



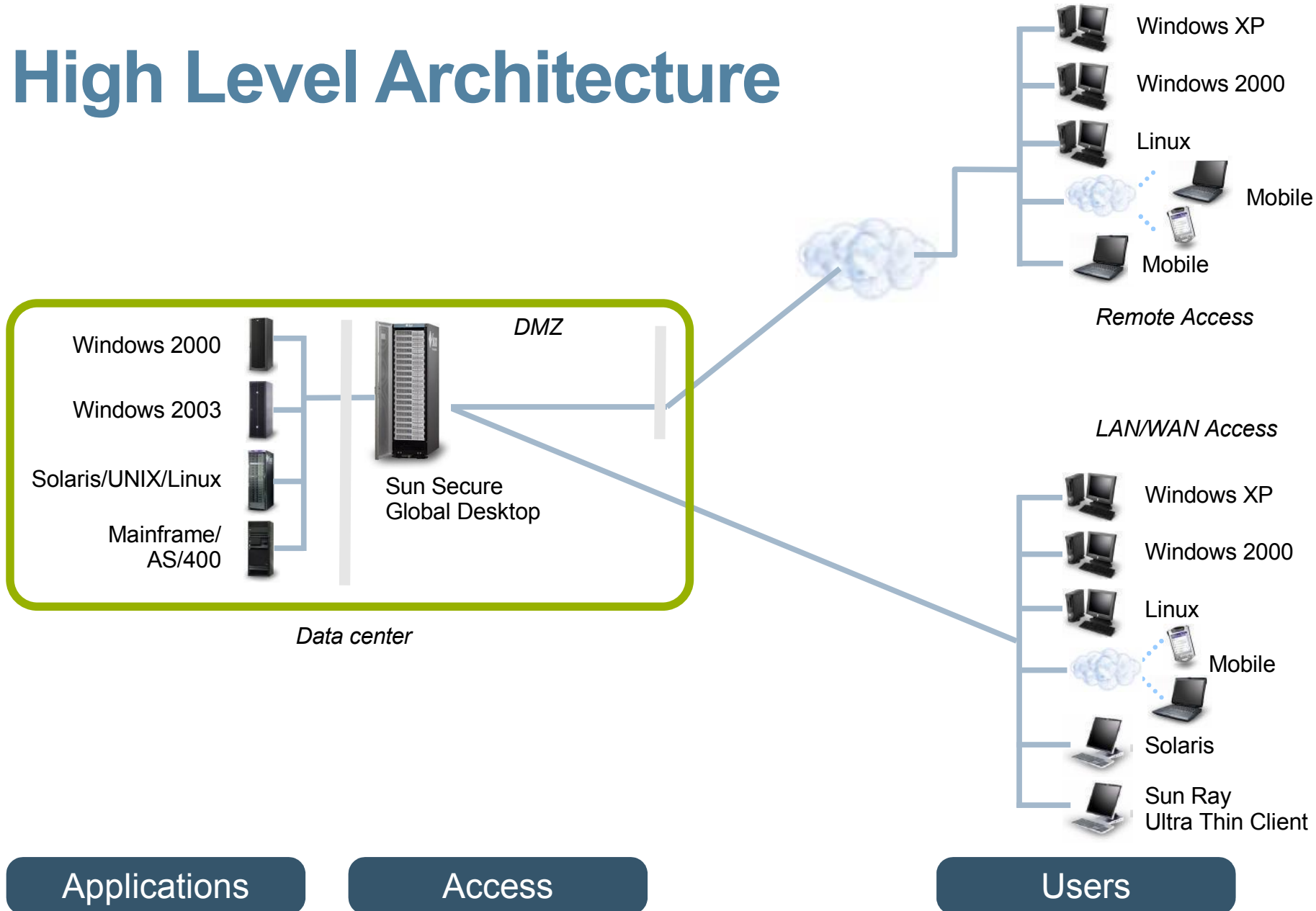
# VIRTUAL DISPLAY COMPUTING WITH SUN SECURE GLOBAL DESKTOP SOFTWARE – WHAT'S NEW IN V4.3?

September 2006

Sun Microsystems, Inc.



# High Level Architecture



# Virtual Display Computing Benefits



Security



Any Application



Operational Efficiency



End-user Mobility



Scale and Uptime



Device Choice

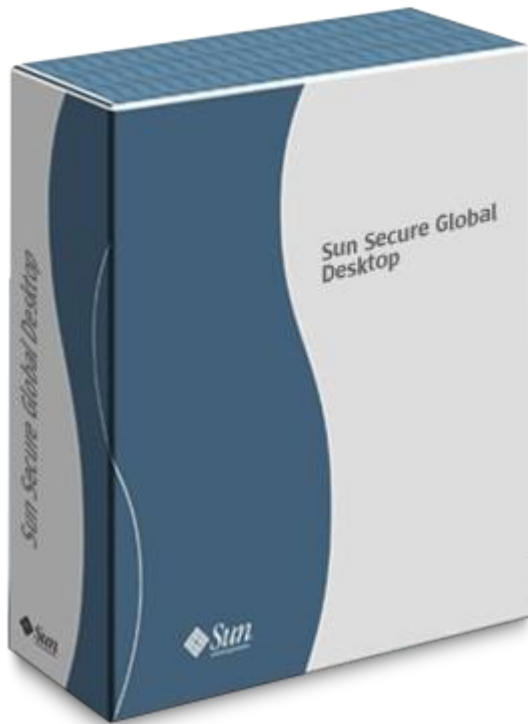
## Traditional Desktop Computing

- Applications installed on every device
- Data resides on vulnerable laptop or PC
- Runs only one application type (Windows)
- Device choice constrained by application set
- Use only “your” device
- Work only in your work location
- Who knows what the user does

## Virtual Display Computing

- Applications run on data center servers
- Data resides in secure data center environment
- Runs nearly any application type (Windows, Solaris, Linux, etc.)
- Choose the right device regardless of application set
- Use anyone's device
- Work anywhere
- Know what the user does

