



# Sun VDI 3.1 Update

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Desktop Virtualization

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# Agenda

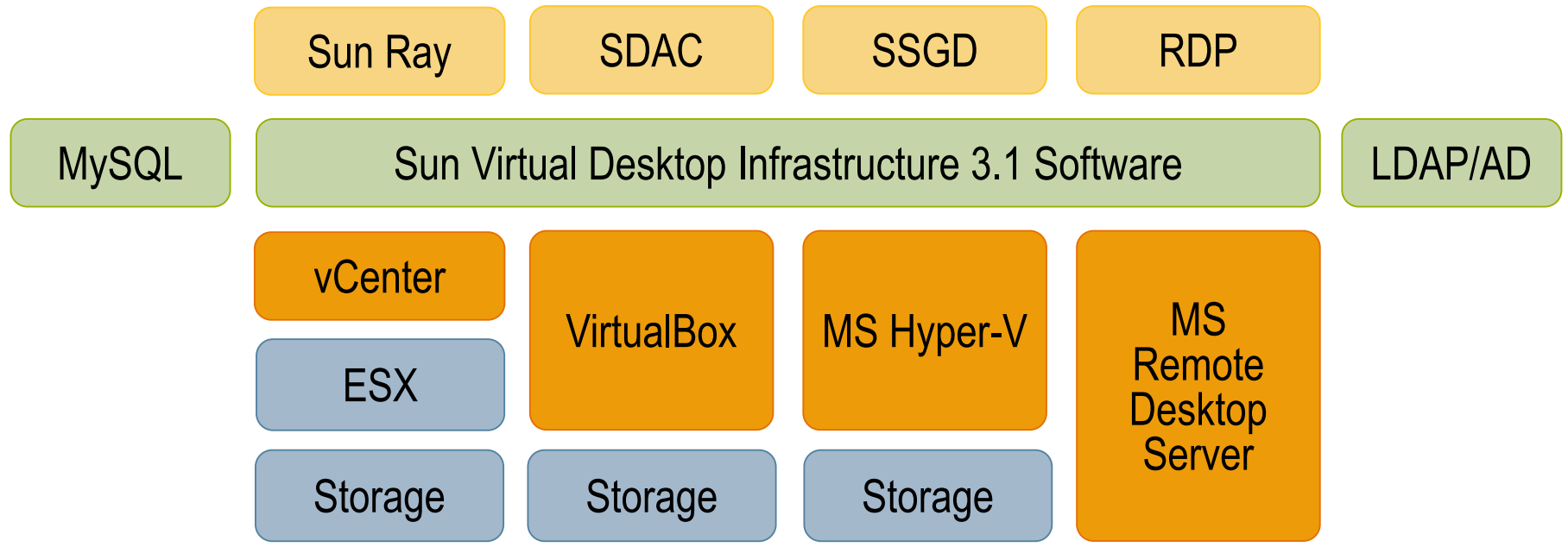
- Added features in Sun VDI 3.1
- Sun VDI Architecture
- Virtualization Layer
- Password Reset
- Desktop Access
- Summary

