



# Xcalibur Global - VDI Broker

## User Manual

Document Version 1.0

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# Table of Contents

<b>CHAPTER 1 INTRODUCTION .....</b>	<b>5</b>
<b>HOW TO USE THIS DOCUMENT .....</b>	<b>5</b>
1 Step 1 - Understanding .....	5
2 Step 2 - Planning .....	5
3 Step 3 - Implementing.....	5
4 Step 4 – Monitoring.....	5
<b>CHAPTER 2 CONCEPTS.....</b>	<b>6</b>
<b>OVERVIEW.....</b>	<b>6</b>
<b>DEFINITIONS .....</b>	<b>7</b>
1 Virtual Desktop.....	7
2 VD Assignment .....	7
3 VDI Broker Plug-in .....	7
4 Lease .....	7
<b>ASSIGNMENT LEVELS.....</b>	<b>8</b>
<b>ASSIGNMENT METHODS .....</b>	<b>8</b>
<b>VD SOURCE .....</b>	<b>8</b>
<b>LEASE TYPE .....</b>	<b>9</b>
<b>EXPIRED LEASE .....</b>	<b>9</b>
<b>PROCESS OUTLINE .....</b>	<b>9</b>
5 Client Side Process Outline .....	9
6 Server Side Process Outline.....	10
6.1 Step 1: Determine the Assignment Level (User/Device) .....	10
6.2 Step 2: Examine the Assignment Method and Lease Status.....	11
<b>CHAPTER 3 PLANNING &amp; IMPLEMENTING VD ASSIGNMENT .....</b>	<b>12</b>
<b>PLANNING .....</b>	<b>12</b>
1 Assignment Method .....	12
2 Assignment Level .....	12
3 VD Source.....	12
4 Lease Type .....	12
<b>IMPLEMENTING.....</b>	<b>13</b>
1 Step 1: Install the VDI Broker Plug-in onto the Thin Clients.....	13
2 Step 2: Configure The VDI Broker settings in Xcalibur Global .....	13
3 Step 3: Launch a Virtual Desktop Session from the Thin Client.....	13
<b>CONFIGURING THE VDI BROKER SETTINGS IN XCALIBUR GLOBAL .....</b>	<b>14</b>
1 Manually Assigning a VD from a VMware Virtual Center to a Device .....	14
1.1 Active Directory Permissions.....	14
1.2 Xcalibur Farm Manager Permissions .....	14
1.3 VMware Virtual Center Permissions.....	14
1.4 Xcalibur Global Virtual Center Settings .....	15
1.5 Xcalibur Global Device Settings.....	18
2 Manually Assigning a VD from a VMware Virtual Center to a User .....	24
2.1 Active Directory Permissions.....	24
2.2 Xcalibur Farm Manager Permissions .....	24
2.3 VMware Virtual Center Permissions.....	24
2.4 Xcalibur Global Virtual Center Settings .....	25
2.5 Xcalibur Global User Settings .....	28
3 Manually Assigning a VD from the Active Directory to a Device .....	35
3.1 Active Directory Permissions.....	35
3.2 Xcalibur Global Device Settings.....	36
4 Manually Assigning a VD from the Active Directory to a User .....	42
4.1 Active Directory Permissions.....	42
4.2 Xcalibur Global User Settings .....	43

5	Automatically Assigning a VD from a VMware Virtual Center to a Device .....	49
5.1	Xcalibur Farm Manager Permissions .....	49
5.2	VMware Virtual Center Permissions.....	49
5.3	Xcalibur Global Virtual Center Settings .....	50
5.4	Xcalibur Global Device Settings .....	53
6	Automatically Assigning a VD from a VMware Virtual Center to a User .....	63
6.1	Xcalibur Farm Manager Permissions .....	63
6.2	VMware Virtual Center Permissions.....	63
6.3	Xcalibur Global Virtual Center Settings .....	64
6.4	Xcalibur Global User Settings .....	67
7	Automatically Assigning a VD from the Active Directory to a Device .....	77
7.1	Active Directory Permissions.....	77
7.2	Xcalibur Farm Manager Permissions .....	77
7.3	Xcalibur Global Device Settings .....	78
8	Automatically Assigning a VD from the Active Directory to a User .....	86
8.1	Active Directory Permissions.....	86
8.2	Xcalibur Farm Manager Permissions .....	86
8.3	Xcalibur Global User Settings .....	87
<b>CHAPTER 4 MONITORING.....</b>		<b>95</b>
<b>USING DESKTOPS TO MONITOR VD ASSIGNMENTS.....</b>		<b>95</b>
1	Accessing the Desktops Section .....	95
2	Monitoring Listed VD Assignments.....	96
2.1	VD Assignment Icons .....	96
2.2	VDI Usage Properties.....	98
3	Desktops Management Options .....	100
3.1	Remote Control .....	100
3.2	General Tasks.....	101
<b>USING FIND TO MONITOR VD ASSIGNMENTS .....</b>		<b>102</b>
1	Using Find to Search for VD Assignments .....	102
2	Monitoring Listed VD Assignments.....	107
3	Desktops Management Options .....	107
<b>CHAPTER 5 ADVANCED VD ASSIGNMENT .....</b>		<b>108</b>
<b>FILTERING .....</b>		<b>108</b>
<b>APPENDIX A PROHIBITED VD ASSIGNMENT .....</b>		<b>109</b>
1	Introduction .....	109
2	Prohibiting VD Assignment to a Device.....	109
3	Prohibiting VD Assignment to a User .....	112
<b>APPENDIX B HOW TO INSTALL THE VDI BROKER PLUG-IN ONTO TCS.....</b>		<b>115</b>
1	Objectives .....	115
2	Procedure .....	115
2.1	Select the OU Containing the Target TCs .....	115
2.2	Create an Xcalibur Policy that is Linked to the Target OU .....	116
2.3	Configure the Xcalibur Policy to install the VDI Broker Plug-in.....	119
3	Process Outcome: .....	121
<b>APPENDIX C HOW TO LAUNCH A VIRTUAL DESKTOP SESSION .....</b>		<b>122</b>
<b>APPENDIX D CREATING VDI BROKER COMPATIBLE ACCOUNTS VIA SCRIPT .....</b>		<b>125</b>

# Chapter 1 Introduction

## How to use this document

### 1 Step 1 - Understanding

Carefully read Chapter 2 (Concepts) to understand how the Xcalibur VDI Broker operates.

### 2 Step 2 - Planning

Review the “Planning” section in Chapter 3 in order to decide on the appropriate implementation scenario.

### 3 Step 3 - Implementing

Perform the 3 steps in the “Implementing” section of Chapter 3, select the appropriate implementation scenario and follow the procedures described to configure the Xcalibur VDI Broker.

### 4 Step 4 – Monitoring

Follow the procedures described in Chapter 4 (Monitoring ) to monitor the VD assignments in Xcalibur Global.

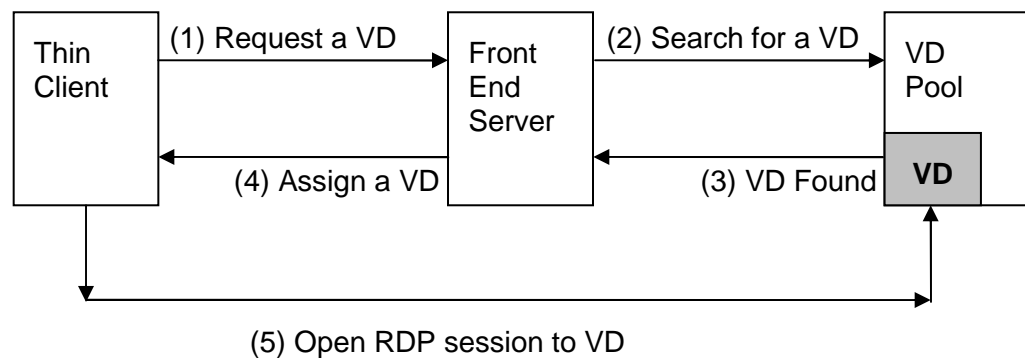
## Chapter 2 Concepts

### Overview

Xcalibur Global enables Administrators to manage the assignment of Virtual Desktops to thin clients using Xcalibur VDI Broker functionality.

Xcalibur VDI Broker is a client-server system responsible for assigning Virtual Desktops to thin clients. The server side is embedded in Xcalibur Global Front End Server and the client side is installed on the thin client as a software add-on (named: VDI Broker Plug-in).

The following flowchart offers a general illustration of the Xcalibur VDI Broker functionality:



**Figure 2-1: Xcalibur VDI Broker Functionality Flowchart**

## Definitions

This section introduces terms and definitions used throughout this document.

### 1 Virtual Desktop

A Virtual Desktop (VD) refers to a computer OS (Operating System, i.e. Windows XP) running on hardware virtualization software such as VMware™ Virtual Infrastructure or Microsoft™ Virtual Server.

### 2 VD Assignment

A VD Assignment refers to the assignment of a Virtual Desktop to a user or a thin client device.

### 3 VDI Broker Plug-in

The VDI Broker Plug-in is a software add-on that enables a Chip PC thin client to receive a VD assignment from the Xcalibur VDI Broker and to open a remote desktop session to the assigned VD.

### 4 Lease

A Lease is issued by the Xcalibur VDI Broker whenever a VD is assigned to a user/device. The lease includes the details of the VD and the details of the user/device to which the VD is assigned. A lease may remain valid indefinitely, may expire after a predefined time period, or may expire following a predefined event such as a device reboot.

## Assignment Levels

Assignment level represents the object-type to which a VD can be assigned to. The assignment of a VD to a thin client is possible on two assignment levels:

- User level – A VD is assigned to a user.
- Device level – A VD is assigned to a device.

Both assignment levels are examined when determining which VD will be assigned to a thin client. User level VD assignment takes priority over Device level VD assignment. If a VD assignment exists for the user that is currently logged-on to the thin client, then this will be the effective VD assignment for the thin client. The device level VD assignment will apply to the thin client only if the currently logged-on user does not have a VD assignment.

## Assignment Methods

An assignment method represents the way a VD is assigned to a user/device. The assignment of a VD is performed using one of the following methods:

- Manual – An administrator manually assigns a specific VD to a specific user/device. In practice this is configured through the Directory Manager snap-in, on the specific user/device's properties.
  - Prohibited – A user/device is explicitly prohibited from obtaining a VD. This is a special instance of the manual assignment method.
- Automatic – Xcalibur VDI Broker mechanism dynamically assigns VDs to devices/users. In practice this is configured through the Farm Manager snap-in, on the Farm, Site and Scope levels. Higher level settings are inherited by the lower levels unless this option is disabled.

## VD Source

The VD Source is the repository from which VDs are taken when they need to be assigned to a device/user.

The assignment of a VD is performed using one of the following VD sources:

- Virtual Center – The assigned VD is selected from a VMware™ VirtualCenter.
- Active Directory – The assigned VD is selected from the Active Directory.
  - Mixed – The assigned VD is selected from the Active Directory and its existence is verified by a VMware™ VirtualCenter. This is a special instance of the Active Directory source.



## Lease Type

A Lease determines how long a VD Assignment will be valid. The assignment of a VD is performed using one of the following lease types:

- Time Expiration – The lease will expire after a designated period.
- Static – The lease has an unlimited duration and it will never expire (it can only be deleted manually).
- Log Off / Reboot – The lease will expire when the user logs off or when the device is rebooted. This lease type is only available when a VD is assigned to a user.

