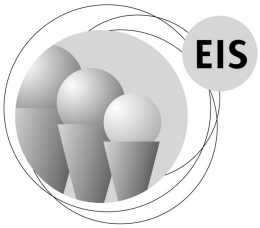
EIS Installation Checklist for SPARC® M7 Series Servers

Customer:		
TASK Number:		
Technician:		
Version EIS-DVD:		
Date:		

- It is recommend that the EIS web pages are checked for the latest version of this checklist prior to commencing the installation.
- It is assumed that the installation is carried out with the help of the current **EIS-DVD**. See EIS web pages for current information and status.
- The idea behind this checklist is to help the installer achieve a "good" installation.
- It is assumed that the installer has attended the appropriate training classes.
- The installation should be prepared using EISdoc V4.
- For platform minimum Solaris requirements refer to table on page 40 of this checklist.
- It is not intended that this checklist be handed over to the customer.
- Feedback on issues with EIS content or product quality is welcome – refer to the last page of this checklist.

The following additional EIS Installation Checklists will be required:

- Sun Rack II (required if the M7 server was shipped within an Oracle rack),
- Solaris 11 OS.

Additional activities such as the creation and installation of Logical Domains (LDoms) with Oracle VM Server for SPARC, Non-Global Zones (Containers) and / or Solaris Cluster are NOT part of the OSSI (Oracle Standard System Installation) services. The recommended service for these are *Oracle Software Installation and Configuration for Solaris Hi (4 LDOMS, 10 Zones)*. EIS content (checklists etc.) is available for these items.

If it is intended that the server be booted via a SAN or iSCSI (which is outside the scope of an EIS installation service), some of the actions listed in this checklist cannot be carried out.

	Serial Number
SPARC M7-8 / M7-16	

Task	*Comment*	*Check*
PREPARATION		
For an overview of the activities carried out during the installation of this product via the EIS Methodology, refer to the *EIS-Deliverables* page within the EIS website for the *SPARC M7-8 /-16 Servers*.		
A minimum of two Service Engineers are required for the physical installation.		
Documentation reviewed? The entire *SPARC M7 Series Servers Documentation Library* is available here: http://docs.oracle.com/cd/E55211_01/	Especially review the product notes for known issues and the firmware version to be installed. • *SPARC M7 Series Servers Product Notes,* • *SPARC M7 Series Servers Getting Started Guide,* • *SPARC M7 Series Servers Installation Guide.*	
EIS *Site-Audit Report* complete?	EISdoc V4: Directory: **SITE-AUDIT** **EIS-SiteAudit-SunRackII+M7-Server.odt** OR: **EIS-SiteAudit-Stand-Alone-M7.odt**	
EIS *Installation Configuration Plan & Test Procedures Plan* complete?	EISdoc V4: Use appropriate **BUILD** & **TPP** templates, inserted into "Master" files (Chapter *Servers*): **EIS-BUILD-Server-M7-8-1PDOM.odt** **EIS-BUILD-Server-M7-8-2PDOM.odt** **EIS-BUILD-Server-M7-16.odt** **EIS-TPP-Server-M7.odt** If the server will be delivered from manufacturing within a Sun Rack II 1242 rack you will also need (Chapter *Additional Items*): **EIS-BUILD-SunRack-II.odt** **EIS-TPP-SunRack-II.odt**	
FABs/EIS-ALERTs reviewed?		
Customer action: If name service (DNS, NIS) in use, ensure that new hostnames, IP addresses etc. have been correctly entered on the name server.		
It is wise to ensure that the required system firmware update is available before commencing the installation. It will be required for the actions on page 20 of this checklist. The system firmware update for the SPARC M7 Series Servers can either be obtained from MOS or are to be found on EIS-DVD-ONE in directory **.../sun/patch/SYSFW/M7**. Refer also to MOS Document ID 1967048.1 for the most current firmware revision information. **Current SPARC M7-8 and M7-16 Firmware Update:** **sysfw 9.7.1.b** ILOM: **3.2.6.2.b** OBP: **4.40.1** MOS patch 23291634 (sysfw 9.7.1.b) is on EIS-DVD ≥20JUL16. MOS patch 22982115 (sysfw 9.5.4.a) is on EIS-DVD 20APR16 to 08JUN16.		

Task	*Comment*	*Check*
If you need to obtain the patch from My Oracle Support (MOS): 1. Go to https://support.oracle.com/ & sign in, *2.* Click on the **Patches & Updates** tab (on the top), *3.* In the **Patch Name or Number** box enter the required patch e.g. **23291634**. *4.* Click **Search**. 5. A new screen will appear with the Patch Search Results. Click on the Patch Name which will be of the form **23291634**. 6. Download the file – currently **68.3 MB** in size. The result will be a file of the form: **p23291634_97_Generic.zip**. When this is unzipped the .pkg file will be found.		
If the platform is running a SysFW version earlier than 9.5.2.g, make sure to read the upgrade special instructions in MOS Document ID 2099205.1 *SPARC M7 Series Servers: Upgrade Sun System Firmware From 9.4.3.d to 9.5.4.a.* The upgrade is performed on page 20 of this checklist.		
It may be required to update some Hardware Programmables during the installation (pages 23 and 24). You may want to obtain the following patches from MOS): • MOS Patch 23750156 (HWP 1.0.7) : PS (A261) FW • MOS Patch 22345376 (HWP 1.0.6) : CMIOU/SP/SWU FPGA The above patches are available on EIS-DVD ≥21SEP16. If you need to obtain the patch from My Oracle Support (MOS): 1. Go to https://support.oracle.com/ & sign in, 2. Click on the **Patches & Updates** tab (on the top), 3. In the **Product or Family** box, select **SPARC M7-8** or **SPARC M7-16** as **Product** and **SPARC M7-x Hardware Programmables 1.0** as **Release,** 4. Click **Search**, 5. A new screen will appear with the Patch Search Results. Click on the Patch Name, 6. Download the ZIP file.		
You should also download copies of the following MOS documents which describe how to install the above patches: • *SPARC M7 Series Servers: Power Supply (A261) Firmware Update* (MOS Document ID 2065435.1). • *SPARC M7 Series Servers: Firmware for the Various Hardware Components used on SPARC M7 Series Servers* (MOS Document ID 2076387.1).		
If the host(s) will be booted using iSCSI over IPoIB (Versaboot) you should obtain the S11.3 Fallback miniroot image for the SP from MOS. This will be used on page 24. Refer to *Oracle Solaris 11.3 Support Repository Updates (SRU) Index* (MOS Document ID 2045311.1) for pointers to the Fallback Boot Images.		

Task	*Comment*	*Check*
Decide on domain installation method: 1. Use the pre-installed boot disk, 2. Re-installation. SPARC M7 servers can ship with optional Flash Accelerator PCIe cards, which will be pre-installed with Oracle Solaris OS; on slot PCIe3 of the first CMIOU in each PDomain. Refer to the *SPARC M7 Series Servers Installation Guide, Oracle Flash Accelerator NVMe Cards* However, the customer can also install Oracle Solaris OS on their own external bootable storage device (booting from an external device is outside the scope of an EIS installation). This server does not have a local DVD drive, nor are there any USB ports to which one could attach a USB DVD drive. If re-installation of Solaris is required on a PDomain there are two choices, both of which require use of the local network: • Using an AI (Automatic Installer) server *OR* • Manual installation using ILOM Redirection – refer to page 57.		
If at server installation time neither disks nor Flash Accelerator PCIe cards with pre-installed Solaris are available, the host(s) cannot be installed/booted. If is however possible to boot the host(s) using the Oracle VTS 8.0.0 bootable image for SPARC (ISO file) in order to run VTS and Explorer Data Collector. If this will be needed, obtain the patch from My Oracle Support (MOS): 1. Go to https://support.oracle.com/ & sign in, *2.* Click on the **Patches & Updates** tab (on the top), 3. In the **Patch Name or Number** box enter the required patch e.g. **22937671.** *4.* Click **Search**. 5. A new screen will appear with the Patch Search Results. Click on the Patch Name which will be of the form **22937671**. 6. Download the file – currently **1.1 GB** in size. 7. The result will be a file of the form: **p22937671_800_SOLARIS64.zip**. When this is unzipped the **.iso** file will be found. Make sure the ISO file is available locally or on NFS server. Refer to Appendix B: *Booting From the VTS Bootable Image* on page 60.		

Task	*Comment*	*Check*
UNPACKING & PHYSICAL INSTALLATION		
Delivery complete?		
Collect the white Customer Information Sheets (CIS).	File away carefully!	
Allow the system to acclimatise (power off) at the customer site.	Refer to EIS standard "Acclimatisation of Oracle Hardware Products".	
Unpack outside data center to ensure no contamination/dust is released inside customer's controlled environment.	Refer to the *SPARC M7 Series Servers Installation Guide*. Follow the steps as described in the section *Installing a Rackmounted Server* or *Installing a Stand-Alone Server in a Rack.* Collect packing material together for disposal.	
Verify all packing material has been removed, i.e. nothing is blocked.	Fans & air vents must be free to operate.	
Inspect the chassis.	Note any damage or issues identified.	
Gather excess parts, cables etc. in a box.	For M7-16 and factory racked M7-8, verify that the key is still attached to the door or included with the other parts.	
Collect documentation together.	Give to customer during handover.	
SERVERS THAT ARE SHIPPED RACK-MOUNTED		
This section applies to the SPARC M7-16 server, which will always ship from the factory installed in a rack and to SPARC M7-8 servers which were shipped rack-mounted (optionally).		
Verify adequate maintenance areas around the system and proper placement of perforated floor tiles in raised floor data centers.	Refer to the *SPARC M7 Series Servers Installation Guide*.	
A rack-mounted SPARC M7-8 server ships with one factory-installed server in a Sun Rack II 1242 rack. A Sun Rack II 1242 rack can contain up three SPARC M7-8 servers, hence up to two more servers can be installed into the same rack. These additional SPARC M7-8 servers ship stand-alone and must be installed into the rack at the installation site.	Refer to the **SPARC M7 Series Servers** *Installation Guide - Installing a Rackmounted Server.*	
A rack-mounted SPARC M7-8 server will be factory-installed at the lowest location: RETMA Rail Location 04 to 13. A second SPARC M7-8 server must be installed at RETMA Rail Location 17 to 26. A third SPARC M7-8 server must be installed at RETMA Rail Location 30 to 39.	*SPARC M7 Series Servers Installation Guide - SPARC M7-8 Server Locations in a Sun Rack II.*	

Task	*Comment*	*Check*
SERVERS THAT ARE SHIPPED NOT RACK-MOUNTED		
This section applies the SPARC M7-8 servers that were NOT rack-mounted by manufacturing.		
The SPARC M7-8 servers and associated rack mounting hardware kit are compatible with Oracle's Sun Rack II 1242 racks only. The servers have not been tested in non-Oracle racks. If the system is being installed in a 3rd party rack, it must be placed on a rack shelf. The shelf must be capable of supporting a minimum weight of 405 lbs and designed for the rack being used. The shelf option should be obtained from the rack vendor. If a non-Oracle rack is to be used and the rack or shelf do not meet the listed requirements, then due to safety and liability reasons, the installation will not be carried out.		
When inserting an M7-8 into a Sun Rack II, follow the proper racking instructions. These servers are heavy (up to 405 1bs / 184 kg). Do not attempt to reduce weight by removing items (CMIOU assembly, power supplies, fans...) from the chassis.	Refer to the *EIS checklist for Sun Rack II* and the SPARC M7 Series Servers Installation Guide. Follow the steps as described in the Section *Installing a Stand-Alone Server in a Rack*. A Dayton Lift is necessary to meet the requirements to raise an M7 server. For Oracle installations the Install Coordinator will arrange that a Dayton lift is available for the installation. Refer to *SPARC M7 Series Servers Installation Guide - Raise Server Using a Mechanical Lift*	
A Sun Rack II 1242 rack can contain up three SPARC M7-8 servers, so you can install up to three more servers into the same rack.	Refer to the *SPARC M7 Series Servers Installation Guide - Installing a Stand-Alone Server in a Rack*	
A rack-mounted SPARC M7-8 server will be factory-installed at the lowest location : RETMA Rail Location 04 to 13. A second SPARC M7-8 server must be installed at RETMA Rail Location 17 to 26. A third SPARC M7-8 server must be installed at RETMA Rail Location 30 to 39.	*SPARC M7 Series Servers Installation Guide - SPARC M7-8 Server Locations in a Sun Rack II*	
ASSEMBLY/CABLING: M7-8 / M7-16		
Have the required documents available.	*SPARC M7 Series Servers Installation Guide.* *SPARC M7 Series Servers Administration Guide.* *SPARC M7 Series Servers Service Manual.* *SPARC M7 Series Servers Product Notes*	

Task	*Comment*	*Check*
Note the system serial numbers.	*The System Serial Number is the one on the RFID tag on the front of the server and should match the System Serial Number on the top CIS sheet.* *For M7-16 Servers, the RFID tag including Serial Number should be on the Switch Unit chassis.*	
Verify placement w.r.t. Airflow & location of air vents.	*The server requires main airflow front to back.*	
Do not connect the power cables at this time.		
Confirm that all respective PDU circuit breakers are switched off.		
Ensure that all CMIOUs are properly seated.		
Carefully, but firmly, push on each PSU to ensure they are fully seated.		
Carefully, but firmly, push on each FAN to ensure they are fully seated.		
Ensure that FRU fillers are in place for all FRUs that are not populated.		
Verify that the hardware configuration meets the requirements provided in the Configuration Guidelines.	*Refer to the SPARC M7 Series Servers Administration Guide and SPARC M7 Series Servers Service Manual.*	
Install any optional components, such as PCIe cards, into the server.		
Install third-party HBAs and connect the data cables for external storage AFTER the Solaris installation!		
Connect the serial and network cables to the SER MGT (category 5 or better) and NET MGT (category 6 or better) RJ-45 ports 0 on the two SPs located in the rear of the server. Secure the SP cables (optional).	Refer to the *SPARC M7 Series Servers Installation Guide*. The cables can be routed through the top of the server or through a floor cutout. Follow the steps as described in the section '*Connect SP Cables*'. To provide redundancy in case a terminal device or network fails, connect each serial cable to different terminal devices and connect the network cables from each SP to separate network switches or hubs. The admin LAN ports on switches must be set to auto-negotiate.	
You can optionally connect serial and network cables to the PDU metering units so that you can monitor the PDU and the connected equipment over the network.	Refer to the *SPARC M7 Series Servers Installation Guide*. Follow the steps as described in the sections '*PDU Cables and Network Addresses*' and '*Connect PDU Management Cables*'. Refer to the EIS checklist for Sun Rack II.	