# SGD 4.3 is Here!



Ease of Use

Enhanced Security

Additional Device Support

Windows XP Remote Desktops

Improved Performance

Localizations

# Ease of Use

## Seamless Integration with the Client Environment

- Remote applications behave like local applications
- No re-training required, reduces user concerns about using virtualized display applications
  - > Applications launch from user's Start or Launch menu
  - > Remote windows integrate seamlessly with local windows
  - > Open and save local documents with remote applications (if allowed by admin)
  - > Print to local printers (if allowed by admin)



# Seamless User Experience



Apps



Access



Local Environment

Ability to access remote files and applications

Ability to print from local and remote apps

Ability to launch applications from Start menu


Ability to access local files and applications

**Sun Secure Global Desktop Software - Mozilla Firefox**

File Edit View Go Bookmarks Tools Help

http://shola.uk.sun.com/sgd/index.jsp?langSelected=en

Customize Links Free Hotmail Windows Media Windows

 **Sun Secure Global Desktop** [HELP](#) [INFO](#) [LOGOUT](#)

**APPLICATIONS** EDIT ahal's Webtop

Suspend All | Resume All | Cancel All

- Gnome Terminal (shola)
- JDS Session
- Mozilla (shola)
- Star Office Calc (Solaris)
- Star Office Impress (Solaris)
- Star Office Writer (Solaris)
- Sun web site

**PRINTING** LIST ALL JOBS

Pause | Resume | Cancel All

No Documents Queued

**Welcome to your Webtop**  
Hello, **ahal**. You are currently using a **standard** connection.

Copyright © 2006 Sun Microsystems, Inc. All rights reserved.

http://shola.uk.sun.com/sgd/webtops/standard/webtop/pref1.jsp






**Sun Secure Global Desktop Software - Mozilla Firefox**

File Edit View Go Bookmarks Tools Help

http://shola.uk.sun.com/sgd/index.jsp?langSelected=en

Customize Links Free Hotmail Windows Media Windows

 Sun Secure Global Desktop HELP INFO LOGOUT

APPLICATIONS EDIT ahall's Webtop

Suspend All | Resume All | Cancel All

- Gnome Terminal (shola)
- JDS Session
- Mozilla (shola)
- Star Office Calc (Solaris)
- Star Office Impress (Solaris)
- Star Office Writer (Solaris)
- Sun web site

PRINTING LIST ALL JOBS

Pause | Resume | Cancel All

No Documents Queued

Done

**Client Settings** **Edit Groups**

### Edit Client Settings

**Start up**

Login URL:

Connect on System Login

Add applications to Start Menu

Automatic Client Login

**Client Options**

Alternative PDF viewer:

Copyright © 2006 Sun Microsystems, Inc. All rights reserved.



**ahall**

- Internet**  
Mozilla Firefox
- E-mail**  
Outlook Express
- Star Office Calc (Solaris)
- MSN Explorer
- Windows Media Player
- Windows Movie Maker
- Tour Windows XP
- Files and Settings Transfer Wizard

**All Programs**

- Activate Windows
- Windows Catalog
- Windows Update
- Accessories
- Adobe
- Games
- Mozilla Firefox
- StarOffice 8
- Startup
- Sun Secure Global Desktop
- Internet Explorer
- MSN Explorer
- Outlook Express
- Remote Assistance
- Windows Media Player
- Windows Messenger

Log Off Turn Off Computer

- Gnome Terminal (shola)
- JDS Session
- Logout
- Mozilla (shola)
- Star Office Calc (Solaris)
- Star Office Impress (Solaris)
- Star Office Writer (Solaris)
- Sun web site
- Using Your Webtop
- VT420 (shola)
- Webtop
- Windows Desktop Session
- Windows Firefox
- xclock (shola)



Remote apps appear in Start menu



Mozilla Firefox



Star Office  
Calc (Solaris)



Star Office  
Impress  
(Solaris)

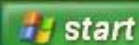


Star Office  
Writer (Solaris)

Shortcuts can be  
dragged to desktop



Recycle Bin



screenshots1 - StarO...

EN



15:12

### dummy\_data.ods - StarOffice Calc

File Edit View Insert Format Tools Data Window Help

Albany 10 B / U

C11 f(x) Σ =

	A	B	C	D	E	F	G	H	I
1	SGD Sales								
2		East	Central	West					
3	Q1	20	10	13					
4	Q2	24	14	17					
5	Q3	27	17	23					
6	Q4	31	20	26					
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

