Contents

1 Preface .......................................................................................................................... 5

2 ServerView Deployment Pack ...................................................................................... 7
  2.1 About This Guide ........................................................................................................ 7
  2.2 Target Audience ......................................................................................................... 7
  2.3 Safety Notes ............................................................................................................... 7
  2.4 Notational Conventions ............................................................................................. 8

3 Deployment Concept ...................................................................................................... 9
  3.1 Overview ...................................................................................................................... 9

4 Installing the ServerView Deployment Pack .............................................................. 11
  4.1 Getting Started .......................................................................................................... 11
    4.1.1 Preconditions ...................................................................................................... 11
    4.1.2 Hints for Driver Packages .................................................................................. 11
    4.1.3 Hints for PRIMERGY System Hardware Configuration ..................................... 12
    4.1.4 Hints for Task Sequences and Bare Metal Deployment ....................................... 12
    4.1.5 Using Deployment Pack PowerShell Module ....................................................... 13
  4.2 Installation .................................................................................................................. 14
    4.2.1 Preparation .......................................................................................................... 14
    4.2.2 ServerView Deployment Pack .............................................................................. 14
    4.2.3 Component List .................................................................................................... 14
    4.2.4 File location overview .......................................................................................... 17

5 Fujitsu driver packages .................................................................................................. 19
  5.1 General ....................................................................................................................... 19
  5.2 Building a driver package .......................................................................................... 19

6 Import Boot Images ......................................................................................................... 21
  6.1 Boot Image Preparations ............................................................................................. 21
  6.2 Importing Fujitsu boot images .................................................................................. 21
  6.3 Custom WinPE images .............................................................................................. 23
    6.3.1 Custom WinPE prerequisites .............................................................................. 23
    6.3.2 Fujitsu WinPE drivers .......................................................................................... 23

7 Preparing SCCM to configure PRIMERGY Servers ...................................................... 25
1 Preface

The ServerView Deployment Pack for Microsoft System Center Configuration Manager (SCCM) is intended to enable users to configure and deploy PRIMERGY servers using Microsoft SCCM.

The pack leverages off the WinPE-based tools provided by the ServerView Scripting Toolkit, and extends the SCCM with tools and scripts. ServerView Suite Installation DVD is required to provide up-to-date drivers and WinPE versions to integrate into SCCM. The ServerView Deployment Pack supports SCCM 2012, SCCM 2012 SP1, SCCM 2012 R2 (at least CU1 is required), SCCM 1511, SCCM 1602, SCCM 1606, SCCM 1610, SCCM 1702, SCCM 1706 and SCCM 1710.

This guide describes the tools and features provided by the ServerView Deployment Pack and how they can be employed in an MS SCCM environment for PRIMERGY servers.

For more information about Microsoft System Center Configuration Manager please refer to the documentation at: https://docs.microsoft.com/en-us/sccm/

The ServerView Deployment Pack contains:

- A collection of scripts to integrate the ServerView Scripting Toolkit for PRIMERGY hardware configuration within Microsoft SCCM
- Tools for handling Fujitsu ServerView Suite DVDs and PRIMERGY Operating System Deployment
- Documentation

The ServerView Deployment Pack is located

- on the ServerView Suite – Management and Serviceability DVD: <DVDroot>\start.html

or

- on Fujitsu support website http://download.ts.fujitsu.com/prim_supportcd/start.html

In both cases follow Software Products – ServerView – Integration Solutions – ServerView Deployment Pack for Microsoft SCCM
Things you need before getting started:

- ServerView Suite V11.12.10 or later
- ServerView Scripting Toolkit V4.0 or later.

All packages are located on the ServerView Suite – Management and Serviceability DVD or on the support website, follow Software Products – ServerView – Deployment Tools – ServerView Scripting Toolkit
2 ServerView Deployment Pack

2.1 About This Guide

This user guide is intended as a reference for using the ServerView Deployment Pack within Microsoft System Center Configuration Manager for the deployment of PRIMERGY servers.

2.2 Target Audience

This guide is targeted at experienced administrators who are familiar with the servers of the PRIMERGY family from Fujitsu and have a good knowledge of Microsoft System Center Configuration Manager.

2.3 Safety Notes

Improper use of the tools and scripts can result in loss of critical data.

Because of the potential risk of data loss, only experienced individuals should use the ServerView Deployment Pack. Before using any tools or scripts, a user must take all necessary precautions to ensure that mission-critical systems remain online if a failure occurs.
## 2.4 Notational Conventions

The following notational conventions are used in this manual:

<table>
<thead>
<tr>
<th>Typewriter text</th>
<th>Indicates elements of the syntax that must be entered exactly as shown in the 'Syntax' section.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Italics</em></td>
<td>Indicates variables, arguments or file names</td>
</tr>
<tr>
<td>[ ]</td>
<td>Indicates an optional entry (an option or argument enclosed in square brackets may be specified), i.e. the entry is not mandatory.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td>Indicates that one or more options or arguments can be specified several times.</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>Used for highlighting in the text.</td>
</tr>
<tr>
<td>&quot;Quotes&quot;</td>
<td>Indicates cross-references to other chapters or manuals.</td>
</tr>
<tr>
<td>![Warning sign]</td>
<td>Warning sign indicating that your health, the correct functioning of your system, or the security of your data may be at risk if you ignore the information given at this point.</td>
</tr>
<tr>
<td>![Information]</td>
<td>Indicates additional information, notes and hints.</td>
</tr>
</tbody>
</table>
3 Deployment Concept

3.1 Overview

The ServerView Deployment Pack is intended to enable users to configure and deploy Fujitsu PRIMERGY servers using Microsoft System Center Configuration Manager. It depends on and uses the ServerView Scripting Toolkit for tools and scripts to configure PRIMERGY servers' hardware.

