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Enterprise

HPE CloudSystem Matrix 7.6 Release Notes

Abstract

This document describes the HPE CloudSystem Matrix 7.6 release content and provides information about limitations and major and minor issues with suggested actions.

Part Number: 872495-001
Published: 11, 2016
Edition: 1

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CloudSystem Matrix

System description

HPE CloudSystem Matrix is designed to simplify the deployment of infrastructure, applications, and cloud services by delivering IT capacity through pools of readily deployed resources. The goal of the Matrix Operating Environment (Matrix OE) is to accelerate provisioning, optimize IT capacity across physical and virtual environments, and to ensure predictable delivery and service levels.

CloudSystem Matrix is built on the modular, standards-based HPE BladeSystem and its proven innovations, including Virtual Connect (VC) and the Matrix OE. With its open, extensible approach, CloudSystem Matrix runs any application workload and provisions the entire infrastructure, including servers, storage, and networking, within minutes. CloudSystem Matrix is optimized for HPE ProLiant and HPE Integrity server blades, HPE storage, and HPE networking but also supports third-party x86 servers, networking, and storage. CloudSystem Matrix is deeply integrated with virtualization technologies such as VMware and Microsoft, through the integration of virtual machine (VM) template libraries.

More information

- [HPE CloudSystem Matrix User Guide](#)
- [HPE CloudSystem Matrix 7.6 Compatibility Chart](#)

Versioning

HPE CloudSystem Matrix versions are indicated by major.minor.update.revision. For example, version 7.5.1.1 is Matrix 7.5 Update 1 Revision 1. Revisions are only for firmware, driver, and/or agent changes to the CloudSystem Matrix recipe.

More information

[HPE CloudSystem Matrix User Guide](#)

System updates

Supersedes

The CloudSystem Matrix 7.6 version supersedes the 7.5.x.x released versions.

Update recommendation

All upgrades to HPE CloudSystem Matrix 7.6 from CloudSystem Matrix 7.5.x.x and prior versions must be performed by HPE Technology Services.

- Hardware, firmware, and software requirements for this release are listed in the [HPE CloudSystem Matrix 7.6 Compatibility Chart](#)
- Installation and upgrade prerequisites are documented here.

Fixes

The objectives of this release are to support the latest HPE hardware platforms, already supported operating systems and hypervisors, add new functionality, and fix software issues. Software updates improve performance in large scale environments.

Operating systems and devices

Supported operating systems and devices for this release are listed in the [HPE CloudSystem Matrix 7.6 Compatibility Chart](#). Additional information is included in the *HP Insight Management 7.6 Support Matrix*.

More information

- [HPE CloudSystem Matrix 7.6 Compatibility Chart](#)
- [HP Insight Management 7.6 Support Matrix](#)

Software enhancements

The HPE CloudSystem Matrix 7.6 solution contains a requirement for a specific set of firmware versions for most of the important hardware components in the solution. The [HPE CloudSystem Matrix 7.6 Compatibility Chart](#) specifies the supported hardware components and defines the required firmware versions.

New operating systems, databases, and hypervisors

- VMware vSphere 6.0 Update 2
- Microsoft Windows Server 2016
- Microsoft Windows Server 2016 Hyper-V support
- Red Hat Enterprise Linux (RHEL) 6.8 managed node
- KVM on Red Hat Enterprise Linux (RHEL) 6.8

Other software enhancements

- Google Chrome 50 or later
- Insight Management version 7.6
- HPE Integrity CloudSystem Matrix firmware bundle to version 7.6
- Service Pack for ProLiant (SPP) 2016.10.0

HPE Matrix infrastructure orchestration enhancements

Refer to the [HPE Matrix Operating Environment Infrastructure Orchestration User Guide](#) and the [HPE Matrix Operating Environment 7.6 Release Notes](#) for detailed information about these enhancements.

- Expanded support for VMware ESX disks provisioning types

The HPE Matrix infrastructure orchestration GUIs and the `ioexec` CLI now support specification of eager or lazy zeroed thick providing types for ESXi VMs. These values can be specified when defining a storage template in designer, when customizing storage at the time of service create, or when adding disks.

- Control over the names of VMs in HPE Matrix services

With the 7.6 release, HPE Matrix infrastructure orchestration now allows you to specify the names of the VMs in a deployed service.

- Requests which are **COMPLETE** but have warnings display orange status

Prior to the 7.6 release, HPE Matrix Operating Environment infrastructure orchestration used green status for **COMPLETE** operations which had warning messages. The Requests tab in HPE Matrix infrastructure orchestration will now show such requests as **COMPLETE** with an orange background (vs. the previous green background) to give a visual indication that there were warnings and manual steps may be required.

- Identifying an Upgraded Server Operating System

Prior to the 7.6 release, HPE Matrix was unaware when the administrator upgrades the OS of a Windows system and Matrix continued to display the original provisioned OS information. With the 7.6 release, HPE Matrix infrastructure orchestration allows the administrator to provide information on such upgrades via the GUI (new Upgrade Server OS action on the Services tab) and the `ioexec` CLI (updates logical server) for physical servers. Cost adjustments can be made as appropriate if there are different costs associated with different OS types.

- Support for customizing the Remote Copy Group Name for a selected SPM template

When defining logical disks for a service, a HPE Storage Provisioning Manager template can be chosen and that SPM template may have a Remote Copy Group requirement for storage replication. It is now possible to customize the name of the Remote Copy Group (giving a different name than the one in the

SPM template). This allows the storage administrator to minimize the number of SPM templates defined, while different Remote Copy Groups can be used as appropriate.

- All services in and HPE Matrix recovery management Recovery Group must use storage in the same RCG (Remote Copy Group).
- Add Disks supports selecting an SPM storage template

With the 7.5 Update 1 release, the Matrix infrastructure orchestration GUI supported specification of an HPE Storage Provisioning Manager (SPM) storage template when adding a disk to a service (in the services list view of the GUI, Server Actions→Add disks). However, the `ioexec` CLI always used the default SPM template; thus you were not able to do the Add Disks operation to a Matrix service which was using Remote Copy requirements.

With 7.6, you can optionally specify an SPM template in the `ioexec` CLI using the new `spmTemplateName` parameter for `addNewDiskToLogicalServerGroup`. For more information, (see the *HPE Matrix Operating Environment Integration Interfaces API and CLI Operations Reference Guide* available at [Hewlett Packard Enterprise Information Library](#)). This enables the addition of disks consistent with the Remote Copy requirements of the existing service. The GUI and CLI perform the appropriate filtering to ensure Remote Copy requirement consistency within the service.

- Using Static MAC Addresses for new Hyper-V services

Prior to 7.5 Update 1, network interface card (NIC) MAC addresses for Hyper-V VMs were always dynamic. The 7.5 Update 1 release allowed specification that static MAC addresses must be used, but was limited to a subset of Hyper-V host operating systems, and MAC address type was controlled via a global property setting.

With the 7.6 release, static MACs are supported on all Hyper-V hosts that HPE Matrix supports, and the specification of static MAC addresses can now be done for each network interface as the architect defines the service template. Each Hyper-V NIC can be set as Static, Dynamic, or Unspecified. If a NIC MAC address type is set to Unspecified in the service template, then that NIC will have MAC address type according to the `use.static.mac.address.for.hypervsetting` in the `hpio.properties` file.

HPE Insight Control server provisioning enhancements

Refer to the [HPE Insight Control Server Provisioning User Guide](#) and the [HPE Insight Control 7.6 Release Notes](#) for detailed information about these enhancements.

- Enable Remote Backup location feature in Appliance settings page.
- PXE Service OS CentOS 6.7 and CentOS 7.2.
- Insight Control server provisioning Media Server utility updated with (RHEL) 6.8 and Windows 2016 support.

HPE Insight Control virtual machine management enhancements

Refer to the [HPE Insight Control Virtual Machine Management User Guide](#) and the [HPE Insight Control 7.6 Release Notes](#) for detailed information about these enhancements.

