



Sun Ray™ Server Software 4.1 Release Notes

for the Solaris™ Operating System

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Sun Ray Server Software 4.1 Release Notes for Solaris

Supported Platforms

Sun Ray Server Software 4.1 for Solaris is designed to run on the following operating systems with Solaris SPARC and x86 servers:

- Solaris 10 5/08 or higher SPARC and X86
- Solaris 10 5/08 or higher SPARC and X86 with Trusted Extensions

[TABLE 1](#) summarizes which versions of Sun Ray Server Software are compatible with which operating system versions.

TABLE 1 Sun Ray Server Software vs. Operating System Versions

Sun Ray Server Software	Solaris 10	Trusted Solaris
4.0	Solaris 10 11/06 or higher SPARC and x86	Solaris 10 11/06 or higher SPARC and x86 with Solaris Trusted Extensions
4.1	Solaris 10 5/08 or higher SPARC and x86	Solaris 10 5/08 or higher SPARC and x86 with Solaris Trusted Extensions

Solaris Patch Requirements

The following patches, which are available on the SunSolve website, must be installed prior to Sun Ray Software installation:

TABLE 2 Required Patches for Solaris 10

Platform	Patch Number
SPARC	120284-07 or later
X86	120285-07 or later

Solaris Trusted Extensions Patch Requirements

The following patches, which are available on the SunSolve website, must be installed prior to Sun Ray Software installation in a Solaris Trusted Extensions environment:

TABLE 3 Required Patches for Solaris Trusted Extensions

Platform	Patch Number
SPARC	126363-05 or later
X86	126364-05 or later

Note – For known issues concerning Solaris Trusted Extensions, see [“Solaris Trusted Extensions Issues”](#) on page 13.

What's New

Sun Ray Server Software 4.1 for Solaris offers the following new features:

Automatic Token Importation (ATI)

Session access can now be controlled with token-related data, such as smart card IDs or Sun Ray MAC addresses, stored within an enterprise when this new feature is used in combination with registered token policies.

To utilize Automatic Token Importation, customers can write a small script to access their enterprise data (in a similar fashion to Automatic MultiGroup Hotdesking) and provide that data to SRSS via a simple key=value text API.

See the `ut_ati_script_interface(3)` and `utatiscrub(1m)` man pages for further details.

Note – This feature is available only after SRSS 4.1 patch rev 01 or later (139548-01, 139549-01, or 139550-01) has been applied.

Xnewt (Xorg Server)

SRSS 4.1 includes a new standalone Xserver, Xnewt, based on Xorg 7.2 community source. Xnewt is designed specifically for Sun Ray DTUs and is now the default Xserver for SRSS on Solaris. It is not effective for non-Sun Ray devices.

Xnewt introduces two new extensions, XRandR and XVideo; however, 8-bit visual is no longer supported. Use `utxconfig` to configure the preferred Xserver for 8-bit support (Xsun). For details, see the `Xnewt(1)` and `utxconfig(1)` man pages.

Multimedia Enhancements

This release provides enhanced multimedia playback capabilities that extend the Sun Ray architecture to accept H.264 (MPEG-4) and VC-1 (WMV9) streams and transmit them directly to Sun Ray 2/2FS/270 DTUs for decoding. In this case, neither the Sun Ray Server CPU nor Windows Server CPU is used for decoding. This is the optimal solution for conservation of server resource and network bandwidth.

For other types of video streams, this release leverages the standard (XVideo) interface on both Sun Ray 1 and Sun Ray 2 DTUS for general purpose player optimization, sending YUV streams directly to the DTU. This enables improved playback of video formats other than H.264 and VC-1 by reducing the bandwidth required to deliver the decoded video to the Sun Ray DTU. For example, RealPlayer on Solaris supports the XVideo extension to utilize the accelerated YUV path.

This enhancement is supported only for clips played using Windows Media Player 10 and 11 on Windows XP and Windows 2003 platforms. Details are described in the *Sun Ray Connector for Window OS Version 2.1 Installation and Administration Guide*.

PC/SC-lite Support

Sun Ray Server Software supports industry standard PC/SC-lite API to enable access to smart cards and smart card readers connected to Sun Ray clients.

PC/SC-lite USB CCID IFD Handler

This distribution is a Sun Ray implementation of the Interface Device Handler (IFD) for CCID-compliant USB smart card readers for the PC/SC-lite API, derived from the Open Source MUSCLE project. When used in conjunction with PC/SC-lite, this IFD handler enables PC/SC-compliant applications and middleware to use external USB smart card readers on Sun Ray clients.

