



# New Features in XenApp 7.6

Citrix Summit 2015

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# Table of Contents

Table of Contents .....	2
Module 4 .....	3
Exercise 1: Prepare The Lab .....	<b>Error! Bookmark not defined.</b>
Exercise 2: Anonymous User Access .....	4
Exercise 3: Application Folders .....	20
Module 5 .....	<b>Error! Bookmark not defined.</b>
Exercise 1: Session Prelaunch and Lingering .....	30
Exercise 2: Connection Leasing .....	48
Exercise 3: PVS Wizard .....	<b>Error! Bookmark not defined.</b>
Exercise 4: PVS Disk Overflow .....	<b>Error! Bookmark not defined.</b>
Exercise 5: Broker Throttling .....	64
Module 6 .....	72
Exercise 1: Licensing Alerts .....	73
Exercise 2: Assign Users to Machines in Director .....	82
Exercise 3: Hosted Applications Usage Report .....	96
Appendix .....	<b>Error! Bookmark not defined.</b>
Appendix 1: Resetting the lab .....	<b>Error! Bookmark not defined.</b>
Appendix 2: NetScaler Integration .....	<b>Error! Bookmark not defined.</b>

# Module 1

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## What's new in XenApp 7.6

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In this module, you will prepare the lab environment for the remaining exercises by using the reset script and recreating the Controller Hosting connection. This module also introduces you to anonymous user access and application folders. Anonymous access allows quick access to applications by not requiring users to log in and application folders allows administrators to sort apps into folders for organizational purposes.

### Exercises in this module

- Exercise 1: Preparing the lab environment
- Exercise 2: Anonymous User Access
- Exercise 3: Application Folders

# Exercise 1: Anonymous User Access

## Overview



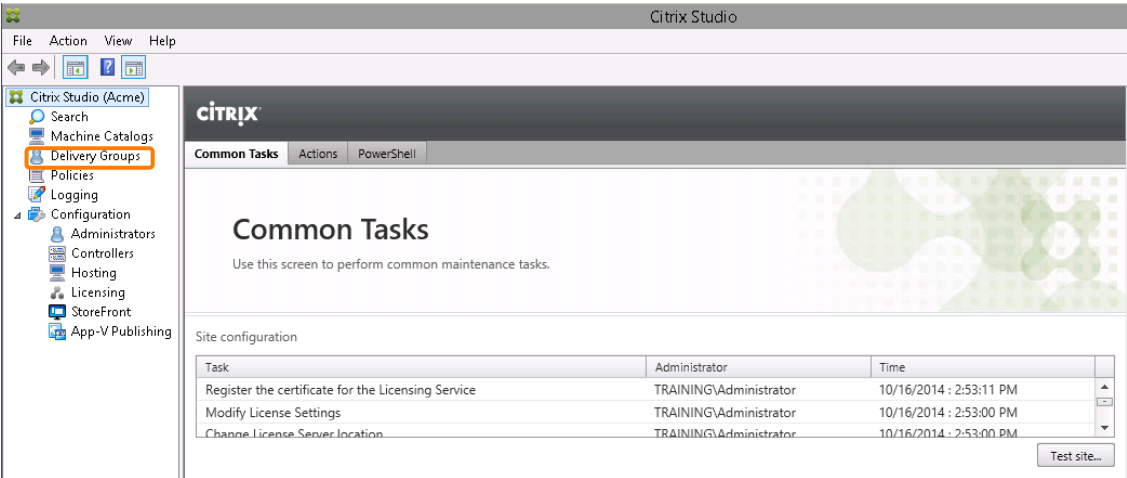
Anonymous user access enables unauthenticated access to applications and desktops hosted by XenApp 7.6. Configuration requires modifying Delivery Group settings and creating a separate unauthenticated StoreFront store.

In this exercise you will:

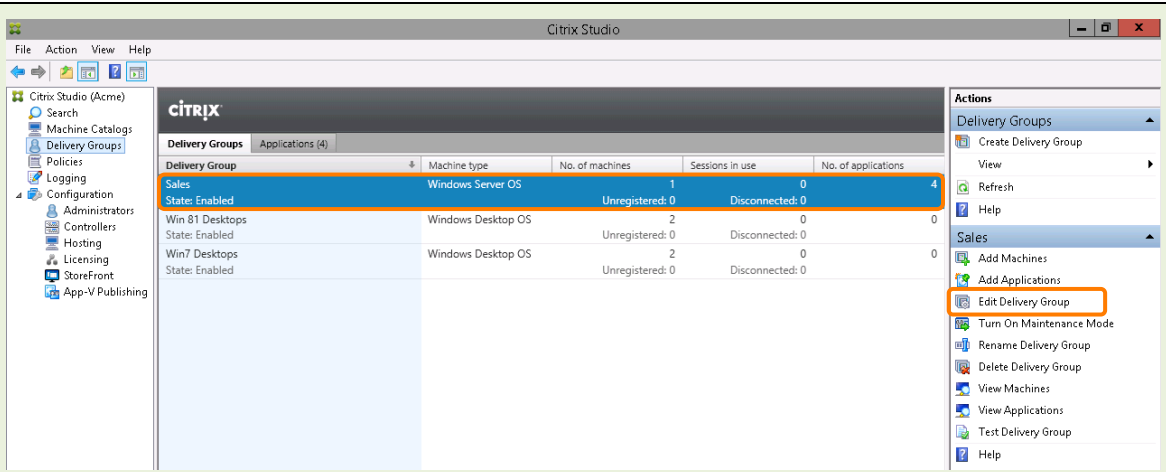
- Configure a Delivery Group for anonymous access.
- Create an unauthenticated Store.
- Test Anonymous access.

## Step by step guidance

Estimated time to complete this exercise: 25 minutes.

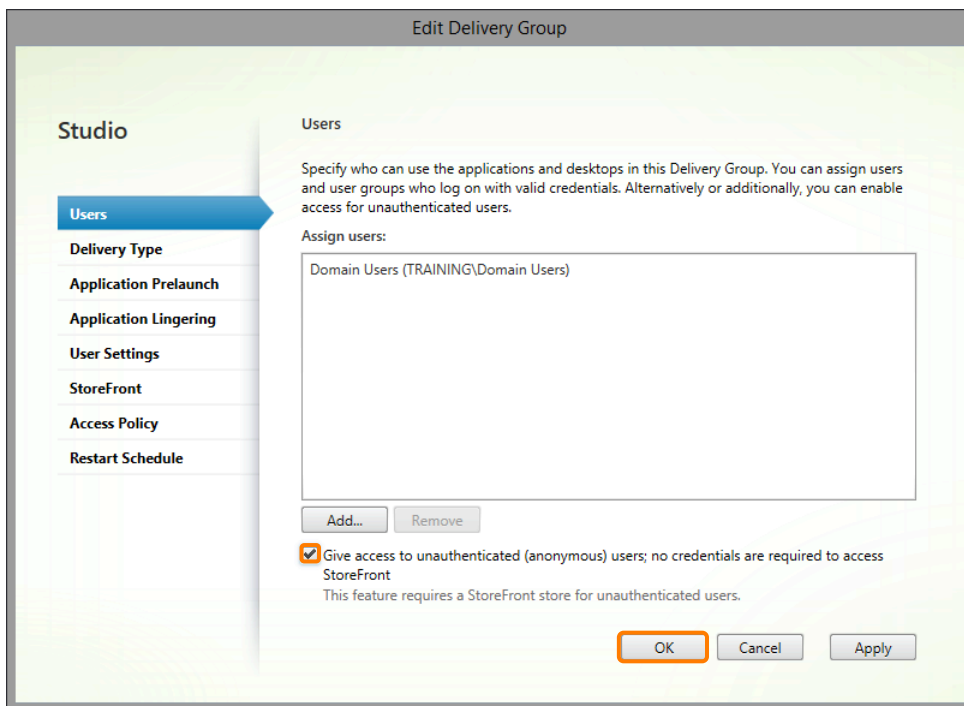
Step	Action
1.	<p>On the Student Desktop, double-click <b>DC1</b>.</p> 
2.	<p>On the DC1 Desktop, double-click the <b>Citrix Studio</b> icon.</p> 
3.	 <p>Click <b>Delivery Groups</b> on the left.</p>

4.



With the Sales Delivery Group highlighted, click **Edit Delivery Group** on the right.

5.



Check the box:

Give access to unauthenticated (anonymous) users; no credentials are required to access StoreFront	<input checked="" type="checkbox"/>
--	-------------------------------------

Click **OK**.

6.

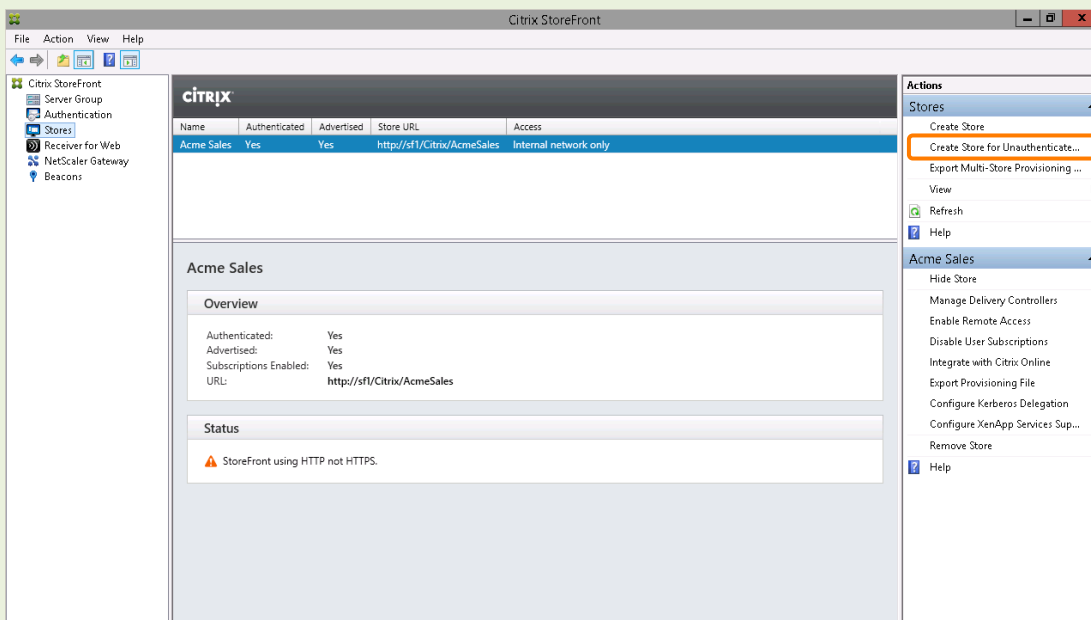
On the Student Desktop double-click the **SF1** shortcut.



7. On the SF1 desktop, double-click the **Citrix StoreFront** shortcut.

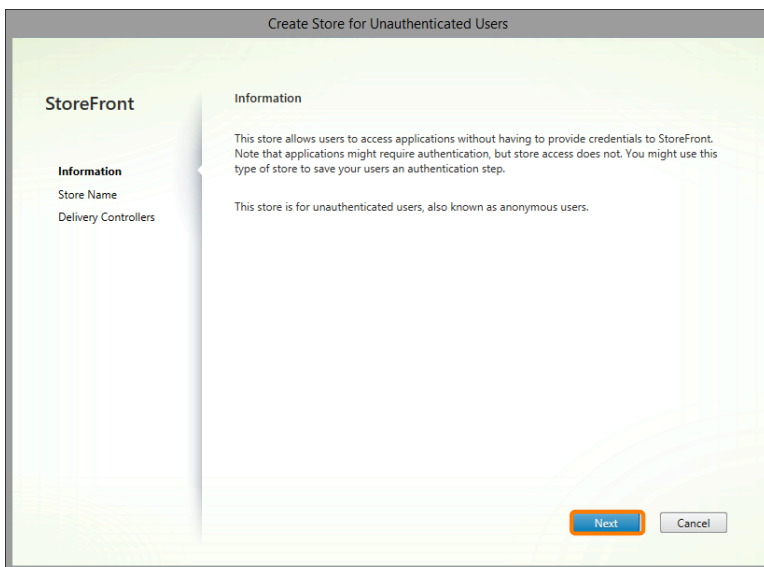


8.



Click **Create Store for Unauthenticated Users** on the right.

9.



Click **Next** on the Information page.

10.

**Create Store for Unauthenticated Users**

**StoreFront**

- Information
- Store Name**
- Delivery Controllers

**Store Name**

Choose a name that helps to identify the store.

Store name:

Back Next Cancel

Enter the following information:

Store name:	<b>AcmeAnonymous</b>
-------------	----------------------

Click **Next**.

11.

**Create Store for Unauthenticated Users**

**StoreFront**

- Information
- Store Name
- Delivery Controllers**

**Delivery Controllers**

Specify the delivery controllers and servers for this store.

Delivery controllers:

Name	Type	Servers
------	------	---------

Add... Edit... Remove

Back Create Cancel

On the Delivery Controllers page, click **Add...**

12.

Display name: XA76

Type:  XenApp 7.5 (or later), or XenDesktop  
 XenApp 6.5 (or earlier)  
 AppController  
 VDI-in-a-Box

Servers (load balanced):

Add... Edit... Remove

Transport type: HTTPS

Port: 443

OK Cancel

Enter the following information:

Display name:	XA76
---------------	------

Click **Add...**

The Add Delivery Controller window allows for the configuration of XenApp/XenDesktop servers to use with the new Store. These servers are grouped by the specified display name.

13.

Server name: DC1

OK Cancel

Type **DC1** and click **OK**.

14.

Display name: XA76

Type:  XenApp 7.5 (or later), or XenDesktop  
 XenApp 6.5 (or earlier)  
 AppController  
 VDI-in-a-Box

Servers (load balanced): DC1

Buttons: Add... Edit... Remove

Transport type: HTTP ⚠

Port: 80

Buttons: OK Cancel

Change the transport type dropdown to **HTTP**.

15.

Display name: XA76

Type:  XenApp 7.5 (or later), or XenDesktop  
 XenApp 6.5 (or earlier)  
 AppController  
 VDI-in-a-Box

Servers (load balanced): DC1

Buttons: Add... Edit... Remove

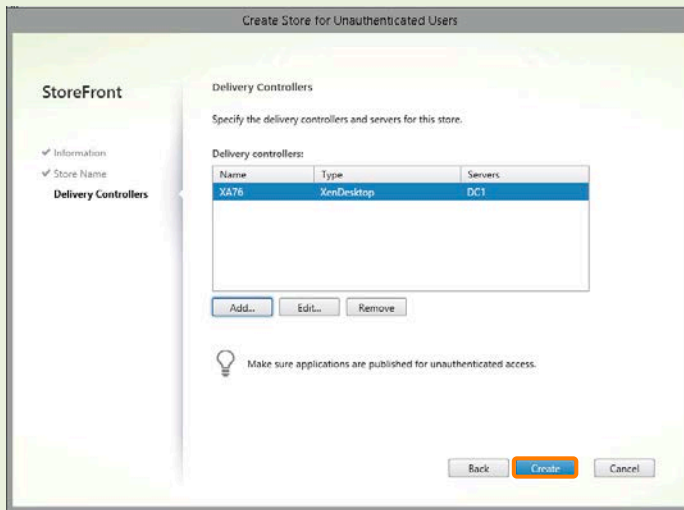
Transport type: HTTP ⚠

Port: 80

Buttons: OK Cancel

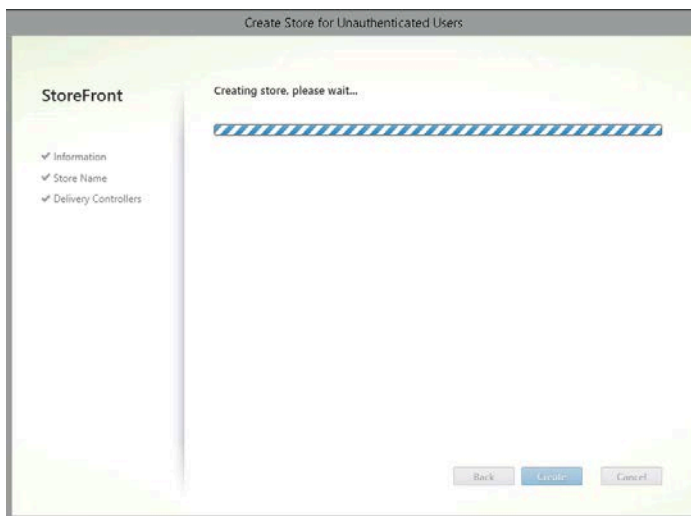
Click **OK**.

16.



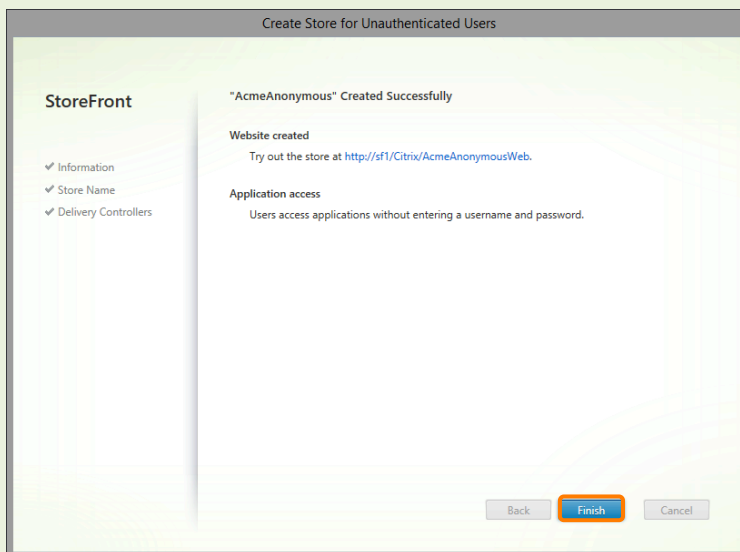
Click **Create**.

17.



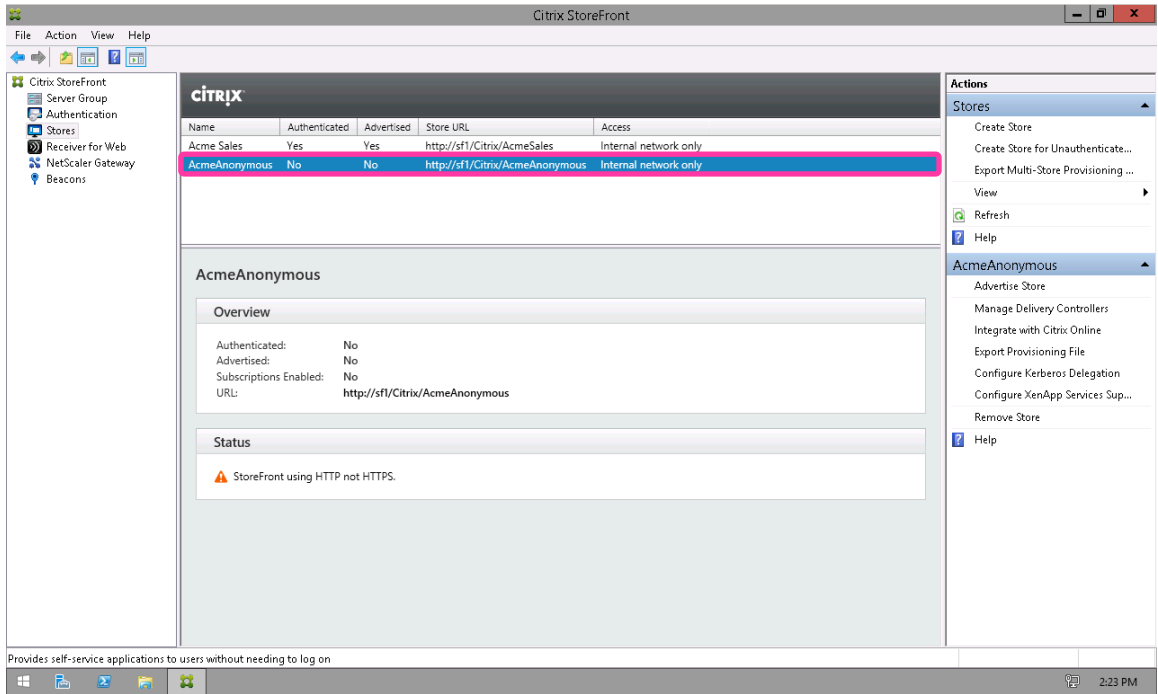
The Store will take a few minutes to create.

18.



Once the store is created click **Finish**.

19.



Verify that the AcmeAnonymous Store appears in StoreFront, this may take several seconds.

20.



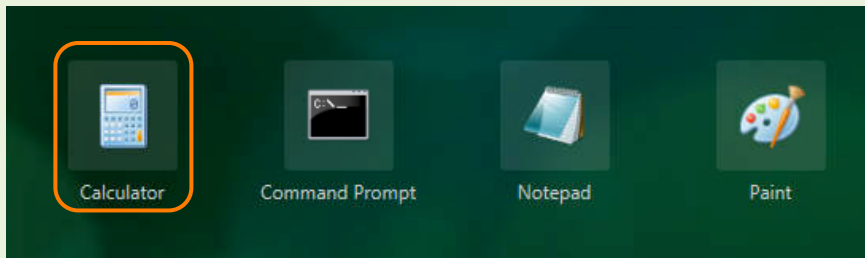
On the Student Desktop, click **Internet Explorer**.

21.



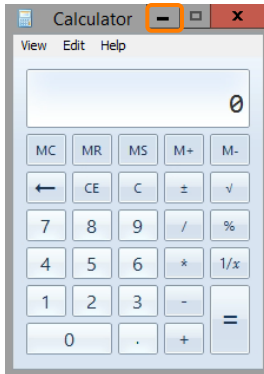
Type **http://sf1/Citrix/AcmeAnonymousWeb/** in the address bar and press **Enter**.

22.



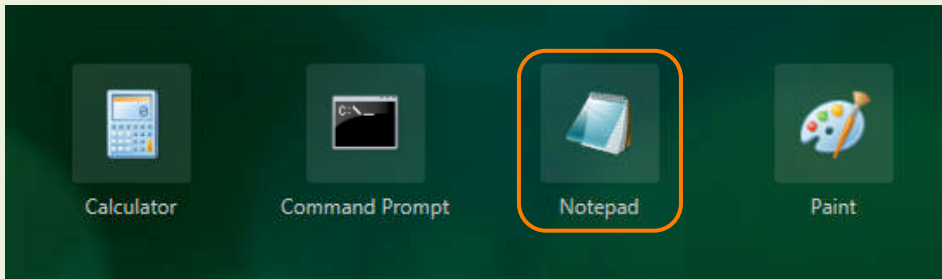
All applications available for anonymous access will be displayed. Click on **Calculator** to launch the application.

23.



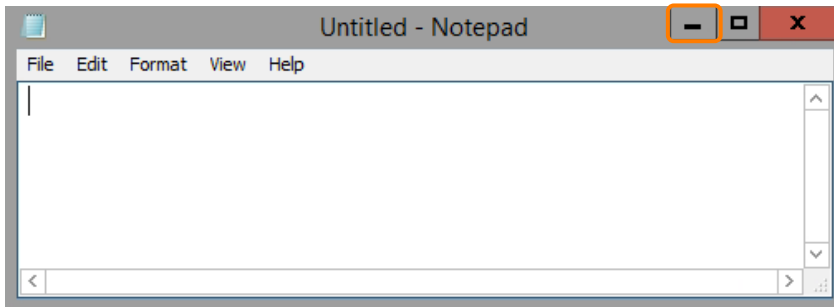
Verify that Calculator launches, minimize Calculator.

24.



Click on **Notepad** to launch the application.

25.



Verify that Notepad launches and then **minimize** all open windows.

26.



Double-click the **Mozilla Firefox** icon on the Student Desktop.

27.



Navigate to **http://dc1.training.lab/Director**

28.

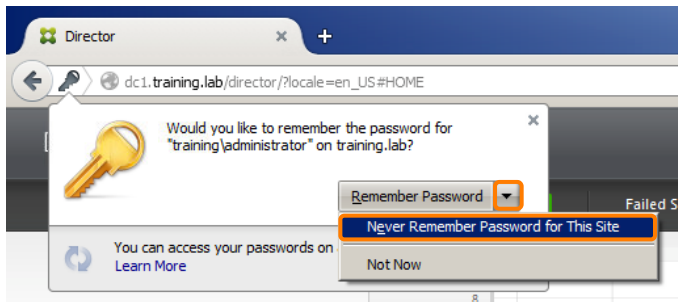


Enter the following information:

User name	administrator
Password	Citrix123
Domain	training

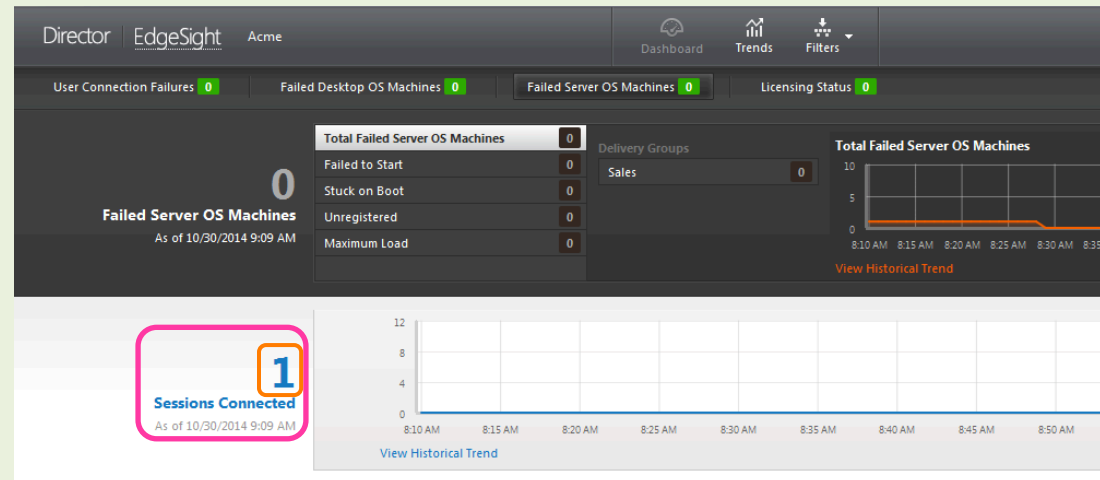
Click **Log on**.

29.



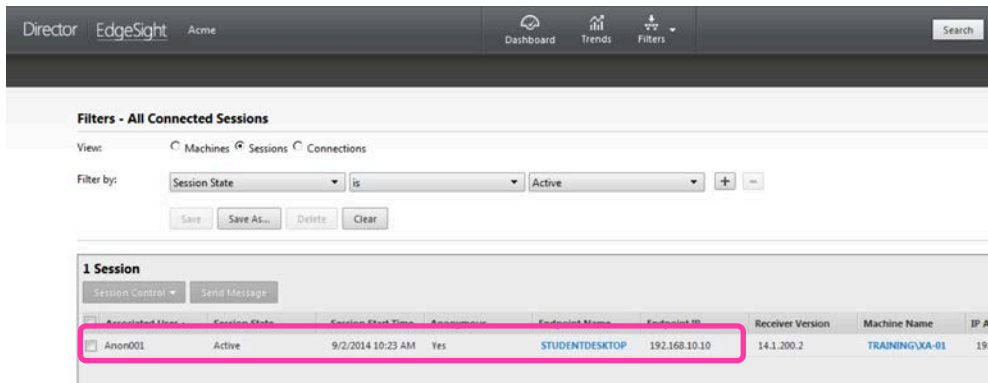
Click the **arrow** and select **Never Remember Password for this Site**.

30.



Notice that 1 session is connected. Click on the number **1** to view this notification.

31.

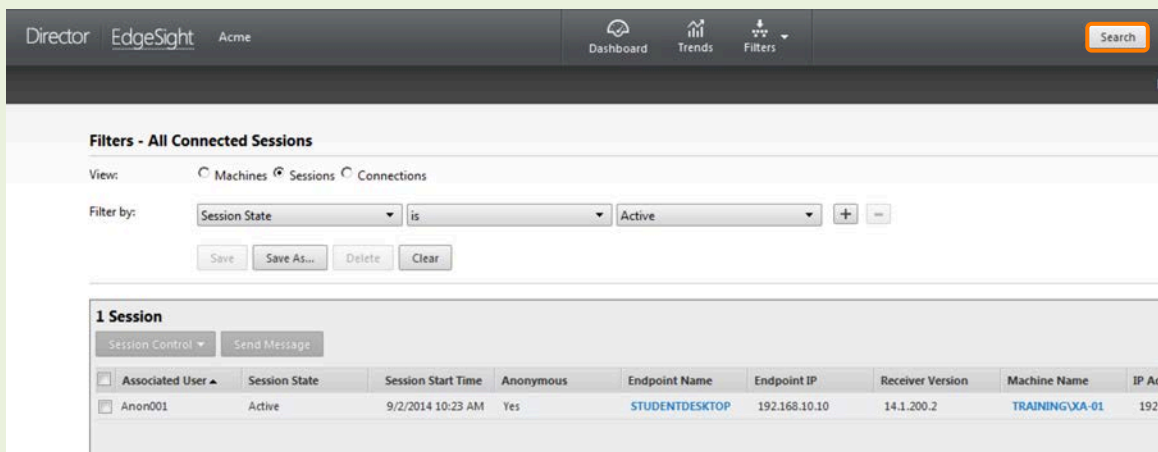


Verify that Anon000 is displayed as the associated session and the Anonymous column indicates Yes. This indicates an anonymous user is logged on.



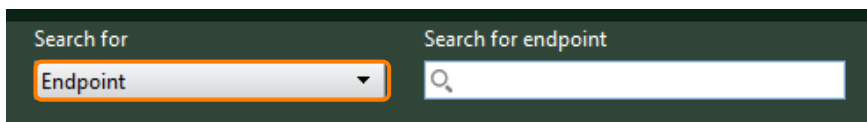
In a production environment there will be multiple sessions in progress, support members using Director can verify the user's endpoint name to troubleshoot the correct session by viewing this page or using the search box.

32.



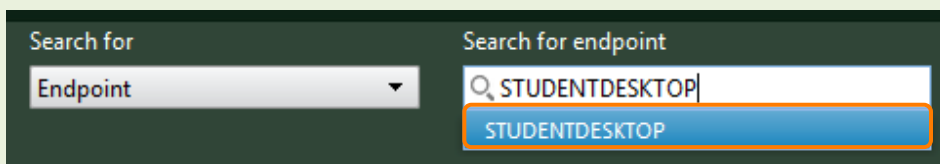
Click **Search** at the top right.

33.



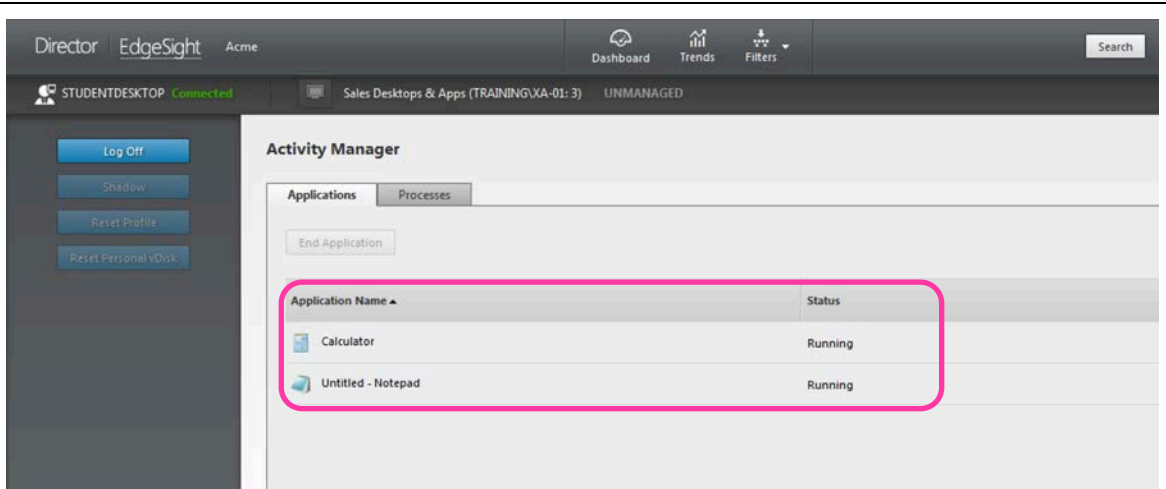
Select **Endpoint** from the drop down box.

34.



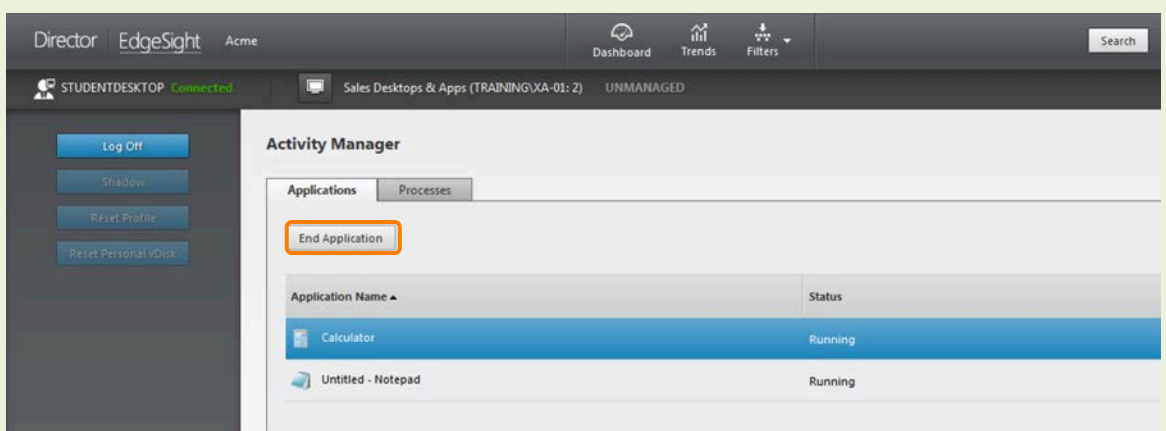
Enter **STUDENTDESKTOP** in the Search for endpoint field, select **STUDENTDESKTOP** when it appears below the field.

35.



Verify that both Calculator and Notepad are running.

36.



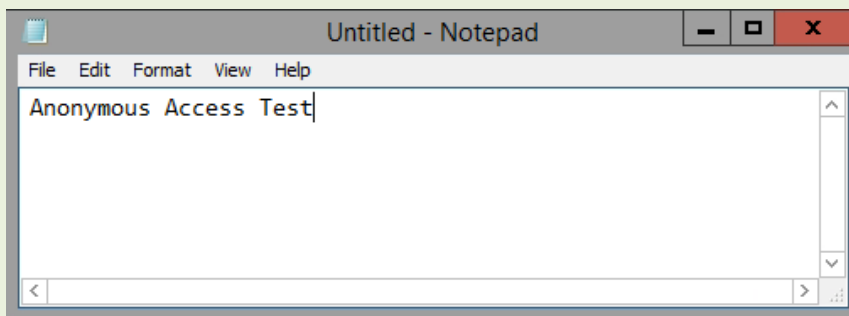
Select **Calculator** and click **End Application**.

37.



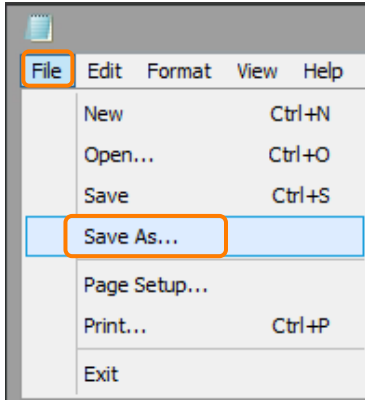
Verify that Calculator is no longer present in the system tray. Click on **Notepad**.

38.



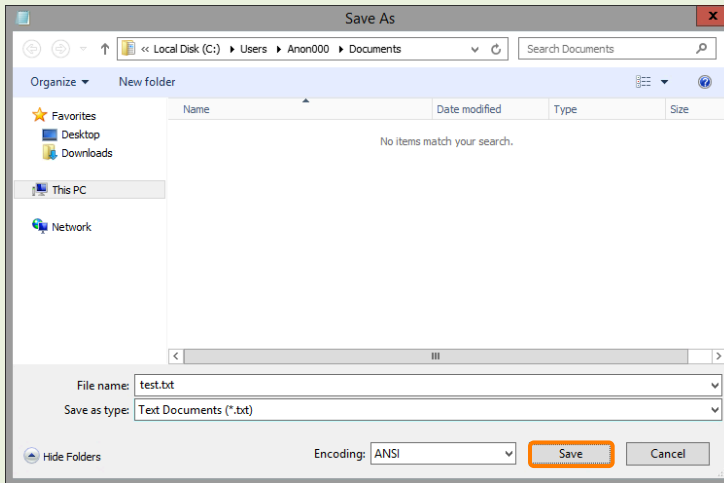
Type **Anonymous Access Test** in the text area.

39.



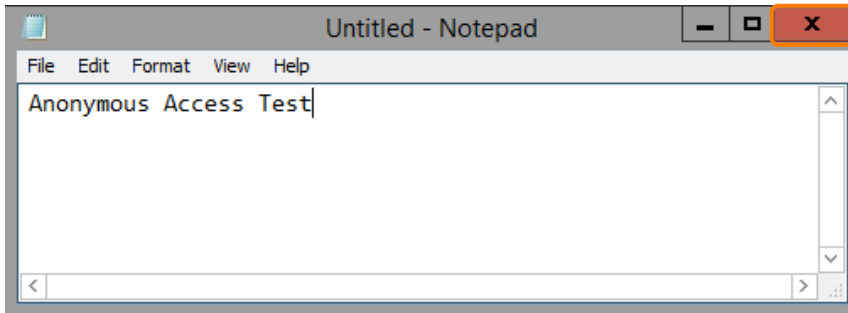
Click **File** and select **Save As...**

40.



Enter test.txt and click **Save**.

41.



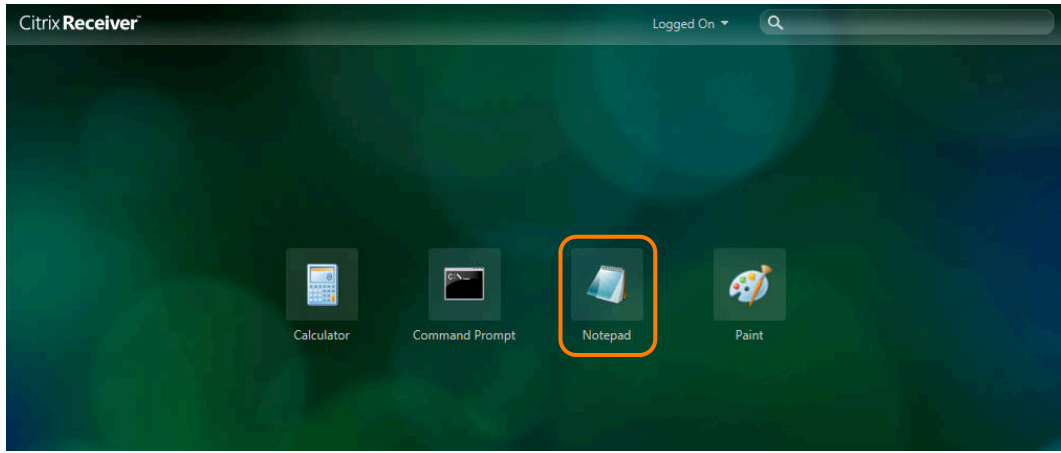
Close Notepad.

42.



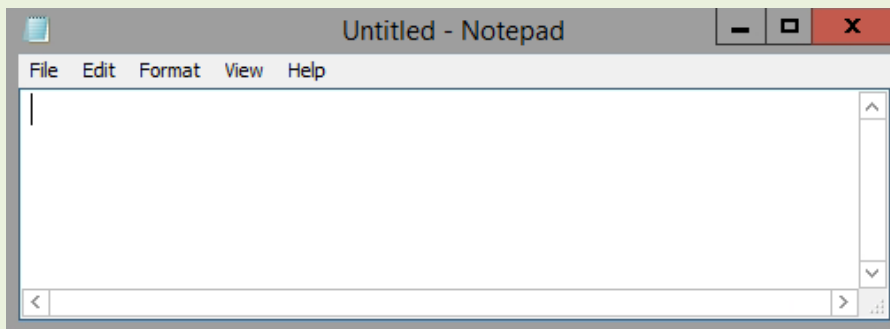
Click on **Internet Explorer** on taskbar to switch back to the Citrix Receiver session.

43.



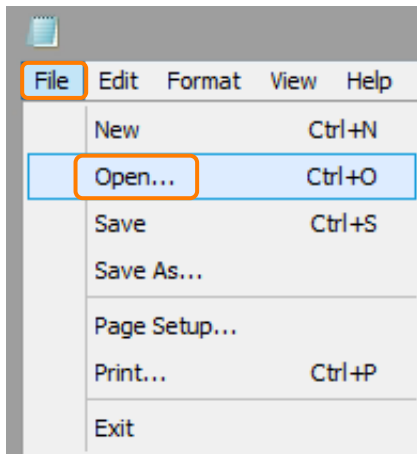
Click on **Notepad** to re-launch the application.

44.



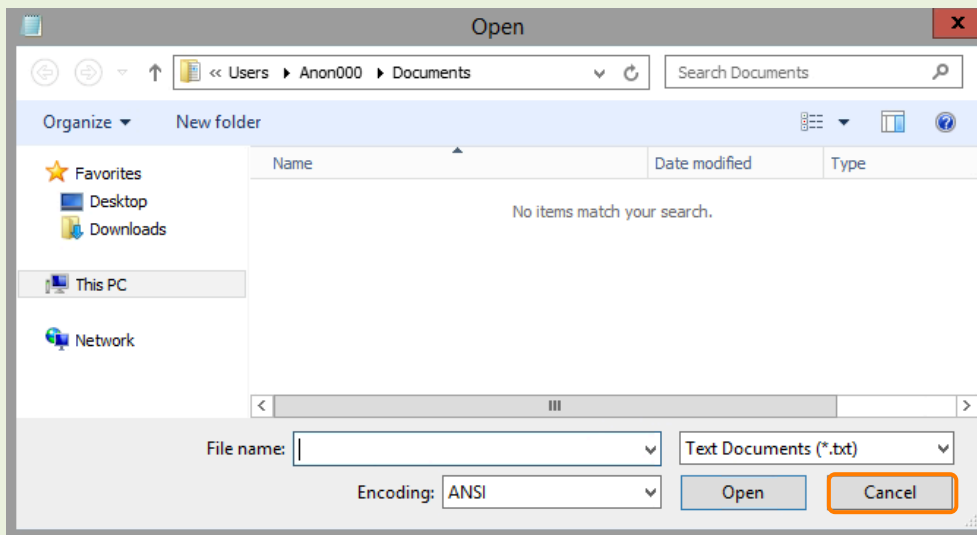
Notepad launches.

45.



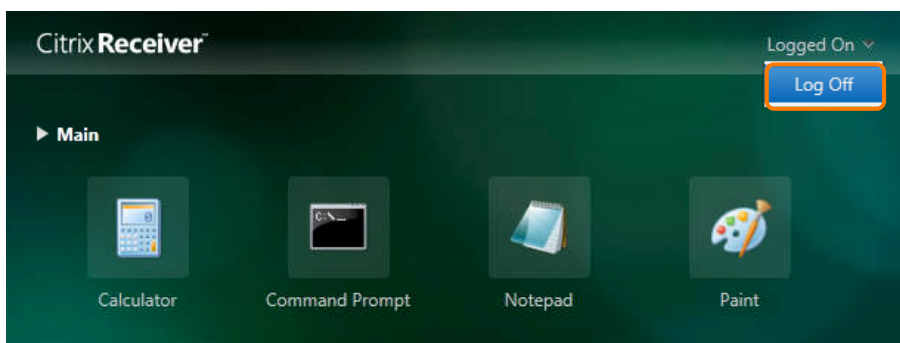
Click **File** and select **Open**.

46.



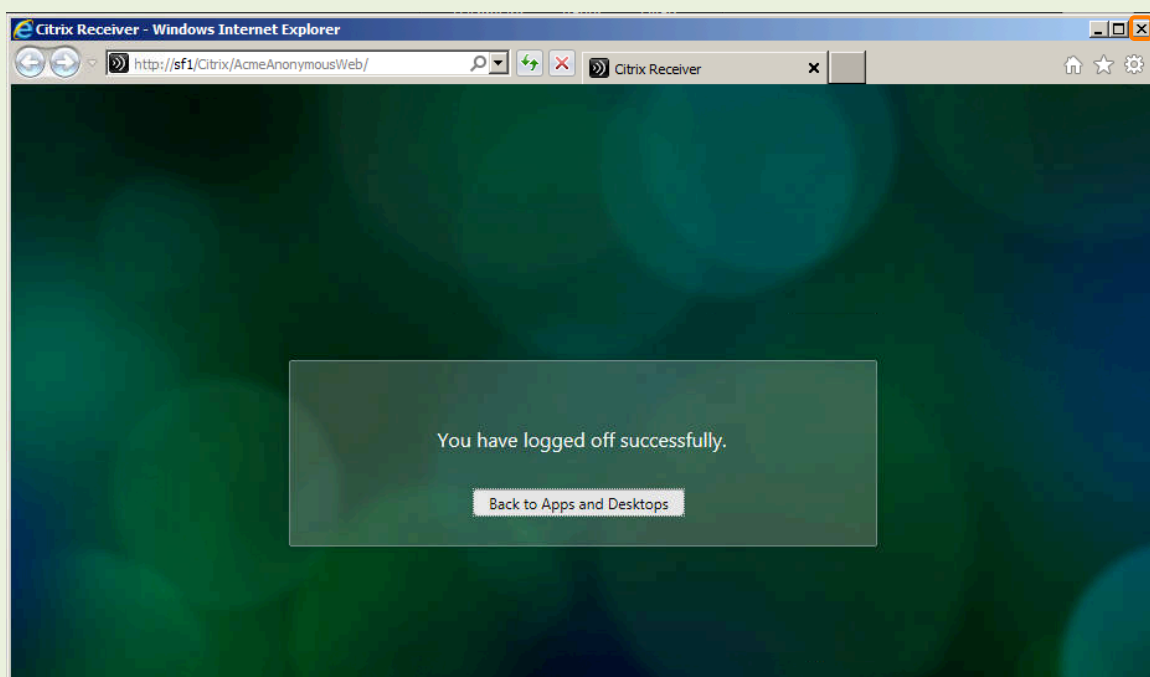
Note that the test.txt file was not retained. Files are not saved for anonymous users. Click **Cancel**.

47.

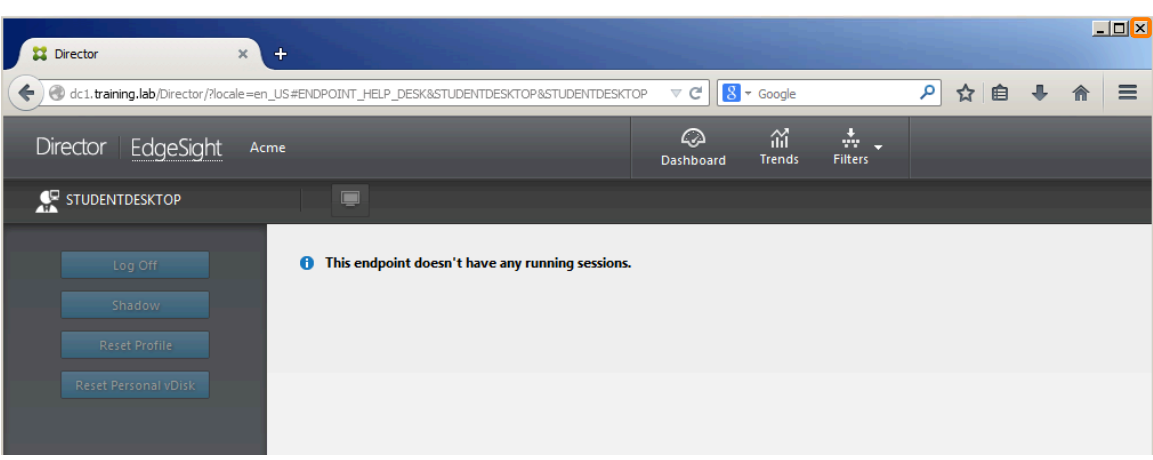


Close Notepad and log off from Receiver for Web.

48.



Close **Internet Explorer**.

49.	
	Close <b>FireFox</b> .
50.	Close the connection to SF1 by clicking the <b>X</b> at the upper right corner and then click ok.

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## Exercise Summary

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In this exercise, you configured the Sales Delivery Group to allow anonymous user access in Studio. A separate unauthenticated Store was created because it is required to allow unauthenticated user connectivity. Anonymous access was then tested to demonstrate the limitations regarding file and session retention.