All necessary MS Windows OS drivers for supported PRIMERGY servers can be imported from ServerView Suite - Installation DVD and incorporated within SCCM using tools provided with the ServerView Deployment Pack. Additionally, ServerView Suite - Installation DVD provides ready-to-use WinPE boot images which can be imported into SCCM using ServerView Deployment Pack supplied tools. ServerView Suite - Installation DVD also provides the chip-set drivers as a 'post-installation' task.

Menu entries and SCCM Property Pages are provided to allow integrating drivers and WinPE images from ServerView Suite - Installation DVD and to generate all required software packages for Bare Metal Operating System Deployment. All tools are also provided as command line tools or PowerShell Cmdlets for use in automated environments.
4 Installing the ServerView Deployment Pack

4.1 Getting Started

The goal for the ServerView Deployment Pack is to help you deploy Operating Systems to Fujitsu PRIMERGY servers. Support to this end comes in three levels:

1. Building Driver Packages for PRIMERGY systems on your site.
2. Configuring PRIMERGY hardware using the ServerView Suite – Installation DVD WinPE images and the tools provided by the ServerView Scripting Toolkit.
3. Providing Task Sequence steps to fully deploy an OS to a Bare Metal PRIMERGY system.

How this support is used is entirely at your discretion and please do not hesitate to inform us if you think we have overlooked something. Obviously for all the cases listed above the ServerView Deployment Pack has to be installed.

4.1.1 Preconditions

To be able to successfully install, configure and fully use the ServerView Deployment Pack, you will need:

- Microsoft System Center Configuration Manager installed and configured
- ServerView Suite – Installation DVD V11.12.10 or later for WinPE Images and drivers
- The ServerView Scripting Toolkit (provided on the ServerView Suite – Management and Serviceability DVD) V4.0 or later.
- Additional Operating System files are required. See chapter “6.1 Boot Image Preparations”.

4.1.2 Hints for Driver Packages

The simplest use of the SVDPSCCM Deployment Pack is to import the drivers required for a target Operating System running on a particular PRIMERGY server. The generated package can
Installing the ServerView Deployment Pack

be used as is in any standard SCCM Windows OS Deployment Task Sequence. The following steps must be completed:

- Install ServerView Deployment Pack; see chapter "4.2.2 ServerView Deployment Pack"
- Build necessary OS-specific and PRIMERGY-specific driver packages from ServerView Suite – Installation DVD; see chapter "7 Preparing SCCM to configure PRIMERGY Servers"

4.1.3 Hints for PRIMERGY System Hardware Configuration

For Hardware configuration of PRIMERGY servers under SCCM, import the appropriate ServerView Suite – Installation WinPE (SVIM), and ServerView Scripting Toolkit (STK). Create a new task sequence which uses the imported WinPE as its boot image and add task sequence steps to configure the RAID controller and set the desired iRMC configuration space variables. All packages (SVIM WinPE and STK) used must be copied to the required Distribution Point because the target system will not necessarily have a disk for the SCCM Client to use (for pre-staging). The task sequence will need to be started with the deployment option "Access content directly from a distribution point when needed by the running task sequence". After configuring the RAID controller the target system must be rebooted before installing an Operating System.

- Import WinPE images for deployment from ServerView Suite – Installation DVD V11.12.10 or later; see chapter "6 Import Boot Images".
- Set up ServerView Scripting Toolkit package from ServerView Suite – Installation DVD; see chapter "7 Preparing SCCM to configure PRIMERGY Servers".

4.1.4 Hints for Task Sequences and Bare Metal Deployment

The SVDPSCCM Deployment Pack provides forms for task sequence steps to configure RAID Controllers, iRMC configuration space values and post OS install of chipset drivers.

It is also possible to generate a Bare Metal OS Deployment task sequence. The generated task sequence will need to be associated with a suitable WinPE boot image and adhere to the restrictions/hints given in the previous two sections. We advise that all steps in the sequence are checked and/or edited to prove that: any usernames and passwords used are correct; that the correct packages are listed in steps that use them; and that the Windows and Network settings match those of the intended environment.

- Build necessary OS-specific and PRIMERGY-specific driver packages from ServerView Suite – Installation DVD; see chapter "7 Preparing SCCM to configure PRIMERGY Servers".
Installing the ServerView Deployment Pack

- Import WinPE images for deployment from ServerView Suite – Installation DVD V11.12.10 or later; see chapter "6 Import Boot Images".
- Set up ServerView Scripting Toolkit package from ServerView Suite – Management and Serviceability DVD; see chapter "7 Preparing SCCM to configure PRIMERGY Servers".
- Build Custom Reboot Package, Copy SCCM Client Package and Post Install Package; see chapter "7 Preparing SCCM to configure PRIMERGY Servers".
- Create Bare Metal OS Deployment Task Sequence; see chapter "8 Task Sequences".