PC/SC-lite and the PC/SC-lite USB CCID IFD Handler are available on the Sun Download Center. For installation instructions and further details, see the *PC/SC-lite Release Notes*.

Remote Hotdesk Authentication

Remote Hotdesk Authentication (RHA) is a new security policy feature, turned on by default.

Before connecting to a pre-existing session, the Authentication Manager now asks the Session Manager to create a temporary new session for authentication of the user. After the user has been successfully authenticated, the Sun Ray DTU is connected directly to the user's session. This authentication does not apply to anonymous Kiosk Mode. Sun Ray Server Software can be configured to turn RHA off, if desired, via the Admin GUI or the `-D` option to `utpolicy`.

VPN Enhancements

This release supports Cisco ASA family (EzVPN) and Juniper/Netscreen IPsec-based gateways.

New Configuration Options (.parms)

This release unifies configuration so that most items can be set in `.parms` files, in a downloadable configuration file, or using the Pop-up GUI to set local configuration.

New configuration options include:

- MTU
- bandwidth
- Syslog event logging levels
- LogHost
- compress
- lossless
- stopqon
- utloadoff
- fulldup
- kbcountry

Except for MTU, GUI values always take precedence. They are also clearable so that `.parms` values can be used. New values replace most DHCP vendor options.

Self-Registration GUI Enhancement

The Self-Registration GUI has been enhanced for compatibility with PAM authentication. For details, see the man pages for `pam` and `pam.conf`. The Self-Registration GUI uses the PAM service name `utselfreg`. No specific PAM configuration is added to `/etc/pam.conf` for this service, so it defaults to the other PAM service, as described on the `pam.conf` man page.

Service Tags

Service Tags is a Sun-wide strategic effort for registering Sun software and hardware. Service Tags support in Sun Ray will allow users to register Sun Ray Software. These entries can then be harvested and fed back to Sun from customer installation.

Service Tags Installation

In addition to the normal SRSS installation, the SRSS installer also installs the Service Tags Add-On package, `SUNWutsvt`. This registers the SRSS and SRWC products with Service Tags; however, the SRSS uninstaller does not uninstall the Service Tags Add-On.

To uninstall this package, run the following command:

```
# pkgrm SUNWutsvt
```

To configure/enable/disable the Service Tags feature, see:
`/etc/opt/SUNWutsvt/utsvtd.conf.defaults`

SRSS installs the Add-On package but not the main Service Tags packages, which are installed by default with Solaris 10 5/08 or later.

With Service Tags, customers can register Sun products to Sun Connection automatically, for instance, by selecting Discover & Register at:
<https://sunconnection.sun.com/inventory>.

For further information regarding Sun Service Tags, see:
<http://wikis.sun.com/display/ServiceTag/Sun+Service+Tag+FAQ>

Known Problems and Limitations

Installation, Configuration, and Upgrade Issues

Reboot Before Running `utadm` and `utconfig`

In SRSS 3.1 and later, 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`.

GUI Issues

SunMC (Bug ID 6507891)

The Sun Ray SunMC module does not detect the status of the Admin GUI correctly and will always report the Admin GUI as not running, whether it is running or not.

Remote Access (Bug ID 6508069)

Disabling remote access can result in an empty page.

The `utconfig -w` command allows you to enable or disable remote access to the Admin GUI. If remote access is disabled (the default), you must access the Admin GUI via `http://localhost:1660` or `http://127.0.0.1:1660`.

Accessing the Admin GUI via `http://<servername>:1660` will not work in this case and will result in an empty browser page. If you want to access the Admin GUI via `http://<servername>:1660`, you must enable remote access.

Self-Registration GUI (Bug IDs 6533780, 6538083)

If the wrong username or password is entered, the self-registration GUI does not allow text to be entered.

The workaround is to press the `Exit` button to relaunch the self-registration GUI.

Occasionally use of the self-registration GUI can result in a Java core dump, although registration continues to work as expected, and no other adverse side effects are observed. However, if `coreadm` is configured to name core dumps uniquely, disk space usage should be monitored.

Multiple Authentication (Bug ID 6752988)

Sometimes multiple authentications are required when the session is disconnected using a hot key sequence (the default is `Shift+Pause`).