# Exercise 2: Application Folders

## Overview


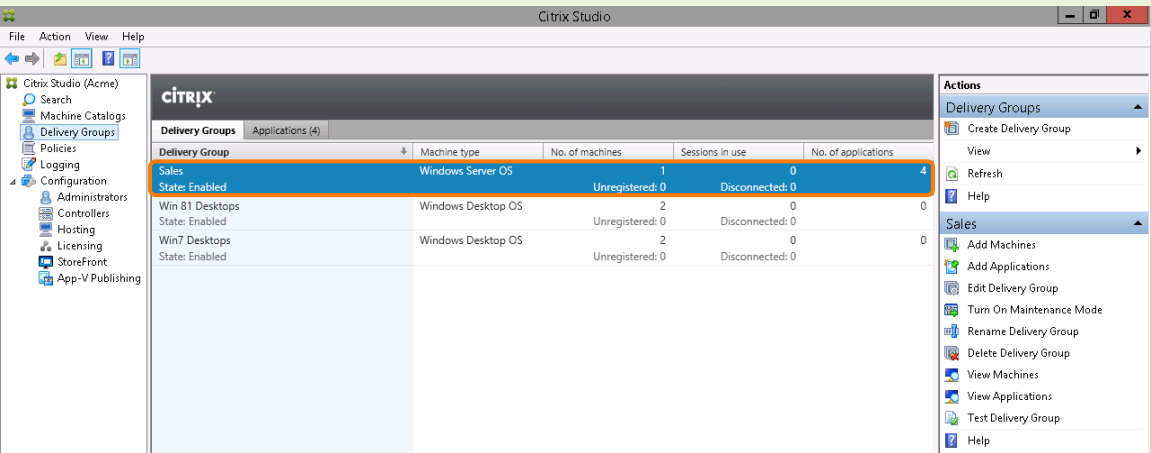
Application folders are an organizational tool for site administrators. Using folders, applications can be grouped by department, type, geographic region or any way that simplifies management.

In this exercise you will:

- Add an application to a new folder during discovery.
- Create a new folder.
- Move an application into a folder.
- Move a folder.

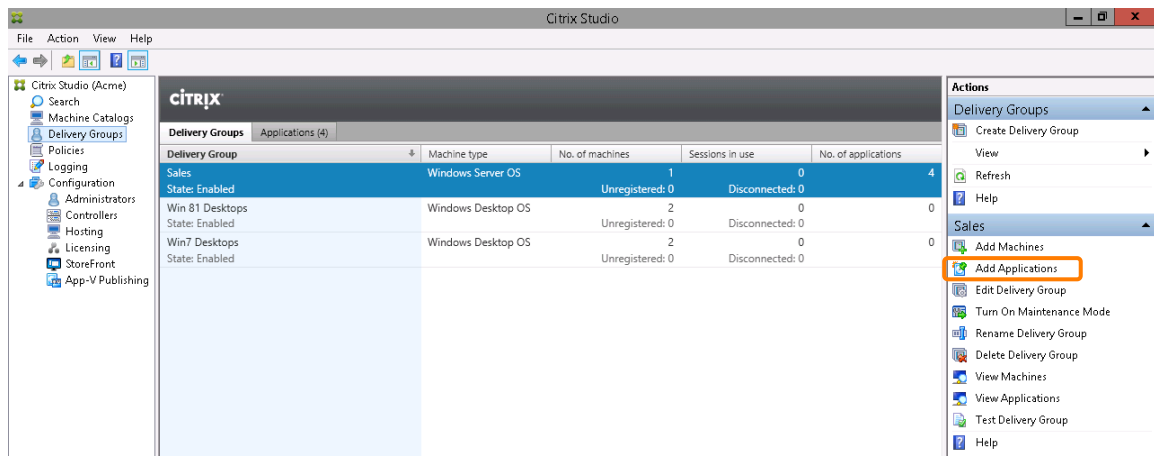
## Step by step guidance

Estimated time to complete this exercise: 20 minutes.

Step	Action
1.	 Switch to <b>DC1</b> .
2.	 Select the <b>Sales</b> Delivery Group.

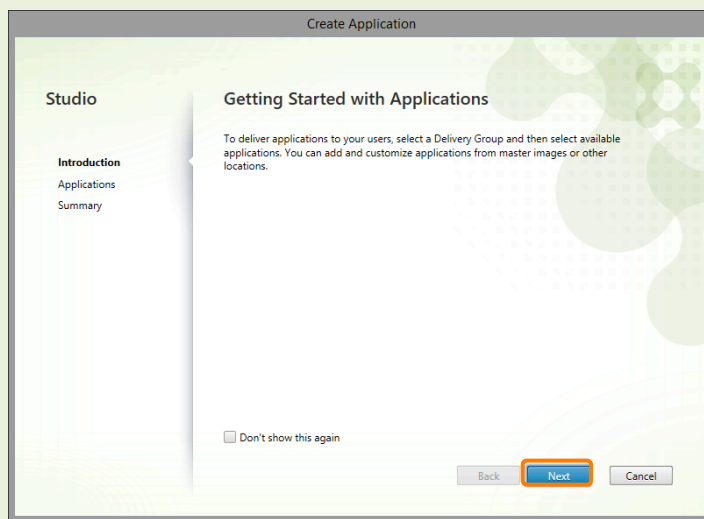
Step Action

3.



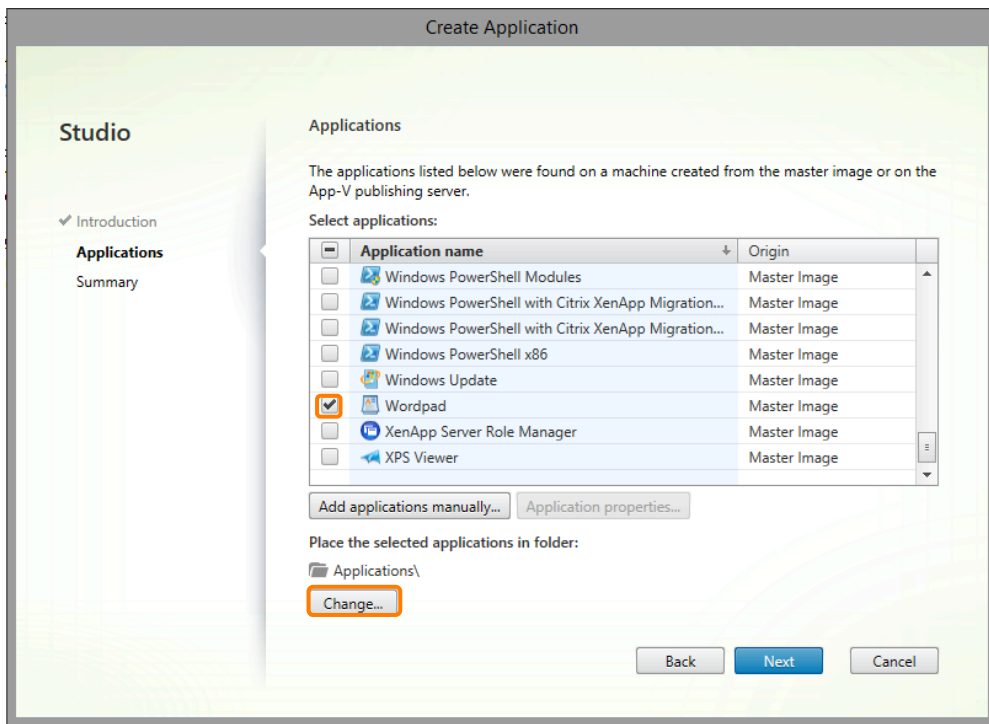
Click **Add Applications** on the right.

4.



Click **Next** on the Getting Started page.

5.

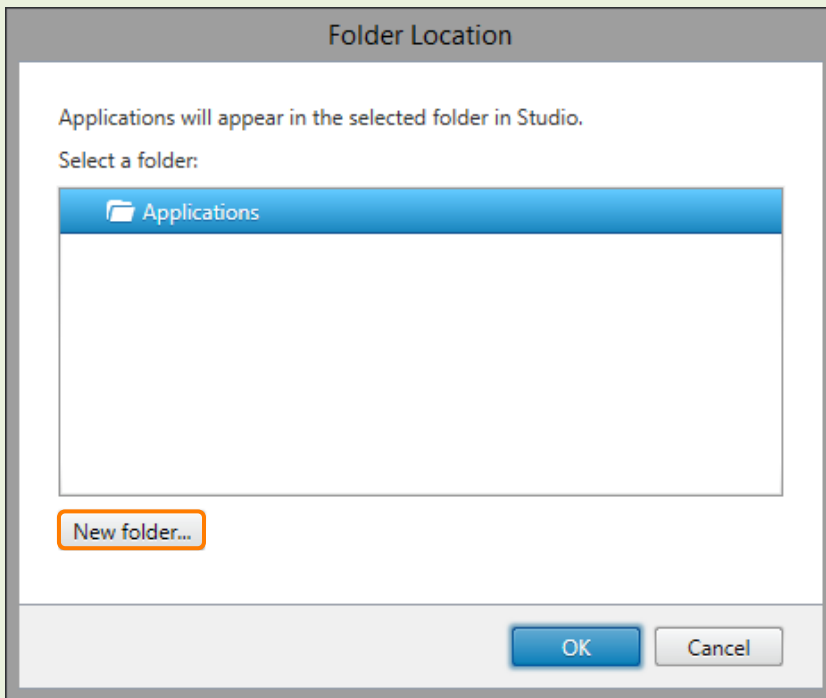


Check the box:

Wordpad	<input checked="" type="checkbox"/>
---------	-------------------------------------

Click **Change...**

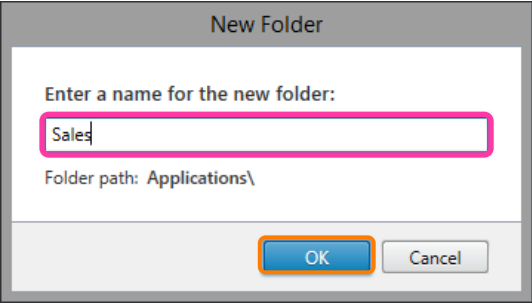
6.



Click **New folder...**

**Step Action**

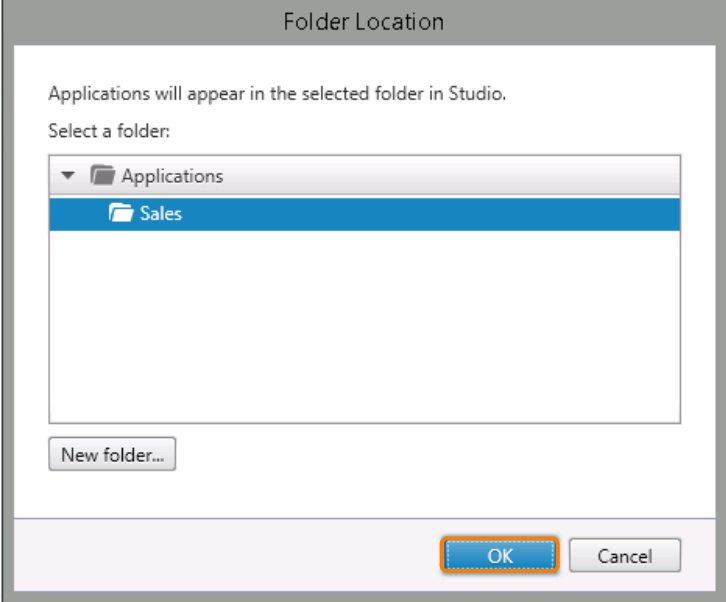
7.



Enter a name for the new folder:  
Sales  
Folder path: Applications\  
OK Cancel

Type Sales in the name field and click **OK**.

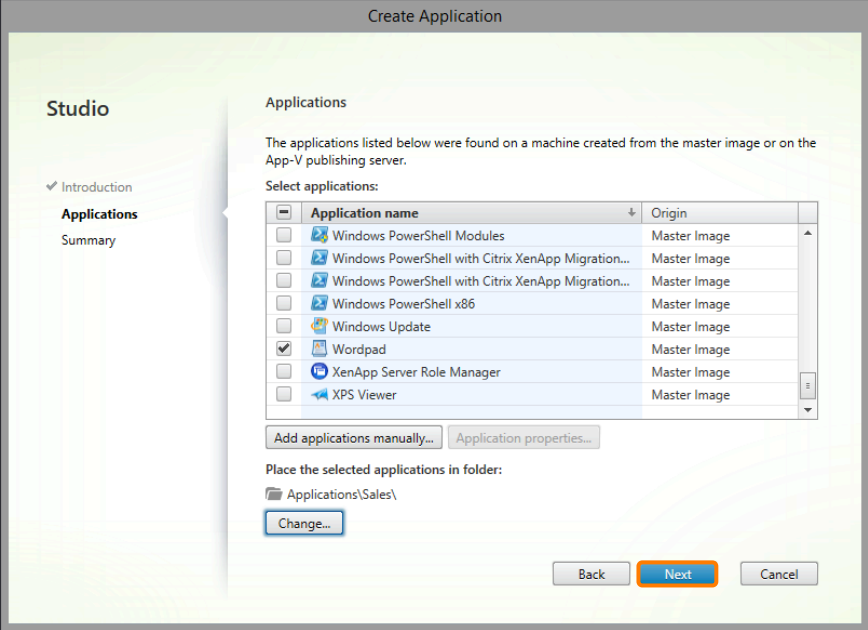
8.



Folder Location  
Applications will appear in the selected folder in Studio.  
Select a folder:  
Applications  
Sales  
New folder...  
OK Cancel

Verify the Sales folder appears and click **OK**.

9.

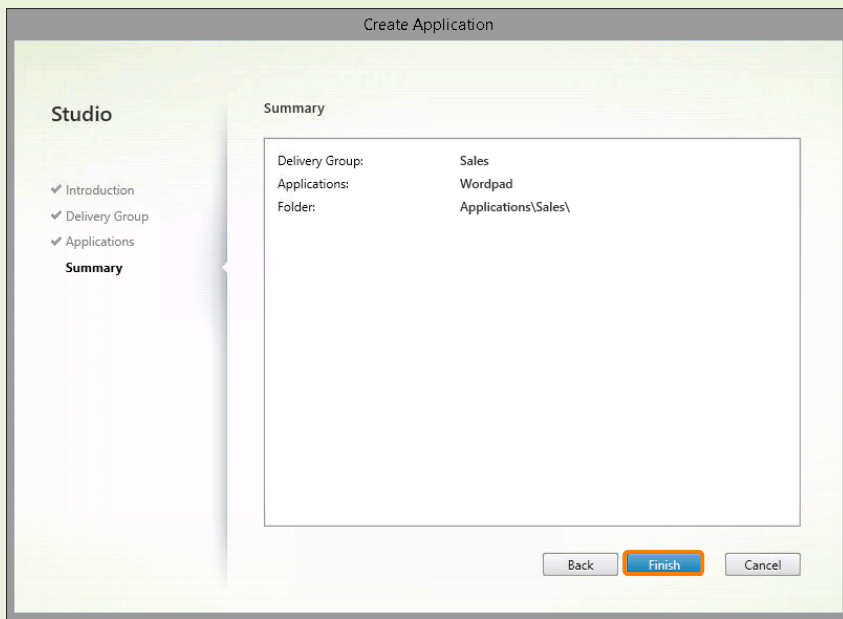


Create Application  
Studio  
Introduction  
Applications  
Summary  
Applications  
The applications listed below were found on a machine created from the master image or on the App-V publishing server.  
Select applications:  
Application name Origin  
Windows PowerShell Modules Master Image  
Windows PowerShell with Citrix XenApp Migration... Master Image  
Windows PowerShell with Citrix XenApp Migration... Master Image  
Windows PowerShell x86 Master Image  
Windows Update Master Image  
Wordpad Master Image  
XenApp Server Role Manager Master Image  
XPS Viewer Master Image  
Add applications manually... Application properties...  
Place the selected applications in folder:  
Applications\Sales\  
Change...  
Back Next Cancel

Click **Next**.

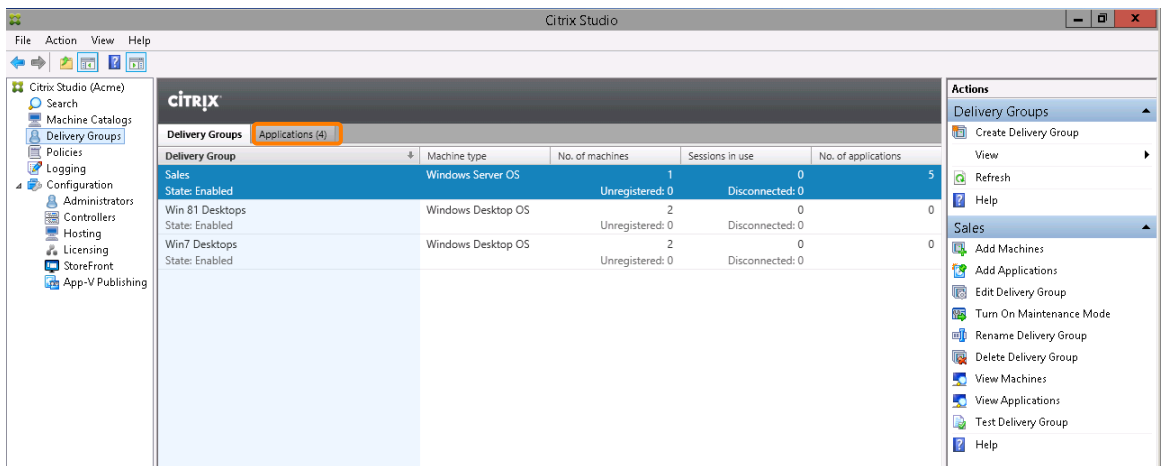
Step Action

10.



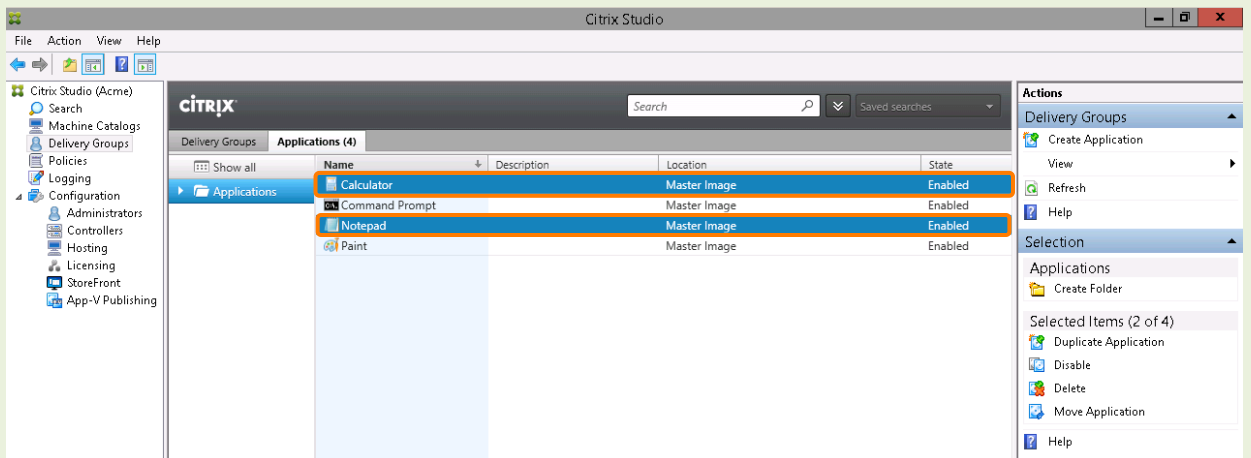
Review the Summary page and click **Finish**.

11.



Click the **Applications** tab at the top.

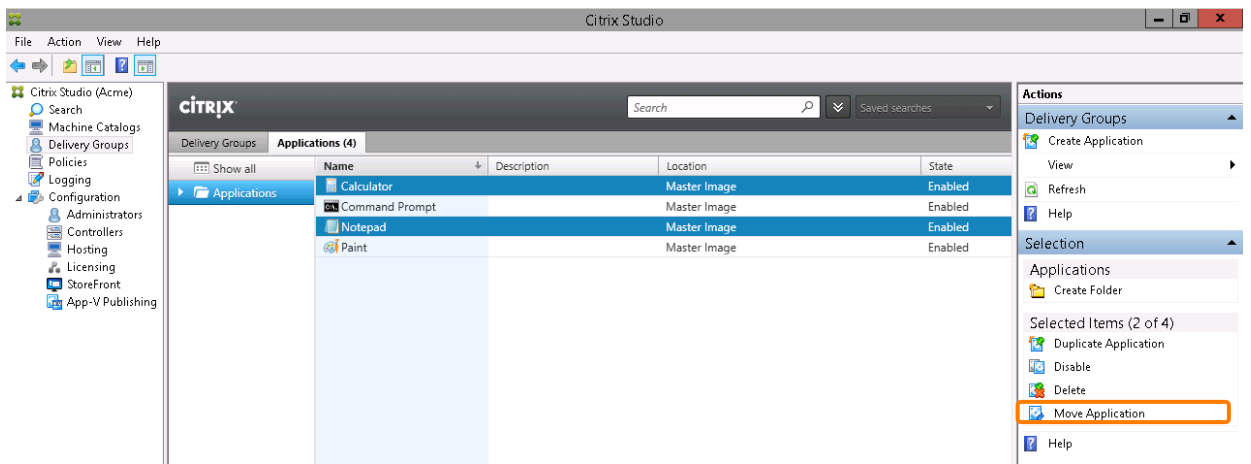
12.



Click **Calculator** and then hold the CTRL key (COMMAND key on Mac) and click **Notepad**.

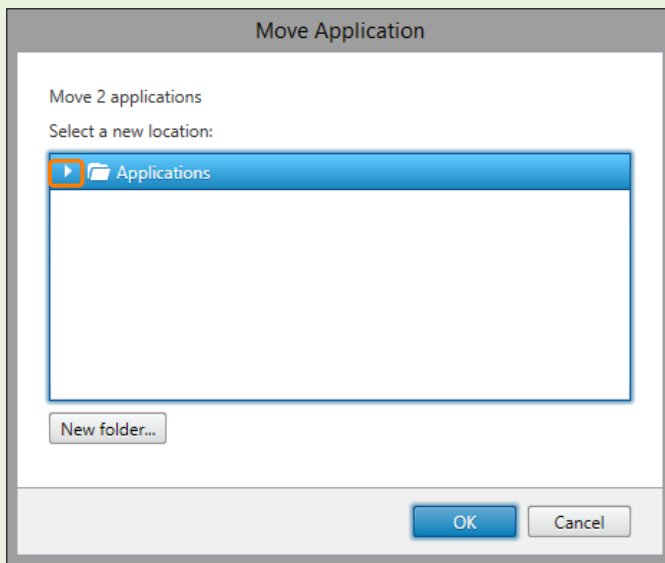
Step Action

13.



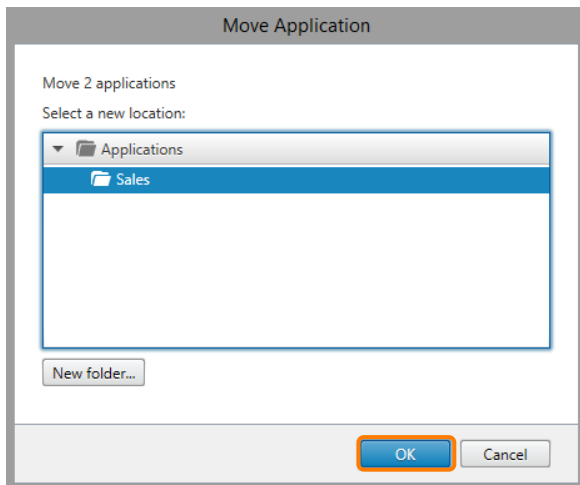
Click **Move Application** on the right.

14.



Click the arrow to expand the Applications folder.

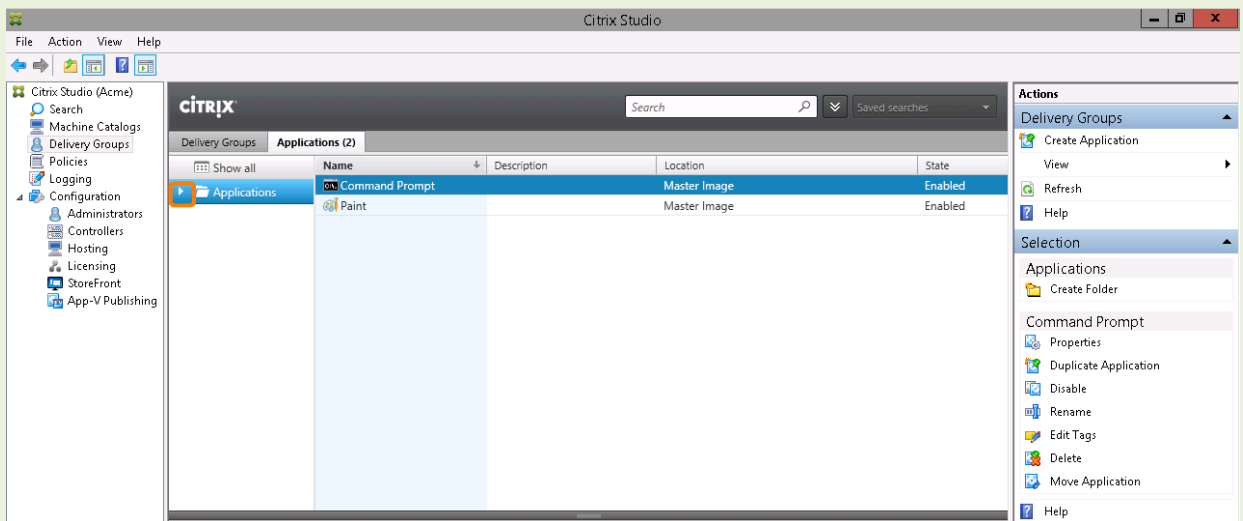
15.



Select the Sales folder and click **OK**.

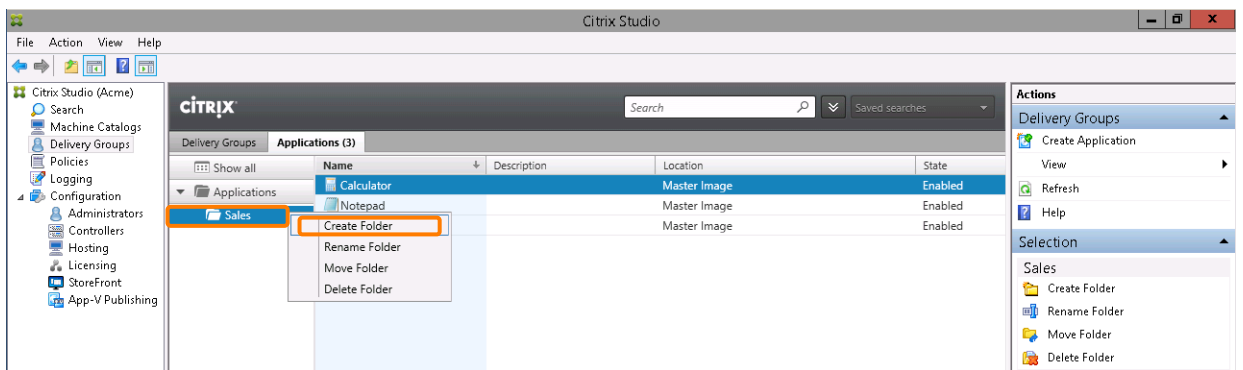
Step Action

16.



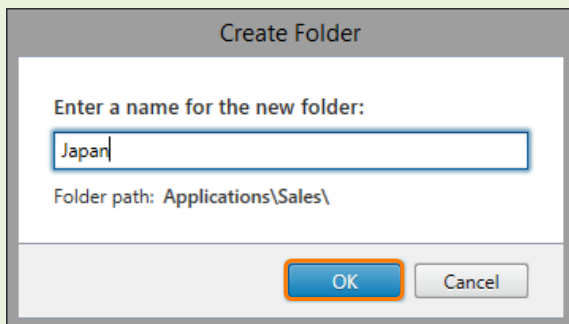
Click the arrow to expand the Applications folder.

17.



Right click the **Sales** folder and select **Create Folder**.

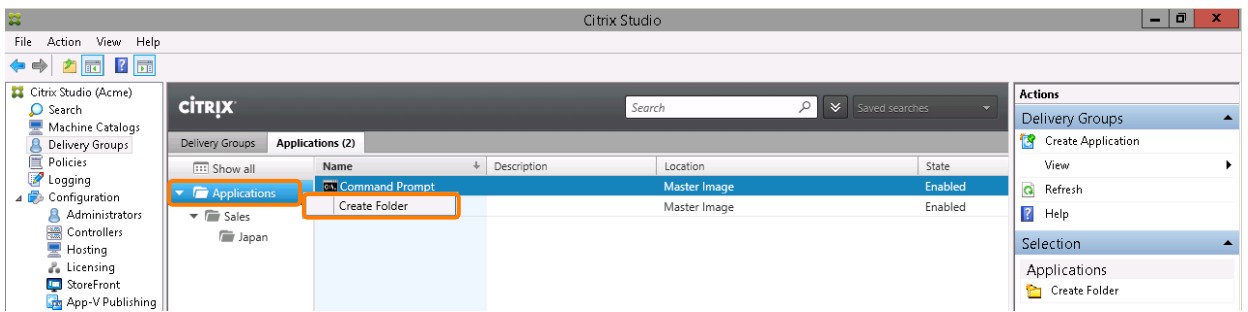
18.



Type **Japan** in the new folder field and click **OK**.

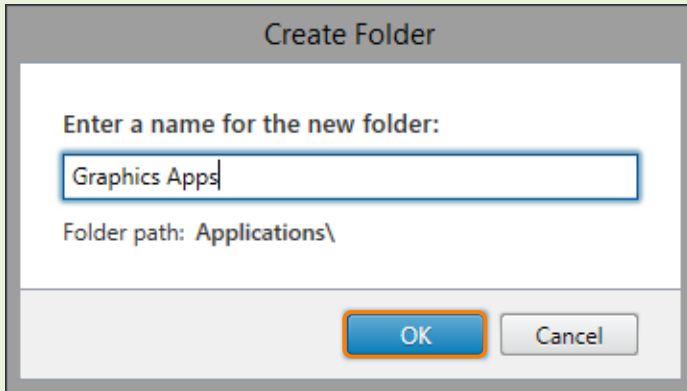
Step Action

19.



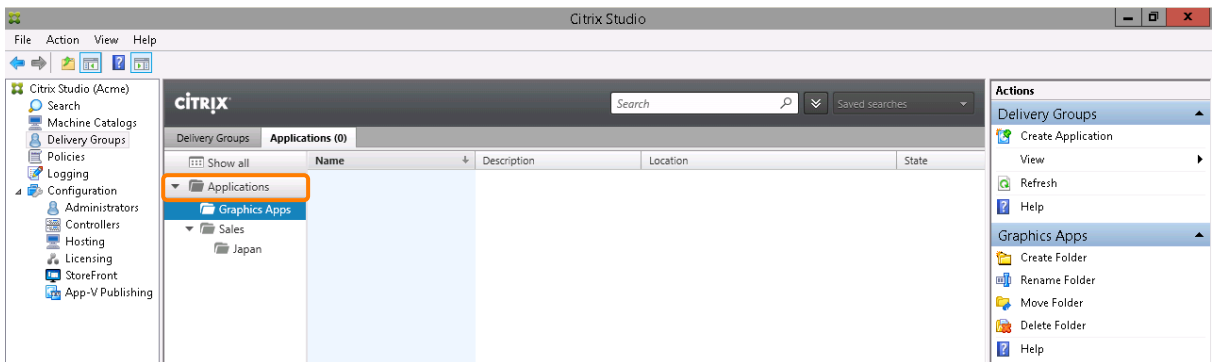
Right-click the **Applications** folder and select **Create Folder**.

20.



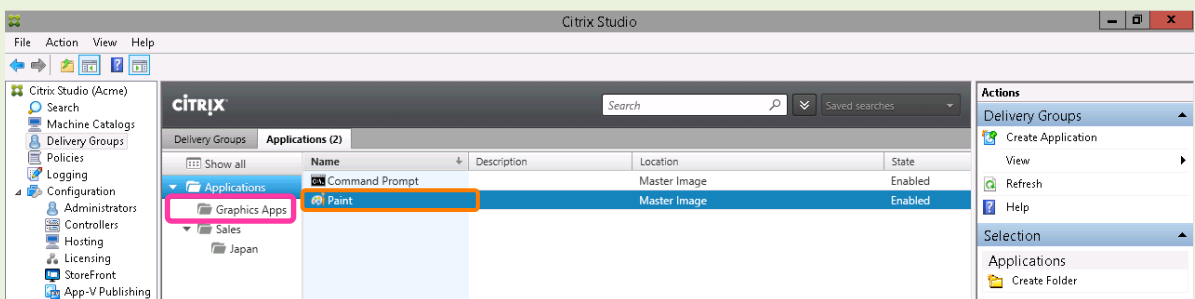
Type **Graphics Apps** in the new folder field and click **OK**.

21.



Click the **Applications** folder.

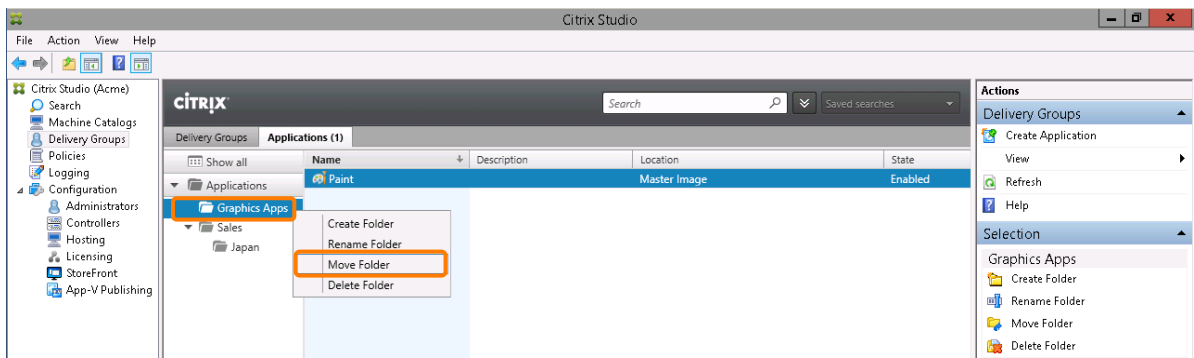
22.



Drag and drop **Paint** into the **Graphics Apps** folder.

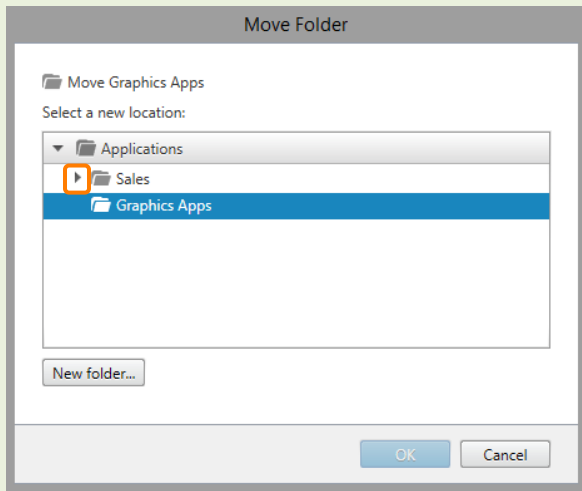
Step Action

23.



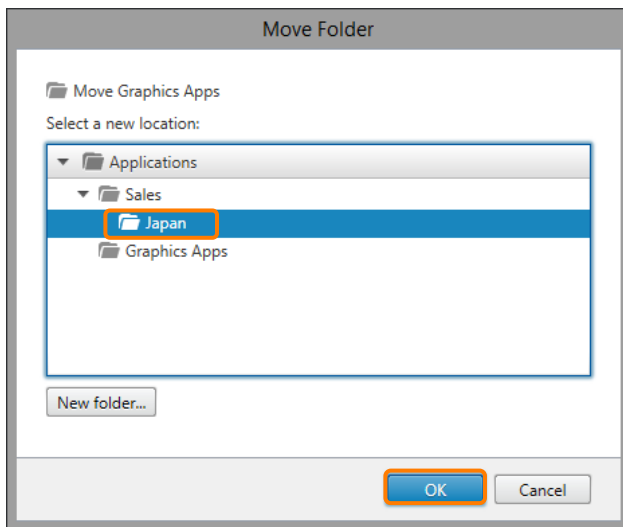
Right-click the **Graphics Apps** folder and select **Move Folder**.

24.



Click the arrow to expand the **Sales** Folder.

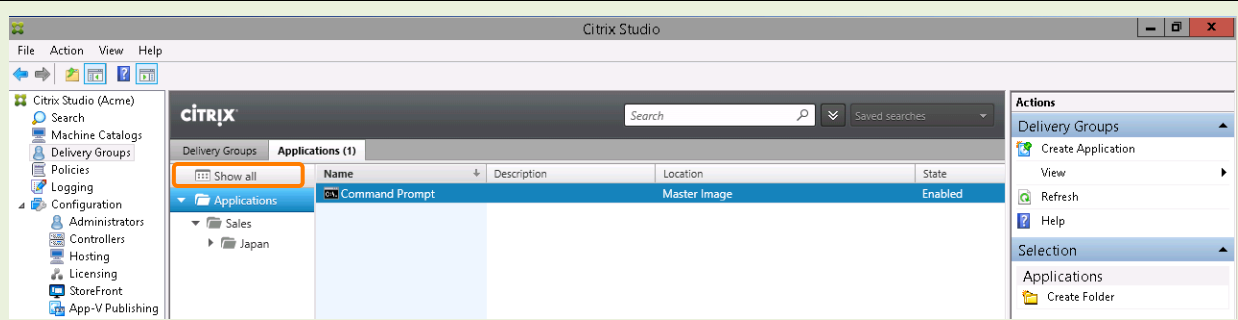
25.



Select the **Japan** folder and click **OK**.

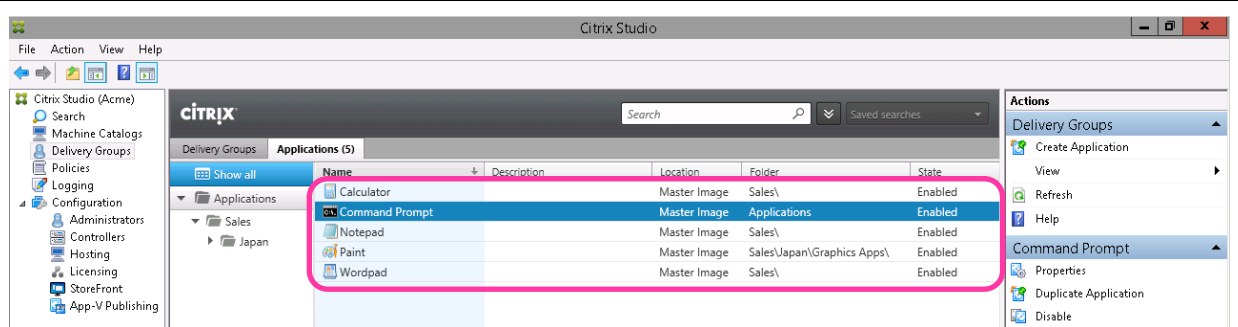
**Step Action**

26.



Click **Show all** on the left.

27.



Verify that all applications are listed in the correct folders.

## Exercise Summary

In this exercise, you performed an application discovery, adding the WordPad application to a new folder for the Sales team. Additional folders were added based on geographic location and application type and moved based on organizational requirements.

# Exercise 3: Session Prelaunch and Linging

## Overview

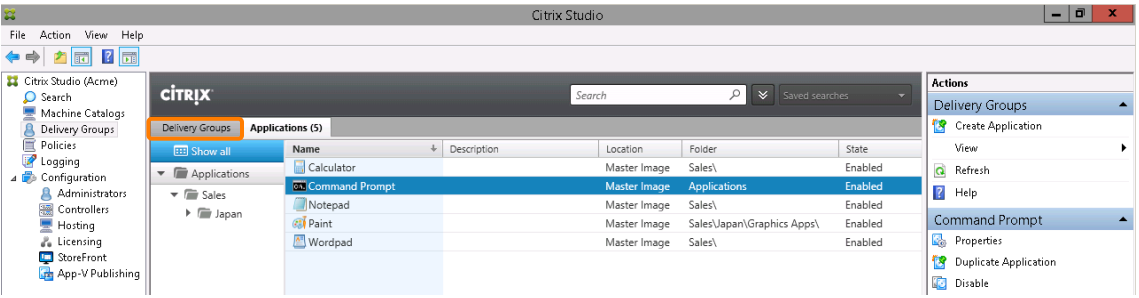
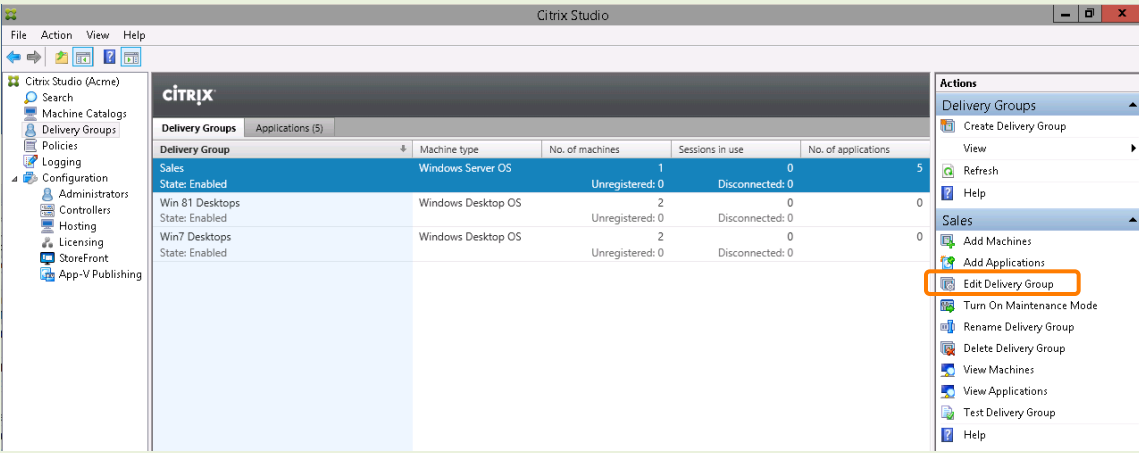
The prelaunch and lingering features help users access server-based hosted applications quickly, by starting sessions before they are requested (session prelaunch) and keeping application sessions active after a user closes all applications (session linger).

In this exercise you will:

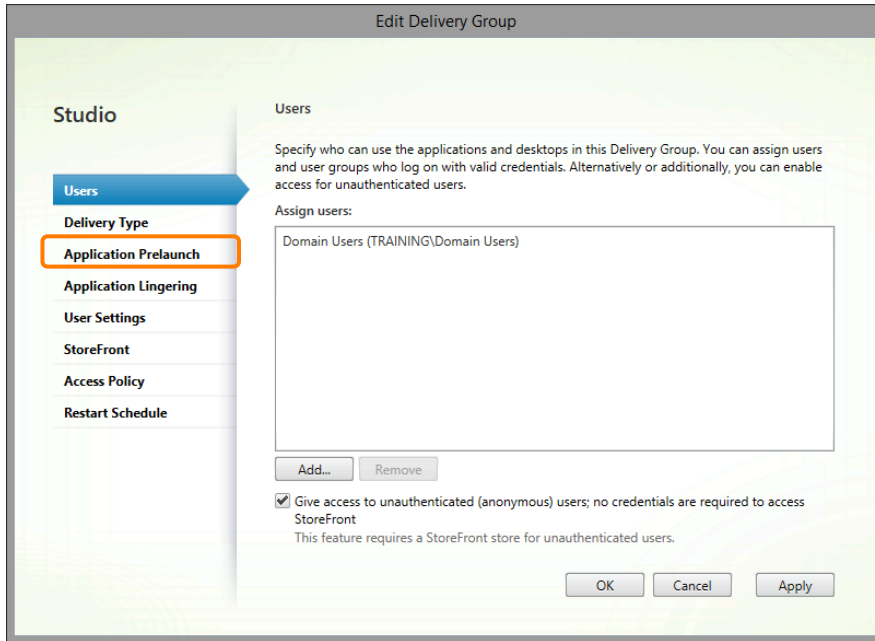
- Enable and configure application pre-launch.
- Enable and configure session linger.
- Test pre-launch and session linger using the Task Manager on XA-01.

## Step by step guidance

Estimated time to complete this exercise: 20 minutes.

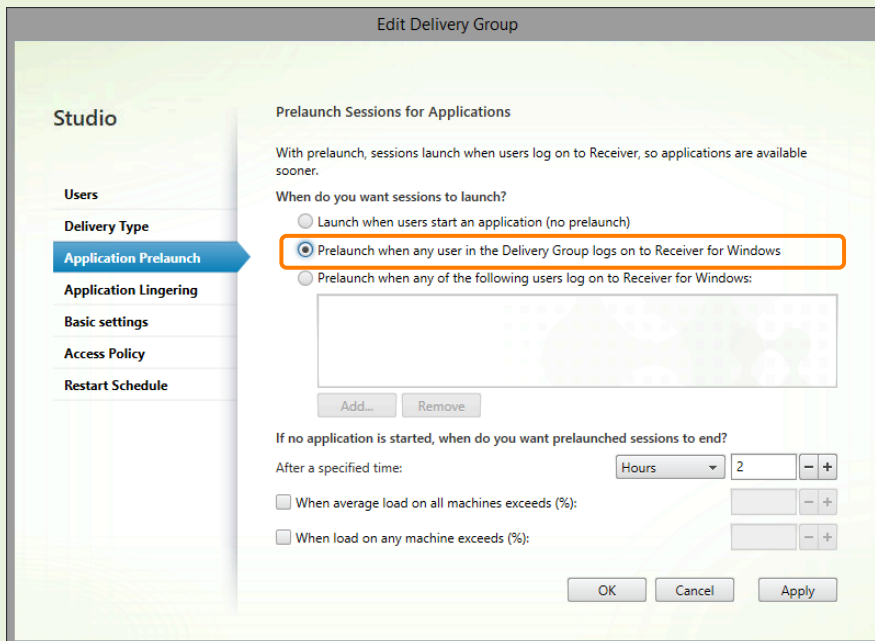
Step	Action
1.	 <p>Click on the <b>Delivery Group</b> tab at the top.</p>
2.	 <p>Verify the Sales Delivery Group is selected and then click <b>Edit Delivery Group</b> on the right.</p>

3.



On the Edit Delivery Group page, click **Application Prelaunch**.

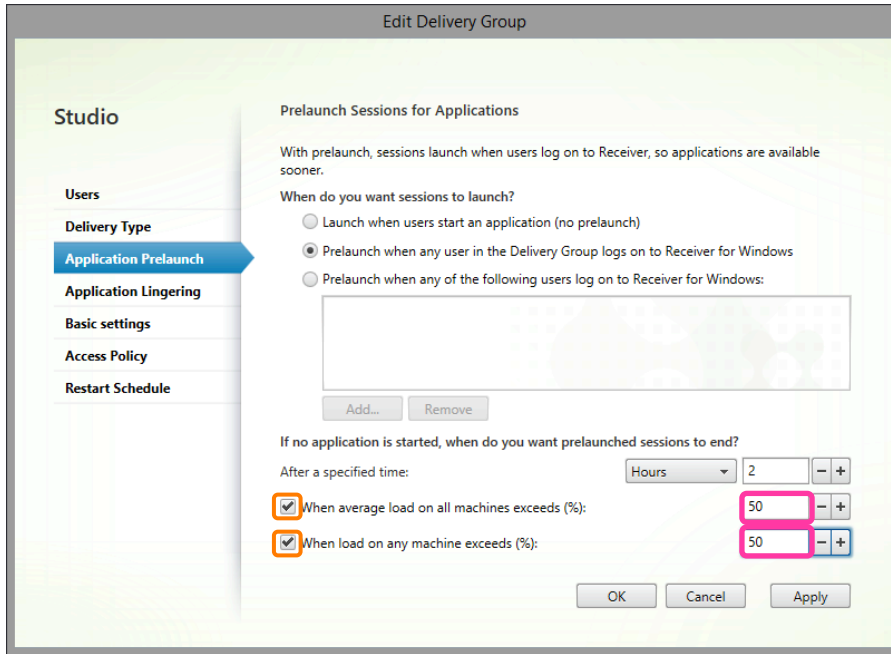
4.



Select **Prelaunch when any user logs on to Receiver for Windows**.

Do not press Enter or click OK.

5.

