



# SUN™ VIRTUAL DESKTOP SOLUTIONS

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# Emerging Access Requirements

## Disasters

### Need for Instant Desktop Recovery and Provisioning

Quickly recover, re-provision and re-establish user access to ensure business continuity

## Alternative Workspace

### Need for Remote Offices, Virtual Offices, Hoteling

Support for a virtual work environment where users have alternative access to complete desktop resources while working remotely

## Outsourcing

### Need for Secure and Controlled Access by Outsourcing Entities

Secure data and resources within the corporate datacenter and support outsourced or offshore developers

## Compliance

### Need for Desktop Consolidation and Standardization

Contain desktop proliferation and build a standardized, centrally-managed desktop environment that adheres to internal and external compliance guidelines

# Application and Desktop Evolution

## From Simple Terminal Applications to Rich Network Desktops

Simple Terminal Applications & Devices



Rich Apps Running Locally



Rich Apps Running Locally & From Network



Rich Apps, All From Network



*The Network Is the Computer™*

# Virtualized Desktop Solutions



One operating system is used to service multiple users. Each user has a separate session but shares the operating system and applications with others.



**Multiple Users  
Per Server**



Each user has a dedicated blade system and operating system. Applications are installed individually for each user and the blades are managed individually.



**Each User With  
Dedicated  
Blade**



Like the blade solution, but each user's system is a VMware virtual machine instead of a physical one. OS and applications are installed and managed individually.



**Each User With  
Dedicated VMware  
VM (VDI)**

# Sun Desktop Virtualization Portfolio

## Sun Provides a Rich Desktop Virtualization Product Set

- Nearly 10 years of experience
- Full screen desktops and individual applications
- Built-in support for Windows, the Solaris™ OS, and Linux
- LAN and WAN
- Extremely secure
- Use clients from Sun or any Java-browser enabled device
- Strategic relationship with VMware



# Sun VDI Software

## Your Desktop, Anywhere You Are

Your Desktop on a  
PC



Your Desktop on a  
Mac

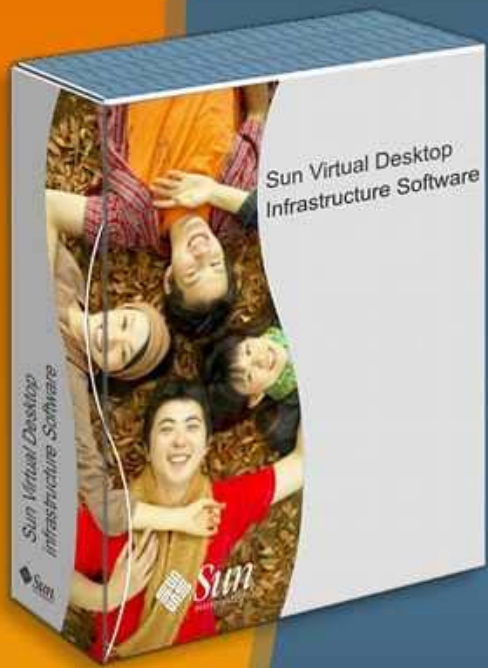


Your Desktop on a Sun Ray client



*As you move between devices,  
your desktop follows you*

# Sun Virtual Desktop Infrastructure Software



Access Centralized Desktops

Easily Assign Users To Desktops

Use Nearly Any Client Device

Shift Desktops Across Devices

Secure Over LAN or WAN

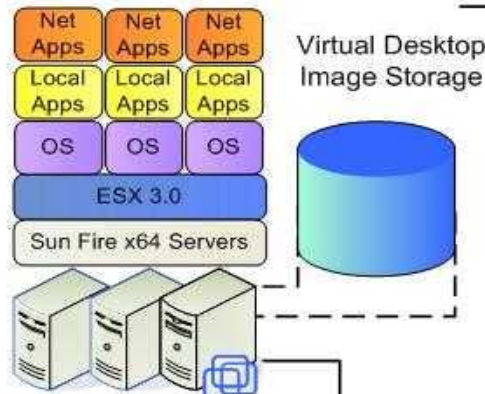
Centralize Desktop Management

# The Sun Solution

## Client Application Tier

Enterprise applications published by Secure Global Desktop, to Virtual Desktops or accessed remotely