## Expired Lease

Whenever a thin client uses the VDI Broker plug-in to request a VD assignment, Xcalibur Global will search for an existing lease associated with the user that is currently logged-on to the thin client or with the thin client device. If a lease already exists, its status is examined to determine whether it is still valid.

- Valid Lease - If the lease is valid, Xcalibur VDI Broker assigns the VD.
- Expired Lease - If the lease expired, the outcome will depend on the assignment method (manual/automatic) by which the lease was created:
  - Automatic Assignment - Xcalibur VDI Broker will issue a new lease if an available VD exists.
  - Manual Assignment - Xcalibur VDI Broker will not issue a new lease, therefore a VD will not be assigned.

**IMPORTANT** *An RDP session that was launched when the VD lease was valid will remain active even after the VD lease has expired.*

## Process Outline

This section explains the VD assignment process as it is performed by the Xcalibur VDI Broker on the client side and on the server side.

### 5 Client Side Process Outline

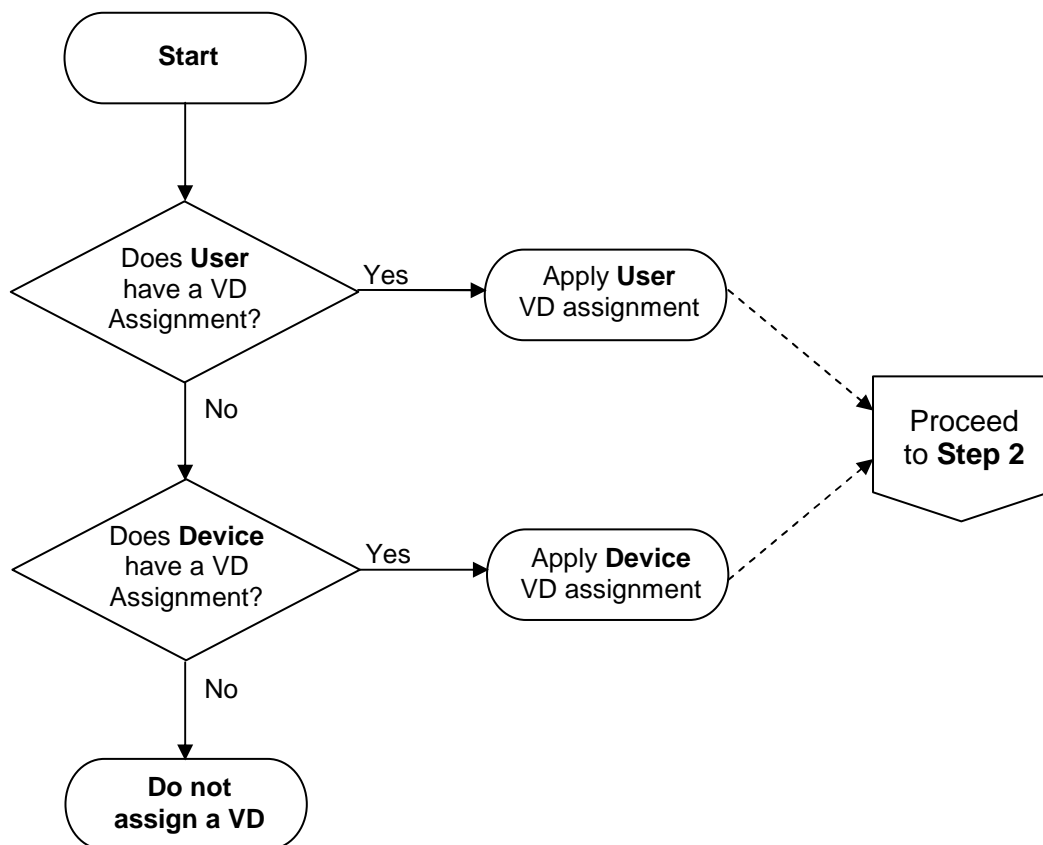
1. The user clicks on the VDI icon on the thin client's desktop
2. The VDI Broker Plug-in requests a VD assignment from the Xcalibur VDI Broker.
3. The Xcalibur VDI Broker assigns a VD to the thin client.
4. The VDI Broker Plug-in launches a remote desktop session to the assigned VD.

## 6 Server Side Process Outline

When receiving a VD assignment request from a thin client, the Xcalibur VDI Broker performs the following assignment process:

### 6.1 Step 1: Determine the Assignment Level (User/Device)

In this step, the Xcalibur VDI Broker determines the assignment level that applies to the thin client. The following flowchart illustrates the procedure:



**Figure 2-2: Xcalibur VDI Broker Assignment Process Flowchart – Step 1**

- User Level – If the currently logged-on user has a VD assignment, then this assignment is applied to the thin client.
- Device level – If the currently logged-on user does not have a VD assignment, and if the thin client's device has a VD assignment, then this assignment is applied to the thin client.

If a VD is assigned to either a user or a device, the assignment process continues to Step 2 (detailed in the next page).

If a VD is not assigned to a user or to a device, the assignment process ends and an indication message is displayed on the thin client's screen.

## 6.2 Step 2: Examine the Assignment Method and Lease Status

This step is identical for both types of assignment level (user/device). The Xcalibur VDI Broker first examines the assignment method and then the lease status (when relevant). The following flowchart illustrates the procedure:

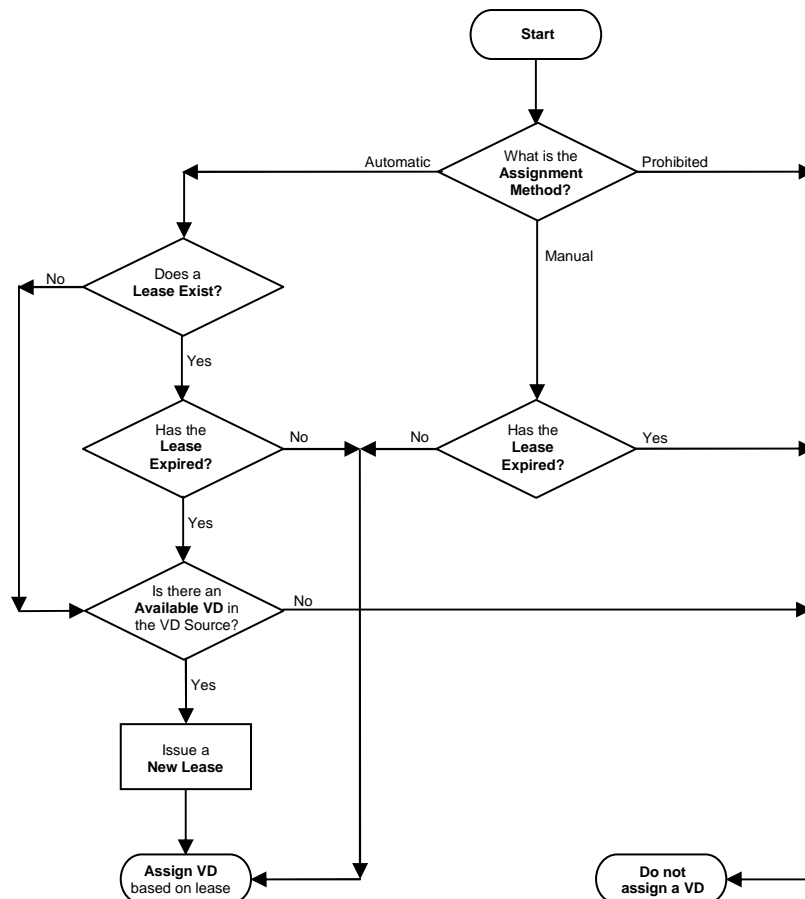


Figure 2-3: Xcalibur VDI Broker Assignment Process Flowchart – Step 2

- If the assignment method is Prohibited, a VD is not assigned.
- If the assignment method is Manual, the Xcalibur VDI Broker checks if the lease has expired.
  - If the lease has not expired, a VD is assigned based on the lease.
  - If the lease has expired, a VD is not assigned.
- If the assignment method is Automatic, Xcalibur VDI Broker checks if a lease exists.
  - If a lease exists and it has not expired, a VD is assigned based on the lease.
  - If a lease does not exist or if a lease exists but it has expired, Xcalibur VDI Broker checks if there is an available VD in the VD source.
    - If a VD is available, a new lease is issued and the VD is assigned.
    - If a VD is not available, a VD is not assigned.

The Xcalibur VDI Broker returns the result of this step to the thin client thus completing the assignment process.

## Chapter 3 Planning & Implementing VD Assignment

### Planning

Prior to configuring the VDI Broker's settings, a number of planning decisions are required:

#### 1 Assignment Method

What method is to be used?

- Manual
- Automatic

#### 2 Assignment Level

What object will the VD's be assigned to?

- User
- Device

#### 3 VD Source

What will be the source of the assigned VD's?

- VMware™ VirtualCenter
- Active Directory

#### 4 Lease Type

What type of leases should be issued?

- Time Limited
- Unlimited
- Expire on log-off/reboot

## Implementing

### 1 Step 1: Install the VDI Broker Plug-in onto the Thin Clients

Refer to the appendix titled “How to Install the VDI Broker Plug-in onto TCs”.

### 2 Step 2: Configure The VDI Broker settings in Xcalibur Global

Based on the decisions made in the **Planning** section, select one of the following scenarios and refer to the specified page for implementation instructions.

- To **Manually** assign a VD from a **VMware Virtual Center** to a **Device**, page 14.
- To **Manually** assign a VD from a **VMware Virtual Center** to a **User**, page 24.
  
- To **Manually** assign a VD from the **Active Directory** to a **Device**, page 35.
- To **Manually** assign a VD from the **Active Directory** to a **User**, page 42.
  
- To **Automatically** assign a VD from a **VMware Virtual Center** to a **Device**, page 49
- To **Automatically** assign a VD from a **VMware Virtual Center** to a **User**, page 63
  
- To **Automatically** assign a VD from the **Active Directory** to a **Device**, page 77
- To **Automatically** assign a VD from the **Active Directory** to a **User**, page 86

### 3 Step 3: Launch a Virtual Desktop Session from the Thin Client

Refer to the Appendix titled “How to Launch a Virtual Desktop Session from the Thin Client”.

## Configuring the VDI Broker Settings in Xcalibur Global

### 1 Manually Assigning a VD from a VMware Virtual Center to a Device

#### 1.1 Active Directory Permissions

In order to perform VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Active Directory:

- The Read, Read gPLink, Write gPLink, Read gPOptions and Write gPOptions permissions are required on the parent OU containing the device to which the VD will be assigned.
- The user must be a member of the group "Group Policy Creator Owners".

**NOTE** *The above permissions are in addition to any other permissions required for Xcalibur Global Management.*

#### 1.2 Xcalibur Farm Manager Permissions

In order to configure VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Xcalibur Farm Manager:

- The Read Site Data and the Write Site Data permissions are required on the Administrative Suite.