Task	*Comment*	*Check*
M7-16 Servers Only: The four SPPs are cabled to the two SPs at the factory. Before connecting the SP cables, confirm that the SPP to SP cables are connected and secured properly.	Refer to the *SPARC M7 Series Servers Installation Guide*. Follow the steps as described in the section '*Confirm SPP Cable Connections (SPARC M7-16 Server)*'.	
Verify that the server has been properly secured and all hardware installed and seated correctly.		
Confirm that the PDU power cords are connected to the facility power outlets.	Refer to the *SPARC M7 Series Servers Installation Guide*. Follow the steps as described in the section '*Connect the PDU Power Cords*'.	
Connect the server power cords to the PDU outlets.	Refer to the *SPARC M7 Series Servers Installation Guide*. Follow the steps as described in the section '*Power Cord-to-PDU Relationship (SPARC M7-8)*' and '*Power Cord-to-PDU Relationship (SPARC M7-16)*'.	
If necessary, switch on the facility circuit breakers to supply power to the PDUs.		
Stand-Alone Servers Only: Connect the power cords to the server's AC inputs and to your rack's AC power source.	Refer to the *SPARC M7 Series Servers Installation Guide*. Follow the steps as described in the section '*Stand-Alone Server Power Cord Requirements*'.	
Implement any relevant FABs. At time of this checklist update there were no applicable FABs.	Oracle System Handbook entry for: • SPARC M7-8 • SPARC M7-16	
Environment Measurements: • Temperature, • Humidity.	..... *C* ..... *%*	
Inspect the power cords to verify that they have been correctly installed and secured.		
Connect a terminal or terminal emulator to the SER MGT 0 ports 0 on both SP0 and SP1. 9600 baud/8 bits/No parity/1 stop bit/No handshake	A null modem configuration is needed. You can use RJ-45 crossover adapters with a standard RJ-45 cable to achieve the null modem configuration. For additional details, reference the *SPARC M7 Series Servers Installation Guide* & the section *Connect Terminals or Emulators to the SP SER MGT Ports*.	
Verify that all of the data cables have been attached and are seated properly.	• Serial cables and network cables to the two SPs when possible; make sure to connect the Active SP. • At least one network cable to each PDomain, • Any cables required for peripherals.	
If the system will be booting from an external storage device, power it on.		

Task	*Comment*	*Check*
At the rear of the server, switch on the respective PDU circuit breakers.	For the SPARC M7-8: • L2, L1, L0 • R6, R7, R8 For the SPARC M7-16: • R4, R5, L5, L4 (SWU) • R0, R1, R2, L8, L7, L6 (upper CMIOU) • R6, R7, R8, L2, L1, L0 (lower CMIOU) where R indicates the right PDU from the rear of the server, L indicates the left PDU from the rear of the server, and the number represents the PDU group number.	
At the front of the server, confirm that the power supplies are powered on and their green OK and AC present LEDs are lit.		
Monitor the status indicators on the front or rear LED panel.	SP LEDs will blink as the Active SP powers on, runs diagnostics and initializes the ILOM firmware.	
Press **Enter** (or the Return key) on the terminal devices connected to the SPs to establish the serial connections to the SER MGT ports on the server.		
Intentionally left blank		

Task	*Comment*	*Check*

Initial startup of the SP takes approximately 15 minutes. You will see messages similar to the following at the end of the startup for the Active SP:
M7-8 server with one PDomain:
`…`
`Starting Sppostadm: -a Done`
`sp0 login: *** PLEASE WAIT BEFORE LOGIN ***`
`waiting for proxies …`
`2015-09-11 18:08:01: /SYS/SP0/SPM0 inventory is available`
`2015-09-11 18:22:02: /SYS/SP1/SPM0 inventory is available`
`done (took 902 secs)`
`*** YOU CAN LOGIN NOW ***`
`sp0 login:`
M7-8 server with two PDomains:
`…`
`Starting Sppostadm: -a Done`
`sp0 login: *** PLEASE WAIT BEFORE LOGIN ***`
`waiting for proxies …`
`2015-09-11 17:35:19: /SYS/SP0/SPM0 inventory is available`
`2015-09-11 17:35:19: /SYS/SP1/SPM0 inventory is available`
`2015-09-11 17:35:19: /SYS/SP0/SPM1 inventory is available`
`2015-09-11 17:35:19: /SYS/SP1/SPM1 inventory is available`
`sp0 login:`
M7-16 Servers:
`…`
`Starting Sppostadm: -a Done`
`sp0 login: *** PLEASE WAIT BEFORE LOGIN ***`
`waiting for proxies …`
`2015-09-11 19:16:20: /SYS/SP0/SPM0 inventory is available`
`2015-09-11 19:16:20: /SYS/SP1/SPM0 inventory is available`
`2015-09-11 19:16:20: /SYS/SPP0/SPM0 inventory is available`
`2015-09-11 19:16:20: /SYS/SPP0/SPM1 inventory is available`
`2015-09-11 19:16:20: /SYS/SPP1/SPM0 inventory is available`
`2015-09-11 19:16:20: /SYS/SPP1/SPM1 inventory is available`
`2015-09-11 19:16:20: /SYS/SPP2/SPM0 inventory is available`
`2015-09-11 19:16:20: /SYS/SPP2/SPM1 inventory is available`
`2015-09-11 19:16:20: /SYS/SPP3/SPM0 inventory is available`
`2015-09-11 19:16:20: /SYS/SPP3/SPM1 inventory is available`
`done (took 61 secs)`
`*** YOU CAN LOGIN NOW ***`
`sp0 login:`
On the front LED panel, the SP LED wil now remain lit, the Power OK LED blinks and the Active SP terminal device will display a login prompt as shown here The chassis fan LEDs are not lit until the Host is on.		

Task		*Check*
CONFIGURE THE PDU METERING UNITS		
If the server was delivered factory-installed within a Sun Rack II 1242 rack, the two PDU metering units can now be configured. Follow the instructions in the *Sun Rack II* checklist from page 8: *Connecting Enhanced PDUs to Customer Management Network*.		

Task	*Comment*	*Check*
INITIAL SERVICE PROCESSOR (SP) LOGIN & USER CREATION		
Detailed instructions for the following steps are given in the *SPARC M7 Series Servers Installation Guide*. Refer to the documentation link given on the second page. The ILOM CLI supports the help command, which can be used with any of the other ILOM commands. *Oracle ILOM Quick Reference for CLI Commands Firmware Release 3.2.x*: http://docs.oracle.com/cd/E37444_01/pdf/E37448.pdf		
PERFORM FOLLOWING STEPS ON THE ACTIVE SP		
At this time you should have a login prompt at the serial console of the Active SP (established on previous page).		

Log in as user **root**. This only can be done when connected via a serial cable as described on previous page.	`xxxxxxxxxxxxx login: root`
	`Password: changeme`
	This account has administrative privileges (read and write) for all ILOM features, functions, and commands.	

Verify that you are on the Active SP. When you log onto the Active SP, the initial output will show the 'Active' status. Example:
`<snip>`
`Copyright (c) 2015, Oracle and/or its affiliates. All rights reserved.`
`Hostname: ORACLE-SP0-SPM0-AK00251327 (Active SP)`
If you are on the Standby SP, type **exit** to log out of the Standby SP and then log in to the Active SP using the other terminal or terminal emulator. Keep recording the output of the Standby SP.		

Create users[1].
(this may be done later)
	To create an admin account:
	`-> create /SP/users/admin`
	`Creating user...`
	`Enter new password: *****`
	`Enter new password again: *****`
	`Created /SP/users/admin`
	To create other accounts:
	`-> create /SP/users/`<username>	

Give users the appropriate privileges and set passwords for the user accounts.	`-> set /SP/users/`<username> `role=aucro` `-> set /SP/users/`<username> `password`	
Verify user settings.	`-> show /SP/users` `-> show -l 2 /SP/users`	
Change the SP root password to prevent unauthorized access if the system administrator would like to.	`-> set /SP/users/root password` This may be done later...	

1 The TSC lead engineers for these systems recommend that every SSE/FE should have their own account and password. That way we can audit who does what. It is a security mistake to have a single Oracle-wide fieldeng account. Each customer/site needs to establish the policy that fits their security goals. There is never a problem logging in when you have physical access and the keyswitch. The server ships with a root account that you use to initially log in to Oracle ILOM. This account has administrative privileges (read and write) for all Oracle ILOM features, functions, and commands. The default password is `changeme`.

Task	*Comment*	*Check*
VERIFY HARDWARE STATUS		

Verify the hardware status. Investigate any issues (no output below the heading indicates no faults):
`-> **show faulty**`
`Target | Property | Value`
`/SP/faultmgmt/0 | fru | /SYS/CMIOU1`
`/SP/faultmgmt/0/faults/0 | class | fault.io.pciex.device-pcie-ce`
`/SP/faultmgmt/0/faults/0 | sunw-msg-id | FMD-8000-11`
`/SP/faultmgmt/0/faults/0 | component | /SYS/CMIOU1/IOH/IOS0/RP0`
`/SP/faultmgmt/0/faults/0 | uuid | 01e14769-b271-4e1c-84fc-bca7694f071b`
`/SP/faultmgmt/0/faults/0 | timestamp | 2015-09-15/06:57:09`
`/SP/faultmgmt/0/faults/0 | system_serial_number | AK98765432`
`/SP/faultmgmt/0/faults/0 | system_manufacturer | Oracle Corporation`
`/SP/faultmgmt/0/faults/0 | chassis_serial_number | AK00251676`
`/SP/faultmgmt/0/faults/0 | chassis_part_number | 7320148`
`/SP/faultmgmt/0/faults/0 | chassis_name | SPARC M7-8`
`/SP/faultmgmt/0/faults/0 | chassis_manufacturer | Oracle Corporation`
`/SP/faultmgmt/0/faults/0 | system_component_serial_number | AK00251676`
`/SP/faultmgmt/0/faults/0 | system_component_part_number | 7320148`
`/SP/faultmgmt/0/faults/0 | system_component_name | SPARC M7-8`
`/SP/faultmgmt/0/faults/0 | system_component_manufacturer| Oracle Corporation`
`/SP/faultmgmt/0/faults/0 | fru_name | CMIOU Module`
`/SP/faultmgmt/0/faults/0 | fru_manufacturer | Oracle Corporation`
`/SP/faultmgmt/0/faults/0 | fru_serial_number | 465769T+14416C01F6`
`/SP/faultmgmt/0/faults/0 | fru_rev_level | 04`
`/SP/faultmgmt/0/faults/0 | fru_part_number| 7090830`
`/SP/faultmgmt/0/faults/0 | mod-version | 1.16`
`/SP/faultmgmt/0/faults/0 | mod-name | eft`
`<snip>`		

Check the LED status on all components	Refer to the section on '*Interpreting LEDs'* in the *SPARC M7 Series Servers Service Manual*.	

Check the status of the output power for each power supply:
`-> **show -t /System/Power/Power_Supplies health output_power**`
`Target | Property | Value`
`/System/Power/Power_Supplies/ | health | OK`
`Power_Supply_0 | |`
`/System/Power/Power_Supplies/ | output_power | 6 watts`
`Power_Supply_0 | |`
`/System/Power/Power_Supplies/ | health | OK`
`Power_Supply_1 | |`
`/System/Power/Power_Supplies/ | output_power | 5 watts`
`Power_Supply_1 | |`
`/System/Power/Power_Supplies/ | health | OK`
`<SNIP>`		

VERIFY THAT THERE ARE NO DEGRADED COMPONENTS		

`-> **show /System health**`
Example output when all is OK:
`/System`
`Properties:`
`health = OK`
Example output with a problem:
`/System`
`Properties:`
`health = Service Required`		

Task	*Comment*	*Check*

If **Service Required** is shown above, investigate further:
`-> **show /System health_details**`
 	
`/System`
`Properties:`
`health_details = CMU8 (Processor Board 8), IOU2/EMS1/CARD (Express Module), IOU2/IOB0 (I/O Board) are faulty. Type 'show /System/Open_Problems' for details.`		

If more detail is required: `-> **show -l all -o table /System**` This produces a long table of output.		

Verify (initial check) that the ambient temperature is within a normal range:
`-> **show /SYS/T_AMB value**`
 	
`/SYS/T_AMB`
`Properties:`
`value = 21.125 degree C`
Reference:
SPARC M7 Series Servers Installation Guide - Environmental Requirements
Temperature Operating:
• Altitude up to 500 Meters (1640 ft): 5° C to 35° C (41° F to 95° F).
• Altitude from 501 to 1000 Meters (1664 to 3281 ft): 5° C to 33° C (41° F to 93.2° F).
• Altitude from 1001 to 1500 Meters (3284 ft to 4921 ft): 5° C to 31° C (41° F to 87.7° F).
• Altitude from 1501 to 3000 Meters (4924 to 10000 ft): 5° C to 29° C (41° F to 84.2° F).
Temperature Non-operating:
• 0° C to 50° C (32° F to 122° F), maximum altitude 12000 Meters (40000 ft).		

Task	*Comment*	*Check*
SERVICE PROCESSOR CONFIGURATION		
Before powering on the PDomain(s) for the first time, static network addresses must be assigned to the components within the Service Processor. The network configuration will be in the Installation Configuration Plan (BUILD-SPEC) created during the Preparation Phase (see page 2 of this checklist). The Active_SP (failover IP address) assignment is mandatory. Refer also to the *SPARC M7 Series Servers Administration Guide.*		

Verify that you are on the Active SP:
`-> show /SP/redundancy status`
`Properties:`
`status = Active`		

Set the gateway IP address for all SP addresses:
`-> set /SP/network pendingipgateway=xxx.xxx.xxx.xxx`
`Set 'pendingipgateway' to 'xxx.xxx.xxx.xxx'`		

Set the netmask IP address for all SP addresses:
`-> set /SP/network pendingipnetmask=255.255.255.0`
`Set 'pendingipnetmask' to '255.255.255.0'`
This example uses *255.255.255.0* to set the netmask.		

Assign the required IP addresses for the SP components:
• Active SP:
`-> set /SP/network/ACTIVE_SP/ pendingipaddress=xxx.xxx.xxx.xxx`
`Set 'pendingipaddress' to 'xxx.xxx.xxx.xxx'`
• SP0:
`-> set /SP/network/SP0/ pendingipaddress=xxx.xxx.xxx.xxx`
`Set 'pendingipaddress' to 'xxx.xxx.xxx.xxx'`
• SP1:
`-> set /SP/network/SP1/ pendingipaddress=xxx.xxx.xxx.xxx`
`Set 'pendingipaddress' to 'xxx.xxx.xxx.xxx'`		

The additional configuration steps below are optional. The PDomain-SPMs require IP addresses if the customer is planning to use rKVMs Redirection.	*Refer to SPARC M7 Series Servers Administration Guide, Configure the Host IP Address for rKVMS*	
ADDITIONAL CONFIGURATION FOR M7-8 SERVERS WITH TWO PDOMAINS ONLY		

Assign the required IP addresses for the PDomain-SPMs components:
• HOSTx (PDomainx-SPM):
`-> set /SP/network/HOST<x> pendingipaddress=xxx.xxx.xxx.xxx`
`Set 'pendingipaddress' to 'xxx.xxx.xxx.xxx'`
• Repeat above step for HOST0 and HOST1.
Note that SP/network/HOSTx ipaddress is **not** the IP address for the Host.		

Intentionally left blank		

Task	*Comment*	*Check*
ADDITIONAL CONFIGURATION FOR M7-16 SERVERS ONLY		

Assign the required IP addresses for the PDomain-SPPs components:
• HOSTx (PDomainx-SPP):
`-> set /SP/network/HOST<x> pendingipaddress=xxx.xxx.xxx.xxx`
`Set 'pendingipaddress' to 'xxx.xxx.xxx.xxx'`
• Repeat above step for HOST0, HOST1, HOST2 & HOST3. They should have IP addresses assigned even if there will not be four PDomains (yet).		

VERIFICATION OF NETWORK ADDRESSES (ALL M7 SERVERS)		
Verify that you have set the network addresses correctly. Make any necessary changes if any of the addresses are incorrect (this example only shows the output for the IP address property).		