### Sales Success

Quarter	East	Central	West
Q1	20	10	13
Q2	24	14	17
Q3	27	17	23
Q4	31	20	26

Sheet1 / Sheet2 / Sheet3

Sheet 1 / 3 Default 100% STD Sum=0

Remote apps open without web browser

# Security Enhancements



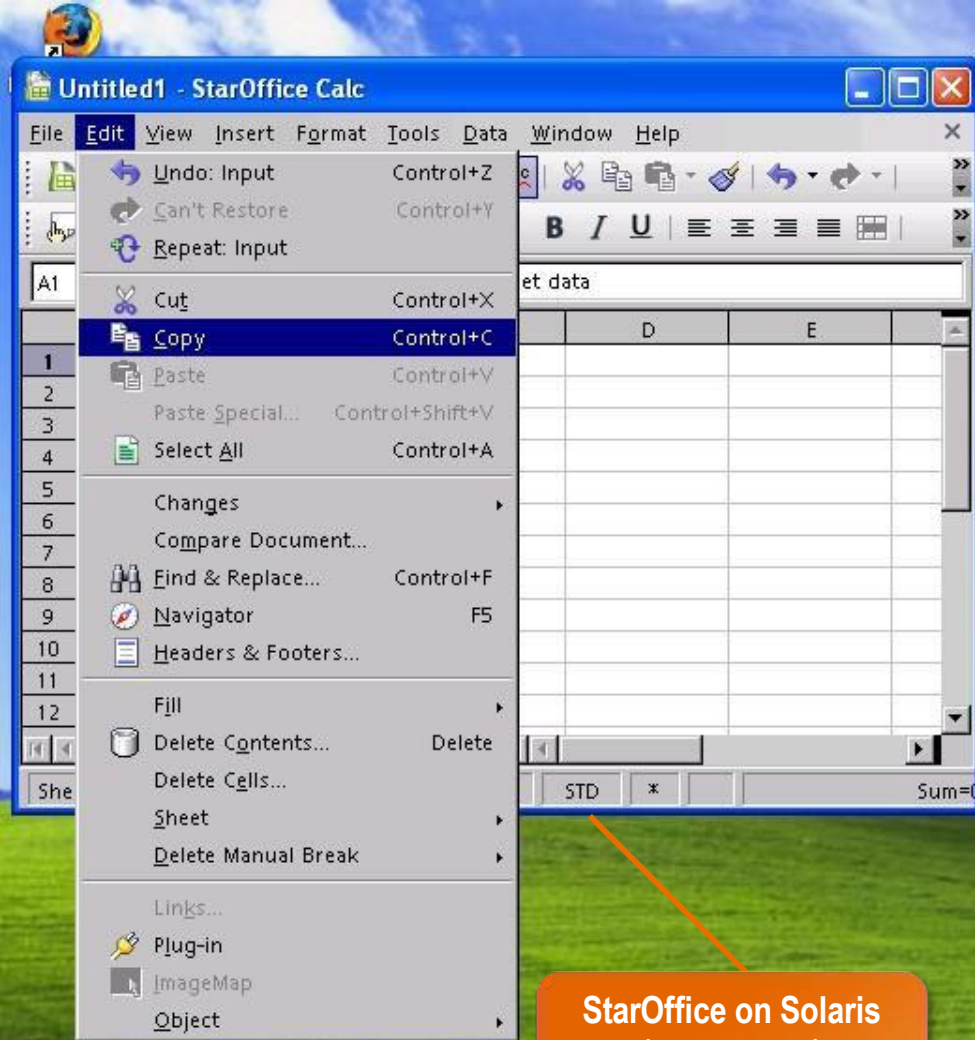
- Controlled copy and paste
  - > Administrator assigns a security label to each application
  - > Local apps are also assigned a security label
  - > Copy and paste is prevented when copying from a high and pasting to a lower security labeled application

StarOffice Calc window titled "Untitled1 - StarOffice Calc". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, and Help. The toolbar contains icons for file operations and text formatting. The font is set to Albany, size 10. The formula bar shows "Top secret data". The spreadsheet grid has columns A through E and rows 1 through 12. Cell A1 contains the text "Top secret data". The status bar at the bottom shows "Sheet 1 / 3", "Default", "100%", "STD", "\*", and "Sum=".

StarOffice on Solaris  
(remote app)

Outlook window titled "Attempt to copy secure data". The menu bar includes File, Edit, View, Insert, Format, Tools, Message, and Help. The toolbar contains icons for Send, Cut, Copy, Paste, Undo, Check, Spelling, and Attach. The "To:" field contains "Red Fox". The "Cc:" field is empty. The "Subject:" field contains "Attempt to copy secure data". The text area contains the following text:  
Red Fox,  
  
When I attempt to copy the Top Secret data from the server, this Sun Secure Global Desktop Software product somehow stops me!  
  
Here's what it tells me:

Outlook on Windows XP  
(local app)



StarOffice on Solaris  
(remote app)



Outlook on Windows XP  
(local app)



StarOffice Calc window titled "Untitled1 - StarOffice Calc". The spreadsheet shows "Top secret data" in cell A1. The interface includes a menu bar (File, Edit, View, Insert, Format, Tools, Data, Window, Help), a toolbar with icons for file operations and editing, and a status bar at the bottom showing "Sheet 1 / 3", "Default", "100%", "STD", and "Sum=".

StarOffice on Solaris  
(remote app)

Outlook window titled "Attempt to copy secure data". The window shows an email composition interface with fields for To (Red Fox), Cc, and Subject (Attempt to copy secure data). The text area contains the following text:  
Red Fox,  
When I attempt to copy the Top Secret data from the server, this Sun Secure Global Desktop Software product somehow stops me!  
Here's what it tells me:  
A context menu is open over the text area, listing options: Cut, Copy, Paste (highlighted), Select All, Font..., Paragraph..., Increase Indent, Decrease Indent, and Properties.

Outlook on Windows XP  
(local app)



StarOffice Calc window titled "Untitled1 - StarOffice Calc". The spreadsheet shows the text "Top secret data" in cell A1. The interface includes a menu bar (File, Edit, View, Insert, Format, Tools, Data, Window, Help), a toolbar with icons for file operations and editing, and a status bar at the bottom showing "Sheet 1 / 3", "Default", "100%", "STD", and "Sum=".

StarOffice on Solaris  
(remote app)

Outlook window titled "Attempt to copy secure data". The email draft is addressed to "Red Fox" with the subject "Attempt to copy secure data". The body text reads: "Red Fox, When I attempt to copy the Top Secret data from the server, this damned Sun Secure Global Desktop Software product somehow stops me! Here's what it tells me: Sun Secure Global Desktop Software: Copied data not available to this application". The interface includes a menu bar (File, Edit, View, Insert, Format, Tools, Message, Help), a toolbar with icons for Send, Cut, Copy, Paste, Undo, Check, Spelling, and Attach, and a status bar at the bottom.

