Netra Server X3-2
(formerly Sun Netra X4270 M3 Server)

Product Notes

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Netra Server X3-2 Product Notes

This document provides last-minute, late-breaking information for Oracle's Netra Server X3-2 (formerly Sun Netra X4270 M3 Server).

Known Problems

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Hardware Known Problems

Bug ID	Description	Information and Workaround
18915618	SATA LED off is default, different than SAS green LED.	The industry standards for the green LED with SAS and SATA devices are different. On SAS, the device drives the LED constant on and flashes with activity. On SATA, the device drives the LED constant off and flashes with activity. On a system with mixed SAS and SATA devices, the user might notice that some green LEDs are constant on and flash with activity (SAS) and other green LEDs constant off and flash with activity (SATA). **Workaround:** There is no workaround, the LEDs adhere to the industry standards.

Bug ID	Description	Information and Workaround
6875309	MegaRAID mouse pointer does not work on Oracle ILOM Remote Console.	When using the Oracle ILOM Remote Console with the mouse mode set to Absolute, the mouse pointer might only move vertically and horizontally on the left and top sides of the utility. **Workaround:** Change the mouse mode setting to Relative mode. For instructions to set Relative mode, see the Oracle ILOM 3.1 Documentation Library at: `http://www.oracle.com/goto/ILOM/docs`.
7067426	Emulex SG-XPCIE2FC-EM8-Z host bus adapter (HBA) requires the latest BIOS and firmware versions to operate in Legacy BIOS mode.	The SG-XPCIE2FC-EM8-Z requires BIOS version 5.11a4, and firmware version 1.11a5 to operate correctly in Legacy BIOS mode. You can download the latest BIOS and firmware versions from the Emulex/Oracle download site at: `http://www.emulex.com/downloads/oem-qualified/oracle/`. **Workaround:** There is no workaround at this time.
7090990	OSA cannot be booted in UEFI BIOS mode unless the SAS expander firmware and HBA firmware are up-to-date.	The SAS expander firmware must be at least version 0901 and the SGX-SAS6-INT-Z HBA firmware must be at least version 11.00.00.00 for OSA to boot in UEFI BIOS mode, otherwise the boot process does not proceed past the GRUB menu. **Note -** If you decide to upgrade the firmware, you must upgrade the SAS expander firmware before upgrading the HBA firmware. If the HBA firmware is upgraded before the SAS expander firmware, the system will not boot. **Workaround:** Boot OSA in Legacy BIOS mode.
7080526	UEFI configuration settings might be lost when transitioning between UEFI and Legacy BIOS modes.	The UEFI boot priority configuration might be lost when transitioning between UEFI and Legacy BIOS modes. **Workaround:** Use the `UEFIconfig` application to save configuration settings prior to transitioning between the BIOS modes. For more information, refer to the *Oracle ILOM 3.1 Configuration and Maintenance Guide* at: `http://www.oracle.com/pls/topic/lookup?ctx=ilom31`
7125220	System hangs when the system is booted in UEFI BIOS mode if the Sun Storage 6 Gb SAS PCIe RAID HBA is running version 10M09P9, or older, of the LSI firmware.	In older LSI firmware, the HBA driver attempts to use the HBA without checking for compatibility with the UEFI BIOS mode. Since the driver is not compatible, there is a processor exception. **Workaround:** You can recover in either of the following ways: • Use Oracle ILOM to restore BIOS to the default settings. This action reverts the BIOS mode back to Legacy BIOS mode, which is the factory default. • Use the `UEFIconfig` application to change the Boot Mode Option back to Legacy BIOS, instead of UEFI BIOS.

Bug ID	Description	Information and Workaround
7129556	The server's dual Intel X540 10GBASE-T network interface controllers are unable to establish a 100Mb link while in UEFI BIOS mode and enabled for LOM.	**Workaround:** Connect the network interface controllers to a 1Gb/sec or 10Gb/sec Ethernet port when the UEFI PXE driver is enabled. Or, use Legacy BIOS boot mode when you perform the PXE boot.
7121782	BIOS might hang when a key is entered in response to a prompt from BIOS.	On rare occasions, BIOS might hang when you press a key in response to a BIOS prompt for F2, F8, or F12 input. **Workaround:** Reboot the host. If the problem persists after two or three system reboots, contact your authorized Oracle service provider for assistance.
7079855	BIOS might not respond to a USB keyboard and mouse that is connected directly to the server.	On rare occasions, BIOS might not recognize a USB keyboard or mouse connected directly to the server. **Workaround:** Reboot the host. If the problem persists after two or three system reboots, contact your authorized Oracle service provider for assistance.
7144233	At the end of the boot process, the system presents a blank screen with a blinking cursor.	**Workaround:** Reboot the host and enter Setup to disable unnecessary bootable Option ROMs, so that there are 16 or fewer bootable Option ROMs enabled. Bootable Option ROMs include storage or network Option ROMs, versus nonbootable Option ROMs such as a VGA Option ROM.