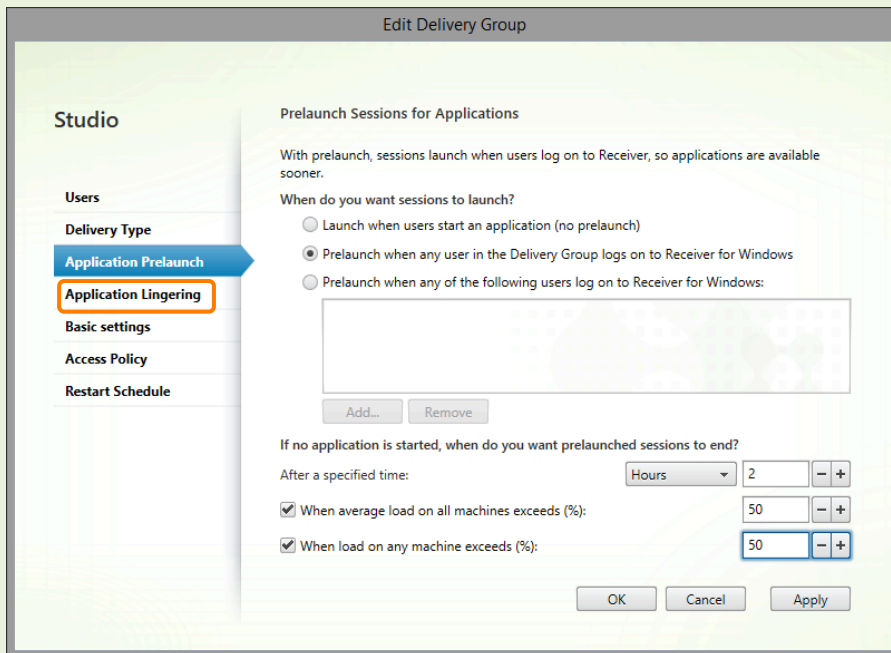


Enter the following information:

When average load time on all machines exceeds (%)	<input checked="" type="checkbox"/>
When load on any machine exceeds (%)	<input checked="" type="checkbox"/>
When average load time on all machines exceeds (%)	50
When load on any machine exceeds (%)	50

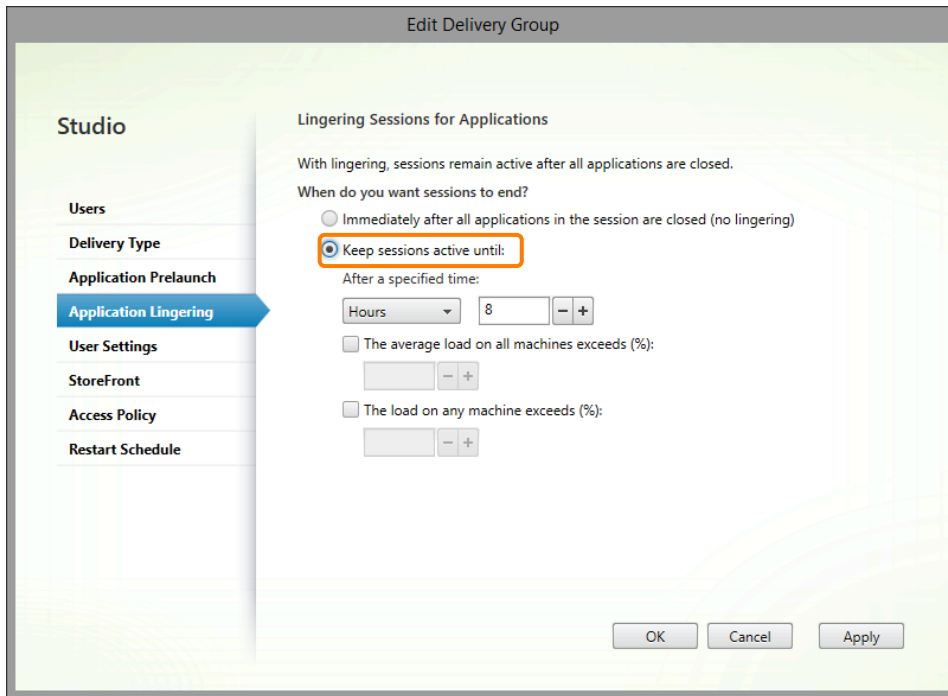
Do not press Enter or click OK.

6.



Click **Application Linging**.

7.

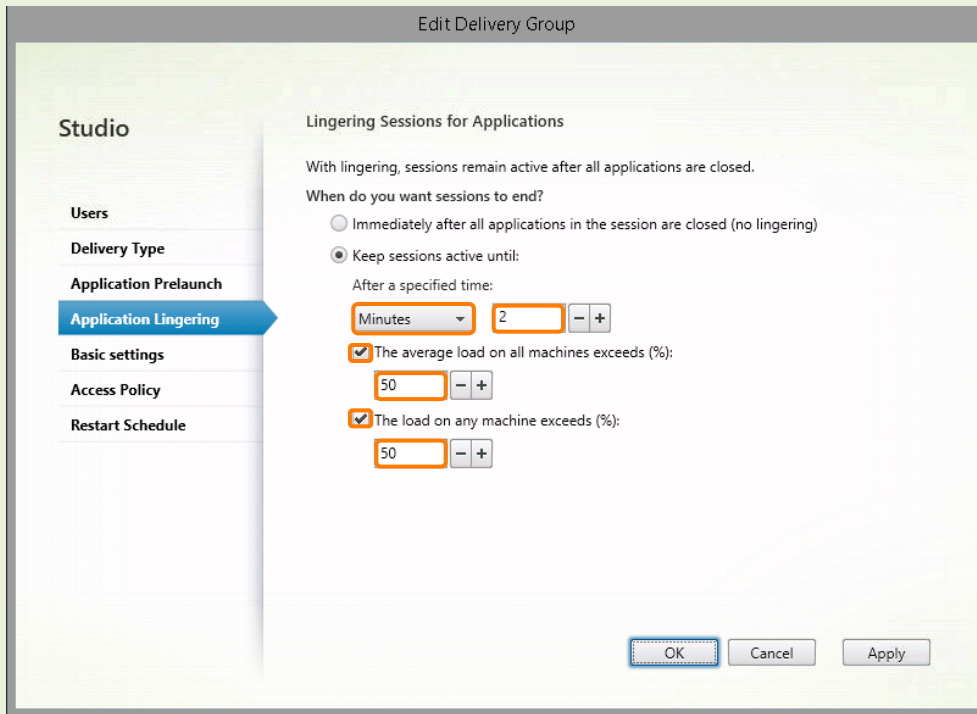


On the Application Linging page, check the box:

Keep session active until:	<input checked="" type="checkbox"/>
----------------------------	-------------------------------------

Do not press Enter or click OK.

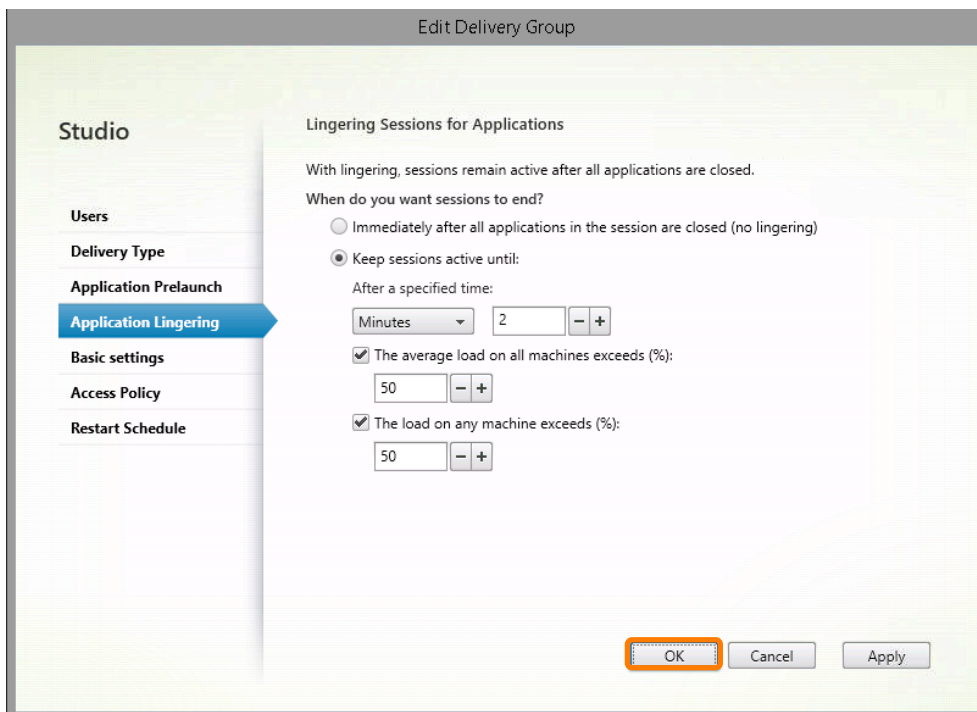
8.



Enter the following information:

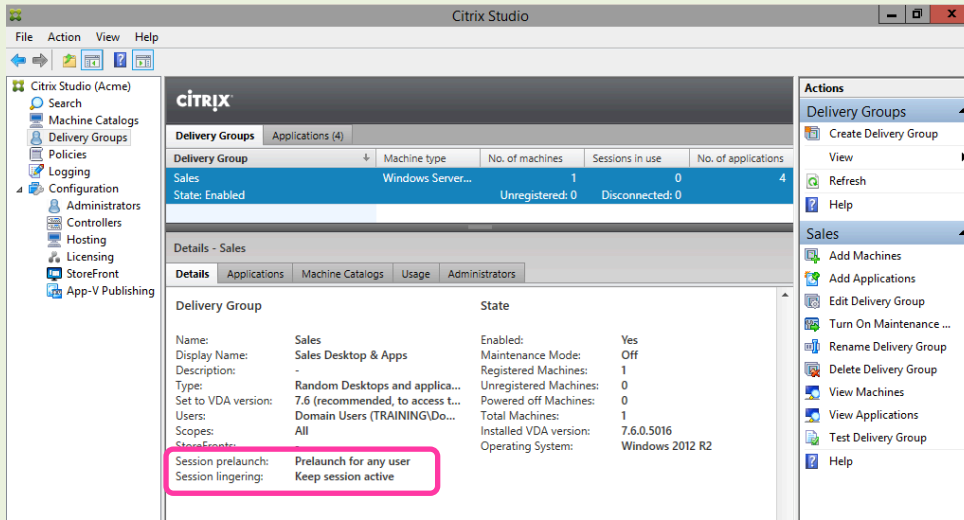
After a specified time:	Minutes, 2
When average load time on all machines exceeds (%)	<input checked="" type="checkbox"/>
When load on any machine exceeds (%)	<input checked="" type="checkbox"/>
When average load time on all machines exceeds (%)	50
When load on any machine exceeds (%)	50

9.



Click **OK**.

10.



Review the Details pane for the Sales Delivery Group and verify the following information:

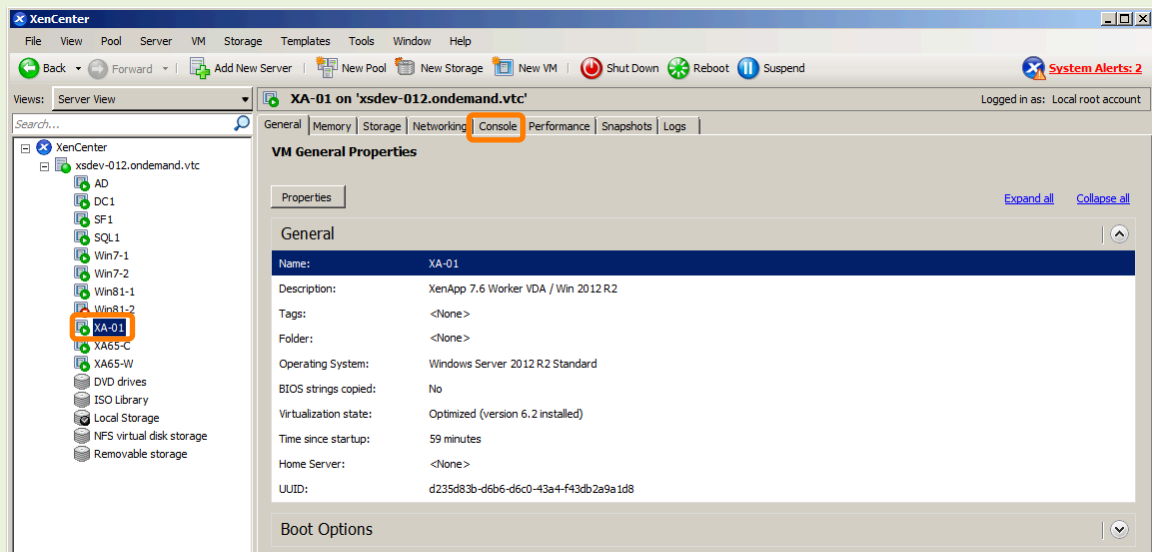
- Session Prelaunch: Prelaunch for any user
- Session lingering: Keep session active

11.



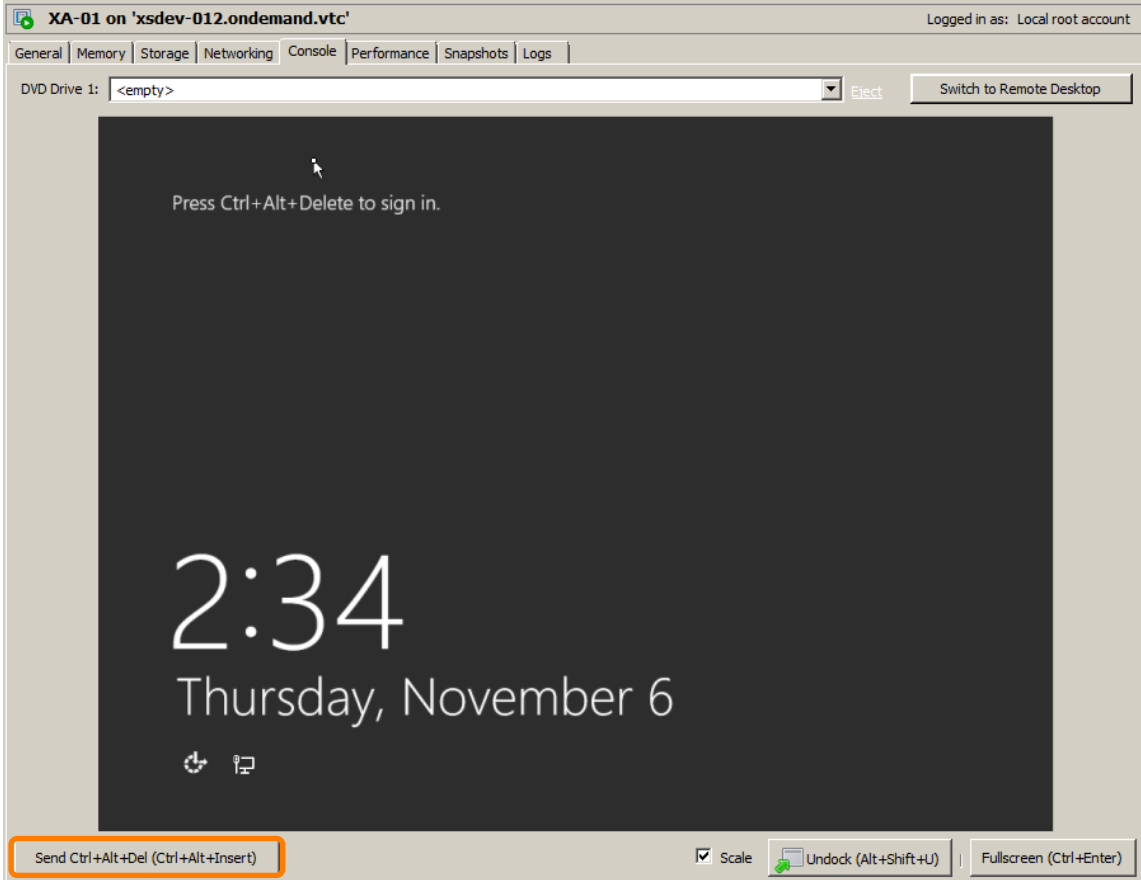
On the Student Desktop switch to **XenCenter**.

12.



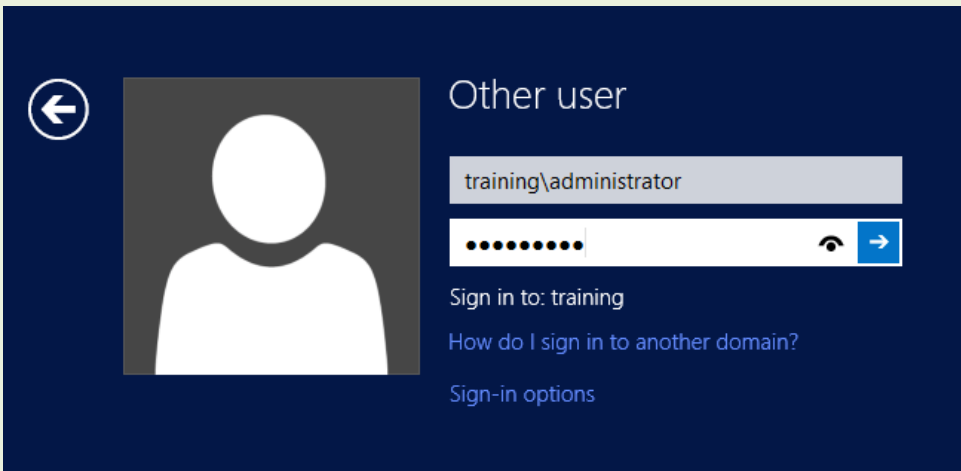
Select **XA-01** on the left and click the **Console** tab.

13.



Click **Send Ctrl-Alt-Del** at the bottom.

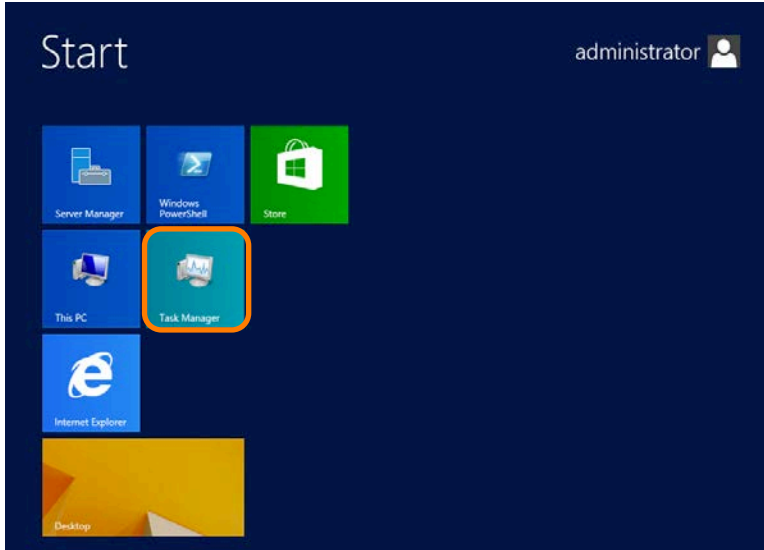
14.



Login with the following information:

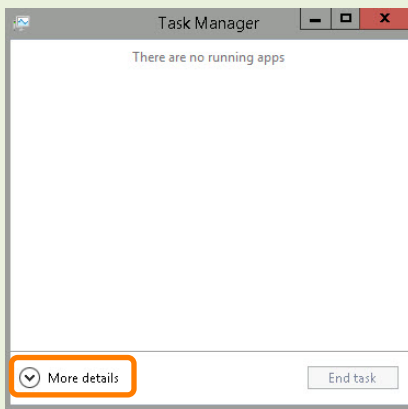
Username	Training\Administrator
Password	Citrix123

15.



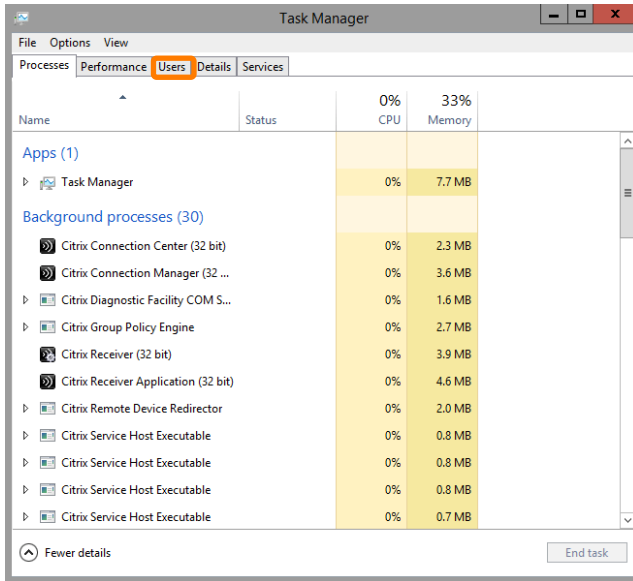
From the Start screen, click **Task Manager**.

16.



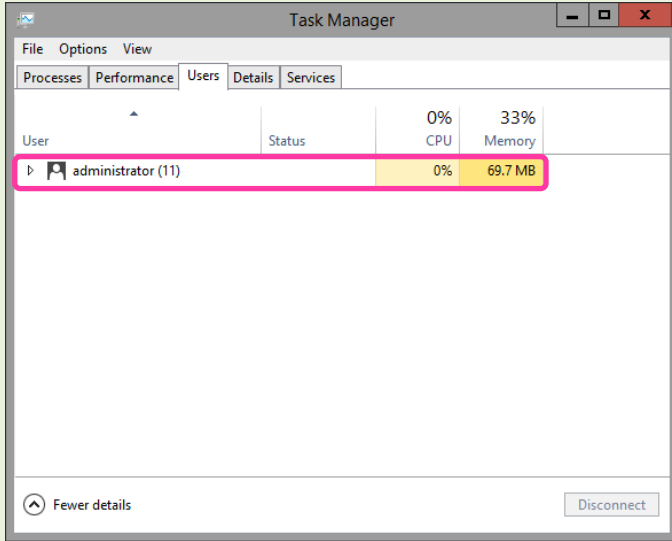
Click **More details**.

17.



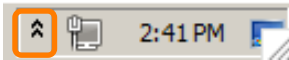
Click the **Users** tab.

18.



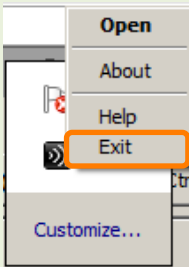
Notice that only the Administrator is listed. This indicates that there are no active sessions on XA-01.

19.



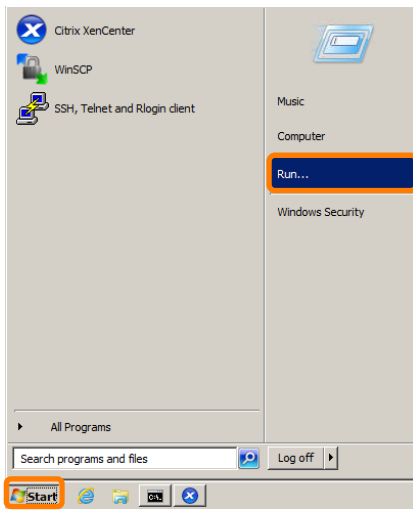
On the Student Desktop, click the **arrows** to view additional tray applications.

20.



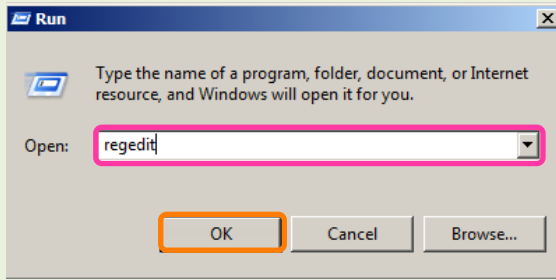
Right-click **Citrix Receiver** and click **Exit**.

21.



On the Student Desktop click **Start** and then click **Run...**

22.

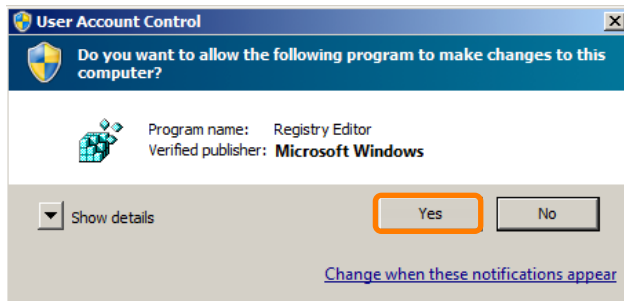


Enter the following:



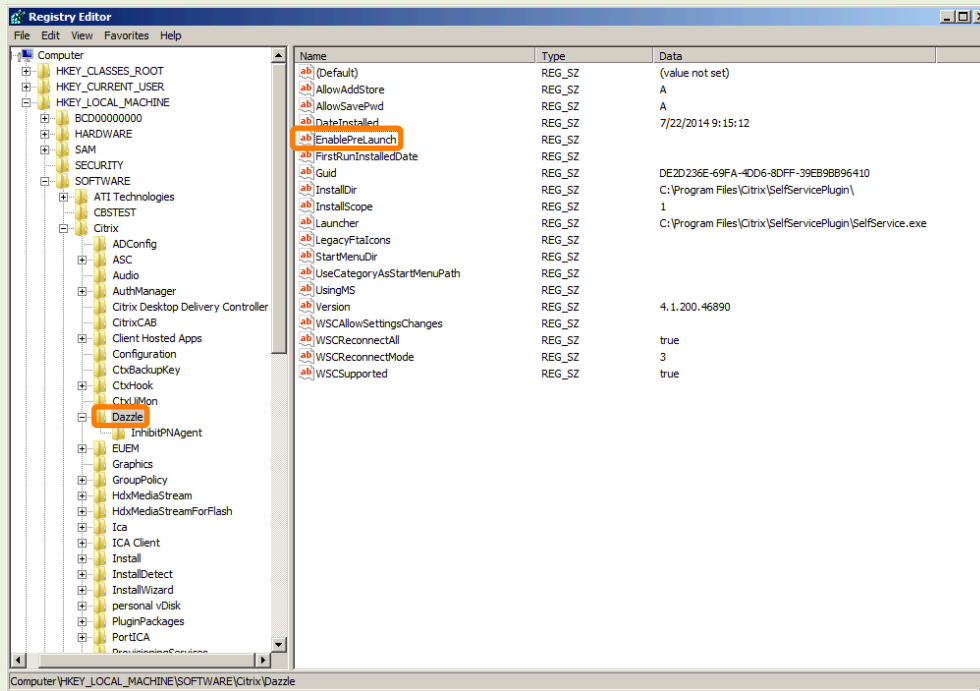
Click **OK**.

23.



Click **Yes** in the UAC dialog box.

24.

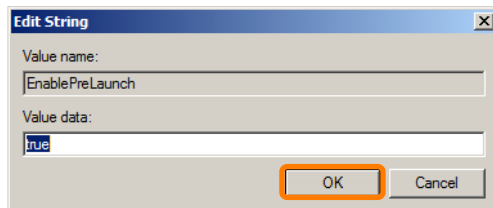


Navigate to HKEY\_LOCAL\_MACHINE > SOFTWARE > Citrix > Dazzle and double-click **EnablePreLaunch**.



EnablePreLaunch must be set to true in order for Session Prelaunch to function. This enables the feature for the client Windows Receiver. In production environments this registry setting can be modified with Group Policy.

25.

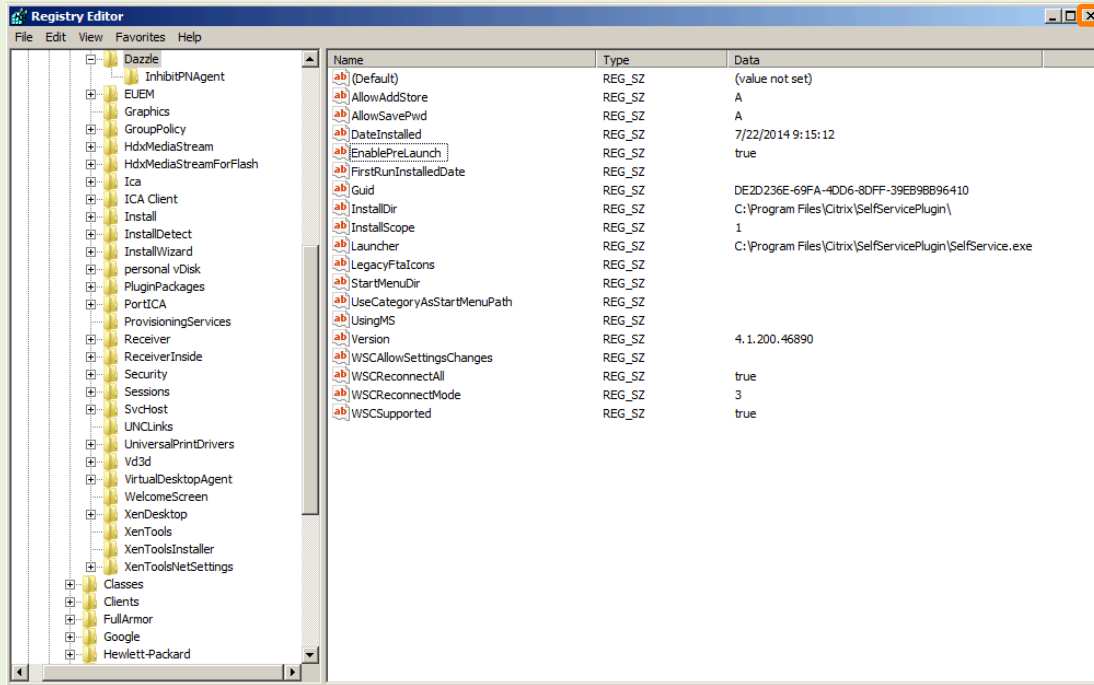


Enter the following information (case sensitive):

Value data:	true
-------------	------

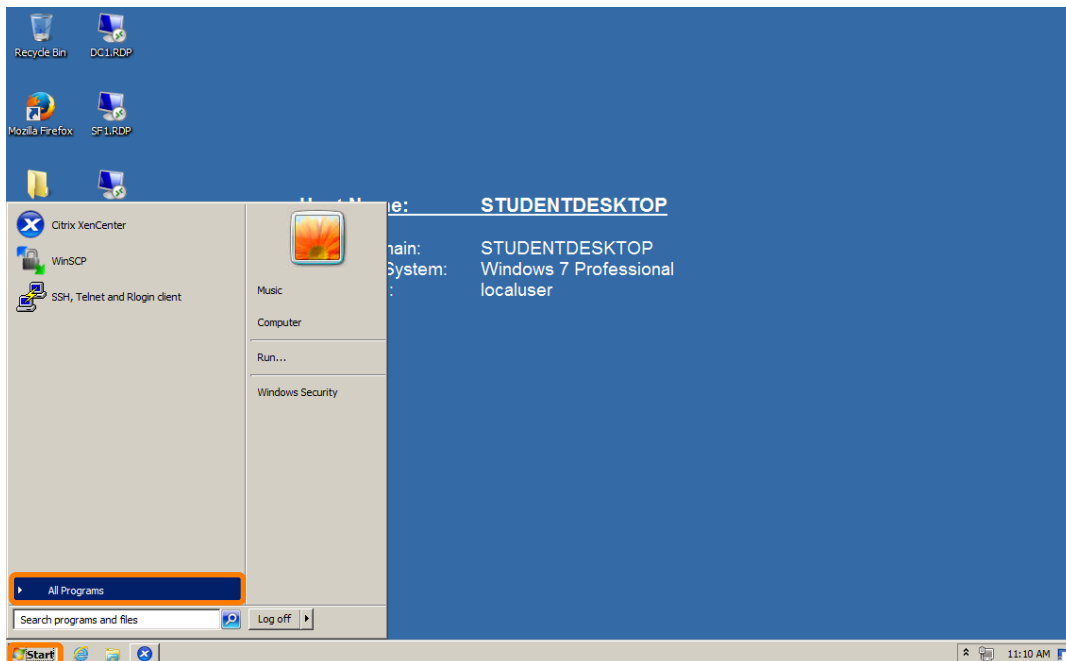
and click **OK**.

26.



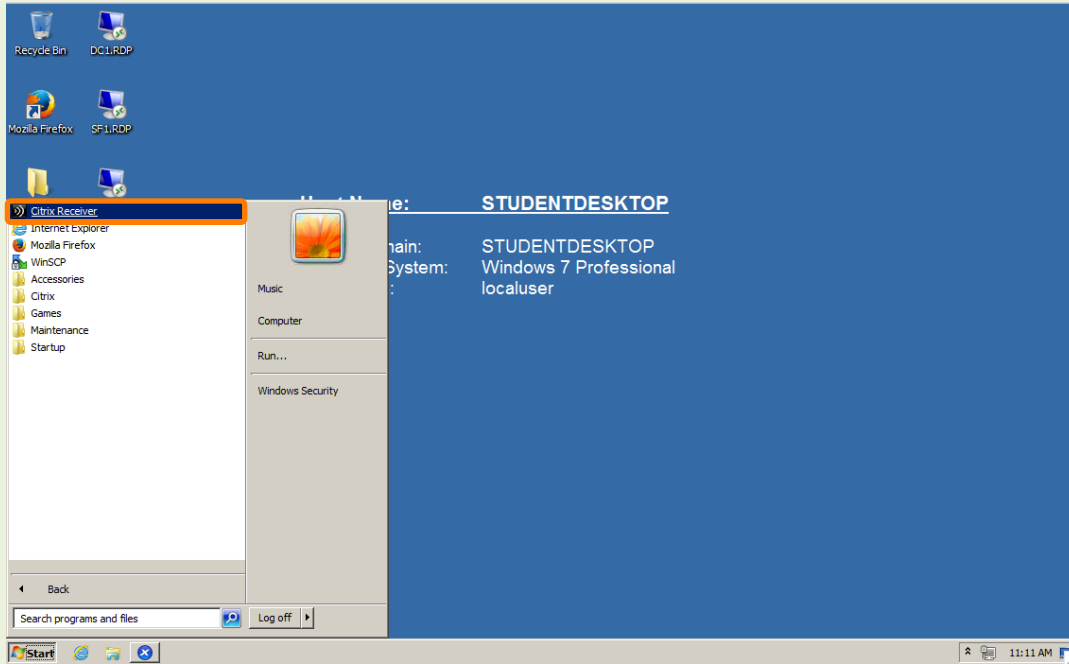
Close the Registry Editor.

27.



On the Student Desktop, click **Start** and then click **All Programs**.

28.



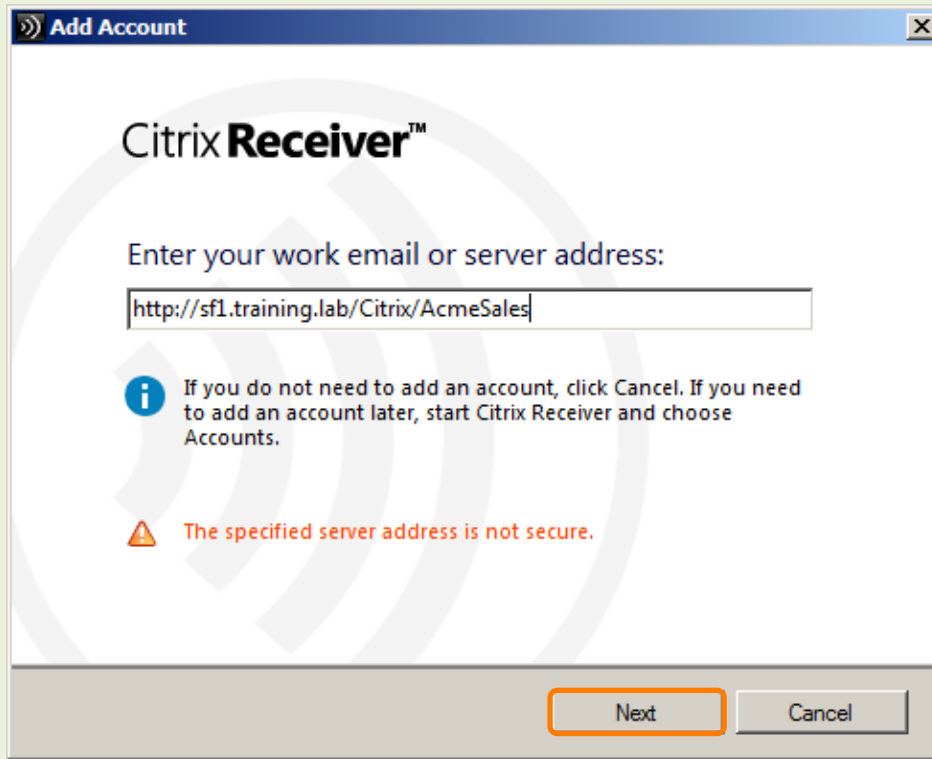
Click **Citrix Receiver**.

29.



Wait a few seconds for the Receiver window to open. Click **Add Account**.

30.

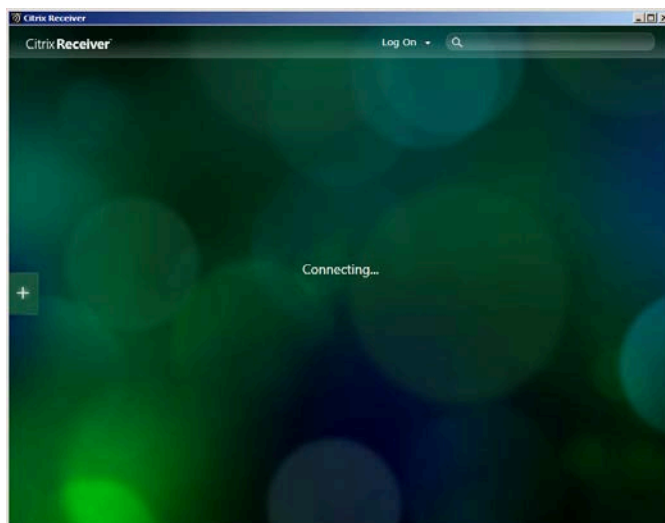


Type the following information:

`http://sf1.training.lab/Citrix/AcmeSales`

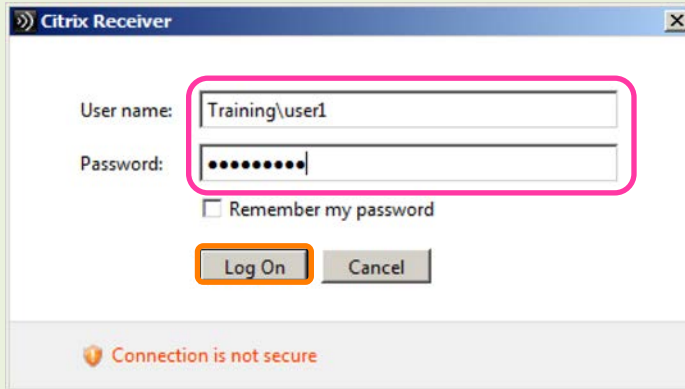
and click **Next**.

31.



Connecting... will be displayed in the receiver window for several seconds.

32.

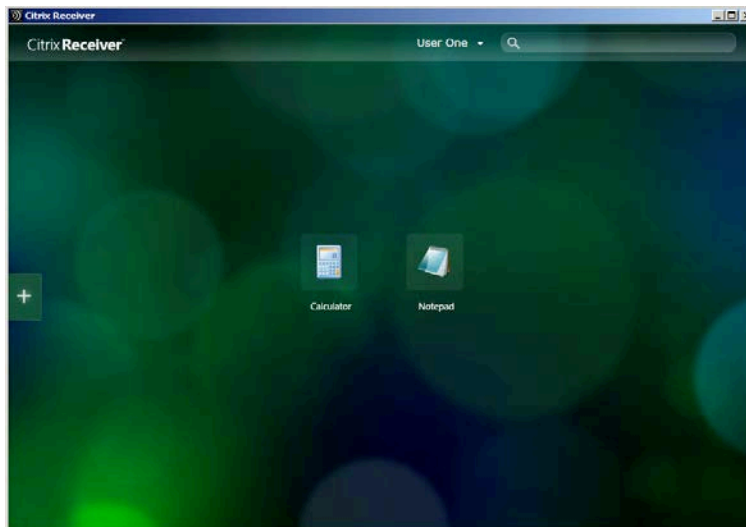


When the authentication dialog box appears enter the following information:

User name	Training\user1
Password	Citrix123

and click **Log On**.

33.



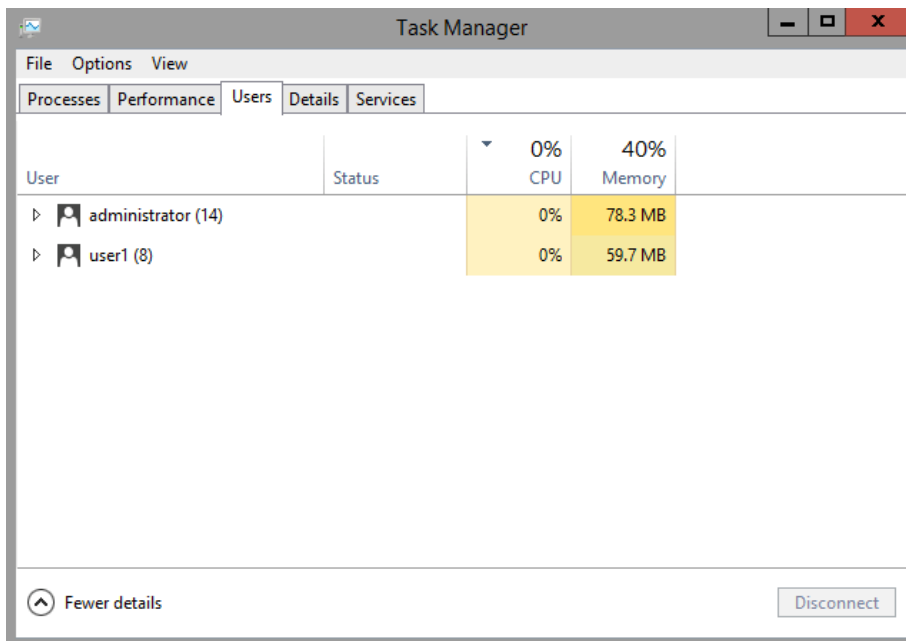
Wait for Receiver to log in completely and for Calculator and Notepad to appear.

34.



Switch back to XenCenter to view the XA-01 VM Task Manager.

35.



Task Manager should still be open on the desktop. A session for user1 will appear after a minute. This is the pre-launch session for user1.

36.



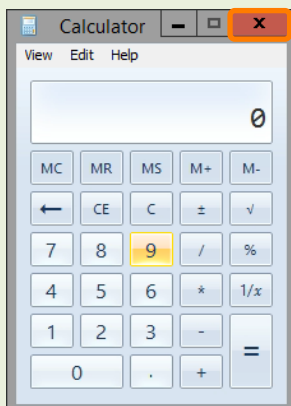
Switch to Citrix Receiver on the Student Desktop.

37.



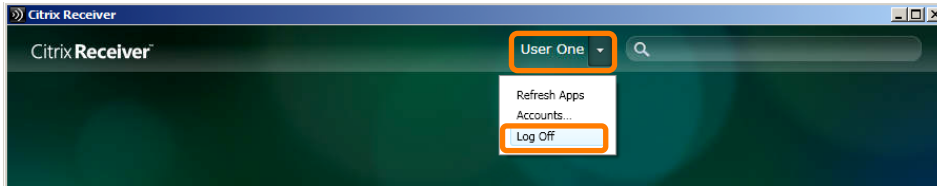
Launch Calculator.

38.



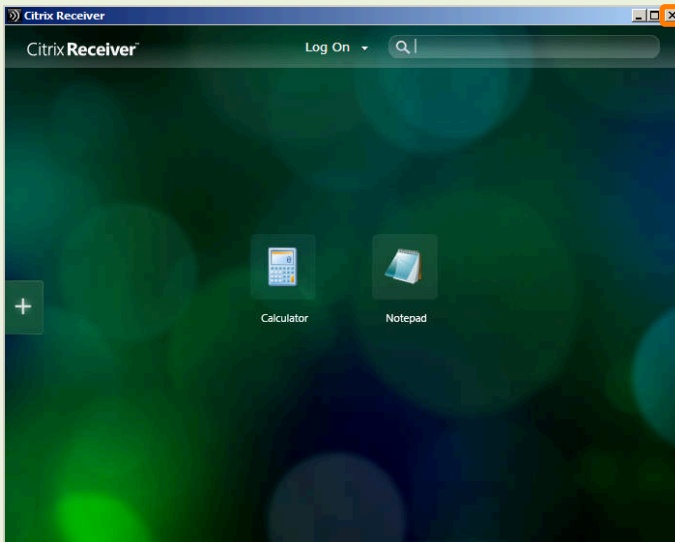
Wait for Calculator to open and close the application.

39.



In the Receiver window click **User One** and click **Log Off**.

40.



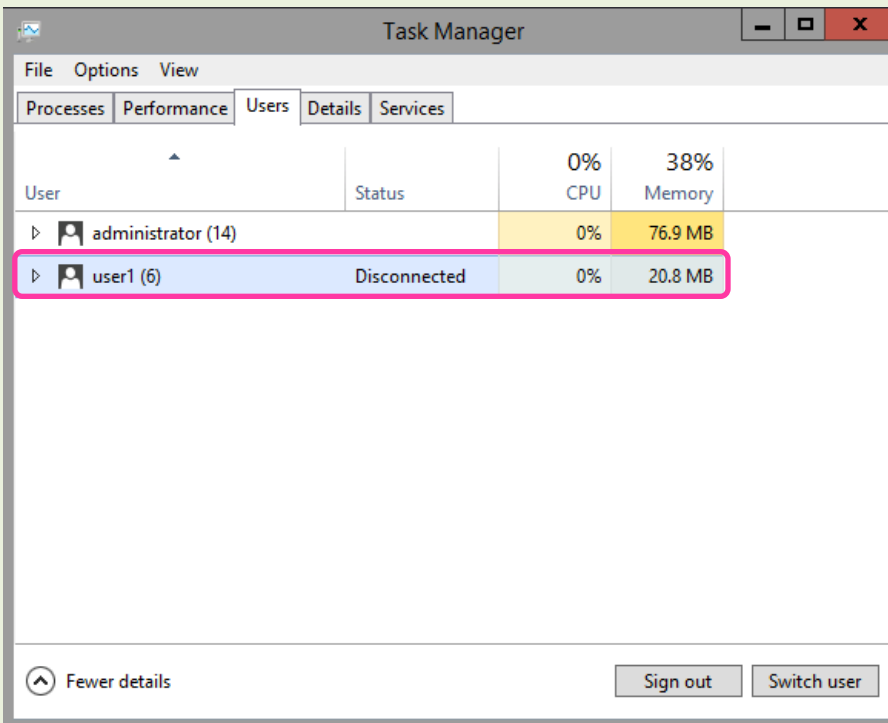
Close Citrix Receiver.

41.



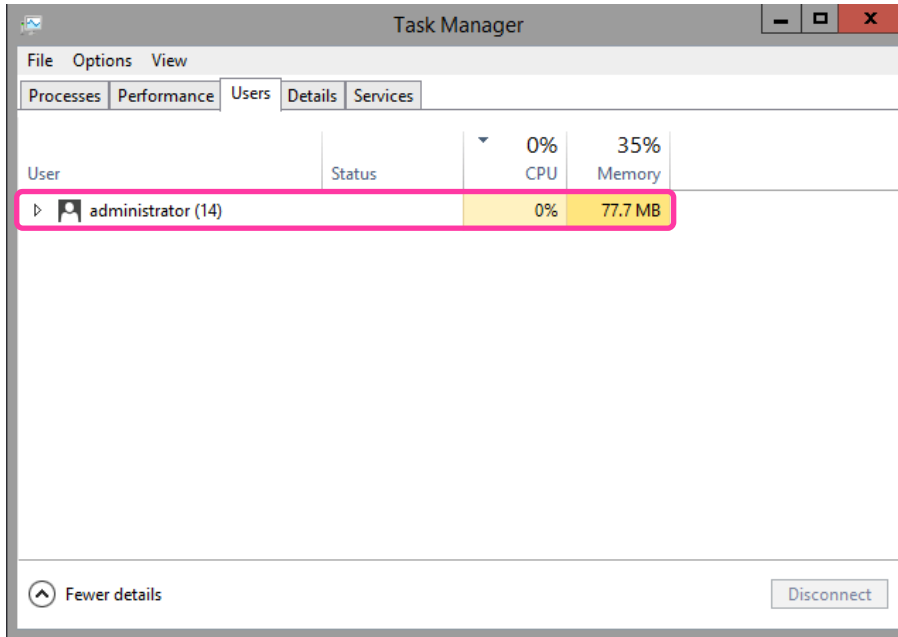
Switch back to XenCenter to view the XA-01 VM Task Manager.

42.



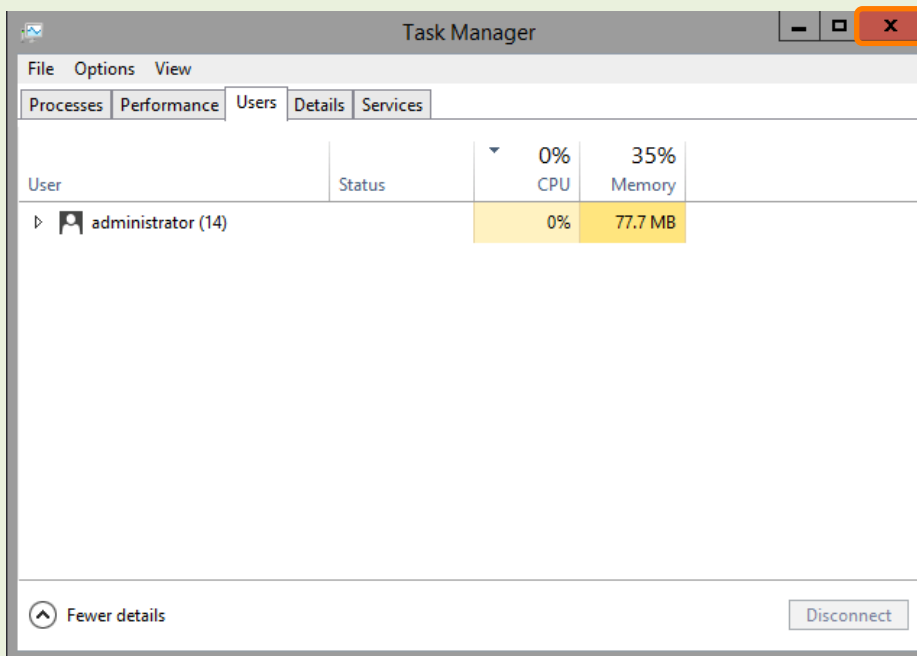
Notice that the user1 session is still present due to session linger being enabled.

43.



In 2 minutes, the session will end due to the timeout threshold we configured earlier in this exercise; only the currently logged in Administrator will be present.

44.



Close Task Manager.

## Exercise Summary

In this exercise, you configured session pre-launch and session linger for all users of the Sales Delivery Group. We used the registry editor to enable pre-launch on the client machine's Receiver and we accessed the Task Manager of XA-01 to see the pre-launched and lingering session for User1.