Outlook on Windows XP  
(local app)

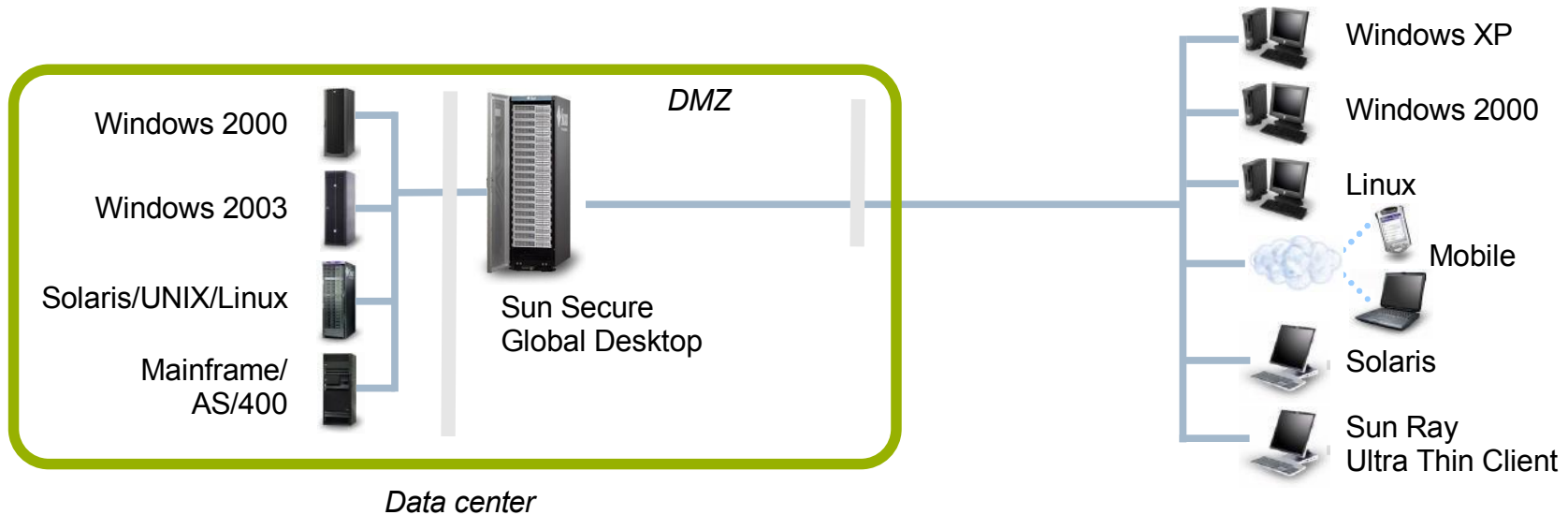
# Additional Security Enhancements

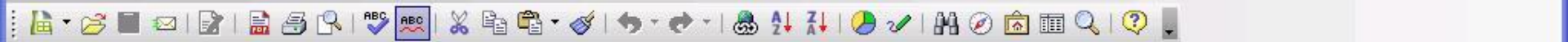
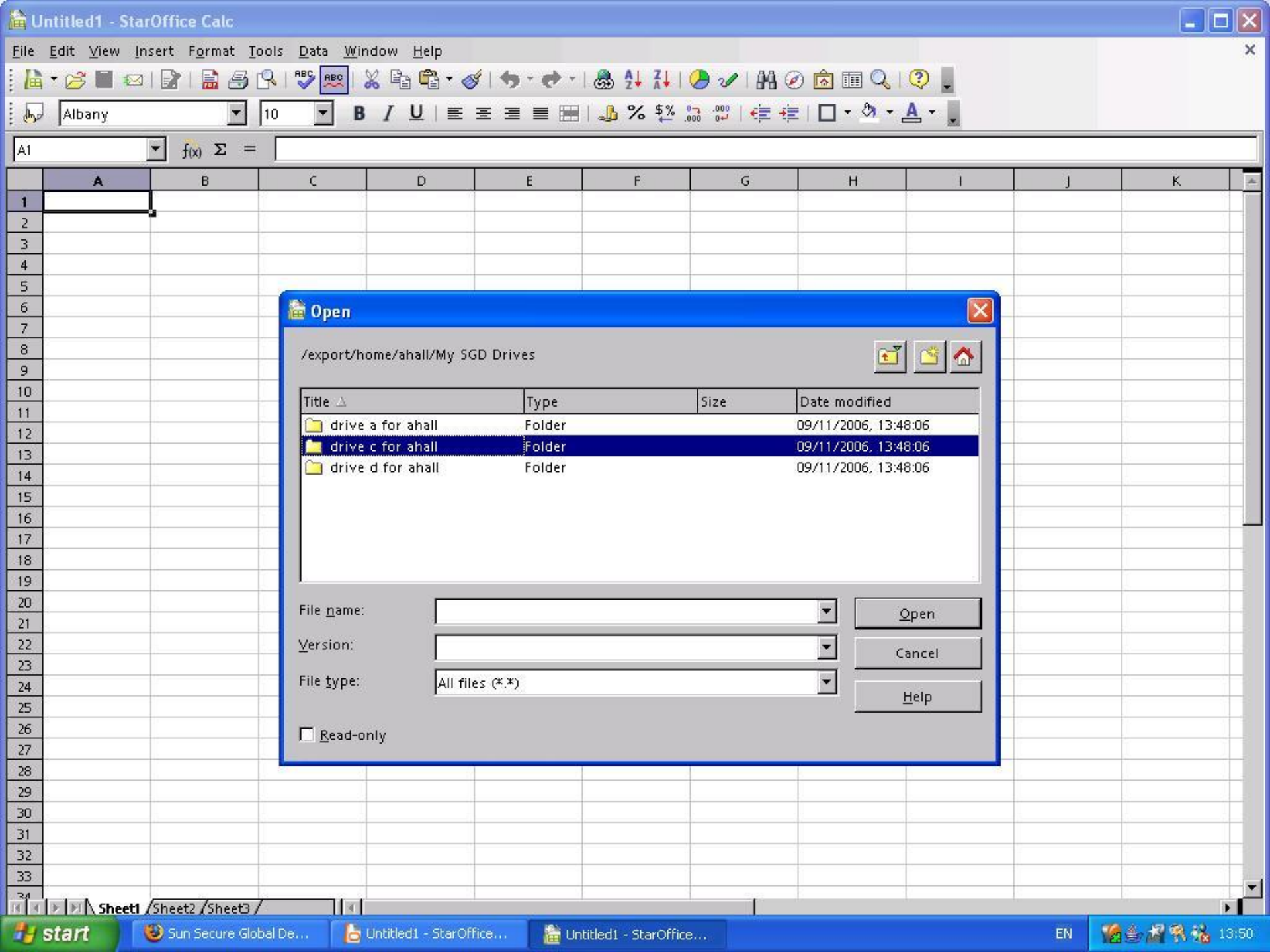