- Support for Hyper-V 2016 Virtual Machine Configuration file format (.vmcx file extension)
- Hot add and remove memory of VM (Hyper-V 2016)
- Hot add and remove network adapters of VM (Hyper-V 2016)
- Support for VMware vApp
- VMware ESXi Lazy Zero Disks Support

HPE Matrix recovery management enhancements

Refer to the [HPE Matrix Operating Environment 7.6 Release Notes](#) for detailed information about these enhancements.

- DR Rehearsal information

HPE Matrix Operating Environment recovery management displays the DR Rehearsal status for each Recovery Group; this provides better tracking of DR vulnerabilities due to incomplete tests executed at the

Remote Site. A successful rehearsal is required to ensure full DR protection of services and logical servers.

The DR Rehearsal status is displayed in the new **Rehearsal Required** column of the Recovery Groups tab for all Recovery Groups present at the current site.

NOTE:

The DR Rehearsal information is also displayed in the **View Logical Server details** in HPE Matrix OE visualization.

-
- Option to track changes in Recovery Groups

The 7.6 release provides a new option to track changes in Recovery Groups at the Local Site that can impact the DR protection of services and logical servers. The feature is disabled by default, but can be enabled to provide a visual indication if changes at the Local Site have not been reflected at the Remote Site. The administrator must manually indicate when changes have been successfully made at the Remote Site.

- Online configuration of Disaster Recovery protected virtual services

Prior to the 7.6 release, it was necessary to perform a storage failover when configuring HPE Matrix infrastructure orchestration virtual services for DR protection with HPE Matrix recovery management (to perform the Remote Site import operation). This impacted VMs running at the primary site.

With 7.6, HPE Matrix supports online configuration of DR protected services containing VMs. To ensure adequate DR protection, it is necessary to perform a rehearsal (including storage failover) but it can be done at an appropriate time (which may not be at initial configuration). A DR rehearsal ensures resources are available and activation is successful at the Remote Site. The server pool mapping values in the `dr.properties` file are used for re-scanning VM Hosts prior to the first successful activation of the replica service during failover.

HPE Matrix OE visualization enhancements

Refer to the [HPE Matrix Operating Environment 7.6 Release Notes](#) for detailed information about these enhancements.

- Expanded support for VMware ESX disks provisioning types

The Matrix OE visualization GUI now supports specification of eager or lazy zeroed thick providing types for ESXi VMs. These values can be specified when manually defining a logical server.

- Support for customizing the Remote Copy Group Name for a selected SPM template

When defining a logical server storage pool entry, a HPE Storage Provisioning Manager template can be chosen and that SPM template may have a Remote Copy Group requirement for storage replication. It is now possible to customize the name of the Remote Copy Group (giving a different name than the one in the SPM template). This allows the storage administrator to minimize the number of SPM templates defined, while different Remote Copy Groups can be used as appropriate.

- HPE ProLiant Gen9 servers support the industry standard system firmware based on UEFI

HPE Matrix Operating Environment visualization with logical server management capabilities provides a feature to configure the server blade boot options (Boot Mode) as part of a Server Profile configuration. Each Ethernet connection in the Server Profile can be configured with a PXE/IP Boot Order option.

More information

- [HPE CloudSystem Matrix 7.6 Compatibility Chart](#)
- [HPE Matrix Operating Environment 7.6 Release Notes](#)
- [HPE Matrix Operating Environment Recovery Management User Guide](#)
- [HPE Matrix Operating Environment Infrastructure Orchestration User Guide](#)
- [HPE Insight Control 7.6 Release Notes](#)

- [HPE Insight Control Server Provisioning User Guide](#)
- [HPE Insight Control Server Provisioning Build Plans Reference Guide](#)

Installation and configuration

Installation and configuration requirements

Install Microsoft hotfix for Windows 2008 R2 or Windows 2008 R2 SP1

Microsoft KB2577795 is required to fix a socket leak which causes network communication issues. The hotfix does not come with Windows updates and must be installed manually on the CMS. Install the hotfix at <http://support.microsoft.com/default.aspx?scid=kb;EN-US;2577795>.

Patches required for Microsoft Windows Server 2008 R2 with Hyper-V systems

Install required patches on the Hyper-V hosts, and then install or update Hyper-V Integration Services from the updated host to each VM guest as a precaution. Not all patches affect Integration Services on the guests.

- If a Windows 2008 R2 Hyper-V server will be running any version of Windows 2012, install the patch located at <http://support.microsoft.com/kb/2744129>

Managing Microsoft Windows servers without OpenSSH installed

Even though the product documentation states that OpenSSH is required, Matrix OE supports Microsoft Windows environments not running OpenSSH. However, for Microsoft Windows systems without OpenSSH, there are several limitations with agent installation and troubleshooting.

Install and configure HPE 3PAR StoreServ Storage

HPE 3PAR StoreServ Storage must be installed, configured, and fully operational before initiating an HPE CloudSystem Matrix Starter Kit Implementation Service. Use the HPE 3PAR StoreServ Storage Software Installation and Startup Service, included with the storage device, to complete the required HPE 3PAR StoreServ Storage installation and configuration.

Manually update Integrity I/O firmware if an update is needed before OS installation

The HPE Integrity CloudSystem Matrix firmware bundle version 7.5.1 supports online updates of I/O firmware on Integrity server blades only after the OS has been installed. If an I/O firmware update is required before operating system installation, the I/O firmware must be manually updated using EFI packages.

More information

- [**Managing Microsoft Windows Server 2008 Hyper-V with HP Insight Software**](#)
- [**HP Matrix Operating Environment 7.6 software without OpenSSH on HP ProLiant and Integrity Servers Running Microsoft Windows**](#)

Issues and suggested actions

Issues and limitations of this release are listed below, organized by Insight Management product or functional area. The following categories are used:

Limitations Limitations of the implemented functions and features of this release

Major issues Issues that may significantly affect functionality and usability in this release

Minor issues Issues that may be noticeable but do not have a significant impact on functionality or usability

HPE Insight managed system setup wizard — limitations

More information

- [HPE Insight Control 7.6 Release Notes](#)

Privilege elevation configurations that require a password by the privilege elevation tool are not supported

Symptom

The Insight managed system setup wizard only supports privilege elevation on a CMS that has privilege elevation configured so that a password is not required by the tool (such as `su` and `sudo`). If you attempt to configure features while privilege elevation is turned on and a password is required, you may see failures in the wizard's execution output.

Cause

Privilege elevation configurations that require a password by the privilege elevation tool are not supported

Action

Procedure

- If a feature cannot be configured correctly because of privilege elevation password requirements, configure the feature outside of the managed system setup wizard.
- To turn off the requirement for a password, use the **Systems Insight Manager Options > Security > Privilege Elevation** menu, and uncheck the **A password is required for this privilege elevation tool** checkbox. Systems managed by the CMS must be reconfigured to reflect this configuration change.

HPE Insight managed system setup wizard — major issues

More information

- [HPE Insight Control 7.6 Release Notes](#)

Patch required to register Integrity VM Hosts running Integrity VM 4.1 or higher and 11.31 HA-OE or DC-OE

Symptom

The Insight managed system setup wizard fails to register Integrity VM Hosts running Integrity VM 4.1 or higher and either the 11.31 High Availability Operating Environment (HA-OE) or the 11.31 Data Center Operating Environment (DC-OE).

Action

Procedure

1. Apply the patch PHSS 40784 to the HP-UX 11i v3 Integrity VM Host. The patch is needed on systems where Serviceguard is installed, but the systems are not actively in a Serviceguard cluster. Serviceguard is included with the HP-UX 11i v3 HA-OE and DC-OE. To download the patch, enter and search the patch number in <http://www.hpe.com/support/hpesc>.

HPE Insight Control power management — limitations

More information

- [HPE Insight Control 7.6 Release Notes](#)

DCPC works only on the primary address of a system

Symptom

Data Center Power Control (DCPC) works only on the primary address of a system. It cannot detect a system with a non-primary address.