7148294	The IPMItool boot override command can be used to override the existing boot priority list.	When an IPMItool boot override is sent to BIOS, BIOS only boots the first device in the boot list that is specified by the IPMItool override command. BIOS will not boot from any other devices if the first device fails to boot.
		Workaround: When using the IPMItool boot override command, ensure that the targeted boot override device is at the highest priority in the boot list relative to other devices within the same category.
		For example, to boot from NET0 when the IPMItool boot override is used, the boot list must be configured as:
		`[SAS:PCIE4:Bus 00-3AF98DDD SEAGATE ST9300]`
		`[PXE:NET0:IBA XE Slot 2000 v2196]`
		`[PXE:NET1:IBA XE Slot 2001 v2196]`
		`[PXE:NET2:IBA XE Slot 8800 v2196]`
		`[PXE:NET3:IBA XE Slot 8801 v2196]`

Bug ID	Description	Information and Workaround
7150235	Fibre Channel adapters are not supported in UEFI boot mode.	Fibre Channel adapters are not supported in UEFI boot mode. In UEFI boot mode, you must disable the Option ROMs for these adapters to avoid unpredictable system behavior during BIOS POST. In the BIOS IO menu, set the OpROM setting to Disabled for each slot that has a Fibre Channel adapter installed. Then configure UEFI boot mode. **Workaround:** These adapters are supported in Legacy boot mode.
7148056	The BIOS boot list might be permanently set when IPMItool is used to override the existing bootlist for two or more consecutive boot cycles.	If the IPMItool boot override command is issued consecutively on two or more consecutive boot cycles, the BIOS boot priority list is permanently changed. Once in this state, you must reenter the BIOS Setup Menu and reorder the bootlist as desired. **Workaround:** To prevent a reoccurrence of this issue, use the IPMItool boot override command only on alternate boot cycles.
7148627	Power-on command might not work after rapid power off and on cycles.	If you rapidly power off and on the server using Oracle ILOM commands, the power-on command might not work. In this situation, wait five minutes before attempting to power on again. **Workaround:** If you are still unable to power on the server, reset the service processor. Use the end of a paper clip to press the reset button located behind the pinhole between the video port and SER MGT port on the rear panel.

OSA Known Problems

Bug ID	Description	Information and Workaround
7129124	Virtual Ethernet device is reported as Not Installed in Windows 2008 R2.	After installing the Windows 2008 R2 drivers, the Windows Device Manager reports that the virtual Ethernet device is not installed. The driver for this interface is available with the Oracle HMP. **Workaround:** Perform either of the following tasks: • Obtain this driver – Install the Oracle HMP, available on OSA. • Disable this device – Use the `ilomconfig disable interconnect` comment.