- Protection for clients against unauthorized / spoofed servers
  - > Anti- “phishing” measure
- PAM
  - > Pluggable Authentication Modules as the UNIX login authority
- Two-factor authentication for UNIX applications
  - > Allows for SecurID token card based authorizations for accessing UNIX applications

# Additional Device Support

- Client Drive Mapping for UNIX and Linux applications





	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											

**Open**

/export/home/ahall/My SGD Drives

Title	Type	Size	Date modified
drive a for a hall	Folder		09/11/2006, 13:48:06
drive c for a hall	Folder		09/11/2006, 13:48:06
drive d for a hall	Folder		09/11/2006, 13:48:06

File name:

Version:

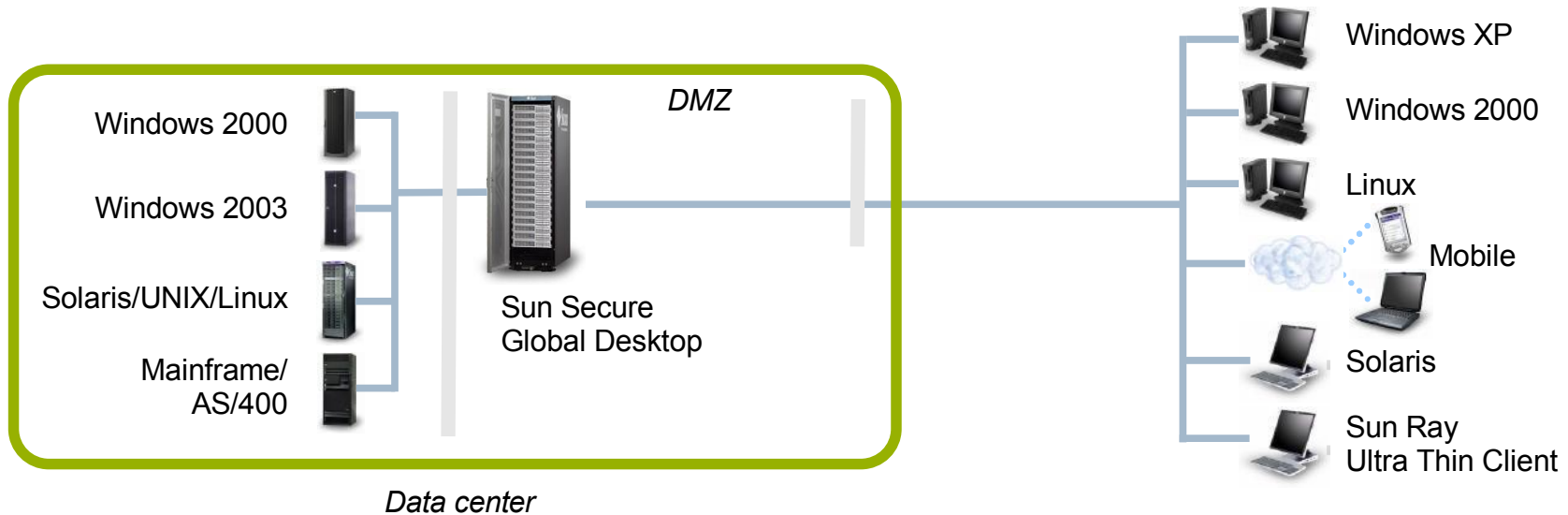
File type: All files (\*.\*)

Read-only

Open Cancel Help

# Additional Device Support

- Client Drive Mapping for UNIX and Linux applications
- PDF printing for UNIX and Mac clients





Sun Secure Global Desktop Software

http://shola.uk.sun.com/sgd/index.jsp

Apple .Mac Amazon eBay Yahoo! News (59) Apple (36)

Sun Secure Global Desktop [HELP](#) [INFO](#) [LOGOUT](#)

APPLICATIONS [EDIT](#) ahal's Webtop

Suspend All | [Resume All](#) | Cancel All

- Gnome Terminal (shola)
- JDS Session
- Mozilla (shola)
- Notepad
- Star Office Calc (Solaris)
- Star Office Impress (Solaris)
- Star Office Writer (Solaris)
- Sun web site
- VT420 (shola)
- Windows Desktop Session
- Windows Firefox
- xclock (shola)

PRINTING [LIST ALL JOBS](#)

Pause | Resume | Cancel All

1 Document Queued

**Welcome to your Webtop**

Hello, ahal. You are currently using a **standard** connection.

Copyright © 2006 Sun Microsystems, Inc. All rights reserved.





Sun Secure Global Desktop Software

Macintosh HD

http://shola.uk.sun.com

Sun Microsystems - Web Browser

File Edit View Go Bookmarks Tools Window Help

Back Forward Reload Stop

http://www.sun.com/

Search Print

Home Bookmarks Java Desktop System Sun Microsystems

Java | Solaris | Communities | Partners | My Sun | Sun Store

United States | Worldwide

# JAVA SE 6 — COMING SOON, COMMUNITY-DEVELOPED

Sun prepares to open source the Java Development Kit and the Java Platform, Micro Edition implementation. [» Read More](#)

## Sun Tech Days

Take part in Sun's worldwide developer conference.

## Avoid an Identity Crisis

New Sun Developer Network Channel.

## Try One - Free

Test drive a Sun Fire X4100 or Sun Fire X4200 server.