# Exercise 4: Connection Leasing

## Overview


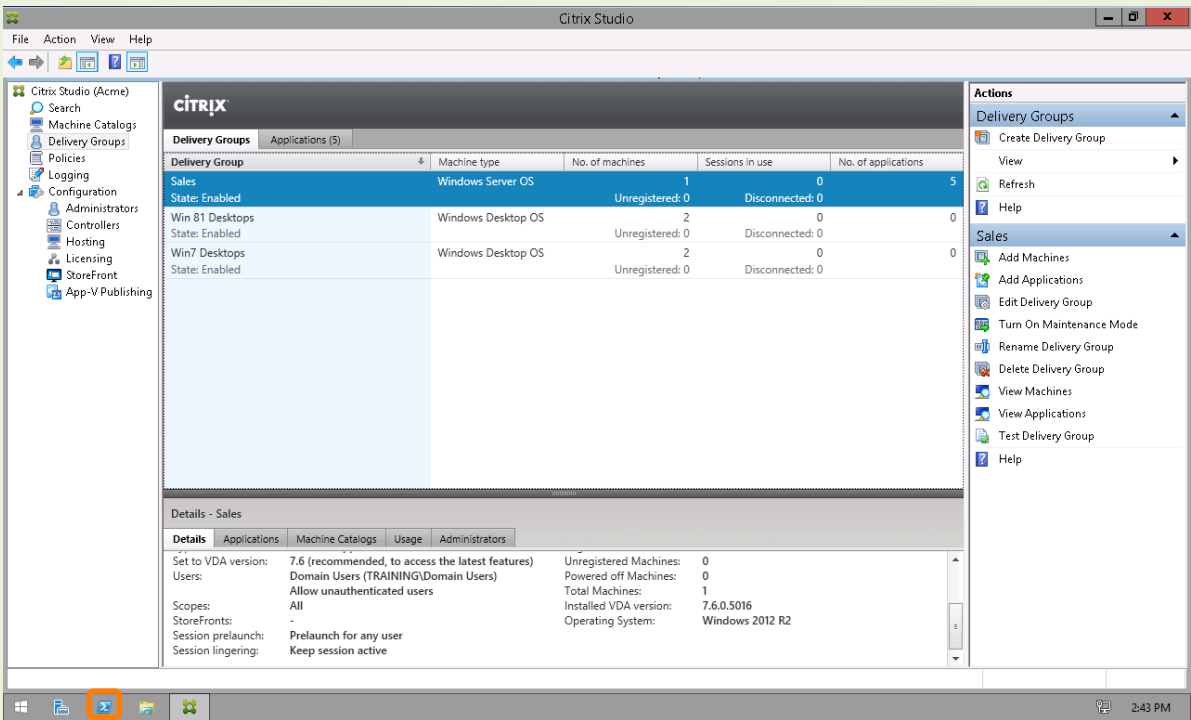
Connection leasing enables users to connect to previously accessed resources during times when the Controller connection to the site database is unavailable.

In this exercise you will:

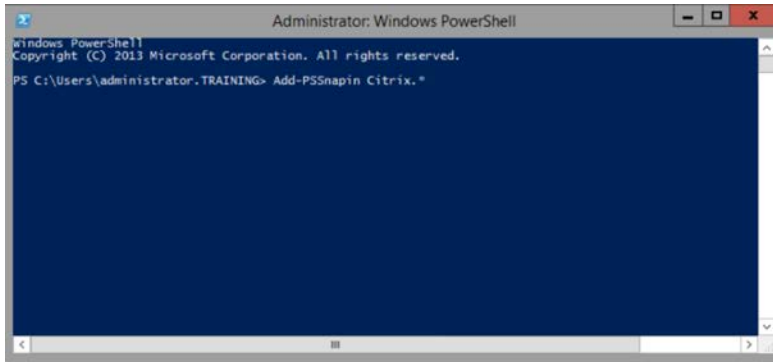
- Launch Calculator
- Shut down the SQL database server
- Verify the Calculator application is still accessible
- View XML file locations

## Step by step guidance

Estimated time to complete this exercise: 15 minutes.

Step	Action
1.	 Switch to <b>DC1</b> .
2.	 Click <b>PowerShell</b> at the bottom left.

3.



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2013 Microsoft Corporation. All rights reserved.

PS C:\Users\administrator.TRAINING> Add-PSSnapin Citrix.*
```

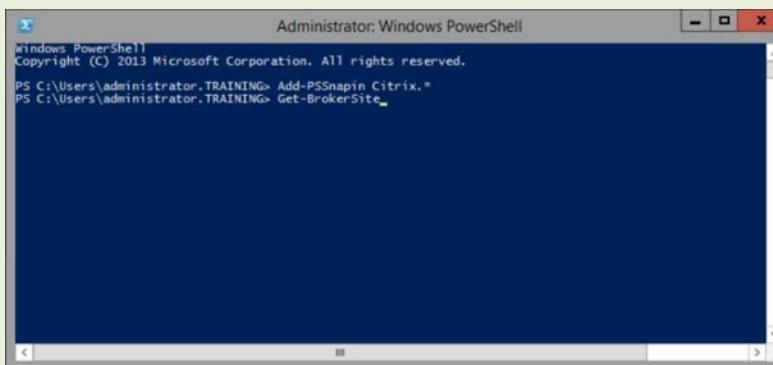
Enter the following command:

`Add-PSSnapin Citrix.*`

Press **Enter**.

This loads the Citrix PowerShell Snap-Ins that are required for interacting with the controller from PowerShell.

4.

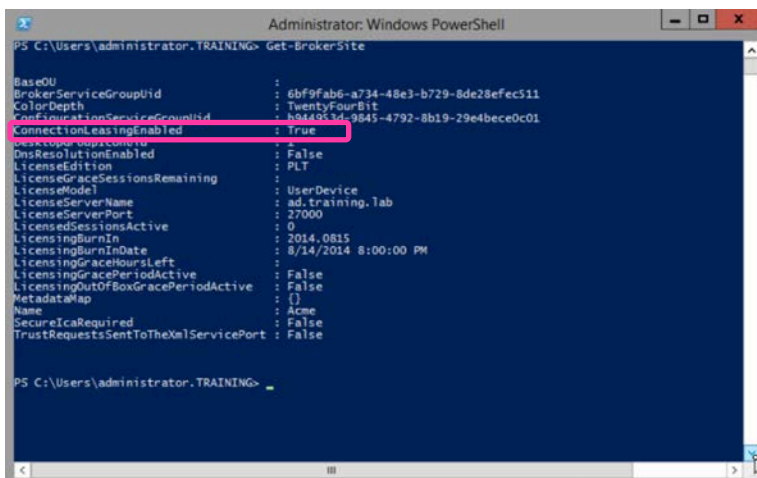


```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2013 Microsoft Corporation. All rights reserved.

PS C:\Users\administrator.TRAINING> Add-PSSnapin Citrix.*
PS C:\Users\administrator.TRAINING> Get-BrokerSite_
```

Type `Get-BrokerSite` and press Enter.

5.



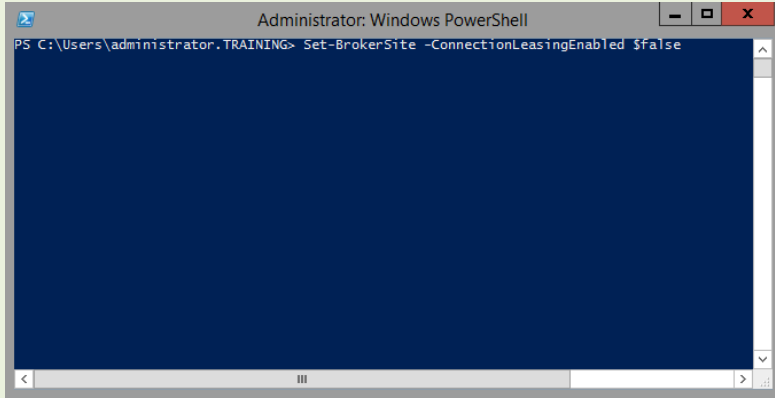
```
Administrator: Windows PowerShell
PS C:\Users\administrator.TRAINING> Get-BrokerSite

BaseOU :
BrokerServiceGroupId : 6bf9fab6-a734-48e3-b729-8de28efec511
ColorDepth : TwentyFourBit
ConfigurationServiceGroupId : h9449c3d-9845-4792-8b19-29e4bece0c01
ConnectionLeasingEnabled : True
DesktopAppIconEnabled :
DnsResolutionEnabled : False
LicenseEdition : PLT
LicenseGraceSessionsRemaining :
LicenseModel : UserDevice
LicenseServerName : ad.training.tab
LicenseServerPort : 27000
LicensedSessionsActive : 0
LicensingBurnIn : 2014.0815
LicensingBurnInDate : 8/14/2014 8:00:00 PM
LicensingGraceHoursLeft :
LicensingGracePeriodActive : False
LicensingOutOfBoxGracePeriodActive : False
MetadataMap : {}
Name : Acme
SecureIcaRequired : False
TrustRequestsSentToTheXmIServicePort : False

PS C:\Users\administrator.TRAINING> _
```

Verify `ConnectionLeasingEnabled` indicates True.

6.

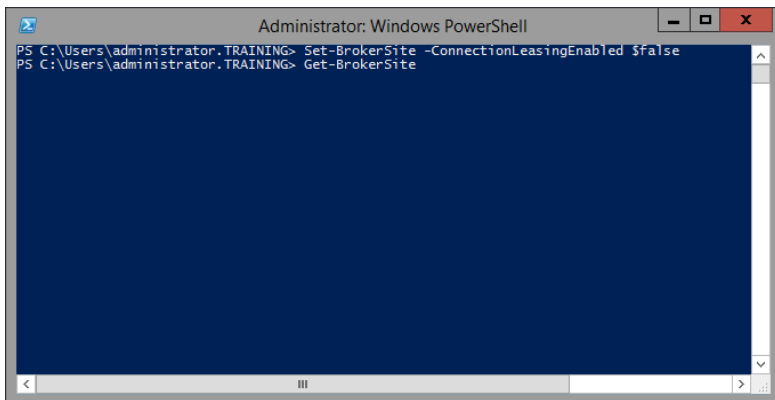


Type `Set-BrokerSite -ConnectionLeasingEnabled $false` and press Enter.



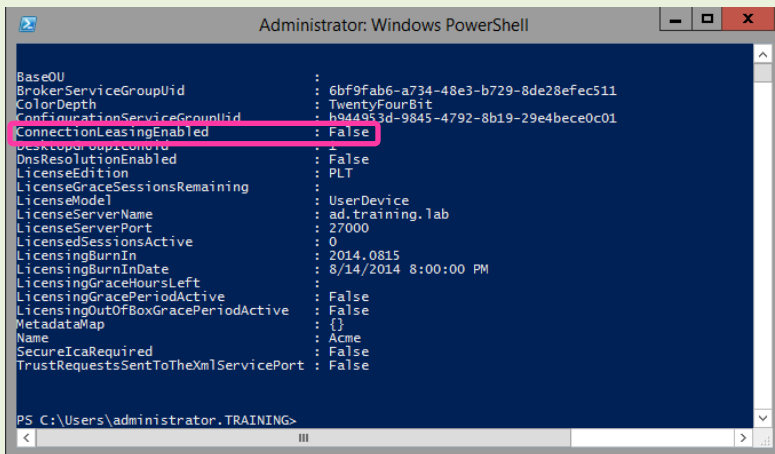
Connection leasing is now disabled. Users will not be able to access resources if the connection to the SQL database is unavailable.

7.



Type `Get-BrokerSite` and press Enter.

8.



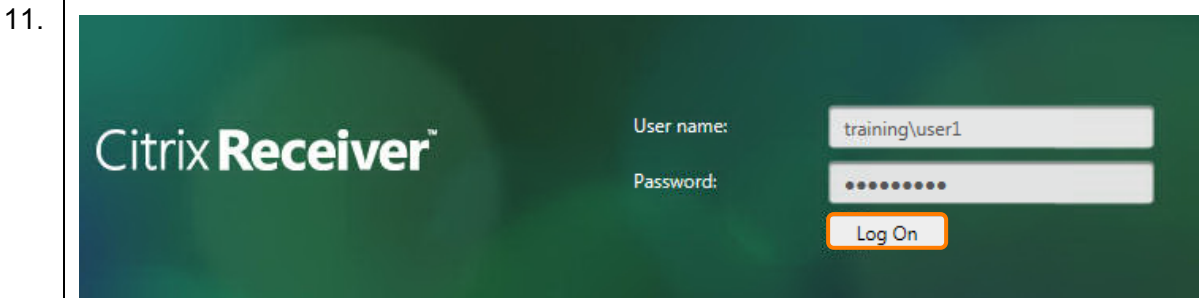
Verify that `ConnectionLeasingEnabled` indicates False.

9.



On the Student Desktop, launch **Internet Explorer**.

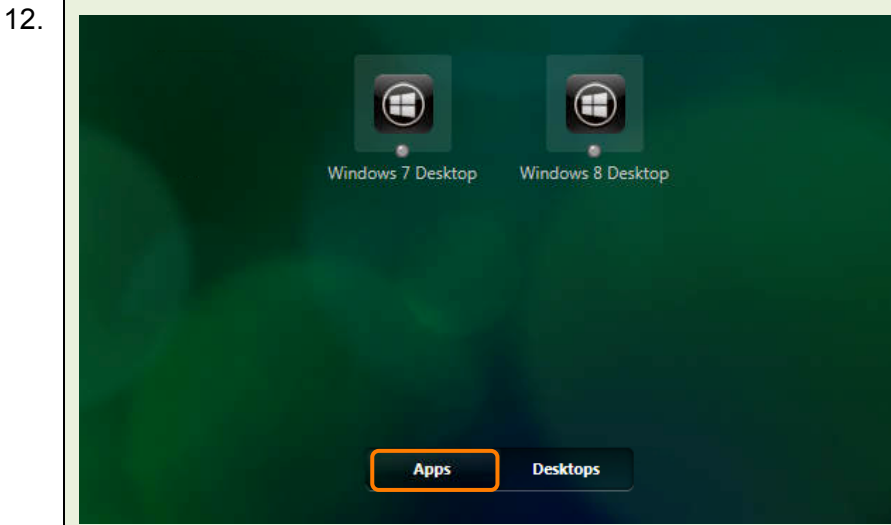
10. Enter the URL of your Store  
<http://sf1/Citrix/AcmeSalesWeb/>



Enter the following:

User Name	training/user1
Password	Citrix123

Click **Log On**.

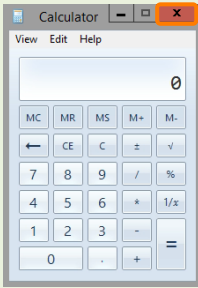


Click **Apps**.



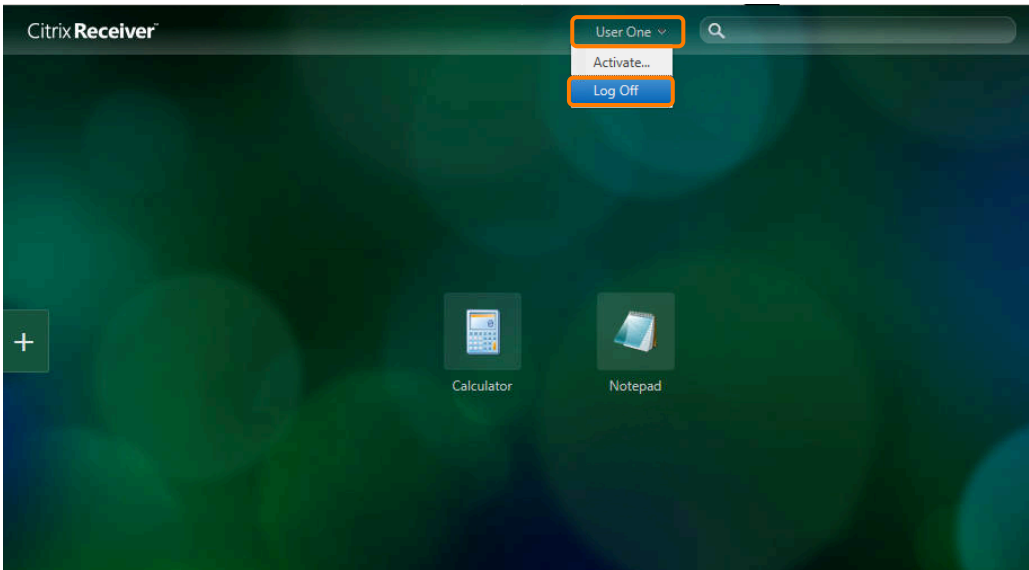
Click on the **Calculator** icon.

14.



The Calculator application appears on the Student Desktop, close Calculator.

15.



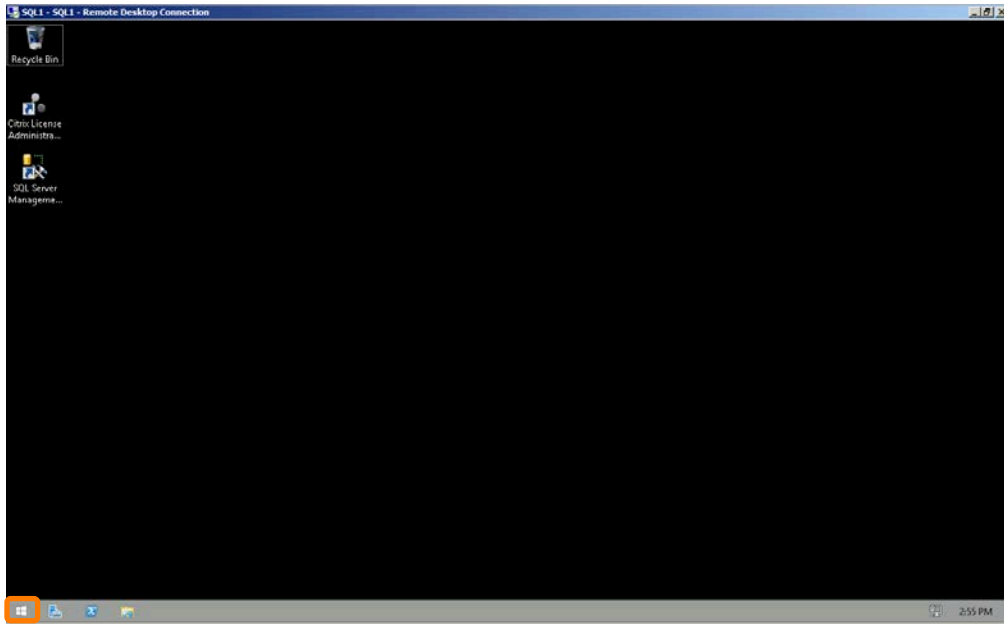
Click **User One** at the top and click **Log Off**.

16.



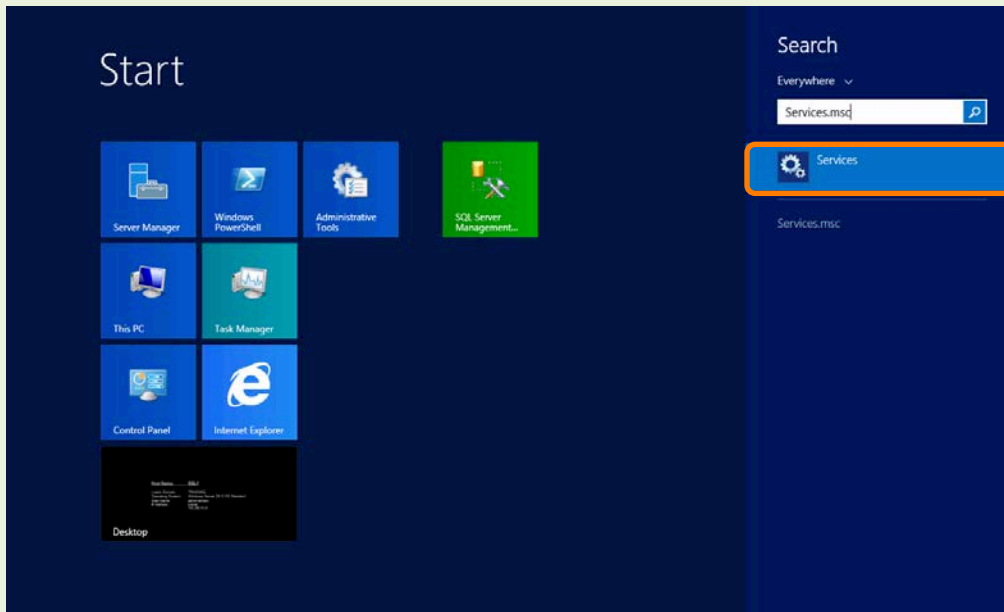
On the Student Desktop, double-click the **SQL1** shortcut.

17.



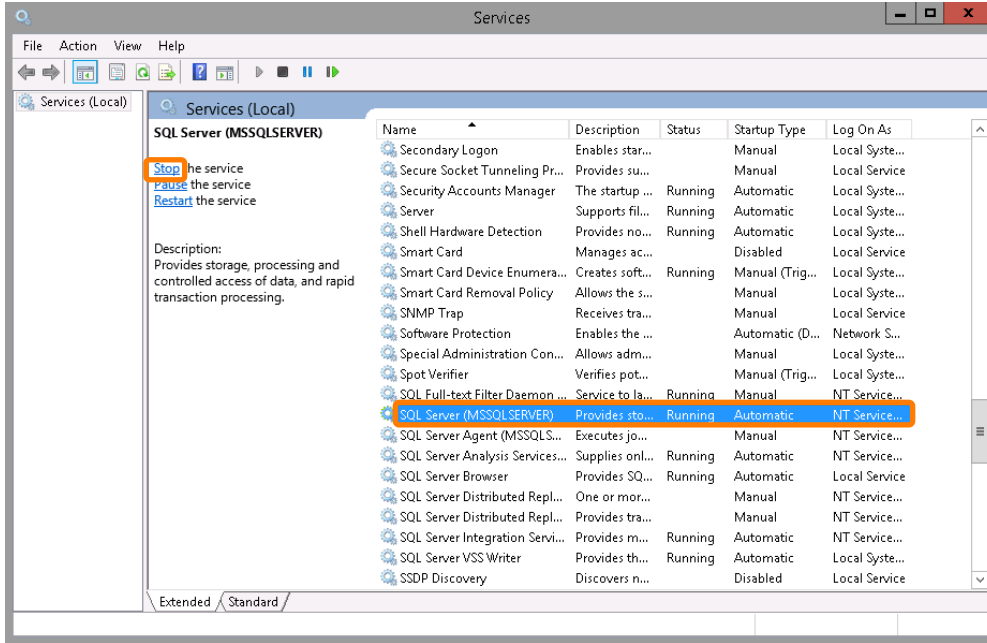
On the SQL1 desktop, click **Start**.

18.



On the Start screen type `Services.msc` to search and then click on **Services** when it appears.

19.



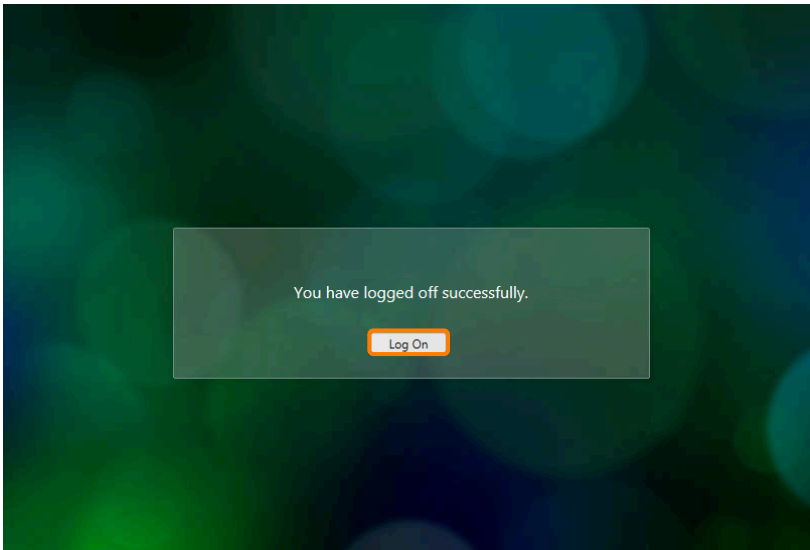
In the Services window, scroll down and select **SQL Server (MSSQLSERVER)** and click **Stop** at the top left, this simulates a database failure.

20.



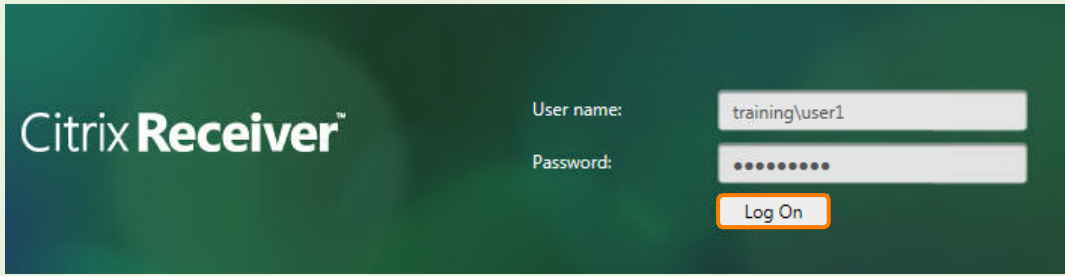
On the Student Desktop switch back to **Internet Explorer**.

21.



Click **Log On**.

22.



Enter the following:

User Name	training\user1
Password	Citrix123

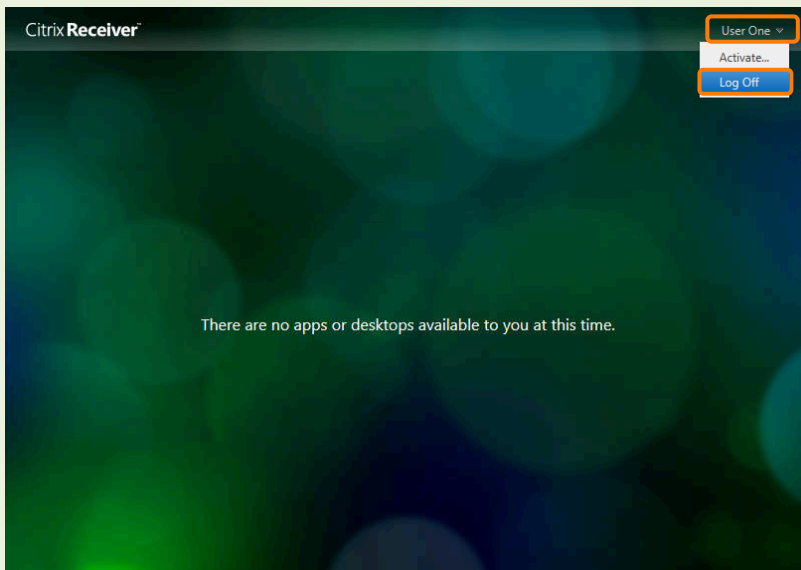
Click **Log On**.

23.



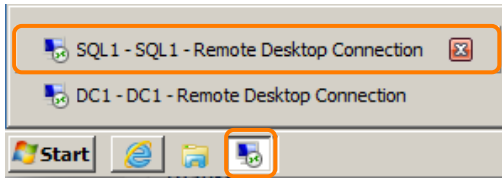
No apps or desktops are available because the SQL database is offline and Connection Leasing is disabled.

24.



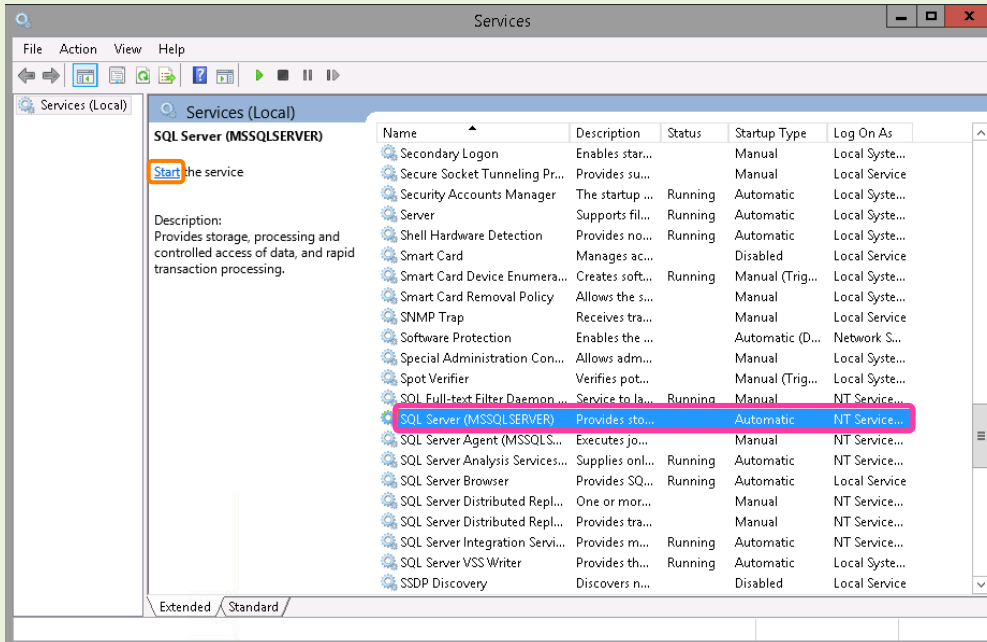
Click **User One** and then click **Log Off**.

25.



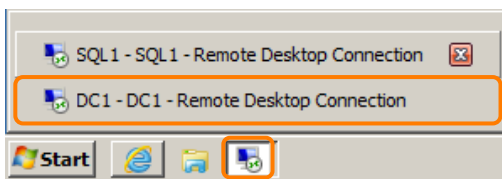
On the Student Desktop switch back to **SQL1**.

26.



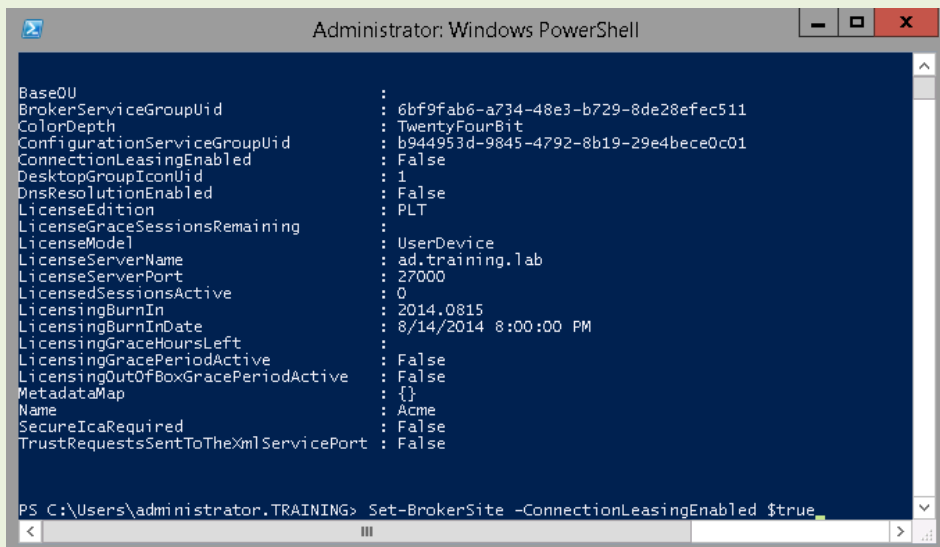
In the Services window, verify SQL Server (MSSQLSERVER) is still selected and click **Start**.

27.



Switch back to **DC1**.

28.



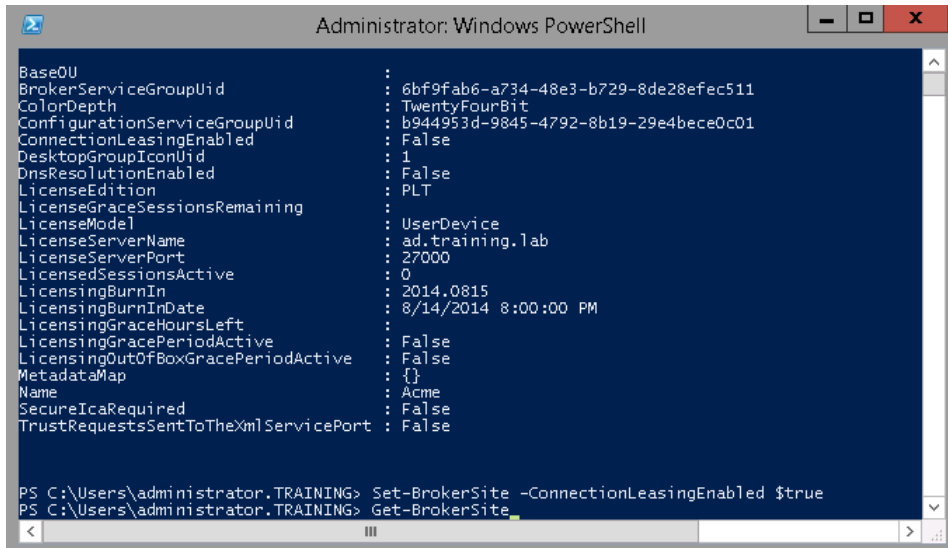
```
Administrator: Windows PowerShell

BaseOU :
BrokerServiceGroupId : 6bf9fab6-a734-48e3-b729-8de28efec511
ColorDepth : TwentyFourBit
ConfigurationServiceGroupId : b944953d-9845-4792-8b19-29e4bece0c01
ConnectionLeasingEnabled : False
DesktopGroupIconUid : 1
DnsResolutionEnabled : False
LicenseEdition : PLT
LicenseGraceSessionsRemaining :
LicenseModel : UserDevice
LicenseServerName : ad.training.lab
LicenseServerPort : 27000
LicensedSessionsActive : 0
LicensingBurnIn : 2014.0815
LicensingBurnInDate : 8/14/2014 8:00:00 PM
LicensingGraceHoursLeft :
LicensingGracePeriodActive : False
LicensingOutOfBoxGracePeriodActive : False
MetadataMap : {}
Name : Acme
SecureIcaRequired : False
TrustRequestsSentToTheXmlServicePort : False

PS C:\Users\administrator.TRAINING> Set-BrokerSite -ConnectionLeasingEnabled $true
```

In the PowerShell window, type `Set-BrokerSite -ConnectionLeasingEnabled $true` and press Enter.

29.



```
Administrator: Windows PowerShell

BaseOU :
BrokerServiceGroupId : 6bf9fab6-a734-48e3-b729-8de28efec511
ColorDepth : TwentyFourBit
ConfigurationServiceGroupId : b944953d-9845-4792-8b19-29e4bece0c01
ConnectionLeasingEnabled : False
DesktopGroupIconUid : 1
DnsResolutionEnabled : False
LicenseEdition : PLT
LicenseGraceSessionsRemaining :
LicenseModel : UserDevice
LicenseServerName : ad.training.lab
LicenseServerPort : 27000
LicensedSessionsActive : 0
LicensingBurnIn : 2014.0815
LicensingBurnInDate : 8/14/2014 8:00:00 PM
LicensingGraceHoursLeft :
LicensingGracePeriodActive : False
LicensingOutOfBoxGracePeriodActive : False
MetadataMap : {}
Name : Acme
SecureIcaRequired : False
TrustRequestsSentToTheXmlServicePort : False

PS C:\Users\administrator.TRAINING> Set-BrokerSite -ConnectionLeasingEnabled $true
PS C:\Users\administrator.TRAINING> Get-BrokerSite
```

Type `Get-BrokerSite` and press Enter.

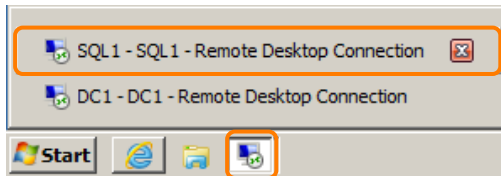
30.

```
Administrator: Windows PowerShell
PS C:\Users\administrator.TRAINING> Set-BrokerSite -ConnectionLeasingEnabled $true
PS C:\Users\administrator.TRAINING> Get-BrokerSite