# Added Features in Sun VDI 3.1

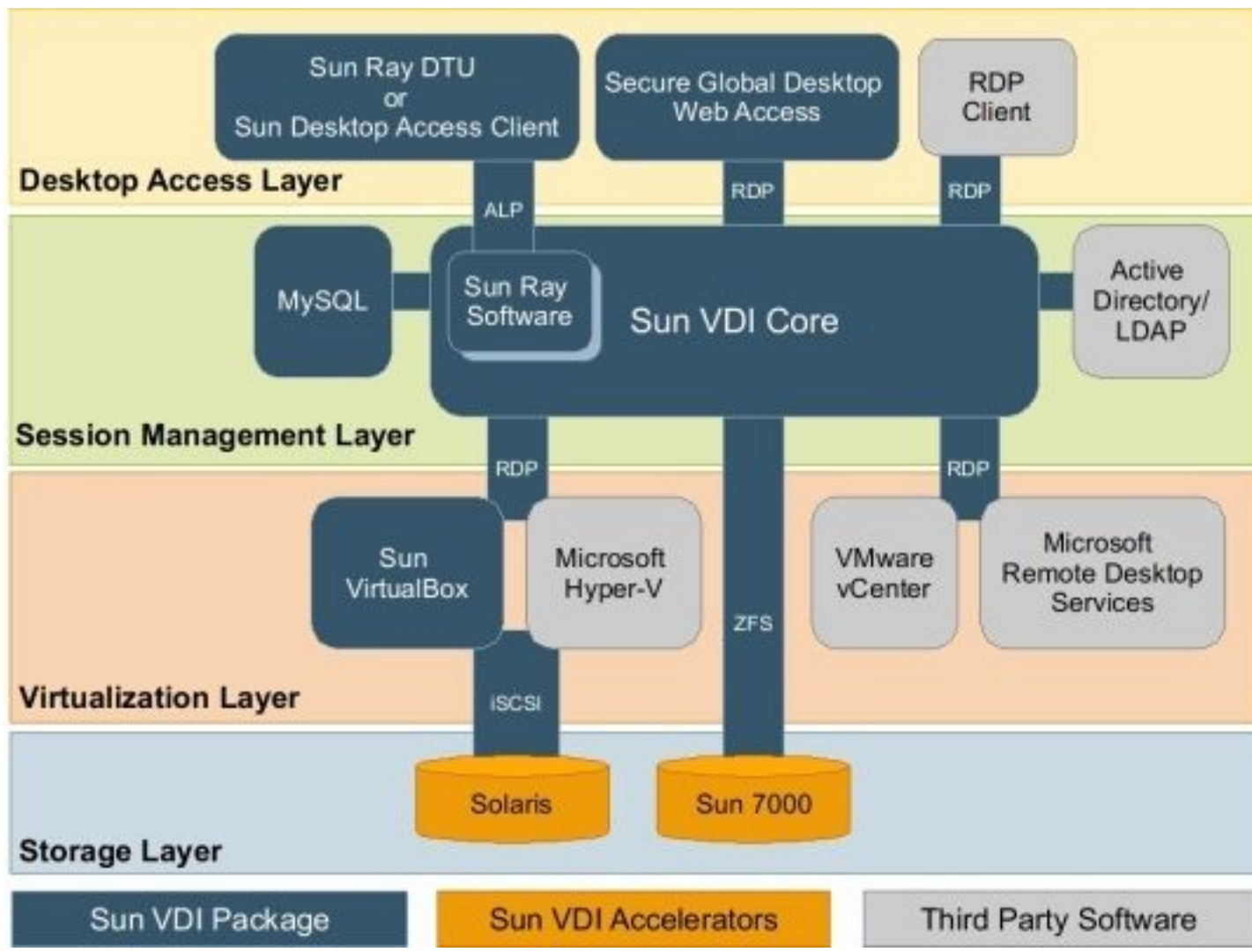
- **Virtualization Platform:**
  - > Microsoft Hyper-V Virtualization Platform
  - > Microsoft Remote Desktop Platform
  - > Enhanced Sun VirtualBox features
- **Sun VDI Management:**
  - > Template Management and Maintenance Mode for VirtualBox and Hyper-V Platforms
  - > New Pool Settings and Per Pool Network Configuration
- **Password Reset for Windows**
- **Sun Ray Software 5**

# Sun Virtual Desktop Infrastructure Architecture

# Sun VDI 3.1 Architecture



# Sun VDI 3.1 Architecture



# Sun VDI Package Software

- **Bundled Software**
  - > Sun Virtual Desktop Infrastructure Software 3.1
    - Sun VDI Core
    - Sun Ray Software 5
    - MySQL Cluster 7.0.8a
  - > Sun VirtualBox for VDI 3.1 (Solaris 10 x86 only)
- **Additional Supported Software**
  - > Sun Secure Global Desktop 4.50 (SGD) and above
  - > Sun VirtualBox for VDI 3.1 (additional platforms for creating desktop templates)

# Virtualization Layer

# Virtualization Layer – Hypervisors

- Sun VirtualBox
- VMware Infrastructure
- Microsoft Hyper-V
- Microsoft Remote Desktop Services
  - > (Terminal Services)

# Microsoft Remote Desktop Services

- **Microsoft TS on Windows Server 2003**
  - > A single server running Windows Server 2003
  - > A cluster of servers with the following characteristics:
    - All servers running Windows Server 2003, any edition
    - The cluster is a Microsoft Network Load Balancing (NLB) cluster, which provides load balancing among servers
- **Microsoft RDS on Windows Server 2008**
  - > A single server running Windows Server 2008
  - > A farm of servers with the following characteristics:
    - All servers running Windows Server 2008
    - Microsoft TS Session Broker is used to enable load balancing and enable users to reconnect to existing sessions.