#### 1.3 VMware Virtual Center Permissions

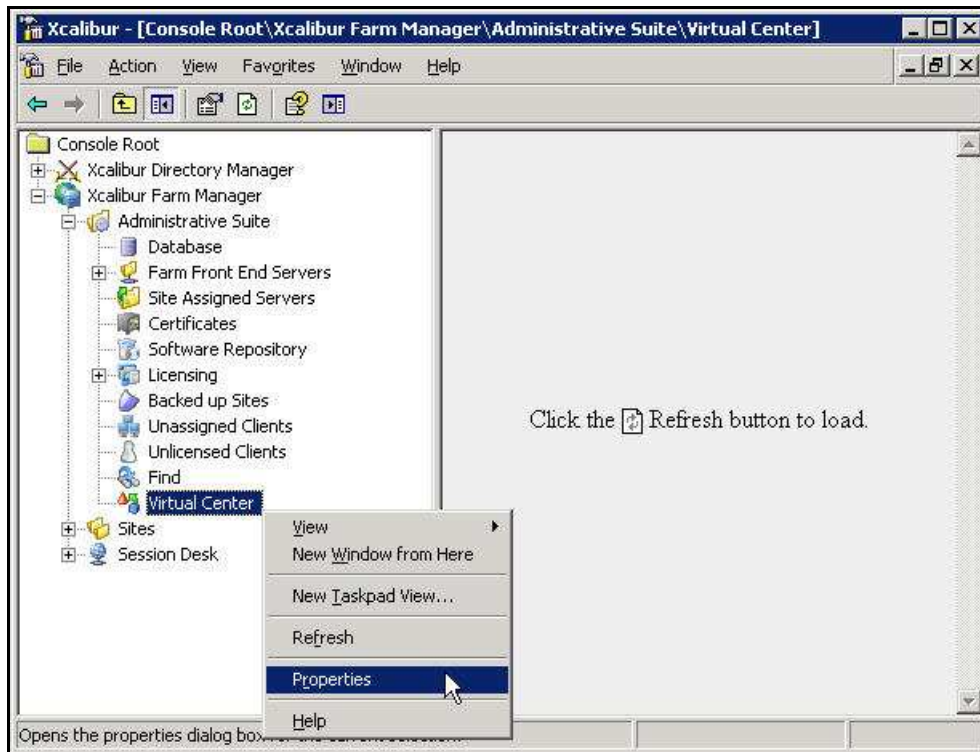
In order to perform VD assignments from the Virtual Center, a user must be created on the Virtual Center for the use of the Xcalibur VDI Broker. The user must be assigned the following permissions:

- Required - Read permission on the Virtual Center path to the VD.
- Optional - Additional permission to perform management tasks on the VD such as Shutdown, Restart Etc.

## 1.4 Xcalibur Global Virtual Center Settings

The Farm Manager Virtual Center Settings are configured using the following procedure:

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, open **Xcalibur Farm Manager / Administrative Suite** and select **Virtual Center**.

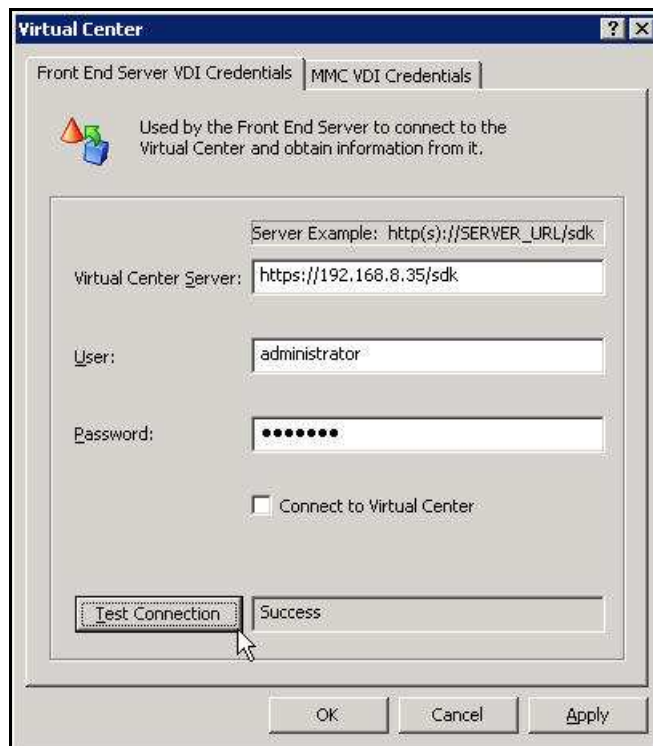


**Figure 3-1: Xcalibur Management Console - Select Virtual Center - Menu**

3. Right-click **Virtual Center**, on the menu click **Properties** to open the **Virtual Center** dialog box.

**NOTE** The *Virtual Center* dialog box is composed of two tabs each containing a separate set of parameters used to connect to the Virtual Center. This separation offers increased security by assigning different credentials to the different Xcalibur Global components.

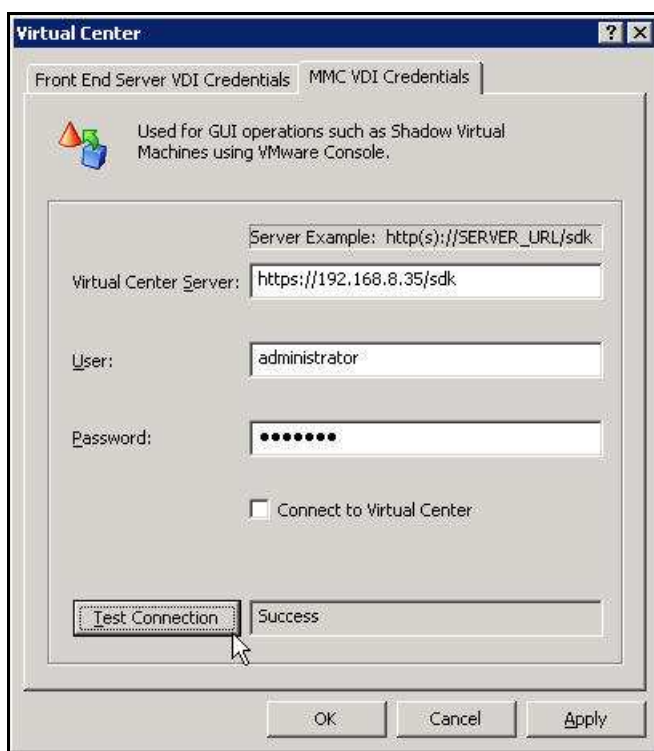
4. The **Front End Server VDI Credentials** tab contains the parameters used by the Xcalibur Global service to connect to the Virtual Center. The user selected will determine the permissions granted to the Xcalibur Global service when it interacts with the Virtual Center.
  - 4.1. In the **Virtual Center Server** text box, type the server’s URL.
  - 4.2. In the **User** text box, type the name of the Virtual Center user that was created in the previous section “VMware Virtual Center Permissions”.
  - 4.3. In the **Password** text box, type the user’s password.
  - 4.4. Uncheck the **Connect to Virtual Center** check box.
  - 4.5. Click **Test Connection** to verify that the parameters entered above are correct (if correct **Success** appears in box, if incorrect **Failure** appears in box).



**Figure 3-2: Virtual Center Dialog Box – Front End Server VDI Credentials Tab**



5. The **MMC VDI Credentials** tab contains the parameters used by the Xcalibur Global Management Console to connect to the Virtual Center. The user selected will determine the Xcalibur Global Management Console's permissions when it interacts with the Virtual Center. In addition to the permission to retrieve information about VDs, this could also include permissions to: Start, Shutdown, Reboot, and Suspend VDs.
  - 5.1. In the **Virtual Center Server** text box, type the server's URL.
  - 5.2. In the **User** text box, type the name of the Virtual Center user that was created in the previous section "VMware Virtual Center Permissions".
  - 5.3. In the **Password** text box, type the user's password.
  - 5.4. Uncheck the **Connect to Virtual Center** check box.
  - 5.5. Click **Test Connection** to verify that the parameters entered above are correct (if correct **Success** appears in box, if incorrect **Failure** appears in box).



**Figure 3-3: Virtual Center Dialog Box – MMC VDI Credentials Tab**

6. Click **OK** to finish this procedure and return to Xcalibur Global Management Console.

**IMPORTANT** *The Xcalibur Global Service must be restarted for the new Virtual Center settings to take effect.*

## 1.5 Xcalibur Global Device Settings

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, expand the tree under **Xcalibur Directory Manager** to reveal the OU that contains the target device. In this example expand: **net8.qa8 \ Chip PC \ Thin Clients \ Berlin**.

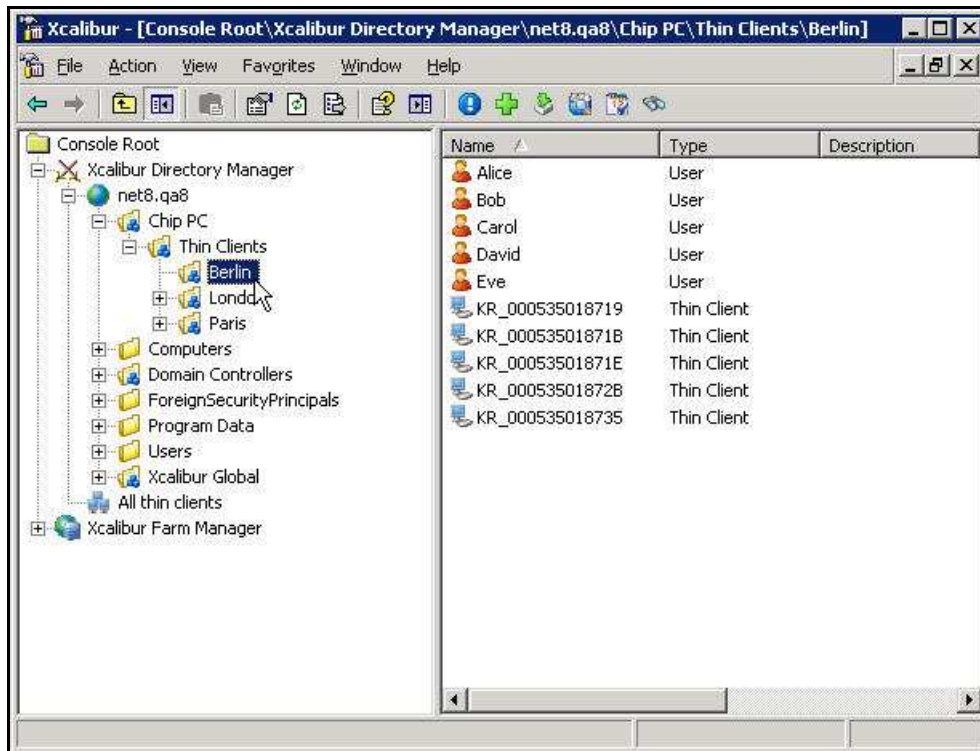
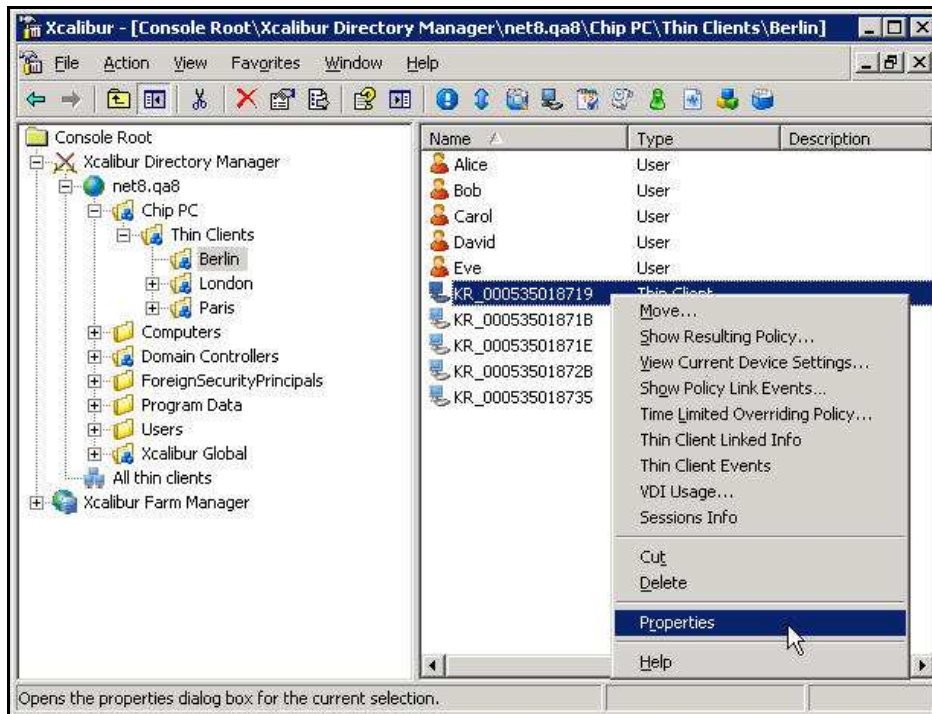


