RELEASE NOTES R2.1.3

Contents

Stratus Technologies

RELEASE R2.1.3.10 NEW FEATURE CONTENT

- Support for extended DOM-0 to 2GB to facilitate running larger configurations where SWAP alerts are causing intermittent evacuations or performance problems for applications running within VMs. Refer to the support article *How to Increase the Size of the Avance Footprint* found on the Avance Customer or Partner Portal for details.
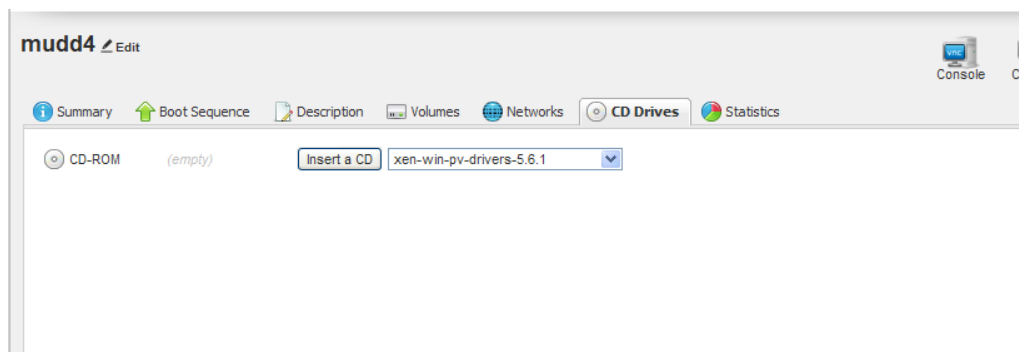
RELEASE R2.1.3.9 NEW FEATURE CONTENT

- Support for Intel S12000KP (Kenosha Pass) based servers.

- Support for Avance Foundation License

    - Customers can purchase Avance Foundation License S1200KP Servers. The Avance Foundation License limits Avance configurations as follows:

        - Only available to select partners in the U.S. and Europe

        - Maximum of 2 running VMs

        - Maximum of 6 total VCPUs for all VMs

        - Maximum 8 GB memory total for all VMs

- Support the new storage controllers

    - LSI 9260CV-4i

    - LSI 9260CV-8i

- Support for Virtual Sockets. Avance allocates multiple cores on the same CPU socket to VMs rather than each VCPU as a new socket. This will allow Windows XP and Windows 7 to run with more than a single VCPU.

- Optionally create and upload diagnostic data directly to Stratus Support from the Avance Management Console.

- Enhancements to Virtual Machine (VM) export from within the Avance Management Console to improve the speed of exports.

IMPORTANT CONSIDERATIONS – WINDOWS 2008 VMS

R2.1.3.10 includes updated PV Drivers to address a known issue where Win2k8-R2 VMs can crash during installation, migration, or under some rare application loads. After an upgrade to R2.1.3.10 we recommend upgrading the PV drivers in your Windows 2008 and Windows 7 VMs during a planned maintenance window. Please follow the procedure below.

1. Select the VM to upgrade on the **Virtual Machines** page of the Avance Management Console.

2. On the **CD Drives** tab, eject the existing CD and load the Updated PV Driver DVD, labelled *xen-win-pv-drivers-5.6.1*.

3. From the VM select the DVD and click on the XenSetup.exe installer. This will update the PV Drivers, and will prompt you for a reboot to complete the installation.

The new PV drivers are compatible with ALL Windows version EXCEPT Windows 2000 VMs. See the next section for Windows 2000 VMs.

IMPORTANT CONSIDERATIONS – WINDOWS 2000 VMS

The PV drivers included in release R2.1.3.10 do not support Windows 2000.An attempt to load them will result in an error and they will fail to load. For Windows 2000 VMs, please download the Windows 2000 PV driver ISO found on the downloads page of the Avance Customer or Partner Portal. Use this ISO to create a VCD on the Avance system. The VCD can in turn be used to load PV drivers into the Windows 2000 VM. The ISO on the downloads page is the same ISO that is loaded into previous versions of Avance so it is not necessary to update existing Windows 2000 that already have PV drivers loaded.