4.1.5 Using Deployment Pack PowerShell Module

The SVDPSCCM Deployment Pack provides a PowerShell Module with support for most required actions. There is also a simple sample script ’NewSVIMDVD.ps1’ to show how the supplied cmdlets (See “4.2.3.5 SCCM Powershell Cmdlets”) can be used.

- Using a PowerShell command prompt with Administrative Rights (needed for BootImage operations).
- Set-Location
  `<AdminConsoleFolder>\XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite`
- Import-Module -Name "PRIMERGYDeploymentPack.psd1"
- PowerShell Module does not set up a PSDrive so no Set-Location is needed to use the Cmdlets.
- There are no Credentials. This means that the PowerShell must be run on a SiteServer and have appropriate rights to access SCCM.
- When using either the command line tools or the PowerShell Cmdlets to remove packages: The tool (or Cmdlet) will first remove the package (if found) from SCCM and then the package’s Contents. If you do not want the package contents to be removed please use the package delete functionality (SCCM Admin Console or Remove-CMPackage Cmdlet) provided by SCCM.
4.2 Installation

4.2.1 Preparation

It is recommended that Microsoft System Center Configuration Manager Console should be closed before the ServerView Deployment Pack is installed.

4.2.2 ServerView Deployment Pack

Make sure MS System Center Configuration Manager Console is closed.

Related Microsoft Windows Server 2016.

For Microsoft Windows Server 2016 to start installation please use following command in command prompt window: msiexec /i SVDPSCCM.msi.

Launch SVDPSCCM.msi and go through the following installation steps.

1. In the Welcome Screen select the preferred ServerView Deployment Pack language, and then click “Next”.
2. In the following dialogue read and then select to accept the license agreement and click “Next”.
3. Start the installation.

4.2.3 Component List

The following is a list of parts provided by the SVDPSCCM Deployment Pack

4.2.3.1 SCCM Console Actions

Ribbon entries are added to various SCCM Console nodes to invoke SVDPSCCM Deployment Pack Actions
4.2.3.2 SCCM Forms

Forms are provided for SVDPSCCM Deployment Pack Actions such as importing PRIMERGY drivers and editing task sequence steps.

4.2.3.3 SCCM Task Sequence steps

Property pages are provided for SVDPSCCM Deployment Pack Task Sequence steps such as iRMC setup or Raid controller configuration.

4.2.3.4 SCCM Command Line Tools

Some command line tools are provided on the Site Server to allow scripted operation.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DriverPackage.exe</td>
<td>Imports the drivers required for a specific OS from the 'SVS Installation DVD' and builds a package.</td>
</tr>
<tr>
<td>BootImage.exe</td>
<td>Imports a single WinPE image from the SVS Installation DVD.</td>
</tr>
<tr>
<td>ImportStk.exe</td>
<td>Imports the specified 'SV Scripting Tool Kit' from the 'SVS Management and serviceability DVD' and builds a package.</td>
</tr>
<tr>
<td>PostInstallPkg.exe</td>
<td>Imports the 'PRIMERGY Support Package' from the 'SVS Installation DVD and builds a package.</td>
</tr>
<tr>
<td>CustomRebootPkg.exe</td>
<td>Builds the 'Custom Reboot Package' required by the 'Bare Metal Template' task sequence.</td>
</tr>
<tr>
<td>CopyClientPkg.exe</td>
<td>Builds the 'Copy SCCM Client Package' required by the 'Bare Metal Template' task sequence.</td>
</tr>
<tr>
<td>BareMetalTemplate.exe</td>
<td>Generates a 'Bare Metal OS Deployment Task' sequence.</td>
</tr>
</tbody>
</table>
### 4.2.3.5 SCCM Powershell Cmdlets

Some PowerShell Cmdlets are provided on the Site Server to allow PowerShell scripted operation.

<table>
<thead>
<tr>
<th>Cmdlet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get-SVDPSCCM, Set-SVDPSCCM</td>
<td>Get Deployment Package properties e.g. Version, Culture and global DebugLevel. Culture (one of &quot;en&quot;, &quot;de&quot; or &quot;jp&quot;) and DebugLevel can be set. Where DebugLevel: 0 means no logging. 1 means log all errors (installation default). 2 means log warnings and errors. 3 means log function calls. 4 means verbose. 5 means log everything.</td>
</tr>
<tr>
<td>New-SVDriverPackage, Remove-SVDriverPackage</td>
<td>Import the drivers required for a specific OS from the 'SVS Installation DVD' and build a package. Remove a particular driver package.</td>
</tr>
<tr>
<td>New-SVBootImage, Remove-SVBootImage</td>
<td>Import an 'SVS Installation DVD WinPE' image. Remove a particular image.</td>
</tr>
<tr>
<td>New-SVScriptingToolKitPackage, Remove-SVScriptingToolKitPackage</td>
<td>Import (or remove) the specified 'SV Scripting Tool Kit' package.</td>
</tr>
<tr>
<td>New-SVCustomRebootPackage, Remove-SVCustomRebootPackage</td>
<td>Build (or remove) the 'Custom Reboot Package' required by the 'Bare Metal Template' task sequence.</td>
</tr>
<tr>
<td>New-SVPostInstallPackage, Remove-SVPostInstallPackage</td>
<td>Import (or remove) the 'PRIMERGY Support Package'.</td>
</tr>
<tr>
<td>New-SVCopyClientPackage, Remove-SVCopyClientPackage</td>
<td>Build (or remove) the 'Copy SCCM Client Package'.</td>
</tr>
<tr>
<td>New-SVBareMetalTaskSequence, Remove-SVBareMetalTaskSequence</td>
<td>Create (or remove) a Bare Metal Task Sequence.</td>
</tr>
<tr>
<td>New-SVSecureStringPassword</td>
<td>Generates from plaintext a SecureStringPassword suitable for storing in OSD_Profile.xml.</td>
</tr>
<tr>
<td>Get-SVCredential</td>
<td>Generates a PSCredential object from the supplied OSD_Profile.xml (NetworkAccessAccount).</td>
</tr>
</tbody>
</table>
A sample script NewSVIMDVD.ps1 is provided giving a few basic examples showing how to use some of the Cmdlets. It is by no means definitive and should only be used as a guide. For this reason the supplied script has not been signed.