Action

Procedure

1. Provide the primary IP address of target node while creating a rule in DCPC.

HPE Insight Control power management — major issues

More information

- [HPE Insight Control 7.6 Release Notes](#)

Scheduled tasks for HP Power Regulator or Power Cap are not listed in the “Scheduled tasks” list or are not editable

Symptom

If you scheduled a Power Regulator or Power Cap task using Power Management 6.0 or earlier and then upgraded your system to Power Management 7.2.x, the task may not be listed in the Scheduled tasks list or may result in failure when you try to edit the task.

Action

Procedure

1. Delete the existing Power Regulator or Power Cap task and schedule a new task.

HPE Insight Control server migration — limitations

More information

- [HPE Insight Control 7.6 Release Notes](#)

Prerequisites for Linux migrations

The following are the prerequisites for Linux migration:

1. Install standard libraries like `glibc`, `nss-softokn-freebl`, `dmraid`, `hdparm`, and `grub2-efi` packages wherever necessary for RHEL 7.1 migrations.
2. The `iscsi-initiator-utils` and `dracut-network` is installed on the source prior to migrations, for RHEL based migrations with iSCSI.
3. Install the following rpm packages before starting a linux migration:
 - SLES migrations:
 - 32 bit package of `glibc`.
 - 32 bit package of `libncurses`.
 - RHEL migrations:
 - 32 bit package of `glibc`.
 - 32 bit package of `ncurses-libs`.

After migration of RHEL or SLES, the target OS gets stuck in the splash screen

Symptom

After migration of RHEL or SLES, the target OS gets stuck in the splash screen.

Cause

This is a known issue in RHEL and SLES where some graphics drivers are unable to load during boot.

Action

Procedure

- Boot the target in text mode.
- For SLES, on post migration reboot in destination server and during the boot process in grub menu, remove the `splash=silent quiet` boot parameter and continue booting.
- For RHEL, on post migration reboot in destination server and during the boot process in grub menu, remove the `rhgb` boot parameter and continue booting.
- For a permanent solution for subsequent boots, remove the `splash=silent quiet` and `rhgb` boot parameters from `grub.cfg/menu.lst` file in `/boot/grub` or `/boot/grub2`.

Agent launch from the CMS to a source server with “, :, or \ characters in the password is not supported

Symptom

Windows source agent deployment does not support Administrator passwords that contain the “, :, or \ characters.

Action

Procedure

1. Do not create Administrator passwords with the “, ;, or \ characters.

HPE Insight Control server migration — major issues

More information

- [HPE Insight Control 7.6 Release Notes](#)

Data is not reflected on the destination server after SAN migration

Symptom

Initiate migration of Linux OS from source server having two controllers (primary partition is on one controller and extended partition is on another controller) to the destination server having two controllers. After successful migration, the OS boots up, but the data on the secondary controller may not be reflected on the destination.

Action

Procedure

1. Try mounting the secondary controller disk on the destination post-migration boot.

Operating system fails to boot on a destination server after migration when logical volumes are not erased on destination disks

Symptom

After a completed Insight Control server migration, the OS may not boot on the destination server if the server is repurposed.

This issue may occur if the disks attached to the primary Storage Controller are not clear of logical volumes, which may have been created previously with the controller configured in RAID mode. For example, the server was configured to use controller in RAID mode and had some logical volumes created on it. Now, if the same controller is configured in non RAID mode without erasing the logical volumes and migration is performed, the OS fails to boot. The server continues trying to boot from the disk in endless loop.

Action

Procedure

- Do one of the following actions:
- Configure the controller in RAID mode and erase all logical volumes. Reconfigure the controller into non-RAID mode and run the migration again.
- Configure the server to use the RAID mode of the controller and run the migration again.

Unable to detect HP FlexFabric 10Gb 2-port 554FLR-SFP+ Adapter configured as iSCSI disk in Step 5 of migration wizard

Symptom

When you start an X2P migration of any OS from any server to any supported ProLiant Gen8 servers with HP FlexFabric 10Gb 2-port 554FLR-SFP+ Adapter configured as iSCSI disk and then start an auto boot in Step

3, you observe that the adapter is not detected in Step 5 of migration wizard and displays the following error message:

```
HP Insight Control could not find any disks on destination server
```

Action

Procedure

1. Disable IOMMU in RBSU.

HPE Insight Control server migration — minor issues

More information

- [HPE Insight Control 7.6 Release Notes](#)

Windows migrations are not supported for more than 14 partitions on a single disk

Symptom

If you select 14 partitions or more on a Windows OS, then the following error is displayed in Step 4 of the V2V migration wizard:

```
The destination disk <target disk name> has reached its partition limits. Try migrating one or more Volume Groups selected for this disk to another disk or go to 'Step 2' of migration wizard to deselect few partition/Volume Group.
```

Cause

The maximum number of partitions supported for Windows migration is 13 for a single disk. To solve this issue, perform one of the following:

Action

Procedure

- You can migrate one or more Volume Groups selected for this disk to another disk.
- Go to Step 2 of the migration wizard to deselect a few partitions/Volume Groups.

HPE Insight Control server provisioning — known issues

More information

- [HPE Insight Control 7.6 Release Notes](#)
- [HPE Insight Control server provisioning Online Help](#)

Network personalization of deployment NIC is limited to IPv4 and during OS installation

Symptom

Since ESXi does not have an agent, you can only personalize the deployment NIC during an OS installation, and only with IPv4. Although the user interface allows you to enter data for other NICs, only the deployment NIC is configured. ESXi does not support post install network personalization.

Action

Procedure

1. No action needed.

Linux installation may time out

Symptom

If you are installing a lot of RPMs as part of your Linux installation, the Build Plan may time out on the *Monitor Installation* step because nothing is written to the installation log for an extended period of time, while the RPMs are installed.

Increase the time the *Monitor Installation* step waits for log activity as follows:

Action

Procedure

1. Make a copy of the Build Plan.
2. Edit your copy of the Build Plan.
3. Modify the parameters of the *Monitor Installation* step by adding a number after the log file name, which indicates the number of polls the step takes before timing out. The default is 200, so increasing to 400 or more is recommended. Here is an example of the parameters in a Red Hat installation: `tmp/anaconda.log 400`.
4. Retry the installation with the new Build Plan.

HPE Insight Control server provisioning — limitations

More information

- [HPE Insight Control 7.6 Release Notes](#)
- [HPE Insight Control server provisioning Online Help](#)

Error while installing RHEL 6.6 or 6.7 on a target server booting from HP 3PAR StoreServ Storage System

Symptom

When performing an RHEL 6.6 or RHEL 6.7 boot from SAN OS installation on a 3PAR StoreServ storage volume, the default autopart option which automatically creates the LVM partitions fails. This issue exists with LVM partition only.

Action

Procedure

1. To complete the installation, use custom partitioning options when using LVM and create partition table sizes manually instead of using autopart. In the following example of a kickstart file, the autopart option is replaced with custom partitioning commands. If HP 3PAR StoreServ Storage System is being used, the minimum boot partition size requirement is 256 MB.

```
zerombr yes
clearpart --all --initlabel
part /boot --fstype=ext3 --size=512
## Uncomment below line if target is in UEFI mode ##
#part /boot/efi --fstype=efi --size=512
```

```
part / --fstype=ext3 --size=4096 --grow --maxsize=8192
part /var --fstype=ext3 --size=4096 --grow --maxsize=8192
part swap --recommended
```

2. While using the HP 3PAR StoreServ Storage System, the minimum boot partition size is 256 MB (no limitation with RHEL 6.7). Creating a /var partition is not supported in FCoE SAN configuration.

Error while installing SLES 12 on a target server booting from 3PAR StoreServ Storage System

This topic requires manual cleanup. You will have to cut and paste the contents of the original file and make adjustments. The content of the original file is contained here: [Link to contents of file](#).

Symptom

When performing an SLES 12 boot from SAN OS installation on an HP 3PAR StoreServ Storage System volume using default partitioning, the installation fails since it automatically creates an MBR partition of less than 256 MB.