For M7-8 server with one PDomain:
`-> show /SP/network -t -l 2 pendingipaddress pendingipnetmask pendingipgateway`
`Target | Property | Value`
`/SP/network | pendingipgateway | 10.134.145.1`
`/SP/network | pendingipnetmask | 255.255.255.0`
`/SP/network/ACTIVE_SP | pendingipaddress | 10.134.145.221`
`/SP/network/HOST0 | pendingipaddress | 10.134.145.222`
`/SP/network/SP0 | pendingipaddress | 10.134.145.225`
`/SP/network/SP1 | pendingipaddress | 10.134.145.226`		

For M7-8 server with two PDomains:
`-> show /SP/network -t -l 2 pendingipaddress pendingipnetmask pendingipgateway`
`Target | Property | Value`
`/SP/network | pendingipgateway | 10.134.137.1`
`/SP/network | pendingipnetmask | 255.255.255.0`
`/SP/network/ACTIVE_SP | pendingipaddress | 10.134.137.29`
`/SP/network/HOST0 | pendingipaddress | 10.134.137.215`
`/SP/network/HOST1 | pendingipaddress | 10.134.137.216`
`/SP/network/SP0 | pendingipaddress | 10.134.137.30`
`/SP/network/SP1 | pendingipaddress | 10.134.137.31`
The IP addresses for the SPM1 are not configured as part of the EIS checklist.		

For M7-16 servers:
`-> show /SP/network -t -l 2 pendingipaddress pendingipnetmask pendingipgateway`
`Target | Property | Value`
`/SP/network | pendingipgateway | 10.129.89.1`
`/SP/network | pendingipnetmask | 255.255.255.0`
`/SP/network/ACTIVE_SP | pendingipaddress | 10.129.89.11`
`/SP/network/HOST0 | pendingipaddress | 10.129.89.14`
`/SP/network/HOST1 | pendingipaddress | 10.129.89.15`
`/SP/network/HOST2 | pendingipaddress | 10.129.89.16`
`/SP/network/HOST3 | pendingipaddress | 10.129.89.17`
`/SP/network/SP0 | pendingipaddress | 10.129.89.12`
`/SP/network/SP1 | pendingipaddress | 10.129.89.13`
`….`		

Task	*Comment*	*Check*

Now commit the updates that were made in the above steps:
`-> set /SP/network commitpending=true`
`Set 'commitpending' to 'true'`		

Confirm that the IP addresses have been updated: `-> show /SP/network -t -l 2 ipaddress ipnetmask ipgateway`		

Determine which physical SP is active and set its hostname:
`-> show /SP`
Look for the following lines in the output (where <X> will be 0 or 1):
`current_hostname = ORACLE-SPX-SPMX-platform_serial_number`
`hostname = (none)`
Then set the hostname:
`-> set /SP hostname=<value>`
Where `<value>` would be of the form `xyz-sp0` (assuming <X> was 0 above).
Note that the hostname of the standby SP will be set later after a fail-over (on page 43).		

Verify the SP hostname has been updated:
`-> show /SP hostname current_hostname`
`/SP`
`Properties:`
`hostname = m7-8-sp0`
`current_hostname = m7-8-sp0`		

Set the name server properties (the M7 SPs do not support DHCP):
`-> set /SP/clients/dns auto_dns=disabled`
`-> set /SP/clients/dns nameserver=ip-address-1,ip-address-2`
`-> set /SP/clients/dns searchpath=domain-1.com,domain-2.edu`
`-> show /SP/clients/dns`		

CHANGE TO ACCESS THE SP VIA THE NETWORK		

Log out and disconnect from the serial port:
`-> exit`
Connect to the Active SP via ssh (user root):
`ssh -l root <ip-addr-of-active-sp>`
`Pwd = <the-root-password>`		

SET THE ALTITUDE OF THE SERVER		
You must set the server altitude so that the server can adjust its fan speeds and monitor the surrounding environmental conditions required for its elevation. Set the server altitude using the SP `system_altitude` property. This property is set to 200 meters by default: `-> set /SP system_altitude=<altitude>` Replace <*altitude*> with the altitude of the datacenter in **meters**. The possible values are 0 to 3000 **meters**.		
Intentionally left blank		

Task	*Comment*	*Check*
CONFIGURING THE SP CLOCK		

View the current clock settings:
`-> **show /SP/clock**`
`Properties:`
`datetime = Fri Sep 2 07:35:37 2011`
`timezone = GMT (GMT)`
`uptime = 3 days, 15:04:03`
`usentpserver = disabled`		

The timezone can be changed from GMT (default) to EST, PST, PDT, etc.: `-> **set /SP/clock timezone=EST5EDT**` For possible timezone settings, including daylight savings time, see the entries in directory **/usr/share/lib/zoneinfo** on any Solaris 10 or 11 system.		

To manually set the ILOM clock property values:
`-> **set /SP/clock datetime=**MMDDhhmmYYYY`
Example:
`-> **set /SP/clock datetime=120415002012**`		

Verify the clock values have been updated:
`-> **show /SP/clock**`
`Properties:`
`datetime = Tue Dec 4 15:00:05 2012`
`timezone = EDT (EST5EDT)`
`uptime = 3 days, 15:04:03`
`usentpserver = disabled`		

To synchronize the SP's clock with one NTP server:
`-> **set /SP/clients/ntp/server/1 address=**xxx.xxx.xxx.xxx`
If a second NTP server is in use:
`-> **set /SP/clients/ntp/server/2 address=**yyy.yyy.yyy.yyy`
Finally:
`-> **set /SP/clock usentpserver=enabled**`		

ALERT MANAGEMENT - FAULT NOTIFICATION (strongly recommended)		
Refer to the *Alert Management* section of the *EIS Installation Configuration Plan* for the IP-address and e-mail destinations (reference page 2 of this checklist).		

Enable the SMTP Client:
`-> **set /SP/clients/smtp address=**<ip-address-of-SMTP-server>`
`-> **set /SP/clients/smtp custom_sender=**<root@hostname>`
`-> **show -d properties /SP/clients/smtp**`
`/SP/clients/smtp`
`Properties:`
`address = <ip-address-of-SMTP-server>`
`custom_sender = (none)`
`port = 25`
`send_test_email_to = (Cannot show property)`
`state = enabled`
If the state is not enabled, run:
`-> **set /SP/clients/smtp state=enabled**`		

Task	*Comment*	*Check*
Test the SMTP Client: `-> set /SP/clients/smtp send_test_email_to=administrator@company.com` Confirm delivery of the test e-mail.		

Confirm delivery of the test e-mail:`-> show /SP/logs/event/list/`
`Event`
`ID  Date/Time  Class  Type  Severity`
`----- ----------  --------  --------  --------`
`65226 Wed Oct 21 10:46:34 2015  Email  Test  minor`
`Test email successfully sent to administrator@company.com.`
`65225 Wed Oct 21 10:46:34 2015  Email  Test  minor`
`Attempting to send a test email to: administrator@company.com`		

Configure Alert Management Rule:
`-> set /SP/alertmgmt/rules/1 type=email`
`-> set /SP/alertmgmt/rules/1 level=major`
`-> set /SP/alertmgmt/rules/1 destination=sysadmin-dist-list@company.com`
`-> set /SP/alertmgmt/rules/1 email_message_prefix=<80 char email prefix to distinguish sending platform>`
`-> show -d properties /SP/alertmgmt/rules/1`
`/SP/alertmgmt/rules/1`
`Properties:`
`type = email`
`level = major`
`destination = sysadmin-dist-list@company.com`
`email_custom_sender = (none)`
`email_message_prefix = M5-32 Room-1 Space-22B`
`event_class_filter = (none)`
`event_type_filter = (none)`
`testrule = (Cannot show property)`		

Test the Rule: `-> set /SP/alertmgmt/rules/1 testrule=true` Confirm delivery of the test e-mail.		

INFORMATION: ADDRESSING THE HOSTS FROM THE SP

M7-8 server with one PDomain:

- Currently there are two methods of addressing the HOST on the platform:

  1) /HOST0

  2) /Servers/PDomains/PDomain_0/HOST

- Both the above have the same effect.
- Whilst we understand that at some future date the first method will be removed and the second "SDM model" will remain, this checklist mostly uses the first method as there is less for the installing engineer to type.

M7-8 server with two PDomains:

- Currently there are two methods of addressing the HOSTs on the platform:

  1) /HOST0 and /HOST1

  2) /Servers/PDomains/PDomain_0/HOST and
  /Servers/PDomains/PDomain_1/HOST

- Both the above have the same effect.
- Whilst we understand that at some future date the first method will be removed and the second "SDM model" will remain, this checklist mostly uses the first method as there is less for the installing engineer to type.
- Generally this checklist refers to **HOST**<x> where <x> is in the range 0 to 1.

M7-16 Servers:

- Currently there are two methods of addressing the HOSTs on the platform (example for the first host (0):

  1) /HOST0

  2) /Servers/PDomains/PDomain_0/HOST

- Both the above have the same effect.
- Whilst we understand that at some future date the first method will be removed and the second "SDM model" will remain, this checklist mostly uses the first method as there is less for the installing engineer to type.
- Generally this checklist refers to **HOST**<x> where <x> is in the range 0 to 3.

Task	*Comment*	*Check*
VERIFY AND UPDATE FIRMWARE		

There is no progress meter during the upgrade which will take about 45min.
A firmware upgrade will cause the SP to be reset, hence any connections to the active SP will need to be re-established afterwards.
It is recommended that a clean shutdown of the server (stop /SYS) be done prior to the upgrade procedure.
• The hosts may remain running during the upgrade, but should be powered off and on as soon as possible following the upgrade to apply the new images (POST/OBP/GM/HV/HC).
• After a SysFW update has taken place, starting several hosts too quickly may result in the host FW for one or more hosts not being updated during the host's restart, hence:
  • After a SysFW update avoid using **`start /SYS`** or **`start /System`**.
  • After the upgrade, before starting a host, it must be ensured that the Host FW has been updated to the target version and that no Host FW update is in progress.
The SP will enter a special mode to load new firmware. No other tasks can be performed on the SP until the firmware upgrade is complete and the SP is reset.
The SysFW update can be performed from the CLI or from the GUI.
If the upgrade is to be performed via the GUI, the firmware file should reside on the system from which the browser is launched so it is possible to upload the local file.
If the upgrade is to be performed via the CLI, the proper server should be configured depending on the protocol being used (FTP, TFTP, SFTP, SCP, HTTP, HTTPS).		

The system firmware updates for the SPARC M7-8 and M7-16 servers can either be obtained from MOS or are to be found on EIS-DVD-ONE in directory **.../sun/patch/SYSFW/M7** (unzip the patch file). Refer to page 2 of this checklist. **Current SPARC M7-8 and M7-16 Firmware Update:** **sysfw 9.7.1.b** ILOM: **3.2.6.2.b** OBP: **4.40.1**		
Display the SP firmware information (in this example it is **9.5.2.g**). Connect to the Active SP via ssh (user root): **ssh -l root** <ip-addr-of-active-sp> Pwd = <the-root-password> -> **show /System/Firmware** Properties: system_fw_version = Sun System Firmware **9.5.2.g**		
If the sysfw version is current, omit the rest of this section and go to page 22.		

Task	*Comment*	*Check*
If the platform is running a SysFW version earlier than 9.5.2.g, make sure to read the upgrade special instructions in MOS Document ID 2099205.1 *SPARC M7 Series Servers: Upgrade Sun System Firmware From 9.4.3.d to 9.5.4.a.*		

Verify that the **keyswitch** property is set to 'Normal' for each HOST before proceeding with the upgrade:
`-> show /HOST<x> keyswitch_state`
 	
`/HOSTx`
`Properties:`
`keyswitch_state = Normal`
 	
If necessary, change **keyswitch_state** to normal:
`-> set /HOST<x> keyswitch_state=Normal`
 	
`Set 'keyswitch_state' to 'Normal'`		

Enter:
`-> load -source URI /SP/firmware`
 	
The following protocols are supported:
FTP, TFTP, SFTP, SCP, HTTP, HTTPS
 	
Reference: http://docs.oracle.com/cd/E37444_01/
 	
Example:
Type the `load` command with the path to the new flash image.
This will update the SP flash image and the host firmware on all of the SPs and SPPs. The **`load`** command requires the following information:
• IP address of a TFTP server on the network that can access the flash image. For setting up a TFTP server see MOS Document ID 1004474.1. Copy the .pkg file from within the patch to the TFTP server (directory /tftpboot).
• Full path name to the flash image that the IP address can access.
 	
`-> load [-script] -source tftp://xxx.xxx.xx.xxx/pathname`
 	
where:
`-script` does not prompt for confirmation and acts as if yes was specified.
`-source` specifies the IP address and full URL to the flash image.
 	
If all hosts are powered off, no firmware compatibility messages should appear. Examples:
`-> load -source scp://username@xxx.xxx.xx.xxx/pathname`
`OR:`
`-> load -source tftp://xxx.xxx.xx.xxx/pathname`
 	
Below is an example from an M7-16 server SysFW upgrade.
 	
Output will be slightly different on M7-8 and M7-16 because of the presence and number of SPs, SPMs and SPPs.		

Task	*Comment*	*Check*
NOTE: An upgrade takes several minutes to complete. ILOM will enter a special mode to load new firmware. No other tasks can be performed in ILOM until the firmware upgrade is complete and ILOM is reset. Are you sure you want to load the specified file (y/n)? **y** Preserve existing configuration (y/n)? **y** 2015-03-18 04:52:27 Download firmware package... 2015-03-18 04:54:55 Check firmware package... ..... 2015-03-18 05:00:24 SP /SYS/STANDBY_SP firmware update started ... 2015-03-18 05:05:21 /SYS/STANDBY_SP firmware update completed. Reboot in progress 2015-03-18 05:14:12 SP /SYS/STANDBY_SP firmware update completed 2015-03-18 05:14:13 SP /SYS/SPP0/SPM0 firmware update started ... 2015-03-18 05:14:15 SP /SYS/SPP0/SPM1 firmware update started ... 2015-03-18 05:14:18 SP /SYS/SPP1/SPM0 firmware update started ... 2015-03-18 05:14:21 SP /SYS/SPP1/SPM1 firmware update started ... 2015-03-18 05:14:25 SP /SYS/SPP2/SPM0 firmware update started ... 2015-03-18 05:14:29 SP /SYS/SPP2/SPM1 firmware update started ... 2015-03-18 05:14:33 SP /SYS/SPP3/SPM0 firmware update started ... 2015-03-18 05:14:38 SP /SYS/SPP3/SPM1 firmware update started ... 2015-03-18 05:23:37 SP /SYS/SPP3/SPM1 firmware update completed 2015-03-18 05:23:41 SP /SYS/SPP3/SPM0 firmware update completed 2015-03-18 05:23:44 SP /SYS/SPP0/SPM0 firmware update completed 2015-03-18 05:23:47 SP /SYS/SPP1/SPM1 firmware update completed 2015-03-18 05:25:37 SP /SYS/SPP2/SPM1 firmware update completed 2015-03-18 05:26:42 SP /SYS/SPP1/SPM0 firmware update completed 2015-03-18 05:26:47 SP /SYS/SPP2/SPM0 firmware update completed 2015-03-18 05:30:29 SP /SYS/SPP0/SPM1 firmware update completed 2015-03-18 05:30:30 Starting update firmware on active SP Firmware update is complete. ILOM will now be restarted with the new firmware. 2015-03-18 05:32:49 Completed update firmware on active SP ...		
The reboot of the SP at the end of the firmware upgrade will cause the network connection to the SP to disconnect. Reconnect to the Active SP via ssh (user root): **ssh -l root** <ip-addr-of-active-sp> Pwd = <the-root-password>		
Before starting a host, it must be ensured that the Host FW has been updated: -> **show -t /Servers/PDomains/PDomain_x/SYSTEM/Firmware/Other_Firmware/ version**		
VERIFY & UPDATE POWER SUPPLY FIRMWARE		
All of the power supplies (A261) shipped with the platform should be running FW30 (F0=3.18, F1=3.17, F2=3.10).		
Intentionally left blank		

Task	*Comment*	*Check*

When running SysFW ≥9.5.2.g, check the PSU FW from the Active SP:
`-> set SESSION mode=restricted`
`WARNING: The "Restricted Shell" account is provided solely to allow Services to perform diagnostic tasks.`
`[(restricted_shell) sp0:~]# hw version | grep "/SYS/PS"`
`350. /SYS/PS0/MICRO (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`351. /SYS/PS0/SUPPLY/PS (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`352. /SYS/PS1/MICRO (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`353. /SYS/PS1/SUPPLY/PS (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`354. /SYS/PS2/MICRO (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`355. /SYS/PS2/SUPPLY/PS (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`356. /SYS/PS3/MICRO (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`357. /SYS/PS3/SUPPLY/PS (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`358. /SYS/PS4/MICRO (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`359. /SYS/PS4/SUPPLY/PS (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`360. /SYS/PS5/MICRO (A261)  Version: F0=3.12, F1=3.13, F2=3.6`
`361. /SYS/PS5/SUPPLY/PS (A261)  Version: F0=3.12, F1=3.13, F2=3.6`		

If FW30 (F0=3.18, F1=3.17, F2=3.10) is not applied then update the PSUs FW using patch **23750156** that was obtained on page 3 of the Preparation section of this checklist.	Refer to *SPARC M7 Series Servers : Power Supply (A261) Firmware Update* (MOS Document ID 2065435.1) to obtain the FW image and update the FW.	