### 4.2.4 File location overview

The following is a list of folders which contain files pertinent to the ServerView Deployment Pack:

- **Documentation:**
  ```
  <AdminConsoleFolder>XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite\Docs
  ```
  is the folder where ServerView Deployment Pack and other documentation is stored.

- **Samples:**
  ```
  <AdminConsoleFolder>XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite\Docs\Samples
  ```
  is the folder where NewSVIMDVD.ps1 PowerShell script is stored.

- **Log files:**
  ```
  <AdminConsoleFolder>XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite\Logs
  ```
  is the folder where ServerView Deployment Pack log files are stored.

- **Command line tools:**
  ```
  <AdminConsoleFolder>XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite
  ```
  is the folder where ServerView Deployment Pack command line tools are installed.

- **Boot images:**
  ```
  \<ServerName\>SMS_<SiteCode>_OSD\lib\BootImages\Fujitsu\n  ```
  is the default package contents location where ServerView Deployment Pack boot images are stored.

- **Drivers:**
  ```
  \<ServerName\>SMS_<SiteCode>_OSD\lib\Drivers\Fujitsu\n  ```
  is the default package contents location where ServerView Deployment Pack drivers are stored.

- **Driver packages:**
  ```
  \<ServerName\>SMS_<SiteCode>_OSD\lib\DriverPackages\Fujitsu\n  ```
  is the default package contents location where ServerView Deployment Pack driver packages are stored.
Installing the ServerView Deployment Pack

- **Deployment packages:**
  \\<ServerName>\SMS_<SiteCode>\OSD\lib\Packages\Deployment\Fujitsu\ServerView Suite\ is the default package contents location where ServerView Deployment Pack software packages are stored.

Boot images, drivers, driver packages and deployment packages will be generated when working with the ServerView Deployment Pack.
5  Fujitsu driver packages

5.1  General

ServerView Suite - Installation DVD (SVIM) is released approximately once every two months. It contains all drivers for all supported PRIMERGY servers for all supported operating systems, including those for WinPE.

5.2  Building a driver package

Have your ServerView Suite - Installation DVD ready.

To build operating-system-specific driver packages or import WinPE drivers follow these steps:

1. In the SCCM Console select ‘Software Library’ and navigate to ‘Operating System’.
2. On the ribbon click on ‘Fujitsu Server Deployment’ – ‘Create Fujitsu PRIMERGY Driver Packages’.
3. When the import tool asks for the location of the ServerView Suite - Installation DVD, navigate to the correct drive.
4. When asked, provide the PRIMERGY model and the operating system the driver package shall be built for.

Which PRIMERGY models and operating systems are supported depends upon the version of ServerView Suite - Installation DVD.

5. Adapt the default locations for driver contents and/or driver packages if desired.

These must be given as UNC paths and accessible from the Site Server.
The tool will then proceed to copy all drivers to a folder on the SCCM server, import those drivers into SCCM with appropriate categories and build a package from those drivers. Categories used comprise of the following: PRIMERGY model, the operating system and the processor architecture. Depending on how many drivers need to be imported this action may take up to 10 minutes. Any existing drivers will not be re-imported but will be given additional new categories as required. A file "DriverList.log" is created in the log files directory which lists the names of drivers that were imported and their associated status message. Only the details from the last successful import are kept.

The driver packages will be supplied with the PRIMERGY model, the operating system, the processor architecture and the ServerView Suite - Installation DVD Version for easy differentiation.

WinPE drivers will only be imported and categorized since WinPE drivers are not stored in packages.

Drivers and Driver Packages can also be generated via the command line tool DriverPackage.exe. See DriverPackage.exe --execute --help for usage information. Alternatively, use the PowerShell Cmdlet New-SVDriverPackage. Use Get-Help New-SVDriverPackage for usage information. For importing 64bit WinPE 5 drivers use parameter '-OperatingSystem "WinPE5x64"'
6 Import Boot Images

6.1 Boot Image Preparations

The tools used to configure Fujitsu PRIMERGY Server hardware require a few preconditions to be able to work in WinPE. These preconditions are mostly fulfilled per default with Fujitsu’s own WinPE versions from ServerView Suite - Installation DVD which are pre-configured to support all current Fujitsu PRIMERGY servers.

The ServerView Deployment Pack therefore uses ServerView Suite - Installation DVD WinPE images to configure PRIMERGY servers. This section describes how to import ServerView Suite - Installation DVD WinPE images into SCCM.

6.2 Importing Fujitsu boot images

Have your ServerView Suite - Installation DVD ready and set up sc.exe in the SVDPSCCM/TOOLS64 folder. See chapter “6.1 Boot Image Preparations” for details.

SVIM features various WinPE versions to the meet all requirements of the supported OS versions. Depending on the SCCM version the following WinPE versions can be selected to be imported:

<table>
<thead>
<tr>
<th>SCCM 2012</th>
<th>WinPE3 x86, WinPE3 x64</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCCM 2012 SP1</td>
