Sun Ray™ Server Software 3.1 Release Notes

for the Linux Operating System

Sun Microsystems, Inc.
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Sun Ray Server Software 3.1

Sun Ray Server Software 3.1 (SRSS 3.1) delivers expanded platform support, optimizations, and enhancements to the Sun Ray Server Software 3 product. This document describes what's new, what's improved, what's been deprecated or removed, and problems known to exist in the update.

SRSS 3.1 does not support JDS3 for Linux.

Note – These release notes contain the most up-to-date information available as of the moment they are printed. As bugs are resolved (or new ones discovered), however, revised versions of this document will be posted to the Sun Download Center (SDLC). The latest revisions of the product documentation are also available on the SDLC.

Note – The latest SRSS 3.1 patch for Linux, patch number 120881-03, is included in the Patches section of the release image.

What's New

Support for Additional Platforms

Sun Ray Server Software 3.1 is designed to run on the following operating systems with SPARC servers:

- Solaris 10 3/05 or greater
- Solaris 9 9/04 or greater
- Solaris 8 02/02 or greater
- Trusted Solaris 8 7/03 (PSR3) or greater

Sun Ray Server Software 3.1 is also designed to run on the following operating systems with x64 servers:

- Solaris 10 3/05 or greater
- Java Desktop System, Release 2 on x86
- Red Hat Enterprise Linux Advanced Server 3 on x86 (32-bit)
- SuSe Linux Enterprise Server 8 Service Pack 3 on x86 (32-bit)

Support for the Embedded Serial Ports on the Sun Ray 170

SRSS 3.1 delivers the firmware and server side support for the embedded serial ports found on the Sun Ray 170.

Support for the XKB Xserver Extension

SRSS 3.1 supports the Xserver XKB extension on Solaris 10 and Linux to allow for greater control over keyboard attributes, including Accessibility Preferences. The extension is not enabled by default but can be enabled through a new option to the `utxconfig` command.

Support for Regional Hotdesking

Regional Hotdesking is a new feature that can be used to extend the hotdesking mobility experience across multiple Sun Ray server groups. It utilizes customer-supplied site policies to determine the group where users or Sun Ray DTUs should have their sessions created. It can also be used, as an alternative or in conjunction with site policies, simply to preload a username into the login environment based on properties such as a smartcard CUID.

During development, regional hotdesking was called Automatic Multigroup Hotdesking (AMGH).

What's Improved

`libusb`

SRSS 3.1 supports `libusb` on all platforms.

Optimizations for Low-latency Network Audio Applications

The Sun Ray audio framework has been optimized to support audio applications that depend upon low latency between end points to meet their quality of service requirements. The round-trip latency between the Sun Ray DTU and the Sun Ray server has been reduced to 80ms for LAN configurations. Actual latency will depend upon the inherent latency of the network.

Enhancements to the Administration Framework

SRSS 3.1 enhances the Sun Ray Administration GUI to allow for the creation of a list of administrators for Sun Ray failover groups rather than the single login name framework used in SRSS 3 and previous releases. Like other users, the administrators are identified by Unix login name and are authenticated through the Pluggable Authentication Module (PAM) stack when they log in. The administration framework now provides an audit trail of the activities of these administrators.

Enhancements to Token Reader Utilization

Token readers can now be utilized from any server in a failover group to which the token reader is connected. The token reader tools may now access the entire list of token readers in the failover group, regardless of which server the token reader is currently connected to.

Enhancements for Type of Service (ToS) Packet Tagging

SRSS 3.1 delivers a zero administration mechanism for supporting Type of Service (ToS) network packet tagging. The Sun Ray Desktop Unit (DTU) firmware has been modified to reflect the ToS settings of incoming packets. Since the reflection of the ToS settings will be done on a stream-by-stream basis, a server can assign a different ToS value to different types of traffic between the Sun Ray DTU and the server (TCP vs. UDP) to provide better overall Quality of Service (QoS).

Enhancements to Device Access Control

SRSS 3 introduced a switch for disabling USB peripheral connectivity for security conscious sites. In SRSS 3.1, this capability is expanded to include:

- The embedded serial ports introduced in the Sun Ray 170
- Internal smart card readers

To control all device connectivity, including access to smart cards, SRSS 3.1 provides a new command, `utdevadm`, plus appropriate updates to the Admin GUI. (The `utusbadm` command, which provides similar control only over USB devices, will be deprecated.)

Removed or Deprecated Features

SCF (Smart Card Framework) API

Sun Ray Server Software provide the industry-standard PC/SC-lite API to enable access to smart cards and smart card readers connected to Sun Ray DTUs. The Sun-proprietary SCF API is not supported in this release of the Sun Ray Server Software and will be removed in the next SRSS release.

Netscape 4.x Browsers

SRSS 3.1 no longer supports Netscape 4.x browsers for accessing the Admin GUI. Please use later releases of the Netscape or the Mozilla browsers.