Confirm that PSU are now running FW30:
`-> set SESSION mode=restricted`
`WARNING: The "Restricted Shell" account is provided solely to allow Services to perform diagnostic tasks.`
`[(restricted_shell) sp0:~]# hw version | grep "/SYS/PS"`
`350. /SYS/PS0/MICRO (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`351. /SYS/PS0/SUPPLY/PS (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`352. /SYS/PS1/MICRO (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`353. /SYS/PS1/SUPPLY/PS (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`354. /SYS/PS2/MICRO (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`355. /SYS/PS2/SUPPLY/PS (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`356. /SYS/PS3/MICRO (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`357. /SYS/PS3/SUPPLY/PS (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`358. /SYS/PS4/MICRO (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`359. /SYS/PS4/SUPPLY/PS (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`360. /SYS/PS5/MICRO (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`361. /SYS/PS5/SUPPLY/PS (A261)  Version: F0=3.18, F1=3.17, F2=3.10`
`[(restricted_shell) sp0:~]# exit`		

VERIFY & UPDATE COMPONENTS FPGA FIRMWARE		
All of the CMIOU, SWU and SP/SPP shipped with the platform should be running: • CMIOU: X.3.8.3 • SWU: Y.2.0.5 • SP/SPP: 15.1.3.4 Where X and Y can be ignored.		
Intentionally left blank		

Task	*Comment*	*Check*

While running SysFW 9.5.2.g or later, check the FPGA version from the Active SP:
`-> set SESSION mode=restricted`
`WARNING: The "Restricted Shell" account is provided solely to allow Services to perform diagnostic tasks.`
`[(restricted_shell) sp0:~]# hw version | grep "M7_FPGA"`
`19. /SYS/CMIOU0/FPGA (M7_FPGA) Version: 7.3.8.3`
`65. /SYS/CMIOU1/FPGA (M7_FPGA) Version: 7.3.8.3`
`111. /SYS/CMIOU4/FPGA (M7_FPGA) Version: 7.3.8.3`
`157. /SYS/CMIOU5/FPGA (M7_FPGA) Version: 7.3.8.3`
`203. /SYS/CMIOU8/FPGA (M7_FPGA) Version: 7.3.8.3`
`249. /SYS/CMIOU9/FPGA (M7_FPGA) Version: 7.3.8.3`
`295. /SYS/CMIOU12/FPGA (M7_FPGA) Version: 7.3.8.3`
`341. /SYS/CMIOU13/FPGA (M7_FPGA) Version: 7.3.8.3`
`401. /SYS/SP0/FPGA (M7_FPGA) Version: 15.1.3.4`
`412. /SYS/SP1/FPGA (M7_FPGA) Version: 15.1.3.4`
`423. /SYS/SPP0/FPGA (M7_FPGA) Version: 15.1.3.4`
`435. /SYS/SPP1/FPGA (M7_FPGA) Version: 15.1.3.4`
`447. /SYS/SPP2/FPGA (M7_FPGA) Version: 15.1.3.4`
`459. /SYS/SPP3/FPGA (M7_FPGA) Version: 15.1.3.4`
`477. /SYS/SWU0/FPGA (M7_FPGA) Version: 6.2.0.5`
`502. /SYS/SWU1/FPGA (M7_FPGA) Version: 6.2.0.5`
`527. /SYS/SWU2/FPGA (M7_FPGA) Version: 6.2.0.5`
`552. /SYS/SWU3/FPGA (M7_FPGA) Version: 6.2.0.5`
`577. /SYS/SWU4/FPGA (M7_FPGA) Version: 6.2.0.5`
`602. /SYS/SWU5/FPGA (M7_FPGA) Version: 6.2.0.5`		

If CMIOU, SP/SPP or SWU are not running the latest FPGA version then update the component FPGA using patch **22345376** that was obtained on page 3 of the Preparation section of this checklist.	Refer to *SPARC M7 Series Servers : Firmware for the Various Hardware Components used on SPARC M7 Series Servers* (MOS Document ID 2076387.1) to obtain the FPGA image & update the FW.	
UPDATING THE FALLBACK MINIROOT IMAGE ON THE SP		

If the host(s) will be using iSCSI over IPoIB for booting then make sure that the fallback miniroot image on the SP is up to date. First determine the current version of the fallback image:
`-> show /SP/firmware/host/miniroot version`
`/SP/firmware/host/miniroot`
`Properties:`
`version = fallback-boot-5.11-0.175.3.2.0.4.0`		

If the fallback image does not match the Solaris SRU that will be running on the host, update via the CLI: `-> load -source http://webserver.example.com/fallback/fallback.pkg` or via the BUI: • Navigate to the **System Management** > **Miniroot** page and click the **Load Miniroot Package** button. • Select the Solaris Miniroot package. • Click **Upload**.		

Task	*Comment*	*Check*
Refer to the following documents: • *Uploading a New Solaris Miniroot Package From SP to Host (SPARC M7 and T7)* can be found at: https://docs.oracle.com/cd/E37444_01/html/E37446/gqcim.html • *How to Update the Fallback Image* can be found at: https://docs.oracle.com/cd/E53394_01/html/E54742/gplct.html		

Task	*Comment*	*Check*	
PREPARING FOR TEST OF ENTIRE PLATFORM			
The SPARC M7-8 with one PDomain supports 1 static Physical Domain (PDomain). The SPARC M7-8 with two PDomains supports 2 staticPhysical Domains (PDomains). If present, both Physical Domains should be tested. The SPARC M7-16 Server supports up to 4 Physical Domains (PDomains). Although the system may be delivered pre-configured into multiple PDomains, we will first create a single PDomain with all available DCUs, boot (or install) Solaris and run SunVTS. If there is a subsequent change to the physical configuration of the platform, remember to re-run VTS again – it suffices to run VTS just on the PDomain that has been affected by the change. If any of the DCUs in the platform are not populated with CMIOUs, they should be removed from the PDomain after the test of the entire platform. Refer to page 40 of this checklist.			
STARTING THE HOSTS (M7-8 WITH 2 PDOMAINS)		*0*	*1*

From each respective Active SPs, make sure Host stops at the ok> prompt:
`-> set /HOST/bootmode script="setenv auto-boot? false"`
`Set 'script' to 'setenv auto-boot? false'`
 	
This is a one-time setting. The next time the PDomain is reset, `auto-boot` returns to its default setting.			

Determine the diag level and verbosity for each Host:
`-> show /HOST<x>/diag`
`Targets:`
`Properties:`
`default_level = off`
`default_verbosity = normal`
`error_level = max`
`error_verbosity = normal`
`hw_change_level = max`
`hw_change_verbosity = normal`
`<SNIP>`
 	
Perform above step for Host0 and Host1.			

If value for default_level and hw_change_level are not **max**, set the level to **max** so that the domains will run POST:
`-> set /HOST<x>/diag default_level=max`
`Set 'default_level' to 'max'`
 	
`-> set /HOST<x>/diag hw_change_level=max`
`Set 'hw_change_level' to 'max'`			

If value for default_verbosity and hw_change_verbosity are not **max**, set the verbosity to **max** so that the POST will produce more verbosity:
`-> set /HOST<x>/diag default_verbosity=max`
`Set 'default_verbosity' to 'max'`
 	
`-> set /HOST<x>/diag hw_change_verbosity=max`
`Set 'hw_change_verbosity' to 'max'`
 	
Note: The value for **default_verbosity** must **not** be set to "**debug**".			

Task	*Comment*	*Check*	
Because the platform comes from factory, "hw_change_level/hw_change_verbosity" should be used. Even if its default value should be set to "max", make sure that it is properly set. -> **show /HOST<x>/diag/ hw_change_level** -> **set /HOST<x>/diag/ hw_change_level=max** -> **show /HOST<x>/diag/ hw_change_verbosity** -> **set /HOST<x>/diag/ hw_change_verbosity=max**			
Before starting the 2 hosts, it must be ensured that the Host FW for the 2 hosts have been updated to the latest FW: -> **show -t /Servers/PDomains/PDomain_x/SYSTEM/Firmware/Other_Firmware/ version** ...(where x is 0 and 1) and that no Host FW update is in progress (operation_in_progress=none): -> **show /Servers/PDomains/PDomain_x/HOST operation_in_progress**			
Power on the Hosts from the respective Active SP: -> **start /SYS** Are you sure you want to start all of the configured hosts on the system (y/n)? **y** Starting /SYS			
Connect to Host0 and Host1 to view the console output: -> **start /HOST<x>/console** Are you sure you want to start /HOST0/console (y/n) **y** There may well be a delay before the POST output starts to appear on the console.			
If multiple network accesses to the Active SP is possible, it may be appropriate to start console before starting the Hosts.			
STARTING THE HOST (M7-8 WITH ONE PDOMAIN)			
From the Active SP, make sure Host stops at the ok> prompt: -> **set /HOST/bootmode script="setenv auto-boot? false"** Set 'script' to 'setenv auto-boot? false' This is a one-time setting. The next time the PDomain is reset, auto-boot returns to its default setting.			
Determine the diag level and verbosity for the Host -> **show /HOST/diag** Targets: Properties: **default_level = off** **default_verbosity = normal** error_level = max error_verbosity = normal **hw_change_level = max** **hw_change_verbosity = normal** <SNIP>			

Task	*Comment*	*Check*

If value for default_level and hw_change_level are not **max**, set the level to **max** so that the domains will run POST:
`-> set /HOST/diag default_level=max`
`Set 'default_level' to 'max'`
`-> set /HOST/diag hw_change_level=max`
`Set 'hw_change_level' to 'max'`		

If value for default_verbosity and hw_change_verbosity are not **max**, set the verbosity to **max** so that the POST will produce more verbosity:
`-> set /HOST/diag default_verbosity=max`
`Set 'default_verbosity' to 'max'`
`-> set /HOST/diag hw_change_verbosity=max`
`Set 'hw_change_verbosity' to 'max'`
Note: The value for **default_verbosity** must **not** be set to "**debug**".		

Because the platform comes from factory, "hw_change_level / hw_change_verbosity" should be used. Even if its default value should be set to "max", make sure that it's properly set.
`-> show /HOST/diag/ hw_change_level`
`-> set /HOST/diag/ hw_change_level=max`
`-> show /HOST/diag/ hw_change_verbosity`
`-> set /HOST/diag/ hw_change_verbosity=max`		

Power on the Host from the Active SP:
`-> start /SYS`
`Are you sure you want to start all of the configured hosts on the system (y/n)? y`
`Starting /SYS`		

Connect to the Host to view the console output:
`-> start /HOST/console`
`Are you sure you want to start /HOST0/console (y/n) y`
There may well be a delay before the POST output starts to appear on the console.		

If multiple network accesses to the Active SP is possible, it may be appropriate to start console before starting the Host.		
STARTING THE HOSTS (M7-16)		

Check the current configuration:
`-> show /HOST0 dcus_assigned`
`Properties:`
`dcus_assigned = /SYS/DCUx /SYS/DCUy`		

If HOST0 does not contain all four DCUs, capture a backup of the configuration (the desired customer configuration should be in the Installation Configuration Plan anyway). See also the *ILOM Administrator's Guide*, Section *Backing Up, restoring, or Resetting the Oracle ILOM Configuration* (document page #228 onwards).		
If HOST0 did not contain all four DCUs, assign all DCUs to PDomain0: `-> set /HOST0 dcus_assigned="/SYS/DCU0 /SYS/DCU1 /SYS/DCU2 /SYS/DCU3"`		

Task	*Comment*	*Check*

Make sure PDomain0 stops at the ok> prompt:
`-> set /HOST0/bootmode script="setenv auto-boot? false"`
`Set 'script' to 'setenv auto-boot? false'`
This is a one-time setting. The next time the PDomain is reset, `auto-boot` returns to its default setting.		

Determine the diag level and verbosity for the Host
`-> show /HOST0/diag`
`Targets:`
 	
`Properties:`
`default_level = max`
`default_verbosity = max`
`error_level = min`
`error_verbosity = normal`
`hw_change_level = min`
`hw_change_verbosity = normal`
<SNIP>		

If value for default_level and hw_change_level are not **max**, set the level to **max** so that the domains will run POST:
`-> set /HOST0/diag default_level=max`
`Set 'default_level' to 'max'`
`-> set /HOST0/diag hw_change_level=max`
`Set 'hw_change_level' to 'max'`		

Because the platform comes from factory, "hw_change_level/hw_change_verbosity" should be used. Even if its default value should be set to "max", make sure that it's properly set.
`-> show /HOST0/diag/ hw_change_level`
`-> set /HOST0/diag/ hw_change_level=max`
`-> show /HOST0/diag/ hw_change_verbosity`
`-> set /HOST0/diag/ hw_change_verbosity=max`		

Power on PDomain0:
`-> start /HOST0`
`Are you sure you want to start /HOST0 (y/n) y`
`Starting /HOST0`
The PDomain0 initialization can take over 30 minutes to complete.		

Connect to PDomain0 to view the console output:
`-> start /HOST0/console`
`Are you sure you want to start /HOST0/console (y/n) y`
There may well be a delay before the POST output starts to appear on the console.		