Action

Procedure

1. Modify the custom partition settings in SLES12 autoyast configuration file and set the MBR partition size to at least 256 MB as in the following example.

```
<partitioning config:type="list">
  <drive>
    <device>/dev/sddevice>/dev/sda>
    <partitions config:type="list">
      <partition>
        <mount>/boot</mount>
        <size>512mb</size>
      </partition>
      <partition>
        <mount>/</mount>
        <size>auto</size>
      </partition>
      <partition>
        <mount>swap</mount>
        <size>2gb</size>
      </partition>
    </partitions>
  </drive>
</partitioning>
```

Installing SLES 11.3 to any Gen9 servers requires a Bootable Driver Kit (kISO)

Symptom

To install SLES 11.3 on any ProLiant Gen9 servers, a special Bootable Driver Kit (previously called kISO) must be added to the SLES distribution on the media server.

Perform the following steps to add Bootable Driver Kit to the SLES distribution on the media server:

Action

Procedure

1. Download the kit located at <https://drivers.suse.com/hpe/HPE-ProLiant-Gen9/>.
2. Open the ISO.
3. On your media server, make a copy of the SLES 11.3 distribution and place it in a properly named folder. For example, `/Media/SLES-11SP3-kISO-x86_64`.

NOTE:

You may want to keep your original as this kit is only used for Gen9 servers.

4. In the new folder you created in step 3, create an add-on directory under new repository directory. For example, `Media/SLES-11SP3-kISO-x86_64/addon`.
5. Copy the kit contents to the add-on directory.
6. Replace the original installation kernel and initrd files with the ones from the kit add-on directory as follows:
 - a. Copy `addon/boot/x86_64/loader/initrd` to `boot/x86_64/loader/initrd`.
 - b. Copy `addon/boot/x86_64/loader/linux` to `boot/x86_64/loader/linux`.
7. In the appliance UI, find the SLES11 SP3 Build Plan and select **Save As** to create an OS Build Plan from the existing SLES11 SP3 Build Plan that can be edited.
8. Edit the *Set Media Source* step in the new Build Plan and change the parameter to point to the new directory.
9. Delete the *ProLiant Drivers for SLES 11 SP3 x64* step as the kit has all the necessary drivers.

Insight Control server provisioning does not currently support SLES 12 provisioning via FCoE

Symptom

The Matrix Operating Environment uses Virtual Connect modules which use FCoE. FCoE is not supported by Insight Control server provisioning for SLES 12 deployment.

Action

Procedure

1. SLES 12 can be provisioned to a physical server using manual deployment.

Disks may not appear to the OS installer when installing RHEL 7 using FCoE

Symptom

Due to a timing issue, the FCoE disks may not appear to the RHEL 7.0 installer. When this happens, the Build Plan fails, and on the target servers console, you see that the installer has happened, the Build Plan fails, and on the target servers console, you see that the installer has switched to interactive mode and asks for storage information.

Action

Procedure

1. Retry the Build Plan. The issue is intermittent and usually works for the second time.

Installation hangs or panics at final reboot when installing RHEL 7 using FCoE

Symptom

Disks may not appear to the OS installer when installing RHEL 7 using FCoE using FCoE with certain HP FlexFabric/StoreFabric Adapters. The server may hang during the final reboot or may kernel panic when trying to boot the RHEL 7.0 production OS. This is due to a race condition when rebooting immediately after the installation is completed. The following adapters are affected when used in FCoE mode:

- HP FlexFabric 10Gb 2-port 536FLB Adapter
- HP FlexFabric 20Gb 2-port 630FLB Adapter
- HP FlexFabric 20Gb 2-port 630M Adapter
- HP FlexFabric 10Gb 2-port 534FLB Adapter
- HP FlexFabric 10Gb 2-port 534FLR Adapter
- HP FlexFabric 20Gb 2-port 630FLB Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter

Action

Procedure

1. Make a copy of the Build Plan and insert a `Sleep script` step with the parameter `--minutes=3` before the final Reboot step.

Intermittent boot failures when installing SLES 11 SP3 with FCoE

Symptom

Intermittent failures are seen when installing SLES 11 SP3 to FCoE devices. The RPM installation succeeds, but OS fails during the first reboot and the Build Plan fails with the error:

```
Step 22 of 22: Run OGFS Script 'Wait for HP SA Agent' Waiting for registration
of agent running on production OS Failed To Wait for HP SA Agent: Timeout while
waiting for agent
```

```
Wait for HP SA Agent failed with exit code 120.
```

Action

Procedure

1. Modify the disk partition section of the `<filepath>Autoyast</filepath>` file as follows:

1. Use

Save as

to make copies of the SLES 11 SP3 Build Plan and configuration file.

2. Edit the configuration file and uncomment the XML section that refers to the partitioning of the disk.
3. Edit the new Build Plan to use the newly modified configuration file.

Restrictions when using the HPE FlexFabric 20Gb 2-port 630FLB, 650FLB, 650M or 630M Adapters

The following are some of the restrictions:

- Windows and Linux deployment is not supported with NEC Intelligent Provisioning on Gen8 (or greater) servers. Windows and Linux deployment via PXE is supported.
- Deployment of SLES11 SP3 is not supported in iSCSI or FCoE configuration with these adapters.
- Deployment of Red Hat 6.x and Red Hat 7.x with FCoE configuration requires you to add the FCoE directive to the Kickstart file. The FCoE directive in the Kickstart file requires that the NIC attached to the SAN be specified.
 - **--nic**
= (mandatory) — The name of the device to be activated.
 - **--dcb**
= — Establish DCB (data center bridging) settings.
 - **--autovlan**
— Discover VLANs automatically.

NOTE:

At a minimum, you must specify the **--nic=** flag. For example, **fcoe --nic=eth0**. With Red Hat 7.x, the Ethernet device names have changed. For more information, see *Red Hat Enterprise Linux 7* documentation located at https://access.redhat.com/documentation/en-US/Red_Hat_Enterprise_Linux/7/html/Networking_Guide/ch-Introduction_to_RHEL_Networking.html.

Broadcom CNA (converged network adapter) option cards may require additional FCoE initialization if the drive does not present using the “fcoe” directive in the Kickstart file

Symptom

There is a timing issue that can sometimes prevent the LUN from being visible to the Broadcom CNA option card.

Action

Procedure

1. Successful deployment requires additional FCoE initialization in the kickstart file's %pre section. To do the initialization, add the following code to the *kickstart* file:

```
%pre
modprobe fcoe
fipvlan -c -s -a
sleep 50
```

```
fipvlan -c -s -a
%end
```

BL465c Gen8 hangs during OS deployment if using Broadcom CNA mezzanine configured with FCoE configuration

Symptom

OS deployment of Windows and Linux is not supported on the BL465c Gen8 if using Broadcom CNA mezzanine configured with FCoE configuration.

Cause

The server hangs due to a platform issue and the OS deployment fails.

Action

Procedure

1. No work around exists.

RHEL Scripted Install may fail at Monitor Installation when target configured with FCoE using Broadcom CNA

Symptom

When performing RHEL scripted install on target having Broadcom CNA configured with FCoE, there is a timing issue that can sometimes prevent the LUN from being seen by the Broadcom CNA option card.

Action

Procedure

1. Create a custom attribute "FCOEwait" with value 120 at OSBP level.
2. Add the FCoE directive to the Kickstart file. The FCoE directive in the Kickstart file requires that the NIC attached to the SAN be specified.

```
--nic= (mandatory) - The name of the device to be activated.
--dcb= - Establish DCB (data center bridging) settings.
--autovlan - Discover VLANs automatically.
```

3. At a minimum, you must specify the `--nic=` flag. For example, `fcoe --nic=eth0`.

HPE Insight Control server provisioning — major issues

More information

- [HPE Insight Control 7.6 Release Notes](#)
- [HPE Insight Control server provisioning Online Help](#)

A single job with more than eight OS deployments at a time might fail due to 249 error

Symptom

Executing more than eight OS deployments at a time using single job might fail due to network performance.

Action

Procedure

1. Execute eight or less than eight OS deployments in a single Job.

Verify Supported Boot Modes might fail

Symptom

In a rare scenario, verify supported boot mode might fail while running the OS Build Plan continuously.

