managed nodes.
   b.   Put entries in the managed nodes `/etc/hosts` files for the CMS.

Step 8: Restarting the Insight Software services on the target CMS

Start the services listed in Table 2 in the reverse order in which they were stopped.

Note:
The "HP Application Discovery "service has to restarted on source and
target systems after installation

Post import operation tasks

Step 1: Verifying the import on the target CMS

HP recommends logging in to the target (new) CMS to verify the data has successfully migrated.
Verification of some key data on the target CMS can help ensure the migration was successful. If the
optional step to record key data items under the Exporting the source CMS configuration data section
was performed, use the item counts that were recorded to verify the following after logging in to the
target CMS as a user that has CMS-level administrator privileges. If verification fails, attempt the
export and import processes again.

1. Verify that the All Systems system list is the same size as was on the source system.

Note:
If the target CMS was a managed system on the source, the count might be
one less.

2. Verify that users are the same. See **Options→Security→Users and Authorizations.**
3. Verify that scheduled tasks appear correct. See **Tasks and Logs→Scheduled tasks**.

Note:
For an upgrade, there might be more tasks than before.

4. Verify the set of collections. From the left navigation page, select **Customize** to view all
   collections and the details to see if they appear correct.

Note:
For an upgrade, more collections might exist than before.

Step 2: Verifying SMTP settings on the target CMS

After a migration to a new host, it is possible that the SMTP configurations need to be updated. Log
into the CMS console, select **Options→Events→Automatic Event Handling→E-mail settings,** and verify
that the SMTP server is correct. If these settings are incorrect, automatic event handling and the
emailing of reports might fail.

Step 3: Re-entering vCenter credentials on the target CMS

For Insight Control virtual machine management, if the source CMS version is less than 6.0, then the vCenter Server credentials must be re-entered. To enter the vCenter Server credentials, log into the CMS console, select **Options→VMware vCenter Settings**. Each of the ESX hosts must be present in only one vCenter Server. The credentials of all the vCenter Servers must be entered to continue managing the ESX hosts.

Step 4: Manually run the migration CRA task on the target CMS

The import process created a special CRA tool and task, which needs to be loaded and run. Perform the following steps:

1. Copy the `HPSIMCRAQuery.xml` and `HPSIMCRATask.xml` files from the target `CMS <HP SIM installdir>\config\migration\CRA directory to the <installdir>\setup directory`
2. Open a command prompt on the target CMS.
   a. Navigate to **Start→Run**.
   b. Type `cmd`, and click **OK**. The command prompt window will appear.
3. In the command prompt window, execute the `mxconfigrefresh` command:
   `mxconfigrefresh`
4. A new task called **HPSIMMigrCRATask** appears in the HP SIM GUI under **Tasks and Logs→View All Scheduled Tasks**.
5. Edit the task, and then provide proper credentials. Validate the configuration, and then run it to reset configuration on the managed systems such as SNMP trap or WBEM indication destinations.

Note:
If the target CMS had been previously discovered by the source CMS that record will be removed, and the original CMS record will remain intact. The original CMS record will be renamed to that of the target and the IP addresses will be updated.

Step 5: Running daily system identification on the target CMS

Run the daily system identification task to ensure data is up to date in the target CMS.

1. In the CMS console, navigate to **Task and Logs→View All Scheduled Tasks.**
2. Select the **Daily System Identification task**.
3. Click **Run**.

Step 6: Running daily data collection just for the CMS

1. In the left search pane, enter the name of the CMS, and then press **Enter**. The CMS system page details appear.
2. Select **Options→Data Collection**.
3. Click **Run**.

Step 7: Running managed system setup wizard on the target CMS

If the source and target systems are both version 6.0 of the Insight Control or Insight Dynamics software bundle including Manage System Setup Wizard (MSSW), create a new task, and then run Manage System Setup against all systems.

Note:
The MSSW a new feature in Insight Control v6.0, might take a while to run.

Step 8: Updating the IP address of CMS in managed blade enclosures

Virtual Connect Enterprise Manager (VCEM) must update all its Virtual Connect Domains with the IP address of the target CMS.

1. Sign in to the CMS portal to validate that HP SIM has completely restarted.
2. Open a command prompt on the target CMS.

a. Navigate to **Start** menu→**Run**.

b. Type `cmd`, and then click **OK**. The command prompt window appears.

3. In the command prompt window, execute the command:

`Vcem –uvcm`

This command updates all VCEM-managed Virtual Connect Domains to contain the IP address of the target CMS on an informative popup message.

Note:
VCEM automatically locks to the target CMS after migration.

Note:
If VCEM is to be uninstalled on the source server, first edit the registry on the source server, locate the key:
HKEY_LOCAL_MACHINE>SOFTWARE>Hewlett-Packard>Virtual Connect Enterprise Manager>Settings and set checkVCDomain to false

Step 9: Redeploying Shared Resource Domains when using Insight Dynamics Global Workload Manager

Users of Insight Dynamics Global Workload Manager must perform several additional steps. For complete information, see the *Insight Dynamics Global Workload Manager 6.0 Users Guide*.