BaseOU :
BrokerServiceGroupUid : 6bf9fab6-a734-48e3-b729-8de28efec511
ColorDepth : TwentyFourBit
ConfigurationServiceGroupUid : h944953d-9845-4792-8b19-29e4bec0c01
ConnectionLeasingEnabled : True
DesktopGroupCondition : 1
DnsResolutionEnabled : False
LicenseEdition : PLT
LicenseGraceSessionsRemaining :
LicenseModel : UserDevice
LicenseServerName : ad.training.lab
LicenseServerPort : 27000
LicensedSessionsActive : 0
LicensingBurnIn : 2014.0815
LicensingBurnInDate : 8/14/2014 8:00:00 PM
LicensingGraceHoursLeft :
LicensingGracePeriodActive : False
LicensingOutOfBoxGracePeriodActive : False
MetadataMap : {}
Name : Acme
SecureIcaRequired : False
TrustRequestsSentToTheXmlServicePort : False
```

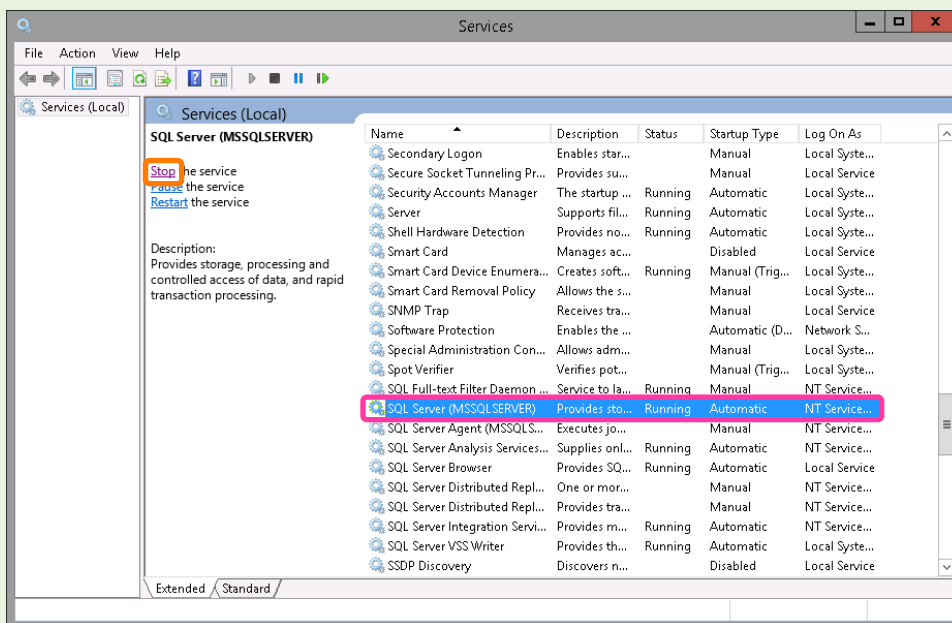
Verify that ConnectionLeasingEnabled indicates True. Close PowerShell.

31.



Switch to SQL1.

32.




In the Services window, verify SQL Server (MSSQLSERVER) is still selected and click **Stop**.

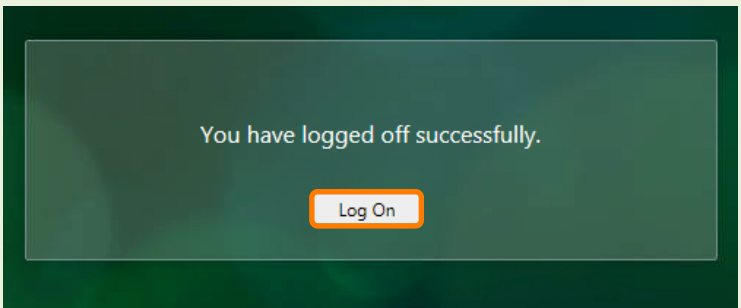
33.



Wait 90 seconds and then switch to Internet Explorer on the Student Desktop.

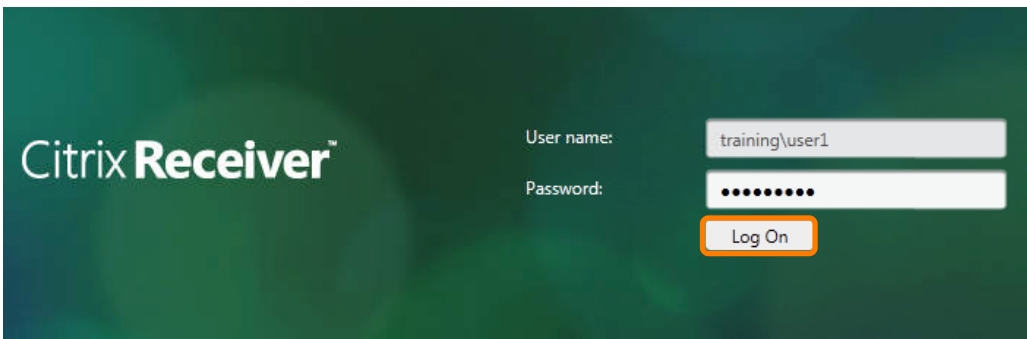
 Connection Leasing has a 90 second delay in case database access can be quickly recovered.

34.



Click **Log On** in the Internet Explorer window.

35.

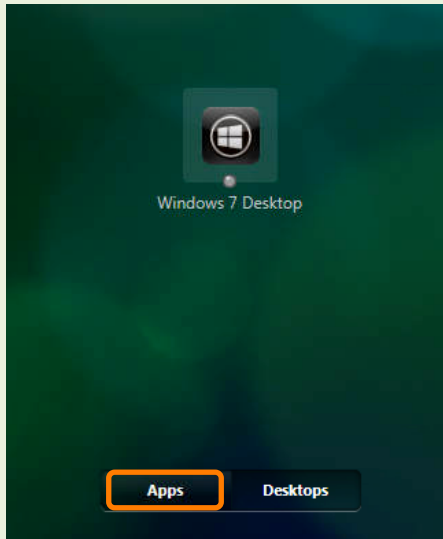


Enter the following:

User Name	training\user1
Password	Citrix123

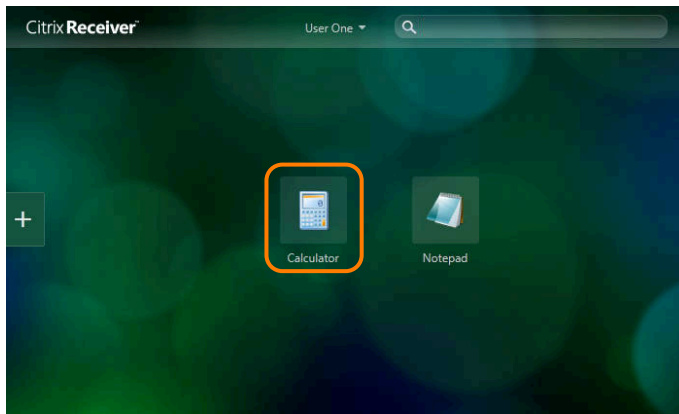
Click **Log On**.

36.



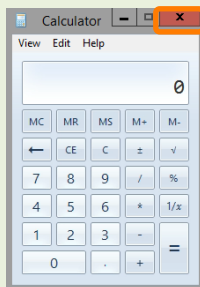
Click **Apps**.

37.



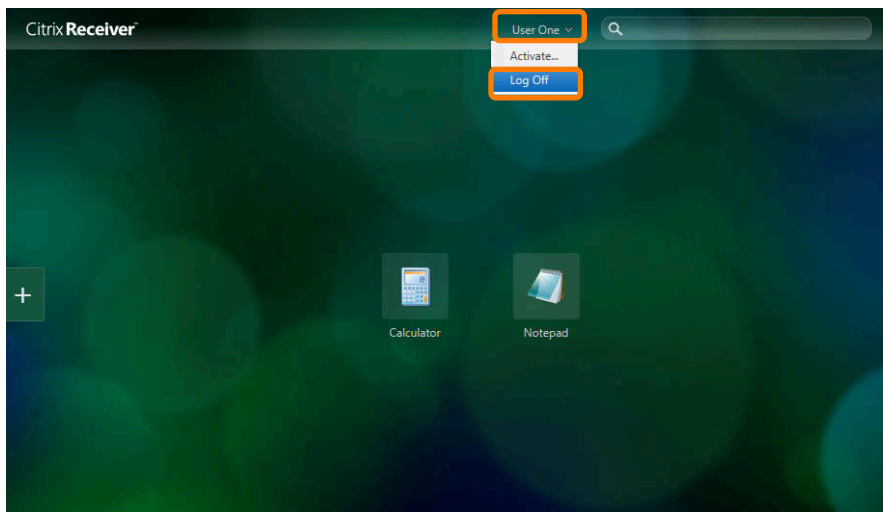
Click on the **Calculator** icon.

38.



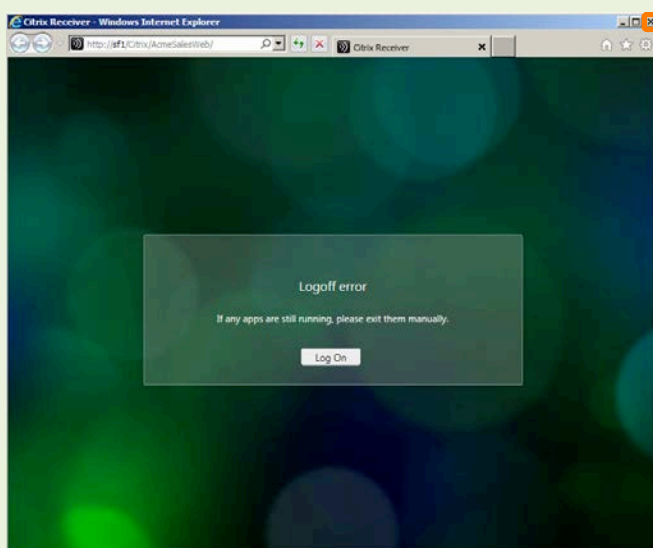
The Calculator application appears on the Student Desktop despite the database being offline. Close Calculator.

39.



Click **User One** and click **Log Off**.

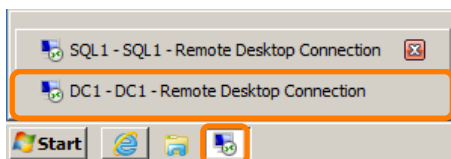
40.



Receiver will indicate a Logoff error, this is due to the database being offline.

Close Internet Explorer.

41.



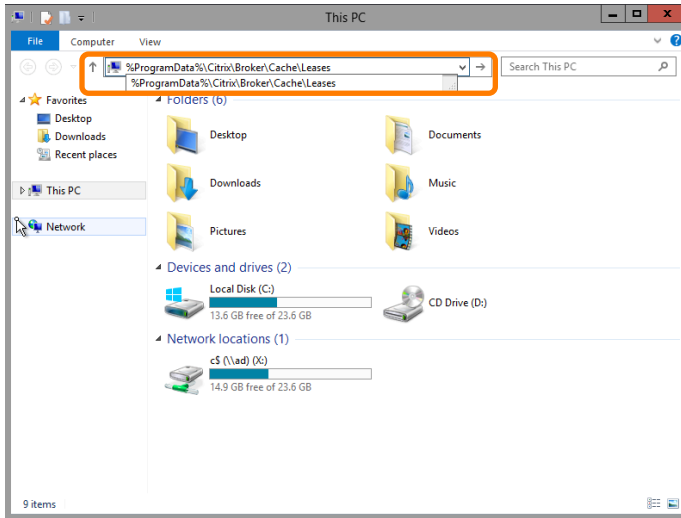
Switch back to **DC1**.

42.



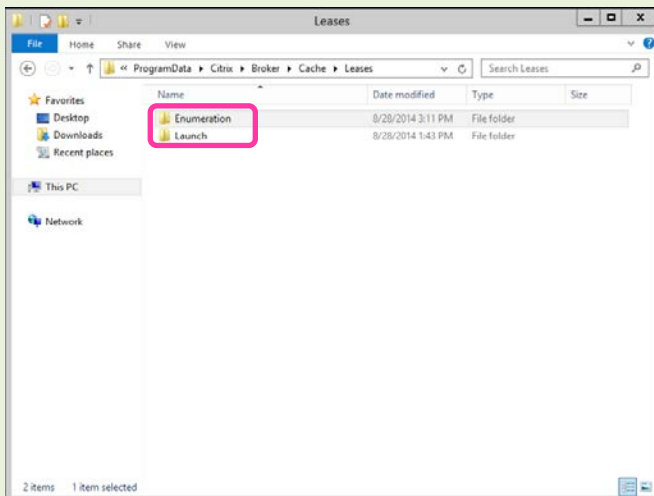
Open File Explorer.

43.




Navigate to %ProgramData%\Citrix\Broker\Cache\Leases

44.



These folders contain a sub-folder structure that holds the XML files for the leases. There are two kinds of leases, enumeration and launch.

 Enumeration leases are specific to user and endpoint; they contain the browser names of resources that can be enumerated by the user from a specific endpoint. Launch leases contain information specific to the user and specifies the worker that was used in the last brokering.

45.

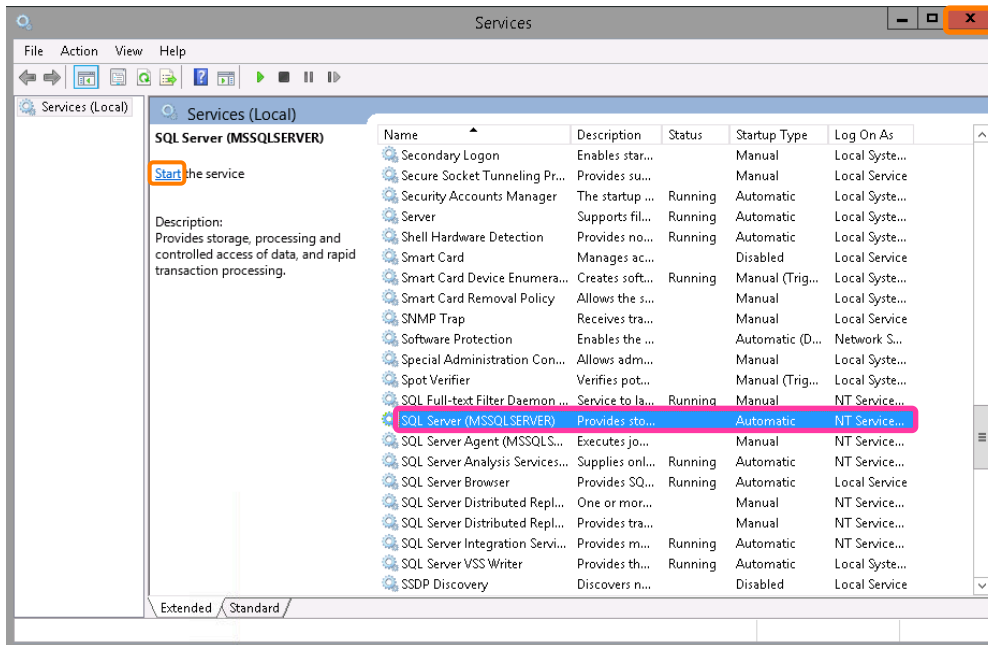
Close File Explorer.

46.



Switch back to **SQL1**.

47.



In the Services window, verify SQL Server (MSSQLSERVER) is still selected and click **Start**. Close the Services window.

48. Close the connection to SQL1.

## Exercise Summary

In this exercise, you tested Connection Leasing by launching an application while the SQL server was offline. You also reviewed the lease XML file locations.

# Exercise 5: Broker Throttling

## Overview


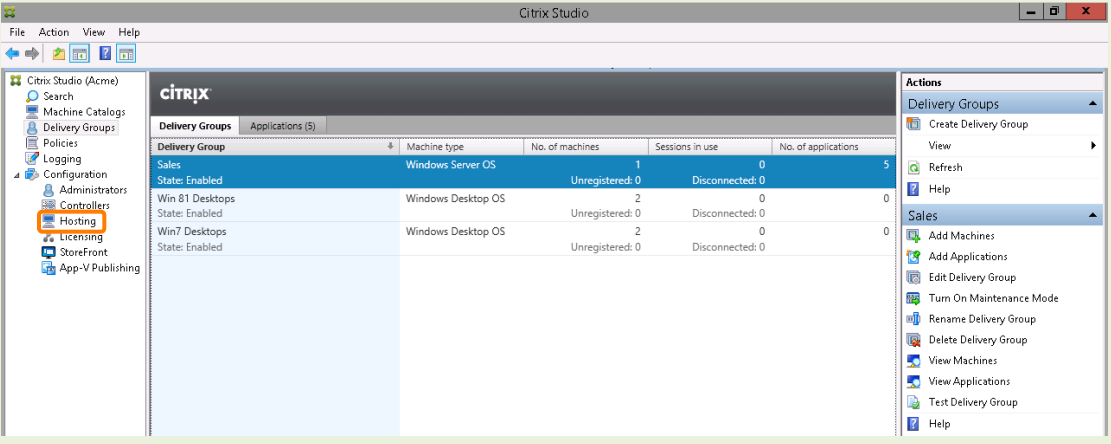
Broker throttling limits the number of actions that can be executed on the hypervisor. This prevents performance issues that result when a hypervisor is overloaded. We can limit the maximum number of simultaneous actions, personal vDisk inventory updates and new

In this exercise you will:

- Configure broker throttling in Studio.
- Test broker throttling by starting and stopping VMs with Personal vDisk.

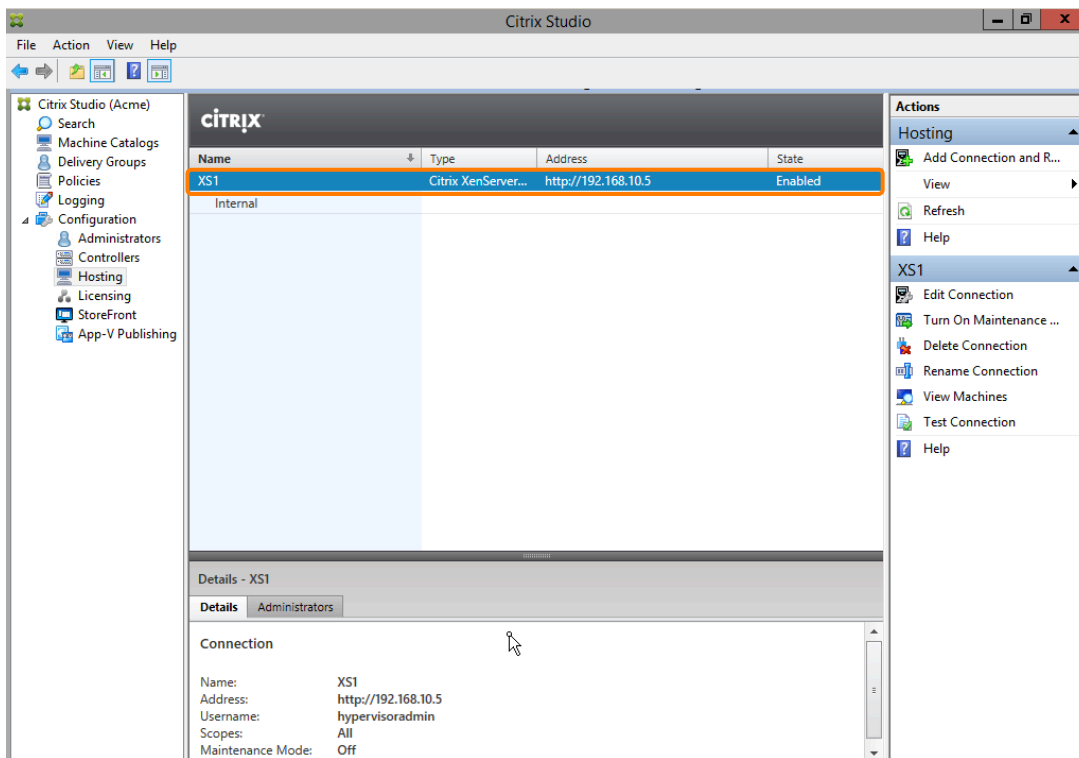
## Step by step guidance

Estimated time to complete this exercise: 15 minutes.

Step	Action																				
1.	 Switch to the <b>DC1</b> connection.																				
2.	 <table border="1"><thead><tr><th>Delivery Group</th><th>Machine type</th><th>No. of machines</th><th>Sessions in use</th><th>No. of applications</th></tr></thead><tbody><tr><td>Sales</td><td>Windows Server OS</td><td>1</td><td>0</td><td>5</td></tr><tr><td>Win 81 Desktops</td><td>Windows Desktop OS</td><td>2</td><td>0</td><td>0</td></tr><tr><td>Win7 Desktops</td><td>Windows Desktop OS</td><td>2</td><td>0</td><td>0</td></tr></tbody></table> Click <b>Hosting</b> on the left.	Delivery Group	Machine type	No. of machines	Sessions in use	No. of applications	Sales	Windows Server OS	1	0	5	Win 81 Desktops	Windows Desktop OS	2	0	0	Win7 Desktops	Windows Desktop OS	2	0	0
Delivery Group	Machine type	No. of machines	Sessions in use	No. of applications																	
Sales	Windows Server OS	1	0	5																	
Win 81 Desktops	Windows Desktop OS	2	0	0																	
Win7 Desktops	Windows Desktop OS	2	0	0																	

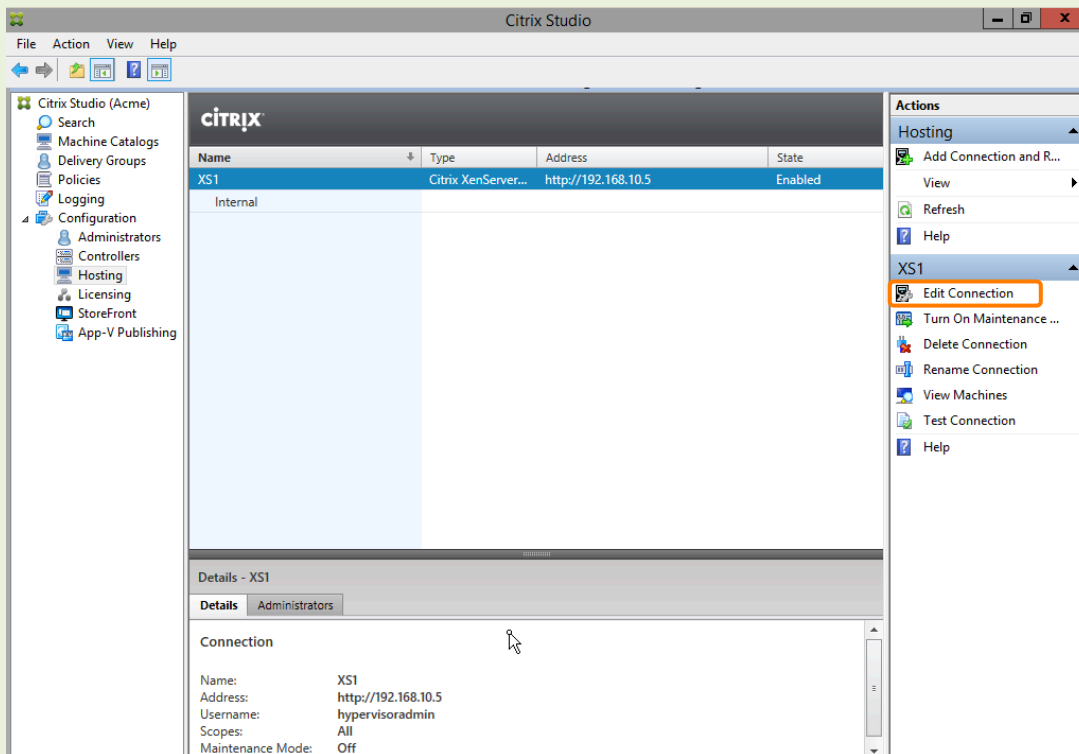
Step Action

3.



Select the **XS1** hypervisor connection.

4.

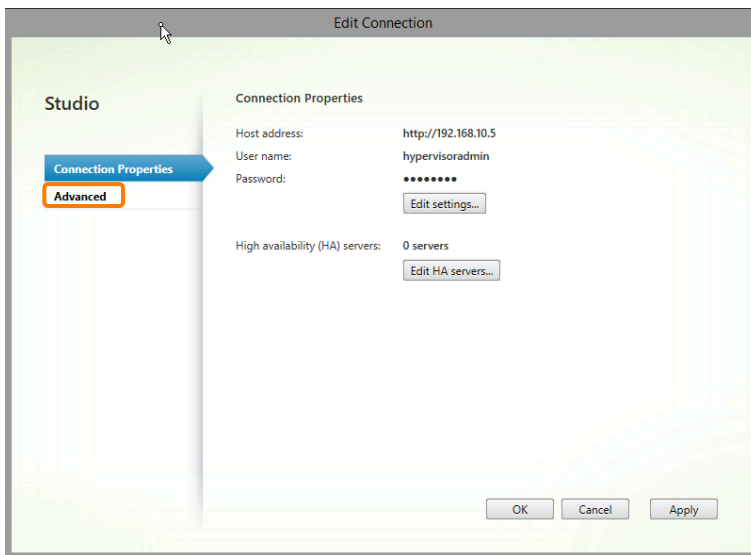


Click **Edit Connection** on the right.

Step

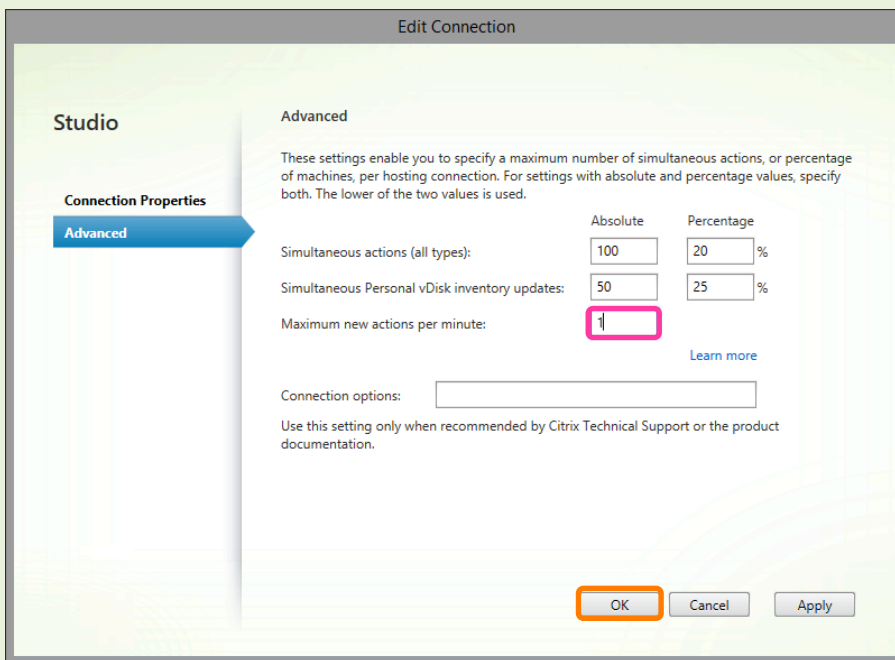
Action

5.



Click **Advanced** on the left of the Edit Connection page.

6.



Enter the following:

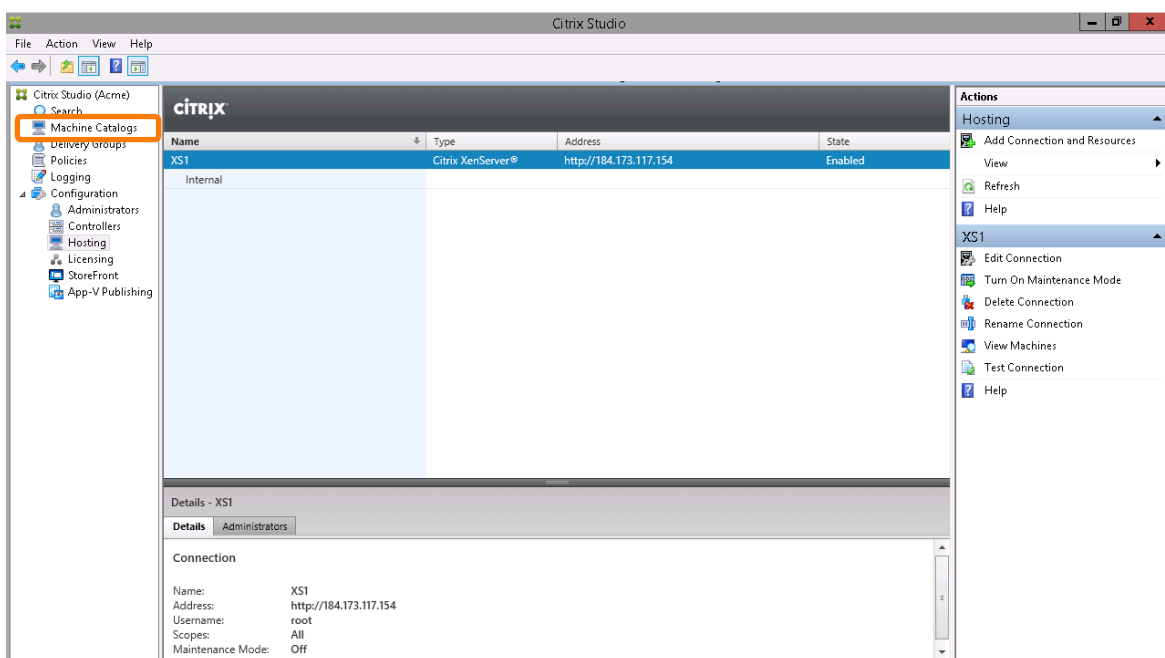
Maximum new actions per minute.	1
---------------------------------	---

The hypervisor connection XS1 will now be limited to performing only one new action per minute. Production environments will have a higher limit, but we are using 1 to demonstrate functionality.

Click **OK**.

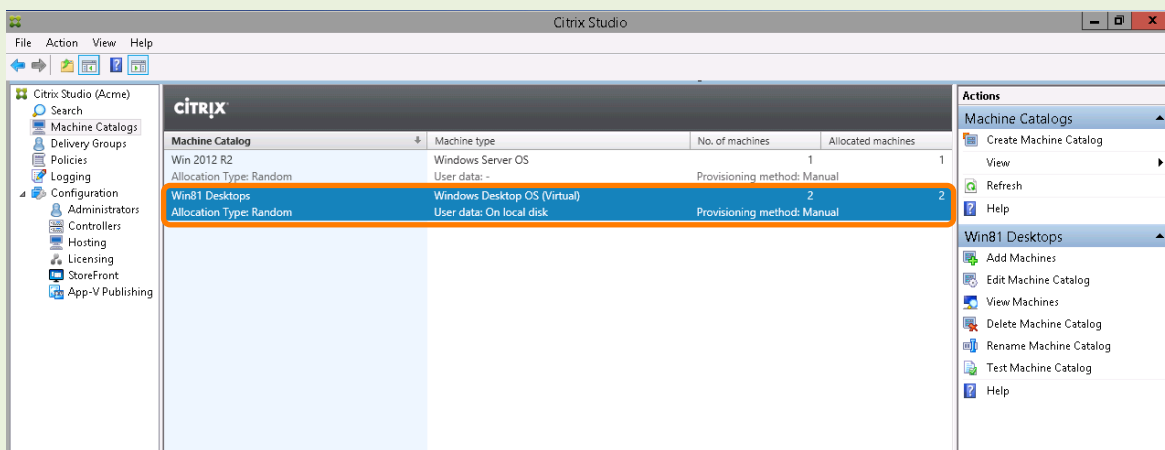
Step Action

7.



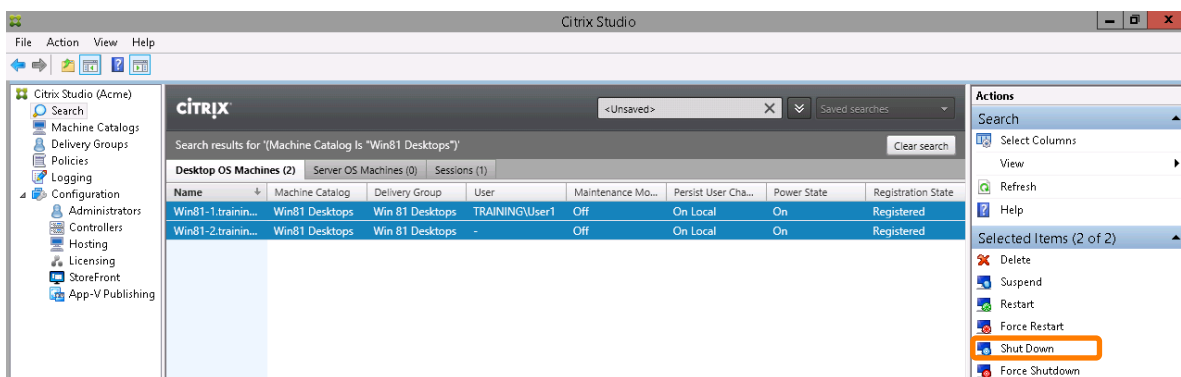
Click **Machine Catalogs** on the left.

8.

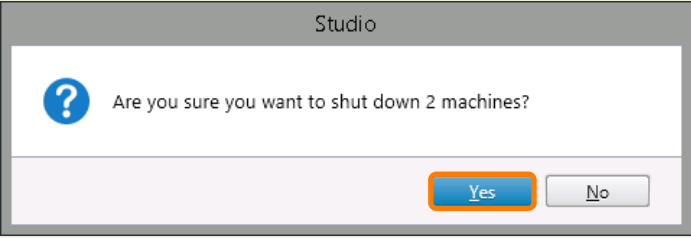

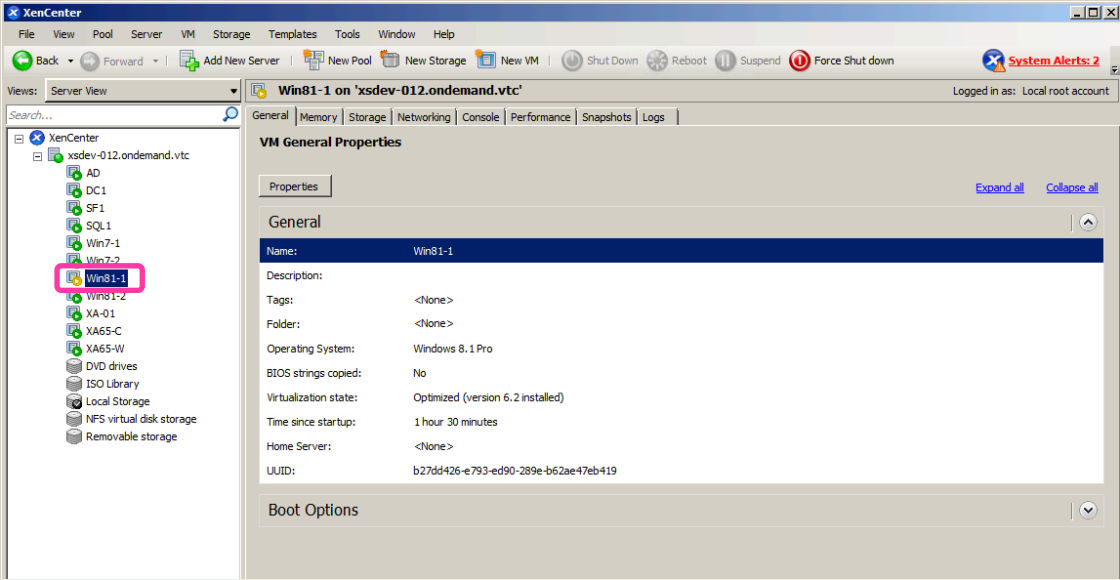


Double-click the **Win81 Desktops** machine catalog.

9.

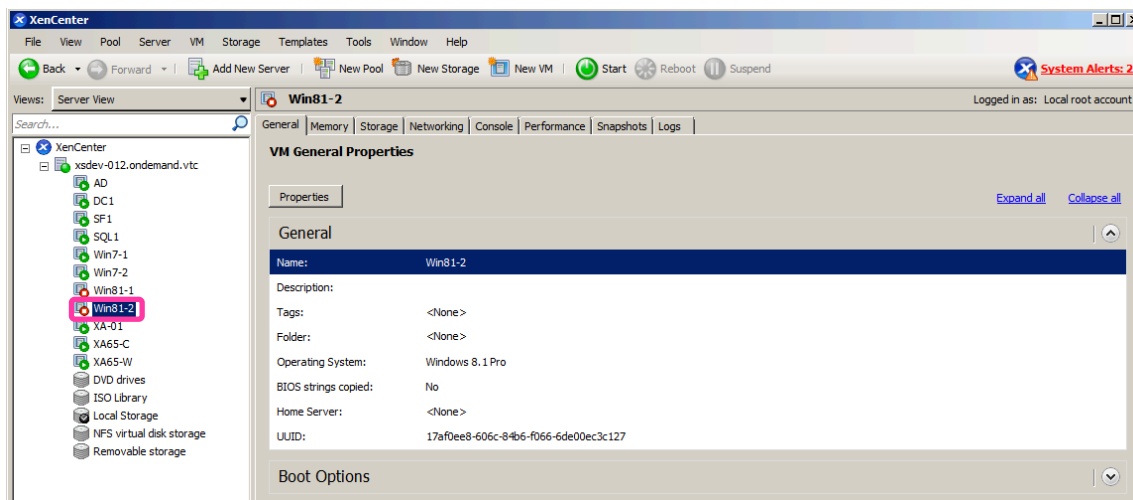


Hold the Shift key to select both **Win81-1** and **Win81-2** and click **Shut Down**.


Step	Action
10.	 <p>Click <b>Yes</b>.</p>
11.	 <p>Switch to <b>XenCenter</b>.</p>
12.	 <p>Notice that Win81-1 is shutting down.</p>

**Step Action**

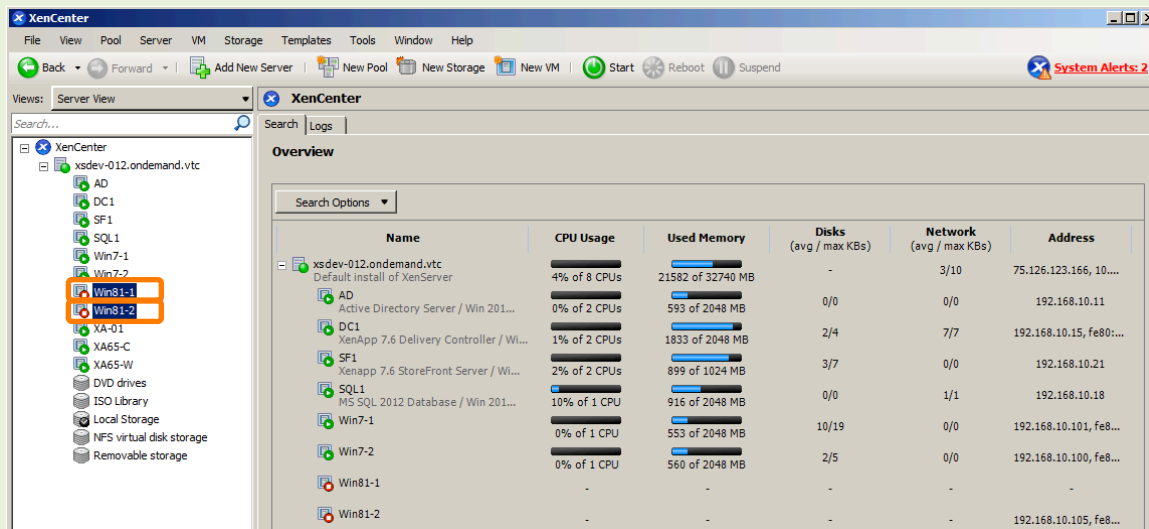
13.



Win81-2 shuts down approximately 1 minute after Win81-1.

 While shutdown of Win81-1 and Win81-2 was requested simultaneously, we limited new actions to 1 per minute. This creates the delay we see shutting down Win81-2.

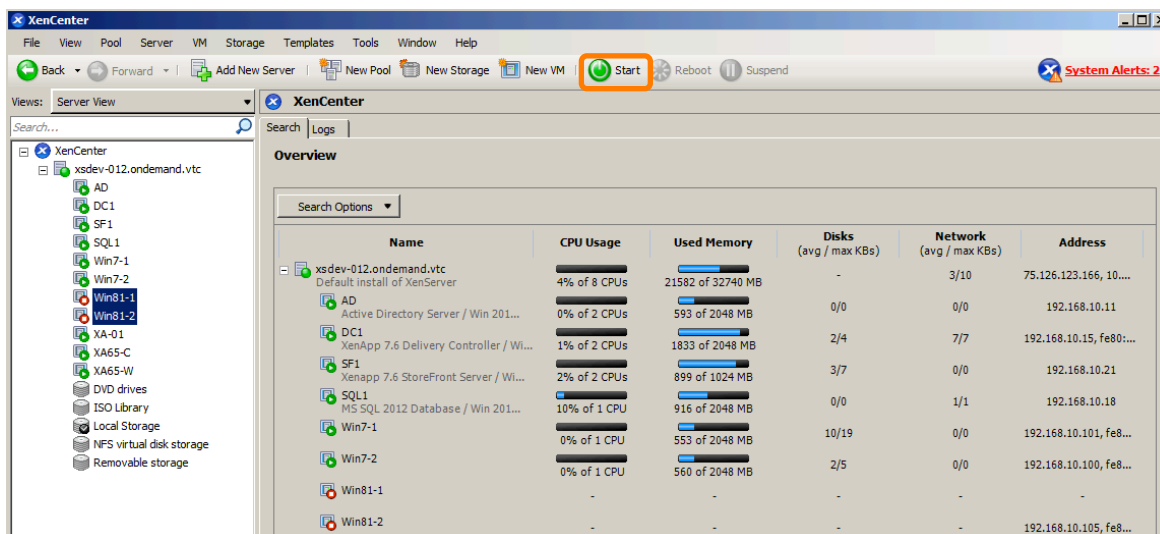
14.



Click **Win81-1**, hold Shift, and click **Win81-2**.

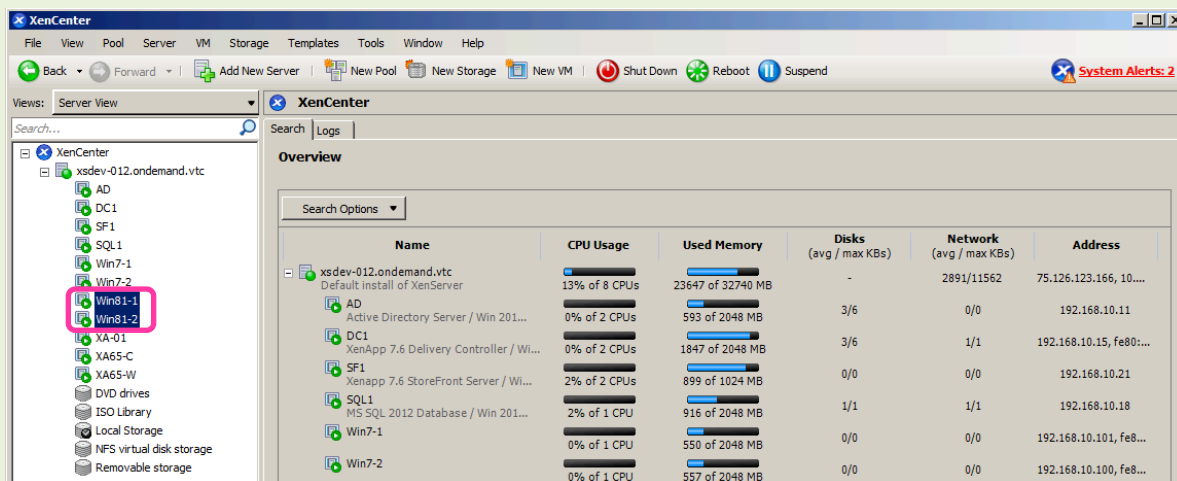
**Step Action**

15.



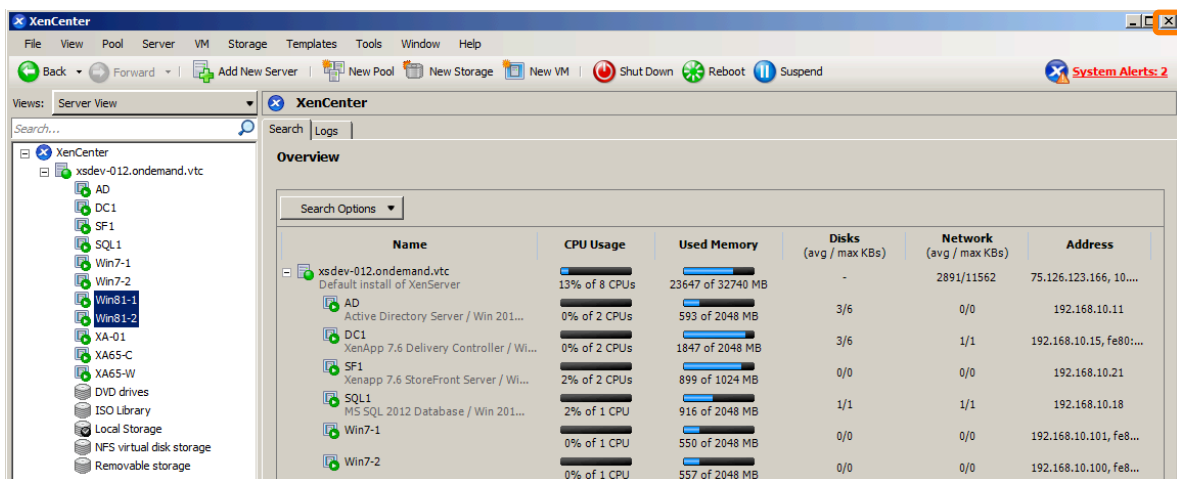
Click **Start** at the top.

16.



Both VMs start immediately because XenCenter is initiating the operation and not the Delivery Controller. The Delivery Controller may shut down one of the VMs after it is started.

17.



Close XenCenter.

---

## Exercise Summary

---

In this exercise, you configured broker throttling for the hosting connection to XS1. You then tested the limitation on new actions by stopping PVD VMs from Studio.

# Module 2

## What's new in Director for XenApp 7.6

This module explores three Director features for XenApp 7.6. Licensing alerts are now provided to notify administrators of possible licensing concerns, administrators can assign themselves to user machines for troubleshooting purposes, and a detailed hosted applications usage report is available to provide usage data to administrators.

### Exercises in this module

- Exercise 1: Licensing Alerts
- Exercise 2: Assign Users to Machines in Director
- Exercise 3: Hosted Applications Usage Report

# Exercise 1: Licensing Alerts

## Overview

Licensing alerts make you aware of issues that might impact user connections. Director also displays a recommended action to correct the condition. Some of the conditions displayed in Director are:


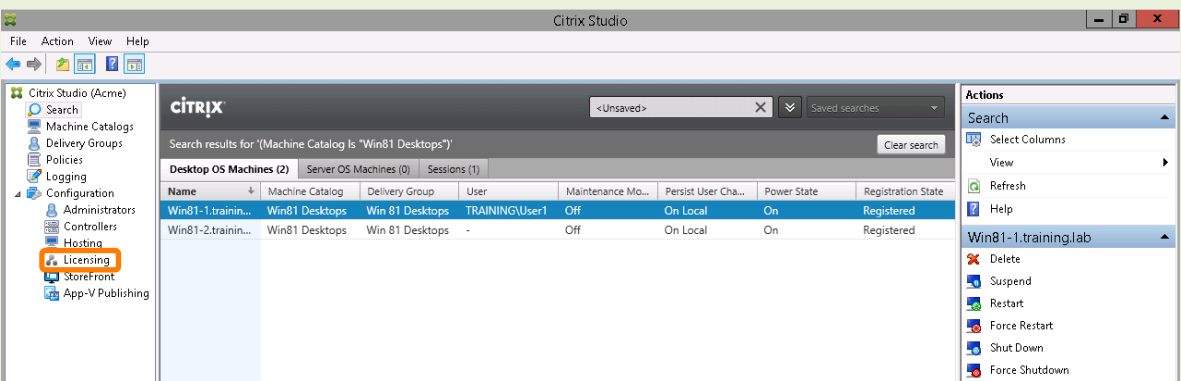
- All licenses have expired.
- Licenses are about to expire.
- Citrix license grace period has expired.
- The Supplemental Grace Period is active and all installed licenses are currently in use.

In this exercise you will:

- Change the license server to SQL1.
- View licensing alerts in Director.
- View licensing details for DC1.
- Change the license server back to AD.

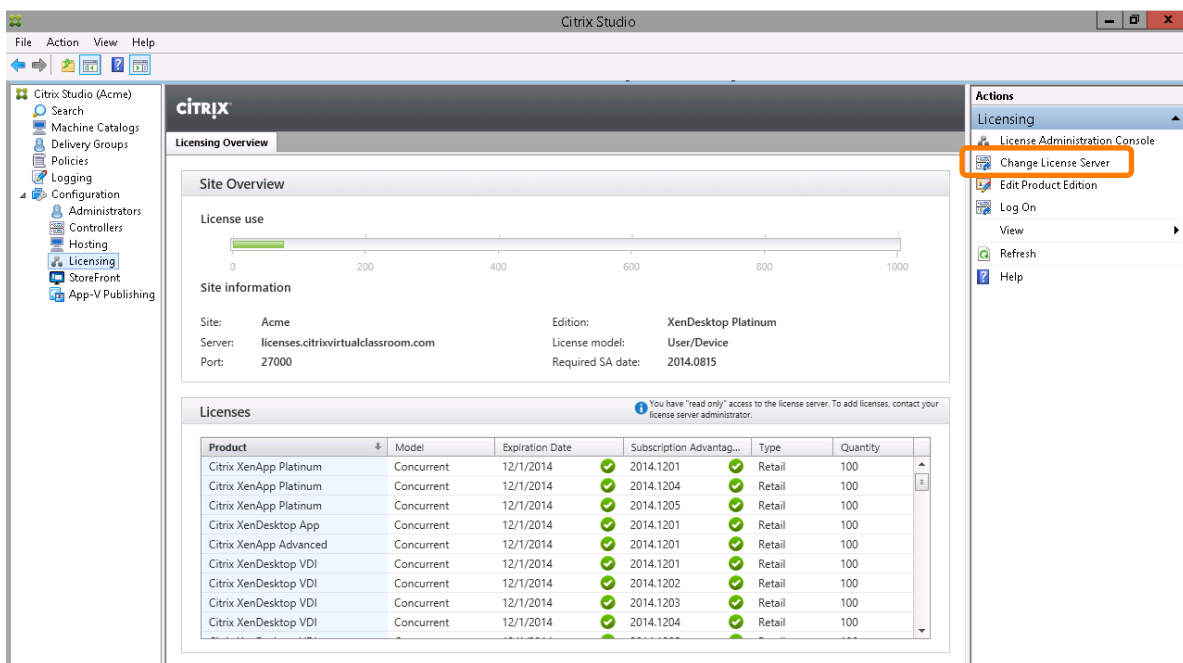
## Step by step guidance

Estimated time to complete this exercise: 15 minutes.

Step	Action
1.	 Switch to the <b>DC1</b> connection.
2.	 Click <b>Licensing</b> on the left.

Step Action

3.

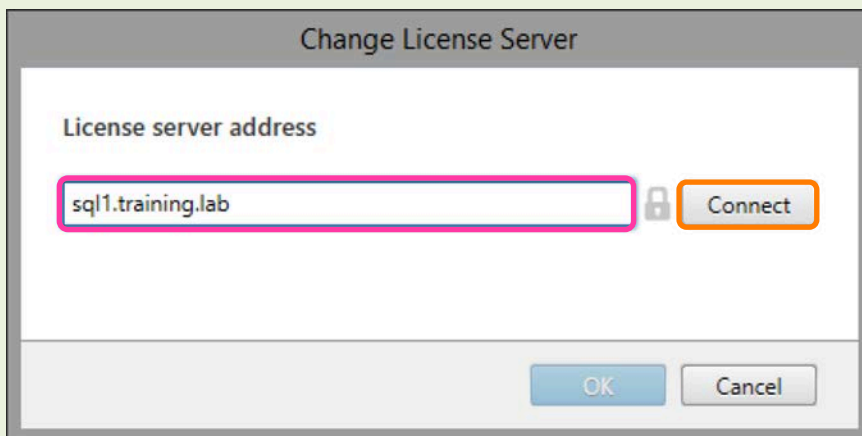


Click **Change License Server** on the right.



We are changing the license server for this lab exercise to a server with no licenses installed in order to demonstrate licensing alert functionality.

4.



Enter the following information:

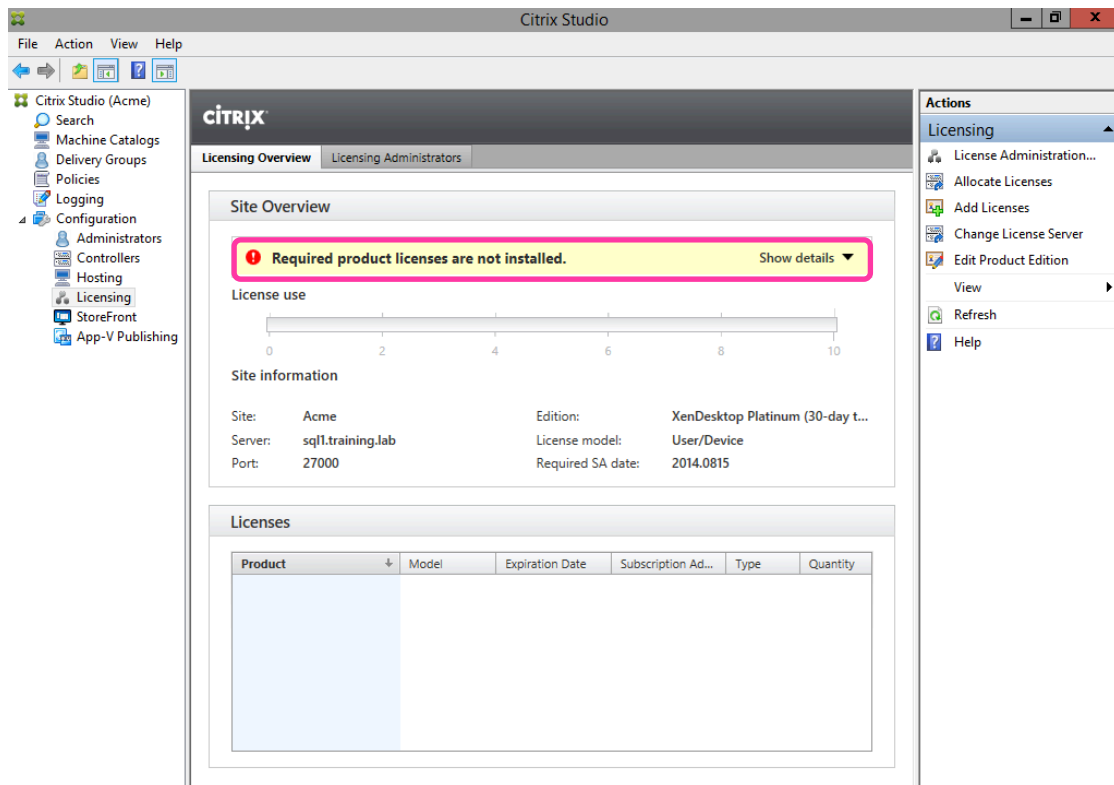