Deprecated `utxconfig` Option

The `utxconfig -s` option has been deprecated and will be removed in a future release. Please use `auto` with the `-r` and `-R` options instead.

Known Problems and Limitations

Installation, Configuration, and Upgrade Issues

Reboot Before Running `utadm` and `utconfig`

In SRSS 3.1, Sun Ray services are started only on the first reboot after installation. Consequently, after you install Sun Ray Server Software, you must reboot the Sun Ray Server before running `utadm` and `utconfig`.

Manual Installation of SRSS GDM Fails for RHEL AS

The GDM RPM delivered by the SRSS 3.1 image depends on the files `libcrypto.so.0.9.6` and `libssl.so.0.9.6`, which are available on JDS and SuSE but not on RHAS Linux. Because these files are not available, manual installation of the SRSS GDM RPM fails on RHEL AS Linux.

The workaround is to use the command `rpm -i --nodeps` to install the GDM RPM on RHEL AS.

DHCP Service on Red Hat Advanced Server

When DHCP service is removed from Startup Services on SRSS 3.1 for RHAS, the DHCP daemon does not start as expected after a reboot.

The workaround is to restart the DHCP server manually after rebooting:

```
# /etc/init.d/dhcpd start
```

Sun Ray Server Software Reconfiguration

If you re-run `utconfig` without first unconfiguring SRSS (i.e., with `utconfig -u`), you may have problems using the Admin GUI or running certain administration commands. The workaround is to change the group ID for the `/etc/opt/SUNWut/utadmin.conf` file to `utadmin`:

```
# chgrp utadmin /etc/opt/SUNWut/utadmin.conf
```

Upgrade

Upgrading from SRSS 3

When upgrading to SRSS 3.1 from SRSS 3, be sure to unconfigure the interconnect before performing the upgrade. It must be reconfigured again after you perform the upgrade.

1. **Run utadm -l.**

```
# utadm -l
```

Note the configuration for all existing SunRay subnetworks.

2. **Run utadm -r before upgrading to unconfigure the interconnect.**

```
# utadm -r
```

3. **After upgrade run utadm -a or utadm -A to configure the interconnect again.**

```
# utadm -a
```

to update all interfaces or

```
# utadm -A
```

to update all subnets.

Admin GUI Issues

Two Admin GUI pages are producing unexpected results:

Refreshing the Admin GUI Page

Refreshing the Admin GUI page from most of the links gives unexpected results. To refresh the data frame independently, use the right mouse button to click on the frame -> This Frame -> Reload Frame.

Restarting Sun Ray Services

The Restart Sun Ray Services page shows unexpected behavior on some browsers. Functionally, it always completes correctly, and the results can be verified from the log files, but, it does not always display the Results or Progress pages correctly.

JDS2

Audio and USB Driver Installation Fail on Some JDS Systems

Systems running Java Desktop Release 2 may not install audio (`utadem`) and usb (`utio`) modules.

To check for this problem, run the following commands:

```
# /sbin/lsmod |grep utio
# /sbin/lsmod |grep utadem
```

If the problem exists, these commands will not list the modules.

The workaround is:

```
# cd /lib/modules/'uname -r'/build
# make cloneconfig
# make dep clean

# cd /usr/src/SUNWut/utio
# make clean
# make
# make install

# cd /usr/src/SUNWut/utademem
# make clean
# make
# make install

# /etc/init.d/utsyscfg stop
# /etc/init.d/utsyscfg start
```

Real Player on JDS Release 2

The default version of Real Player shipped with JDS 2 does not work correctly on Sun Ray.

The workaround is to upgrade the Real Player to the following version, which is available at the Real Player website, `http://www.real.com`:

`rp8.linux2.0.libc6.i38c.cs2.rpm`

Keyboard Issues

XKB Features on a Second DTU (Bug ID 6267227)

XKB-related features do not function when logged in with same user ID on second DTU.

SuSE-SP3 Linux Keyboard Problems

On SuSE-SP3, Sun Ray users may experience certain keyboard problems.

The workaround is to make sure the `/etc/SuSE-release` file exists. If it does not, create a symbolic link as follows:

```
# ln -s /etc/UnitedLinux-release /etc/SuSE-release
```

Users must logout/login for this workaround to take effect.

Caps Lock Key

The Caps Lock key does not work on JDS2.

Screen Issues

Screen Saver May Trigger Warnings

On JDS2, invoking the screen saver, especially running `xscreensaver-demo`, causes error messages like the following to be displayed:

```
Xlib: extension XFree86-misc missing on Display...
```

This problem has nothing to do with Sun Ray; it is a screen saver configuration issue. The workaround is to edit the `/usr/lib/X11/app-defaults/XScreenSaver` file, setting the value of *captureStderr* to False.