If multiple network accesses to the Active SP is possible, it may be appropriate to start console before starting the Host.		
Starting the host with the diag level set to **max** can take a long time to complete. For example: • M7-8 with one PDomain: 50 minutes • M7-8 with two PDomains: 40 minutes per host • M7-16 with all the DCUs in one PDomain : 90 minutes		

Task	*Comment*	*Check*

To monitor the Host startup sequence, enter the following at regular intervals:
`-> show /HOST<x> operation_in_progress`
`operation_in_progress = Host start in progress`
To display the status of the PDomain initialization, enter the following at regular intervals (example output is when Solaris is up & running):
`-> show /HOST<x> status`
`status = Solaris running`
`-> show /HOST<x> status_detail`
`status_detail = 20130423 18:01:11: Start Host completed successfully`
`-> show /HOST<x> operation_in_progress`
`operation_in_progress = none`
For M7-8 with 1 PDomain and M7-16 servers, only Host0 is available at this point.
For M7-8 with 2 PDomains, both Host0 and Host1 should be available.		

VERIFY HARDWARE STATUS		

Verify the hardware status. Investigate any issues.
`-> show faulty`
`Target | Property | Value`
`---+---+---`		

Check the LED status on all components.	Refer to the section on '*Interpreting LEDs'* in the *SPARC M7 Series Servers Service Manual*.	

`-> show /System health`
Example output when all is OK:
`/System`
`Properties:`
`health = OK`
Example output with a problem:
`/System`
`Properties:`
`health = Service Required`		

If **Service Required** is shown above, investigate further:
`-> show /System health_details`
`/System`
`Properties:`
`health_details = CMU8 (Processor Board 8), IOU2/EMS1/CARD (Express Module), IOU2/IOB0 (I/O Board) are faulty. Type 'show /System/Open_Problems' for details.`		

Task	*Comment*	*Check*

Verify (2nd time) that the ambient temperature is within a normal range:
`-> show /SYS/T_AMB value`
 	
`/SYS/T_AMB`
`Properties:`
`value = 21.125 degree C`
 	
Reference:
SPARC M7 Series Servers Installation Guide - Environmental Requirements
 	
Temperature Operating:
• Altitude up to 500 Meters (1640 ft): 5° C to 35° C (41° F to 95° F).
• Altitude from 501 to 1000 Meters (1664 to 3281 ft): 5° C to 33° C (41° F to 93.2° F).
• Altitude from 1001 to 1500 Meters (3284 ft to 4921 ft): 5° C to 31° C (41° F to 87.7° F).
• Altitude from 1501 to 3000 Meters (4924 to 10000 ft): 5° C to 29° C (41° F to 84.2° F).
 	
Temperature Non-operating:
• 0° C to 50° C (32° F to 122° F), maximum altitude 12000 Meters (40000 ft).		

Verify the configuration:
`-> show -l all -d properties /System`
 	
Example Output for M7-8 with 1 PDomain:
`-> show -l all -d properties /System/DCUs`
`/System/DCUs`
`Properties:`
`health = OK`
`health_details = -`
`installed_dcus = 1`
`max_dcus = 1`
 	
`/System/DCUs/DCU_0`
`<SNIP>`
 	
Example Output for M7-8 with 2 PDomains:
`-> show -l all -d properties /System/DCUs`
`/System/DCUs`
`Properties:`
`health = OK`
`health_details = -`
`installed_dcus = 2`
`max_dcus = 2`
 	
`/System/DCUs/DCU_0`
`<SNIP>`
 	
Example Output for M7-16:
`-> show -l all -d properties /System/DCUs`
`/System/DCUs`
`Properties:`
`health = OK`
`health_details = -`
`installed_dcus = 4`
`max_dcus = 4`
 	
`/System/DCUs/DCU_0`
`<SNIP>`		

Task	*Comment*	*Check*
BOOTING THE PDOMAIN		
The SPARC M7-8 & M7-16 servers do not include any integrated storage or storage controllers. If the customer did not order one or more flash accelerator PCIe cards with your server, the customer must install a host bus adapter into a server's PCIe slot and connect to an external storage device to install and configure the Oracle Solaris OS. If the customer ordered flash accelerator PCIe cards with the server, the preceding software will be pre-installed on these cards. See *SPARC M7 Series Servers Installation Guide, Oracle Flash Accelerator NVMe Cards.* Otherwise, you must install this software on storage devices attached to each PDomain.		
BOOTING FROM THE ORACLE VTS BOOTABLE IMAGE		
If no boot solution is available and you intend to boot on the Oracle VTS bootable image using ILOM redirection, go to Appendix B of this checklist (page 60).		
BOOTING THE PRE-INSTALLED PDOMAIN		

Once on the console, if the domain is at the ok> prompt, you can confirm the Flash Accelerator cards:
`{0} ok` **`show-disks`**
`a) /reboot-memory@0`
`b) /pci@327/pci@2/usb@0/storage@1/disk`
`c) /pci@322/pci@2/usb@0/storage@1/disk`
`d) /pci@31d/pci@2/usb@0/storage@1/disk`
`e) /pci@318/pci@2/usb@0/storage@1/disk`
`f) /pci@315/pci@1/nvme@0/disk`
`g) /pci@313/pci@2/usb@0/storage@1/disk`
`h) /pci@30e/pci@2/usb@0/storage@1/disk`
`i) /pci@309/pci@2/usb@0/storage@1/disk`
`j) /pci@304/pci@2/usb@0/storage@1/disk`
`m) MORE SELECTIONS`
`q) NO SELECTION`
`Enter Selection, q to quit: m`
`a) /pci@304/pci@1/pci@0/pci@2/usb@0/storage@2/disk`
`b) /pci@301/pci@1/nvme@0/disk`
`c) /iscsi-hba/disk`
`q) NO SELECTION`
`Enter Selection, q to quit: q`
 	
`{0} ok` **`probe-nvme-all`**
`/pci@315/pci@1/nvme@0`
`NVME Controller VID: 8086 SSVID: 108e SN: CVMD512100AA1P6N MN: INTEL SSDPEDME016T4S FR: 8DV1RA13 NN: 1`
`Namespace ID:1 Size: 1.600 TB`
`/pci@301/pci@1/nvme@0`
`NVME Controller VID: 8086 SSVID: 108e SN: CVMD512100F81P6N MN: INTEL SSDPEDME016T4S FR: 8DV1RA13 NN: 1`
`Namespace ID:1 Size: 1.600 TB`		

OBP alias may exist, pointing to the Flash Accelerator cards. `{0} ok` **`devalias`**		

Task	*Comment*	*Check*
Boot the domain from the existing alias or using the path previously identified: `{0} ok` **`nvalias disk /pci@301/pci@1/nvme@0/disk@1`** `{0} ok` **`boot disk -v`** It is suggested that the **`-v`** option be used when booting a PDomain for the first time. If this fails for some reason, you will need to freshly-install the PDomain with Solaris 11.3 – see below.		
When the domain boots you will be prompted for a number of parameters, the values for which should be in the *Installation Configuration Plan* (BUILD-SPEC) created during the Preparation Phase (see page 2 of this checklist).		
Go to PERFORMING SUNVTS CPU/MEMORY TEST OF ENTIRE PLATFORM on page 34 – pre-installed images from manufacturing should include the sunvts package for Solaris 11.3. In order to test the whole platform, SUNVTS should be run on: • M7-8 with 2 PDomains: 1 or 2 PDomains depending on how many CMIOUs are installed. • M7-8 with one PDomain / M7-16: 1 PDomain		
FRESH INSTALLATION OF PDOMAINS		
Now go to the appropriate Solaris OS checklist: • *EIS Installation Checklist for the Solaris 11 OS* If you intend to re-install the host using ILOM redirection, refer ALSO to the information starting page 57 of this checklist.		

Task	*Comment*	*Check*
SUNVTS CPU/MEMORY TEST OF THE CONFIGURED PDOMAIN(S)		
SunVTS tests can only be performed if there is a boot environment.		
Verify that SunVTS package has been pre-installed.	`# pkg list system/test/sunvts`	
If required, install SunVTS from the repository. If the publisher is not set up correctly consult the *EIS Installation Checklist for the Solaris 11 OS.*	`# pkg install system/test/sunvts`	
Start SunVTS software:	Change directory: `cd /usr/sunvts/bin` To start SunVTS: • TTY mode: `./startsunvts -t` • GUI mode: `./startsunvts -g`	
It is recommended that SunVTS be run at least overnight, hence disable the time limit for the duration of the test.	The default value is 240 minutes. To make the change, select **global_options** and change the value for **Duration of Testing:** to 0.	
It is recommended to use the the System Exerciser test mode.	The default value is System Exerciser. To confirm, select **test_mode** and confirm that it is set to **System Exerciser**.	

To start the VTS session:
• TTY mode:
  • Move to the control panel using the **Tab** key.
  • Using the arrow keys, highlight **start** and press the **Return** key.
• GUI mode:
  • On the **Test Group** page
  • Click on **Start Tests**		

Make sure that the **System_status** is “testing”.		
When leaving for the night select the **Quit** option / **UI Only**.	Now the laptop can be disconnected	

To stop the VTS session:
• TTY mode:
  • Move to the control panel using the **Tab** key.
  • Using the arrow keys, highlight **stop** and press the **Return** key.
• GUI mode:
  • On the **Test Group** page
  • Click on **Stop Tests** to stop all the running tests.		

Inspect the SunVTS log files under: `/var/sunvts/logs`		

Task	*Comment*	*Check*

From Active SP, verify the hardware status. Investigate any issues:
`-> **show faulty**`
 	
`Target | Property | Value`
`----------+----------+----------`		

From the Active SP, enter **fmadm faulty -av** to verify if any DIMM non-serviceable event has been reported:
`-> **start -script /SP/faultmgmt/shell/**`
`faultmgmtsp> **fmadm faulty -av**`
`Time UUID msgid Severity`
`2016-06-22/03:03:22 3e488ffd-4592-ce73-aa5c-8ac43a13141e SPSUN4V-8000-H5`
`MINOR`
`Problem Status : open`
`Diag Engine : fdd 1.0`
`System`
`Manufacturer : Oracle Corporation`
`Name : SPARC M7-8`
`Part_Number : 34293725+1+1`
`Suspect 1 of 1`
`Problem class : fault.memory.page`
`Certainty : 100%`
`Affects :`
`/SYS/CMIOU0/CM/CMP/BOB01/CH0/DIMM/RANK3/DRAM11/ROW48744/COL496`
`Status : faulted`
`FRU`
`Status : faulty`
`Location : /SYS/CMIOU0/CM/CMP/BOB01/CH0/DIMM`
`Manufacturer : Samsung`
`Name : 32768MB DDR4 SDRAM DIMM`
`Part_Number : 07075400,M386A4G40DM0-CPB`
`Revision : 01`
`Serial_Number : 00CE02161832499F08`
<...>
`Resource`
`Location :`
`/SYS/CMIOU0/CM/CMP/BOB01/CH0/DIMM/RANK3/DRAM11/ROW48744/COL496`
<...>
In the above example (a few lines have wrapped-around) a DIMM sparing took place and a non-serviceable event is recorded against /SYS/CMIOU0/CM/CMP/BOB01/CH0/DIMM.
Even if no serviceable event occurred, this DIMM should be replaced so no suspect DIMM is in the platform when handing over to the customer.		

If there will be additional PDomains configured or if a fresh install of Solaris will be added, shut down the domain after successful VTS run.	On the console: # **init 0**	
If the single PDomain will NOT be the production configuration, power off ***OR*** If the PDomain contains DCUs that are not populated with CMIOUs, power off: `-> **stop /HOST0**` and go to the next page to configure the PDomain's configuration.		
ACTIONS IF SINGLE PDOMAIN WILL BE PRODUCTION CONFIG FOR M7-16 OR FOR M7-8		
Go to page 38.		

Task	*Comments*	*PDomain*			
		0	*1*	*2*	*3*
CONFIGURE THE DOMAINS FOR M7-16 SERVERS					
Following the platform VTS test, all DCUs are configured into PDomain0. The PDomain configuration should be in the Installation Configuration Plan (BUILD-SPEC) created during the Preparation Phase (see page 2 of this checklist). It would also be possible to restore the configuration that was saved on page 34 – see again the *ILOM Administrator's Guide*, Section *Backing Up, restoring, or Resetting the Oracle ILOM Configuration* (page #228 onwards). However, it may well be easier to reconfigure the domains manually. DCUs that are not populated with CMIOUs should should not be assigned to any host. Refer to page 40 of this checklist.					

Check the current configuration (from the SP):
`-> show /HOST0 dcus_assigned`
`Properties:`
`dcus_assigned = /SYS/DCUx /SYS/DCUy`					

CONFIGURING MULTIPLE PDOMAINS					
Unassign the DCUs that will not be in PDomain0 by defining only the DCUs that will remain. Example: `-> set /HOST0 dcus_assigned="/SYS/DCU0 /SYS/DCU1"` This will make the other DCUs available to the new domains.					
Configure the additional PDomain(s): `-> set /HOST<x> dcus_assigned="/SYS/DCUx"`					
Set auto-boot to false: `-> set /HOST<x>/bootmode script="setenv auto-boot? false"` This is a one-time setting. The next time the PDomain is reset, `auto-boot` returns to its default setting.					

Determine the **default_level** for each PDomain:
`-> show /HOST<x>/diag`
`Targets:`
 	
`Properties:`
`default_level = off`
`default_verbosity = max`
`error_level = off`
`error_verbosity = max`
`hw_change_level = min`
`hw_change_verbosity = max`
`<SNIP>`
In the above example **default_level** is **off**.					

If value is **off**, set the level to **min** so that the PDomains will run POST:
`-> set /HOST<x>/diag default_level=min`
`Set 'default_level' to 'min'`					

Task	*Comments*	*PDomain*			
		0	*1*	*2*	*3*
Make sure that the default_level and hw_change_level are set to the same value. Change to assign the same value when appropriate: -> **show /HOSTx/diag/ hw_change_level** -> **set /HOSTx/diag/ hw_change_level=min** -> **show /HOSTx/diag/ default_level** -> **set /HOSTx/diag/ default_level=min** The hw_change_level can temporarily be changed during HW replacement when needed.					
Before starting the hosts, the user must ensure that the Hosts FW have been updated to the latest FW: -> **show -t /Servers/PDomains/PDomain_**x**/SYSTEM/Firmware/Other_Firmware/ version** (where x is 0, 1 etc.) and no Host FW update is in progress (operation_in_progress=none): -> **show /Servers/PDomains/PDomain_**x**/HOST operation_in_progress**					
Start a fresh connection (each from a new terminal session) to the active SP via ssh for each domain: **ssh -l root** <ip-addr-of-active-sp> Pwd = <the-root-password> Open a console connection to each domain to monitor the progress during power on: -> **start /HOST**<x>**/console** Are you sure you want to start /HOSTx/console (y/n)? **y** Serial console started. To stop, type #.					
Back on the original connection to the SP, power on each domain: -> **start /HOST**<x> Are you sure you want to start /HOSTx (y/n)? y Starting /Hostx					

Task	*Comments*	*PDomain*			
		0	1	2	3
OBP ALIASES					
For the configured domains (one or two PDomains on M7-8 server, one to four PDomains on M7-16 server), identify and set the proper OBP aliases.					
Device path information: • *SPARC M7 Series Servers Administration Guide / Understanding Root Complexes* • *SPARC M7-8 and M7-16 Servers: Device Paths* (MOS Document ID 2063247.1).					