Action

Procedure

1. Reboot the server and ensure that POST cycle is complete. Power off the server and retry the OS deployment.

When using a Directory Server, group names are required to be in English

Symptom

Any non-English group names added to the appliance cannot be viewed and deleted.

Action

Procedure

1. Ensure that all the group names intended for use by Insight Control server provisioning are in English.

HPE Insight Control server provisioning — minor issues

More information

- [HPE Insight Control 7.6 Release Notes](#)
- [HPE Insight Control server provisioning Online Help](#)

OS Build Plan may fail with `java.net.SocketException: Connection reset` message in standard error logs

Symptom

The iLO communication library used in Insight Control server provisioning does not support AES encryption. So, enabling Enforce AES/3DES Encryption option in target servers **iLO > Security > Encryption settings** breaks the communication and socket exceptions are reported.

Action

Procedure

1. Disable Enforce AES/3DES Encryption in target servers **iLO > Security > Encryption settings**.

Backup files with customized names will not be displayed in the restore UI

Symptom

When a backup is created, the name of the backup file has a very specific format. If the name of the backup file is changed to something other than the default format, and then that file is uploaded to the appliance as part of a restore, the uploaded file will not be visible in the UI.

Action

Procedure

1. To ensure successful restore operations, do not change the name of the downloaded backup file.

HPE Insight Control virtual machine management — limitations

More information

- [HPE Insight Control 7.6 Release Notes](#)
- [HPE Insight Control server provisioning Online Help](#)

HPE Insight Control virtual machine management limitations

Observe these VMM limitations:

Procedure

- The HPE Matrix Operating Environment does not support hypervisors installed in virtual machines.
- Enabling a device guard on any Windows machine is not supported.
- Microsoft System Center Virtual Machine Management Server installed on Nano Server 2016 is not supported.
- The production checkpoint is not supported for Hyper-V VM created on Hyper-V 2016.

As part of Cluster Rolling Upgrade, Hyper-V template cannot upgrade to Windows 2016

Symptom

The template is not a Microsoft concept. Hence there is no API from Hyper-V end to upgrade the functional level to Microsoft Windows Server 2016.

Action

Procedure

1. Deploy Microsoft Windows Server 2012 R2 Hyper-V template, using VMM API.
2. Upgrade the deployed Virtual machine to Microsoft Windows Server 2016 Hyper-V functional level.
3. Recreate the template using the deployed Virtual machine.

VMM does not recognize the new RDM disk size after there is a change in RDM disk size

Symptom

VMM does not recognize the new RDM disk size after there is a change in RDM disk size (either increased or decreased from storage side) even after the SAN is scanned again on vCenter server. VMware vCenter gets notified of any event for the changes done through EVA or HP 3PAR StoreServ Storage management console for the change in disk size. If the user increases or decreases the size of LUN using EVA or HP 3PAR StoreServ Storage management console, vCenter does not generate any events for the same.

Action

Procedure

1. Restart the VMM service or unregister ESXi host and register the host again to get the updated size.

Customization of RHEL 7.1 fails to set the IP and hostname

Symptom

Customization of RHEL 7.1 fails to set the IP and hostname.

Cause

This is a VMware limitation.

Action

Procedure

1. You have to manually set the IP address and host name after customization.

Hyper-V does not apply DNS suffix customization for DHCP IPv4 or IPv6

Symptom

VMM `customizeSystem` API does not support setting of DNS suffix for Hyper-V VM.

Cause

This is a Windows UI issue.

Action

Procedure

1. Manually set the DNS suffix for the Hyper-V VM.

HPE Insight Control virtual machine management — major issues

More information

- [HPE Insight Control 7.6 Release Notes](#)
- [HPE Insight Control server provisioning Online Help](#)

SCVMM server managing more number of Hyper-V hosts, increases the SCVMM server memory consumption

Symptom

HPE Matrix SCVMM Web Service bloats and also it hung if SCVMM is managing more number of Hyper-V host. As a result, the SCVMM fails with exception Confirm if HPE Matrix SCVMM Web Service is installed, is up and running on the port 7999.Exception : null

Cause

This is a VMM issue where connections are not returned to the connection pool. So, the HPE Matrix SCVMM Web Service memory bloats to an extent. As a result, HPE Matrix SCVMM Web Service fails or slow down the Insight Orchestration APIs related to SCVMM.

Action

Procedure

1. Restart HPE Matrix SCVMM Web Service (agent on the SCVMM server) periodically, or run the following script to restart the HPE Matrix SCVMM web service periodically using windows scheduler:

```
Stop-Process -name "VMMSCVMMBridgeWindowsService" -Force
[string]$ $ fetch = Get-Date; ($ fetch + " Matrix Service Stopped " ) | out-file C:\Temp
\RestartMatrix.log
-Append
Start-Sleep -s 10
Start-Service "HP Matrix Scvmm Web Service"
[string]$ fetch = Get-Date; ($ fetch + "Matrix Service Started " ) | out-file C:\Temp\RestartMatrix.log
-Append
```

VMM returns Hyper-V status as disconnected

Symptom

VMM returns the Hyper-V host status as disconnected as VMM is holding on the WMI Mapper IP, which does not exist.

Action

Procedure

1. While changing the WMI Mapper Proxy IP, ensure that VMM service is restarted or enter the key-value in VMM *conf* file (WMIProxyServer). Restart the VMM service.

ESXi Linux VM customization fails when two network adapters have different DNS suffixes

Symptom

If you create or provision (using HP Matrix infrastructure orchestration) a Linux VM on an ESXi VM Host with two network adapters and add the Linux VM and DNS suffix to the domain of each network adapter, it fails. It will not set the correct FQDN for the guest if the Domain name matches with the second network DNS Suffix. This is a VMware related issue.

Action

Procedure

1. To resolve this issue, always use the Primary NIC in the Matrix infrastructure orchestration network tab, which has same domain name and DNS suffix to create the service request.

Dual entry in SCVMM (Microsoft System Center Virtual Machine Management) with same VM name

Symptom

When you associate a Hyper-V VM with a logical switch on SCVMM 2012 SP1 and SCVMM 2012 R2, the SCVMM console creates two VMs with same name and pointing to the same VM files.

Cause

This is an SCVMM console issue.

Action

Procedure

1. Ignore duplicate instances and do not delete the duplicate VM from the SCVMM console.

VMM fails to update virtual hard disk details during provisioning

Symptom

If the Hyper-V VM is linked to a cloned VM and if you try to attach the data disk to the linked clone, it fails. Sometimes, you receive the following error message:

```
Drive in Use. Unable to attach Virtual Hard Disk.
```

Cause

This is a Microsoft issue, where WMI fails to attach the disk. Also, the WMI process is locked to execute the WMI query to attach the disk.

Action

Procedure

1. To resolve this issue, restart the Hyper-V host.

Hyper-V provisioning fails on Microsoft Windows Server 2012 Hyper-V and Microsoft Windows Server 2012 R2 Hyper-V with time out errors

Symptom

Hyper-V provisioning fails on Microsoft Windows Server 2012 Hyper-V and Microsoft Windows Server 2012 R2 Hyper-V with time out errors and sometimes it fails to register the deployed VM. The slow performance of the Hyper-V host delays the retrieval of the required data through WMI query.

Action

Procedure

1. Increase the *CIM Client time out* period to 900000 using parameter *HyperVQueryTimeout* in the `<vmm-install>\bin\hpvmm.conf` and restart the Insight Control virtual machine management service.
2. Set the value of *serverTimeOut* to 900000 in `cimserver_planned.conf` file of `<MAPPER_INSTALLED_DIR>` and then restart the Mapper.

Unable to perform power on or off operations on a virtual machine through Insight Control virtual machine management

Symptom

The power on or off operation on a VM through Insight Control virtual machine management fails when you restore the VM from a backup. The backup and restore is performed using the HP Data Protector software. The `getVmDetails` API shows incorrect data for the backed up VM.