<td>WinPE4 x64</td>
</tr>
<tr>
<td>SCCM 2012 SP1 CU2 and later</td>
<td>WinPE3 x64, WinPE4 x64, WinPE5 x64</td>
</tr>
<tr>
<td>SCCM 1602 Hotfix (KB3174008) and later</td>
<td>WinPE3 x64, WinPE4 x64, WinPE10 x64</td>
</tr>
</tbody>
</table>

To import Fujitsu Boot Images follow these steps:

1. In the SCCM Console select ‘Software Library’ and navigate to ‘Operating System’.
2. On the ribbon click on ‘Fujitsu Server Deployment’ – ‘Create Fujitsu Boot Images’.
3. When the import tool asks for the location of the ServerView Suite - Installation DVD, navigate to the correct drive.
4. Select one or more WinPE version(s).
5. Adapt the default location for image content if desired. The default file name of the WinPE image(s) cannot be changed.

The tool will then proceed to adapt the SVIM WinPE image(s) for SCCM and import these boot image(s) into the SCCM Boot Images node into a folder 'Fujitsu PRIMERGY Boot Images'. This action takes about 15 minutes per WinPE image.

The boot images will be supplied with the ServerView Suite - Installation DVD Version to distinguish between different versions of SVIM WinPE images.

Fujitsu WinPE images can also be imported via the command line tool BootImage.exe. See BootImage.exe –execute –help for usage information. The command line tool will only import one boot image at a time.

Alternatively, after importing the PRIMERGYDeployment module, use the PowerShell Cmdlet 'New-SVBootImage'.
Use 'Get-Help New-SVBootImage' for usage information. To import 64bit WinPE 5 image use the parameter '-OperatingSystem "WinPE5x64"

- The WinPE images(s) from a particular ServerView Suite - Installation DVD version can only be imported once. If for any reason the same WinPE needs to be imported again, change the name and package contents location for the already imported boot image (or delete them) before re-importing it.
- Different RAID drivers may be required for Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2 and Windows Server 2016 therefore it is important to use the corresponding SVIM WinPE image for the target OS installation. The installation may run to a bluescreen after reboot if the wrong WinPE is used.
6.3 Custom WinPE images

If the required conditions are met in a custom WinPE, there is every chance the tools will work in this boot image too.

6.3.1 Custom WinPE prerequisites

The following conditions must be met within a custom WinPE which will be used to configure PRIMERGY hardware.

- WinPE-Scripting-Package installed
- Fujitsu WinPE drivers added. See chapter “6.3.2 Fujitsu WinPE drivers” for details.

6.3.2 Fujitsu WinPE drivers

The ServerView Suite - Installation DVD contains all drivers for all supported PRIMERGY models and all supported operation system variants including supported WinPE versions. To extract all the required WinPE drivers follow the instructions in chapter “5 Fujitsu driver packages”.

Then add the appropriate drivers to a custom boot image in the SCCM console.
7 Preparing SCCM to configure PRIMERGY Servers

The ServerView Scripting Toolkit requires the Windows tool sc.exe. This tool can be found in %SystemRoot%\SysWOW64 in any full operating system.

Copy the tool and place x64 version in

<AdminConsoleFolder>\XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite\Packages\SVDPSCCM\TOOLS64

The ServerView Scripting Toolkit no longer supports x86 tools. Hardware configuration must be executed using an x64 environment.

7.1 Import the ServerView Scripting Toolkit

Either have your ServerView Suite – Management and Serviceability DVD ready or retrieve the newest version of the ServerView Scripting toolkit from the Fujitsu download site at:

http://download.ts.fujitsu.com/prim_supportcd/start.html

Both on the DVD and on the web site follow ServerView Suite – Deployment Tools to obtain the ServerView Scripting Toolkit.

To import the ServerView Scripting Toolkit follow these steps:

1. Set up additional files folders with sc.exe. See above "6.1 Boot Image Preparations".
2. In the SCCM Console select ‘Software Library’ and navigate to ‘Operating System’.
4. When the import tool asks for the ServerView Scripting Toolkit, navigate to the ServerView Scripting Toolkit installer (ServerView Scripting Toolkit.msi).
5. Adapt the default location for package contents if desired.

This will import the ServerView Scripting Toolkit and create the STK software packages. The packages will be supplied with the ServerView Scripting Toolkit’s version and architecture. The
resulting software packages are located in a folder ‘Fujitsu PRIMERGY Server OS Deployment’ in the ‘Application Management’ – ‘Packages’ section of the ‘Software Library’.

The ServerView Scripting Toolkit can also be imported via the command line tool ImportSTK.exe. See ImportSTK.exe –execute –help for usage information.


A specific version of the ServerView Scripting Toolkit cannot be imported twice. When deleting a specific ServerView Scripting Toolkit Package, make sure to delete the associated package contents as well, otherwise that version of the ServerView Scripting Toolkit cannot be imported again.

7.2 **Build the Custom Reboot Package**

To be able to use the custom reboot within the Bare Metal OSD task sequence, the Custom Reboot Package is required.

To build the package, follow these steps:

1. In the SCCM Console select ‘Software Library’ and navigate to ‘Operating System’.
