**Sun Ray Software 5.1 Release Notes**

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This document contains important information about the Sun Ray Software 5.1 release, including the list of new features, system requirements, and known issues. Be sure to read this document before you begin using Sun Ray Software 5.1.

The Sun Ray Software 5.1 release contains the following main components:

- Sun Ray Server Software (SRSS) 4.2 plus bundled patches
- Sun Ray Connector for Windows (SRWC) 2.3

See Sun Ray Software 5.1 Documentation for details about all the software components in the Sun Ray Software 5.1 release.

## Table of Contents

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## What's New in Sun Ray Software 5.1

This page provides the what's new or what has changed since the previous release.

See the Sun Ray Software 5.1 System Requirements.

| Feature | Description |
| --- | --- |
| Integrated Product and Patch Installation for Sun Ray Server Software (SRSS) 4.2 | Sun Ray Software 5.1 includes a new SRSS 4.2 installer that simplifies the product release upgrade and patch updates. The new SRSS 4.2 installer automatically upgrades prior releases of SRSS with new feature updates and the latest patches. The new SRSS 4.2 installer automatically applies the latest patches to existing SRSS 4.2 installations.<br><br>To upgrade to SRWC 2.3, follow the SRWC 2.3 upgrade instructions. |

| | |
|---|---|
| Audio Input support for Windows | Enables audio input from analog devices, such as microphones and headsets, to be redirected to a Windows session from a Sun Ray client. Audio input is supported for Windows XP, Windows Server 2003 R2, Windows 7 and Windows Server 2008 R2. |
| Adobe Flash Acceleration for Windows 7 and Windows Server 2008 R2 | Enables smoother Adobe Flash media playback. |
| Enhanced Network Security | Enables users to connect to their remote desktop session using enhanced network security options, which includes TLS/SSL (with optional server verification)  and Network Level Authentication (NLA) using CredSSP.  These options help protect the Windows session from malicious users and software by completing user authentication before a full session connection is established. |
| Auto-reconnect | Enables a Windows session to automatically re-establish a network connection if it is unexpectedly disconnected. |
| USB Redirection support for Linux | Enables USB redirection from a Sun Ray Server running Linux. |
| USB Redirection for Windows Server 2003, Windows Server 2008 R2, and Windows 7 | USB redirection has been added for remote Windows 7 desktops as well as remote desktops running on Windows Server 2003 R2 and Windows Server 2008 R2.  USB devices connected and shared on a remote desktop running Windows Server 2003 R2 or Windows Server 2008 R2 are visible and accessible to all desktops running on the Windows server.  Sharing devices between multiple clients does not require any additional setup. |
| Updated firmware for Sun Ray 3 Series Clients | Provides updated GUI and non-GUI firmware for Sun Ray 3 Series Clients. |

# Sun Ray Software 5.1 System Requirements

This page provides the product requirements for the Sun Ray Software 5.1 release, which includes SRSS 4.2 and SRWC 2.3.

## Sun Ray Software Operating System Requirements

The following table provides the supported Sun Ray Software operating systems for the SRSS 4.2 and SRWC 2.3 releases.

| Platform | Releases |
|---|---|
| Solaris | • Solaris 10 5/09 or later on SPARC and x86 platforms<br>• Solaris 10 5/09 or later on SPARC and x86 platforms with Solaris Trusted Extensions |
| Linux | • Oracle Linux 5.4, 5.5 (32-bit and 64-bit)<br>• SuSE Linux Enterprise Server (SLES) 10 with Service Pack 2 (32-bit and 64-bit) |

> **Note**
> Oracle products certified on Oracle Linux are also certified and supported on Red Hat Enterprise Linux due to implicit compatibility between both distributions. Oracle does not run any additional testing on Red Hat Enterprise Linux products.

> **Note**
> SuSE Linux Enterprise Server (SLES) will not be supported after the Sun Ray Software 5.1.x releases.

For additional operating system requirements, see Additional Software Requirements.