Locate disks and set nvalias. Example below from an M7-8 server:
`{0} ok` **`show-disks`**
`a) /reboot-memory@0`
`b) /pci@327/pci@2/usb@0/storage@1/disk`
`c) /pci@324/pci@1/SUNW,qlc@0,1/fp@0,0/disk`
`d) /pci@324/pci@1/SUNW,qlc@0/fp@0,0/disk`
`e) /pci@322/pci@2/usb@0/storage@1/disk`
`f) /pci@31f/pci@1/SUNW,qlc@0,1/fp@0,0/disk`
`g) /pci@31f/pci@1/SUNW,qlc@0/fp@0,0/disk`
`h) /pci@318/pci@2/usb@0/storage@1/disk`
`i) /pci@314/pci@1/SUNW,qlc@0,1/fp@0,0/disk`
`j) /pci@314/pci@1/SUNW,qlc@0/fp@0,0/disk`
`m) MORE SELECTIONS`
`q) NO SELECTION`
`Enter Selection, q to quit:` **`m`**
 	
`a) /pci@313/pci@2/usb@0/storage@1/disk`
`b) /pci@310/pci@1/SUNW,qlc@0,1/fp@0,0/disk`
`c) /pci@310/pci@1/SUNW,qlc@0/fp@0,0/disk`
`d) /pci@309/pci@2/usb@0/storage@1/disk`
`e) /pci@305/pci@1/SUNW,qlc@0,1/fp@0,0/disk`
`f) /pci@305/pci@1/SUNW,qlc@0/fp@0,0/disk`
`g) /pci@304/pci@2/usb@0/storage@1/disk`
`h) /pci@304/pci@1/pci@0/pci@2/usb@0/storage@2/disk`
`i) /pci@301/pci@1/LSI,sas@0/disk`
`j) /pci@300/pci@1/SUNW,qlc@0,1/fp@0,0/disk`
`m) MORE SELECTIONS`
`q) NO SELECTION`
`Enter Selection, q to quit:` **`q`**
`<snip>`
 	
`ok` **`nvalias disk /pci@301/pci@1/LSI,sas@0/disk@9,0:a`**
 	
`ok` **`nvalias mirror-disk /pci@xxx/pci@x/LSI,sas@0/disk@x,0:a`**					

Locate network and set nvalias:
`{0} ok` **`show-nets`**
`a) /pci@308/pci@1/network@0,1`
`b) /pci@308/pci@1/network@0`
`c) /pci@303/pci@1/network@0,3`
`d) /pci@303/pci@1/network@0,2`
`e) /pci@303/pci@1/network@0,1`
`f) /pci@303/pci@1/network@0`
`q) NO SELECTION`
`Enter Selection, q to quit: q`
 	
`ok` **`nvalias net`** *`<device_path>`*					

Task	*Comments*	*PDomain*			
		0	1	2	3
Verify and modify the OBP settings to be suitable during the OS installation & configuration: `ok` **`printenv`** `ok` **`setenv auto-boot? false`** `ok` **`setenv diag-switch? false`** If more verbose output is needed, set **diag-switch** to true.					

INFORMATION: PLATFORM MINIMUM SOLARIS REQUIREMENTS

SPARC M7-8, SPARC M7-16:

- Solaris 11.3 GA (includes SRU 1).
- SysFW 9.5.2.g

Additional information:

SPARC M7 Series Servers: Minimum supported Firmware, Software and Solaris patches page (MOS Document ID 1967047.1).

The latest SP firmware is also recommended. Normally, only the 2 most recent releases of firmware are actively supported. Firmware information:

- *SPARC M7 Series Servers: Firmware Image Software Version Matrix Information* (MOS Document ID 1967048.1) – also page 20 of this checklist.

EIS strongly recommends that the most recent update of the required operating system together with the updates from the latest EIS-DVD are used.

INFORMATION: UNPOPULATED DCUs (no CMIOUs) on M7-16

Initial tests (VTS, POST) will be performed with all DCUs assigned to PDomain_0. However, after these first tests are completed, any unpopulated DCUs should be unassigned from PDomain_0 and should not be assigned to any of the Hosts as part of the final configuration.

INFORMATION: ACCESS TO EIS-DVD

When applying EIS Methodology it is necessary to access the contents of the EIS-DVD.

Since the M7 server has no local DVD (and no USB port to which a DVD drive could be attached), it is suggested that for the duration of the installation work that you copy the contents for the EIS-DVD via **`copy-dvd2sun.sh`** onto an available server on the network, share the contents and access via **/net/**<IP-of-server>. The copy action takes about 40 minutes if using a local DVD drive. The contents of EIS-DVD-TWO should be added to this via **`add-dvd2sun.sh`**.

In the EIS checklists examples of EIS-DVD locations are of the form **.../sun/patch/xxx** and should be preceded by the appropriate path. Example:

```
# cd /net/<IP-of-server>/sun/install
```

All content will be under **`/net/`**`<IP-of-server>`**`/sun`** (even when sun2 is shown in checklist examples).

Task	*Comments*	*PDomain*			
		0	*1*	*2*	*3*
SOLARIS-INSTALLATION					
In previous steps, Solaris has been installed on PDomain0 on M7-8 / M7-16 and on PDomain0 and PDomain1 on M7-8 with 2 PDomains. Additional domains need to be installed on M7-16 servers.					
BOOTING PRE-INSTALLED SOLARIS					
On PDomain0 do a boot / reconfigure to remove the devices that are now in the other PDomains.	`ok> boot -r`				

On the other PDomains boot from disk:
If this fails for some reason, you will need to freshly-install PDomainX with Solaris 11.3 – see below.
When the domain boots you will be prompted for a number of parameters, the values for which should be in the Installation Configuration Plan (BUILD-SPEC) created during the Preparation Phase (see page 2 of this checklist).
	`ok> boot -v`
	It is suggested that the **-v** option be used when booting a PDomain for the first time.
	If the disk alias is not set, you may also try:
	`ok boot disk0 -v`				

Now go to the appropriate Solaris OS checklist: • *EIS Installation Checklist for the Solaris 11 OS* You will need to understand access to the Solaris 11.3 repositories, run the setup-standard script, updating the OS from the SRU & so on.					
When the PDomains are all set up go to next page.					
FRESH SOLARIS-INSTALLATION					
Go to the appropriate Solaris OS checklist: • *EIS Installation Checklist for the Solaris 11 OS* If you intend to re-install the host using ILOM redirection, refer ALSO to the information on the last two pages of this checklist (SPARC M7 Series Servers).					
When the PDomains are all set up go to next page.					

Task	*Comments*	*PDomain*			
		0	*1*	*2*	*3*
VERIFY COMMUNICATION BETWEEN SOLARIS & THE SP					

From each PDomain (with root access), communication between Solaris and the SP can be verified with:
`# ilomconfig list interconnect`
`Interconnect`
`============`
`State: enabled` **`<<<<  It is enabled!`**
`Type: USB Ethernet`
`SP Interconnect IP Address: 169.254.182.76`
`Host Interconnect IP Address: 169.254.182.77`
`Interconnect Netmask: 255.255.255.0`
`SP Interconnect MAC Address: 02:21:28:57:47:16`
`Host Interconnect MAC Address: 02:21:28:57:47:17`
If it is not enabled, run:
`# ilomconfig enable interconnect`
Confirm it is now enabled:
`# ilomconfig list interconnect`					

If the service remains disabled or there is a problem to enable it, refer to: *SPARC M7 Series Servers: Interconnect - EoUSB* (MOS Document ID 2063349.1). It's mandatory that this service is enabled and working.					

Task	*Check*
FINAL WORK ON THE SPs, SPMs AND SPPs	
Failover Active SP: `-> set /SP/redundancy initiate_failover_action=true` The failover typically completes within 5 minutes.	

Now the other physical SP should be active (confirm) and set its hostname:
`-> show /SP`
Look for the following lines in the output (where <X> will be 0 or 1):
`-> show /SP`
`current_hostname = ORACLE-SPX-SPMX-`*`platform_serial_number`*
`hostname = (none)`
then set the hostname:
`-> set /SP hostname=`<value>
Where <value> would be of the form xyz-sp1 (assuming <X> was 1 above).	

Verify the SP hostname has been updated:
`-> show /SP hostname`
`-> show /SP current_hostname`	

Failover Active SP back to SP0: `-> set /SP/redundancy initiate_failover_action=true` The failover typically completes within 5 minutes.	

Make sure that the default_level and hw_change_level are set to the same value. Change to assign the same value when appropriate:
`-> show /HOSTx/diag/ hw_change_level`
`-> set /HOSTx/diag/ hw_change_level=min`
`-> show /HOSTx/diag/ default_level`
`-> set /HOSTx/diag/ default_level=min`
The hw_change_level can temporarily be changed during HW replacement when needed.	

ADDITIONAL STEPS FOR M7-8 WITH 2 PDomains SERVERS	

Check the name for the SPM managing Host1:
`-> show /System/DCUs/DCU_1 sp_name`
`/System/DCUs/DCU_1`
`Properties:`
`sp_name = /SYS/SP1/SPM1`
`-> show /Servers/PDomains/PDomain_1/SP current_hostname`
`Properties:`
`current_hostname = ORACLE-SP1-SPM1-`*`platform_serial_number`*	

Optionally, set the SPM hostname. `-> set /Servers/PDomains/PDomain_1/SP/ hostname=`<value>	
Verify the SPM hostname has been updated: `-> show /Servers/PDomains/PDomain_1/SP/ hostname current_hostname`	
Switch the DCU-SPM role for DCU_1: `-> set /System/DCUs/DCU_1 initiate_sp_failover=true`	

Task	*Check*

Now the other SPM1 should be managing the host:
`-> show /System/DCUs/DCU_1 sp_name`
`/System/DCUs/DCU_1`
`Properties:`
`sp_name = /SYS/SP0/SPM1`
`-> show /Servers/PDomains/PDomain_1/SP current_hostname`
`Properties:`
`current_hostname = ORACLE-SP0-SPM1-`*`platform_serial_number`	

Optionally, set the SPM hostname: `-> set /Servers/PDomains/PDomain_1/SP/ hostname=`<value>	
Verify the SPM hostname has been updated: `-> show /Servers/PDomains/PDomain_1/SP/ hostname current_hostname`	
Note: Failover of the SPM managing Host0 has been performed in the previous steps. *Refer to the SPARC M7 Series Servers Service Manual Guide,* Section *'SPARC M7-8 Configurations and Failover Behavior (Two PDomains)'* for further details.	
Switch the DCU-SPM role for DCU_1 back to the original SPM1. `-> set /System/DCUs/DCU_1 initiate_sp_failover=true`	
ADDITIONAL STEPS FOR M7-16 SERVERS	

Identify the SPP managing the DCU:
`-> show /System/DCUs/DCU_0 sp_name`
`/System/DCUs/DCU_0`
`Properties:`
`sp_name = /SYS/SPP0/SPM0`
Repeat the above step for all of the populated DCUs.	

Initiate a DCU-SPP failover for DCU_0:
`-> set /System/DCUs/DCU_0 initiate_sp_failover=true`
`Are you sure you want to set initiate_sp_failover=true (y/n)? y`
and confirm that the DCU-SPP has changed:
`-> show /System/DCUs/DCU_0 sp_name`
`/System/DCUs/DCU_0`
`Properties:`
`sp_name = /SYS/SPP1/SPM0`
Repeat the above step for all of the populated DCUs.	

Refer to the SPARC M7 Series Servers Service Manual Guide, section 'SPARC M7-16 Server Configurations and Failover Behavior' for further details and SPP-DCU relationship.	
Optionally, set the SPM hostname: `-> set /Servers/PDomains/PDomain_0/SP/ hostname=`<value>	
Verify the SPM hostname has been updated: `-> show /Servers/PDomains/PDomain_0/SP/ hostname current_hostname`	
Switch the DCU-SPP role for DCU_0 back to SPM0: `-> set /System/DCUs/DCU_0 initiate_sp_failover=true` Repeat the above step for all of the populated DCUs.	

Task	*Check*
If one or more PDomain is configured with more than one DCU assigned, proceed with the next step.	

Identify the PDomain-SPP:
`-> **show /Host0 sp_name**`
`  /HOST0`
`  Properties:`
`  **sp_name = /SYS/SPP0/SPM0**`
Repeat the above step for all of the configured PDomains.	

Initiate a PDomain-SPP failover:
`-> **set /Host0/ initiate_sp_failover=true**`
`Are you sure you want to set initiate_sp_failover=true  (y/n)? **y**`
and confirm that the PDomain-SPP has changed
`-> **show /Host0 sp_name**`
`  /HOST0`
`  Properties:`
`  sp_name = /SYS/SPP1/SPM1`
Repeat the above step for all of the configured PDomains.	

Reset the SPs (and all of the SPPs on M7-16): `-> **reset /SP**` Then reconnect to the SP.	
Set the virtual keyswitch position for each PDomain to Normal: `-> **set /HOST**<x> **keyswitch_state=Normal**` where <x> is in the range 0 to 3. This property can not be set for the entire platform.	
If it was not changed previously, change the SP root password to prevent unauthorized access if the system administrator would like to: `-> **set /SP/users/**<username> **password**`	

Task	*Check*

Create any additional users that were not added previously[2].
To create an admin account:
`-> create /SP/users/admin role=aucros [password=password]`
To create other accounts:
`-> create /SP/users/<username> role=aucros [password=password]`	

COLLECTION OF ILOM SNAPSHOT	
References: • Collecting snapshot on ILOM 3.x and later platforms (MOS Document ID 1020204.1). The EIS team has not yet been able to fully verify the steps within the section, in particular the command to run the snapshot and send the results to HOST – additional steps may be necessary to enable this to happen. Feedback welcome.	

Log into the Active SP as the root user. If using an account other than root, verify that it has the roles required to run snapshot ('**aucro**' is required):
`-> show /SP/users/root role`
`/SP/users/root`
`Properties:`
`role = aucro`	

For information about possible snapshot settings:
`-> help /SP/diag/snapshot`
To check the snapshot settings:
`-> show /SP/diag/snapshot`
The value for the dataset should be set to '**fruid**'. Update if necessary:
`-> set /SP/diag/snapshot dataset=fruid`	

2 The TSC lead engineers for these systems recommend that every SSE/FE should have their own account and password. That way we can audit who does what. It is a security mistake to have a single Oracle-wide **fieldeng** account. Each customer/site needs to establish the policy that fits their security goals. There is never a problem logging in when you have physical access and the keyswitch. The server ships with a root account that you use to initially log in to Oracle ILOM. This account has administrative privileges (read and write) for all Oracle ILOM features, functions, and commands. The default password is `changeme`.