Admin GUI Upgrade (Bug ID 6572246)

The Admin GUI requires a Web container that supports the Java Servlet and Java Server Pages (JSP) standards; earlier versions did not. Due to this change, Apache Tomcat 5.5 (or higher) has to be installed on the system, and the `utconfig` script has therefore been extended to ask for the location of an existing Tomcat instance.

If you perform an upgrade from a previous Sun Ray Server Software version (using a preserve file, for example), you must run `utconfig -w` after you have completed the upgrade. The `utconfig -w` command will prompt you for the Admin GUI settings, including the location of the Tomcat installation, after which the Admin GUI will be started automatically.

Choose Host from List (Bug ID 6638939)

The Choose Host from List option does not work for XDMCP sessions with Xnewt.

Screen Issues

Resizing Multihead Session (Bug ID 6635409)

When resizing the screens for a multihead session, you must resize all the screens manually to the same size.

This can be done easily from the Desktop Preference menu.

Video Blanking for YUV Icons (Bug ID 6711545)

While the YUV icon is displayed, the screen will not go to power saver even if the Video Blanking interval option is set.

Multimedia Issues

Media enhancements currently lack the following functionality:

- Low bandwidth
- Multiple Streams at the same time

Scaling Down Using XVideo (Bug ID 6747848)

In this release, video playback using XVideo does not support scaling down.

RealPlayer Rendering (Bug ID 6752983)

If you press `Ctrl+Moon` while using XVideo to play a video clip in RealPlayer, the RealPlayer application sometimes fails to render for a long period of time. Pressing `Pause` followed by `Play` causes it to start working again.

Solaris 10 Zones

S10 uses zones to permit multiple virtualized operating system environments to coexist in a single instance of Solaris, allowing processes to run in isolation from other activity on the system for added security and control. SRSS releases are supported only in the global zone.

Note – Attempts to install SRSS 4.1 in S10 local zones generate error messages.

Keyboard Issues

Xnewt CPU Utilization

Running `utswitch` from your `gnome-terminal` window (to switch to another Sun Ray server) while using Xnewt with the XKB extension enabled for a Sun Ray session, may generate repeated new lines in the window, causing the Xnewt to consume extra CPU resources. This only happens when you press the `Return` key a bit too long when entering the `utswitch` command.

Workarounds include:

- Using the `utselect` GUI tool instead.

- Disabling the Repeat key for the user through the keyboard preference menu.
- Disabling XKB for the user with the `utxconfig -k off` option
- Changing the system default by including the `-a` option to the `utxconfig` command above.

Kiosk Issues

Set Kiosk Application Type Correctly (Bug ID 6533804)

Some Kiosk session types allow additional applications to be launched. Within the Admin GUI, you can specify a new Kiosk application either by entering a path to an executable or by specifying a path to an application descriptor (a file that lists the various properties for the application).

The Admin GUI cannot automatically determine the type (executable vs. descriptor), so you must specify the type correctly in the Admin GUI when adding a new application.

If you specify an incorrect type, the Kiosk session cannot start up correctly, and the affected DTUs will hang, typically with a 26D error.

If you encounter such an error, the workaround is to check the specified types in the Admin GUI and correct the settings, if necessary.

Multihead CDE Kiosk Sessions (Bug ID 6645931)

Multihead CDE kiosk sessions are not working with CDE patch 11928{0|1}-14. CDE-based Kiosk sessions hang during startup on Sun Ray DTUs in a multihead configuration. The DTUs show a black screen for approximately 15 minutes, after which the session starts normally.

The workaround is to move the `/usr/dt/lib/dtobsolete` binary, which is responsible for displaying a warning that CDE is obsolete and will be removed in a future minor release of Solaris. For example:

```
# mv /usr/dt/lib/dtobsolete /usr/dt/lib/dtobsolete.gone
```

Note – Please warn affected users by other means if you move away from CDE.

Sessions May Hang After CAM Migration

Procedures for preserving existing CAM configurations and migrating to Kiosk Mode are documented in chapters 4 and 7 of the *Sun Ray Server Software 4.1 Installation and Configuration Guide*. However, after performing the documented procedures, using `utconfig -k` and `utcammigrate -u`, you may find that sessions that should be Kiosk sessions according to policy appear hung and show only a black screen.

To recover from this condition, terminate these sessions. To ensure that all affected sessions are terminated, perform a cold restart of the Sun Ray server group.