# Prepare a Windows Server for VDI

- Sun VDI Core wants to communicate with Windows server
  - > Critical information about the server can be displayed in the VDI Manager:
    - CPU usage, memory usage
    - Number of user sessions
    - Logout, disconnect sessions
- No Agent required on Windows server
  - > Windows Remote Management (WinRM)
  - > Uses HTTPS (secure protocol)
  - > WinRM requires a server certificate
  - > Encryption of the communication channel

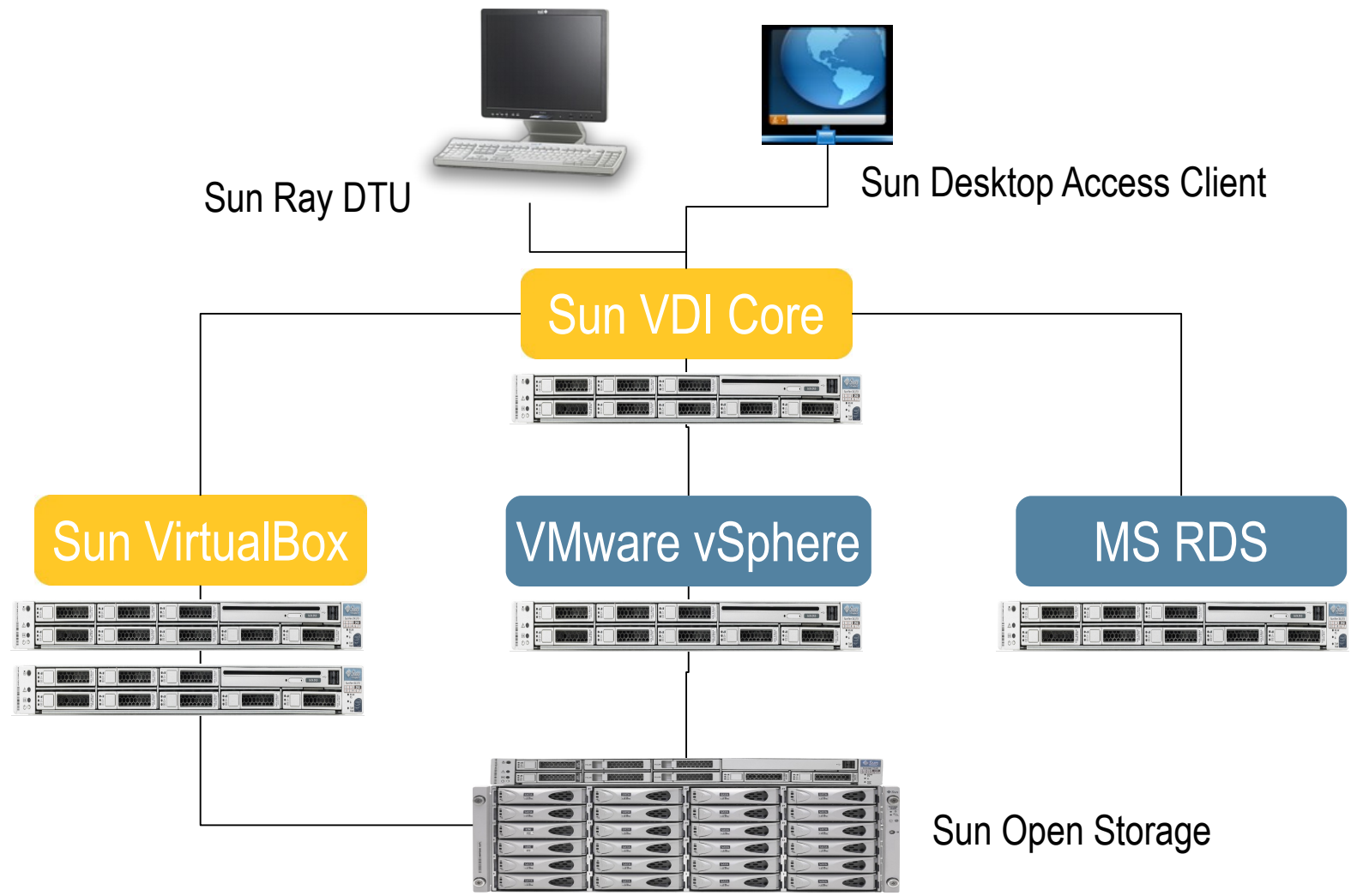
# Configure a Windows Server for VDI

- **Generate self-signed certificate**
  - > selfssl.exe which is part of IIS 6.0 Resource Kit
  - > certutil manages certificates
  - > Beware of time-synchronization
- **Configure winrm to listen for HTTPS requests**
  - > Included in Windows 2008
  - > Download the WS-MAN v1.1 for Windows 2003
  - > Three steps:
    - Create Listener on port 443 (default)
    - Open firewall setting
    - Enable Basic authentication

# Configure RDS on Sun VDI Server

- Create Microsoft Remote Desktop Providers
  - > Single Remote Desktop (Terminal) Services host **OR**
  - > Several Remote Desktop (Terminal) Services hosts that all participate in the same cluster.
- Create a Desktop Pool
  - > Always a Flexible Pool
  - > Different Pool configuration options
    - No templates, no cloning, no recycling, no personal assignment
- Assign Users or Groups to the Pool

# Demo Infrastructure



Demo...