## SRWC 2.3 Feature Support

The following Windows platforms are supported with SRWC:

- Windows XP Professional with Service Pack 2 (64-bit)
- Windows XP Professional with Service Pack 3 (32-bit)
- Windows Server 2003 R2 Enterprise Edition with Service Pack 2 (32-bit and 64-bit)
- Windows 7 Enterprise (32-bit and 64-bit)
- Windows Server 2008 R2 Enterprise (64-bit)

The following table provides the support matrix for the major SRWC features. Some OS platforms require an SRWC component to be installed for specific feature support. For detailed information, see How to Install the Sun Ray Connector Windows Components.

| | Windows XP SP2 (64-bit) | Windows XP SP3 (32-bit) | Windows Server 2003 R2 (32-bit/64-bit) | Windows 7 (32-bit/64-bit) | Windows Server 2008 R2 (64-bit) |
|---|---|---|---|---|---|
| Adobe Flash Acceleration (1) | ✅ | ✅ | ✅ | ✅ | ✅ |
| Video Acceleration (2) | ✅ | ✅ | ✅ | ✅ | ✅ |
| USB Redirection (3) | ✅ | ✅ | ✅ | ✅ | ✅ |
| Audio Input (4) | ✅ | ✅ | ✅ | ✅ | ✅ |
| Enhanced Network Security | ✅ | ✅ | ✅ | ✅ | ✅ |
| Session Directory/Session Broker | N/A | N/A | ✅ | N/A | ✅ |

(1) For Windows XP and Windows Server 2003 R2, support is provided by the Adobe Flash acceleration SRWC component.
(2) For Windows XP and Windows Server 2003 R2, support is provided by the multimedia redirection SRWC component. For Windows 7 and Windows Server 2008 R2, support is provided for Windows Media Video (wmv) playback.
(3) For all OS platforms, support is provided by the USB redirection SRWC component.
(4) For Windows XP and Windows Server 2003 R2, support is provided by the audio input SRWC component.

## Licensing

The Sun Ray Software can be licensed as follows:

- Per Named User Plus – is defined as an individual authorized by the customer to use the programs which are installed on a single server or multiple servers, regardless of whether the individual is actively using the programs at any given time.
- Per Sun Ray Device – is defined as any licensed software or hardware device, whether from Oracle or a 3rd party, that accesses a Sun Ray Server environment using the ALP (Appliance Link Protocol), an Oracle Virtual Desktop Infrastructure server environment using ALP or RDP (Remote Desktop Protocol), or an Oracle Secure Global desktop environment using the AIP (Adaptive Internet Protocol).

Connecting to a Sun Ray Software environment via a Sun Ray client or the Oracle Virtual Desktop Access client without an appropriate software license is prohibited.

## SRSS 4.2 Known Issues

The latest known bugs and other issues are listed here, along with appropriate workarounds when they are available.

> 🛈 Note
> For the latest SRSS 4.2 patch information, refer to the SRS Patches page.

## Installation, Configuration, and Upgrade Issues

### Restart Required on RHEL (Linux)

After Sun Ray Server Software installation on RHEL, Sun Ray Services must be restarted with the following command after the Sun Ray server is rebooted:

```
# /opt/SUNWut/sbin/utrestart -c
```

Reference: CR 6481726

### Shutdown/Restart Options (Linux)

SRSS installation removes Shutdown/Restart options from the console; however, users can open a terminal and execute these commands.

Reference: CR 6716548

## GUI Issues

### Admin GUI Upgrade

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.

Reference: CR 6572246

### Remote Access

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 Administration 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.

Reference: CR 6508069

### Self-Registration GUI

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

Workaround: 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.

Reference: CRs 6533780, 6538083

### SunMC (Solaris)

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.

Reference: CR 6507891

### Multiple Authentication (Solaris)

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

Reference: CR 6752988

## Screen Issues

### Video Blanking for YUV Icons (Solaris)

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

Reference: CR 6711545

### No Screen Lock for Second Linux Session (Linux)

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. The workaround is to start a `screensaver` daemon for the second session manually, to enable screen locking and stop SRSS from using `xlock`.

```
# /usr/X11R6/bin/xscreensaver -nosplash &
```

## Audio Issues

### Low Volume on SuSE Multihead Sessions (Linux)

On SuSE, sometimes audio volume is very low in a multihead session.

Workaround: Create and use a new audio device by setting the `AUDIODEV` and `UTAUDIODEV` variables to the newly-created audio device.