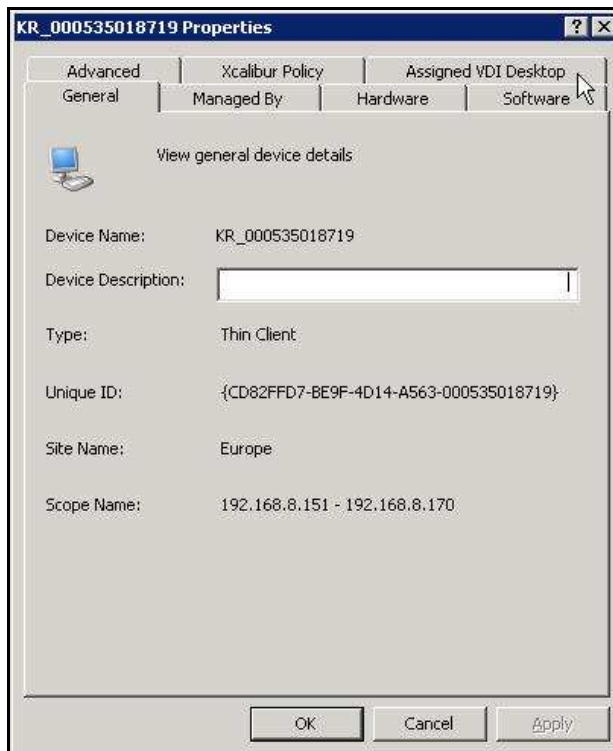
Figure 3-4: Xcalibur Management Console - Select Target OU

3. Right-click on the target device (**KR\_000535018719** in this example) to display a menu.
4. On the menu, click **Properties** to display the **<Device> Properties** dialog box.



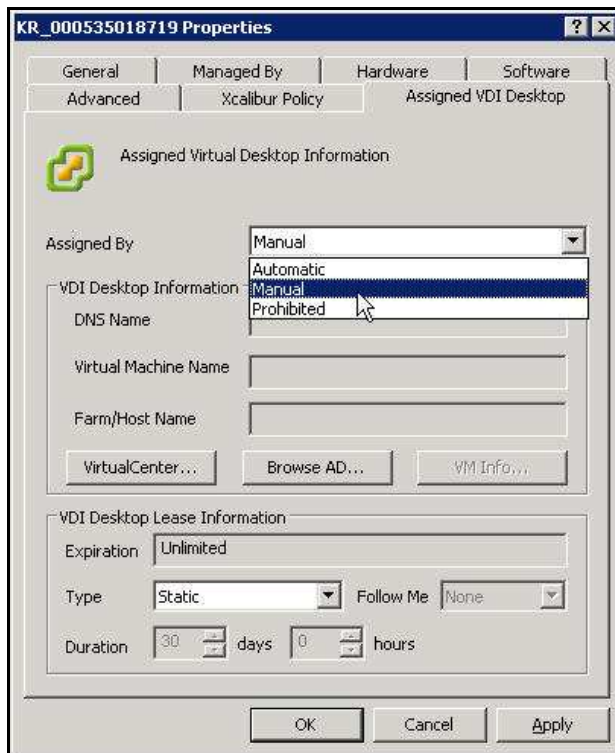
**Figure 3-5: Xcalibur Management Console – Device - Menu**

5. In the **<Device> Properties** dialog box, select the **Assigned VDI Desktop** tab.



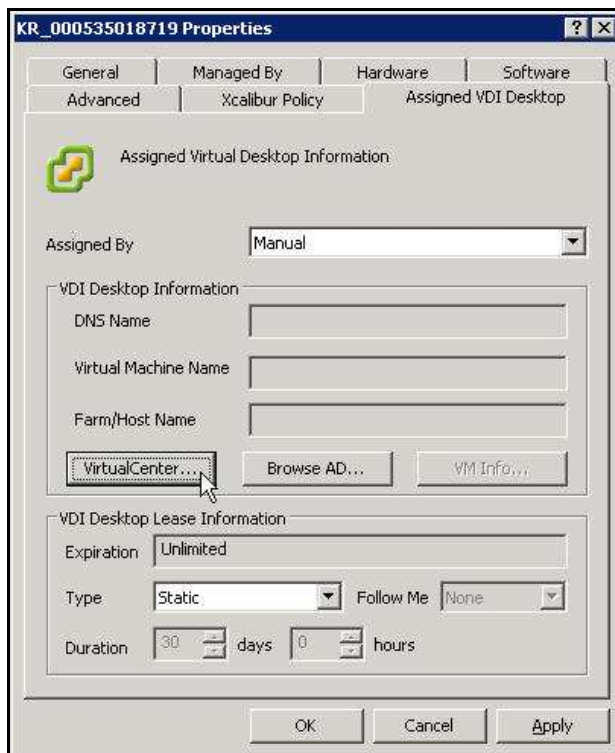
**Figure 3-6: <Device> Properties Dialog Box – Assigned VDI Desktop Tab**

- In the **Assigned By** drop down list box select **Manual**.



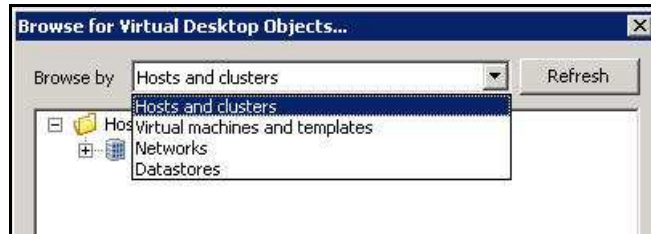
**Figure 3-7: <Device> Properties Dialog Box – Assigned VDI Desktop Tab – Manual**

- Click **VirtualCenter...** to open the **Browse for Virtual Desktop Objects...** dialog box.



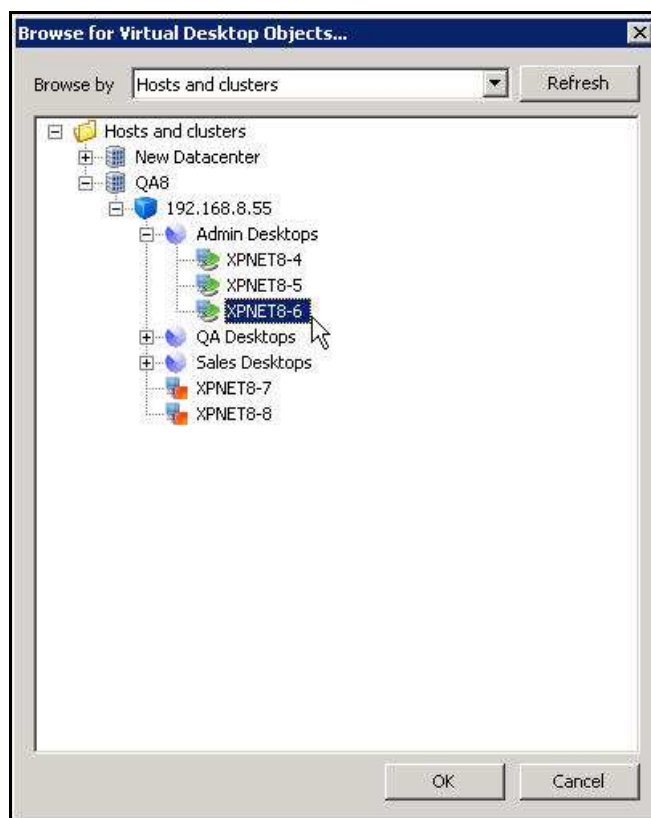
**Figure 3-8: Assigned VDI Desktop Tab – Manual – Virtual Center**

8. In the **Browse for Virtual Desktop Objects...** dialog box, perform the following:
  - 8.1. In the **Browse by** drop down list box, select a display format for the Virtual Center.



**Figure 3-9: Browse for Virtual Desktop Objects... Dialog Box**

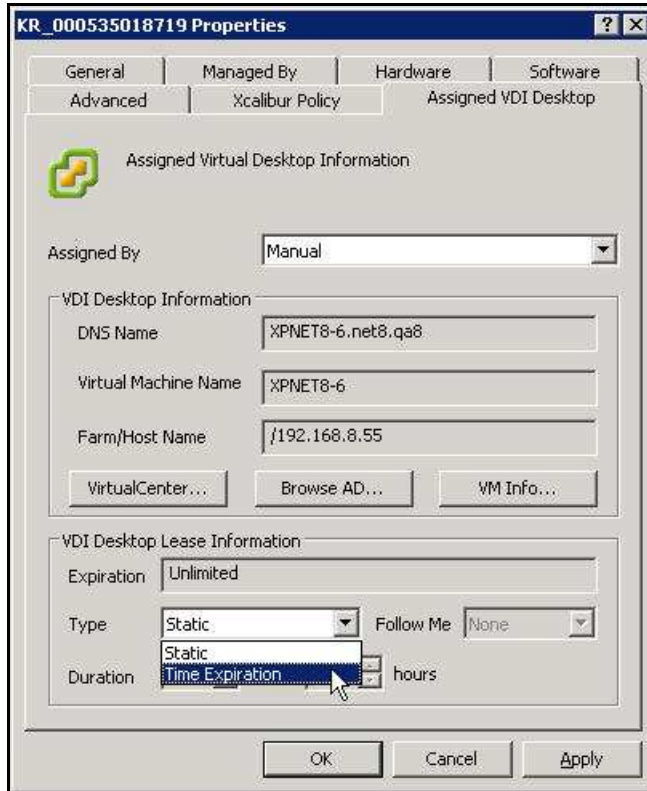
- 8.2. Browse and select the desired VD (**XPNET8-6** in this example).