Products Downloads Services & Solutions Support Training Developer

Search

What's New: [Moving Beyond Today's Blades \(Sun Inner Circle\)...](#) [» More News](#) [XML](#)

» Shop for Products  
Identity Mgmt Servers  
Software Solaris 10  
Get a free rack and more with [»](#)

» View All Promotions

» Communities  
Customer Stories  
Research

» View All Downloads  
Run Desktop Apps Faster with java

Read www.sun.com





Sun Secure Global Desktop Software

Sun Microsystems - Web Browser

File Edit View Go Bookmarks Tools Window Help

- New
- Open Web Location... Ctrl+Shift+L
- Open File... Ctrl+O
- Close Ctrl+W
- Save Page As... Ctrl+S
- Send Page...
- Send Link...
- Edit Page Ctrl+E
- Upload File...
- Page Setup...
- Print Preview
- Print... Ctrl+P**
- Work Offline
- Quit Ctrl+Q

http://shola.uk.sun.com

Apple .Mac Amazon eBay Yahoo

Search Print

United States | Worldwide

### SOON, JAVY-DEVELOPED

java Development Kit and the Java

Sun Tech Days  
Take part in Sun's worldwide developer conference.

Avoid an Identity Crisis  
New Sun Developer Network Channel.

Try One - Free  
Test drive a Sun Fire X4100 or Sun Fire X4200 server.

Products Downloads Services & Solutions Support Training Developer

What's New: The Art of the Operating System with Sun Fellow Tim Marsland (Contrarian Minds)...

Shop for Products View All Promotions Communities View All Downloads

Identity Mgmt Software Servers Solaris 10

Get a free rack and more with

Customer Stories Research

Run Desktop Apps Faster with java

Read www.sun.com







Macintosh HD

Sun Secure Global Desktop Software

Web Browser: Sun Microsystems - Web Browser

Print Dialog:

- Printer: PostScript/tta\_pdfprinter
- File: /export/home/ahall/mozilla.ps
- Print Range:  All Pages
- Copies: Number of copies: 1
- Print Frames:  As laid out on the screen

Applications List:

- Gnome Terminal (shola)
- JDS Session
- Mozilla (shola) (1)
- Session 1
- Notepad
- Star Office Calc (Solaris)
- Star Office Impress (Solaris)
- Star Office Writer (Solaris)
- Sun web site
- VT420 (shola)
- Windows Desktop Session
- Windows Firefox
- xclock (shola)

Printing: 1 Document Queued

Web Page Content:

- United States | Worldwide
- Sun Tech Days
- Avoid an Identity Crisis
- Try One - Free
- Products Downloads Services & Solutions Support Training Developer
- What's New: Register Today for FORUM 2006, Sun's Storage Conference (October 10-12, 2006)...
- Shop for Products View All Promotions Communities View All Downloads





Sun Secure Global Desktop Software

APPLICATIONS

Suspend All | Resume All | Cancel All

- Gnome Terminal (shola)
- JDS Session
- Mozilla (shola) (1)
  - Session 1
- Notepad
- Star Office Calc (Solaris)
- Star Office Impress (Solaris)
- Star Office Writer (Solaris)
- Sun web site
- VT420 (shola)
- Windows Desktop Session
- Windows Firefox
- xclock (shola)

PRINTING

Pause | Resume | Cancel All

1 Document Queued

Sun Microsystems - Web Browser

http://www.sun.com/

File Edit View Go Bookmarks Tools Window Help

Back Forward Reload Stop

Home Bookmarks Java Desktop System Sun Microsystems

Java | Solaris | Communities | Partners | My Sun | Sun Store

United States | Worldwide

# JAVA SE 6 — COMING SOON, COMMUNITY-DEVELOPED

Sun prepares Platform, M...

Sun Tech Days  
Take part in Sun's worldwide developer conference.

Crisis  
Developer Channel.

Free  
Sun Fire X4100 or Sun Fire X4200 server.

Printing

Title: Sun Microsystems  
Progress: Preparing...

Cancel

Products Downloads Services & Solutions Support Training Developer

Search

What's New: NetTalk: Migrating to NetBeans... More News XML

Shop for Products View All Promotions Communities View All Downloads

Identity Mgmt Software Servers Solaris 10

Get a free rack and more with X4100

Customer Stories Research

Run Desktop Apps Faster with Java

Read www.sun.com



ttaprint.tmp.6 (1 page)

Drawer Previous Next Page Back/Forward Zoom In Zoom Out Tool Mode

Home | Solutions | Companies | Partners | My Sites | Sites Search

# JAVA SE 6 — COMING SOON, COMMUNITY-DEVELOPED

Sun prepares to open source the Java Development Kit and the Java Platform, Micro Edition implementation. [Read More](#)

**Sun Tech Days**  
Take part in Sun's worldwide developer conference.

**Avoid an Identity Crisis**  
New Sun Developer Network Channel.

**Try One - Free**  
Test drive a Sun Fire X4100 or Sun Fire X4200 server.

**What's New:**

- Shop for Products:** Identity Mgmt, Software Services, Oracle Product, UltraSPARC T2+, Networking, Sun Grid
- View All Promotions:** Get a free rack and more with x86 servers. [Learn More](#)
- Communities:** Customer Stories, Research, System Administrators, Partners, Investors, Education, Blogs from Sun
- View All Downloads:** Run Desktop Apps Faster with Java, NetScout Simple, intuitive UI, SOLARIS The Most Advanced OS on the Planet

powered by

Contact: About Sun | News & Events | Employment | Site Map | Privacy | Terms of Use | Trademarks  
Copyright 1996-2006 Sun Microsystems, Inc.

Microsystems - Web Browser

sun.com/ Search Print

Sun Microsystems

United States | Worldwide

# COMMUNITY-DEVELOPED

ment Kit and the Java [Read More](#)

**Sun Tech Days**  
Take part in Sun's worldwide developer conference.

**Avoid an Identity Crisis**  
New Sun Developer Network Channel.

**Try One - Free**  
Test drive a Sun Fire X4100 or Sun Fire X4200 server.

Solutions Support Training Developer Search

Follow Tim Marsland (Contrarian Minds)...