Task	*Check*
Run **snapshot** from the Active SP and send the output to HOST0: `-> set /SP/diag/snapshot dump_uri=sftp://<username>@<PDomain_0_ipaddress>//var/tmp` Where: • <username> is a user on HOST0 which can be accessed via SFTP. This is likely to be the user account created during the installation (e.g. **jack**)[3]. • <PDomain_0_ipaddress> can be found under section *Domain (Host) Network Information* of the PDomain0 section of the Installation Configuration Plan (BUILD-SPEC) created during the Preparation Phase. You will be prompted for the user's password. The above method will use the "external" network.	
To check the status of the snapshot: `-> show /SP/diag/snapshot result` The output will show the result as Running, Snapshot Complete, or in the event of a problem it will return the reason for the failure.	
For M7-8 servers, there will be up to five zip files created (SysFW<9.7.1.b) or nine zip files (SysFW>=9.7.1.b), one for every possible SPM and a base file. For M7-16 servers, there will be up to eleven zip files created, one for every SP, one for every SPP and a base file. When uploading snapshot data (page 55), ensure that all snapshot files are uploaded. The filenames will be of the form: **M7-8:** • m78-sp0_Platform_Serial_Number_2015-03-17T19-08_@usr@local@bin@bm_snapshot_-n_@SYS@SP0@SPM0.zip • m78-sp0_Platform_Serial_Number_2015-03-17T19-08_@usr@local@bin@bm_snapshot_-n_@SYS@SP0@SPM1.zip • m78-sp0_Platform_Serial_Number_2015-03-17T19-08_@usr@local@bin@bm_snapshot_-n_@SYS@SP0@SPM2.zip • m78-sp0_Platform_Serial_Number_2015-03-17T19-08_@usr@local@bin@bm_snapshot_-n_@SYS@SP0@SPM3.zip • m78-sp0_Platform_Serial_Number_2015-03-17T19-08_@usr@local@bin@bm_snapshot_-n_@SYS@SP1@SPM0.zip • m78-sp0_Platform_Serial_Number_2015-03-17T19-08_@usr@local@bin@bm_snapshot_-n_@SYS@SP1@SPM1.zip • m78-sp0_Platform_Serial_Number_2015-03-17T19-08_@usr@local@bin@bm_snapshot_-n_@SYS@SP1@SPM2.zip • m78-sp0_Platform_Serial_Number_2015-03-17T19-08_@usr@local@bin@bm_snapshot_-n_@SYS@SP1@SPM3.zip • m78-sp0_Platform_Serial_Number_2015-03-17T19-08.zip **M7-16:** • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51_@usr@local@bin@bm_snapshot_-n_@SYS@SP1@SPM0.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-	

3 Initial tests have shown that **root** cannot be used here (usually not a “real” user in Solaris 11).

Task	*Check*
51_@usr@local@bin@bm_snapshot_-n_@SYS@SPP1@SPM1.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51_@usr@local@bin@bm_snapshot_-n_@SYS@SPP3@SPM1.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51_@usr@local@bin@bm_snapshot_-n_@SYS@SPP3@SPM0.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51_@usr@local@bin@bm_snapshot_-n_@SYS@SPP0@SPM0.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51_@usr@local@bin@bm_snapshot_-n_@SYS@SPP2@SPM1.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51_@usr@local@bin@bm_snapshot_-n_@SYS@SPP1@SPM0.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51_@usr@local@bin@bm_snapshot_-n_@SYS@SPP2@SPM0.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51_@usr@local@bin@bm_snapshot_-n_@SYS@SPP0@SPM1.zip • m716-sp1_Platform_Serial_Number_2015-03-18T11-16-11_@usr@local@bin@bm_snapshot_-n_@SYS@SP1@SPM0.zip • m716-sp1_Platform_Serial_Number_2015-03-18T10-14-51.zip	

Task	*Comment*	*Check*
CONFIGURE THE SERVER TO USE ASR		
Configure the System to use Auto Service Request (ASR) if the Customer has a configured and operational ASR Manager system (formerly known as "SASM host") available. For further information refer to the *Oracle Auto Service Request Documentation*. The ASR Manager must be version ≥ 5.0.3. For this family of servers there are three steps: 1. Enabling the ILOM telemetry on the SP. 2. Activating the ASR Asset on the ASR Manager system. 3. Completion of activation in MOS. Refer to *Auto Service Request Qualified Server Products* (Documentation page) for list of qualified products.		
The ASR model for M7 is to support SNMP and XML for ILOM. ASR XML or SNMP should not be enabled at the same time. ASR SNMP must be configured to connect to ASR Manager, Ops Center or Enterprise Manager. ASR XML can connect to Oracle ASR backend directly (direct connection to transport.oracle.com) or to ASR Manager (5.0.3 or later).		
On the SP: Enabling the ASR SNMP ILOM Telemetry via GUI		
Log in to the ILOM via the ACTIVE-SP address as Administrator to reach the ILOM web GUI.	**https://**<SP-ipaddr> User = **root** Pwd = <the-root-password>	
Go to the **ILOM Administration | Notifications | Alerts** tab.	The Alert Setting screen appears (a table with15 possible Alert IDs).	
Select an **Alert ID** that is not used by selecting the button to the left of an **Alert ID** number.	Unused Alert IDs show the **disable** setting in the **Level** column. You do not have to choose the first unused ID.	
Select **Edit** from the **Actions** pull-down.	A pop-up will appear.	
Set **Level** to **minor** and **Type** to **SNMP Trap**.		
Enter the SNMP trap information: • **IP_Address** is the IP address of the ASR Manager system. • **Destination Port** is the SNMP listener port (Default value = 0; this should be changed to a non-zero value such as 162, unless the customer needs to use a different port, in which case the port needs to be changed on the ASR Manager system as well – see Section 4.14.2 of the Auto Service Request (ASR) Manager User's Guide). • **SNMP Version**: select **v2c**. • **Community Name:** set to **public.**		
Click on the **Save** button.		
Log out from the GUI.		
On the SP: Enabling the ASR XML ILOM Telemetry via GUI		
Log in to the ILOM via the ACTIVE-SP address as Administrator to reach the ILOM web GUI.	**https://**<SP-ipaddr> User = **root** Pwd = <the-root-password>	

Task	*Comment*	*Check*
Go to the **ILOM Administration | Notifications | ASR Client** tab.		
Configure the ASR properties:	• **Endpoint** is used to directly or indirectly connect the ASR Client in Oracle ILOM to Oracle Services. The default ASR Manager URL address provided connects directly to Oracle Services. Optionally, you can set the Endpoint property to indirectly connect to Oracle Services by specifying the URL address to an ASR Manager Relay. • **Username/password** are a valid My Oracle Support username (email address) and password. • **Proxy** is an HTTPS/HTTP proxy server to access the Internet.	
Confirm the State property is "Enabled"		
Register the asset.		
Click on the **Save** button.		
Send an ASR Test	Click **Send Test**	
Verify that a test message was successfully sent.	Check for the ASR notification email.	
Send an ASR Heartbeat	Click **Send Heartbeat**. The Oracle ILOM ASR client configuration transmits a heartbeat message to Oracle Services (Endpoint URL).	
Check for the ASR notification email. Check the entries in Oracle ILOM System Log for the applicable ASR Test event or ASR Heartbeat event.		
Log out from the GUI.		
On the SP: Enabling the ASR SNMP ILOM Telemetry via CLI (alternative to GUI)		
Connect to the SP via **ssh**.	`ssh -l root <SP-ipaddr>` `Pwd = <the-root-password>`	

Select an **Alert ID** that is not used – there is no way to display all Alert IDs so you have to step through until an unused ID is found...	`-> cd /SP/alertmgmt/rules`
	`-> show 1`
	`......`
	`-> show 15`
	An unused ID is indicated by the line:
	`level = disable`	

Task	*Comment*	*Check*
Run the following command (all on one line): `-> set /SP/alertmgmt/rules/x type=snmptrap level=minor destination=<IP_of_ASR_manager> snmp_version=2c community_or_username=public destination_port=162` Where: • **x** is the Alert ID to be used. • **IP_of_ASR_manager** is the IP address of the ASR Manager system. • **Destination Port** is the SNMP listener port (Default value = 0; this should be changed to a non-zero value such as 162, unless the customer needs to use a different port, in which case the port needs to be changed on the ASR Manager system as well – see Section 4.12.2 of the ASR Installation and Operations Guide).		
Log out from SP.	`-> exit`	
On the SP: Enabling the ASR XML ILOM Telemetry via CLI (alternative to GUI)		
Connect to the SP via **ssh**.	`ssh -l root <SP-ipaddr>` `Pwd = <the-root-password>`	
Setup the ASR client	`-> cd /SP/clients/asr`	
Configure the ASR properties: -> **set /SP/clients/asr endpoint**=<https://transport.oracle.com | ASR Manager Relay> **username**=<user> **password**=<password> Where: • **Endpoint** is used to directly or indirectly connect the ASR Client in Oracle ILOM to Oracle Services. The default ASR Manager URL address provided connects directly to Oracle Services. Optionally, you can set the Endpoint property to indirectly connect to Oracle Services by specifying the URL address to an ASR Manager Relay. • **Username/password** are a valid My Oracle Support username (email address) and password.		
If applicable configure the proxy: `-> set /SP/clients/asr proxy-host=<user> proxy-user=<user> proxypassword=<password>` Where: • **Proxy** is an HTTPS/HTTP proxy server to access the Internet.		
Enable the asr state	`-> set /SP/clients/asr/ state=enabled`	

Verify that the state is enabled	`-> show /SP/clients/asr state`
	`/SP/clients/asr`
	`Properties:`
	`state = enabled`	

Register the asset		

Verify that the status is registered	`-> show /SP/clients/asr status`
	`/SP/clients/asr`
	`Properties:`
	`status = registered`	

Send an ASR Test	`-> set /SP/clients/asr/ send-event=test`	

Task	*Comment*	*Check*
Verify that a test message was successfully sent.	Check for the ASR notification email	
Send an ASR heartbeat	`-> set /SP/clients/asr send-event=heartbeat`	
Check for the ASR notification email. Check the entries in Oracle ILOM System Log for the applicable ASR Test event or ASR Heartbeat event.		
Log out from SP.	`-> exit`	
ACTIVATE THE ASR ASSET (from the ASR Manager System)		
Log into the ASR Manager system as user **root**.	Via **ssh** or **rlogin**.	
Activate the ASR Asset for the SP.	Assuming that **/opt/asrmanager/bin** is in PATH: `# asr activate_asset -i <IP-of-SP>`	
Confirm that the SP/host is activated. The ASR registration user will receive an email with report results. Confirm that the SP & host are activated (as appropriate).	`# asr report`	
Disconnect from the ASR manager.	`# exit`	
COMPLETION OF ACTIVATION IN MOS		
Log into My Oracle Support:	`https://support.oracle.com`	
In the My Oracle Support Dashboard, click the **More...** tab. Then select **Settings** from the menu.		
In the **Settings** pane on the left of the window, select **Assets** (located under the administrative submenu). For your Support Identifier, select **ASR Status** from the sort filter, then select **Pending** from the **All Statuses** drop-down menu:		
Approve Pending assets either via the **Asset Toolbar** or via **Asset Details**:		
Activate via Asset Toolbar Click the asset's serial number to display a toolbar with following options: • Assign Contact: select this option to assign a contact to the asset. Only users associated with the support identifier can be a contact. • Change Address: select this option to update the asset's physical location. • Approve - for assets that are Pending, click **Approve** to enable ASR for the asset. • Other Actions: you can also perform other actions such as **Activate** (for an inactive asset), **Deactivate** (for an active asset), or **Deny** (for a pending request).		

Task	*Comment*	*Check*
Activate via Asset Details At the bottom of the Asset pane there is a **Show Asset Details** option. Click an asset's serial number and then the **Show Asset Details** to update information about the asset. Required fields for ASR asset activation are indicated by an asterisk ***.**		

Task	*Comment*	*PDomain*			
		0	*1*	*2*	*3*
EXPLORER & VERIFICATION FOR THE DOMAINS					
Explorer can only be collected if a boot environment exists. When collecting explorer on M7 hosts, timeout for some commands collection can be observed. A work-around with Explorer 8.x is to set the RDA timeout to 900 on the command line as shown below. Be aware that in disabling the RDA timeout there is the risk that Explorer might not complete if there is a fault somewhere within the system. You can add the **`-v`** option to monitor progress in detail.					
You can refer to *Oracle Services Tools Bundle (STB) - RDA/Explorer, SNEEP, ACT* (MOS Document ID 1153444.1) for more information about STB and Explorer.					
Run Explorer on each PDomain, excluding the IPMI module (as this would take approximately 20 minutes longer and IPMI information are collected by snapshot): Explorer 8.x: `# explorer -w default,\!ipmi -timeout 900` It is important that the system's serial number is in the Explorer configuration for each PDomain.					
Run **ORAS/CLI** (from EIS-DVD) locally to analyse the Explorer data.	`cd .../sun/tools/ORAS` `sh run-oras.sh`				

Examine the results.
If necessary repair & repeat Explorer/ORAS sequence.
	Examine the resulting report:
	`cd /var/tmp/ORAS`
	`more *EIS.Report.txt`				

Upload the Explorer file to the Oracle **proactive** directory.
If the newly-installed system has connectivity to the Internet:
`# curl -T <filename to upload> -o <logfile> -u <SSO login> \`
`https://transport.oracle.com/upload/proactive/`
Note the trailing **`/`** is required or the upload will fail.
Check the <logfile> after the upload completes to see any errors recorded.
Alternatively, to upload the Explorer file from a non-Solaris system (Windows, Linux or Max OS X) use the **Filezilla** Client.
1. Required settings (under **File** then **Site Manager**):
`Host: transport.oracle.com`
`Port:` (*leave empty*)
`Protocol: FTP - File Transfer Protocol`
`Encryption: Require implicit FTP over TLS`
`Logon Type: Ask for password` (*best option*)
`User: <SSO login>` (*usually your personal Oracle email address*)
`Transfer Mode: Passive` (*in the* **transfer settings** *tab*)
2. Select the **proactive** directory on transport, note that you will not see anything in this directory.
3. Upload the local files to the **proactive** directory.					

Task	*Comment*	*PDomain*			
		0	*1*	*2*	*3*
EXPLORER & VERIFICATION FOR THE DOMAINS					
The Explorer output file is normally in directory: • IPS (Solaris 11): **/var/explorer/output** The filename is of the form **explorer.<*hostid*>.<*hostname*>-<*date*>.tar.gz**					

Task	*Comment*	*Check*
UPLOADING SNAPSHOT FILES		
These actions are required if a snapshot was collected from the SP (page 46).		
Change directory to the location on HOST0 containing the snapshot filed (e.g. /var/tmp).		
Pre-pend the service request number for the Install SR to all of the file names. Example (for one of the several files): Before: **m7-sp0_Platform_Serial_Number_2015-03-17T19-08-02.zip** After: <SR_number>**-m7-sp0_Platform_Serial_Number_2015-03-17T19-08-02.zip**		
Upload each Snapshot file to the Oracle **proactive** directory. If the newly-installed system has connectivity to the Internet: # **curl -T** <filename to upload> **-o** <logfile> **-u** <SSO login> **** **https://transport.oracle.com/upload/proactive/** Note the trailing **/** is required or the upload will fail. Check the <logfile> after the upload completes to see any errors recorded. Alternatively, to upload the Snapshot file from a non-Solaris system (Windows, Linux or Max OS X) use the **Filezilla** Client. 1. Required settings (under File then Site Manager): Host: **transport.oracle.com** Port: (*leave empty*) Protocol: **FTP - File Transfer Protocol** Encryption: **Require implicit FTP over TLS** Logon Type: **Ask for password** (*best option*) User: <SSO login> (*usually your personal Oracle email address*) Transfer Mode: **Passive** (*In the* **transfer settings** *tab*) 2. Select the **proactive** directory on transport, note that you will not see anything in this directory. 3. Upload the local Snapshot files to the **proactive** directory.		

Task	*Comment*	*Check*
HANDOVER		
Perform Installation Assessment tests as described in the EIS *Test Procedures Plan*.	EISdoc V4 – completed during preparation of installation.	
Complete documentation and hand over to customer.	EISdoc V4: File **EIS-DOCS-Operational-Handover-Document.odt**	
Short briefing: the configuration.		