Action

Procedure

1. Unregister/register the VM in vCenter using the following procedure:
 1. Select the VM in vCenter (ensure that VM is in the powered off state), and right-click to select **Remove from Inventory**. This unregisters the VM from inventory.
 2. Navigate to **vCenter Inventory > Datastores and Datastore clusters**.
 3. Select the datastore on which the VM was residing before, and right-click to browse the datastore.
 4. Select the `.vmtx` file of the VM in the datastore and right-click to select the option **Add to inventory**. This completes the VM registration. Now, you can perform power on or off operations on the VM from virtual machine management.

If the IP address of the host changes, virtual machine management cannot manage the host

Symptom

If the IP address of a hypervisor host is changed, virtual machine management will not be able to manage the host.

Action

Procedure

1. Hewlett Packard Enterprise recommends that you unregister the hypervisor host before changing the IP address. After the IP address is changed, identify the host in HP Systems Insight Manager and register with virtual machine management. If the IP address is changed without unregistering the host, unregister the host with the old IP address using the `vmcli` tool and register with the new IP address.

HPE Insight Control virtual machine management — minor issues

More information

- [HPE Insight Control 7.6 Release Notes](#)
- [HPE Insight Control server provisioning Online Help](#)

If Virtual Machine disk is not online or does not have drive letter, then the disk partition of VM does not project the disk

Symptom

This is an expected behavior.

Action

Procedure

1. Create the drive letter and ensure that the disk is online.

If you restore the backup VM by a VM name with more than 80 characters, the restore fails

Symptom

This is an expected behavior.

Action

Procedure

1. Do not use more than 80 characters in the Hyper-V VM name.

Adding RDM disk on Hyper-V VM fails

Symptom

Adding RDM disk on Hyper-V VM fails with error message minimum of 2048MB for RAM memory. Sometime WMI database sets the memory value as -1, as a result, any update of VM settings fails the operation.

Action

Procedure

1. To update the memory to a valid value, power on or off the VM. This action refreshes the VM state and automatically updates the VM settings accordingly.

VMM is not able to customize on Microsoft Windows 2012 running on ESXi

Symptom

Sometimes VMM is not able to customize Microsoft Windows 2012 Guest operating system running on ESXi Host.

Cause

This is a VMware limitation.

Action

Procedure

1. To solve this issue, manually set the Sysprep attributes to the Guest OS.

Adding VM with RDM disk to the Inventory on another host, fails to populate layout disk MOB

Symptom

Updating the RDM disk size from storage UI, for example, out-of-band, `getVmDetails` does not show the updated disk size.

Action

Procedure

1. It is a VMM limitation, VMWare ViSDK is not fetching the updated data.

`createLinkedClone` API on a VM fails for VMWare VVOL or Virtual SAN datastore

Symptom

Snapshot created on source VM, does not create any delta VMDK file on VVOL or Virtual SAN datastore.

Cause

This is a VMware issue.

Action

Procedure

1. There is no known workaround at this time.

Incorrect LS name for Hyper-V with SuSE 12.1 is displayed in System UI

Symptom

Linux customization is not supported for Hyper-V. If the VM is imported as a logical server and the hostname shows `getaddrinfo failed: Name or service 0xfffffffffe not known`.

Action

Procedure

1. In the VM, `/etc/hosts`, `/etc/sysconfig/network [HOSTNAME=]` and terminal `hostname` commands are identical. The `test1` should have `/etc/hosts127.0.0.1 test1 test1.domain`

```
localhost localhost.local and /etc/sysconfig/network should have HOSTNAME=
test1.domain.com NETWORKING=yes.
```

SCVMM Generation 2 with two disks, uses Data disk as Boot Disk

Symptom

SCVMM having Generation 2 templates with multiple disks attached to multiple SCSI controller. This setup always fails to customize the deployed VM. Also, getVmDetails VMM API might show incorrect association of disks with controller.

Cause

Microsoft does not provide an option to identify the SCSI controller.

Action

Procedure

1. To resolve this issue, create SCVMM Generation 2 type template having multiple disks attached to a single SCSI controller.

MPIO should be installed to avoid duplicate disk in Host

Symptom

If any LUN is attached to Host, in disk management section, it will show as duplicate disk.

Action

Procedure

1. To resolve this issue, you must enable MIPO on the Host.

Auto logon failed for Win2008 R2 SP1 guest customization on ESXi 6.0u2

Symptom

After successful customization of Windows 2008 R2 SP1 guest VM on ESXi 6.0u2, it prompts for screens to set up Windows instead of auto logon. When you login, all the other customized parameters are set.

Cause

It is a VMware issue seen for Windows 2008 R2 SP1 guest on ESXi 6.0u2.

Hyper-V HA enabled VM getting live migrated with saved state while IO provisioning

Symptom

On network resource crunch, Hyper-V VM might move to another node with SAVED state. Due to which Stop VM and editing of VM fails.

Action

Procedure

1. To resolve this issue, do not use combination of Cluster Network and NVGRE enabled logical switch to assign to the VM.

VMM version upgrade sets VME status as disconnected

Symptom

When you upgrade the VMM version, the VMM sets the VME status as disconnected.

Action

Procedure

1. To solve this issue, unregister the VME and reregister.

Registration of SCVMM 2012 SP1, SCVMM 2012 R2, and SCVMM 2016 server fails on a CMS

Symptom

Registration of SCVMM 2012 SP1, SCVMM 2012 R2, and SCVMM 2016 server occasionally fails. This is an intermittent issue and observed several times on a CMS configured with any CMS operating system.

Solution 1

Action

Procedure

1. To solve this issue, retry to register SCVMM server.

Solution 2

Action

Procedure

1. Add a parameter *SCVMM_Retries* in *hpvmm.conf* file (located in *<IM installation>\Insight Control virtual machine management\bin*) and set the value to greater than 5.
2. Restart the VMM service and try to register again.

Action

Procedure

1. If it still fails to register SCVMM, then perform the following steps:
 1. Check if the HP Matrix SCVMM Web Service is installed on the SCVMM server.
 2. If the HP Matrix SCVMM Web Service is not installed, copy the *ScvmmWS2012.msi* file from *<IM installation>\Insight Control virtual machine management\bin* to the target SCVMM server.
 3. Manually, install the HP Matrix SCVMM Web Service.
 4. Run the HP Matrix SCVMM Web Service on the SCVMM server and reregister the SCVMM server.

Solution 3

Action

Procedure

1. Before upgrading MSI, register the VME.
2. After upgrade, the old MSI is uninstalled. But, the installation might fail because Microsoft does not allow to copy the latest MSI to the SCVMM server.

Virtual machine names do not display correctly

Symptom

Virtual machine names may not be displayed correctly in the virtual machine management user interface if the virtual machine name contains special characters.

Action

Procedure

1. Hewlett Packard Enterprise recommends avoiding special characters in virtual machine names. Rename such virtual machine names appropriately.

Host/Guest control buttons disabled

Symptom

If the virtual machine names have non-ANSI characters, the control buttons in the Host/Guest system page are disabled.

Action

Procedure

1. From the HP Systems Insight Manager user interface, run **Tools > Virtual Machine**, then select the appropriate control operations.

HPE Matrix Operating Environment software

For complete release notes for the HP Matrix Operating Environment software, see the *HPE Matrix Operating Environment 7.6 Release Notes*.

HPE Matrix Operating Environment does not recognize when a Linux OS has been upgraded within a VMware VM

When upgrading the Linux operating system within a VMware ESXi VM, VMware does not detect the upgraded operating system. This will result in HPE Insight Control virtual machine management and HPE Matrix OE visualization not recognizing that the VM was upgraded.

• Suggested action

1. During the OS upgrade, the Linux installer sets the hostname to “localhost.localdomain”, change this back to the same name configured during the VM creation.
2. After OS upgrade, install VMware tools, which will add drivers for NICs, the display, and so on.
3. After OS upgrade, if the VM loses its IPv4 address. (Only the IPv6 address may be present in the NIC configuration file.), run the “system-config-network-tui” tool to configure DHCP and DNS, then restart the network services.
4. Run a VM refresh from Matrix OE visualization.

