

## SUN RAY SOFTWARE

SECURE ACCESS TO DESKTOP ENVIRONMENTS WITH GREATER FLEXIBILITY, MANAGEABILITY, AND COST EFFICIENCY

### FEATURES

- Highly secure access to server-hosted virtual desktops
- Access to multiple platforms including Windows, Oracle Solaris, Oracle Linux and other Linux desktop environments
- Seamless desktop session mobility between Sun Ray Clients, PCs and laptops.
- Superior multimedia playback for Adobe Flash content and Windows Media Player videos
- Bidirectional audio from Sun Ray Clients to Windows, Oracle Solaris, Oracle Linux and other Linux virtual desktops
- Support for USB peripherals connected to Sun Ray Clients
- Capability to drive up to 32 displays with Sun Ray Clients

### BENEFITS

- Secure, global access to centralized data and applications
- Eliminate client virus attacks
- Increase mobile productivity
- Reduce the cost of desktop maintenance and manage thousands of desktops with just a few administrators
- Upgrade applications on thousands of desktops in hours – not weeks or months

*Sun Ray Software is a secure and cost-effective solution that delivers a rich virtual desktop experience for Sun Ray Clients, PCs, and laptops. It provides access to virtual desktop environments from nearly any location and dramatically reduces the complexity and operational costs incurred by traditional PC deployments. By centralizing management, data, and applications in the data center, desktop maintenance requirements and client security vulnerabilities are virtually eliminated. Rich multimedia capabilities provide users with a seamless end-user experience and a simpler migration path, which makes moving to a virtualized desktop solution easier for both administrators and end-users.*

### Foundation for Improved Security, Manageability, and Cost Reduction

Virtual desktops are becoming increasingly popular due to their superior security and manageability versus standard PCs, as well as their reduced operational costs. With Sun Ray Software technology, you can essentially eliminate desktop maintenance – all upgrades to software, operating systems (OSs), and memory are performed from the server – reducing IT administration and management requirements. Sun Ray Software enables access to server-hosted desktops for a wide variety of platforms including Microsoft Windows, Oracle Solaris, Oracle Linux, and others, to meet the needs of a diverse enterprise. Because sensitive data and critical applications remain on the server instead of on individual hard drives, desktops, or laptops, data is significantly less vulnerable to theft and loss. Security is built into the system by design and is not dependent on keeping PCs containing sensitive data patched and updated to ensure data integrity. Sun Ray Software provides user authentication and encryption between the server and the client, as well as user session management across the environment. User sessions are load balanced across the servers in the group to optimize performance.

Sun Ray Software enables users to connect to their remote desktop session using enhanced network security options, which include TLS/SSL (with optional server verification) and Network Level Authentication using CredSSP. These options help protect Windows sessions from malicious users and software by completing user authentication before a full session connection with the server is established.

### Choice of Client Devices

With Sun Ray Software, users have a choice of client devices when connecting to their virtual desktop sessions. They can take advantage of the highly secure and energy-efficient Sun Ray Clients, or use the virtual desktop client feature of Sun Ray Software and use an existing Windows PC or Mac OS X computer. Sun Ray Software provides seamless integration with supported clients, allowing end-users to instantly move their live desktop session between any Sun Ray Client and any supported PC or laptop.

Choice of client device improves mobility and data access, helps mitigate the costs and challenges of migration to an alternative desktop solution, extends the life of existing PC assets, and reduces the environmental impact of frequent desktop refreshes.

### Seamless Mobility

The 'hotdesking' capability of Sun Ray Software enables users to move from client device to device regardless of location, whether from within a department or globally. Users can access their desktop environment from one location, and resume their session from where they left off at another location. Since no data is cached or saved on clients, there is no risk of data security vulnerabilities.

Sun Ray Software and clients utilize Oracle's Appliance Link Protocol (ALP), which is specifically designed to enable Sun Ray Clients to work seamlessly over both LAN and WAN distances without requiring WAN repeater hardware, reducing cost and complexity.

### Superior Multimedia Experience

Sun Ray Software supports multiple media formats and provides superior multimedia playback for Adobe Flash content and Microsoft Windows Media Player, allowing users to watch multimedia just as they would on a local PC desktop. Video acceleration and audio input capabilities further enhance the multimedia experience for users of Windows virtual desktops.

### Universal Serial Bus Peripheral Integration

Users can connect USB devices to a Sun Ray Client and have those devices visible in their remote Windows virtual desktop environments. Printers, scanners, and external hard drives can be mounted quickly and easily, giving users added flexibility while maintaining the security advantages of a virtual desktop architecture.

### Benefits of Sun Ray Software

IT organizations can realize the following benefits by using Sun Ray Software:

- Access to virtual desktop sessions from Sun Ray Clients, Windows PCs and Mac OS X systems
- Greater mobility through 'hotdesking' from device to device
- Elimination of client security vulnerabilities and reduced risk of data theft
- Decreased maintenance costs, with no OS, software, or memory to physically upgrade at the desktop
- Reduction of desktop support and administration costs due to centralized management
- Access to a broad choice of virtual desktop environments including Microsoft Windows, Oracle Linux, and Oracle Solaris
- A PC-like experience for Sun Ray Client users, including compatibility with USB peripherals such as scanners, printers, and storage devices
- Simple "plug-and-work" setup or replacement of Sun Ray Clients
- Continued use of existing PCs using the included client software for Windows PCs and Mac OS X systems, extending the life of these assets and avoiding the need to upgrade all users to Sun Ray Clients at the same time
- Seamless integration of full-screen Windows desktops
- Reduced power consumption and operating costs
- Smooth playback for Adobe Flash content and Windows Media Player multimedia
- Microsoft Windows Server 2008 applications are displayed in 32-bit color
- Instant access to a customized compute environment from any Sun Ray Client, supported PC or laptop on the LAN or WAN using a smart card.