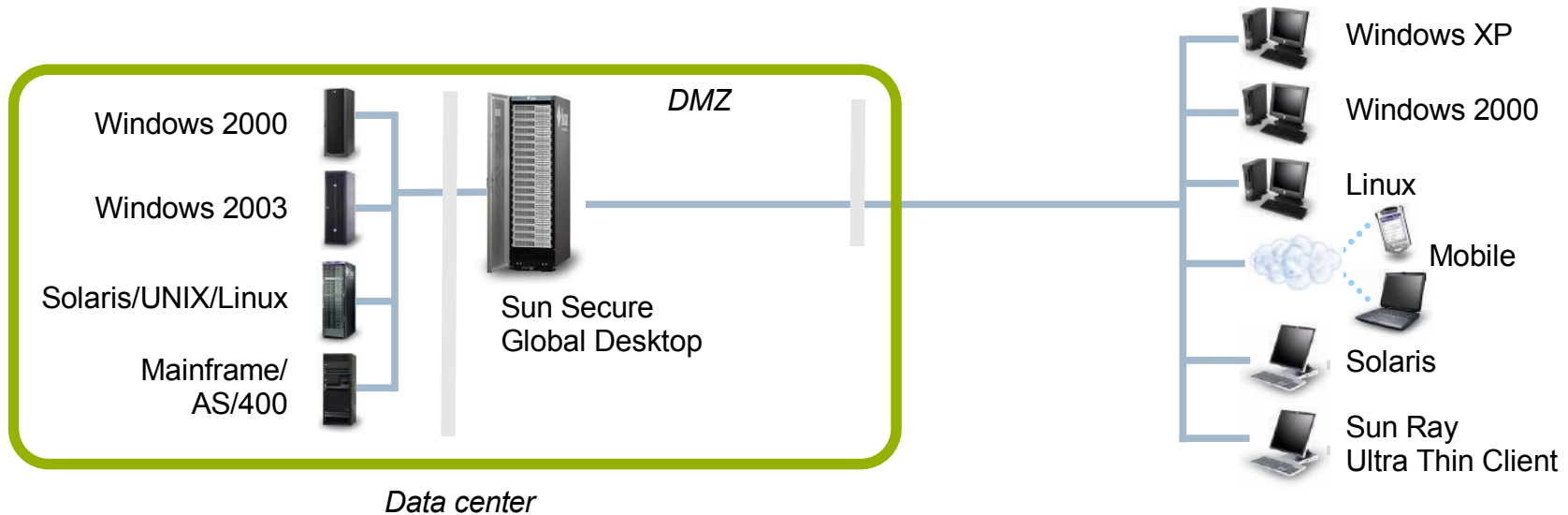
**Communities**  
Customer Stories  
Research

**View All Downloads**  
Run Desktop Apps Faster with Java



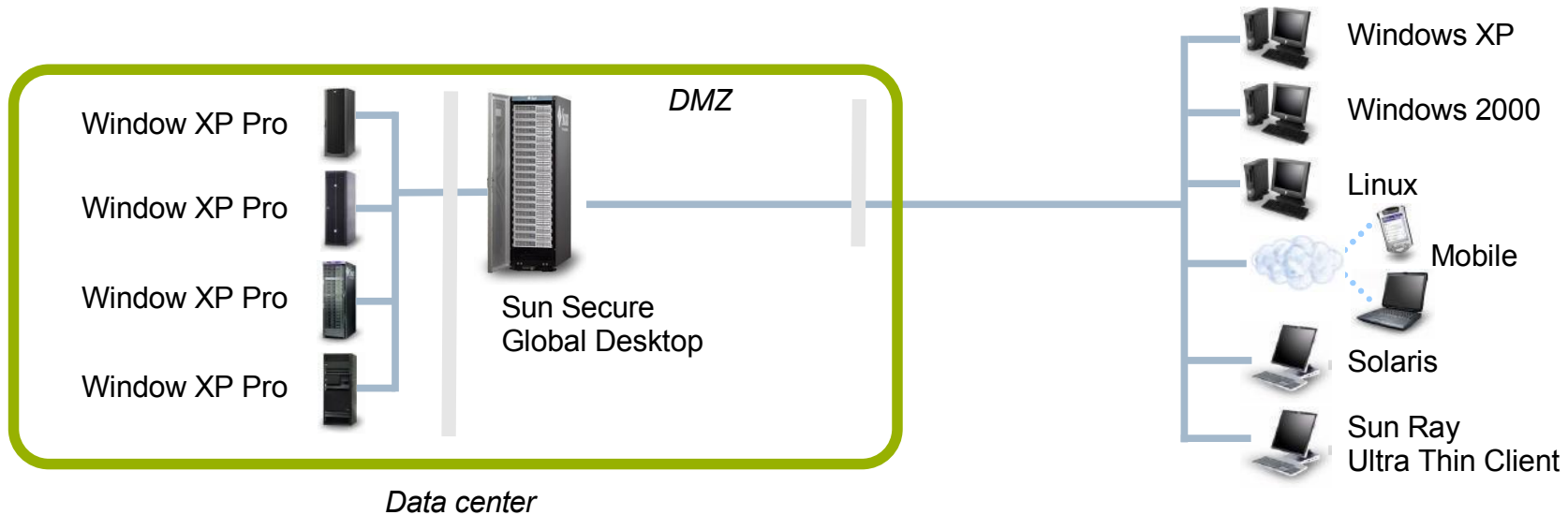
# Additional Device Support

- Client Drive Mapping for UNIX and Linux applications
- PDF printing for UNIX and Mac clients
- COM port mapping for Windows apps



# Windows XP Pro Remote Desktops

- Secure, remote access to a fat client
  - > Disaster planning (bird flu, terrorism threat, etc.)
  - > Remote working
  - > Virtualize XP Pro “Servers” (e.g. VMware Servers)



Sun Secure Global Desktop Software

http://masala.uk.sun.com/sgd/index.jsp?langSelected=en

Apple .Mac Amazon eBay Yahoo! News (59) Apple (36)

Sun Secure Global Desktop [HELP](#) [INFO](#) [LOGOUT](#)

APPLICATIONS [EDIT](#) Andy Hall's Webtop

Suspend All | Resume All | Cancel All

[My Windows PC Desktop](#)

**Welcome to your Webtop**

Hello, **Andy Hall**. You are currently using a **standard** connection.