Once the steps above have been completed, HPE Insight Control virtual machine management and HPE Matrix OE should now display the new OS.

HP-UX support of IPv6

HP-UX and cloud servers do not support IPv6. For more information, see the *IPv6 Support in Insight Management* white paper.

Supporting HP IO Accelerators

HP IO Accelerators are supported in the Matrix Operating Environment with limitations. The hypervisor version and Virtual Connect modules need to support the particular HP IO Accelerator. Matrix OE will not provision the hypervisor host to use the HP IO Accelerators (the installation and configuration of the hypervisor using these accelerators would be independent of Matrix OE). Matrix OE can be used to provision VMs to the hypervisor host. Three white papers are available online that describe the setup and scenarios for using HP IO Accelerators.

Scheduled OO flows are disabled after upgrade

When upgrading from Matrix OE 7.4.x or 7.5.x, the Operations Orchestration (OO) workflows that are scheduled in the 9.x version will be migrated, but will be disabled after the upgrade. The workflows can be enabled via OO Central portal.

More information

- [HPE Matrix Operating Environment 7.6 Release Notes](#)
- [IPv6 Support in Insight Management white paper](#)
- [Insight Management and HP IO Accelerators \(ioTurbine version 2.0.3.1\) – Supported Environments and Scenarios white paper](#)
- [Insight Management and HP IO Accelerators \(ioTurbine version 2.1\) – Supported Environments and Scenarios white paper](#)
- [Insight Management and HP IO Accelerators \(ioTurbine version 2.2.0 or later\) – Supported Environments and Scenarios white paper](#)

HPE Operations Orchestration

HPE Operations Orchestration intended usage in Matrix OE

A limited version of Operations Orchestration is included with Matrix OE. This version of Operations Orchestration is licensed for limited use.

The limited version of OO in Matrix OE:

- Allows Matrix OE infrastructure orchestration to trigger Operations Orchestration workflows for pre and post provisioning tasks. Examples include Create Service/Add Server, Standby Server/Service, and Resume Server/Service.

Workflows in the limited version of Operations Orchestration included with Matrix OE may only be triggered from the Matrix OE infrastructure orchestration interface in relation to pre- and post- provisioning tasks. An upgrade to the full version of Operations Orchestration allows the launch of workflows from outside of the Matrix OE interface.

- Allows Matrix OE to be integrated with other management software. However, this requires additional services from HP consulting.
- Is licensed for one author in OO Studio. Upgrades to the full version of Operations Orchestration allow for multiple authors.
- Is included in Matrix OE may only be used for flow troubleshooting. An upgrade to the full version of Operations Orchestration allows the use of Operations Orchestration Central to launch and schedule the launch of Operations Orchestration workflows from outside of Matrix OE/Insight Control.

The content supplied with the limited version is a subset of the content that is available in the full version of Operations Orchestration and is related to Infrastructure-as-a-Service workflow. An upgrade to HPE Helion

CloudSystem Enterprise provides unrestricted use of full Operations Orchestration including additional content through HPE Live Network.

For detailed information about Matrix OE Operations Orchestration issues, see the *HPE Matrix Operating Environment 7.6 Release Notes*.

Matrix OE Capacity Advisor

For detailed information about Matrix OE Capacity Advisor issues, see the *HPE Matrix Operating Environment 7.6 Release Notes*.

More information

- [HPE Matrix Operating Environment 7.6 Release Notes](#)

Matrix OE infrastructure orchestration

For detailed information about Matrix OE infrastructure orchestration issues, see the *HPE Matrix Operating Environment 7.6 Release Notes*.

Matrix OE recovery management

For detailed information about Matrix OE recovery management issues, see the *HPE Matrix Operating Environment 7.6 Release Notes*.

Limitations

Matrix recovery management is not supported on a secondary CMS and all DR protected IO services must be on the primary CMS. This can be controlled in Matrix infrastructure orchestration by ensuring server pools on the primary CMS are used when provisioning IO service templates that are recoverable. For additional information, see the *HPE Matrix Operating Infrastructure Orchestration User Guide*.

Required configuration for disaster recovery

Storage pool entry names must be the same at both the preferred and secondary site.

Logical servers (physical and virtual) which have been DR protected via Matrix recovery management do not support the unmanage and subsequent import operations. Later Matrix recovery management operations (including failover) may not succeed if a DR protected logical server is unmanaged, edited, (for example, to modify networks or storage) and imported.

Planning a DR solution with hypervisor-based IO services

When planning for a disaster recovery solution using Matrix recovery management with VMware or Hyper-V hypervisor based IO services, you must ensure that the hosts at both the primary datacenter and the DR datacenter match. For example, the hosts with visibility to the replicated volume that the IO service uses can be selected to activate the replica services at the DR datacenter and must be running a version equal to or higher than the primary host on which the original IO service is created. That is, if primary datacenter IO service was created on an ESX 5.5 host, the DR site ESX servers that have the replicated datastore mapped must be running ESX 5.5 or later, the same is true when using Hyper-V versions.

Physical disks within HPE 3PAR StoreServ virtual domains

Matrix recovery management does not support servers that contain physical disks within HP 3PAR StoreServ virtual domains that were provisioned using SPM storage replication support (Remote Copy requirements). The alternative is to manually import the volumes into SPM at the secondary site prior to Matrix recovery management import.

More information

- [HPE Matrix Operating Environment 7.6 Release Notes](#)
- [HPE Matrix Operating Infrastructure Orchestration User Guide](#)

HPE Storage Provisioning Manager

SPM runs on an x86/x64 Windows CMS. iSCSI is not supported by SPM.

Required version of Brocade Network Advisor and HP B-Series Network Advisor

Brocade Network Advisor or HP B-Series SAN Network Advisor versions 12.1.4, 12.3.1, 12.3.4, 12.4.2, 12.4.3, 12.4.4, or 14.0.0 must be installed in order to manage Brocade-based SAN environments. No other versions of BNA are supported.

NOTE:

- While using the SPM automated zoning capability, you may disable Historical Data Collection to ensure BNA provides adequate performance for SPM. To disable Historical Data Collection from Brocade Network Advisor GUI, select **Monitor > Performance > Historical Data Collection > Disable All**.
- Upgrade from BNA 12.3.x and 12.4.x to BNA 14.0.0 is not supported. For more information, see *BNA 14.0.0 Release Notes*.

HP B-Series Network Advisor is available from http://h18006.www1.hp.com/products/storageworks/dc_fabricmgr/index.html. See the *HPE Storage Provisioning Manager (SPM) User Guide* for additional details.

HPE 3PAR StoreServ Storage an initiator WWN limit per controller port

Two features in SPM can be used to limit the number of initiator WWNs that may be connected to a storage controller port. The white list capability for HPE 3PAR StoreServ Storage allows a storage administrator to control the controller ports used by SPM, thus preventing SPM from using controller ports that are reserved for other uses. The port group feature gives a storage administrator more detailed control over how SPM uses controller ports for all storage.

When adding ports to a storage system for which a white list is configured, if any new ports are to be used by SPM and Matrix OE, they must be added to the white list, and the storage system must be resynchronized in SPM. The white list capability can only be used for HPE 3PAR StoreServ Storage.

These limitations can impact Matrix OE-created servers that use SPM to provision their storage. Use of the SPM port group and white list capabilities are helpful to keep within 3PAR StoreServ Storage limitations. For more information, see the *HPE Storage Provisioning Manager (SPM) User Guide*.

More information

- [HPE Matrix Operating Environment 7.6 Release Notes](#)
- [HPE Storage Provisioning Manager \(SPM\) User Guide](#)

Matrix OE visualization

For detailed information about Matrix OE visualization issues, see the *HP Matrix Operating Environment 7.6 Release Notes*

Other issues and suggested actions

PXE-less boot consideration

Use of Intelligent Provisioning may not be supported by all server configurations or firmware versions. Consult the *HP Insight Management Support Matrix* for information about configurations that do not support Intelligent Provisioning. To globally disable use of Intelligent Provisioning set the `enable.hp.intelligent.provisioning.boot` property to False in the `hpio.properties` file. To disable its use on a per-server basis, use the following procedure to delete all iLO users from the system:

NOTE:

This disables the ability to log in directly to the iLO, but the Onboard Administrator continues to perform operations and you can log in to iLO via the Onboard Administrator.