Reference: CR 6552753

### `xmms` Player Configuration (Linux)

To configure an `xmms` player to play mp3 files, perform the following steps:

1. Change the preferences on `xmms` output plugin to add more buffering.
2. Change the buffer size to 10000 ms and the Pre-Buffer percent to 90.
   When you run `xmms`, from command line or menu, click on the O (letter O) on the left side of the panel to bring up the Preferences menu.
3. Under the Audio I/O Plugins button, select Output Plugin OSS Driver and press the Configure button.
4. Select Buffering.
   a. The default Buffer size is 3000 ms. Change this to 10000 ms.
   b. The default Pre-buffer percent is 25. Change this to 90.
5. Press OK, then Press OK on the Preferences panel.
6. Exit `xmms` and restart it.

Reference: CR 6473628

## Multimedia Issues

Media enhancements currently lack the following functionality:

- Low bandwidth
- Multiple Streams at the same time

### Scaling Down Using XVideo (Solaris)

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

Reference: CR 6747848

### RealPlayer Rendering (Solaris)

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.

Reference: CR 6752983

### Slow Maximized XVideo Playback in RealPlayer (Linux)

When video is played in an enlarged size (RealPlayer maximized mode), the user's X session responds very slowly, especially to menu requests.

Reference: CR 6638225

### RealPlayer Application Core Dumps (Linux)

Sometimes, RealPlayer application exits with a core dump while using XVideo to play a video clip.

This problem is caused by memory corruption in the RealPlayer process. The fix is beyond the scope of Sun Ray release.

Reference: CR 6667704

## Solaris 10 Zones

Solaris 10 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. Sun Ray Software releases are supported only in the global zone.

## Keyboard Issues

### Right Shift Key Does Not Work (Linux)

In SLES 10 SP2, the Right Shift does not work.

Workaround: Disable the following shortcut:

From Computer -> Control Center:

1. Select Personal.
2. Select Shortcuts.
3. Select E-mail.
4. Disable it by pressing the Backspace key.

Reference: CR 6633324

### Num Lock Keys Do Not Work (Linux)

In SLES 10 SP2, the Num lock keys do not work when tab is pressed in Sun Ray session.

Reference: CR 6822650

### XKB on RHEL (Linux)

In RHEL, the following message is displayed after enabling XKB feature; however, the feature works as expected.

```
Error activating XKB configuration.
Probably internal X server problem.
```

### Numeric Keypad Mapping (Linux)

Numeric keypad mapping does not work properly in Java-based Sun Ray tools such as `utsettings`, `utmhconfig`, and the registration GUI.

Workaround: Set the environment variable `_AWT_USE_TYPE4_PATCH` to false, as follows:

```
# setenv _AWT_USE_TYPE4_PATCH false
```

### Keyboard Layout (Linux)

`setxkbmap` cannot be used to set layouts for keyboards on Sun Ray DTUs.

## Kiosk Issues

### Set Kiosk Application Type Correctly

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.

Workaround: Check the specified types in the Admin GUI and correct the settings, if necessary.

Reference: CR 6533804

### 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 the 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 the 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`.

### Sessions May Hang After CAM Migration (Solaris)

After preserving existing CAM configurations and migrating to Kiosk Mode, using `utconfig -k` and `utcammigrate -u`, sessions that should be Kiosk sessions according to policy might 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.

## Mass Storage Issues

### 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.

Workaround:

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

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

### Memorex Disk

Memorex disk does not work when connected to a Sun Ray 2FS DTU.

Reference: CR 6846292

## Solaris Trusted Extensions Issues

### Applying Solaris 10 patch 125720-41 or later on a Sun Ray server degrades Sun Ray DTU performance

This problem occurs on a Sun Ray server configured with Trusted Extensions.

Workaround: Install the SRSS 4.2 patch -03 or later on the Sun Ray server.

Reference: CR 6967194

### Audio

Remove the setuid-0 bit on the `utaudio` binary.

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

### Volume Control

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

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

Reference: CR 6481380

## Multiple Slices/Partitions

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

Reference: CR 6535611

## Mount Points

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

Reference: CR 6538004

## Flash Disk Allocation

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

Workaround: Hot-plug the device.