Bug ID	Description	Information and Workaround
7123372	OSA cannot update a Sun Storage 6 Gb SAS PCIe HBA from Legacy BIOS firmware to UEFI BIOS firmware.	Updating the HBA to UEFI BIOS firmware requires two consecutive firmware updates, which OSA is unable to perform. Instead, use the LSI `sas2flash` utility. **Workaround:** 1. Download the OS version-specific `sas2flash` utility for the HBA at: http://www.lsi.com/sep/Pages/oracle/sas_6gbs_support.aspx. 2. Identify the HBA controller number. -> **sas2flash -listall** 3. Update the HBA. where *n* is the number found in Step 2. -> **sas2flash -c <*n*> -f fw-rem-11050000-0a030019.bin** -> **sas2flash -c <*n*> -b x64sas2-07180207.rom** -> **sas2flash -c <*n*> -b mptsas2-7210400.rom** -> **sas2flash -c <*n*> -b lsisas2f-10060.rom**
7116803	`Path too Long` errors might occur when unzipping Windows downloads.	When unzipping a Windows package using the default Windows Server 2008/2008R2 compression utility, errors might occur stating that the path is too long. The maximum path is limited to 260 characters. Depending on the directory level at which the package is unzipped or the tool used to unzip the package, the maximum path length might be exceeded. **Workaround:** Use a third-party decompression utility that supports longer path lengths.
7126194	Starting OSA from the Oracle ILOM web interface displays `cannot retrieve host power status`.	The Summary page correctly displays the host power status. Clicking the OSA Launch button produces a pop-up message `cannot retrieve host power status`, and the host power status is incorrectly reported. **Workaround:** Dismiss the pop-up and refresh the web browser to update the host power state information on the page.
7090990	OSA cannot be booted in UEFI BIOS mode unless the SAS expander firmware and HBA firmware are up-to-date.	The SAS expander firmware must be at least version 0901 and the SGX-SAS6-INT-Z HBA firmware must be at least version 11.00.00.00 for OSA to boot in UEFI BIOS mode, otherwise the boot process does not proceed past the GRUB menu. **Note -** If you decide to upgrade the firmware, you must upgrade the SAS expander firmware before upgrading the HBA firmware. If the HBA firmware is upgraded before the SAS expander firmware, the system will not boot. **Workaround:** Boot OSA in Legacy BIOS mode.

Oracle Solaris 11 OS Known Problems

Bug ID	Description	Information and Workaround
7123018	When installing Oracle Solaris 11 to a 3-terabyte (3-TB) HDD, accepting the installation program default for disk partitioning results in a failed installation.	When installing Oracle Solaris 11 on to a 3-TB drive, the installer presents a default to `Use the whole disk`. This default setting seems to be acceptable. However, attempting to load Oracle Solaris 11 onto the entire 3-TB drive fails because UEFI BIOS is required. Oracle Solaris 11 does not support UEFI BIOS. **Workaround:** During the installation, in the Fdisk Partition screen, select `Use a partition of the disk`, instead of `Use the whole disk`.
7151581	During system boot up, a warning message appears on the console.	During system boot up, `WARNING: npe1: no ranges property` appears on the console. This message is benign and can be ignored.
None	Oracle Solaris 11 preinstall might see a five-minute delay during first boot.	Customers using the Oracle Solaris 11 Pre-install option might see a five-minute delay during first boot. During this delay the system is configuring the `ilomconfig-interconnect` service. This situation only occurs on first boot. The system boots normally on subsequent restarts.
7146324 7148284	No USB controller in `fmtopo` for servers, `fault.sunos.eft.unexpected_telemetry` reported.	The Fault Management Architecture (FMA) topology does not include USB controllers. If an FMA ereport is generated for a EHCI USB controller, the `fmadm faulty` command generates an unexpected telemetry fault, and the Service Required LED is illuminated. **Workaround:** 1. Consult `/var/adm/messages` for more information about the source of the error. 2. On the Oracle Solaris host, log in as `root`. 3. Type **`fmadm faulty`** and record the UUID of the fault. 4. Type **`fmadm acquit`** *UUID* to clear the fault. 5. Log in to the service processor as `root`. 6. Type **`reset /SP`** to restart the SP.

Linux OS Known Problems

Bug ID	Description	Information and Workaround
None	SUSE Linux Enterprise Server (SLES) 11 SP1 OS does not recognize the on-board network interface controller (NIC) unless an upgraded `ixgbe` driver is installed.	The driver needed is not available in the general availability release of SLES 11 SP1. **Workaround:** Perform either of the following tasks: • Use OSA to install the SLES 11 SP1 OS. OSA includes the upgraded `ixgbe` driver and installs it automatically. • Download and install the upgraded `ixgbe` driver from Intel.
7144197	When using the SUSE Linux Enterprise Server (SLES) 11 SP1 kernel, `Sense Key: Recovered Error` messages appear on the console and in `/var/log/messages`.	The SUSE Linux Enterprise Server 11 Base Install, Service Pack 1 kernel installed from media is version 2.6.32.12-0.7-default. With certain hardware configurations under this kernel, nuisance error messages are generated by the kernel and the `smartd` service. **Workaround:** The impact of this condition is minimal, and there is no error condition. You can ignore the messages.
7096052	Network boot servers based on Oracle Linux 6.1 or Red Hat Enterprise Linux 6.1 cause UEFI Linux clients to panic when booting over the network.	The `grub.efi` bootloader included with the software distribution does not work with UEFI clients. **Workaround:** Update the Oracle 6.1 distribution `grub.efi` bootloader package on your PXE boot server. You can obtain updates from the Unbreakable Linux Network (ULN) at: `http://linux.oracle.com`
7142600	Oracle Linux 6.1 can fail on some disk partitions.	Oracle Linux 6.1 can fail on some disk partitions because `libparted` does not handle some disk partitions correctly. **Workaround:** Use the `dd` command to completely clear the disk to receive the OS.