IMPORTANT CONSIDERATIONS – UPGRADE

- A VM may experience of backwards time shift of 1 day on a migration. This may occur on any Windows 7, Windows 2008, or Windows 2008 R2 VM that is created on and Avance system prior to 12/31/2011. The VM time change is large enough that it will not be corrected by NTP and the time setting will remain offset by 24 hours.

  - To Avoid this problem you should either:

- Reboot the VM prior to upgrade

- OR

- Shutdown the VM during the upgrade and restart it post upgrade

- If you cannot afford VM downtime at the upgrade then

  - Verify the time after the upgrade and correct it manually, then set the VM back to NTP time.

- If you cannot afford VM downtime or the possible time shift in the VM

  - Contact Avance L2 support

- Avance polls the Stratus license server via an internet connection to alas.stratus.com (port 443, https) to validate service expiry. This polling starts immediately on upgrade and every 24 hours thereafter. Further upgrades are only allowed with valid service contracts. Customers must either enable port 443 through their firewall or perform a manual service expiry update. Refer to the Avance User's Guide R2.1.X and the online help on the License page of the Avance Management Console for additional details.

- If you are upgrading from an Avance release prior to r2.0.2.5 then please refer to **_Appendix A_** for some important information.

- If you are upgrading from Avance R2.1.0.9 or R2.1.0.10 there are special considerations, please contact Avance support for further details.

- If you are upgrading Avance to R2.1.3 and also upgrading HP P410i storage controller firmware from version 1.66, you must execute the following steps in order:

  1. Upgrade to R2.1.3.
  2. Upgrade HP P410i firmware on each node in a rolling upgrade.

ISSUES FIXED IN THIS RELEASE

Case Number	Fix in Release	Description
19008	2.1.3.10	Emergency Console does not generate a diagnostic file. A regression had been introduced in R2.1.2.15 where the emergency console was accidentally broken and rendered unusable.
18907	2.1.3.10	Windows 2008 VMs can crash under rare application loads or during installation or migration. To apply the fix, please install the new PV drivers distributed with this release in all Windows 2008 VMs.
18571	2.1.3.10	Node Unreachable on HP, Dell, and IBM systems. This node crash and reboot has only been seen thus far on system with unconnected NIC ports. Any VMs running on the node will be automatically restarted on the secondary node.
18015	2.1.3.10	Avance database can be corrupted during migration under boundary conditions. VM, network, and volume renaming may be lost.
18940	2.1.3.10	Fatal Swap alerts can occur on systems with large configurations. Avance has added support for increasing the size of the Avance footprint to 2 G via the CLI.
18667	2.1.3.9	VM Time can be set back one day on Windows VM migration or restart on Windows VMS created prior to 1/1/2012. Correcting this issue requires extra steps at upgrade. Refer to the section "Important Considerations – Upgrade" in this document for details.
18272	2.1.3.9	Avance may report RAID battery as degraded or failed during the RAID battery learn cycle.
18780	2.1.3.9	Systems with 10G Intel sync links may experience application timeouts when secondary node is abruptly powered off or hung.

KNOWN ISSUES IN THIS RELEASE

INSTALLING AVANCE RELEASE R2.1.3 AND LATER

Avance requires a DVD rather than a CD. When installing Avance R2.1.3, please review the documents below and follow all preparation, installation and configuration instructions:

- Avance Compatibility Matrix R2.1.3

- Installation and Configuration Guide R2.1.3

- Avance User's Guide R2.1.3

UPGRADING TO AVANCE RELEASE R2.1.3

You can only upgrade to R2.1.3 from R1.6.x and later releases.

- **Upgrades from a release prior to R2.0.1:** contact either the Stratus Avance Worldwide Support Center or your authorized Stratus Avance Support to perform this upgrade.