**Figure 3-10: Browse for Virtual Desktop Objects... Dialog Box**

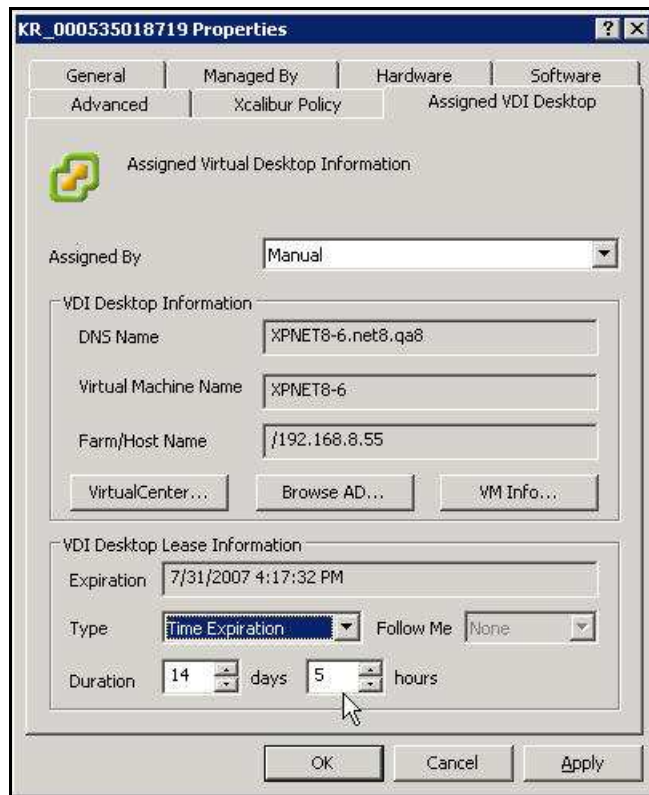
- 8.3. Click **OK** to complete the VD selection and to return to the **<device> Properties** dialog box.

9. In the **VDI Desktop Lease Information** section, perform the following:
  - 9.1. From the **Type** drop down list box, select one of the following lease types:
    - **Static** – for an unlimited lease duration (never expires).
    - **Time Expiration** – for a time limited lease that will expire after a preset duration.



**Figure 3-11: Assigned VDI Desktop Tab – Manual – Virtual Center – Lease Type**

- 9.2. If a **Time Expiration** lease type is selected, enter the lease **Duration**. The lease expiration date and time appears in the **Expiration** field.



**Figure 3-12: Assigned VDI Desktop Tab – Manual – Virtual Center – Lease Duration**

10. Click **OK** to complete the VD assignment procedure and to return to the Xcalibur Global Management Console.



## 2 Manually Assigning a VD from a VMware Virtual Center to a User

**IMPORTANT** *Domain User Authentication must be activated on the scope containing the device receiving a VD assignment.*

*In Scope Properties \ Authentication Properties tab \ User Authentication Provider, verify that the Active provider is "Domain User Authentication Provider".*

### 2.1 Active Directory Permissions

In order to perform VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Active Directory:

- The Read, Read gPLink, Write gPLink, Read gPOtions and Write gPOtions permissions are required on the parent OU containing the user to which the VD will be assigned.
- The user must be a member of the group "Group Policy Creator Owners".

**NOTE** *The above permissions are in addition to any other permissions required for Xcalibur Global Management.*

### 2.2 Xcalibur Farm Manager Permissions

In order to configure VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Xcalibur Farm Manager:

- The Read Site Data and the Write Site Data permissions are required on the Administrative Suite.

### 2.3 VMware Virtual Center Permissions

In order to perform VD assignments from the Virtual Center, a user must be created on the Virtual Center for the use of the Xcalibur VDI Broker. The user must be assigned the following permissions:

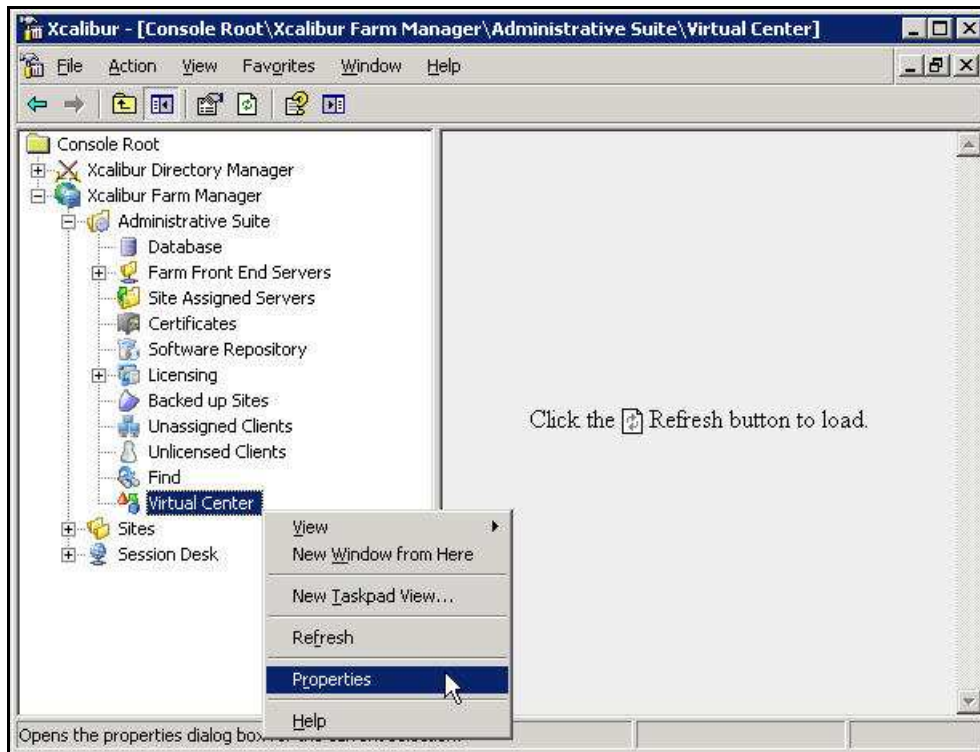
- Required - Read permission on the Virtual Center path to the VD.
- Optional - Additional permission to perform management tasks on the VD such as Shutdown, Restart, etc.



## 2.4 Xcalibur Global Virtual Center Settings

The Farm Manager Virtual Center Settings are configured using the following procedure:

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, open **Xcalibur Farm Manager / Administrative Suite** and select **Virtual Center**.

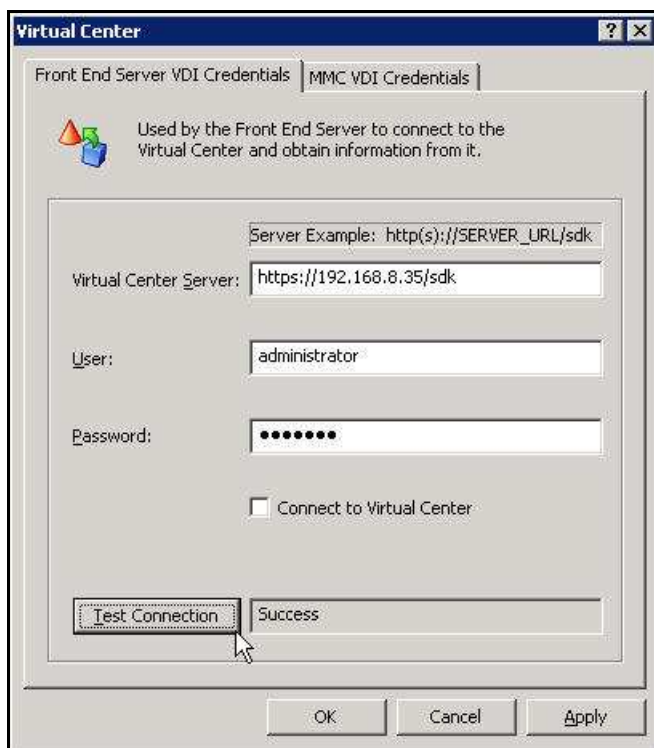


**Figure 3-13: Xcalibur Management Console - Select Virtual Center**

3. Right-click **Virtual Center**, on the menu click **Properties** to open the **Virtual Center** dialog box.

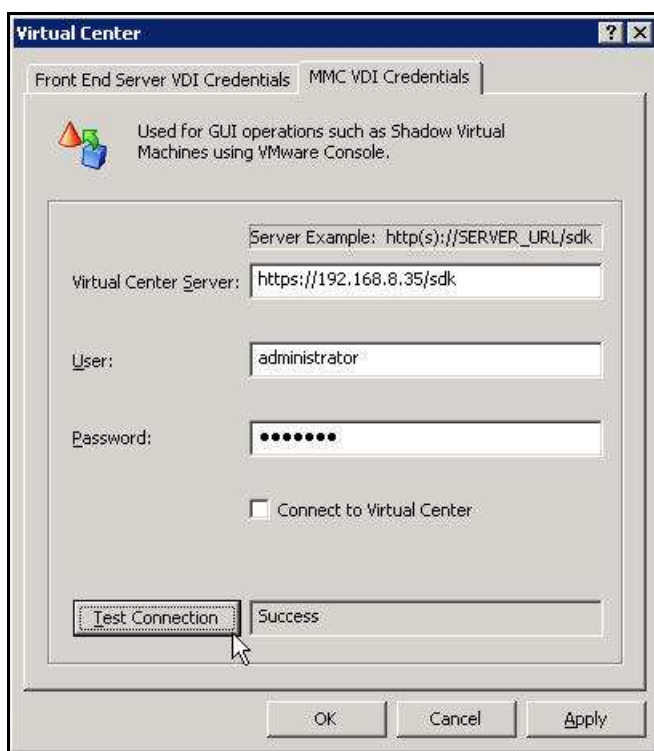
**NOTE** The Virtual Center dialog box is composed of two tabs each containing a separate set of parameters used to connect to the Virtual Center. This separation offers increased security by assigning different credentials to different Xcalibur Global components.

4. The **Front End Server VDI Credentials** tab contains the parameters used by the Xcalibur Global service to connect to the Virtual Center. The user selected will determine the permissions granted to the Xcalibur Global service when it interacts with the Virtual Center.
  - 4.1. In the **Virtual Center Server** text box, type the server's URL.
  - 4.2. In the **User** text box, type the name of the Virtual Center user that was created in the previous section "VMware Virtual Center Permissions".
  - 4.3. In the **Password** text box, type the user's password.
  - 4.4. Uncheck the **Connect to Virtual Center** check box.
  - 4.5. Click **Test Connection** to verify that the parameters entered above are correct (if correct **Success** appears in box, if incorrect **Failure** appears in box).



**Figure 3-14: Virtual Center Dialog Box – Front End Server VDI Credentials Tab**

5. The **MMC VDI Credentials** tab contains the parameters used by the Xcalibur Global Management Console to connect to the Virtual Center. The user selected will determine the Xcalibur Global Management Console's permissions when it interacts with the Virtual Center. In addition to the permission to retrieve information about VDs, this could also include permissions to: Start, Shutdown, Reboot, and Suspend VDs.
  - 5.1. In the **Virtual Center Server** text box, type the server's URL.
  - 5.2. In the **User** text box, type the name of the Virtual Center user that was created in the previous section "VMware Virtual Center Permissions".
  - 5.3. In the **Password** text box, type the user's password.
  - 5.4. Uncheck the **Connect to Virtual Center** check box.
  - 5.5. Click **Test Connection** to verify that the parameters entered above are correct (if correct **Success** appears in box, if incorrect **Failure** appears in box).