VMware OS Known Problems

Bug ID	Description	Information and Workaround
None	VMware ESXi 5.0 does not support network connections using the on-board NIC unless an `ixgbe` driver or a compatible network interface card is installed.	The driver needed is not in the general availability release of VMware ESXi 5.0. **Workaround:** Perform either of the following tasks: • Add the required driver to the ESXi 5.0 installation ISO image. • Install a PCIe NIC in the server that is compatible with the standard download ESXi 5.0 ISO image.

Software Information and Issues

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Supported OSs and Required Patches

OS	Comment
Oracle Solaris Release 10 8/11	Install these patches after installing the OS: • 148170-02 • 147706-02 • 148172-01 • 147441-08 • 147156-01 • 147150-01 • 148099-03
Oracle Solaris Release 11 11/11	Release 11 11/11 is a preinstall option, but you must install Support Repository Update 2, or greater, before installing Oracle Solaris 11 11/11. See: http://www.oracle.com/technetwork/server-storage/solaris11/documentation/index.html
Oracle VM Release 3.0	Release 3.0 is a preinstall option, but you must upgrade to release 3.0.2 using Oracle eDelivery at: https://edelivery.oracle.com or Unbreakable Linux Network at: http://linux.oracle.com
Oracle Linux 5.7 and 6.1 for x86 (64-bit)	You must include the Oracle Linux Support kernel, the Oracle Unbreakable Enterprise Kernel, or the Red Hat Compatible Kernel.
Red Hat Linux 5.7 and 6.1 for x86 (64-bit)	
SUSE Linux Enterprise Server 11 SP1 (64-bit)	
VMware ESXi 5.0	

OS	Comment
Windows Server 2008 SP2 and 2008 R2 SP1	Includes: • Standard Edition (64-bit) • Enterprise Edition (64-bit) • Datacenter edition (64-bit)

▼ Xorg GUI Might Fail to Start Under Oracle Solaris 11 (CR7112301)

Servers containing SR-IOV capable devices in certain configurations might encounter problems with the X11 Xorg GUI not starting. Servers running the Oracle Solaris 11 preinstalled OS already contain the workaround for this issue. However, if you install a new version of the OS using the Oracle Solaris 11 11/11 distribution media, and the X11 GUI fails to start, perform this procedure.

If you are performing a GUI-based installation of Oracle Solaris 11 11/11, then you must perform Step 1 through Step 3 to allow the GUI to start the installation, and then repeat all steps on the first boot after the installation.

If you log in to the system without using the GUI (by using text, serial console, or Ethernet login), perform the procedure from Step 4 after the first boot after the installation.

1. **Edit the GRUB line displayed when booting and change the default graphics console to either `ttya` (serial console) or `text` (VGA text), and add the `-kd` kernel flags.**

   a. **Press the E key to edit the GRUB entry.**

   b. **Press the E key to edit the selected line.**

   c. **Type the changes.**

      For example:

      ```
      kernel /platform/i86pc/kernel/amd64/unix
      ```

      becomes:

      ```
      kernel /platform/i86pc/kernel/amd64/unix -kd -Bconsole=text
      ```

      or

      ```
      kernel /platform/i86pc/kernel/amd64/unix -kd -Bconsole=ttya
      ```

   d. **Press the ESC key to finish.**

   e. **Press the B key to boot.**

      Oracle Solaris boots and then drops to the debugger.

2. **Set a breakpoint at** `pcie'_init`**.**

```
0> ::bp pcie'_init
0> :c
```

3. **When the Oracle Solaris OS reaches the breakpoint, set the variable.**

```
0> pcie_br_flags/W0
pcie'pcie_br_flags: 0x1 = 0x0
[0]>:c
```

The system boots.