Windows 2000/2003 Mainframe/AS-400 Unix/Linux



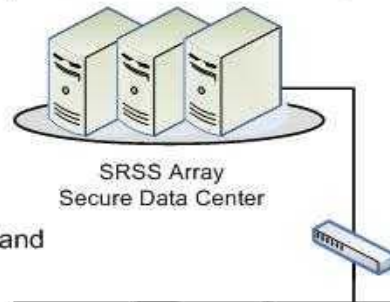
## Virtual Desktop Tier

VMware Virtual Infrastructure  
Virtual Desktop Images, SAN for image storage

**Identity/Management/Control Tier**  
VMware Virtual Center, Sun Java Directory Server, Sun Java Identity Manager

## Access Tier

Sun Ray Server Software  
Sun Secure Global Desktop  
Provides Session Management and Secure Remote Access



## Client Tier

Displays Virtual Desktop

Virtual Display Clients

Mobile

Secure Remote Access



# Sun VDI Software Features

- Delivers secure access to full screen desktop environments over the network
- Integrates with VMware Infrastructure 3
- Integration of VMware Desktop Manager 2.1
- Supports high security encryption with integrated VPN client
- Provides a highly optimized client side protocol that adjusts dynamically to changing network conditions
- Built-in support for Sun Ray clients or use existing client devices



# Organizational Benefits



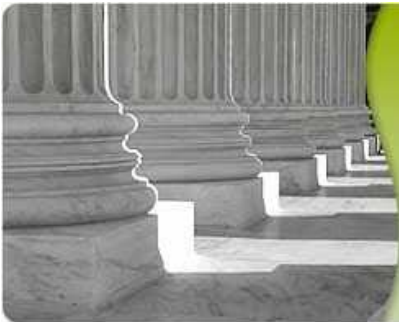
## Business Continuity

Let employees work from anywhere, particularly helpful when disasters strike



## Cost

Reduce datacenter operational costs as well as administration and management expenses



## Regulatory Compliance

Demonstrate compliance with industry or government legislation and internal policies

# Sun Virtual Desktop Connector

New in  
Sun VDI  
Software 2.0



- Brokers connections between Sun VDI Software and VMware Infrastructure 3
- Easy to install and configure
- Dynamic and static binding of desktops to users
- Automatic integration with Sun Secure Global Desktop Software and Sun Ray Software
- Supports latest VMware ESX Server 3.5 with Virtual Center 2.5
- Designed for Windows deployments