License Server Address `sql1.training.lab`

and click **Connect**.

Step	Action
5.	<div data-bbox="285 149 1127 716" style="border: 1px solid gray; padding: 10px;"> <p style="text-align: center;"><b>Certificate Authentication</b></p> <p>This certificate is not trusted:</p> <p>This is the first time that you have connected to this server. Its identity cannot be verified automatically because it does not appear to have an SSL certificate that was issued by a public or private certificate authority.</p> <div style="border: 1px solid gray; padding: 5px; text-align: center; margin: 10px 0;"> <p><b>sql1.training.lab</b></p> <p><a href="#">View certificate</a></p> </div> <p> <input type="radio"/> Do not connect me  I need to verify that this server is secure. </p> <p> <input checked="" type="radio"/> <b>Connect me</b>  I trust this server, remember it next time I connect. </p> <div style="text-align: right; margin-top: 10px;"> <input type="button" value="Confirm"/> </div> </div> <p>Select <b>Connect me</b>, and click <b>Confirm</b>.</p>
6.	<div data-bbox="285 827 1101 1234" style="border: 1px solid gray; padding: 10px;"> <p style="text-align: center;"><b>Change License Server</b></p> <p>License server address</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <input type="text" value="sql1.training.lab"/> <input type="button" value="Connect"/> </div> <p style="text-align: center; color: green;"> <input checked="" type="checkbox"/> Connected to trusted server  <a href="#">View certificate</a> </p> <div style="text-align: right; margin-top: 10px;"> <input type="button" value="OK"/> <input type="button" value="Cancel"/> </div> </div> <p>Click <b>OK</b>.</p>

**Step Action**

7.



Verify that no product licenses are available.

8.

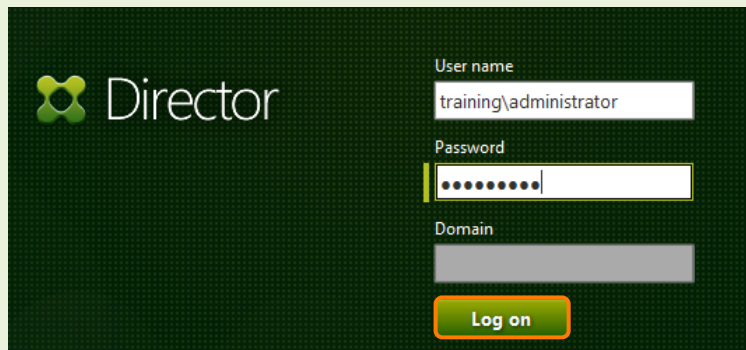


On the Student Desktop, double-click the **Mozilla Firefox** shortcut.

9.

Navigate to <http://dc1.training.lab/director>

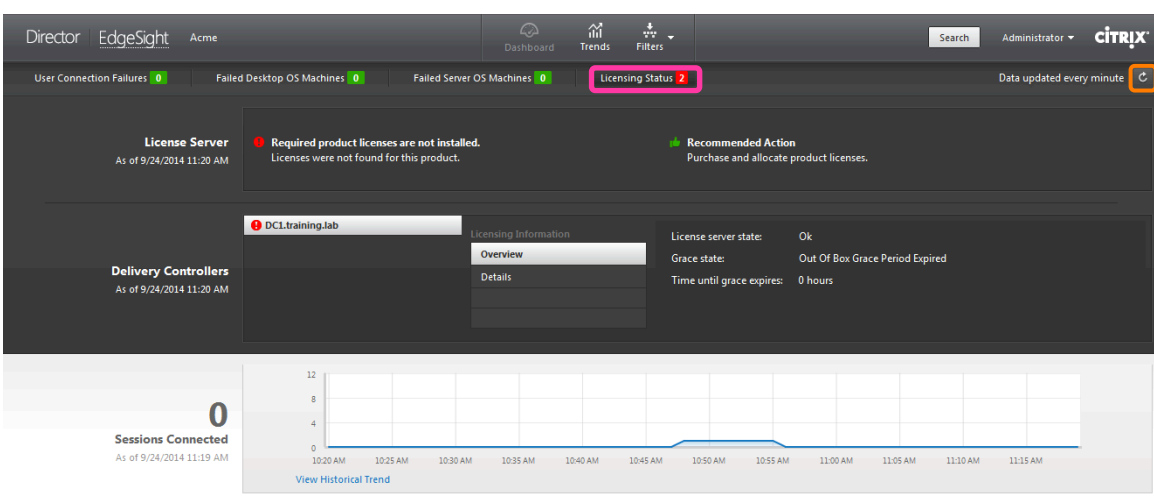
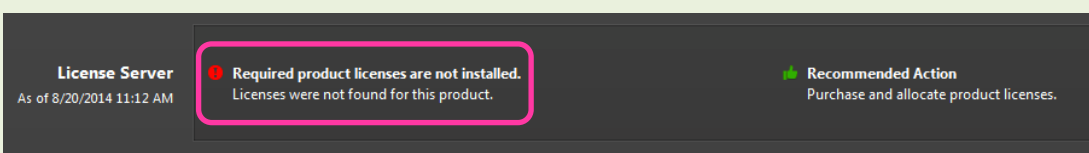
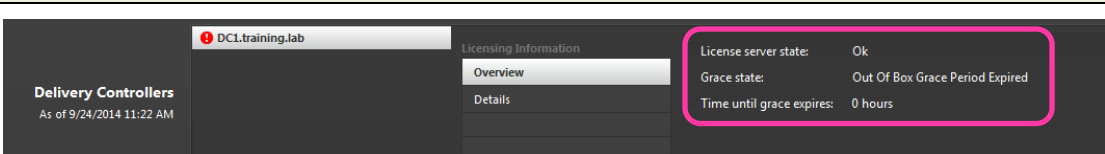
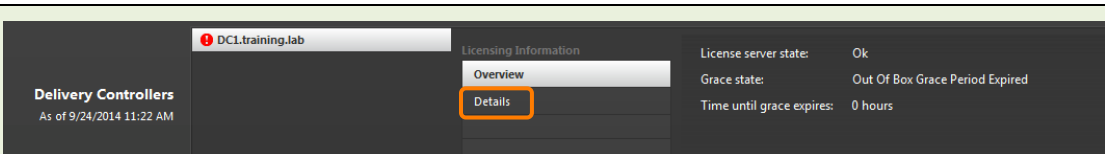
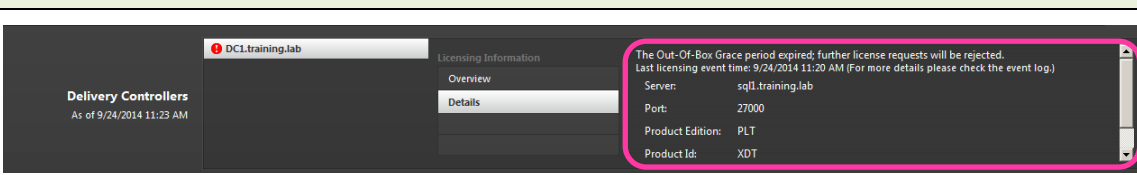
10.



Enter the following:

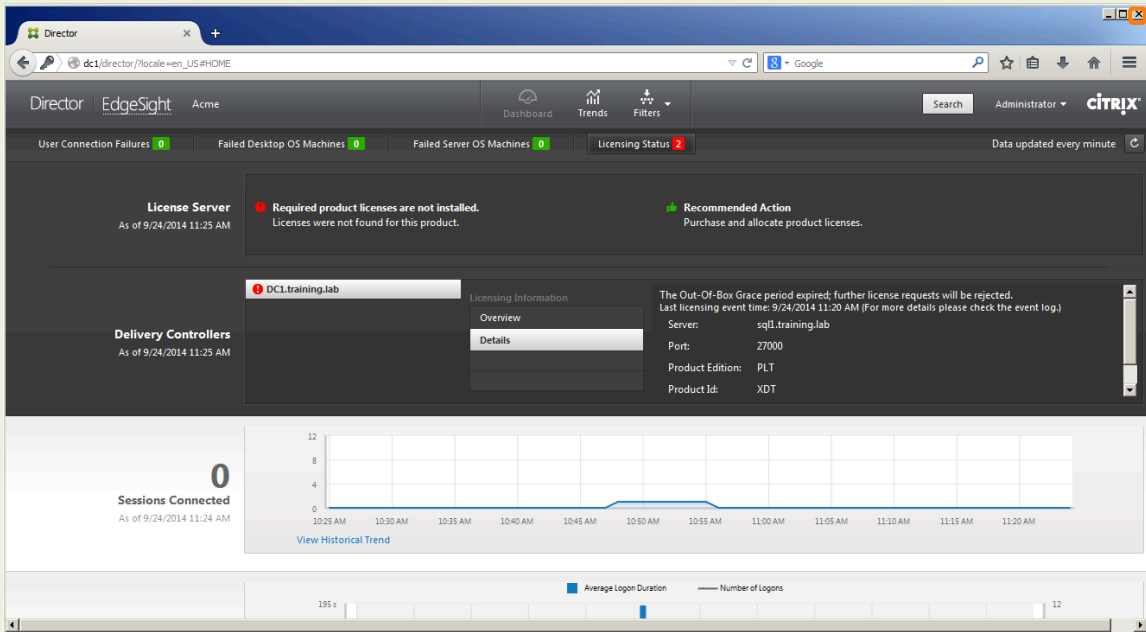
User Name	training\administrator
Password	Citrix123

Click **Log on**.

Step	Action
11.	 <p>Notice that there are 2 issues with Licensing Status. If only 1 issue is reported, wait several minutes and click the <b>refresh</b> icon at the top right.</p>
12.	 <p>The License Server does not currently have the required product licenses installed.</p>
13.	 <p>The Delivery Controller, DC1, is currently unlicensed, Grace Period licensing is expired with 0 days remaining.</p>
14.	 <p>Click on <b>Details</b>.</p>
15.	 <p>Scroll down to review the licensing information for DC1.</p>

Step Action

16.



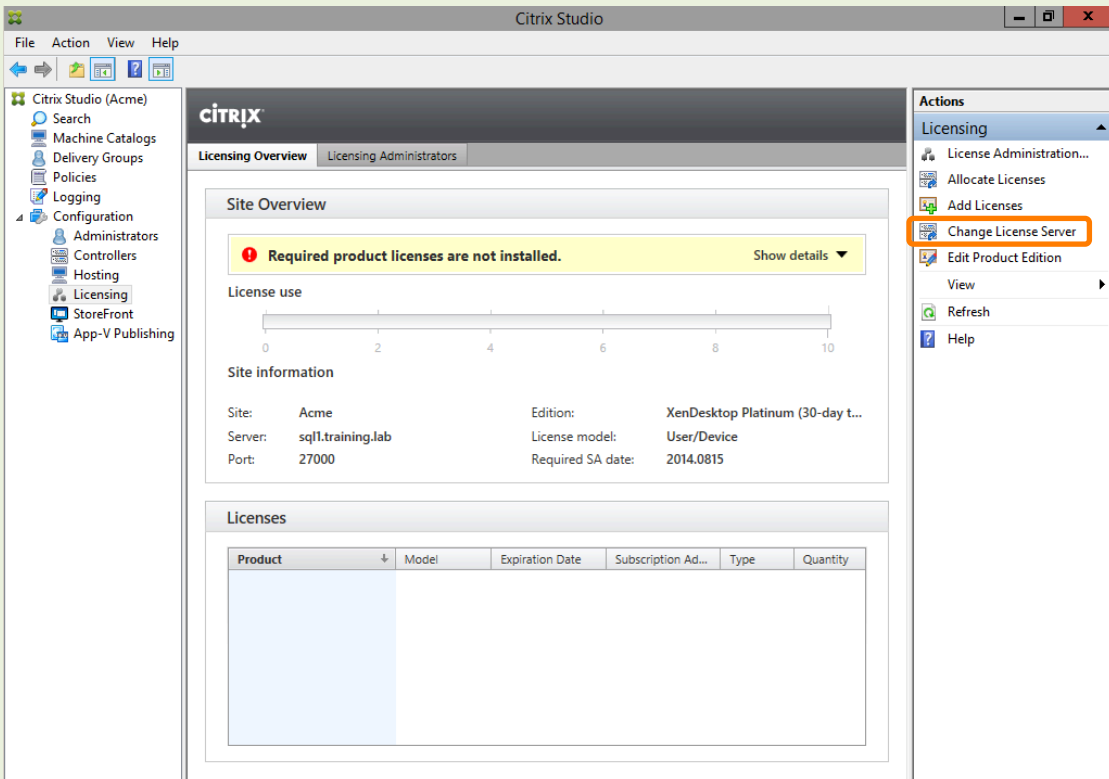
Close Firefox.

17.

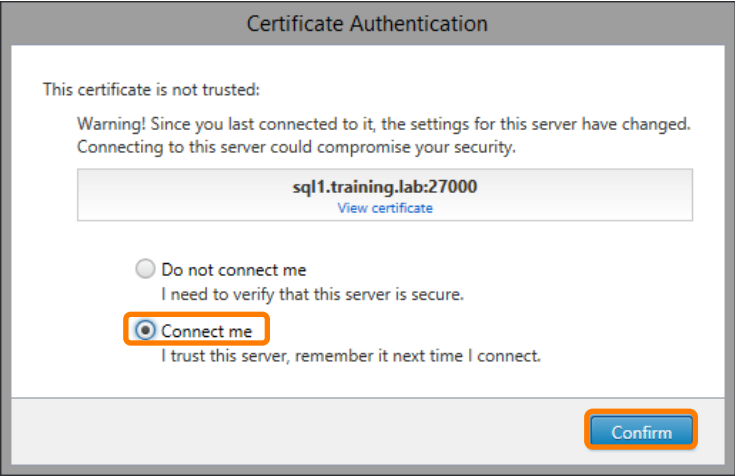
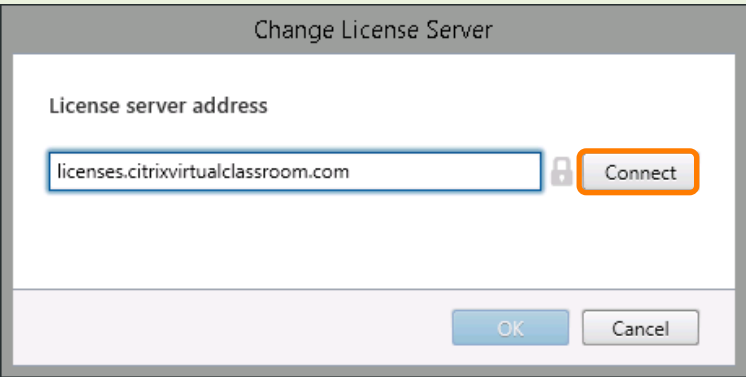
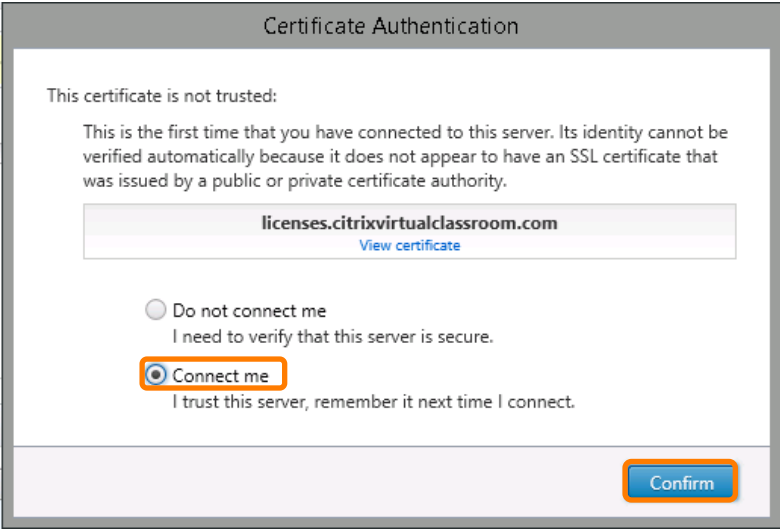


Switch back to DC1.

18.

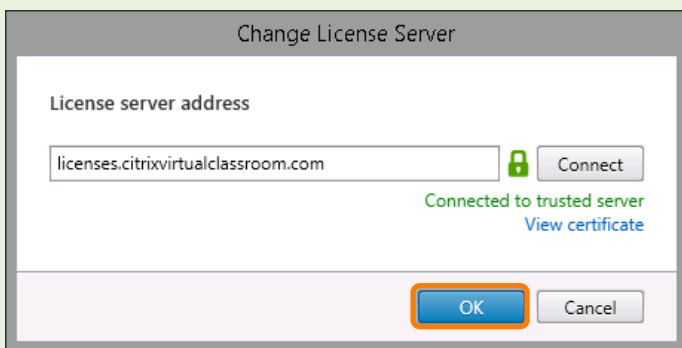


Click **Change License Server** at the right.

Step	Action		
19.	 <p>Select <b>Connect me</b>, and click <b>Confirm</b>.</p>		
20.	 <p>Enter the following information:</p> <table border="1" data-bbox="285 1182 1206 1220"> <tr> <td>License Server Address</td> <td><code>licenses.citrixvirtualclassroom.com</code></td> </tr> </table> <p>Click <b>Connect</b>.</p>	License Server Address	<code>licenses.citrixvirtualclassroom.com</code>
License Server Address	<code>licenses.citrixvirtualclassroom.com</code>		
21.	 <p>Select <b>Connect me</b> and click <b>Confirm</b>.</p>		

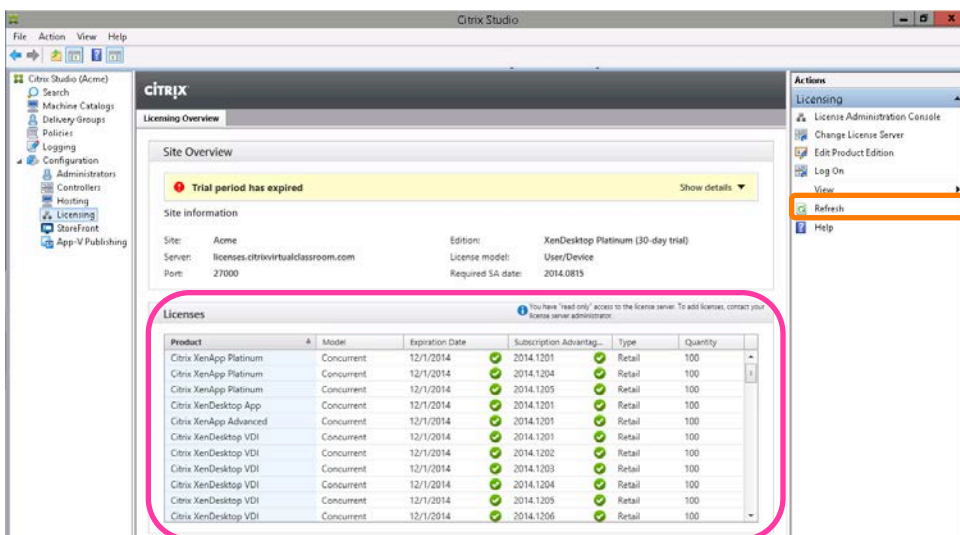
Step Action

22.



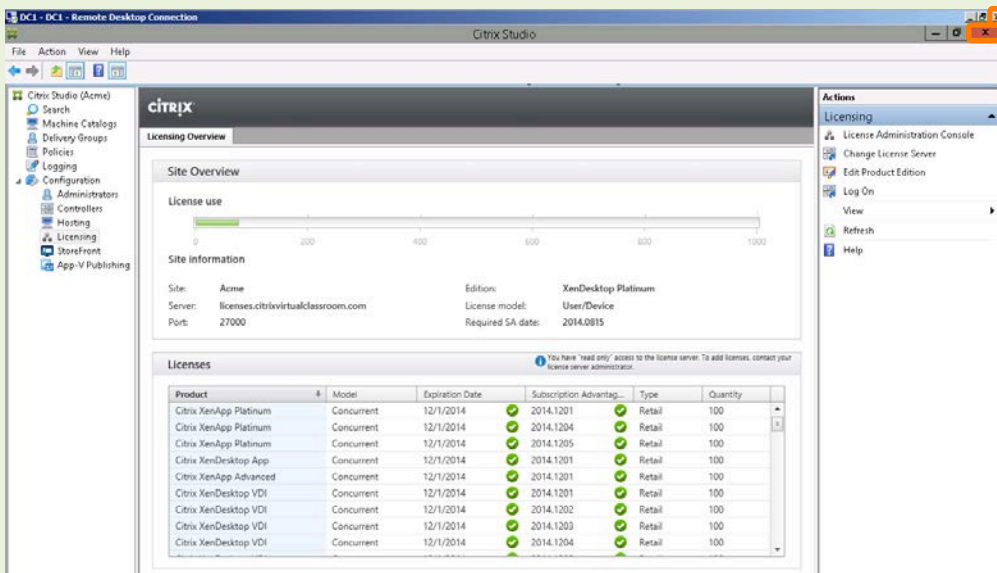
Click **OK**.

23.



Verify licenses are now available. The trial period warning will disappear after a few minutes click **Refresh** periodically.

24.



Close Citrix Studio and then close the connection to DC1.

---

## Exercise Summary

---

In this exercise, you changed the license server setting in Studio to a server with no installed licenses. You logged into Director to view the details of the licensing alerts and then restored the original license server setting in Studio.

## Exercise 2: Assign Users to Machines in Director

### Overview


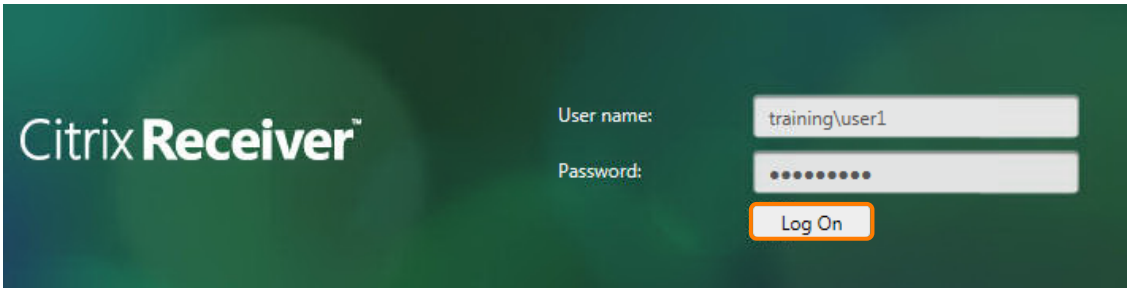
Troubleshooting of user issues often requires the administrator to replicate these issues. Director allows administrators to assign themselves to the user's statically assigned machine in order to log in for troubleshooting purposes as long as the administrator belongs to the same Delivery Group.

In this exercise you will:

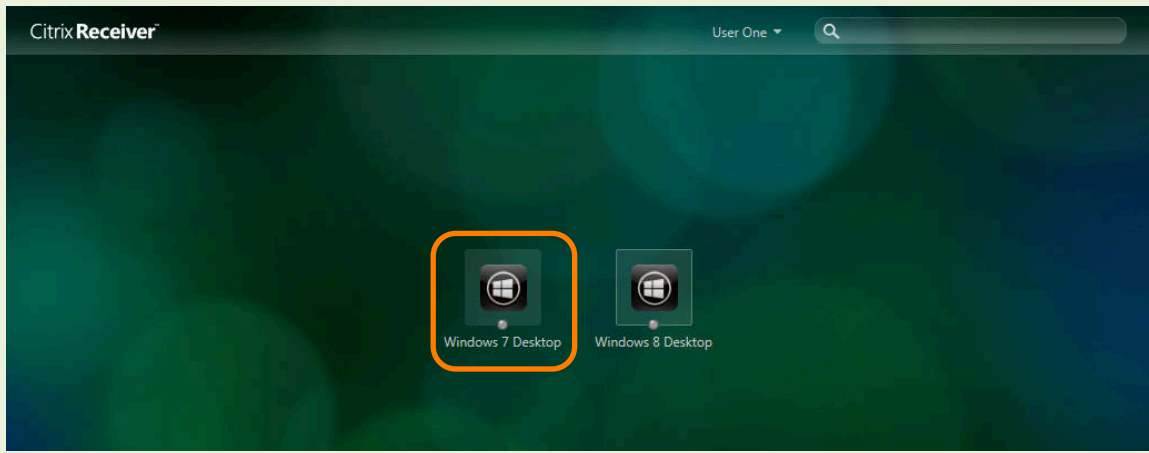
- Launch the Windows 7 PVS Desktop.
- Assign an administrator to the Desktop.
- Access the Desktop as the administrator.
- Remove the administrator from the assigned users.
- Verify the administrator no longer accesses the user's desktop.

### Step by step guidance

Estimated time to complete this exercise: 25 minutes.

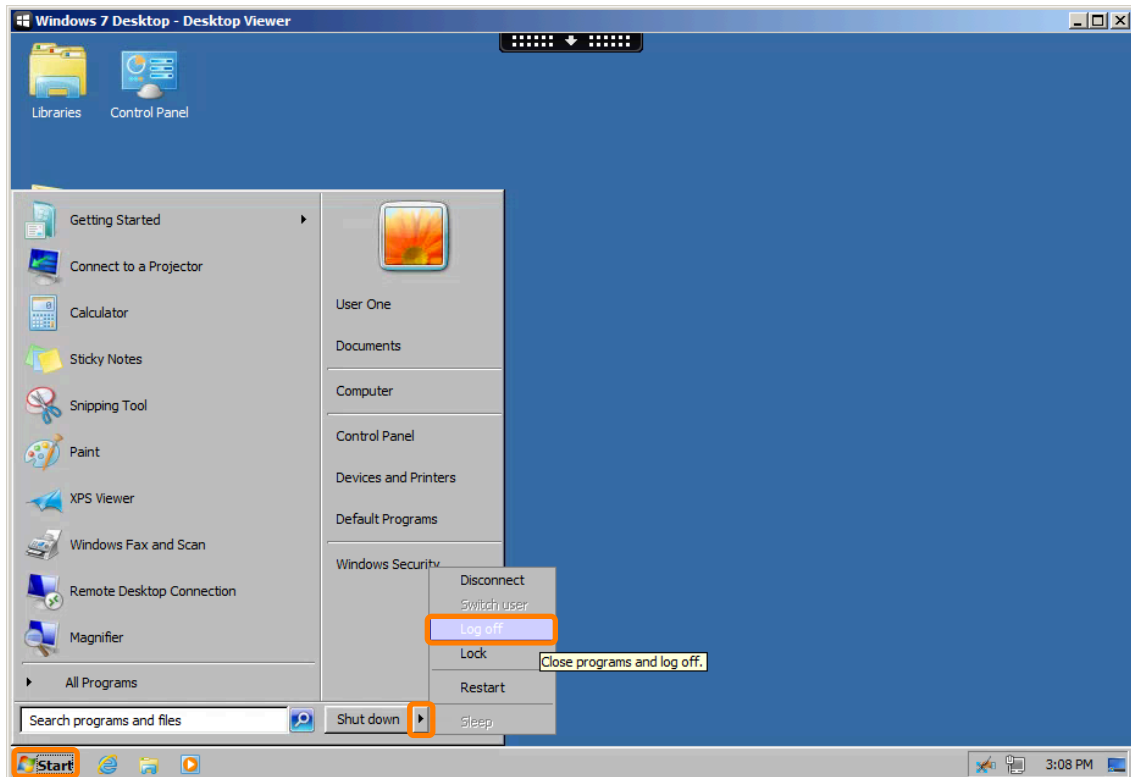
Step	Action				
1.	 Click the <b>Internet Explorer</b> icon at the lower left of the Student Desktop.				
2.	Enter the URL of your Store <a href="http://sf1/Citrix/AcmeSalesWeb/">http://sf1/Citrix/AcmeSalesWeb/</a>				
3.	 Enter the following: <table border="1" data-bbox="282 1608 946 1675"><tbody><tr><td>User Name</td><td>training\user1</td></tr><tr><td>Password</td><td>Citrix123</td></tr></tbody></table> Click <b>Log On</b> .	User Name	training\user1	Password	Citrix123
User Name	training\user1				
Password	Citrix123				

4.



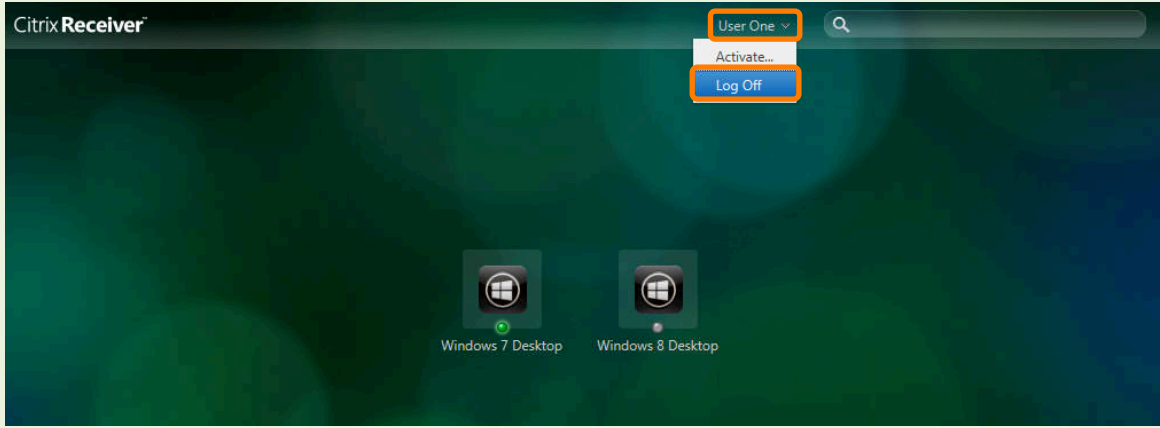
Click the **Windows 7 Desktop**.

5.



Once the desktop launches, click **Start**, click the **arrow** next to Shut down and then click **Log off**.

6.



Click **User One** and click **Log Off**.

7.

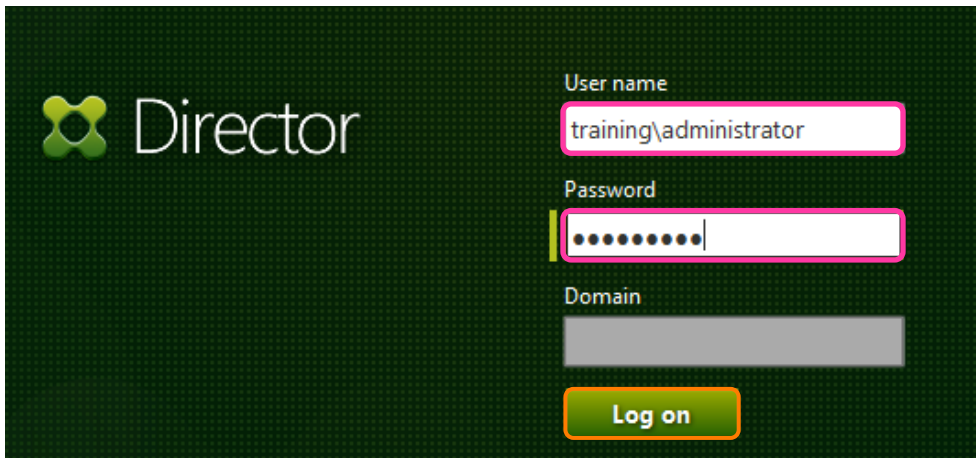


On the **Student Desktop**, double-click the **Mozilla Firefox** shortcut.

8.

Navigate to <http://dc1.training.lab/director/>

9.



Enter the following:

User Name	training\administrator
Password	Citrix123

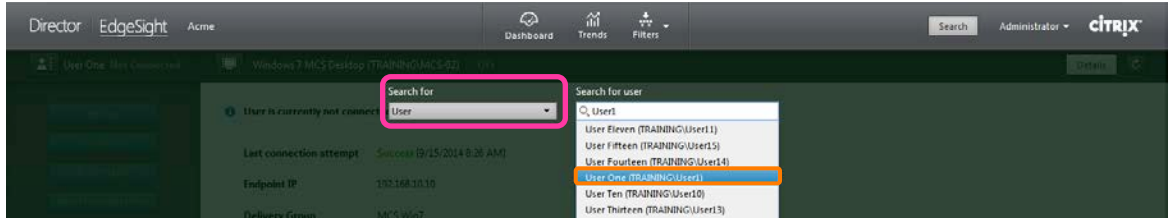
Click **Log on**.

10.



Click **Search** at the top right.

11.

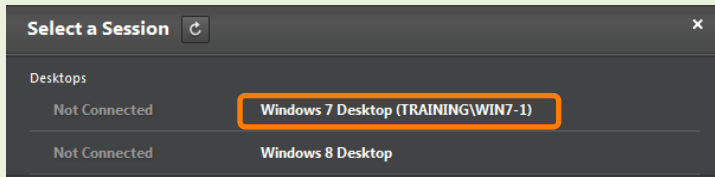


Enter the following information:

Search for	User
Search for user	User1

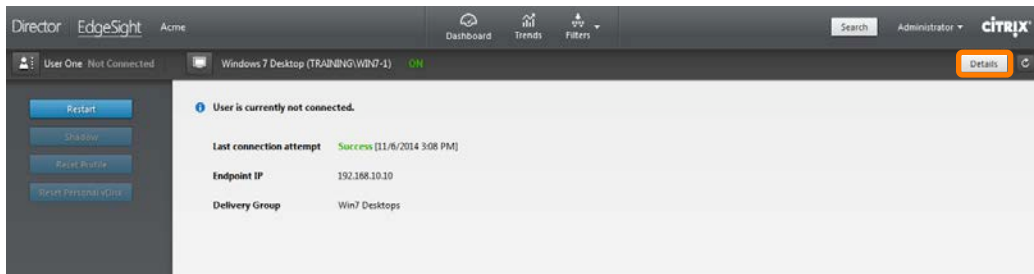
Click **User One (Training\User1)** when it appears.

12.



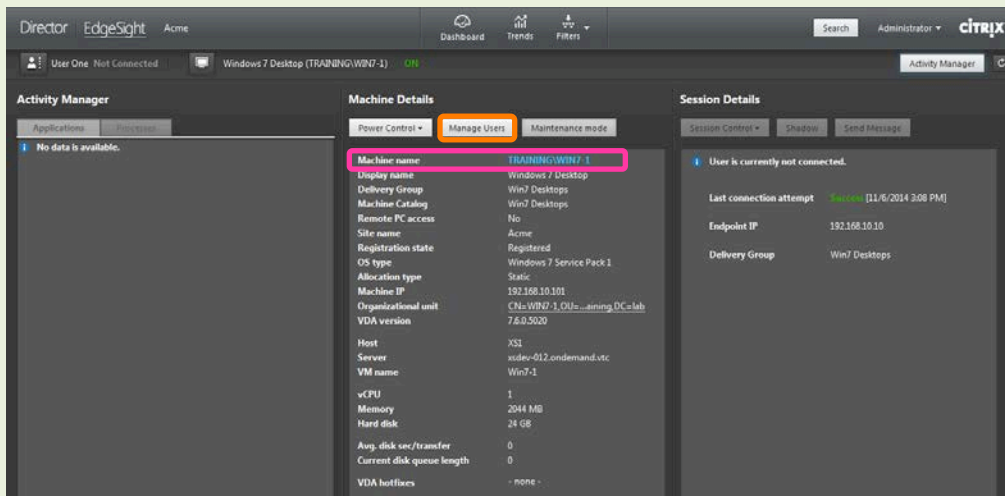
Select the **Windows 7 Desktop** session.

13.



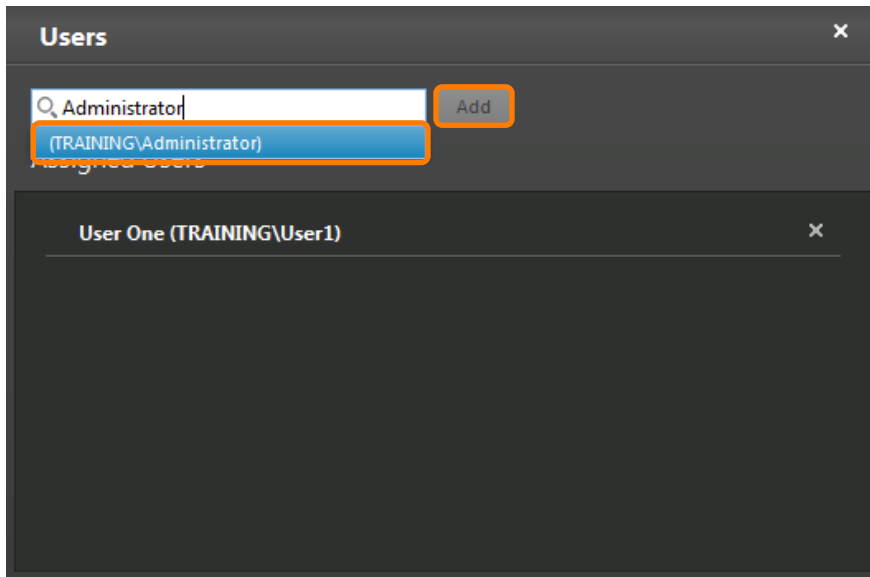
Click **Details** at the top right.

14.



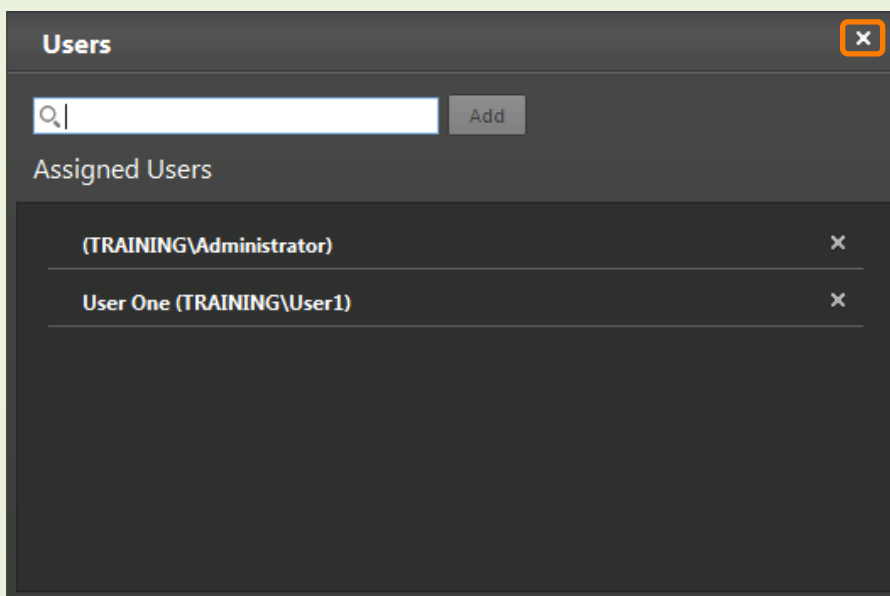
Note the current machine and then click **Manage Users**.

15.



Type **Administrator**, click **Training\Administrator** when it appears and click **Add**.

16.



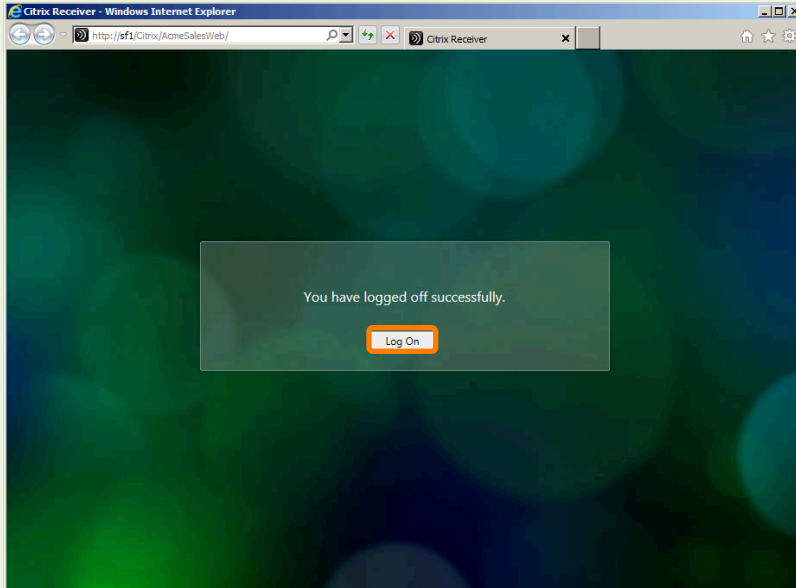
Verify that **Training\Administrator** appears in the Assigned Users list and close the Users dialog box.

17.



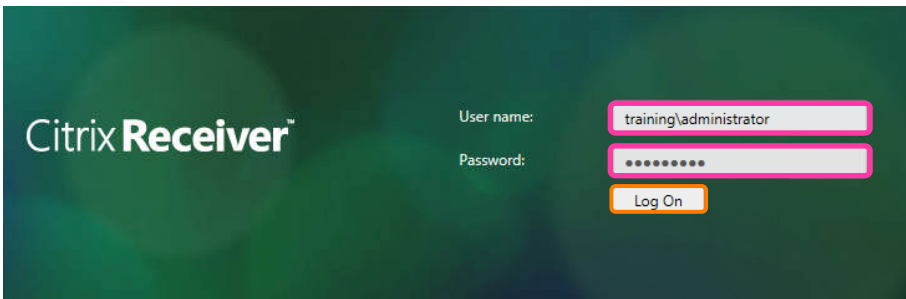
Switch back to Internet Explorer.

18.



Click **Log On**.

19.

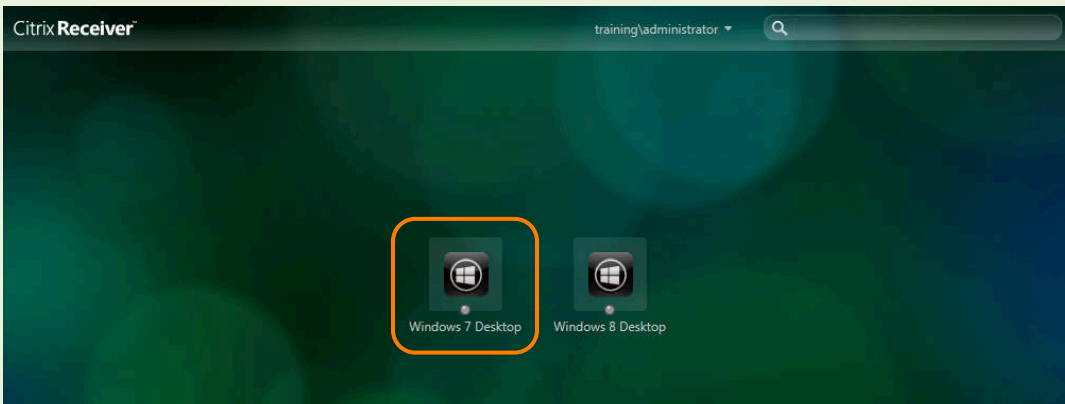


Enter the following information:

User Name	training\administrator
Password	Citrix123

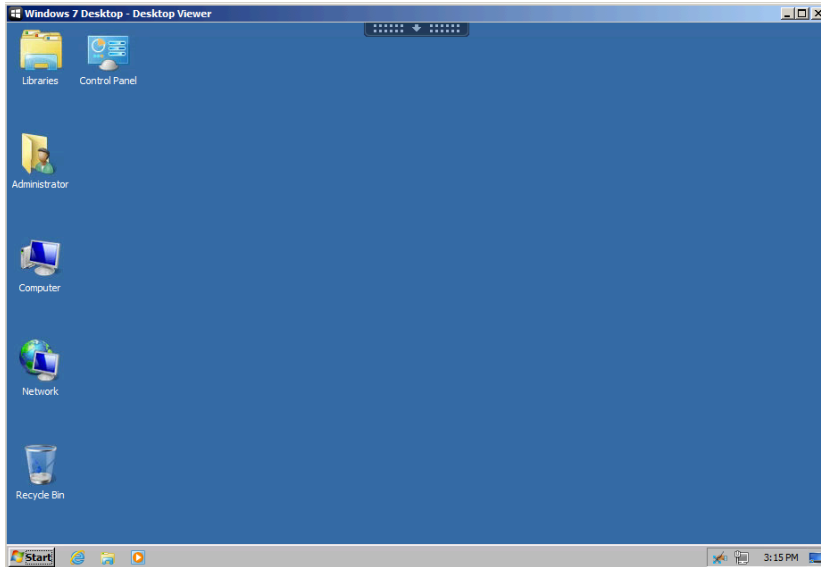
Click **Log On**.

20.



Click the **Windows 7 Desktop**.

21.



Wait for the desktop to launch.

22.



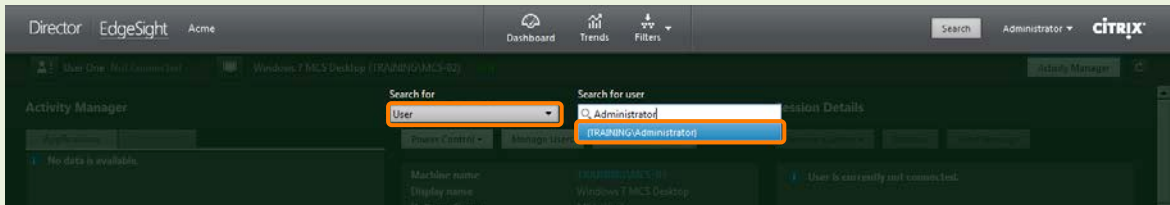
Switch back to Firefox.

23.



Click **Search** at the top right.

24.

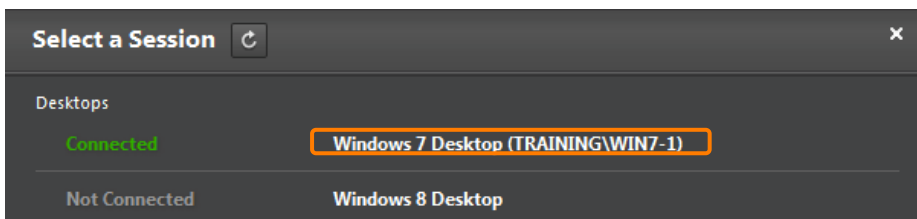


Enter the following information:

Search for	User
Search for user	Administrator

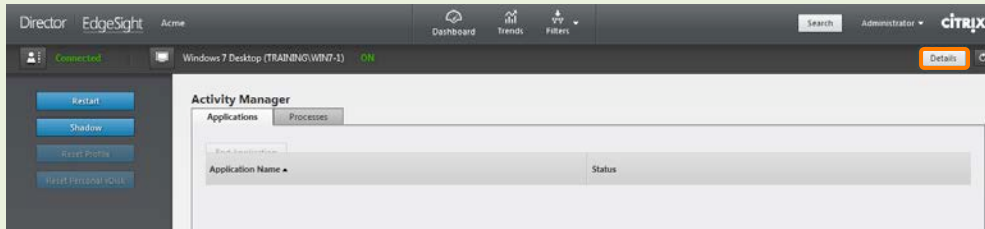
Click **(Training\Administrator)** when it appears.

25.



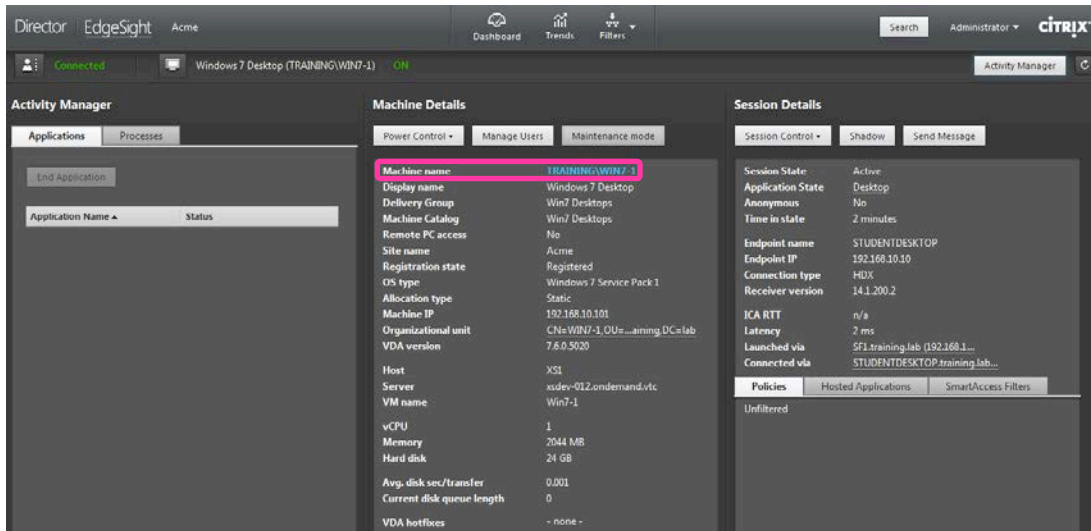
Click the **Windows 7 Desktop** session.

26.



Click **Details** at the top right.

27.



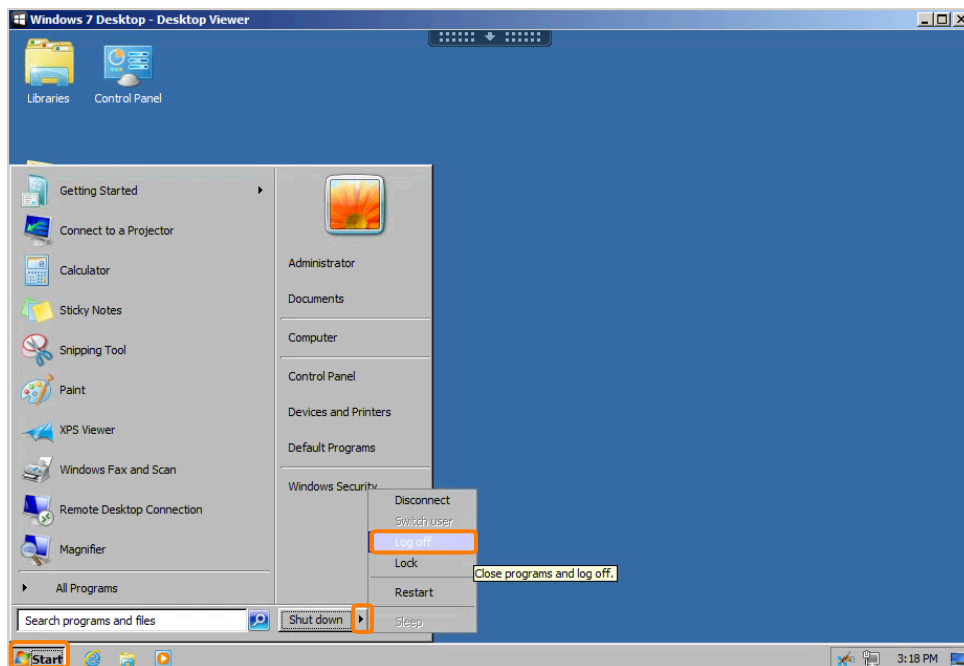
Notice that Training\Administrator was connected to the previously assigned machine.

28.



Switch back to the **Windows 7 PVS Desktop**.

29.



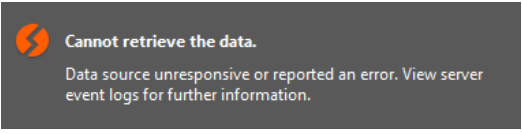
Click **Start**, click the **arrow** next to Shut down and then click **Log off**.

30.



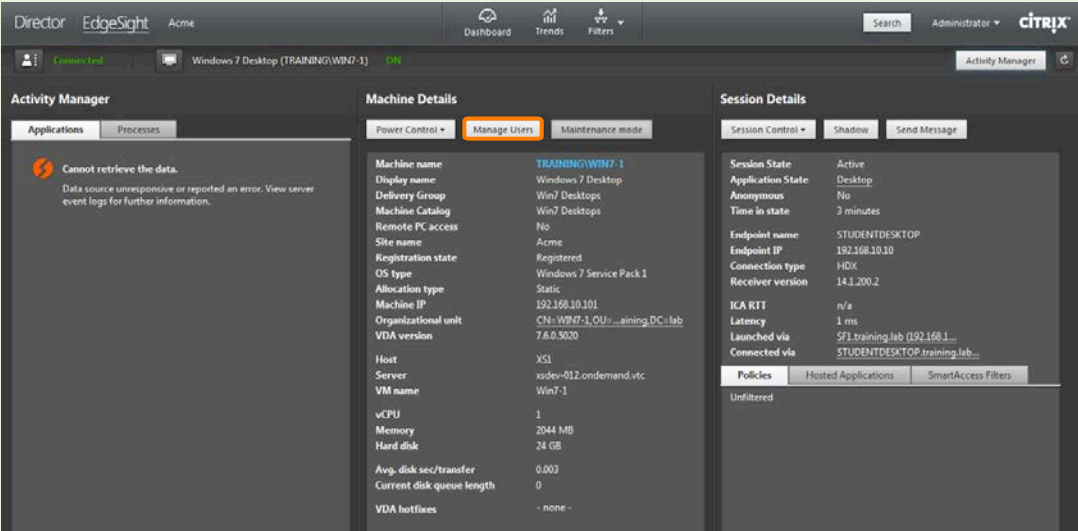
Switch back to **Firefox**.

31.



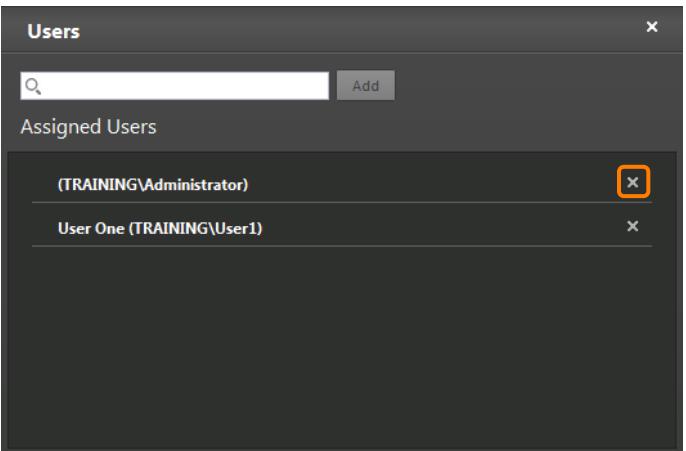
You will notice that Activity Manager data is unavailable. This is because there are no longer any active session on the selected desktop.

32.



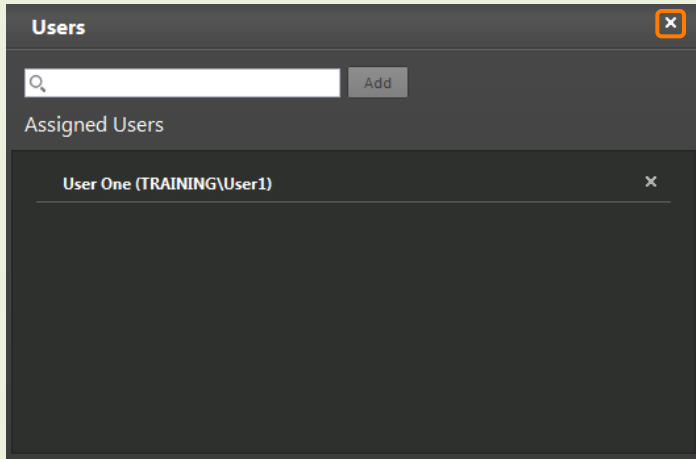
Click **Manage Users**.

33.



Click the **X** next to (Training\Administrator).

34.



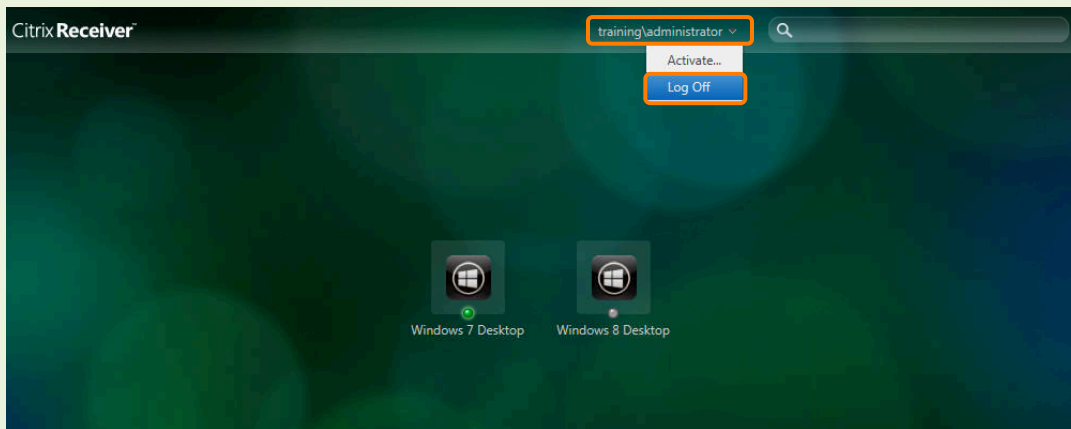
Close the Users window.

35.