# Password Reset

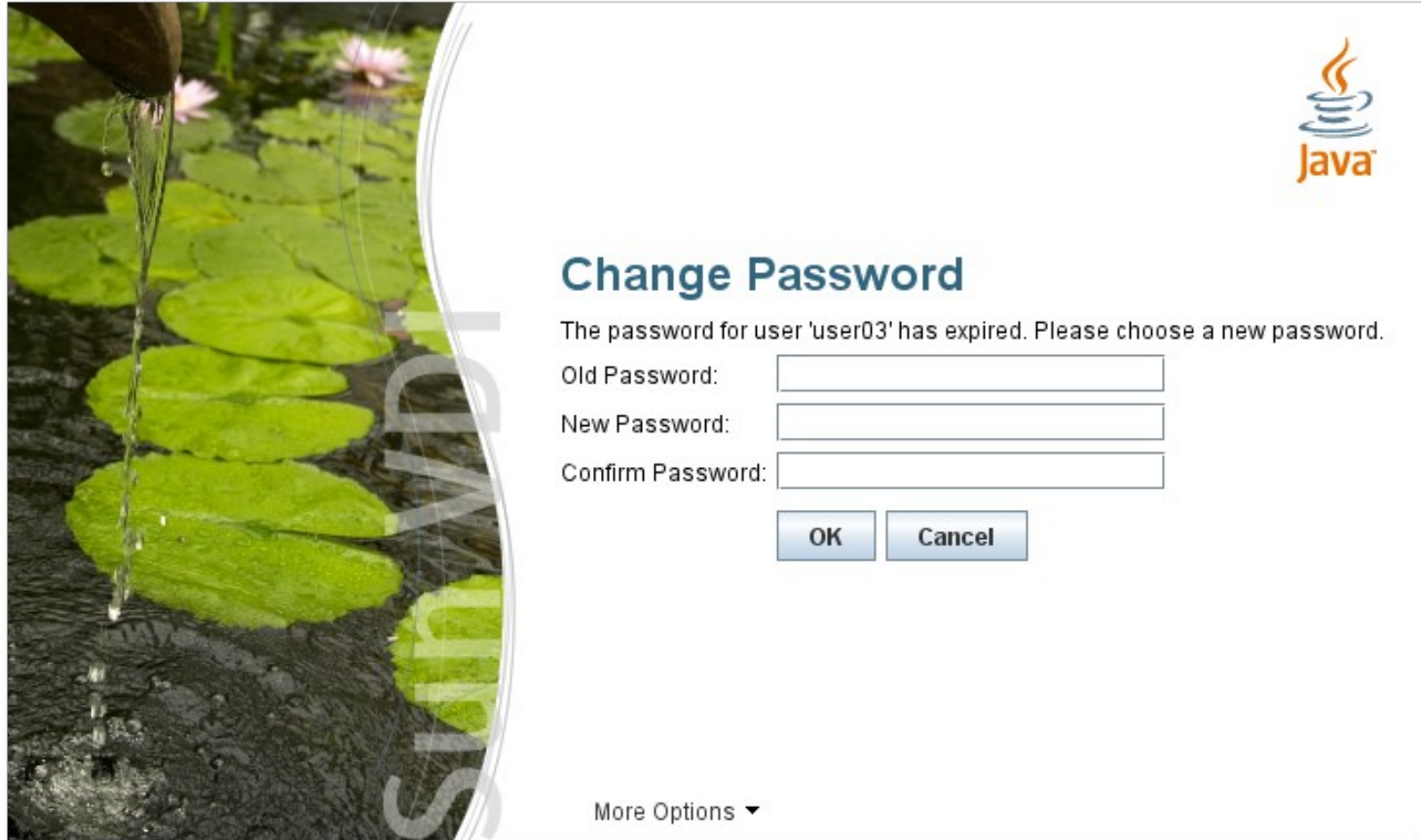
# User Directories


- Active Directory
  - > Kerberos Authentication (single domain tree)
  - > Public Key Authentication
- LDAP Directory
  - > Anonymous Authentication
  - > Simple Authentication
  - > Secure Authentication
- AD as LDAP Directory is supported
  - > Limited features

# Active Directory Integration

- Access all the users from a forest
  - > Use those users for desktop and pool assignments.
  - > Users in the sub-domains
- Computer entries removed from the AD
  - > When cloned desktops are deleted by the VDI Core.
  - > Need credentials of a user that has 'write' access
- Allows end-users update their password in AD
  - > Optional action: before password has expired
  - > Mandatory action: change password at next logon or the password has expired

# Password Reset via Sun VDI





## Change Password

The password for user 'user03' has expired. Please choose a new password.

Old Password:

New Password:

Confirm Password:

More Options ▾

# Warnings for Password Reset

- Only supported for
  - > Active Directory (from Windows Server 2003 and 2008)
  - > Sun Directory Server
- Depends on Authentication Type used
  - > Kerberos, PKI: before and after password has expired
  - > LDAP anonymous, simple and secure only before password has expired
- Warning: AD used as LDAP server

# Password Reset Alternatives

- Inform users,
  - > Common practice, e.g. 4 weeks before expiration
  - > Expired → Helpdesk
- Use Identity Management system to address Identity and Access issues
- Disable client-authentication in Sun VDI Broker
  - > How to handle unauthorized users with non-smard card access ?
  - > Only use this alternative with smart-card access enabled and non smart-card disabled

Demo...

# Desktop Access

# Windows Session on the Sun Ray client



# Sun Desktop Access Client

- Desktop Access Client
  - > Software version of Sun Ray DTU
  - > Runs on Windows (XP, Vista, Win 7)
- Must activate SDAC access on Server
  - > SRSS: default access disabled
  - > Sun VDI: default is access enabled
- System Policy change in SRSS GUI
  - > Non-smart card access
  - > Need to restart server

# SDAC is not equal Sun Ray DTU

- No smart card access
- No USB redirection
- No client-side multi-media enhancements
- Network provisioning is different
  - > Find automatically: vendor-option DHCP
  - > Enter name of server
- No-VPN included
  - > Use the VPN-client on your host platform