Reference: CR 6562880

## Multihead Role Assumption

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

Reference: CR 6709982

## Multihead Screen Lock

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

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:

```
dtsession-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.

Reference: CR 6713236

## Sun Ray Interconnect Configuration

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

```
0.0.0.0/32:admin_low
```

Reference: CR 6744443

### `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
```

# Localization Issues

## Swedish Locale

To enable the Swedish locale for Solaris, use the `pkgadd` command to install these packages:

```
# pkgadd -d . SUNWsuta
# pkgadd -d . SUNWsutes
# pkgadd -d . SUNWsuto
# pkgadd -d . SUNWsutwa
# pkgadd -d . SUNWsutwh
# pkgadd -d . SUNWsutwl
# pkgadd -d . SUNWskio
```

To enable the Swedish locale for Linux, use the `rpm` command to install these packages:

```
# rpm -i SUNWsuta-4.2-04.i386.rpm
# rpm -i SUNWsuto-4.2-04.i386.rpm
# rpm -i SUNWsutwa-4.2-04.i386.rpm
# rpm -i SUNWsutwh-4.2-04.i386.rpm
# rpm -i SUNWsutwl-4.2-04.i386.rpm
# rpm -i SUNWskio-4.2-04.i386.rpm
```

## Portuguese Locale

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

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

To enable the Portuguese locale for Linux, use the `rpm` command to install these packages:

```
# rpm -i SUNWputo-4.1-04.i386.rpm
# rpm -i SUNWpkio-4.1-04.i386.rpm
```

## `utselect` and `utwall` (Linux)

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

Workaround: 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
```

Contents

# SRWC 2.3 Known Issues

The latest known bugs and other issues are listed here, along with appropriate workarounds when they are available.

## General Issues

### Black mouse cursor is displayed in Windows 2008 R2 session when XRender is disabled

If Xrender extension is disabled on a client, a black mouse cursor is displayed instead of a white mouse cursor in a Windows 2008 R2 session.

Workaround: Enable Xrender.

Reference: CR 6947142

### Session does not get redirected with Windows 2008 R2 when security layer is set to negotiate

Workaround: Configure "RDP security" as the security layer on the Windows server or pass full user credentials through the `-u <user> -p` options of the `uttsc` command.

Reference: CR 6993438 (Fixed in Sun Ray Software 5.1.2 update.)

### Smart cards cannot authenticate users to a Windows Terminal Server

To use smart cards to authenticate users to the Windows Terminal Server, install the Base Smart Card Cryptographic Service Provider Package update from:

```
http://support.microsoft.com/kb/909520/en-us
```

This update improves screen unlocking behavior in the Sun Ray environment.

### Copying a large file from Windows onto PCFS-formatted removable media does not work, due to known Linux limitations

Workaround: Use other file systems than PCFS, such as UFS, ext3, or etc.

## Media Issues

### Windows Performance Counter API Requirement

The Adobe Flash Acceleration and Sun Ray Audio Driver components require hardware that supports the Windows Performance Counter API. If the Windows Performance Counter API is not working properly, the components might fail to load or behave unexpectedly. In one known example, this problem occurs when a computer has the AMD Cool'n'Quiet technology enabled in the BIOS, which is documented in http://support.microsoft.com/kb/895980.

### When reducing the size of a video, the video starts playing inside the image of the previously set higher video size

Reference: CR 6979386

### SRWC session freezes when Windows Media Player is used with multimedia redirection (SunMMR) installed and firewall on

The Windows machine does not have the proper port open for the firewall. The multimedia redirection (SunMMR) feature requires that a TCP port between 6000 and 10000 must be open for the firewall.

Workaround: Opening port 6000 should be sufficient unless some other service is using it.

Reference: CR 6929900

## USB Redirection Issues

### Scanning does not work when using scanner button

With some scanners, scanning does not work when initiated by the button on the scanner. You can still scan documents by initiating the scan from the software.

Reference: CR 6885825

### Explore window not launched automatically after inserting flash disk

The Explore Window (disk contents) is not launched automatically after inserting a flash disk. The program must be manually launched. This is a different behavior than the Windows behavior on a console session.

Reference: CR 6840545

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