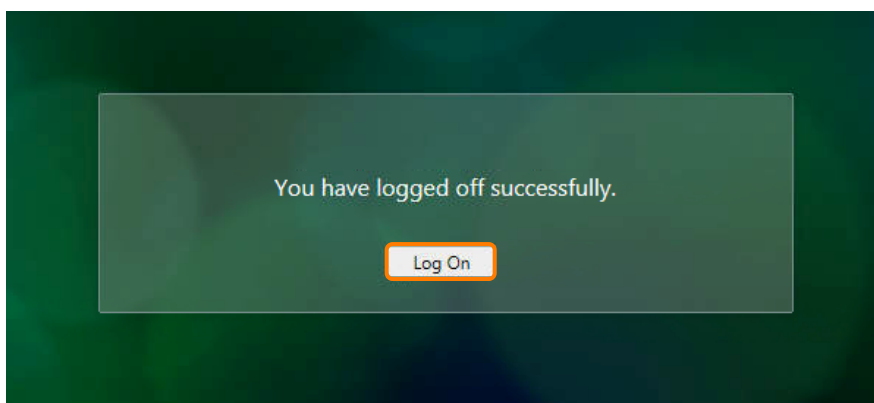
Switch back to **Internet Explorer**.

36.



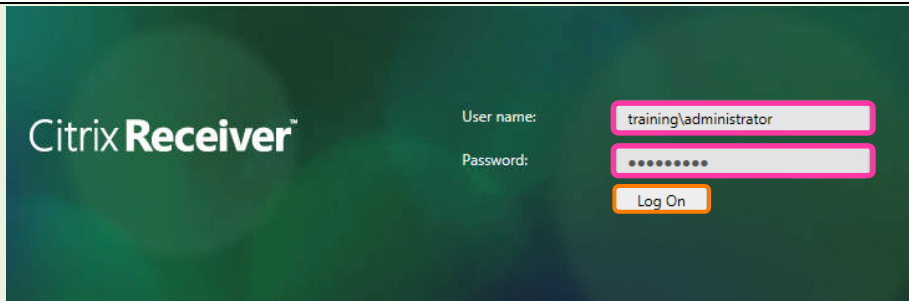
Click **training\administrator** and then click **Log Off**.

37.



Click **Log On**.

38.

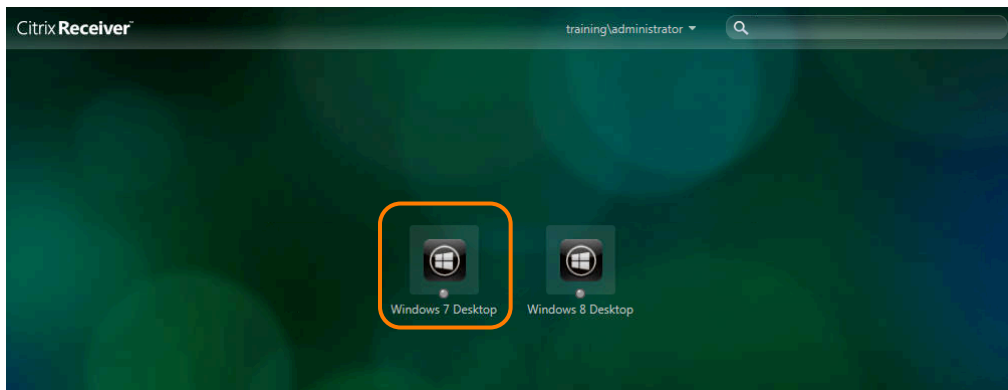


Enter the following information:

User Name	training/administrator
Password	Citrix123

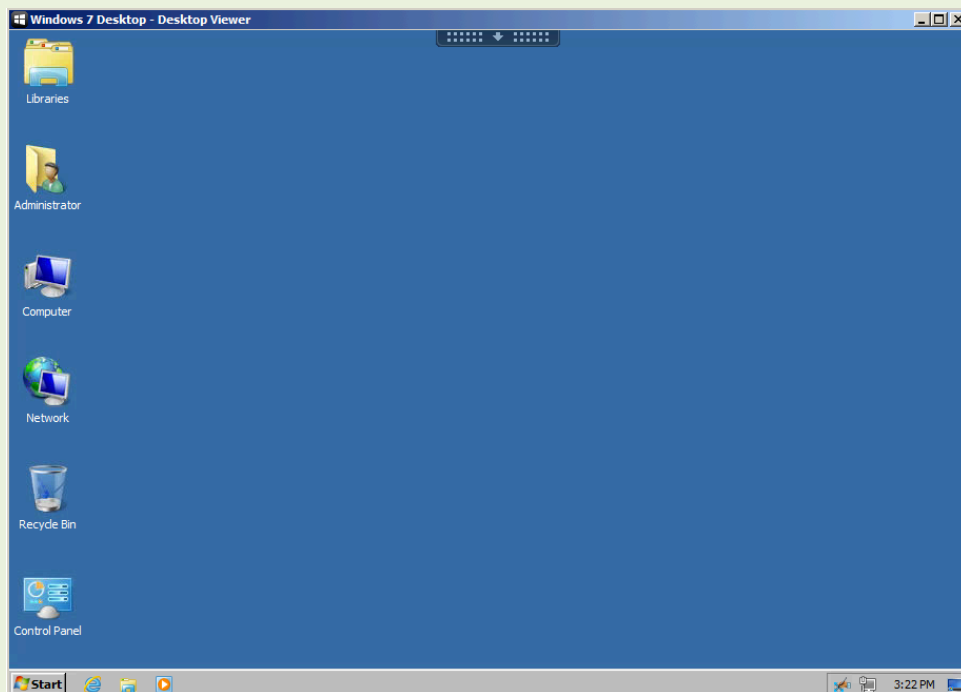
and click **Log On**.

39.





Click the **Windows 7 PVS Desktop**.


40.

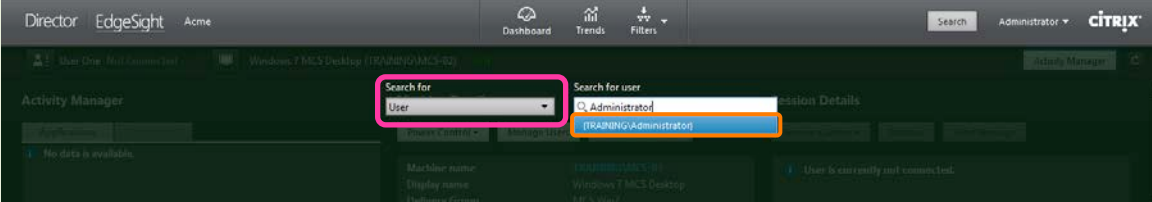


Wait for the desktop to load completely.

41.  Switch back to **Firefox**.

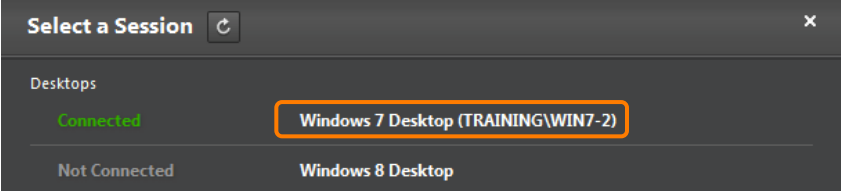
42.  Click **Director** at the top left.

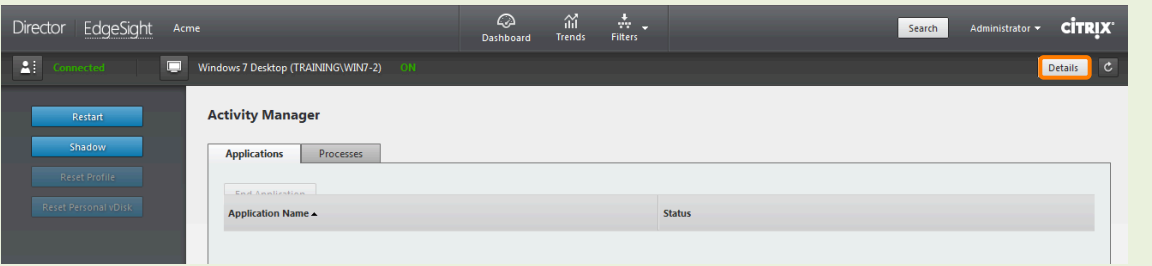
43.  Click **Search** at the top right.

44.  Enter the following information:

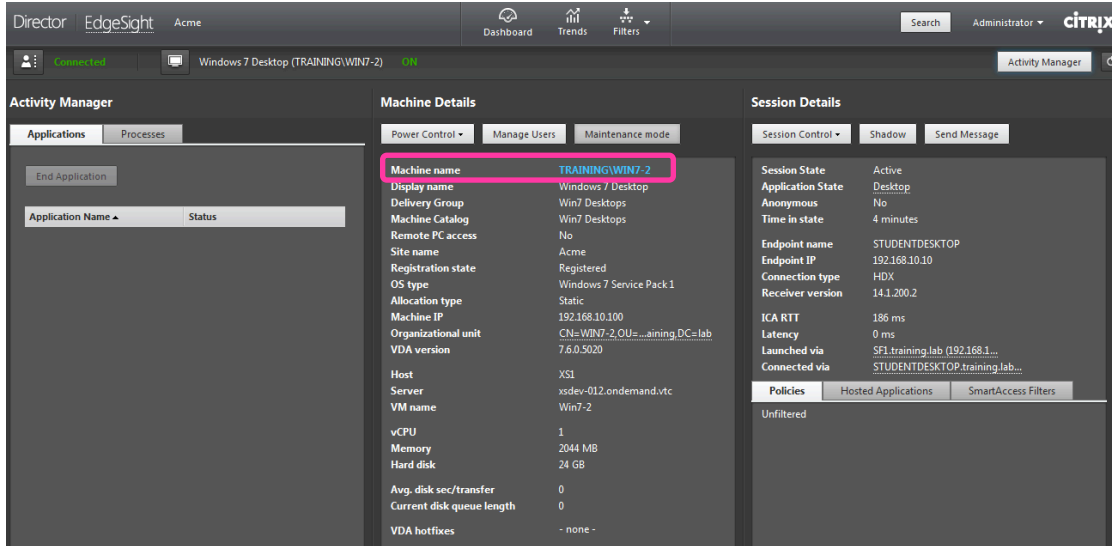
Search for	User
Search for user	Administrator

Click **(Training\Administrator)** when it appears.

45.  Click the **Windows 7 Desktop** session.

46.  Click **Details** at the top right.

47.



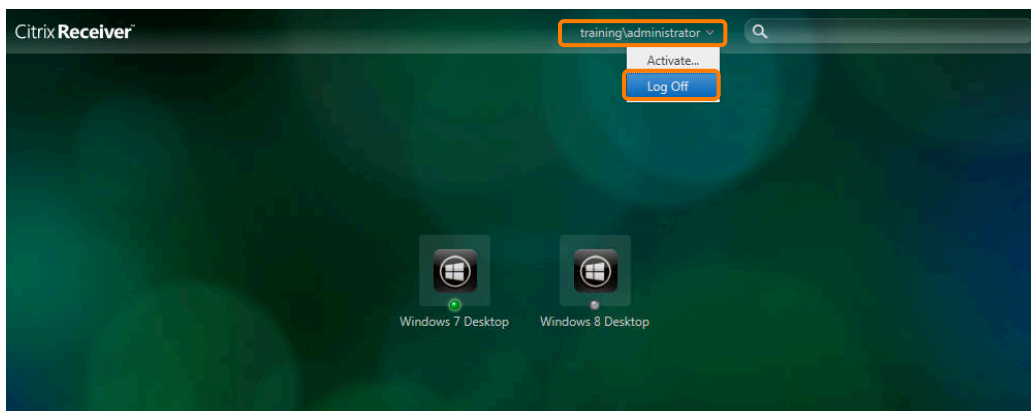
Notice that Training\Administrator was now assigned to the other Win7 desktop by XenDesktop.

48.



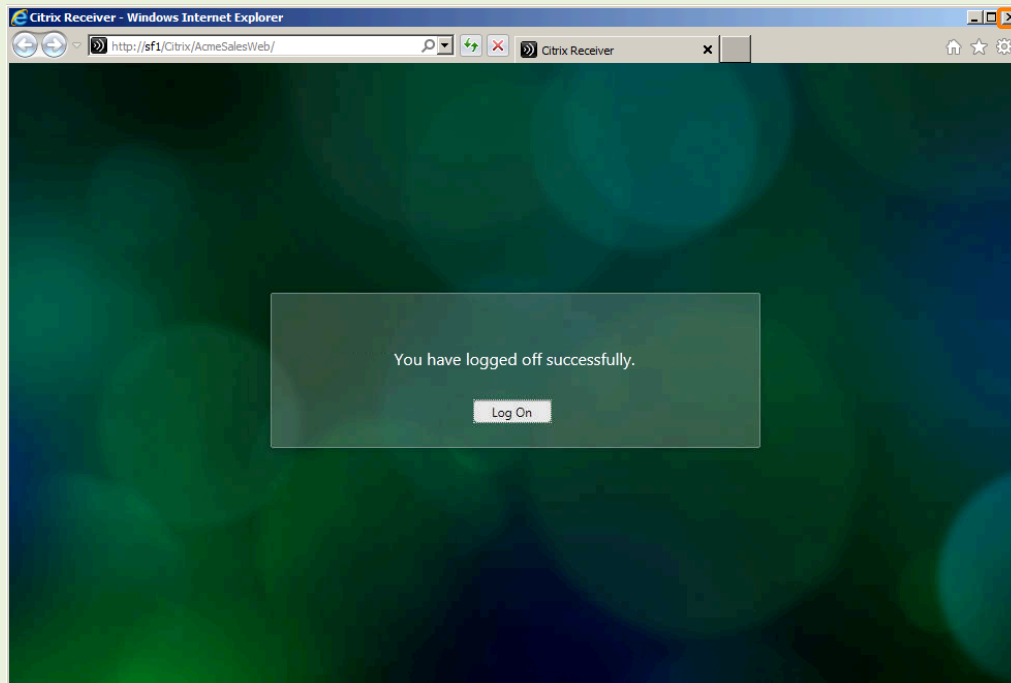
Switch back to **Internet Explorer**.

49.



Click **training\administrator** and then click **Log Off**.

50.



Close Internet Explorer.

---

## Exercise Summary

---

In this exercise, you launched a desktop as User1, assigned an administrator to that desktop and then accessed the user's assigned desktop as the administrator in order to troubleshoot the user's connection issues. Next, you removed the assignment and verified the administrator account no longer launches the previously assigned desktop.

# Exercise 3: Hosted Applications Usage Report

## Overview


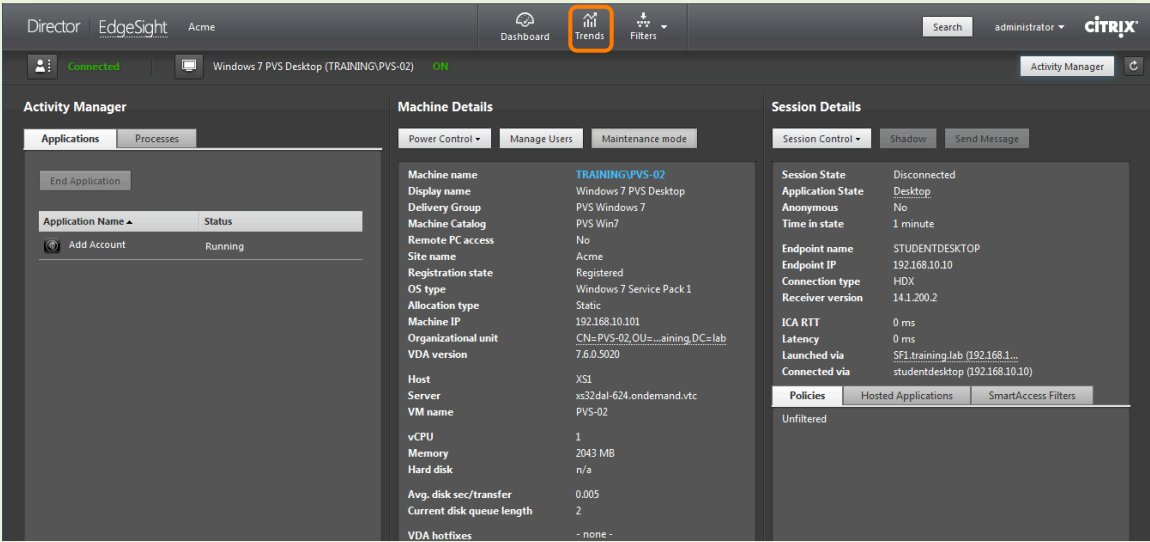
Director provides new capacity reports that show the usage of hosted applications over time. Several new methods enable you to easily access the usage data as trends and aggregate values.

In this exercise you will:

- View Hosted Application Usage in Director.
- Export the Hosted Application Usage Report.
- View the exported application report PDF.

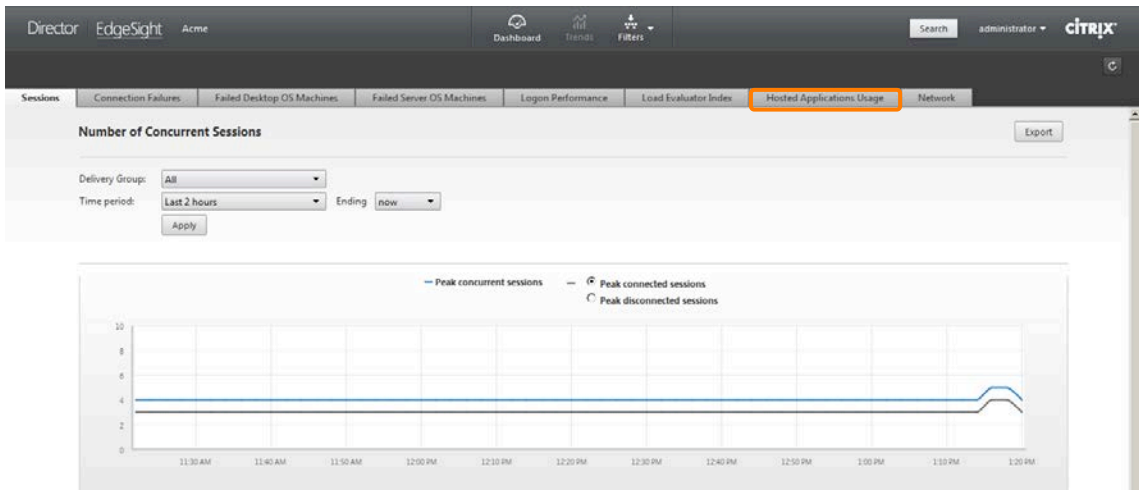
## Step by step guidance

Estimated time to complete this exercise: 15 minutes.

Step	Action
1.	 Switch to <b>Firefox</b> .
2.	 Click on <b>Trends</b> at the top.

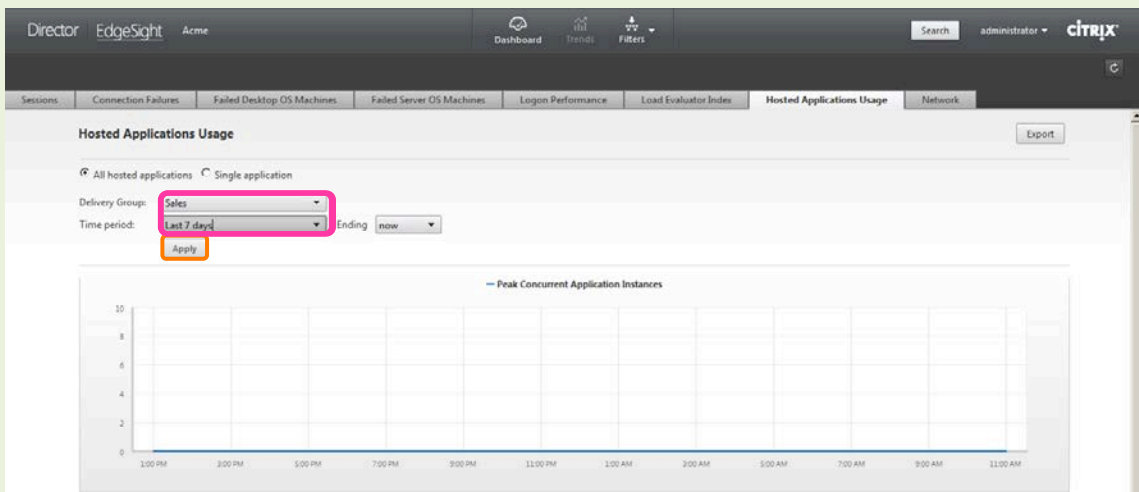
Step Action

3.



Click the **Hosted Applications Usage** tab at the top.

4.



Change Delivery Group to Sales and Time period to Last 7 days and then click **Apply**.

Step Action

5.

Director EdgeSight Acme

Dashboard Trends Filters Search administrator citrix

Sessions Connection Failures Failed Desktop OS Machines Failed Server OS Machines Logon Performance Load Evaluator Index Hosted Applications Usage Network

**Hosted Applications Usage** Export

All hosted applications Single application

Delivery Group: Sales

Time period: Last 7 days Ending now Apply

Peak Concurrent Application Instances

Application Based Usage

Application Name	Folder Path	Peak Concurrent Instances	Total Instances	Total Launches	Total Usage Duration (hr:...	Total Distinct Users
All	n/a	2	2	2	0:16	2
Calculator	n/a	0	0	0	0:00	0
Command Prompt	n/a	1	1	1	0:16	1
Microsoft PowerPoint 2010	n/a	0	0	0	0:00	0
Microsoft Word 2010	n/a	0	0	0	0:00	0
Notepad	n/a	1	1	1	0:00	2
Paint	n/a	0	0	0	0:00	0

View the updated Application Based Usage at the bottom.

6.

Director EdgeSight Acme

Dashboard Trends Filters Search administrator citrix

Sessions Connection Failures Failed Desktop OS Machines Failed Server OS Machines Logon Performance Load Evaluator Index Hosted Applications Usage Network

**Hosted Applications Usage** Export

All hosted applications Single application

Delivery Group: Sales

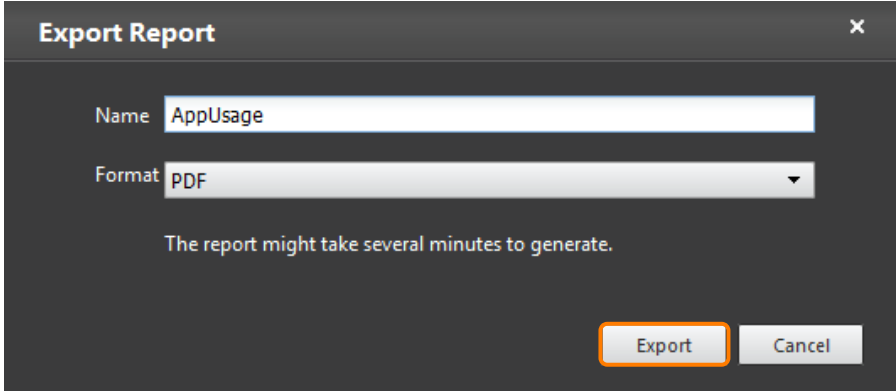
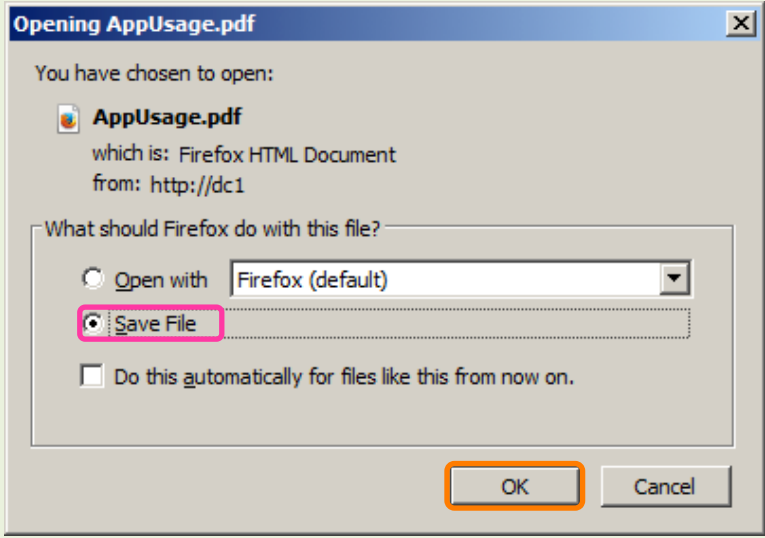

Time period: Last 7 days Ending now Apply

Peak Concurrent Application Instances

Application Based Usage

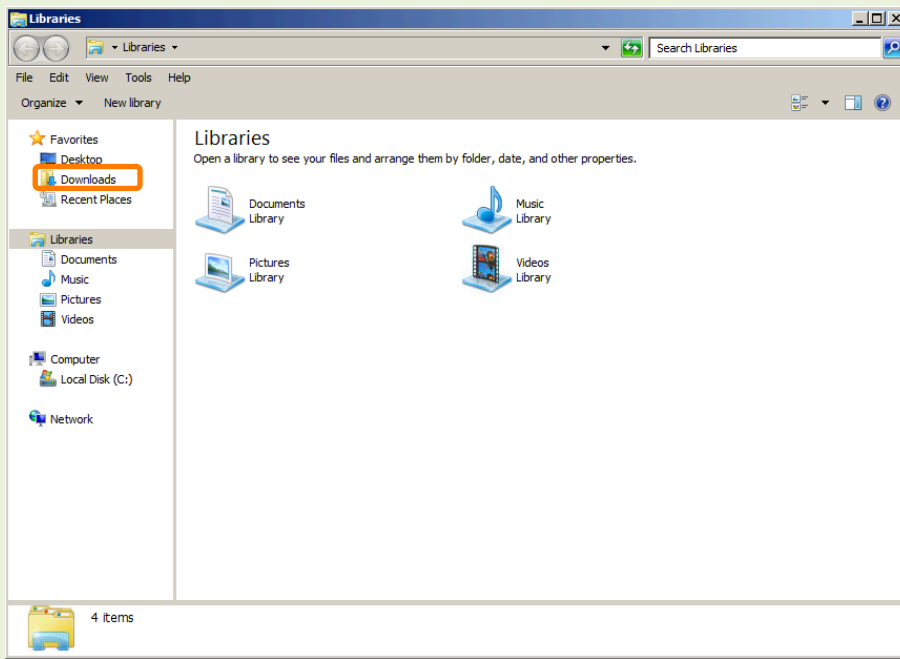
Application Name	Folder Path	Peak Concurrent Instances	Total Instances	Total Launches	Total Usage Duration (hr:...	Total Distinct Users
All	n/a	2	2	2	0:16	2
Calculator	n/a	0	0	0	0:00	0
Command Prompt	n/a	1	1	1	0:16	1
Microsoft PowerPoint 2010	n/a	0	0	0	0:00	0
Microsoft Word 2010	n/a	0	0	0	0:00	0
Notepad	n/a	1	1	1	0:00	2
Paint	n/a	0	0	0	0:00	0

Click **Export** at the top right.

Step	Action
7.	 <p>Enter <b>AppUsage</b> as the Name and click <b>Export</b>.</p>
8.	 <p>Once exporting completes, you will be prompted to open or save the file. Select <b>Save File</b> and click <b>OK</b>.</p>
9.	 <p>Open <b>File Explorer</b> on the Student Desktop.</p>

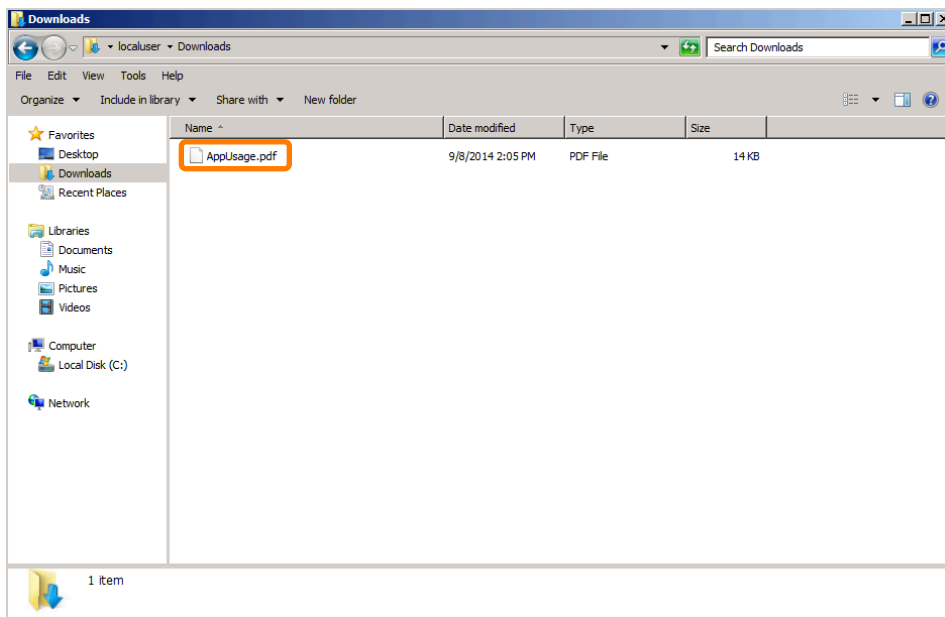
**Step Action**

10.

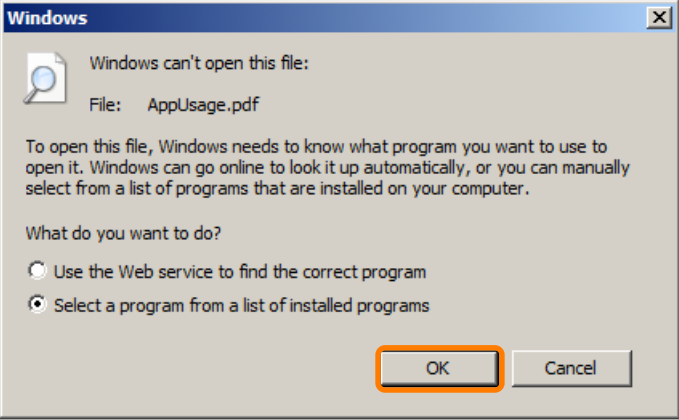
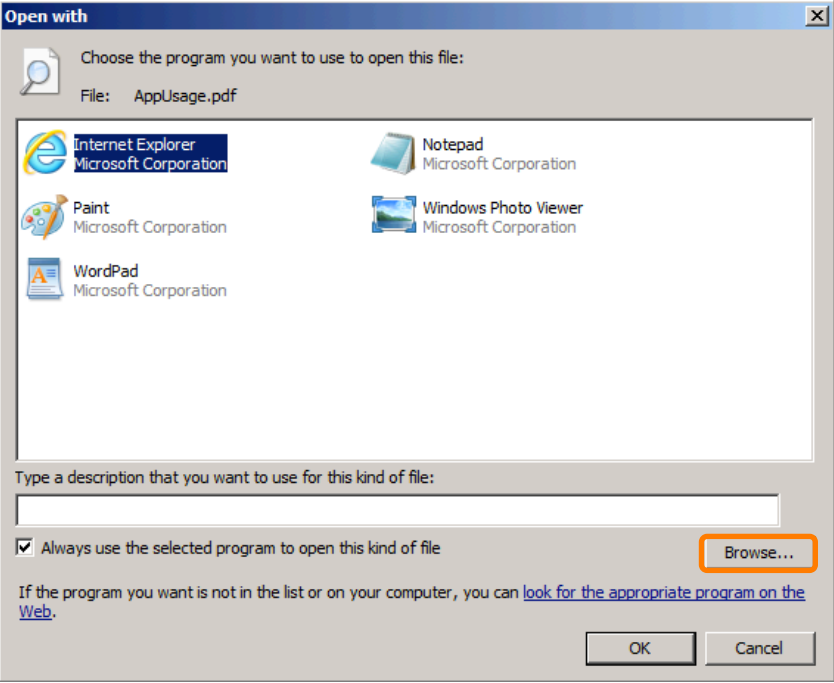


Click **Downloads** at the left.

11.

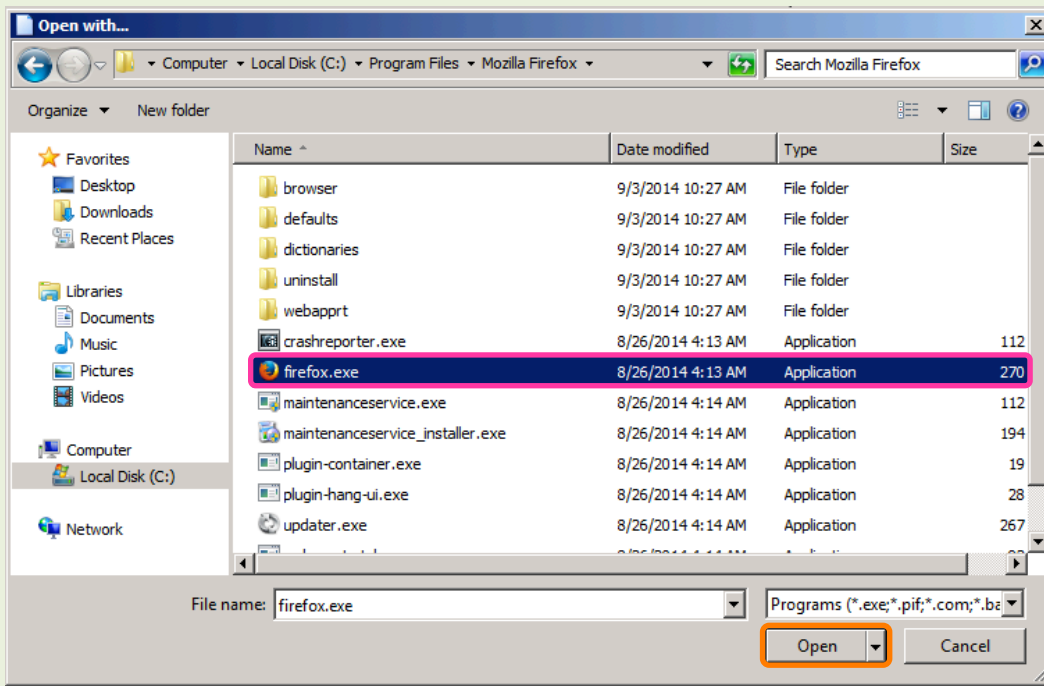


Double-click **AppUsage.pdf**.

Step	Action
12.	 <p>Choose <b>Select a program from a list of installed programs</b> and click <b>OK</b>.</p>
13.	 <p>Click <b>Browse...</b></p>

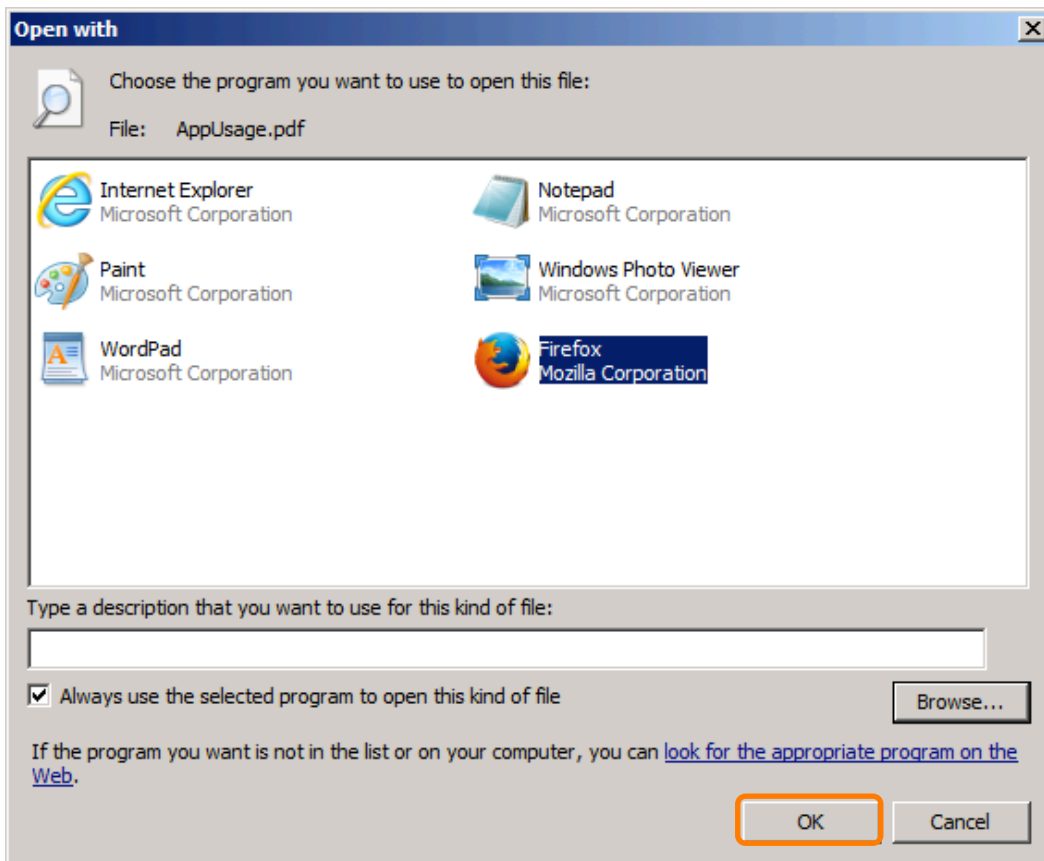
Step Action

14.



Browse to C:\Program Files\Mozilla Firefox, select firefox.exe and click **Open**.

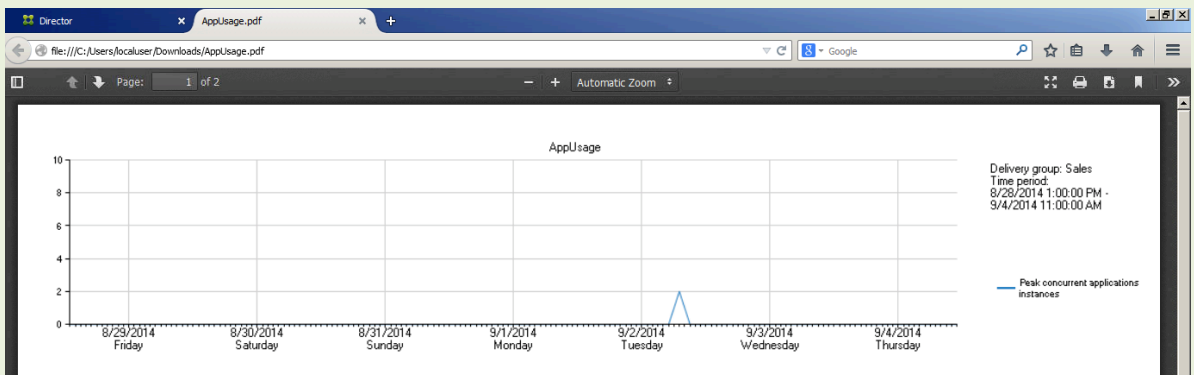
15.



Click **OK**.

**Step Action**

16.



Review the AppUsage graph for the Sales Delivery Group.

17.

**Application Based Usage**

Application Name	Folder Path	Peak Concurrent Instances	Total Instances	Total Launches	Total Usage Duration (hr:min)	Total Instances
All Applications		2	2	2	0:16	2
Calculator		0	0	0	0:00	0
Command Prompt		1	1	1	0:16	1
Microsoft PowerPoint 2010		0	0	0	0:00	0
Microsoft Word 2010		0	0	0	0:00	0
Notepad		1	1	1	0:00	2
Paint		0	0	0	0:00	0

Scroll to the next page to view detailed application usage. Close Mozilla Firefox.

## Exercise Summary

In this exercise, you reviewed the hosted application usage report, and exported a PDF copy for distribution.

# Exercise 4: Using Director with XenApp 6.5

## Overview

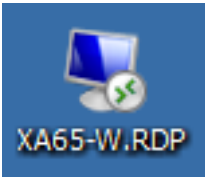

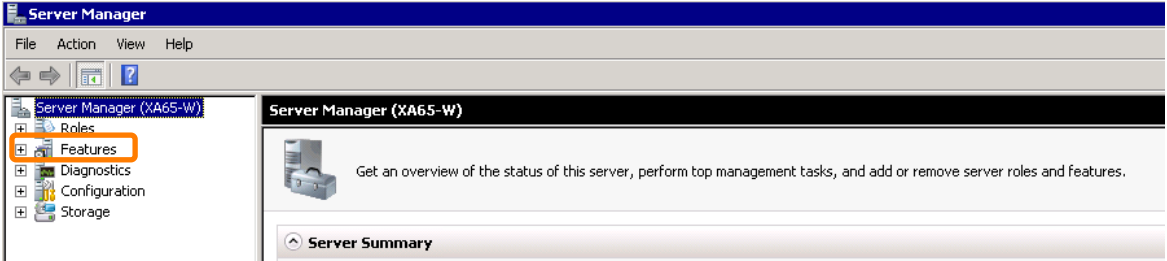
Director provides

In this exercise you will:

- Install Remote Assistance on XA65-W
- Install the Director WMI Provider on XA65-W
- Add XA65-W to Director
- Test Shadowing from Director with XenApp 6.5

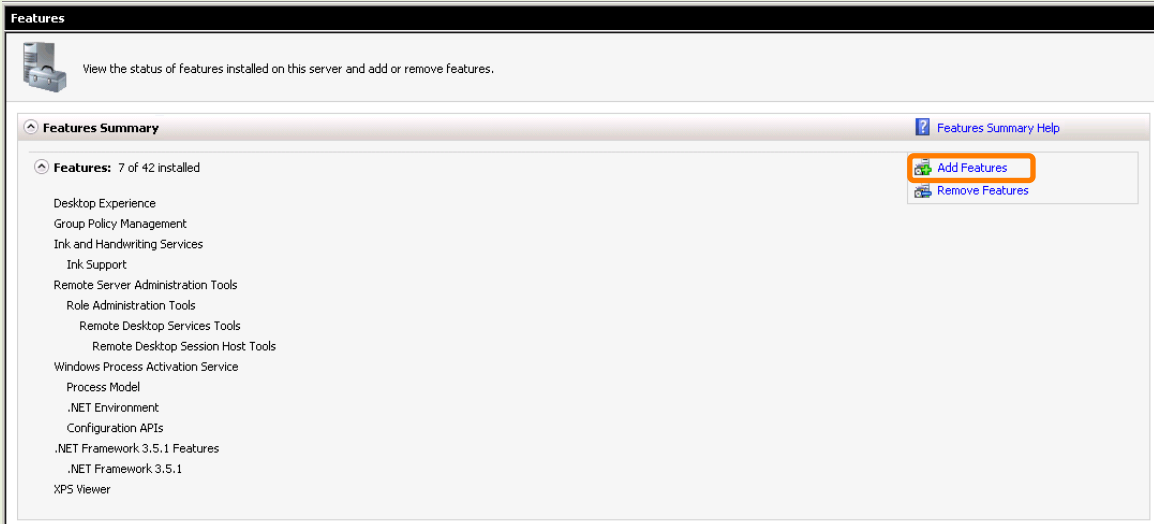
## Step by step guidance

Estimated time to complete this exercise: 20 minutes.

Step	Action
1.	<p>On the Student Desktop, double-click the shortcut for XA65-W.</p> 
2.	 <p>On the XA65-W Desktop, open <b>Server Manager</b>.</p>
3.	 <p>Click <b>Features</b> on the left.</p>

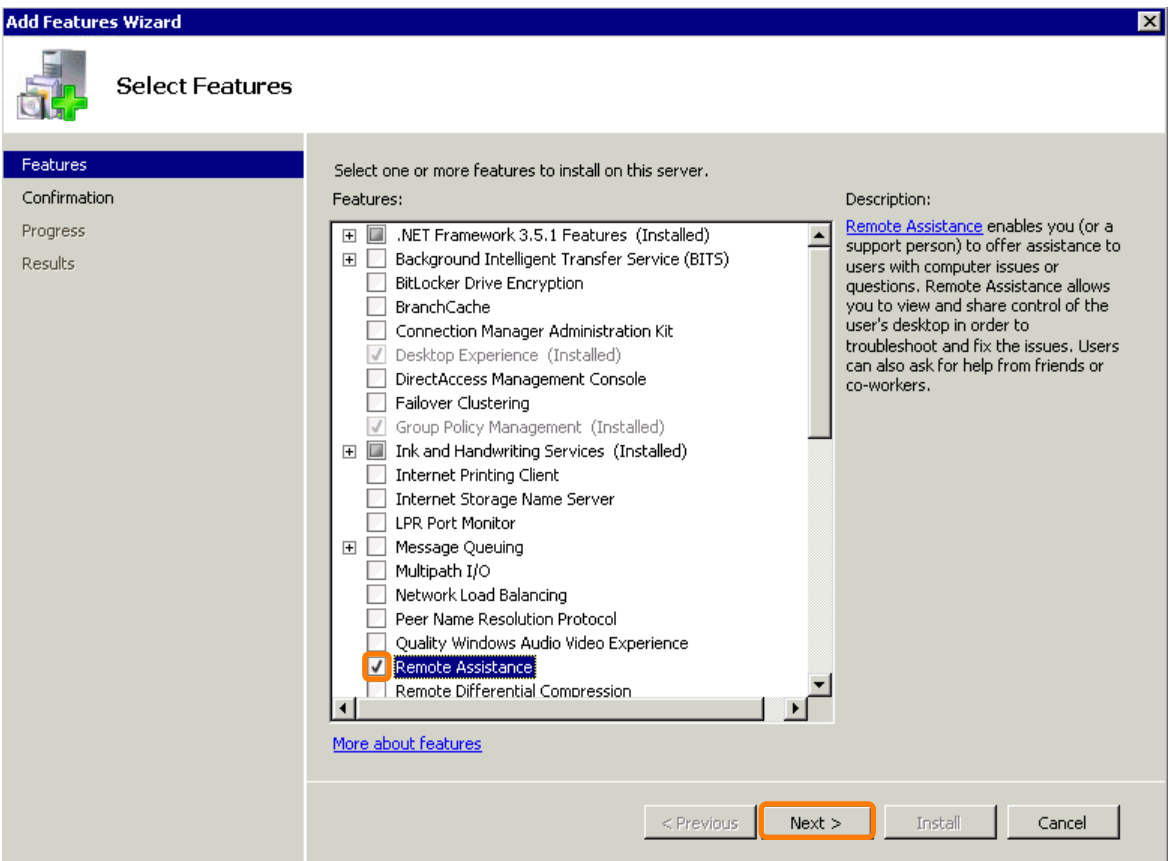
Step Action

4.

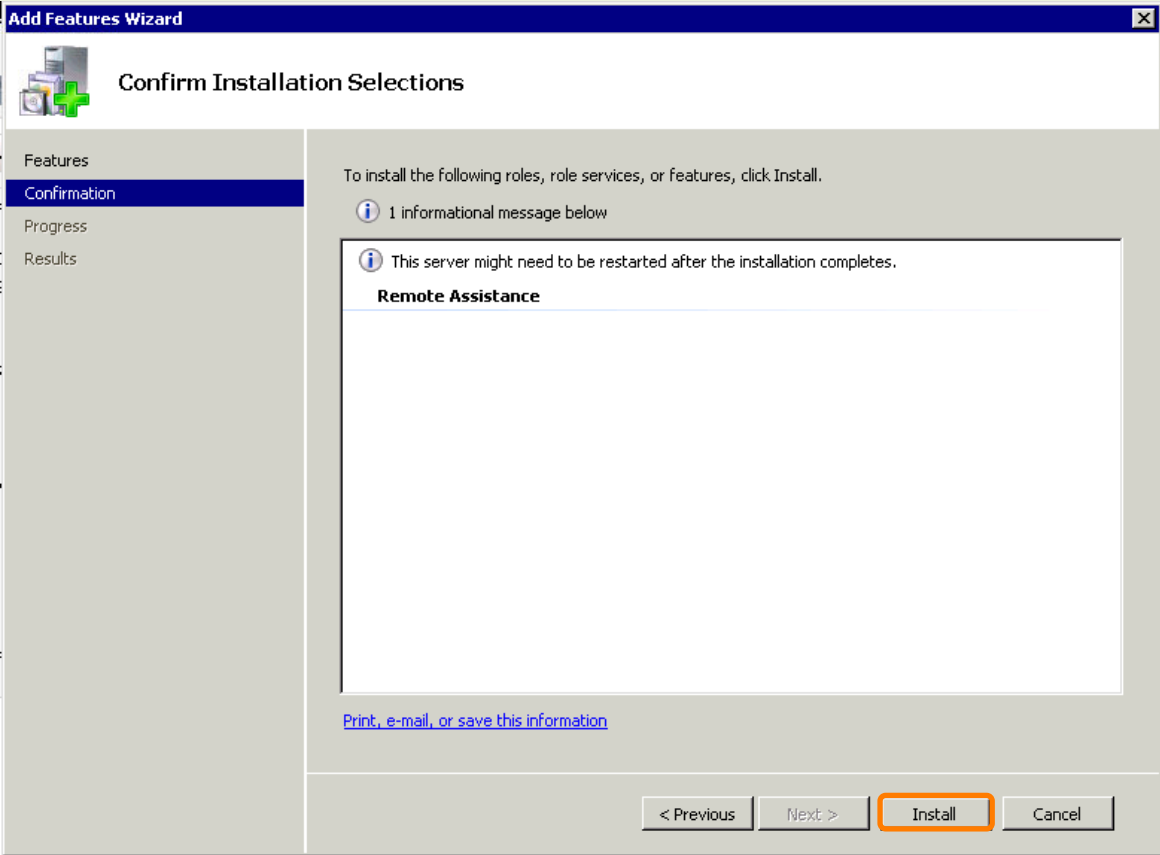


Click **Add Features**.

5.

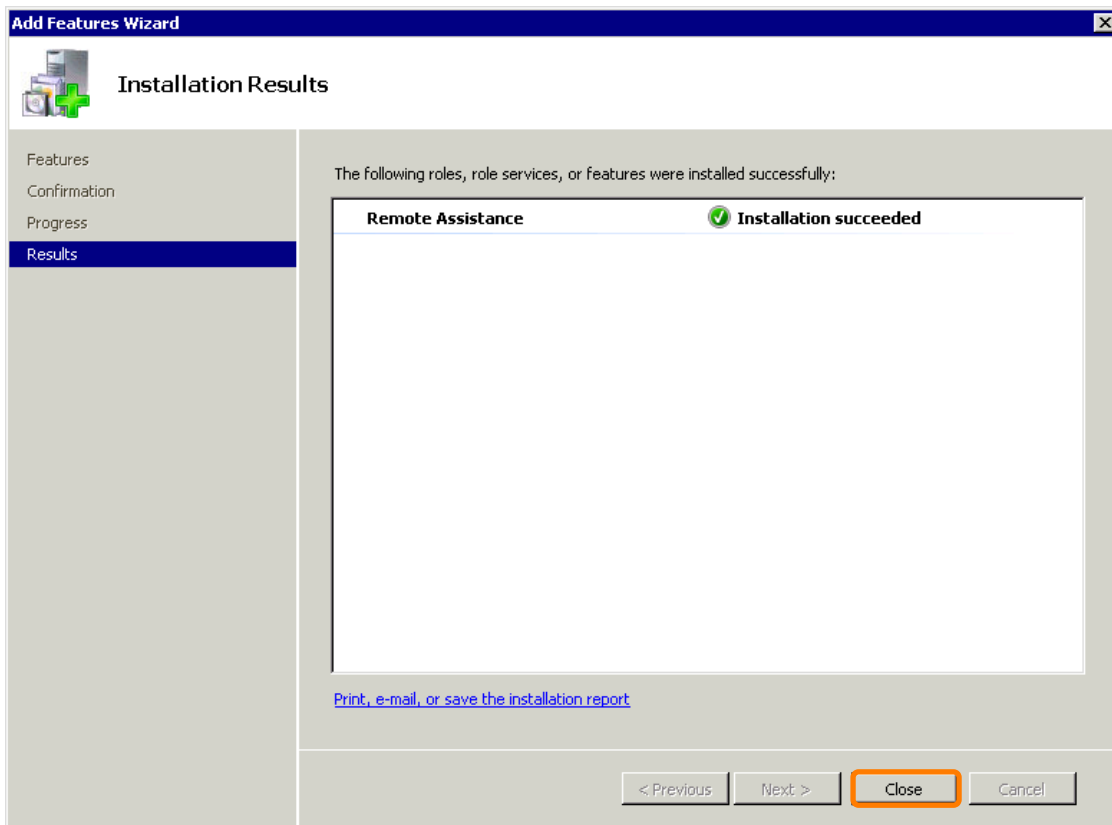


Select **Remote Assistance** and click **Next**.

Step	Action
6.	 <p>Click <b>Install</b>.</p>

Step	Action
------	--------

7.



Wait for installation to complete and click **Close**.

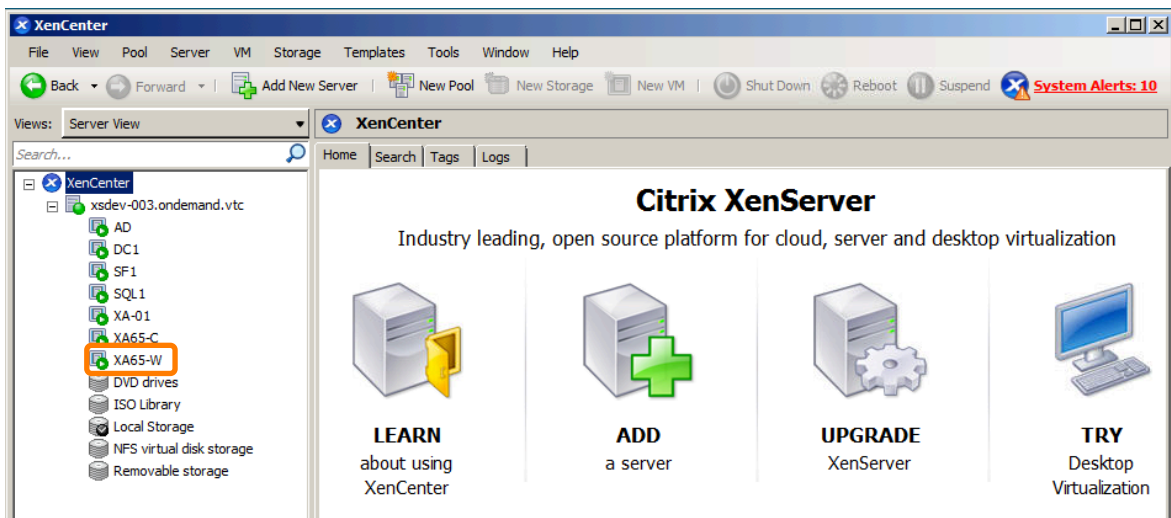
Close Server Manager.

8.

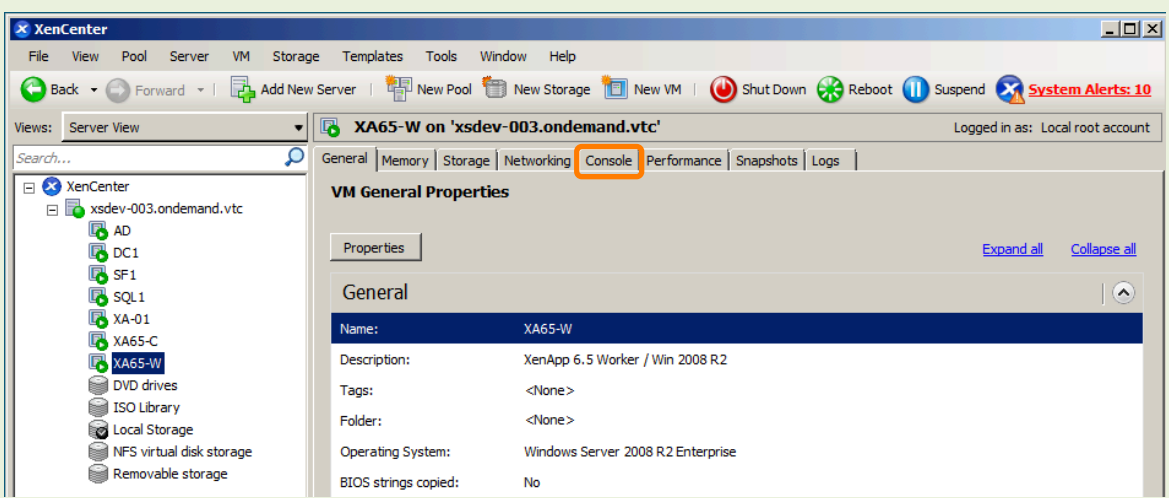
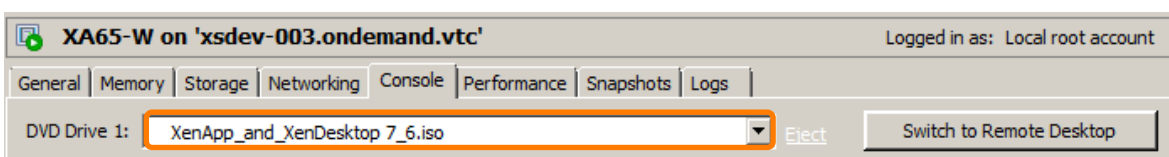




On the Student Desktop, switch to **XenCenter**.

9.

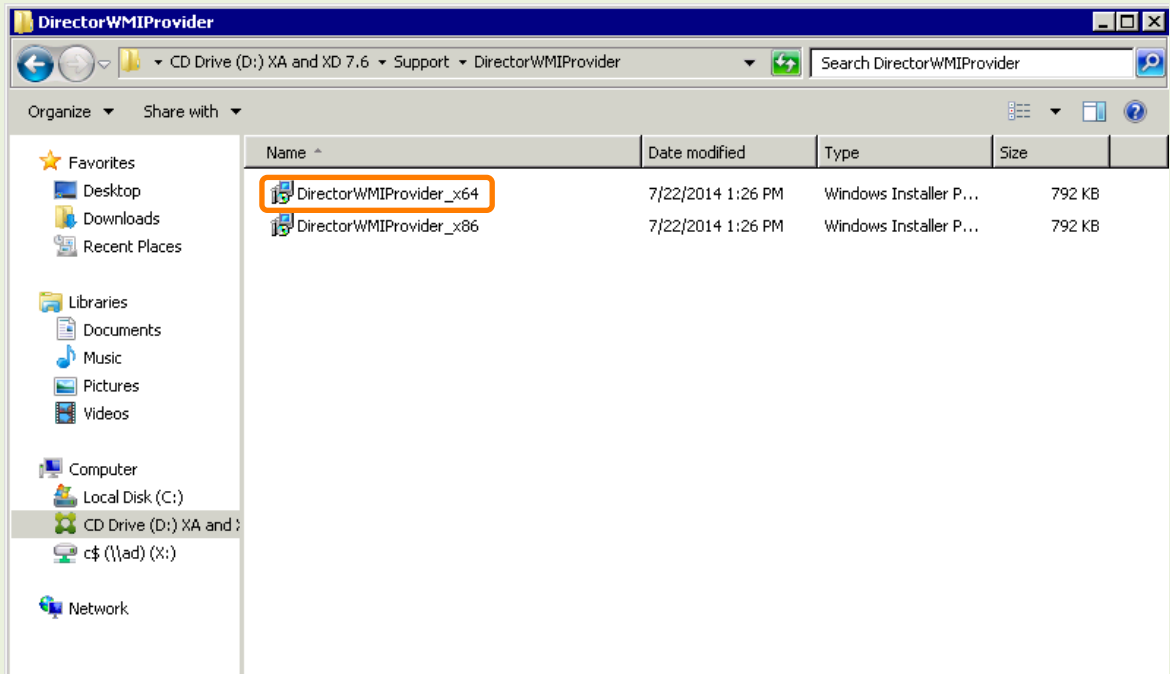


Click **XA65-W** on the left.

Step	Action
10.	 <p>The screenshot shows the XenCenter interface for a virtual machine named 'XA65-W' on the host 'xsdev-003.ondemand.vtc'. The 'Console' tab is selected and highlighted with an orange box. The 'VM General Properties' section is visible, showing details like Name (XA65-W), Description (XenApp 6.5 Worker / Win 2008 R2), and Operating System (Windows Server 2008 R2 Enterprise).</p> <p>Click the <b>Console</b> tab.</p>
11.	 <p>The screenshot shows the 'DVD Drive 1' selector in the XenCenter console. A dropdown menu is open, and the option 'XenApp_and_XenDesktop 7_6.iso' is selected and highlighted with an orange box. Other options include 'Eject' and 'Switch to Remote Desktop'.</p> <p>Using the <b>DVD Drive 1</b> selector, chose the <b>XenApp_and_XenDesktop 7_6.iso</b> installation DVD.</p>
12.	 <p>The screenshot shows the Windows taskbar with several icons. The Remote Desktop Connection icon (a blue square with a white computer monitor) is highlighted with an orange box.</p> <p>Switch to the XA65-W Remote Desktop Connection.</p>
13.	 <p>The screenshot shows the Windows taskbar with several icons. The File Explorer icon (a yellow folder) is highlighted with an orange box.</p> <p>On the XA65-W Desktop, open <b>File Explorer</b>.</p>

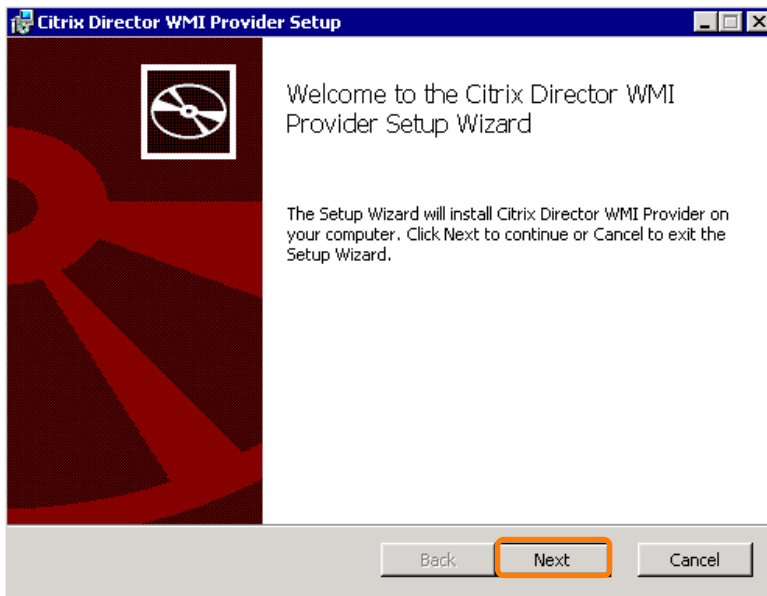
Step Action

14.