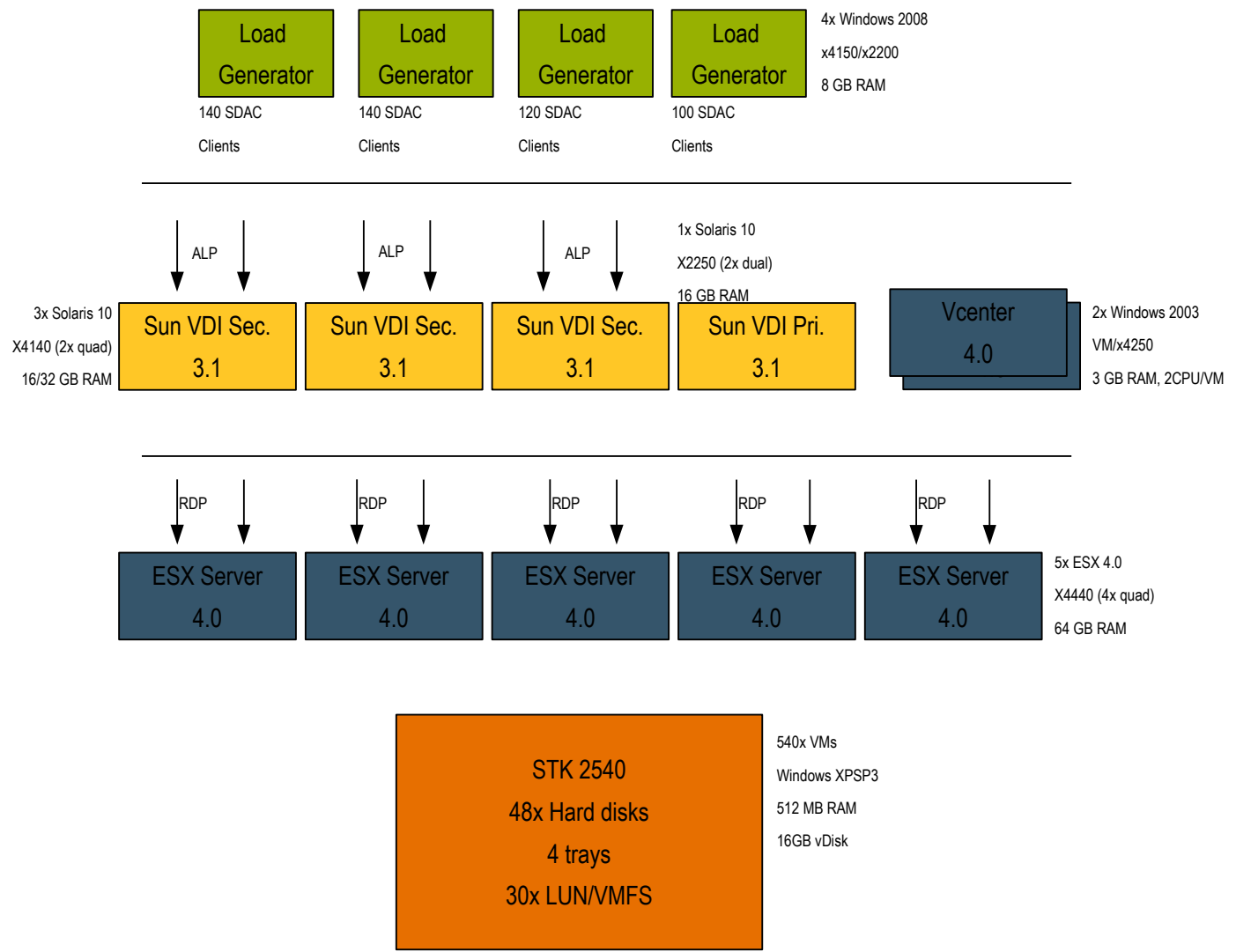
# SDAC use-case

- Loadtest for Customer
  - > Simulate Sun Ray DTU users with SDAC
- Use connection profile with SDAC settings
  - > Created when started for the first time
  - > Default profile with name “default”
- Run SDAC sessions from command-line
  - > Use a different connection profile per SDAC session
- Token depends on key in connection profile
  - > pseudo.74cc1c801be1fedb8eb69c57abdf4782

# Goal of Test

- Customer wanted to know how the system performs with 500 users
- Defined 4 use-case scenario's, running in Windows XP and simulates interactive user
- Multiple Tests:
  - > Stress Test (Full load with 510 VMs)
  - > Failover test (outage ESX and Sun VDI server)
  - > Windows XP VM Acceptance test
  - > Management, Operations test

# Target Infrastructure



# Launching SDAC clients:

Script runs on each Windows 2008R2 Loadgenerator

```
SESSIONS=140
```

```
DELAY=3
```

```
for (( i=1 ; i<=$SESSIONS ; i++ )) do
```

```
    # Launch the SDAC with the generated profile
```

```
    echo "Launch Sun Desktop Access Client $i"
```

```
    "$SDAC" --profile "sdac${i}.txt" $VDIHOST &
```

```
    sleep $DELAY
```

```
done
```

Demo...

# More Info

- Sun VDI Software
  - > <http://www.sun.com/software/vdi/>
- Sun VDI 3.1 Documentation
  - > <http://wikis.sun.com/display/VDI3dot1/Home>
- Blogs
  - > <http://planets.sun.com/VDI/group/Blogs/>



# Sun VDI 3.1 Software

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