**Figure 3-15: Virtual Center Dialog Box – MMC VDI Credentials Tab**

6. Click **OK** to finish this procedure and return to Xcalibur Global Management Console.

**IMPORTANT** *The Xcalibur Global Service must be restarted for the new Virtual Center settings to take effect.*

## 2.5 Xcalibur Global User Settings

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, expand the tree under **Xcalibur Directory Manager** to reveal the OU that contains the target user. In this example expand: **net8.qa8 \ Chip PC \ Thin Clients \ Berlin**.

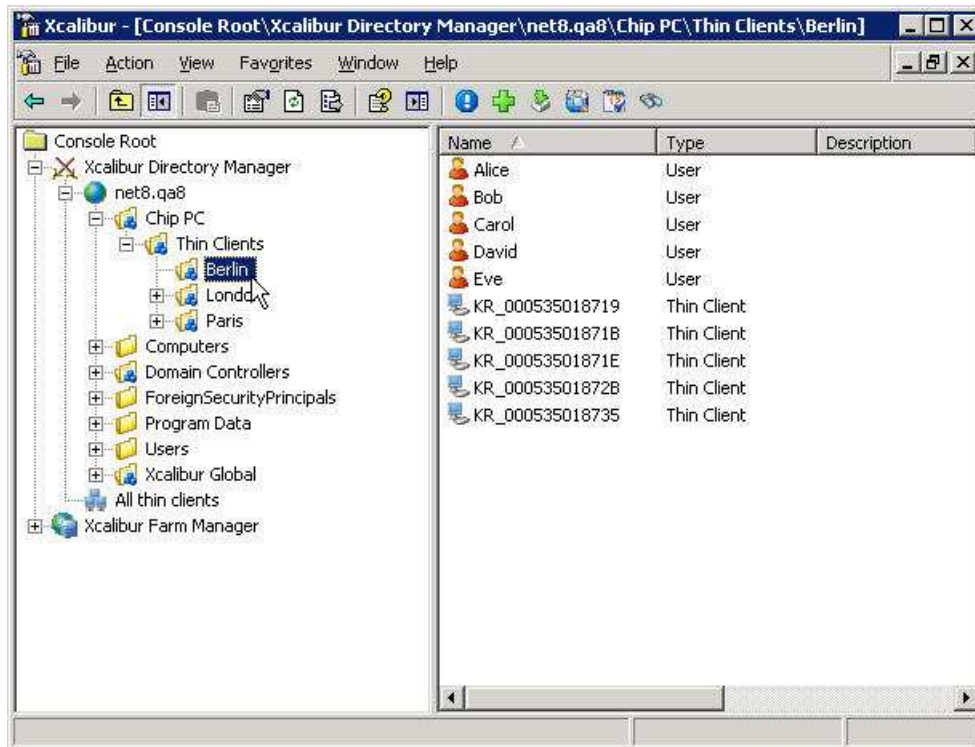


Figure 3-16: Xcalibur Management Console - Select Target OU

3. Right-click on the target user (**Alice** in this example) to display a menu.
4. On the menu, click **Properties** to display the **<User> Properties** dialog box.

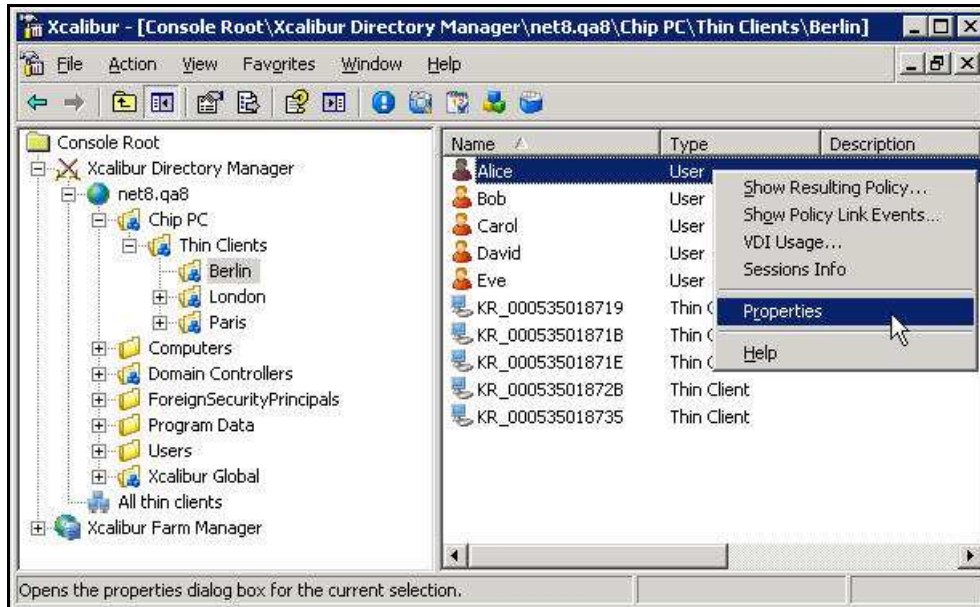


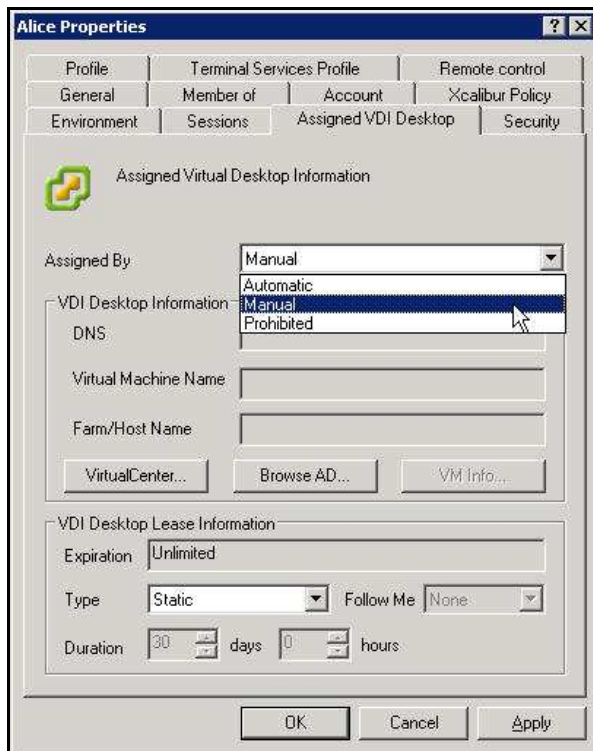
Figure 3-17: Xcalibur Management Console

5. In the **<User> Properties** dialog box, select the **Assigned VDI Desktop** tab.



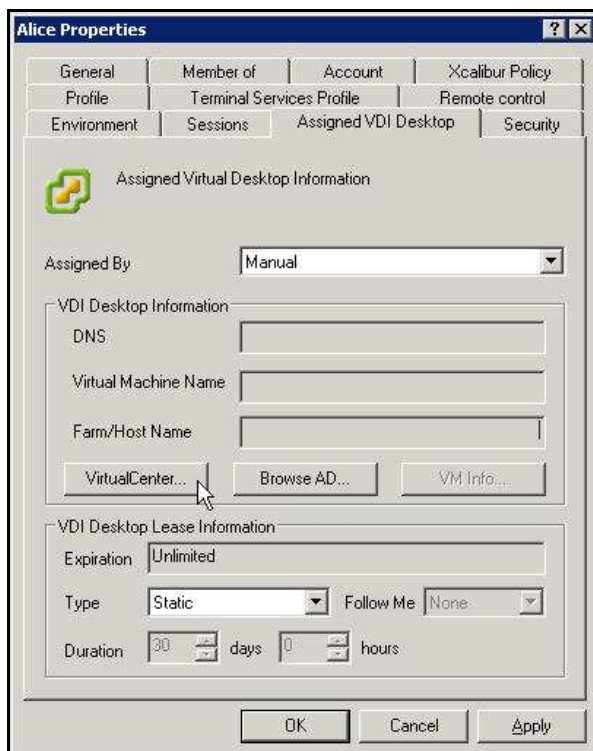
Figure 3-18: <User> Properties Dialog Box – Assigned VDI Desktop Tab

- In the **Assigned By** drop down list box select **Manual**.



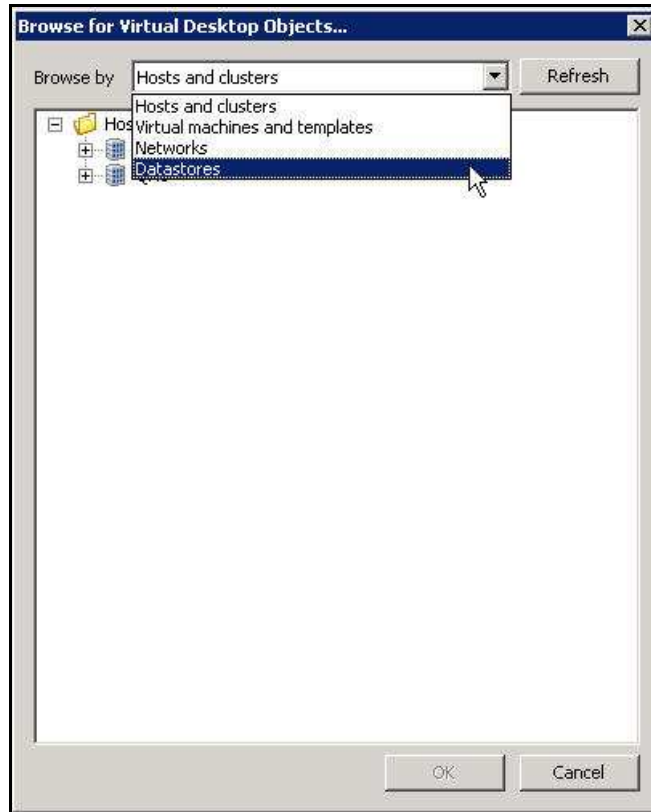
**Figure 3-19: <User> Properties Dialog Box – Assigned VDI Desktop Tab – Manual**

- Click **VirtualCenter...** to open the **Browse for Virtual Desktop Objects...** dialog box.



**Figure 3-20: Assigned VDI Desktop Tab – Manual – Virtual Center**

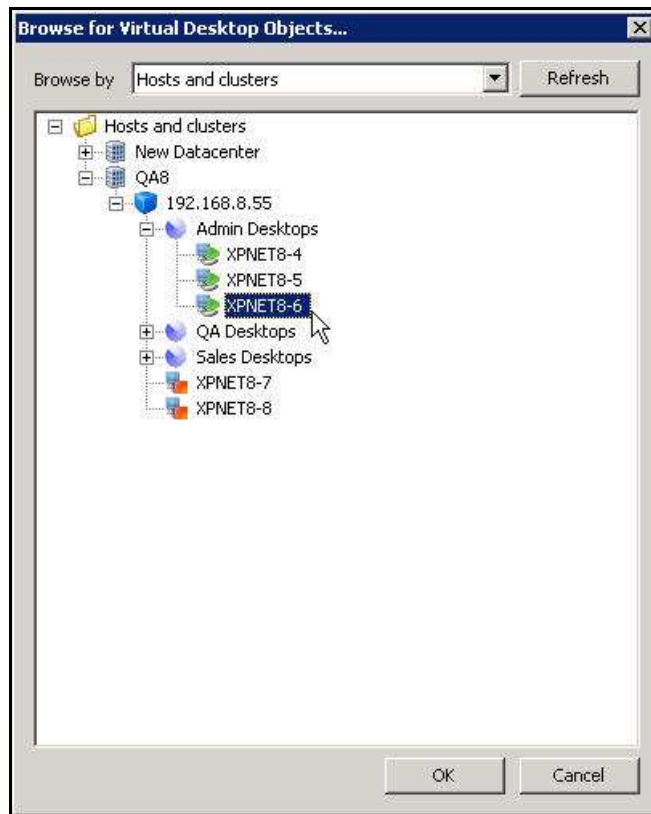
8. In the **Browse for Virtual Desktop Objects...** dialog box, perform the following:
  - 8.1. In the **Browse by** drop down list box, select a display format for the Virtual Center.