Unconfiguring Kiosk Mode Disables Kiosk Policy

If Kiosk mode is enabled for smart card and/or for non-card sessions, then disabling Kiosk mode (using `utconfig -u -k`) also disables the Kiosk policy.

This behavior may be surprising in a failover group, where Kiosk policy is disabled for the entire group when Kiosk Mode is unconfigured on any server in the group.

Before unconfiguring Kiosk Mode on any host in a failover group, disable Kiosk policy, and perform a cold restart of the server group.

To perform maintenance tasks on Kiosk user accounts without unconfiguring Kiosk Mode completely, use the `/opt/SUNWkio/bin/kioskuseradm` tool instead of `utconfig`.

Mass Storage Issues



Caution – Failure to run `utdiskadm -r` before unplugging mass storage devices will cause loss of data. Make sure your users run `utdiskadm -r` before they unplug any mass storage device.

```
% /opt/SUNWut/bin/utdiskadm -r device_name
```

USB Operations Fail After Idle Timeout Limit

If a user fails to access a given session for longer than the screen lock idle timeout interval while an application is accessing a USB device — for instance, while copying a large number of files to or from a USB flash drive — the session will be

locked. With RHA, NSCM, and authenticated smart cards, this means the session detaches, and all USB devices disconnect from the session. This can interrupt or abort the application's access to the device.

Workarounds include:

- Advising users to monitor their USB device usage to avoid being timed out
- Setting the timeout interval value high enough to allow I/O to complete before the interval elapses
- Disabling the screen saver
- Disabling RHA



Caution – The last two alternatives are less desirable because they each remove a level of security.

Solaris Trusted Extensions Issues

Audio

Remove the setuid-0 bit on the utaudio binary.

```
# chmod u-s /opt/SUNWut/bin/utaudio
```

Volume Control (Bug ID 6481380)

The volume control applet on the panel doesn't work in Trusted JDS.

To adjust the volume, use the three volume keys on the keyboard or launch the Sun Ray Settings GUI by pressing *Shift+Props*.

Multiple Slices/Partitions (Bug ID 6535611)

Sun Ray mass storage handles a single slice or partition for use by the Trusted Extensions device allocation framework.

Mount Points (Bug ID 6538004)

Mount points for USB mass storage devices with HSFS/UFS/PCFS file systems are not removed correctly.

Flash Disk Allocation (Bug ID 6562880)

Allocating flash disk with UFS file system second time does not work.

The workaround is to hot-plug the device.

Multihead Role Assumption (Bug ID 6709982)

In a multihead Trusted JDS session, role assumption does not work until `utmhscreen` is removed.

Multihead Screen Lock (Bug ID 6713236)

In multihead trusted CDE session, the session cannot be retrieved once the screen has been locked manually via screen lock.

As a workaround, users should use `Shift-Pause` to lock their screens.

To avoid this situation by making sure that the screen cannot be locked in the normal fashion, comment out the following line in the `/etc/pam.conf` file:

```
dtssession-SunRay auth sufficient /opt/SUNWut/lib/pam_sunray.so syncondisplay
```

A second alternative is to disable RHA, either by specifying the `-D` option to `utpolicy` or by selecting `Direct Session Access Allowed` from the `Advanced/System Policy` page of the Admin GUI.

Sun Ray Interconnect Configuration (Bug ID 6744443)

The following entry should be made available in `/etc/security/tsol/tnrhd`:

```
0.0.0.0/32:admin_low
```

xscreensaver Links

Verify that following links are created so that `xscreensaver` can work correctly:

```
# ln -s /usr/openwin/bin/xscreensaver /usr/bin/xscreensaver
# ln -s /usr/openwin/bin/xscreensaver-command /usr/bin/xscreensaver-command
# ln -s /usr/openwin/bin/xscreensaver-demo /usr/bin/xscreensaver-demo
```

L10N Issues

Portuguese Locale

To enable the Portuguese locale, use the `pkgadd` command to install these packages:

```
# pkgadd -d . SUNWputes  
# pkgadd -d . SUNWputo  
# pkgadd -d . SUNWpkio
```

Multibyte Font Display Problem

In multibyte locales using pre-1.6 releases of JRE, Java-based Sun Ray tools such as the `utsettings` GUI do not work properly. Proper multibyte font display requires JRE 1.6.

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_1.6> guijre
```