# Sun VDI Software and VMware

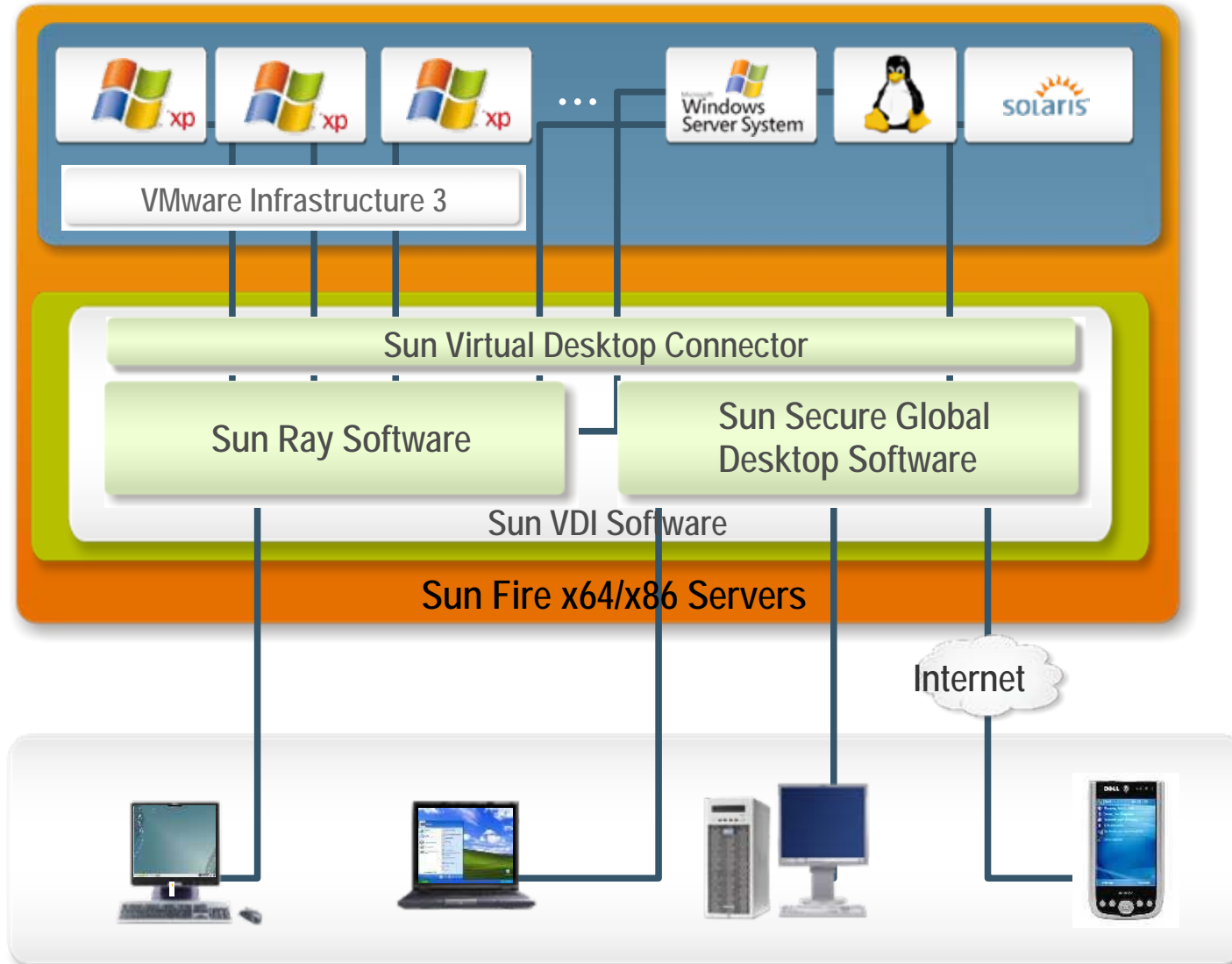
➤ Solve problems with applications that are not Terminal Services friendly

➤ Provide a highly manageable environment while still allowing users to customize their desktops

➤ Access VDI desktops with added security and excellent performance over low bandwidth connections

➤ Leverage features in VMware Infrastructure 3 such as VMotion and HA for a truly dynamic desktop architecture

# Sun VDI Software Architecture



# End User Benefits



## Security

Gain industrial strength security and avoid lost laptop disasters



## Flexibility

Work on your home PC without installing specialized software



## Mobility

Be as productive out of the office as you are at your desk



## Choice

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Provide Windows, Solaris OS or Linux  
desktop environments

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Install on Solaris OS or Linux OS

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SPARC, x86, x64 servers

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Clients from Sun or OEMs

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# World Class Windows Desktop



- Full screen Windows desktops on Sun Ray clients
- Windows Server or Windows XP Pro
- Two-factor smart card authentication to Windows
- Hot desk Windows sessions between devices
- RDP-based, excellent performance



# Easy Access



# No Local Data, Nothing Cached



- Display and manipulate sensitive data without it ever leaving the server
- Data is never cached
- No hard disk or addressable flash memory
- No intellectual property risk if a client is lost or stolen
- No local operating system, no client virus issues

# The Thinner The Better

Lower Complexity Helps Reduce Cost

Local Apps  
Local OS  
Memory  
CPU  
Hard Drive



PC

Local Apps  
Local OS  
Memory  
CPU



Embedded OS  
thin client

Nothing to  
Manage!