No Screen Lock for Second Linux Session

A user who creates two Linux sessions cannot create a screen lock for the second session. When SRSS needs to lock the screen, it uses `xlock` for the second session. When the user tries to lock the screen from the menu, nothing happens. For a workaround, start a `screensave` daemon for the second session manually, to enable screen locking and stop SRSS from using `xlock`:

```
# /usr/bin/xscreensaver-bin -nosplash&
```

Gnome Display Manager

Gnome Display Manager Privilege Issues

Many Linux systems come configured with liberal administrative privileges for non-root users. You most likely do *not* want these privileges offered to users who login using a SunRay DTU. Please review the man pages for `pam_console`, `console.perms`, and `console.apps`. It is also a good idea to edit the `/etc/security/console.perms` file to remove display numbers from the definition of *console*. If a definition exists for *xconsole*, it should be removed entirely.

For example, a line that reads:

```
<console>=tty[0-9][0-9]* vc/[0-9][0-9]* :[0-9].[0-9] :[0-9]
```

should instead read:

```
<console>=tty[0-9][0-9]* vc/[0-9][0-9]*
```

And a line such as:

```
<xconsole>=:[0-9].[0-9] :[0-9]
```

should be removed altogether.

Exiting a Session

If a user exits a session with the key sequence `Ctrl+Alt+backspace+backspace`, GDM may hang the DTU display. Unfortunately, power cycling the DTU has no effect; therefore, users should be instructed to exit their sessions gracefully, by logging out, instead of using this key sequence.

L10N Issues

Multibyte Font Display Problem

In multibyte locales using pre-1.5 releases of JRE, Java-based Sun Ray tools such as `utsettings`, `utmhconfig`, and the Registration GUI do not work properly. Proper multibyte font display requires JRE 1.5.

The workaround is to create a `guijre` symbolic link in `/etc/opt/SUNWut` to point to an appropriate JRE release, for instance:

```
# ln -s </path_to_jre_1.5> guijre
```

The Registration GUI, `utsettings`, and `utmhconfig`, can then be launched with the specified JRE.

`utselect` and `utwall`

In the Simplified Chinese, Traditional Chinese, and Korean locales, `utselect` and `utwall` do not work properly in Linux distributions.

A workaround for this issue is to remove the `utselect` and `utwall` catalog files from the appropriate locale sub-directory. This brings up `utselect` and `utwall` in English.

For the Simplified Chinese locale:

```
# rm /opt/SUNWut/lib/locale/zh_CN/LC_MESSAGES/utselect.mo
# rm /opt/SUNWut/lib/locale/zh_CN/LC_MESSAGES/utwall.mo

# rm /opt/SUNWut/lib/locale/zh_CN.utf8/LC_MESSAGES/utselect.mo
# rm /opt/SUNWut/lib/locale/zh_CN.utf8/LC_MESSAGES/utwall.mo
```

For the Traditional Chinese locale:

```
# rm /opt/SUNWut/lib/locale/zh_TW/LC_MESSAGES/utselect.mo
# rm /opt/SUNWut/lib/locale/zh_TW/LC_MESSAGES/utwall.mo
```

For the Korean locale:

```
# rm /opt/SUNWut/lib/locale/ko_KR.utf8/LC_MESSAGES/utselect.mo
# rm /opt/SUNWut/lib/locale/ko_KR.utf8/LC_MESSAGES/utwall.mo
```

Documentation

This build includes documentation for both Solaris and Linux operating systems, including Administration Guides, and Installation and Configuration Guides. These manuals are intended to be feature-complete and reviewable.

Newer versions will be posted on the Sun Download Center as significant updates become available.

Documentation Errata

The following errata appear in the documentation included on the SRSS 3.1 CD.

Administrator's Guide

The NSCM feature, which is not supported for Linux, is mentioned in several places in the Administrator's Guide (Figure 3-4 and page 113).

Release Notes

The footers of the release notes on the Sun Ray Server Software 3.1 CD mistakenly refer to Sun Ray Server Software 3 instead of Sun Ray Server Software 3.1.

Documentation Errata for L10N

Some corrections and other modifications have been made to the administration guides after drafts were submitted for translation and localization. They are described here.

Administrator's Guide

Printing

Printing instructions ("To Set Up a Printer") in Chapter 4 have been updated to include more specific information for Linux.

Multihead Groups

The following admonition has been added under Hotdesking and under Multihead Administration:

Note – Regional hotdesking is not enabled for multihead groups.

Screen Shots

Figure 10-3 (Failover Group Status Table) has been updated with a current screen shot.

Extra Sections

A few paragraphs that describe or refer to NCSM (Non-Smart Card Mobile Sessions), a feature that is not implemented on Linux platforms in SRSS 3.1, were inadvertently included in the Linux administrator's guide. This error should have no impact on SRSS administrators.

Reference Manual

The *Sun Ray Server Software 3.1 Reference Manual for the Linux Operating System* is actually a set of concatenated man pages provided to L10N for translation into Japanese. It is included on the SRSS 3.1 CD as a convenience to other users; however, the `man` command is usually preferable to hardcopy.

In the current release, the footer pages carry the text string, "SRSS 3 Update 1" rather than the correct designation, "SRSS 3.1".