**Figure 3-21: Browse for Virtual Desktop Objects... Dialog Box – Browse by**



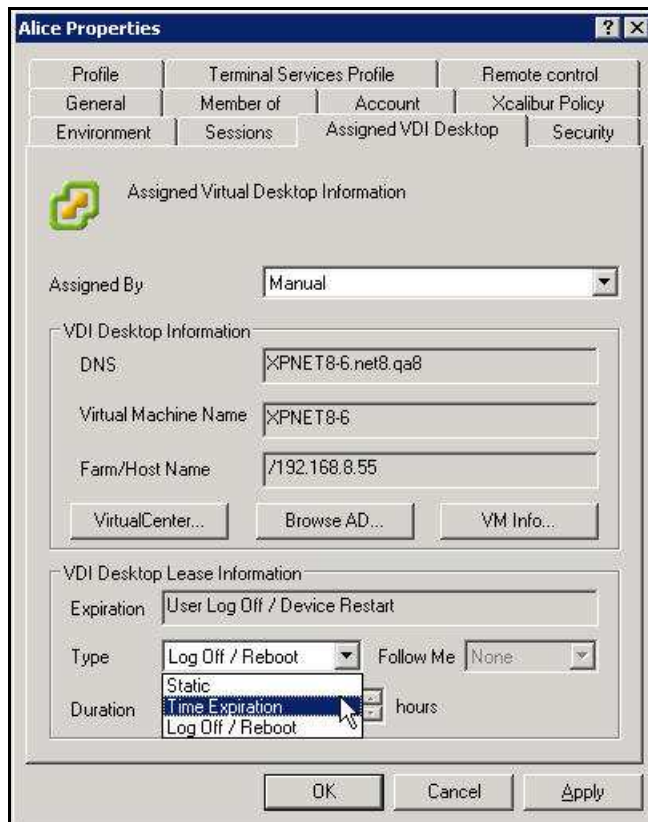
8.2. Browse and select the desired VD (**XPNET8-2** in this example).



**Figure 3-22: Browse for Virtual Desktop Objects... Dialog Box - Select VD**

8.3. Click **OK** to complete the VD selection and to return to the **<User> Properties** dialog box.

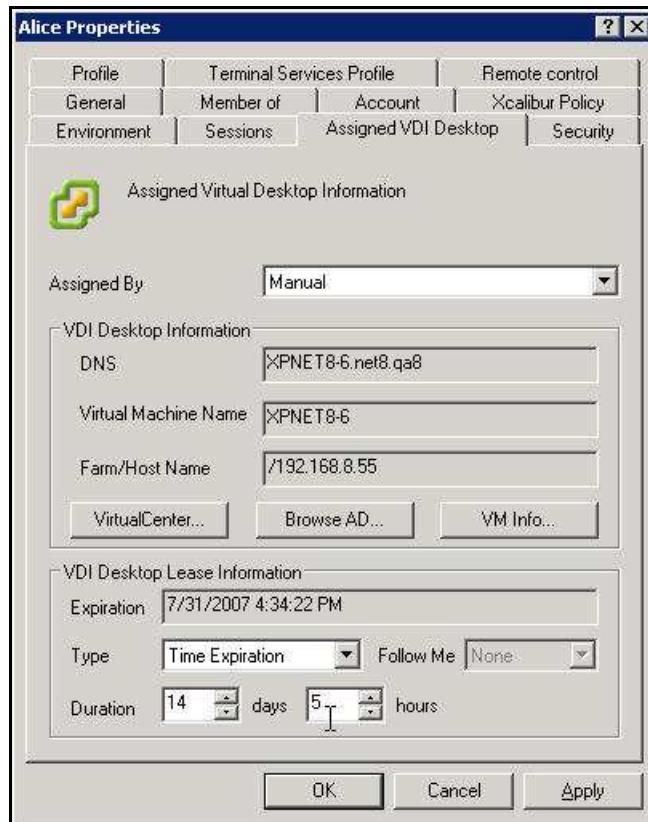




**Figure 3-23: Assigned VDI Desktop Tab – Manual – Virtual Center – Lease Type**

9. In the **VDI Desktop Lease Information** section, perform the following:
  - 9.1. From the **Type** drop down list box, select one of the following lease types:
    - **Static** – for an unlimited lease duration (never expires).
    - **Time Expiration** – for a time limited lease that will expire after a preset duration.
    - **Log Off / Reboot** – for temporary lease that will expire when the user logs off or when the device is rebooted.

- 9.2. If a **Time Expiration** lease type is selected, enter the lease **Duration**. The lease expiration date and time appears in the **Expiration** field.



**Figure 3-24: Assigned VDI Desktop Tab – Manual – Virtual Center – Lease Duration**

10. Click **OK** to complete the VD assignment procedure and to return to the Xcalibur Global Management Console.

## 3 Manually Assigning a VD from the Active Directory to a Device

### 3.1 Active Directory Permissions

In order to perform VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Active Directory:

- The Read permission is required on the Active Directory path (Domain\OU...) to the VD that will be assigned.
- The Read, Read gPLink, Write gPLink, Read gPOptions and Write gPOptions permissions are required on the parent OU containing the device to which the VD will be assigned.
- The user must be a member of the group “Group Policy Creator Owners”.

**NOTE** *The above permissions are in addition to any other permissions required for Xcalibur Global Management.*

### 3.2 Xcalibur Global Device Settings

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, expand the tree under **Xcalibur Directory Manager** to reveal the OU that contains the target device. In this example expand: **net8.qa8 \ Chip PC \ Thin Clients \ Berlin**.

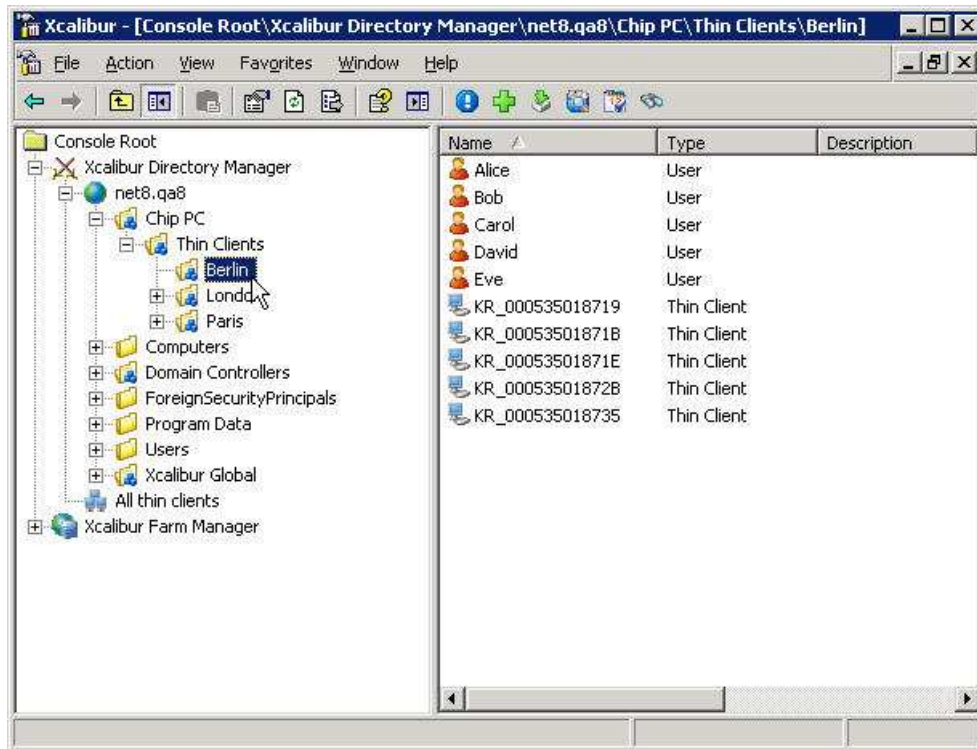
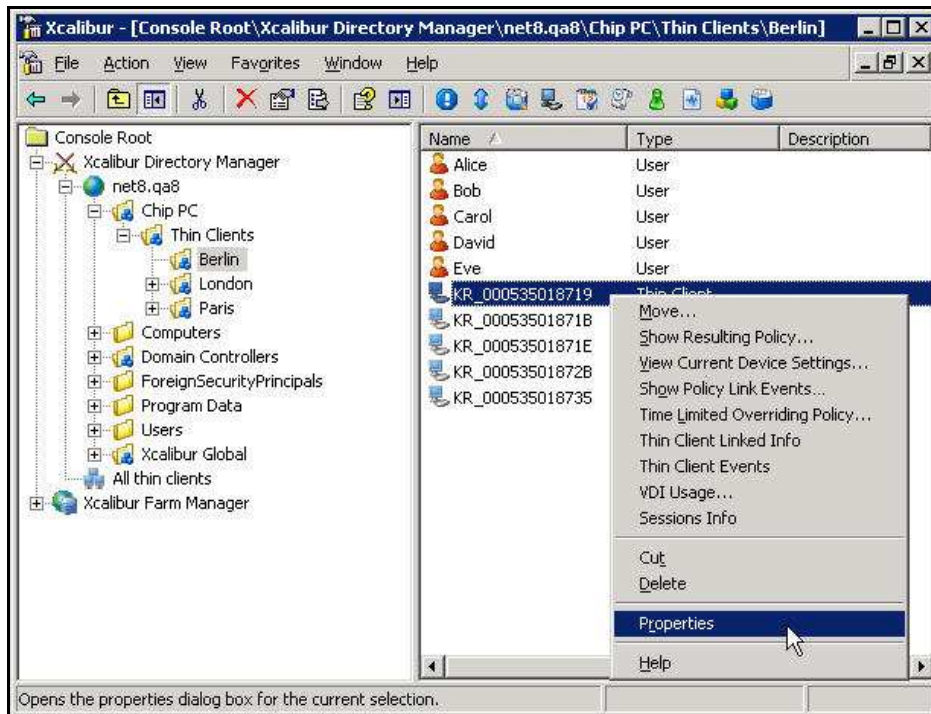


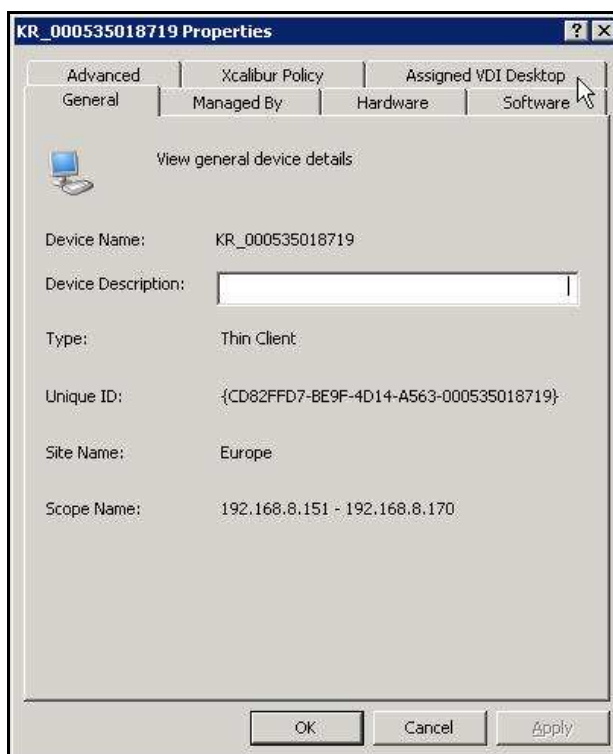
Figure 3-25: Xcalibur Management Console - Select Target OU

3. Right-click on the target device (**KR\_000535018719** in this example) to display a menu.
4. On the menu, click **Properties** to display the **<Device> Properties** dialog box.