Sun Ray  
client

# The Sun Ray Client Portfolio

From left: Sun Ray 270 – Sun Ray 2 – Sun Ray 2FS



# New Features in Sun Ray Software

## Sun Ray Software 4 - Available

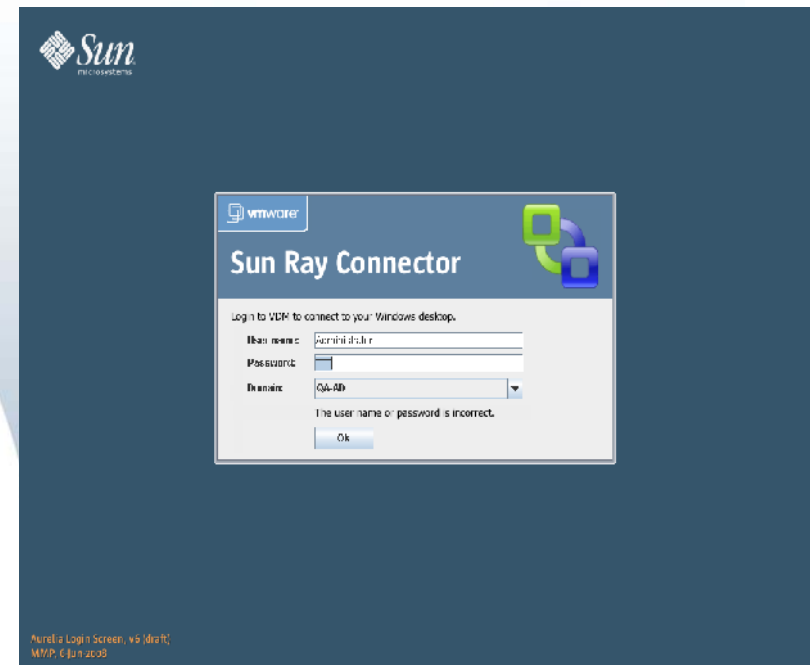


- Integrated VPN client
- Pop-up graphical interface for client settings
- Kiosk mode simplifies Windows desktop deployments and dedicated application display
- Performance improvements for Windows desktops
- Support for Solaris Trusted Extensions

# Future Features Sun Ray Software

## Sun Ray Software 4 – Available Now (4QCY08)

- Integration of VMware Desktop Manager 2.1
- Add-On package for Sun Ray Software 4
- Delivers access to desktops managed by VDM 2
- Use Sun's protocols and client devices & VMware's VDI back-end



# SGD Administration Console

VERSION | PREFERENCES | LOG OUT | HELP

User Identity: System Objects / Administrator (Local) Secure Global Desktop Server: masala.uk.sun.com | Last Update: Oct 17, 2007 2:07:48 PM BST

## Sun Secure Global Desktop Administration Console

Navigation View

- Secure Global Desktop Servers
- Sessions
- User Profiles
- Applications
- Application Servers
- Global Settings
- Caches

### Secure Global Desktop Servers

Secure Global Desktop servers are machines running the Secure Global Desktop Software. By adding at least one other server you create an array. An array allows to distribute load between its servers and increases the reliability. One server in the array is the primary server which is responsible for replicating configuration data. Use the Administration Console on the primary server of the array to add additional servers to the array.