1. If secure communications are desired, then secure communications between the target CMS and all managed nodes.
2. Redeploy all previously deployed Shared Resource Domains.

Step 10: Migrating the Insight Dynamics orchestration users to the corresponding user groups on the target CMS when using Insight Dynamics orchestration

With the user names and passwords collected before the import operation, create the users on the target CMS (For domain users, this step is not required.)

Associate the users with the corresponding Windows User Groups required by HP IO:

1. Go to **Control Panel→Administrative Tool→Computer Management→Local Users and Groups→Groups**.
2. Add the HP IO Administrator users to the HPIO_Administrators group.
3. Add the HP IO Architect users to the HPIO_Architects group.
4. Add the HP IO regular users to the HPIO_Users group.

Step 11: If using Insight Dynamics recovery management, perform the following operations

1. Update the remote site with the name of the target CMS. Follow the procedure outlines for editing a site in *Chapter 3 of the Insight Dynamics Recovery Management User Guide*
2. Use the following procedure to refresh the credentials for each EVA Storage Management Server:

a. Navigate to the **HP Insight Recovery 6.0 Storage Management Servers** tab.

b. Select an **EVA Storage Management Server,** and click **Edit.**

c. Select the **Refresh SIM Password** box, and then click Save.

3. Perform a rehearsed failover.

For validation of the migration, HP recommends performing a planned failover as outlined in Chapter 8 of the *Insight Dynamics Recovery Management User Guide.*

Step 12: Reconfiguring Insight Control server deployment agents

If you had customized deployment jobs on the source CMS, you must import them to the target CMS. Copy the exported job files from the safe location and any other customized script files to the target CMS. To import the customized jobs on the target CMS:

1. From the deployment console menu, select **File→Import/Export→Import Jobs…**
2. Browse to the local copy of the jobs file exported in step 1.
3. Select a job folder in which to import the jobs.
4. Press **OK** to begin the import process.
5. Copy any customized deployment script files from the safe location to the appropriate locations on the target CMS.

If the deployment server is remote, you will need to change the location where HP SIM looks for the deployment server.

1. Open a command prompt and run `mxnodesecurity -l` to list the deployment servers IP address. If this address is correct you can stop here.
2. To change the IP address used by HP SIM for the deployment server, type the following in the same command window:

   a. `mxnodesecurity -r -p ds_rdp -n rdp-ip` to delete the old deployment server IP address where rdp-ip is the IP address of the deployment server.

b. `mxnodesecurity -a -p dsc_rdp -c username:password -n ` *`rdp-ip`*
to add the new deployment server IP back in with the user name and password necessary to access that server.

Step 13: Reinstalling and reconfiguring Insight Remote Support

Insight Remote Support Advanced must be reinstalled and reconfigured on the target CMS. For more information, see the *HP Systems Insight Manager 6.0 Installation and Configuration Guide for Microsoft Windows*.

Step 14: Updating bookmarks

1. Notify users that bookmarked URLs to the source CMS will no longer be valid after migration to the target CMS.
2. Provide new links to the target CMS, for example `https://<newcmsname>:50000`.

Scenarios not supported

- The source and target CMS (Including the database server) having different login credentials.
- Importing to a clustered CMS environment. Currently the export and import utility are not supported for a clustered CMS installation.
- The source CMS running with Insight Software v3.x/6.0 and target CMS running only standalone HP SIM.
- The source CMS running with standalone HP SIM and target CMS having Insight Control or Insight Software v3.x/6.0 installed.
- The source CMS as a 64-bit system and the target CMS as a 32–bit system.
- If you have issues activating a Logical Server after the import, see the LSM Troubleshooting guide.
- HP Insight Dynamics recovery management currently has a limitation that job information is not migrated to the target CMS. Therefore, the jobs TAB of HP Insight Dynamics recovery management will be empty after migration.

- The target CMS system must not be one of the managed systems of the source CMS, and instead must be a NEW system. Deleting the target system from the source CMS will not work if the target system was ever licensed for any product. Licensing what will be the target CMS system on the source CMS (even if it is then deleted before running DMT) may allow for multiple licenses for that target system for the same product.

Insight Software components that do not support migration

- Insight Remote Support

Remote support data will need to be re-configured on the target CMS, for instance, all systems needing remote support will need to be re-imported.

- VCRM uses a separate migration tool. Therefore, it does not support migration described in this document.
- RDP does not support data migration, some manual steps were listed in this paper that will assist in migrating RDP jobs and scripts.

- VPM, Version and Patch Management migration is not supported in Insight Software v6.0 and is not supported by data migration.

Appendix A: Quiescing services for a pre v6.0 CMS

Prior to stopping the HP Insight Software services and backing up your environment, you must quiesce Insight Software components. The following actions only need to be performed for components that are installed and currently in use in your environment.

Note:
The steps might vary slightly depending on the version of software installed on your system. See the product documentation for your release for additional information.

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1. Ensure all in-progress Insight Recovery jobs have completed. You can view the status of Insight Recovery jobs by selecting **Insight Recovery…** from the Tools menu in HP SIM. Select the **Jobs** tab to view the status of jobs. A job with the in progress icon in the **Status** column has not yet finished.