3. Adapt the default location for package contents if desired.

The resulting software package is located in a folder ‘Fujitsu PRIMERGY Server OS Deployment’ in the ‘Application Management’ – ‘Packages’ section of the ‘Software Library’.

The Custom Reboot Package can also be generated via the command line tool CustomRebootPkg.exe. See CustomRebootPkg.exe –execute –help for usage information.

7.3  **Build the Copy SCCM Client Package**

The standard Microsoft SCCM Client package cannot be amended to be run from a Distribution Point which makes is unsuitable for use in a Bare Metal OSD task sequence.

To build the package, follow these steps:

1. In the SCCM Console select 'Software Library' and navigate to 'Operating System'.
2. On the ribbon click on 'Fujitsu Server Deployment' - 'Build Copy of Client Package'.
3. Adapt the default package contents location if desired.

The resulting software package is located in a folder ‘Fujitsu PRIMERGY Server OS Deployment’ in the 'Application Management' - 'Packages' section of the 'Software Library'.

The Copy SCCM Client Package can also be generated via the command line tool `CopyClientPkg.exe`. See `CopyClientPkg.exe --execute --help` for usage information.

Alternatively, after importing the PRIMERGYDeployment module, use the PowerShell Cmdlet 'New-SVCopyClientPackage'. Use 'Get-Help New-SVCopyClientPackage' for usage information.

7.4  **Build the Post Installation Package**

To finish the OSD task sequence, a Post Installation Package is also required.

To build the package, follow these steps:

1. In the SCCM Console select ‘Software Library’ and navigate to ‘Operating System’.
3. When the import tool asks for the location of the ServerView Suite – Installation DVD, navigate to the correct drive.
4. Adapt the default package contents location if desired.

The resulting software package is located in a folder ‘Fujitsu PRIMERGY Server OS Deployment’ in the ‘Application Management’ – ‘Packages’ section of the ‘Software Library’.

The Post Installation Package can also be generated via the command line tool `PostInstallPkg.exe`. See `PostInstallPkg.exe --execute --help` for usage information.

Alternatively, after importing the PRIMERGYDeployment module, use the PowerShell Cmdlet 'New-SVPostInstallPackage'. Use 'Get-Help New-SVPostInstallPackage' for usage information.
8 Task Sequences

8.1 General

The ServerView Deployment Pack provides both an Operating System Deployment task sequence generator and task sequence property pages for additional hardware configuration tasks.

Configuring a brand new server or RAID configuration in general requires the task sequence to be run directly from the distribution point. All depending packages – including the boot image – need to be configured to be accessed directly from the distribution point.

Use the Fujitsu Boot images with any task sequence that configures PRIMERGY server hardware to be sure all necessary drivers are at hand.

8.2 Add an OSD task sequence

To set up a preconfigured Operation System deployment task sequence follow these steps:

1. In the SCCM Console select ‘Software Library’ and navigate to ‘Operating System’.
2. On the ribbon click on ‘Fujitsu Server Deployment’ – ‘Create Fujitsu PRIMERGY Deployment Template’.
3. Provide the Network Access Account Details within the form.

An OSD Task Sequence can also be generated via the command line tool BareMetalTemplate.exe. See BareMetalTemplate.exe –execute –help for usage information.

Alternatively, after importing the PRIMERGYDeployment module, use the Cmdlet 'New-SVBareMetalTaskSequence'. Use 'Get-Help New-SVBareMetalTaskSequence' for usage information.

The new OSD task sequence can be found in the Task Sequences node. Refresh the pane if necessary.
8.2.1 Using the profile option

It is possible to obviate the need to finalise a generated Bare Metal OSD Task Sequence by supplying all the required information in a profile.

Some comments are provided in the sample OSD_Profile.xml to help with setting up a profile.

There is a section for general information such as which PRIMERGY server is being targeted. It is possible to store various passwords (e.g. NetworkAccessAccount) in this file. Use the NewSVSSecureStringPassword cmdlet to generate a suitable string. A second command Get-SVCredential can be used to generate a PSCredential Object suitable for use in ‘Start-Bitstransfer’ thereby validating the entries in the OSD_Profile.xml.

There is a section for Packages where the package IDs for all required packages can be defined.

There is a section for Property Sheets where values found on most Property sheets can be set.

The profile is an adjunct to the Bare Metal Task Sequence meaning it cannot be used at this time to extend or restructure the generated task sequence.

The OSD profile is an XML file and has an associated Schema supplied. It is recommended to use a schema aware XML editor, or as a minimum an XML aware editor.

Warning: Please do not edit this file using MS Notepad.

8.2.2 Finalise the OSD task sequence

Some adoptions are necessary, before the OSD task sequence can be used:

1. Open the task sequence properties and provide a boot image for the task sequence.

Edit the task sequence and adapt the following steps:

2. Check that all hardware configuration task steps are supplied with the correct ServerView Scripting Toolkit Package.

3. Add more hardware configuration task steps as required.