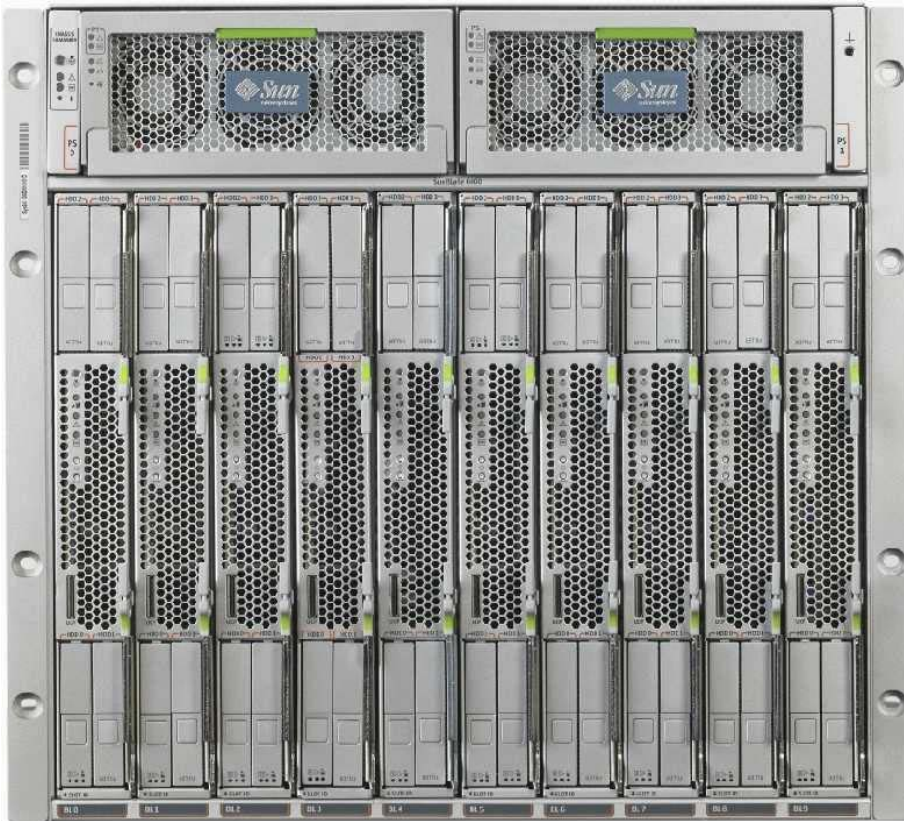
#### Secure Global Desktop Server List (2)

Server	Type	Status	Start Time (BST)	Accepting Connections		User Sessions			Application Sessions		
				Standard	Secure	Standard	Secure	Total	Terminal	Graphical	Total
masala.uk.sun.com	Primary Server	Up	2007/10/10 01:33:00	Yes	No	2	0	2	0	3	3
shola.uk.sun.com	Secondary Server	Up	2007/10/17 08:40:35	Yes	No	1	0	1	0	2	2

Powerful new features  
 Easier and more intuitive  
 Familiar web-based Sun standard interface

# Sun Blade 6000 Modular System

## 10 Server Module Capacity



### Compute

- 10 Server Modules

### I/O

- 1.42Tb/s I/O per Chassis
- 20 Hot-Plug PCIe Express Modules<sup>(TM)</sup> for granular blade I/O configuration
- 2 PCIe Network Express Modules<sup>(TM)</sup> for multi blade I/O configuration

### Availability

- Hot Swap fans
- Hot Swap power supplies
- Redundant power grid connection capability

### Management

- SNMP, SSH, CLI

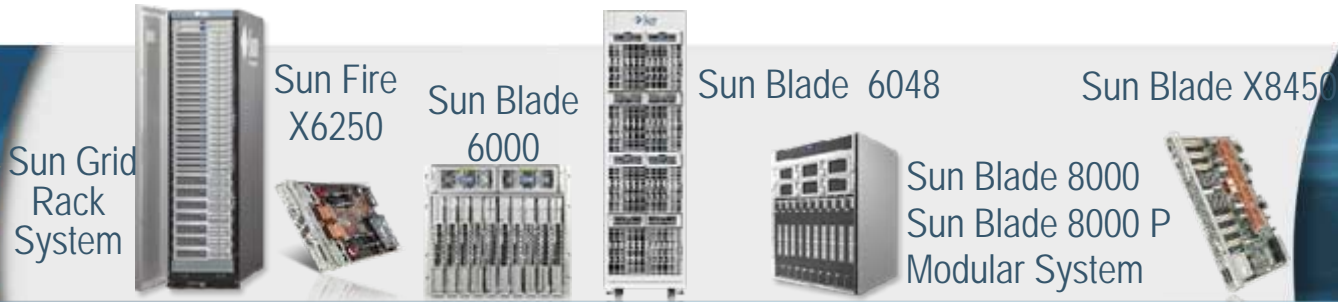
### Form Factor

- 10 Rack Units
  - 40 Opteron Cores
  - 80 Intel Cores
  - 80 SPARC cores



# Sun x86 Product Line

New w/  
Quad-core



New w/  
Quad-core



New w/  
Quad-core



New w/  
Quad-core





# SUN VIRTUAL DESKTOP SOLUTIONS

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Sun Microsystems, Inc.