  - There are several issues when upgrading from earlier version that should be considered before initiating an upgrade, including planned VM downtime required to upgrade PV drivers.

  - If you are running a 2.0.x release older than R2.0.1.9, it is imperative that you upgrade to R2.1.3

  - Refer to Appendix A – Upgrading from Older Avance Releases for additional information on this upgrade.

- **Upgrades from release R2.0.1 or later**: refer to the help instructions on the Avance Upgrade Kits page for detailed upgrade instruction.

  - Upgrades now require the use of the avance_upgrade_kit_XXX.kit for all upgrades. The ISO file used for DVD creation on initial install cannot be used.

  - Although upgrades are intended to be automated and transparent, if possible they should always be done in a maintenance window where a VM outage will not affect the end user's business operation.

  - Internet Explorer 8 or Firefox 3.x or later is required for connection to the Avance Management Console.

  - If you are running Avance on an HP platform, you will need to upload new HP tools for this release.

  - Use keyword "firmware" and release "2.1.3" to search the Known Issues database to check for any firmware incompatibilities prior to upgrade

  - If you are upgrading from release R2.0.1: refer to Appendix A – Upgrading from Older Avance Releases for additional information on this upgrade.

WINDOWS GUEST OS UPGRADE REQUIREMENTS

If you are upgrading from R1.6.x, then all Windows VMs **must** be upgraded with new Windows PV drivers after upgrading to Avance release 2.1.3. Planned downtime is required to reboot the VMs after the PV drivers are upgraded.

After upgrading to Avance release 2.1.3, refer to the upgrade help instructions on the Avance Upgrade Kits or Virtual Machines page for any additional steps.

LINUX GUEST OS UPGRADE REQUIREMENTS

Upgrading Linux kernel patches is recommended but NOT required when upgrading from R1.6.x or later to R2.1.3.

After upgrading to Avance release 2.1.3, refer to the help instructions on the Avance Upgrade Kits or Virtual Machines page for any additional steps.

ENTERPRISE MANAGEMENT UPGRADE REQUIREMENTS

New Avance 2.1.3 CLI and MIB versions must be downloaded and installed into your management solutions. These versions are backwards compatible with all previous releases of Avance

KNOWN PROBLEMS

For the latest known issues:
1. Login to the Avance Customer or Partner Portal.
2. Click on *Search for known issues* under technical support.
3. Select release 2.1.3 and optionally an issue type.

GETTING HELP

If you have a technical question about Avance system software, you can find the latest technical information about your Avance system by signing into online product support at the Stratus Avance support Web site, https://avance-productinfo.stratus.com.

If you are unable to resolve your questions with the help available at the online site, and the system is covered by a service agreement, please contact the customer support or your authorized Stratus service representative. For information, see: http://www.stratus.com/Stratus/Home/Services/CustomerSupport.

APPENDIX A – UPGRADING FROM OLDER AVANCE RELEASES

This upgrade will attempt to allocate 1024MB of space for the Avance software stack in order to improve performance and availability. Prior to the release of R2.0.2.5 the Avance software only required 750MB of space. *If you are upgrading from an older version of Avance, it is strongly recommended that you ensure there is at least 254MB of free memory available prior to the upgrade.* The available memory is calculated by subtracting any memory used by stopped VMs from the **Physical Memory Available** shown on the top level summary page of the Avance Management Console (as shown in the screenshot below). If you don't have 254MB available you can add more memory, remove unnecessary VMs, or reduce the amount of memory allocated across all VMs by 254MB.

The upgrade will proceed whether or not this memory can be allocated. If the memory cannot be allocated, an informational alert is generated in the dashboard on the completion of the upgrade, with instructions on how to rectify the problem. For small installations (< 4 VMs) the alert can be safely ignored. Allocating additional memory *after* the upgrade will require an additional rolling upgrade and more planned maintenance time.

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