1. Navigate to the Onboard Administrator.
2. Select the device bay for the server where you want to remove the iLO credentials.
3. Click the **Web Administration** link.
4. Click the **Administration > User Administration** menu.
5. Select all local users.
6. Click the **Delete** button.
7. Re-run the HP Systems Insight Management discovery task for the target system or enclosure.

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RHEL 7.1 OS deployment may fail on ProLiant servers configured with SAN multipath

Symptom

RHEL 7.1 OS deployment may fail on ProLiant servers configured with SAN multipath

Action

Procedure

- For RHEL 7.5 deployments in a multi-path environment, refer to the deployment software documentation for how to enable multi-path.
- If Storage Provisioning Manager is used to zone the LUN and zones to multiple target ports on the storage solution, then multipath must be configured for any RHEL 5.9 deployment with the LUN provisioned by SPM.

HP SIM security certificate is not imported

Symptom

A problem occurs when an Insight Remote Support Advanced installation is supporting an HP-UX Mission Critical contract and the HP SIM security certificate is 2048 bits. System Management Homepage (SMH) does not automatically import the HP SIM 2048-bit certificate causing communication with HP-UX Advanced Configuration Collections to fail. In HP SIM 7.2, the security certificate is 2048 bits by default, but this issue also occurs if a previous HP SIM 7.x setup changed the certificate to 2048 bits.

Action

Procedure

1. Upgrade to the latest HP-UX SMH version from <https://h20392.www2.hpe.com/portal/swdepot/displayProductInfo.do?productNumber=SysMgmtWeb>.

Insight Management installation error

Symptom

When you upgrade HP SIM from version 7.5 to 7.5 Update 1, only the components included in the HP SIM will be upgraded. However, after installing HP SIM, when you try to install HP Insight Control version 7.5, the following error message is displayed:

```
Installation cannot proceed due to the following incompatibilities - HP Insight Control Power Management: found version 1.0, minimum upgradable version is 7.3.0.
```

Action

Procedure

1. There is no known workaround at this time.

Non-English OS upgrade error

Symptom

During the upgrade of a non English OS from Microsoft Windows server version 2008 R2 SP1 to 2012 R2, the Insight Management Installer services and database services fail to start if the user name ends with \$.

Action

Procedure

1. To resolve this issue, the user name must not end with \$ for a non English OS.

Managing an Hyper-V (or any MSCS) cluster when an alias is assigned by DHCP

Symptom

In Windows Server 2008 Failover Clusters, if the cluster alias is assigned using DHCP, the cluster alias PTR (reverse lookup) record in DNS is incorrect, causing the cluster to be discovered incorrectly in HPE SIM.

Action

Procedure

1. To correct this problem, delete the cluster objects from HPE SIM, follow the steps in the Microsoft Knowledge Base article at <http://support.microsoft.com/kb/969049> to modify the cluster DNS behavior, and then rediscover the cluster in HPE SIM.

VM kernel port name used for management traffic must be “Management Network”

Symptom

- When trying to activate a logical server, the ESXi/vSphere hosts appear as Rejected Target hosts with an error that the hosts are not part of vCenter, or that Insight Control virtual machine management is unable to get vCenter information for the VM host.
- The association between the host and vCenter does not appear in HPE SIM.

Action

Procedure

1. Modify the **Network Label** of the VMKernel port used for management traffic to “Management Network”:
 1. Log into vCenter using the vCenter client.
 2. Select the **Hosts and Clusters** view from the **View > Inventory** menu.
 3. Select the **ESXi server** from the tree in the left pane.
 4. Select the **Configuration** tab in the right pane.
 5. In the **Hardware** section, select **Networking**.
 6. Click **Properties** for the Virtual Switch where the VMKernel port used for management traffic is located. If there are multiple VMKernel ports located on multiple virtual switches and configured for management traffic, select the switch that has the VMKernel port with the IP that is registered with Insight Control virtual machine management, or that will be used for registration with Insight Control virtual machine management.
 7. In the virtual switch properties pop-up window, select the service console port, and then click **Edit**.
 8. Change the Network Label to “**Management Network**” and click **OK**. Close the virtual switch properties pop-up window.

NOTE:

It can take up to five minutes for the cache to refresh and the API to report the ESXi/vSphere host.

Multipath I/O and Emulex FC HBA or Emulex FlexFabric Converged Network Adapter is not supported on Windows Server 2008 R2 and Windows 2012

Symptom

Using multipath I/O during OS installation is not supported with an Emulex FC HBA or an Emulex FlexFabric Converged Network Adapter on any CloudSystem Matrix-supported server on Windows Server 2008 R2 and Windows 2012.

The following suggested actions enable you to install the OS single-path and then modify the storage definitions to create multiple-path access to the boot volume. After a successful OS installation, these instructions define an additional physical path to the boot volume by:

- Modifying the storage definition to add an additional server HBA definition (port).
- Modifying the boot volume definition to add a second physical 'path' to its definition.

Solution 1

Action

Procedure

1. If you are creating a template using Matrix OE infrastructure orchestration designer, select Redundant SAN paths to disk when configuring the boot volume. Matrix infrastructure orchestration executes steps to work around this issue by ensuring that the OS is single-path while the OS is being provisioned, and then modifies the storage definitions to create multipath access to the boot volume when OS provisioning is complete.

Solution 2

Action

Procedure

1. If you are defining a storage pool entry in Matrix OE visualization using the Manage Storage Pool interface:
 1. Define the storage pool entry. Add multiple ports and mark all non-boot disks as redundant. Keep the boot volume as a single path.
 2. Assign the storage pool entry to a logical server.
 3. Activate the logical server.
 4. Provision the OS, and install the multipath IO drivers as appropriate.
 5. Deactivate the logical server.
 6. Modify the storage pool entry to make the boot volume redundant.
 7. Reactivate the logical server.

Support and other resources

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:
<http://www.hpe.com/assistance>
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:
<http://www.hpe.com/support/hpesc>

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates:

Hewlett Packard Enterprise Support Center

www.hpe.com/support/hpesc

Hewlett Packard Enterprise Support Center: Software downloads

www.hpe.com/support/downloads

Software Depot

www.hpe.com/support/softwaredepot

- To subscribe to eNewsletters and alerts:

www.hpe.com/support/e-updates

- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:

www.hpe.com/support/AccessToSupportMaterials

ⓘ **IMPORTANT:**

Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HP Passport set up with relevant entitlements.

Websites

Website	Link
Hewlett Packard Enterprise Information Library	www.hpe.com/info/enterprise/docs
Hewlett Packard Enterprise Support Center	www.hpe.com/support/hpesc
Contact Hewlett Packard Enterprise Worldwide	www.hpe.com/assistance
Subscription Service/Support Alerts	www.hpe.com/support/e-updates
Software Depot	www.hpe.com/support/softwaredepot
Customer Self Repair	www.hpe.com/support/selfrepair
Insight Remote Support	www.hpe.com/info/insightremotesupport/docs
Serviceguard Solutions for HP-UX	www.hpe.com/info/hpux-serviceguard-docs
Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix	www.hpe.com/storage/spock
Storage white papers and analyst reports	www.hpe.com/storage/whitepapers

Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

<http://www.hpe.com/support/selfrepair>

Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

Remote support and Proactive Care information

HPE Get Connected	www.hpe.com/services/getconnected
HPE Proactive Care services	www.hpe.com/services/proactivecare
HPE Proactive Care service: Supported products list	www.hpe.com/services/proactivecaresupportedproducts
HPE Proactive Care advanced service: Supported products list	www.hpe.com/services/proactivecareadvancedsupportedproducts

Proactive Care customer information

Proactive Care central

www.hpe.com/services/proactivecarecentral

Proactive Care service activation

www.hpe.com/services/proactivecarecentralgetstarted

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (docsfeedback@hpe.com). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.