Appendix A: Installing Solaris OS via ILOM

Task	*Comment*	*Check*
INSTALLING VIA ILOM STORAGE REDIRECTION		
One method to manually re-install a PDomain rather than having to use AI is to use the ILOM storage redirection facility. To do this you need: • A Windows[4] or Linux X86 system[5] attached to a network that can be accessed by/from the server's SP and the PDomain, • The Oracle Solaris 11.3 Interactive Text Install (SPARC) ISO file – refer to the *EIS installation checklist for the Solaris 11 OS* on how to obtain this. The ISO file must be placed onto the server above. Tests showed that Storage Redirection did not work with media in the CD/DVD drive. The M7 server PDomains will install with the original Solaris 11.3 image – you just have to ignore numerous error messages during the boot sequence and subsequently update with the current SRU.		
Before starting ensure that the PDomain to be installed is started and at the OBP prompt.		
SETTING UP THE REDIRECTION		

Make sure that the Host IP Address has been properly configured:
`-> show /SP/network/HOST0/ ipaddress state`
`/SP/network/HOST0`
`Properties:`
`ipaddress = xx.xxx.xxx.xxx`
`state = enabled`
Note that this is not required for M7-8 with one PDomain.		

Make sure that the kvms service is enabled for the respective PDomain:
`-> show /Servers/PDomains/PDomain_x/SP/services/kvms/ servicestate`
`/Servers/PDomains/PDomain_x/SP/services/kvms`
`Properties:`
`servicestate = enabled`		

Set the host_storage_device for the respective PDomain to "remote":
`-> set /Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/ mode=remote`
`Set 'mode' to 'remote'`
`-> show /Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/ mode`
`/Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device`
`Properties:`
`mode = remote`		

Makes sure that no server_URI is NOT set to any value:
`-> show /Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/remote/ server_URI`
`/Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/remote`
`Properties:`
`server_URI = (none)`		

Note: the above steps can be performed from BUI as well.		
From the Windows / Linux system connect to the SP GUI & log in as root.	`https://<Address of SP>`	

4 This has been tested using a Windows 7 Professional system.

5 Storage Redirection has been developed by engineering for Solaris x86 and SPARC clients but not yet delivered: CR16536938.

Task	*Comment*	*Check*
Launch the remote console:	Select **Domain x** from the **Manage** pull-down (top-left).	
Set the redirection:	In menu on Left-hand side: **Remote Control** **Redirection** Within the main screen select **Use serial redirection** and then the **Launch Remote Console** button.	
When the warning (certificate) appears:	Accept this: **yes**	
When the application has started:	In the top bar select the **KVMS** pull-down & then **Storage**.	
In the pop-up it will list the DVD drive – do NOT select this. Click the **Add** button & in the popup select the Interactive Text Install (SPARC) ISO file that you placed there. Then highlight the entry and **Connect** (do not try to select the DVD device). Ensure that you see a message in RED and that the **Connect** button has changed to **Disconnect**. If not, try again.		
Alternative solution if an NFS or SAMBA server is available, it's possible to load the Interactive Text Install ISO file from this NFS or SAMBA server.		
Select the PDomain	Select **Domain x** from the **Manage** pull-down (top-left).	
Set the redirection to host storage device. In menu on Left-hand side: **Remote Control** **Host Storage Device** Within the main screen set the **mode** to **remote** and set the **Server URI** to **nfs://1.2.3.4:/export/john/example.iso** for NFS or **smb://1.2.3.4/export/john/example.iso** for SAMBA. Enter SMB username/password when applicable. **Save** the change.		
ACTIVITIES ON THE PDOMAIN CONSOLE		
From the Active SP, set auto-boot to false: `-> set /HOST<x>/bootmode script="setenv auto-boot? false"`		
From another window connect directly to the SP via SSH (user root) and bring the domain to the OBP prompt.	`-> start -f /HOST<x>/console`	
Prevent rebooting of the PDomain:	`ok> setenv auto-boot? false`	
Rediscover the disk devices (requires several minutes):	`ok> reset-all`	
Then enter the **show-disks** command and look for an entry with USB in the string (probably near end of list). Use the **m** key for "more". Example: `a) /pci@308/pci@1/usb@0/hub@1/storage@1/disk@0`		

Task	*Comment*	*Check*

When running **probe-scsi-all** command, this path should be identified as:
`{20} ok` **`probe-scsi-all`**
`<SNIP>`
`/pci@308/pci@1/usb@0/hub@1/storage@1`
`Unit 0 Removable Read Only device` **`SUNRemote ISO CDROM2.05`**		

There should be a **rcdrom** alias created pointing to this device.
`{20} ok devalias`
`screen  /pci@309/pci@1/display@0`
`cdrom  /pci@308/pci@1/usb@0/hub@5/device@4/storage@0/disk@0`
`rcdrom  /pci@304/pci@1/pci@0/pci@2/usb@0/storage@2/disk@0`
`<SNIP>`		

Now boot off this device or alias (use copy-and-paste): `ok>` **`boot`** `<selected device>` **`- install`**		
Now go to the EIS installation checklist for Solaris 11 – page #6, *Fresh Solaris-Installation (Text Installer)*. Once the dialogue has finished the installation should be completed within about 20 minutes (depends of course on network speed & traffic). NOTE: If the screen fills up with error & warning messages before & just after the welcome screen try entering CTRL-L to restore the screen.		
TIDYING UP AFTERWARDS		
When the installation has completed go back to the Redirection Screen on the Windows / Linux system:	In the top bar select the **KVMS** pull-down & then **Storage**. If the option is greyed out, click on **Take Full Control...** and try again.	
Disconnect the storage.	In the pop-up select **Disconnect** and **OK**.	
Then exit the KVMS screen.		

Set the host_storage_device for the respective PDomain to default value:
`->` **`set`**
`/Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/`
`mode=miniroot`
`Set 'mode' to 'miniroot'`
`->` **`show`**
`/Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/`
`mode status`
`/Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device`
`Properties:`
`mode = miniroot`
`status = operational`		

On the PDomain you should do a boot / reconfigure so that the pseudo-cdrom is removed from the device tree.	**`boot -r`** If you omit this you will see an error message on each future reboot.	

Appendix B: Booting From the VTS Bootable Image

Task	*Comment*	*Check*
BOOTING FROM THE VTS BOOTABLE IMAGE		
If no boot device is available at time of installing the PDomain, it's possible to boot on the VTS bootable image for SPARC, run VTS and collect an Explorer before handing the platform over to the customer. Reference : *SPARC M7 Servers : boot a PDomain on the VTS bootable image for SPARC* (MOS Document ID 2130996.1). In order to boot on the VTS bootable image, the ISO file must be downloaded from MOS and the ISO file available locally or from an NFS server as described in the preparation section. When the host is booted on the shared ISO file, Solaris will be running in ramdisk. Disconnecting the ISO file will cause the PDomain to become unresponsive. The ISO file must remain connected from local laptop or from NFS server.		
SETTING UP THE REDIRECTION		

Make sure that the Host IP address has been properly configured:
`-> show /SP/network/HOST0/ ipaddress state`
`/SP/network/HOST0`
`Properties:`
`ipaddress = xx.xxx.xxx.xxx`
`state = enabled`
This is not required for a M7-8 with one PDomain.		

Make sure that the kvms service is enabled for the respective PDomain:
`-> show /Servers/PDomains/PDomain_x/SP/services/kvms/ servicestate`
`/Servers/PDomains/PDomain_x/SP/services/kvms`
`Properties:`
`servicestate = enabled`		

Set the host_storage_device for the respective PDomain to “remote”:
`-> set /Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/ mode=remote`
`Set 'mode' to 'remote'`
`-> show /Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/ mode`
`/Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device`
`Properties:`
`mode = remote`		

Makes sure that no server_URI is NOT set to any value:
`-> show /Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/remote/ server_URI`
`/Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/remote`
`Properties:`
`server_URI = (none)`		

Note: the above steps can be performed from BUI as well.		
From the Windows / Linux system connect to the SP GUI & log in as root.	`https://<Address of SP>`	
Launch the remote console:	Select **Domain x** from the **Manage** pull-down (top-left).	

Task	*Comment*	*Check*
Set the redirection:	In menu on Left-hand side: **`Remote Control`** **`  Redirection`** Within the main screen select **Use serial redirection** and then the **Launch Remote Console** button.	
When the warning (certificate) appears:	Accept this: **yes**	
When the application has started:	In the top bar select the **KVMS** pull-down & then **Storage**.	
In the pop-up it will list the DVD drive – do NOT select this. Click the **Add** button & in the popup select the VTS bootable (SPARC) ISO file that you placed there. Then highlight the entry and **Connect** (do not try to select the DVD device). Ensure that you see a message in RED and that the **Connect** button has changed to **Disconnect**. If not, try again.		
Alternative solution if an NFS or SAMBA server is available, it's possible to load the Interactive Text Install ISO file from this NFS or SAMBA server.		
Select the PDomain	Select **Domain x** from the **Manage** pull-down (top-left).	
Set the redirection to host storage device. In menu on Left-hand side: **`Remote Control`** **`  Host Storage Device`** Within the main screen set the **mode** to **remote** and set the **Server URI** to **nfs://1.2.3.4:/export/john/example.iso** for NFS or **smb://1.2.3.4/export/john/example.iso** for SAMBA. Enter SMB username/password when applicable. **Save** the change.		
ACTIVITIES ON THE PDOMAIN CONSOLE		
From the Active SP, set auto-boot to false: `-> set /HOST<x>/bootmode script="setenv auto-boot? false"`		
From another window connect directly to the SP via SSH (user root) and bring the domain to the OBP prompt.	`-> start -f /HOST<x>/console`	
Prevent rebooting of the PDomain:	`ok> setenv auto-boot? false`	
Rediscover the disk devices (requires several minutes):	`ok> reset-all`	
boot off the rcdrom alias `ok> boot rcdrom -v`		
The default user/passwords are: • jack / jack • root / solaris You must log as user **jack** before logging in as **root**.		

Task	*Comment*	*Check*
RUN VTS		
BEFORE starting VTS, a directory must be created to store the VTS logs. In this procedure, we will be using a eUSB disk. **The eUSB disks must not be used outside of this context.**		

Pick up a eUSB disk from the format command output.
`root@solaris:~# format`
`Searching for disks...done`
`AVAILABLE DISK SELECTIONS:`
`...`
`9. c12t0d0 <MICRON-eUSB DISK-1112 cyl 246 alt 0 hd 255 sec 63>`
`/pci@327/pci@2/usb@0/storage@1/disk@0,0`
`/dev/chassis/SYS/CMIOU7/EUSB-DISK/disk`
`Specify disk (enter its number): ^D`		

Create a ZFS pool from it `root@solaris:/var# zpool create VTS c12t0d0`		

Create a symlink for the VTS logs so the logs will end up in the /VTS filesystem.
`root@solaris:~# mkdir /VTS/sunvts`
`root@solaris:~# chmod 777 /VTS/sunvts`
`root@solaris:/var# ln -s /VTS/sunvts /var/sunvts`		

Start VTS in TTY mode.	`root@solaris:~#`
	`/usr/sunvts/bin/startsunvts -t`
	`Starting TTY UI....`	

It is recommended that SunVTS be run at least 240 minutes or 3 / 4 passes.		
It is recommended to use the the System Exerciser test mode.	The default value is System Exerciser. To confirm, select **test_mode** and confirm that it is set to **System Exerciser**.	

To start the VTS session:
• TTY mode:
  • Move to the control panel using the **Tab** key.
  • Using the arrow keys, highlight **start** and press the **Return** key.		

Make sure that the **System_status** is “testing”.		
Disconnecting the laptop or ISO file will stop the Solaris instance.		

To stop the VTS session:
• TTY mode:
  • Move to the control panel using the **Tab** key.
  • Using the arrow keys, highlight **stop** and press the **Return** key.		

Inspect the SunVTS log files under: **/var/sunvts/logs**		

From Active SP, verify the hardware status. Investigate any issues:
`-> show faulty`
`Target | Property | Value`
`------------------------+------------+-------------------------`		

Task	*Comment*	*Check*

From the Active SP, use **fmadm faulty -av** to verify if any DIMM non-serviceable event has been reported:
`-> start -script /SP/faultmgmt/shell/`
`faultmgmtsp> fmadm faulty -av`
`Time UUID msgid Severity`
`------------------- ------------------------------ -------------- --------`
`2016-06-22/03:03:22 3e488ffd-4592-ce73-aa5c-8ac43a13141e SPSUN4V-8000-H5 MINOR`
`Problem Status : open`
`Diag Engine : fdd 1.0`
`System`
`Manufacturer : Oracle Corporation`
`Name : SPARC M7-8`
`Part_Number : 34293725+1+1`
`----------`
`Suspect 1 of 1`
`Problem class : fault.memory.page`
`Certainty : 100%`
`Affects :`
`/SYS/CMIOU0/CM/CMP/BOB01/CH0/DIMM/RANK3/DRAM11/ROW48744/COL496`
`Status : faulted`
`FRU`
`Status : faulty`
`Location : /SYS/CMIOU0/CM/CMP/BOB01/CH0/DIMM`
`Manufacturer : Samsung`
`Name : 32768MB DDR4 SDRAM DIMM`
`Part_Number : 07075400,M386A4G40DM0-CPB`
`Revision : 01`
`Serial_Number : 00CE02161832499F08`
<...>
`Resource`
`Location :`
`/SYS/CMIOU0/CM/CMP/BOB01/CH0/DIMM/RANK3/DRAM11/ROW48744/COL496`
<...>
In the above example (a few lines have wrapped-around) a DIMM sparing took place and a non-serviceable event is recorded against /SYS/CMIOU0/CM/CMP/BOB01/CH0/DIMM.
Even if no serviceable event occurred, this DIMM should be replaced so no suspect DIMM is in the platform when handing over to the customer.		

If network is available, configure an interface: • **ipadm create-ip netx** • **ipadm create-addr –T static –a local=**x.x.x.x**/24 netx/addr** and export the VTS logs.		
COLLECT EXPLORER DATA		

Create a directory for explorer and configure explorer
`root@solaris:/# mkdir /VTS/explorer`
`root@solaris:/# chmod 777 /VTS/explorer`
`root@solaris:/# explorer -g`
`-----`
`...`
`Absolute path of the Explorer defaults file?`
`[/etc/explorer/default/explorer]:`
`Absolute path of the Explorer output top location?`
`[/var/explorer/output]: /VTS/explorer`		

Run explorer `root@solaris:/# explorer -w default,\!ipmi -timeout 900`		
If network was configured above, export the Explorer output.		

Task	*Comment*	*Check*
TIDYING UP AFTERWARDS		

Destroy the ZFS pool previously created
`root@solaris:~# zpool destroy VTS`
`root@solaris:~# zpool list`
`no pools available`		

Shutdown solaris and stop the host.		
Disconnect the storage.	In the pop-up select **Disconnect** and **OK**.	
Then exit the KVMS screen.		

Set the host_storage_device for the respective PDomain to default value:
`-> set /Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/ mode=miniroot`
`Set 'mode' to 'miniroot'`
`-> show /Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device/ mode status`
`/Servers/PDomains/PDomain_0/SP/services/kvms/host_storage_device`
`Properties:`
`mode = miniroot`
`status = operational`		

If this is an M7-16 server, go to *"Configure the Domains for M7-16 Servers"* (page 36), otherwise go to *"Final Work on the SPs, SPMs AND SPPs"* (page 43).		

Copies of the checklists are available on the EIS web pages or on the EIS-DVD. We recommend that you always check the web pages for the latest version.

Comments & RFEs welcome. Oracle staff should mail to EIS-SUPPORT_WW_GRP@oracle.com . Partners should mail to: SUPPORT-PARTNER-QUESTIONS_WW_GRP@oracle.com .