Resumable until log out, displays in a single scalable independent window (3 sessions)

PRINTING [LIST ALL JOBS](#)

Pause | Resume | Cancel All

No Documents Queued

Copyright © 2006 Sun Microsystems, Inc. All rights reserved.




Sun Secure Global Desktop Software

http://masala.uk.sun.com/sgd/index.jsp?langSelected=en

Google

Apple .Mac Amazon eBay Yahoo! News (59) Apple (36)



APPLICATIONS EDIT

Suspend All | Resume All | Cancel All

My Windows PC Desktop (1)


Session 1

PRINTING LIST ALL JOBS

Pause | Resume | Cancel All

No Documents Queued

My Windows PC Desktop



Sun Secure Global Desktop Software

http://masala.uk.sun.com/sgd/index.jsp?langSelected=en

Google

Apple .Mac Amazon eBay Yahoo! News (59) Apple (36)



Sun Secure Global Desktop Software

Andy Hall's

APPLICATIONS EDIT

Suspend All | Resume All | Cancel All

My Windows PC Desktop (1)

Session 1

PRINTING LIST ALL JOBS

Pause | Resume | Cancel All

No Documents Queued

Copyright © 2006 Sun Microsystems, Inc. All rights reserved.

My Windows PC Desktop

ahall

- Internet Mozilla Firefox
- E-mail Outlook Express
- MSN Explorer
- Windows Media Player
- Windows Movie Maker
- Tour Windows XP
- Files and Settings Transfer Wizard
- StarOffice Impress
- All Programs
- My Documents
- My Recent Documents
- My Pictures
- My Music
- My Computer
- Control Panel
- Printers and Faxes
- Help and Support
- Search
- Run...
- Windows Security

start

Log Off Disconnect

Recycle Bin





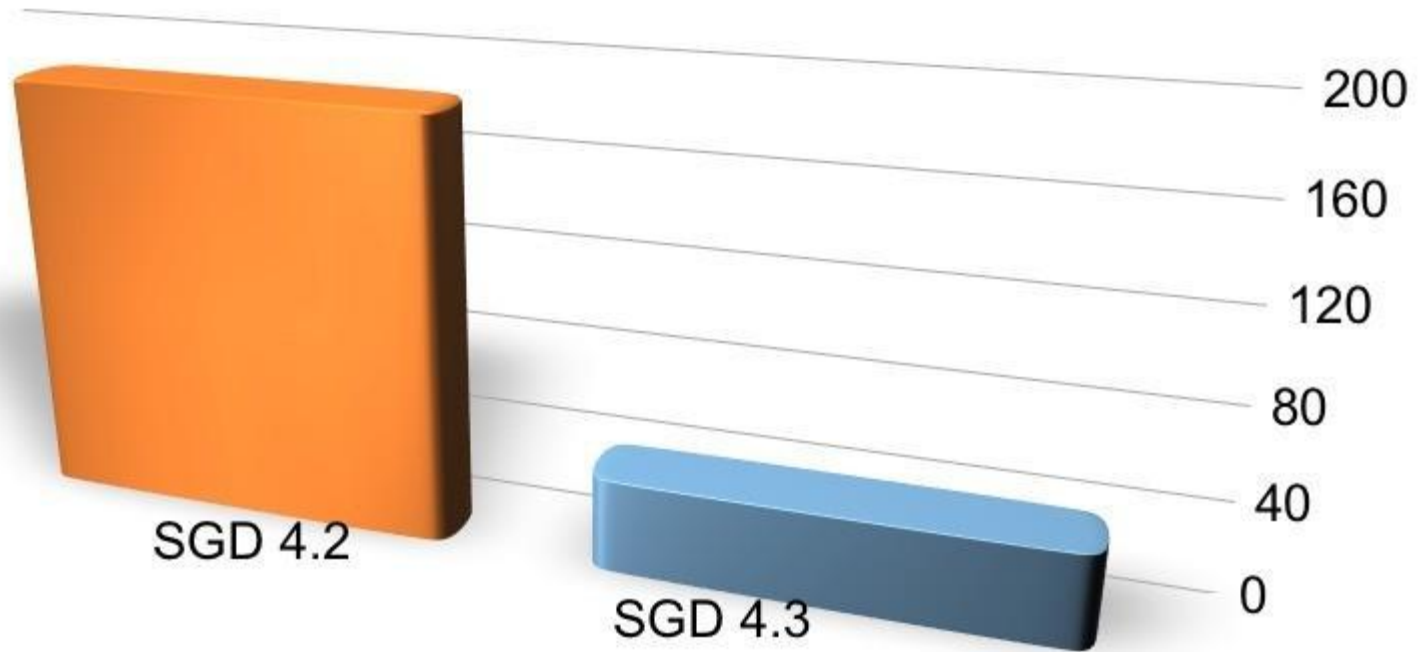
# Performance Improvements

80%

Less Bandwidth Consumed

When running WinBench Business Graphics Benchmark

# Performance Improvements



Network Usage  
Shorter Bars are Better

# Performance Improvements



- Significant enhancements to Adaptive Internet Protocol (AIP)
- New context sensitive compression
- Better packet shaping on high performance networks
- “Ack-less Overdrive” maximizes performance on reliable networks

# Performance Improvements

30%

Faster Performance in WinBench Business Graphics Benchmark

# Performance Improvements



WinBench Business Graphics Benchmarks  
Longer Bars are Better

# Performance Improvements



- Entirely new graphics subsystem
- Increased bitmap cache in RAM on client
- Faster cache lookup algorithm

# Localizations

- Localized User Interface
- Translated Documentation
- Locale-aware launch scripts
- One array can support multiple locales