4. Within the ‘Operating System Deployment’ group add a valid OS image to the ‘Apply Operating System Image’ step.

5. Within the ‘Operating System Deployment’ group add a valid driver package to the ‘Apply Driver Package’ step.

6. Within the ‘Operating System Deployment’ group add the Config Manager Client package to the ‘Setup Windows and ConfigMgr’ step.

7. Check that the post installation task step is supplied with the correct Post Installation Package.

It is necessary to reboot the server between RAID configuration and Operating System Deployment. The reboot can only be executed successfully if the Custom Reboot account (Network Access Account) has WMI access rights on the Site Server. The password to the Network Access Account is saved encrypted.

The result of this precaution is that every time a change is made to any of the Custom Reboot steps, the password must be supplied again and the ‘Apply’ button must be pressed immediately. Otherwise a garbled password will be saved and the task sequence will fail.

8.3 Custom Reboot

The Custom Reboot feature stores the task sequence progress in a computer-specific WMI variable called RebootStep on the Site Server and uses this variable to control the task sequence progress. To read and write this variable full SiteServer WMI access is required.

SCCM always runs the complete task sequence. The actual reboot of the task sequence is executed at the very end of the task sequence. The RebootStep variable is used to define which group of the task sequence is to be executed at a given run (see the ‘Options’ tab of the group). A group is only run if the RebootStep variable has the correct value.

The Custom Reboot feature consists of 3 steps:

1. Prepare the Reboot.
   This step sets up machine-specific variables on the SiteServer. RebootStep is incremented each time the Prepare step is run.

2. Execute the Reboot.
   This step resets the PXE Deployment on the SiteServer. It must be the last task step within a group.
3. Reset (or Cleanup) the Reboot.
   This step removes the machine-specific variables from the SiteServer.

   If a task sequence fails, it is necessary to manually reset or remove the RebootStep variable for the device on the Site server (see the device properties, tab 'Variables') to be able to restart the task sequence from the beginning for that particular device.

### 8.3.1 Change or add a Custom Reboot task

To change a Custom Reboot task edit an existing task sequence and select one of the Custom Reboot steps. To add a Custom Reboot task click the 'Add' in the upper left corner, select 'Fujitsu Deployment' and click on 'Custom Reboot'. This will add a Custom Reboot task to the task sequence.

Select whether to prepare or execute or reset the Custom Reboot feature and add a valid account with WMI access rights on the Site Server and the password. Click 'Apply' immediately.

Save the task sequence.

   The server reboot can only be executed successfully if the Custom Reboot account (Network Access Account) has WMI access rights on the Site Server. The password to the Network Access Account is saved encrypted.

   The result of this precaution is that every time a change is made to any of the Custom Reboot steps, the password must be supplied again and the 'Apply' button must be pressed immediately. Otherwise the password will be saved garbled.

### 8.4 Add a RAID configuration task

Edit an existing task sequence, click the 'Add' in the upper left corner, select 'Fujitsu Deployment' and click on 'RAID Controller Setup'. This will add a RAID configuration task step to the task sequence.

Change the name of the task sequence step for later reference. Select the appropriate ServerView Scripting Toolkit version from the drop-down-list. Its package ID will be added to the
next field. Select the controller to be configured and add the RAID Type and number of disks to be used. If the RAID controller does not support FastInit, remove the tick from the box.

Save the task sequence.

8.5 Add an iRMC configuration task

Edit an existing task sequence, click the 'Add' in the upper left corner, select ‘Fujitsu Deployment’ and click on ‘iRMC Comfort Configuration’. This will add an iRMC configuration task step to the task sequence.

Change the name of the task sequence step for later reference. Select the appropriate ServerView Scripting Toolkit version from the drop-down-list. Its package ID will be added to the next field.

Select an iRMC configuration from the list and add the required values to the other fields (values and types depend on the selected configuration item).

Save the task sequence.

8.5.1 Add a custom iRMC configuration task

At times the iRMC configuration values provided by the comfort configuration task may not be sufficient to cover a customer’s configuration requirements.

With the custom iRMC configuration task any iRMC configuration value can be configured. This requires detailed knowledge of the iRMC and SCCI specification. The SCCI specification is part of the ServerView Scripting Toolkit and can be found here once a specific STK Package has been imported:

<AdminConsoleFolder>\XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite\Docs\STK_<Version>.

Edit an existing task sequence, click the ‘Add’ in the upper left corner, select ‘Fujitsu Deployment’ and click on ‘Custom iRMC specification’. This will add a custom iRMC configuration task to the task sequence.