4. **Log in as** `root` **and append the following line to the** `/etc/system` **file.**

```
# echo 'set pcie:pcie_br_flags=0' >> /etc/system
```

Do Not Accept Default Installation Options

The OSA USB flash drive appears as an ordinary disk to the Linux or virtual machine software installer. Accepting the default options presented during the Linux or virtual machine software installation process overwrites the contents of the OSA USB flash drive and incurs other system software issues.

Caution – Do not accept the default options for the installation.

For more information, see Server OS Installation, OSA for guided installations.

Ensure Preinstalled Oracle VM Server and Oracle VM Manager Compatibility

If you use the preinstalled Oracle VM Server software, you must ensure that it is compatible with the Oracle VM Manager managing your Oracle VM infrastructure. You might need to upgrade your Oracle VM Server or Oracle VM Manager to achieve compatibility.

See the *Oracle VM Installation and Upgrade Guide* at:
http://www.oracle.com/technetwork/documentation/vm-096300.html

Server Management Tools

There are three sets of single-system management tools for your server:

- Oracle Integrated Lights Out Manager (Oracle ILOM) 3.1 – http://www.oracle.com/pls/topic/lookup?ctx=ilom31
- OSA – For information, see the *Server Administration*, OSA overview.
- Oracle Hardware Management Pack – http://www.oracle.com/pls/topic/lookup?ctx=ohmp

In addition, this software is available to manage multiple systems:

- Oracle Enterprise Manager Ops Center – http://www.oracle.com/pls/topic/lookup?ctx=oc122

Hardware Information and Issues

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Supported PCIe Cards

PCIe Card and Model Number or Part Number	Quantity Supported	Slot Restrictions
Sun Storage 6 Gb SAS PCIe RAID HBA, Internal SGX-SAS6-R-INT-Z SG-SAS6-R-INT-Z	1	Supported in slot 1 only
Sun Storage 6 Gb SAS PCIe HBA, Internal SGX-SAS6-INT-Z SG-SAS6-INT-Z	1	Supported in slot 1 only
Sun Storage 6 Gb SAS PCIe HBA, External SGX-SAS6-EXT-Z SG-SAS6-EXT-Z	4	None
StorageTek 8 Gb FC PCI-Express, QLogic SG-PCIE2FC-QF8-Z SG-XPCIE2FC-QF8-N	5	None

PCIe Card and Model Number or Part Number	Quantity Supported	Slot Restrictions
StorageTek 8 Gb FC PCI-Express, Emulex SG-PCIE2FC-EM8-Z SG-XPCIE2FC-EM8-N	5	None
Sun Dual 10GbE SFP+ PCIe 2.0 Low Profile Adapter 1109A-Z X1109A-Z	4	None
Sun Dual Port GbE PCIe 2.0 Low Profile Adapter, MMF 7100482 7100481	4	None
Sun Dual Port GbE PCIe 2.0 Low Profile Adapter, UTP 7100479 7100477	4	None
Sun Storage 16 Gb Fibre Channel PCIe Universal HBA, Qlogic 7101674 7101673	4	None
Sun Storage 16 Gb Fibre Channel PCIe Universal HBA, Emulex 7101684 7101683	4	None

Update HBA Firmware to Support UEFI BIOS

If you are configuring UEFI BIOS, these HBAs might need updated firmware if they were not preinstalled in the server:

- Sun Storage 6 Gb SAS PCIe HBA Internal
- Sun Storage 6 Gb SAS PCIe HBA External
- Sun Storage 6 Gb SAS PCIe RAID HBA Internal card

You also might need to update your HBA firmware in these situations:

- You receive a replacement HBA.
- You order an HBA separately from your system.
- You want to use an HBA that you already own.

You can use OSA or Oracle HMP to update your HBA firmware. For information on updating HBA firmware using OSA, see the *Server Administration*, obtain and update firmware.

Note – Alternatively, you can configure your system to use Legacy BIOS mode.

Fan Module Failure Might Impact Performance

If a fan module fails and the server's operating temperature rises above 30°C (86°F), the processors' performance on Oracle's Netra Server X3-2 might be reduced.

Documentation Information and Issues

There are no documentation issues at this time.