2. Ensure no HP Insight Orchestration requests are in-progress. Requests pending approval and scheduled requests may remain scheduled. However, if a request is scheduled to run during the upgrade process, you will need to defer the execution of the request until the upgrade process is complete.

3. You can view the status of HP IO requests by selecting **Insight Orchestration…** from the Tools menu in HP SIM and then selecting the **Requests** tab. Click the **End Date** column name to sort the request list. Requests with an empty End Date have not yet finished.

4. Ensure all in-progress logical server jobs have completed before stopping the HP Logical Server Automation service. Logical server jobs that are in-progress when the service stops will fail. These jobs must be resubmitted after restarting the service.

5. You can view the status of logical server jobs by selecting **VSE Management…** from the Tools menu in HP SIM. Use the Reports menu to select the **Logical Server Job Status…** item. Click the **% Complete** column name to sort the list of jobs.

6. Ensure all in-progress Virtual Connect jobs have completed. You can view the status of Virtual Connect jobs by selecting **Integrated Consoles→Virtual Connect Enterprise Manager (VCEM)…** from the Tools menu in HP SIM. Select the **Jobs** tab to view the status of jobs. Click the **End Time** column name to sort the job list. Jobs displaying an empty **End Time** have not finished.

7. Ensure all in-progress Virtual Machine tasks have completed. You can view the status of Virtual Machine tasks by selecting **View Task Results…** from the Tasks & Logs menu in HP SIM. Click the **End Time** column name to sort the task list. Tasks displaying an empty **End Time** have not yet finished.

8. Ensure all in-progress installation and configuration tasks have completed (for example, Configure and Repair Agents tasks or Deploy Drivers, Firmware or Agents). You can view the status of the tasks by selecting **View Task Results…** from the Tasks & Logs menu in HP SIM. Click the **End Time** column name to sort the task list. Tasks displaying an empty End Time have not finished.

If you are using the CMS to manage gWLM on Integrity nodes, you can issue the `gwlm history --flush` command to gather the latest historical data from the gWLM agents before performing a backup. This step may be skipped if you are not using the CMS to manage gWLM on Integrity nodes.

IMPORTANT:

If, in your environment, you have customized an application, workflow or script to asynchronously issue Insight Software requests, you must temporarily disable this functionality to avoid generating Insight Software requests during the upgrade process.

Troubleshooting

Scenario 1: Where some or all services are running

```
c:\mxexport
....
....

WARNING! Service is running for the following plug-ins:
APPLICATIONDISCOVERY, CA
PACITYADVISOR, GWLM, HPIO, HPSIM, VMM.
Please stop all services and restart the export function..
14 Dec 2009 19:15:03,344 INFO  [HPSIM_DEBUG] Services are running for the
follow
ing plug-ins APPLICATIONDISCOVERY, CAPACITYADVISOR, GWLM, HPIO, HPSIM,
VMM. Please stop all plug-in services and restart the migration function.

Error occurred while exporting data. Export failed.
```

Solution:

Stop all the above said services then run the export utility again.

Scenario 2: After import the target CMS shows two iLOs:

When does this happen
This can happen if, prior to exporting, the target CMS and/or the iLO was discovered.

Solution
Delete the extra management processor (the one originally associated to the source CMS) and re-discover it and the source CMS server.

Scenario 3: if an export of some plugins fails:

```
c:\mxexport

Warning! Export is not completely successful. Some errors are bypassed
forcibly.
 The exported data file is C:/Program Files/HP/Systems Insight
Manager/data/conf
igdata-export\Products.zip.
```

Solution:

Call support

Scenario 4: In Application Discovery the results of template is not the same on the target CMS as was on the source CMS.

When does this happen

Templates on source CMS are defined to use a wild card (Any) for any of the **System Scope** fields **(Arch, OSver, OS type).**

Solution

When the user perform DMT of AD and when the template does not provide the desired results the following needs to be performed for all **System Scope (Arch, OSver, OS type)** templates.

1. Open the template in edit mode
2. Select the first entry in the drop down list for Arch
3. Save it.

Scenario 5: The export or import includes all products, only wanted HP SIM data.

When does this happen

By default the data migration tool will export installed products using a set of XML configuration files. The same applies to the import, on import both the export file and the set of installed components is examined to pull the common set of data from the exported file.

Solution
It is possible to only import HP SIM data, or export only HP SIM data. To do this navigate to the installation directory and locate the config/migration folder. Delete (or move to a new location) all XML files except `hpsim_migrate.xml` for both the source and target CMS systems.

For more information

Insight Dynamics troubleshooting guides at www.hp.com/go/insightdynamics/docs

Backing up and restoring HP Insight Software v6.00 Central Management System (Windows) white paper at www.hp.com/go/insightsoftware/docs.

LSM troubleshooting information is included in *HP Insight Manager 6.0 Software with Logical Server Management: User Guide.* This and other ID docs are available at www.hp.com/go/insightdynamics/docs

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