Change the name of the task sequence step for later reference. Select the appropriate ServerView Scripting Toolkit version from the drop-down-list. Its package ID will be added to the next field.

Consulting the SCCI specification, add Value ID and Object Index and select the data type and add a value to configure to the fields.
Save the task sequence.

8.6 Add custom configuration tasks

Edit an existing task sequence, click the ‘Add’ in the upper left corner, select ‘Fujitsu Deployment’ and click on ‘Custom Scripting Toolkit Command’. This will add a custom scripting toolkit task to the task sequence.

Consulting the scripts within the ServerView Scripting Toolkit package share add any of the scripts with appropriate parameters. Select the appropriate Scripting Toolkit package to run the script from. For details see the ServerView Scripting Toolkit documentation.

Save the task sequence.

The following scripts are available for hardware configuration:

- Change BIOS Boot Order
  biosBootOrder.cmd "<BootOrder>" [BiosPassword]

- Save/Restore BIOS
  biosCfg.cmd <SAVE/DEPLOY>

- biosPassword.cmd

- Configure iRMC via config file
  irmcAnyCfg.cmd

- Configure iRMC Config Space Variable
  irmcCfg.cmd

- Configure RAID automatically
  raidAutomatic.cmd

- Clear RAID configuration
  raidClear.cmd <CtrlNo>

- Custom-configure RAID
  raidCfg.cmd <CtrlNo> <RaidType> <DriveNo> [<YES|NO>]

- Restore RAID configuration
  raidRestore.cmd

- Save RAID configuration
  raidSave.cmd
Some of these tasks either generate custom data or require custom data. Make sure that you save this custom data for later use or to make the custom data available within the ServerView Scripting Toolkit package. Refer to the scripts directly and STK documentation for details.

8.7 Add a POST OS Installation task

Edit an existing task sequence; click the 'Add' in the upper left corner, select 'Fujitsu Deployment' and click on 'Build Post Installation Package'. This will add a Post Install task step to the task sequence.

Change the name of the task sequence step for later reference. Select the appropriate Post Installation Package from the drop-down-list. Its package ID will be added to the next field.

Before the Post Installation task step can be invoked the target System has to have the UNC path check disabled thereby allowing the Post Install script to run.

Save the task sequence.

8.8 Debugging OS Deployment

The most important file to debug a failed task sequence is SCCM's smsts.log file. It can be found at these locations within WinPE and the OS (as the OSD task sequence progresses the location changes):

- X:\windows\temp\smstslog\smsts.log
- X:\smstslog\smsts.log
- C:\_SMSTaskSequence\logs\smstslog\smsts.log
- C:\Windows\System32\CCM\Logs\smsts.log

To debug the PRIMERGY hardware configuration task sequence steps, refer to the ServerView Scripting Toolkit documentation and consult these log files:

X:\STK\STATES\<SystemSerialNumber>\LogFile.txt

for general STK task debugging
Task Sequences

X:\TMP\scu.cfg and X:\STK\HW_PROA\<SystemType>\<SerialNumber>.xmlres to debug iRMC configuration
9 Addendum

9.1 Supported PRIMERGY Systems

Supported PRIMERGY systems depend mostly on the ServerView Installation Manager for drivers and WinPE support and on the ServerView Scripting Toolkit for tool support.

See `<AdminConsoleFolder>\XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite\Docs\STK_<Version>\ServerView Scripting Toolkit Documentation.pdf` and ServerView Suite – Management and Serviceability DVD `<DVDroot>\Web\htdocs\ServerStar\docs\en\whatsnew.html`.

9.2 Supported Controllers

See `<ServerViewScriptingToolkitPackageFolder>\TOOLS64\SVRAID\version.txt`

9.3 Released Utilities Versions

See `<AdminConsoleFolder>\XmlStorage\Extensions\bin\Deployment\Fujitsu\ServerView Suite\Docs\STK_<Version>\ServerView Scripting Toolkit Documentation.pdf`.

9.4 Supported Operating Systems

- Microsoft Windows 2008 x64
- Microsoft Windows 2008 R2
- Microsoft Windows 2012
- Microsoft Windows 2012 R2
- Microsoft Windows 2016
9.5  Supported Microsoft SCCM versions with this ServerView Deployment Pack

<table>
<thead>
<tr>
<th>Microsoft SCCM</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>SCCM 2012</td>
<td>✔️</td>
</tr>
<tr>
<td>SCCM 2012 SP1</td>
<td>✔️</td>
</tr>
<tr>
<td>SCCM 2012 R2</td>
<td>✔️</td>
</tr>
<tr>
<td><strong>Note:</strong> At least CU1 is required to be able to use the Custom Reboot feature.</td>
<td></td>
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<tr>
<td>SCCM 1511</td>
<td>✔️</td>
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<tr>
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<tr>
<td>SCCM 1710</td>
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9.6  Restrictions

9.6.1  Restrictions with SCCM 2012 SP1

- FTS task sequence property pages do not recognize changes within the property pages. This is a known Microsoft problem with SCCM 2012 SP1.
  **Result:** The 'Apply' button remains inactive.
  **Workaround:** Change something else within the task sequence (create and delete, dummy task, enable/disable a task, etc.) to enable the 'Apply' button.
9.6.2 Restrictions with SCCM 2012 R2

- SCCM 2012 R2 cannot store computer-specific variables for imported computers.

**Result:** The Custom Reboot Feature does not work; Fujitsu Bare Metal task sequences can only execute the hardware configuration group.

**Resolution:** Install at least SCCM 2012 R2 CU1