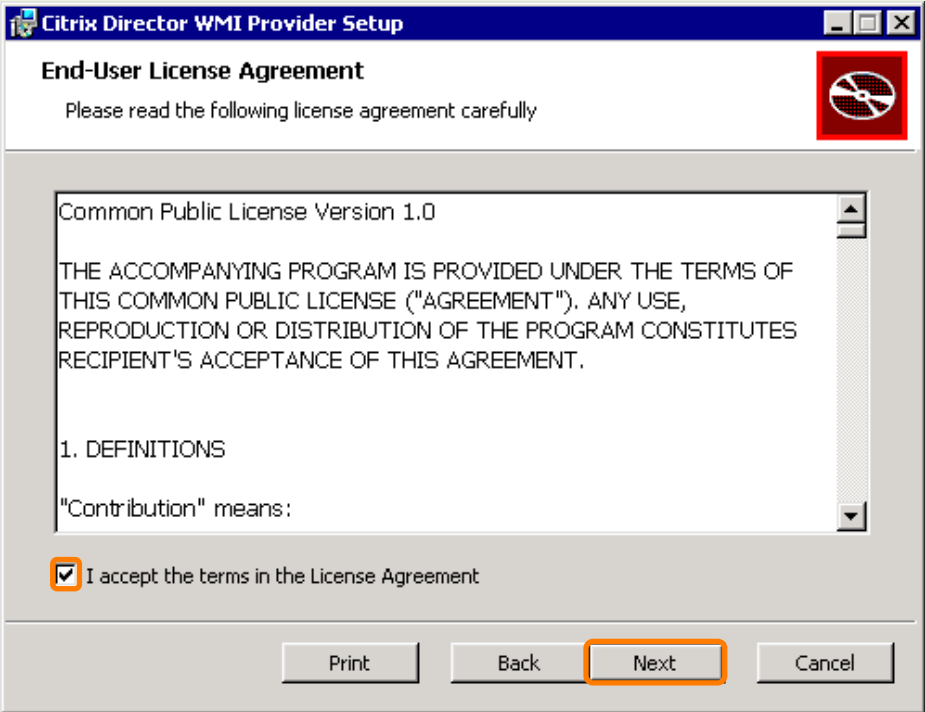
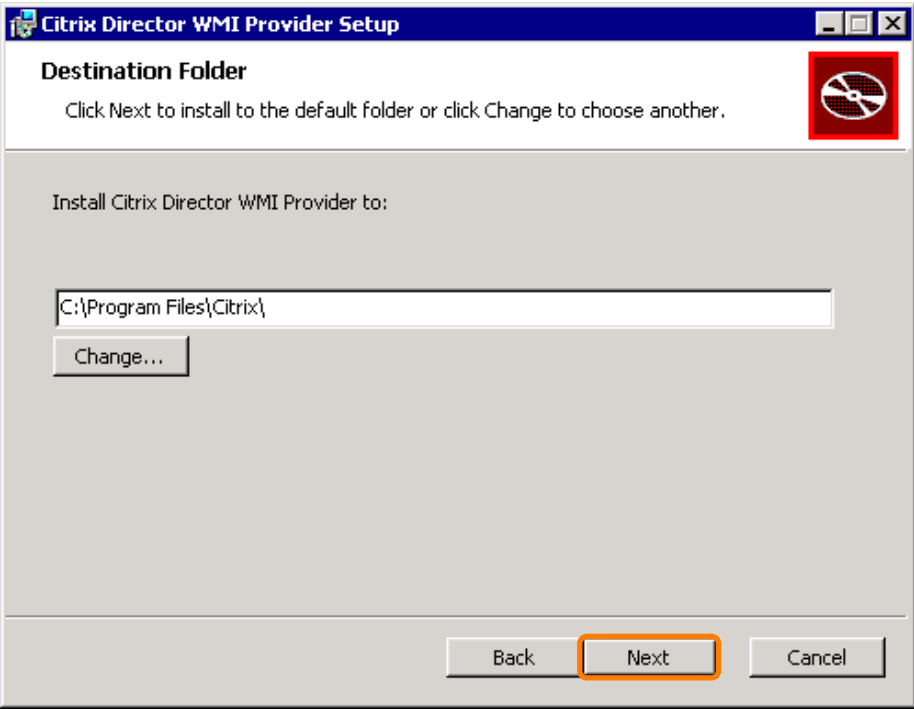


Navigate to D:\Support\DirectorWMIProvider and double-click **DirectorWMIProvider\_x64**.

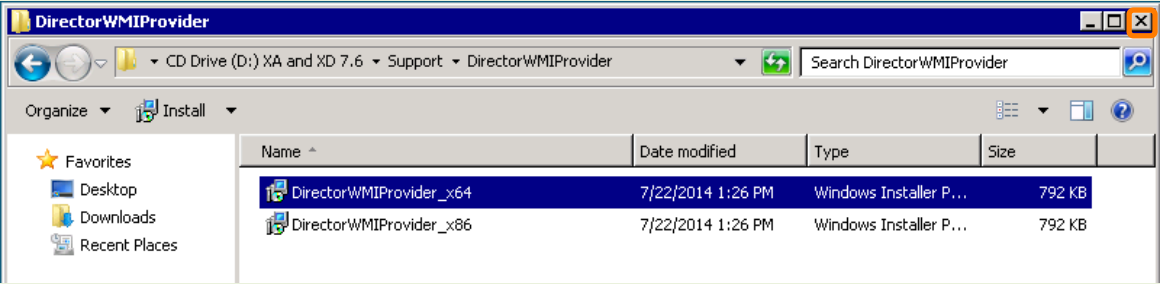
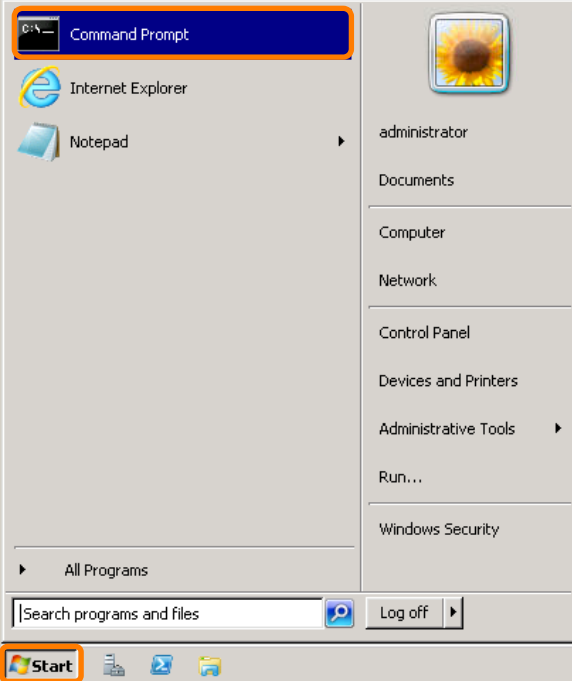
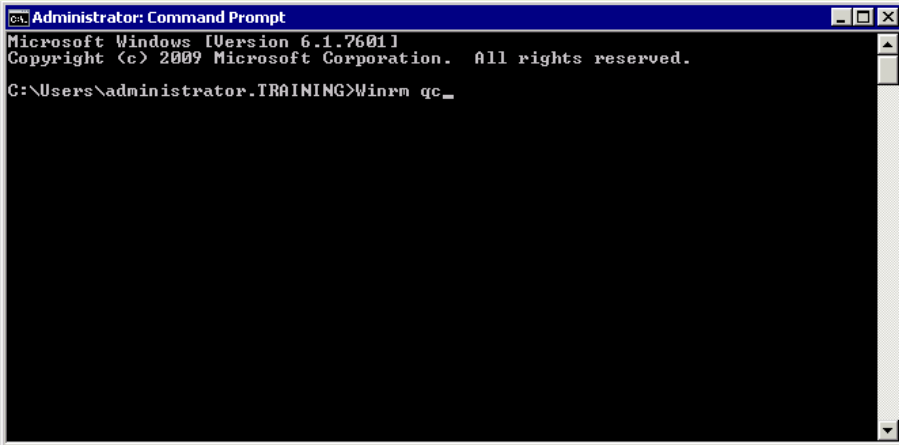
15.

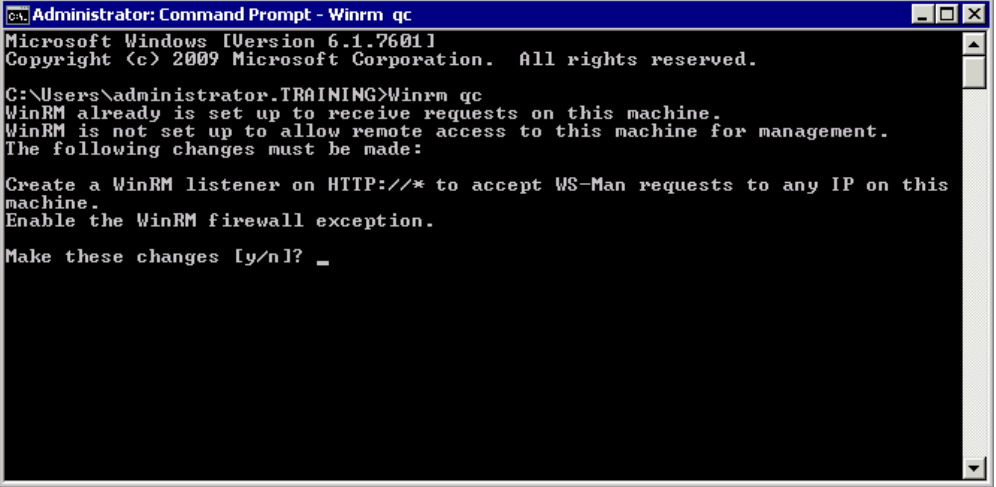
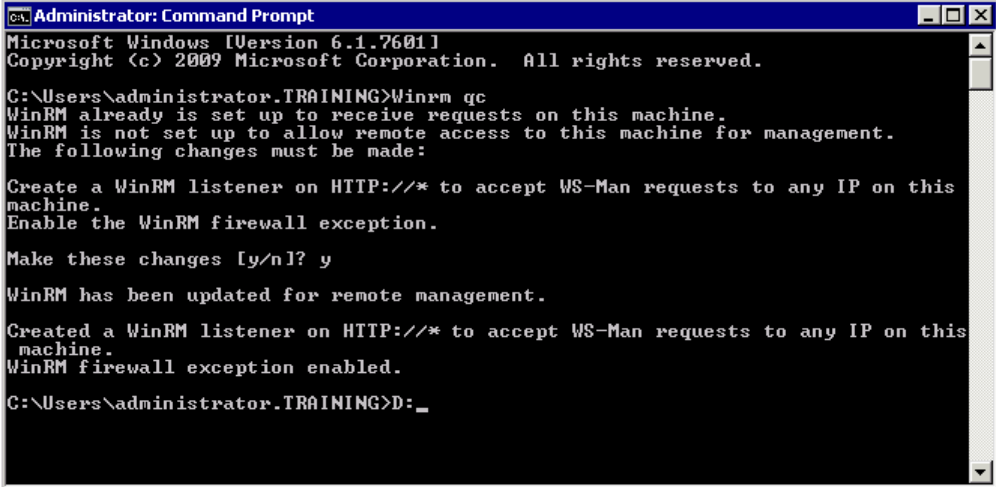


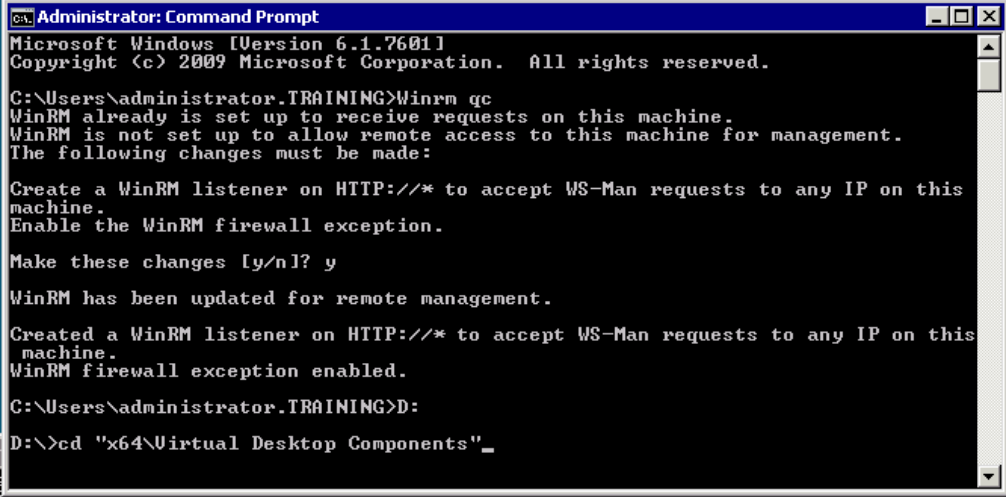
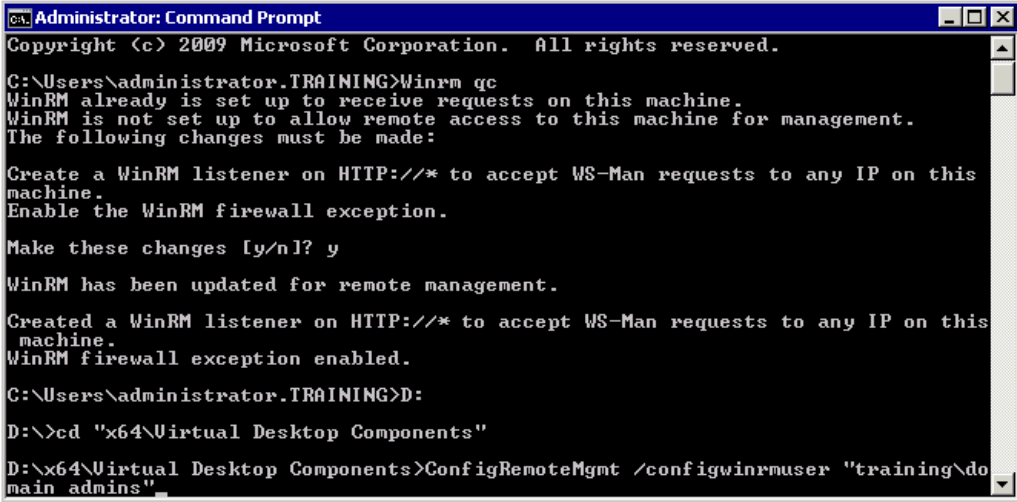
Click **Next** in the Citrix Director WMI Provider Setup window.

Step	Action
16.	 <p><b>End-User License Agreement</b> Please read the following license agreement carefully</p> <p>Common Public License Version 1.0</p> <p>THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS COMMON PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.</p> <p>1. DEFINITIONS</p> <p>"Contribution" means:</p> <p><input checked="" type="checkbox"/> I accept the terms in the License Agreement</p> <p>Print    Back    <b>Next</b>    Cancel</p> <p>Read and respond to the license agreement and click <b>Next</b></p>
17.	 <p><b>Destination Folder</b> Click Next to install to the default folder or click Change to choose another.</p> <p>Install Citrix Director WMI Provider to:</p> <p>C:\Program Files\Citrix\ Change...</p> <p>Back    <b>Next</b>    Cancel</p> <p>Click <b>Next</b> to accept the default installation path.</p>

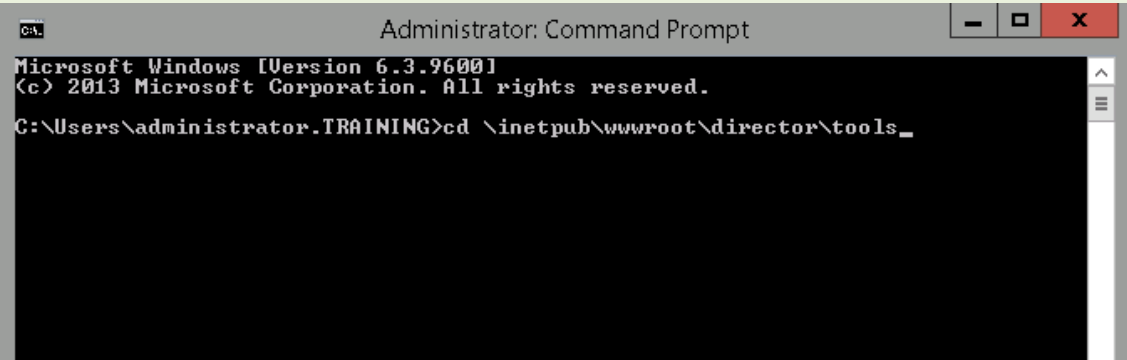
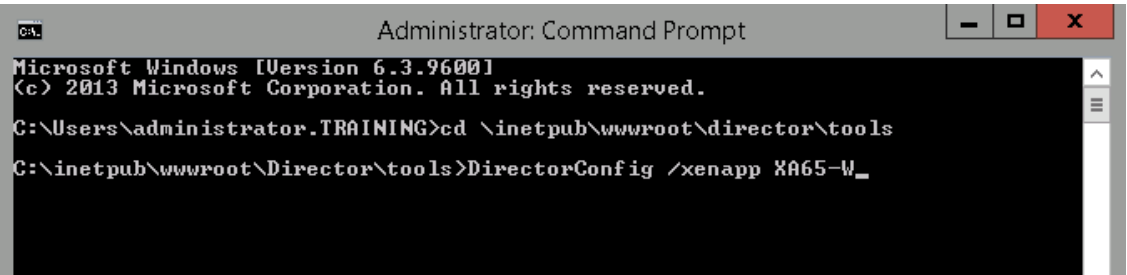
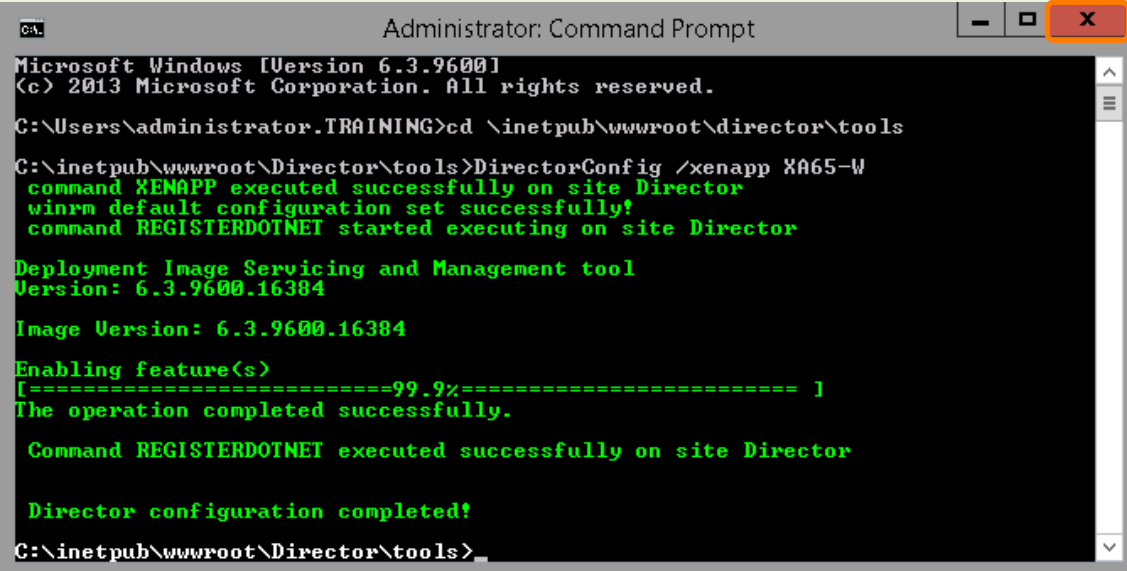

Step	Action
18.	 <p>The screenshot shows a Windows-style dialog box titled "Citrix Director WMI Provider Setup". The main text reads "Ready to install Citrix Director WMI Provider". Below this, instructions state: "Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard." At the bottom, there are three buttons: "Back", "Install", and "Cancel". The "Install" button is highlighted with an orange border.</p> <p>Click <b>Install</b>.</p>
19.	 <p>The screenshot shows the same dialog box, but now it says "Completed the Citrix Director WMI Provider Setup Wizard". The instructions now read: "Click the Finish button to exit the Setup Wizard." The buttons at the bottom are "Back", "Finish", and "Cancel". The "Finish" button is highlighted with an orange border.</p> <p>Wait for installation to complete and click <b>Finish</b>.</p>

Step	Action
20.	 <p>Close File Explorer by clicking the <b>X</b> at the top right of the window.</p>
21.	 <p>On the XA65-W Desktop, click <b>Start</b> and then click <b>Command Prompt</b>.</p>
22.	<p>Next, we will check if WinRM is enabled.</p>  <p>In the command prompt window type <b>Winrm qc</b> and press the Enter key.</p>


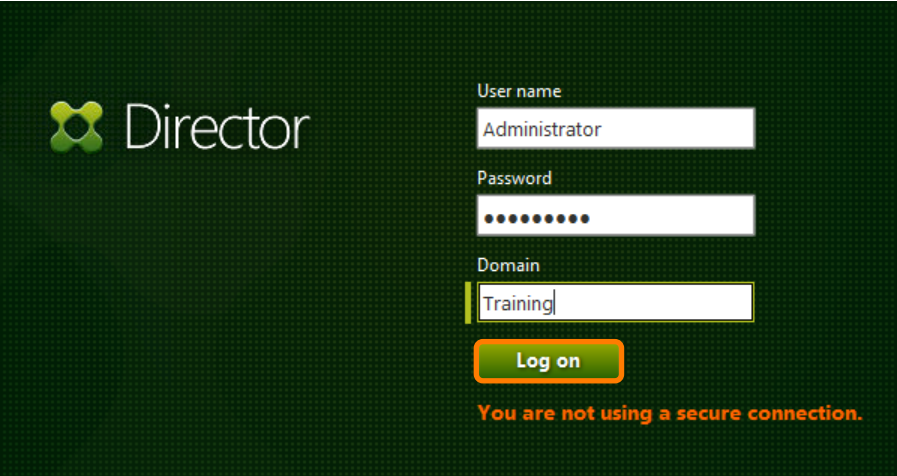
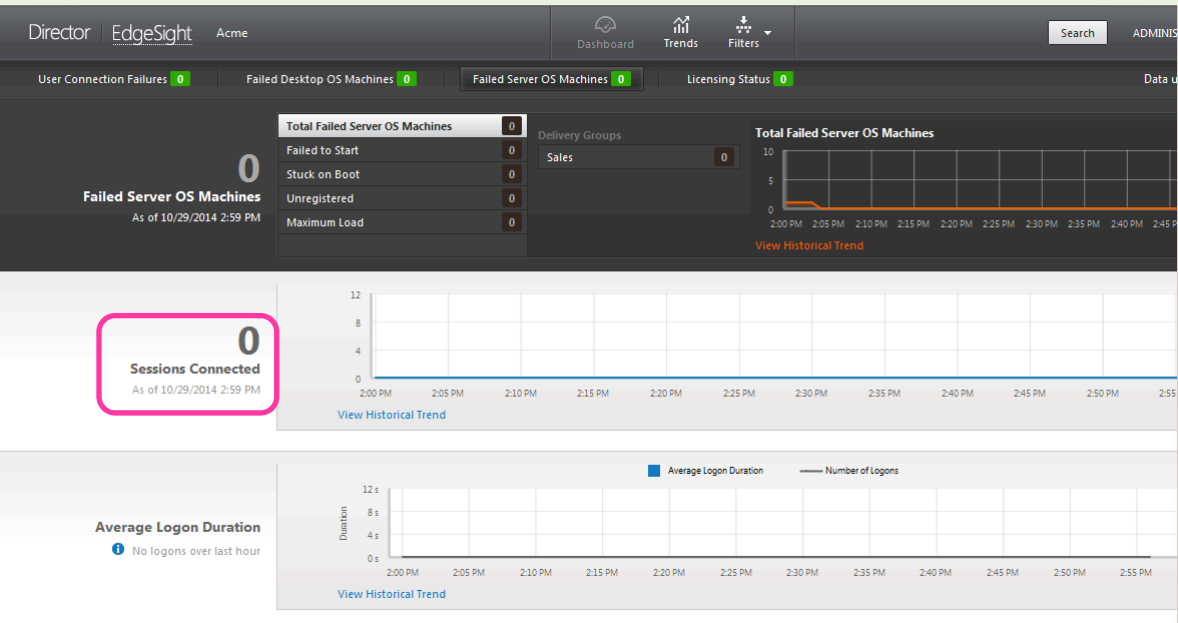
Step	Action
23.	<p>WinRM is not set up for remote management.</p>  <pre> Administrator: Command Prompt - Winrm qc Microsoft Windows [Version 6.1.7601] Copyright (c) 2009 Microsoft Corporation. All rights reserved.  C:\Users\administrator.TRAINING&gt;Winrm qc WinRM already is set up to receive requests on this machine. WinRM is not set up to allow remote access to this machine for management. The following changes must be made:  Create a WinRM listener on HTTP://* to accept WS-Man requests to any IP on this machine. Enable the WinRM firewall exception.  Make these changes [y/n]? _ </pre> <p>Type <b>y</b> and press the enter key.</p>
24.	 <pre> Administrator: Command Prompt Microsoft Windows [Version 6.1.7601] Copyright (c) 2009 Microsoft Corporation. All rights reserved.  C:\Users\administrator.TRAINING&gt;Winrm qc WinRM already is set up to receive requests on this machine. WinRM is not set up to allow remote access to this machine for management. The following changes must be made:  Create a WinRM listener on HTTP://* to accept WS-Man requests to any IP on this machine. Enable the WinRM firewall exception.  Make these changes [y/n]? y  WinRM has been updated for remote management.  Created a WinRM listener on HTTP://* to accept WS-Man requests to any IP on this machine. WinRM firewall exception enabled.  C:\Users\administrator.TRAINING&gt;D: _ </pre> <p>Verify that the WinRM listener and firewall exception were created successfully.</p> <p>Type <b>D:</b> and press the enter key to switch to the D Drive.</p>

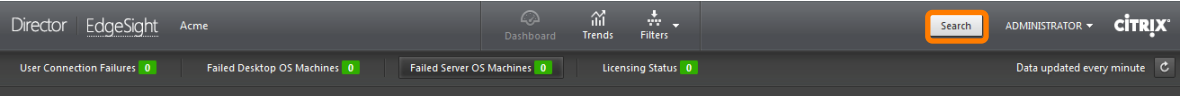
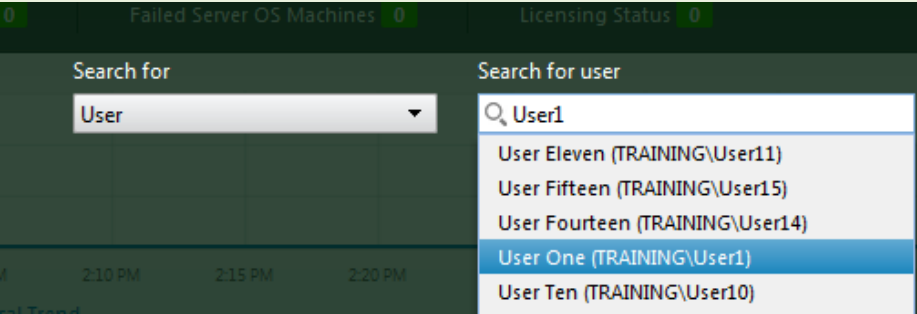
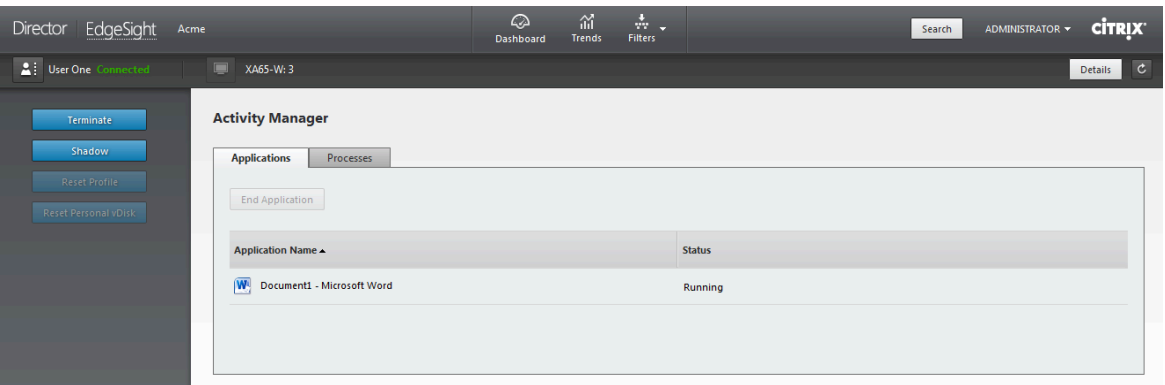
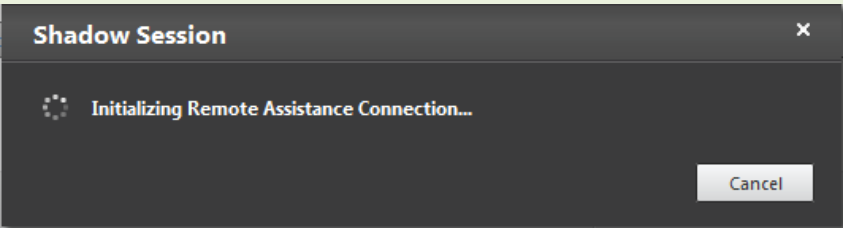
Step	Action
25.	 <p>Type <code>cd "x64\Virtual Desktop Components"</code> and press the Enter key to switch to the Virtual Desktop Components folder.</p>
26.	<p>In order for Director to retrieve information from the XA server, it is necessary to enable WinRM permission for administrators.</p>  <p>Type <code>ConfigRemoteMgmt /configwinrmuser "training\domain admins"</code> and press the Enter key.</p>

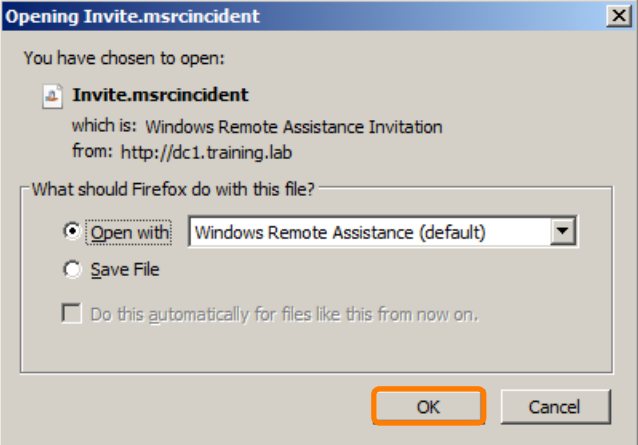
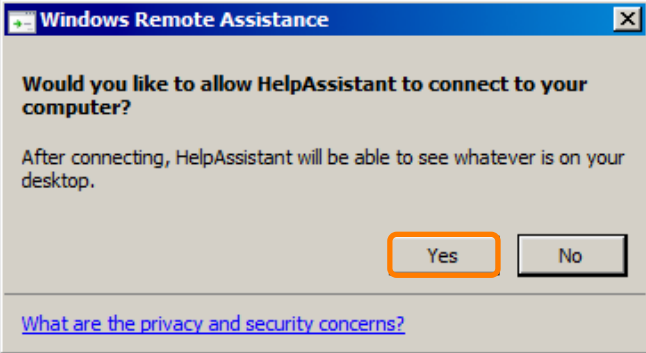
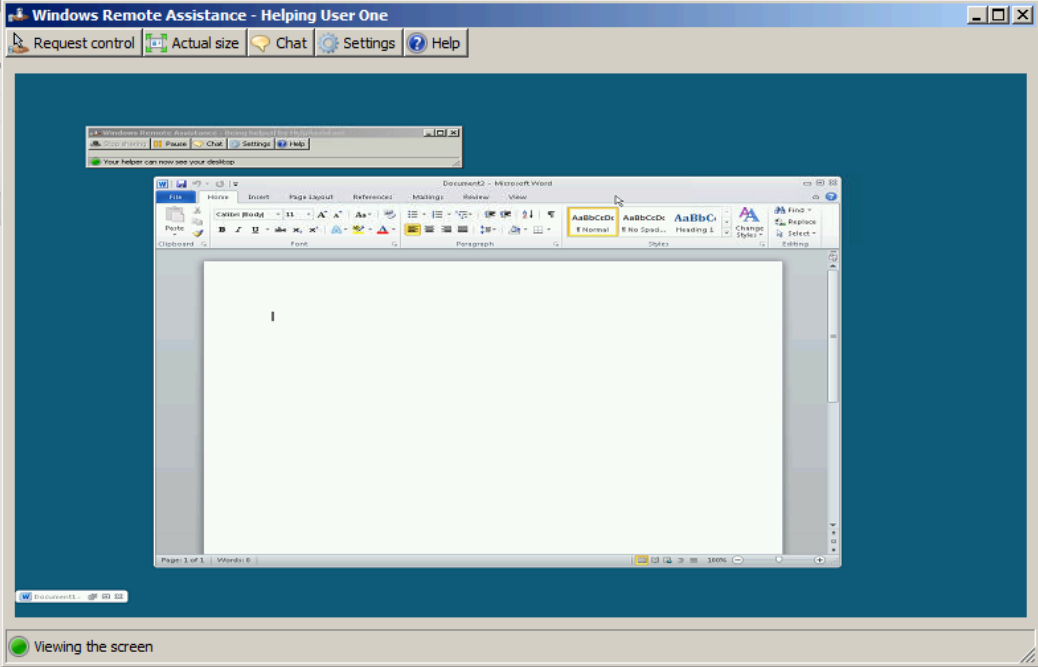
Step	Action
27.	 <p>Verify WinRM configuration completed successfully and then close the Command Prompt Window.</p>
28.	Close the Remote Desktop Connection to XA65-W by clicking the <b>X</b> at the upper right corner and then clicking <b>OK</b> .
29.	<p>Now we will add the XenApp 6.5 server to director using DirectorConfig.exe.</p>  <p>On the Student Desktop, double-click the shortcut for <b>DC1</b>.</p>
30.	 <p>Click <b>Start</b>.</p>
31.	 <p>Type Command Prompt to search and then click on <b>Command Prompt</b> when it appears.</p>

Step	Action
32.	 <p>Type <code>cd \inetpub\wwwroot\director\tools</code> and press the Enter key to change to the tools directory.</p>
33.	 <p>Type <code>DirectorConfig /xenapp XA65-W</code> and press the Enter key.</p>
34.	 <p>Verify configuration was successful and close the Command Prompt window.</p>
35.	Close the Remote Desktop Connection to DC1 by clicking the <b>X</b> in the upper right corner and then clicking <b>OK</b> .
36.	 <p>On the Student Desktop, launch <b>Internet Explorer</b>.</p>

Step	Action				
37.	Navigate to <a href="http://XA65-C.training.lab">http://XA65-C.training.lab</a>				
38.	<div data-bbox="280 210 1279 718" data-label="Image"> </div> <p data-bbox="280 741 683 772">Enter the following information:</p> <table border="1" data-bbox="280 795 857 871"> <tr> <td data-bbox="280 795 487 831">User name</td> <td data-bbox="487 795 857 831">User1</td> </tr> <tr> <td data-bbox="280 831 487 871">Password</td> <td data-bbox="487 831 857 871">Citrix123</td> </tr> </table> <p data-bbox="280 890 459 921">Click <b>Log on</b>.</p>	User name	User1	Password	Citrix123
User name	User1				
Password	Citrix123				
39.	<div data-bbox="280 961 1385 1207" data-label="Image"> </div> <p data-bbox="280 1257 812 1289">Click <b>MS Word</b> to launch the application.</p>				
40.	<div data-bbox="280 1333 1312 1822" data-label="Image"> </div> <p data-bbox="280 1843 722 1875">Wait for Microsoft Word to launch.</p>				

Step	Action						
41.	 <p>On the Student Desktop, double-click the shortcut to <b>Mozilla Firefox</b>.</p>						
42.	<p>Navigate to <a href="http://DC1.training.lab/Director">http://DC1.training.lab/Director</a></p>						
43.	 <p>Enter the following information:</p> <table border="1" data-bbox="284 982 857 1094"> <tr> <td>User name</td> <td>Administrator</td> </tr> <tr> <td>Password</td> <td>Citrix123</td> </tr> <tr> <td>Domain</td> <td>Training</td> </tr> </table> <p>Click <b>Log on</b>.</p>	User name	Administrator	Password	Citrix123	Domain	Training
User name	Administrator						
Password	Citrix123						
Domain	Training						
44.	 <p>Notice that Director shows 0 Sessions Connected, despite User1's active instance of Microsoft Word. XenApp 6.5 sessions are not reflected here.</p>						

Step	Action
45.	 <p>Click <b>Search</b> at the top right.</p>
46.	 <p>Type <b>User1</b> and then click <b>User One (Training\User1)</b> when it appears.</p>
47.	 <p>The Activity Manager shows all running applications for User1. Click <b>Shadow</b> on the left.</p>
48.	 <p>Remote assistance will take a few seconds to initialize.</p>

Step	Action
49.	 <p>Click <b>OK</b> to open the Remote Assistance Invitation.</p>
50.	 <p>Click <b>Yes</b> to allow Remote Assistance to connect to the open Microsoft Word Session.</p>
51.	 <p>You have successfully shadowed User1's XenApp 6.5 session from Director.</p>
52.	Close all open windows.

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## Exercise Summary

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In this exercise, you reviewed the hosted application usage report, and exported a PDF copy for distribution.