## Sun Ray Software 5.1 Specifications

## RELATED PRODUCTS

The following Oracle Desktop Virtualization products are also offered:

- **Sun Ray Clients** – Provide an interoperable, zero-administration desktop client solution that reduces the maintenance, upgrade, and operational costs commonly associated with PC environments.
- **Oracle Virtual Desktop Infrastructure** – A complete solution for managing, hosting, and providing access to virtualized desktop environments housed in the data center.
- **Oracle Secure Global Desktop** – Provides secure access to centralized, server-hosted Windows, Linux, Oracle Solaris, mainframe, and midrange applications from a wide variety of popular client devices.
- **Oracle VM VirtualBox** – Enables desktop or laptop computers to simultaneously run multiple operating systems, allowing users to get the most flexibility and utilization out of their PCs.
- **Oracle Display Monitors** – Ideal choice of high resolution and high performance displays to complement Oracle Sun Ray Clients.

## RELATED SERVICES

The following services are available from Oracle Support Services:

- **Product Support Services**

| Installation Platform Requirements                                |   |
|---|---|
| <b>Sun Ray Software - Server Platforms</b>                        |   |
|   | <ul style="list-style-type: none"> <li>• Oracle Solaris 10 (5/09 and later)</li> <li>• Oracle Solaris 10 with Trusted Extensions (5/09 and later)</li> <li>• Oracle Linux 5.4, 5.5</li> <li>• SUSE Linux Enterprise Server 10 Service Pack 2</li> </ul>   |
| <b>Sun Ray Software – Oracle Virtual Desktop Client Platforms</b> |   |
|   | <ul style="list-style-type: none"> <li>• Microsoft Windows XP</li> <li>• Microsoft Windows Vista</li> <li>• Microsoft Windows 7</li> <li>• Mac OS X 10.6 or later</li> </ul>  |
| Supported Desktop Environments                                    |   |
|   | <ul style="list-style-type: none"> <li>• Oracle Solaris 10 (5/09 and later)</li> <li>• Oracle Solaris 10 with Trusted Extensions (5/09 and later)</li> <li>• Oracle Linux 5.4, 5.5</li> <li>• SUSE Linux Enterprise Server 10 Service Pack 2</li> <li>• Microsoft Windows XP</li> <li>• Microsoft Windows 2003 R2 Enterprise Edition</li> <li>• Microsoft Windows 2008 R2 SP2</li> <li>• Microsoft Windows Vista</li> <li>• Microsoft Windows 7</li> </ul>  |
| Add-On Components Available for Sun Ray Software                  |   |
|   | <ul style="list-style-type: none"> <li>• Sun Ray connector for VMware View Manager (for VMware View 3.1, 4.0)</li> <li>• Smart card authentication with PC/SC-Lite</li> </ul>   |
| Sun Ray Windows Media Requirements                                |   |
| <b>Microsoft Windows OS Support</b>                               |   |
|   | <ul style="list-style-type: none"> <li>• Windows XP Professional SP2 (64-bit)</li> <li>• Windows XP Professional SP3 (32-bit)</li> <li>• Windows Server 2003 R2 SP2 (32-bit/64-bit)</li> <li>• Windows Server 2008 R2 (64-bit)</li> </ul>   |
| <b>Microsoft Windows Applications Support</b>                     |   |
|   | <ul style="list-style-type: none"> <li>• Microsoft Windows Media Player 10, 11</li> <li>• Microsoft Internet Explorer version 7, 8 (32-bit)</li> <li>• Adobe Flash Player version 9, 10</li> </ul>  |
| <b>Media Content Format Support</b>                               |   |
|   | <ul style="list-style-type: none"> <li>• MPEG-4 part 10 (H.264 – baseline encoding)</li> <li>• WMV 9 (VC-1 encodings)</li> <li>• Simple profile, low level – 96 Kbps, 176 x 144 @ 15 Hz (QCIF)</li> <li>• Simple profile, medium level - 384 Kbps, 352 x 288 @ 15 Hz (CIF)</li> <li>• Main profile, low level – 2 Mbps, 320 x 240 @ 24 Hz (QVGA)</li> <li>• Advanced profile, L0 level – 2 Mbps, 352 x 288 @ 30 Hz (CIF)</li> <li>• Adobe Flash 9 content – up to 4 flash animations, the sum of which has to be &lt; 1024 x 768</li> </ul> |

|   |
|---|
| <b>Sun Ray Client and Software Requirements for Sun Ray Windows Media</b>   |
| <ul style="list-style-type: none"> <li>• Sun Ray 2 Series Clients and Sun Ray 3 Series Clients</li> <li>• Sun Ray Software 5 and later</li> </ul>   |
| <b>Sun Ray Software Universal Serial Bus Redirection Support</b>  |
| <b>Microsoft Windows OS Support</b>   |
| <ul style="list-style-type: none"> <li>• Windows Server 2003 R2 SP2 (32-bit/64-bit)</li> <li>• Windows Server 2008 R2 (64-bit)</li> <li>• Windows XP SP2 (64-bit) &amp; SP3 (32-bit)</li> <li>• Windows XP SP3 (32 bit)</li> </ul>    |
| <b>Supported Devices</b>  |
| <ul style="list-style-type: none"> <li>• View the full list of supported devices at:<br/><a href="http://wikis.sun.com/display/SRS/Sun+Ray+Peripherals+List">http://wikis.sun.com/display/SRS/Sun+Ray+Peripherals+List</a></li> </ul> |

## Contact Us

For more information about Oracle's Sun Ray Software and Sun Ray Clients, visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.



Oracle is committed to developing practices and products that help protect the environment

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