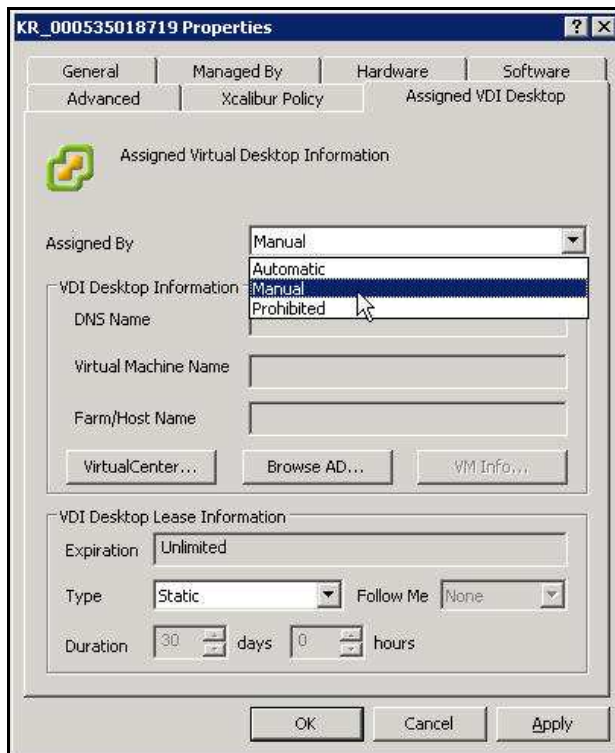
**Figure 3-26: Xcalibur Management Console – Device – Menu**

5. In the **<Device> Properties** dialog box, select the **Assigned VDI Desktop** tab.



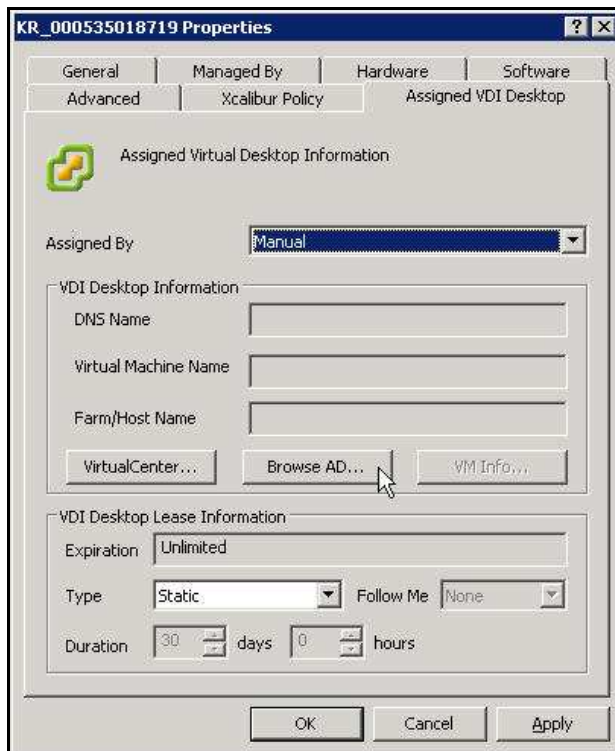
**Figure 3-27: <Device> Properties Dialog Box – Assigned VDI Desktop Tab**

- In the **Assigned By** drop down list box select **Manual**.



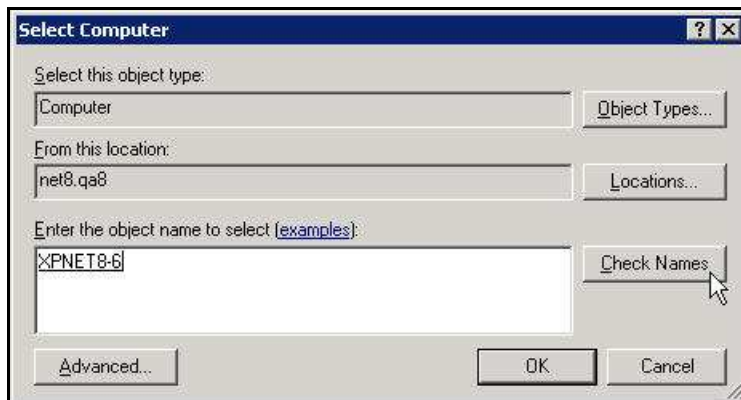
**Figure 3-28: <Device> Properties Dialog Box – Assigned VDI Desktop Tab – Manual**

- Click **Browse AD...** to open the **Select Computer** dialog box.



**Figure 3-29: Assigned VDI Desktop Tab – Manual – Active Directory**

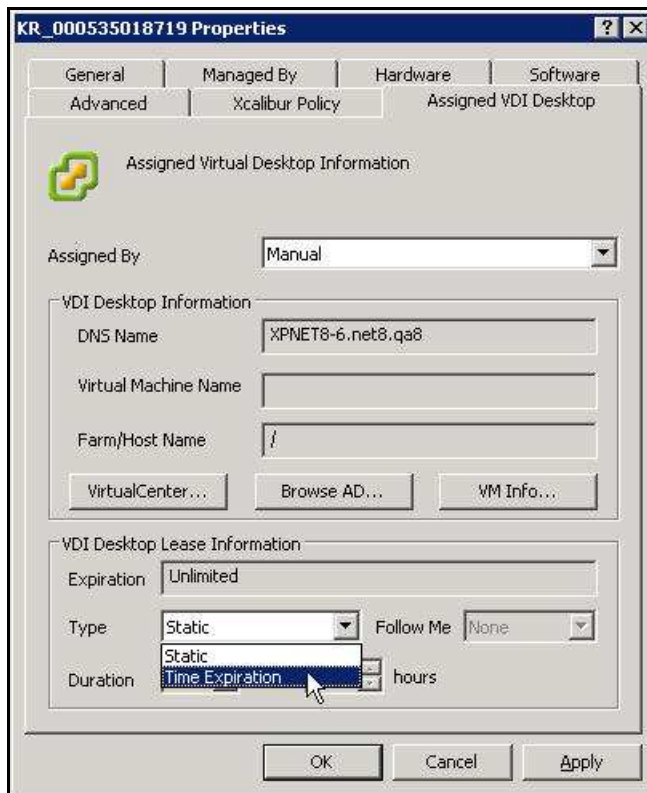
- In the **Select Computer** dialog box, enter the name of the desired VD.



**Figure 3-30: Select Computer Dialog Box**

**NOTE** *The computer must have a valid “DNS Name” attribute. See the Appendix titled “Creating VDI Broker Compatible Accounts via Script”.*

- Click **Check Names** to verify that the VD name exists in the Active Directory.
- Click **OK** to complete the VD selection and to return to the **<Device> Properties** dialog box.

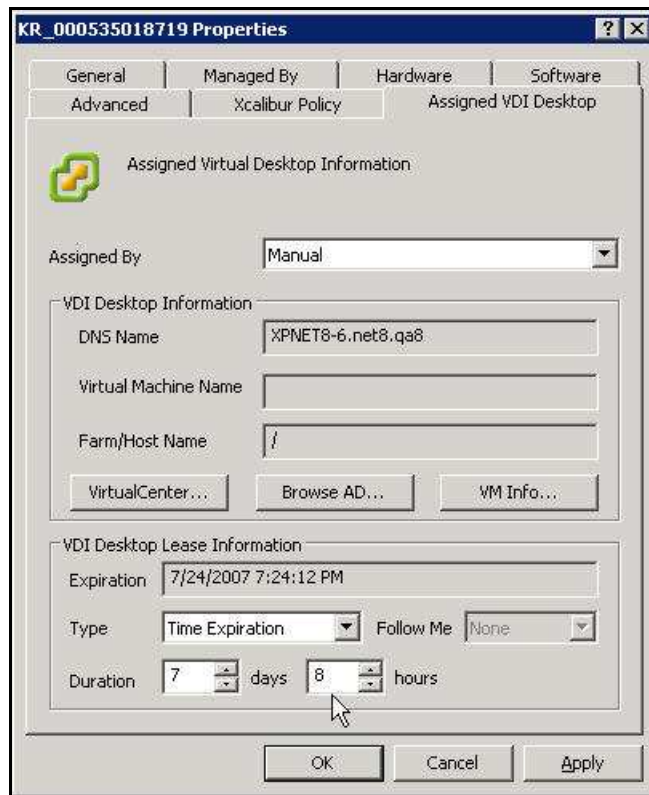


**Figure 3-31: Assigned VDI Desktop Tab – Manual – Active Directory – Lease Type**

11. In the **VDI Desktop Lease Information** section, perform the following:
  - 11.1. From the **Type** drop down list box, select one of the following lease types:
    - Static – for an unlimited lease duration (never expires).
    - Time Expiration – for a time limited lease that will expire after a preset duration.



- 11.2. If a **Time Expiration** lease type is selected, enter the lease **Duration**. The lease expiration date and time appears in the **Expiration** field.



**Figure 3-32: Assigned VDI Desktop Tab – Manual – Active Directory – Lease Duration**

12. Click **OK** to complete the VD assignment procedure and to return to the Xcalibur Global Management Console.

## 4 Manually Assigning a VD from the Active Directory to a User

**IMPORTANT** *Domain User Authentication must be activated on the scope containing the device receiving a VD assignment.*

*In Scope Properties \ Authentication Properties tab \ User Authentication Provider, verify that the Active provider is “Domain User Authentication Provider”.*

### 4.1 Active Directory Permissions

In order to perform VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Active Directory:

- The Read permission is required on the Active Directory path (Domain\OU...) to the VD that will be assigned.
- The Read, Read gPLink, Write gPLink, Read gPOtions and Write gPOtions permissions are required on the parent OU containing the user to which the VD will be assigned.
- The user must be a member of the group “Group Policy Creator Owners”.

**NOTE** *The above permissions are in addition to any other permissions required for Xcalibur Global Management.*

## 4.2 Xcalibur Global User Settings

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, expand the tree under **Xcalibur Directory Manager** to reveal the OU that contains the target user. In this example expand: **net8.qa8 \ Chip PC \ Thin Clients \ Berlin**.

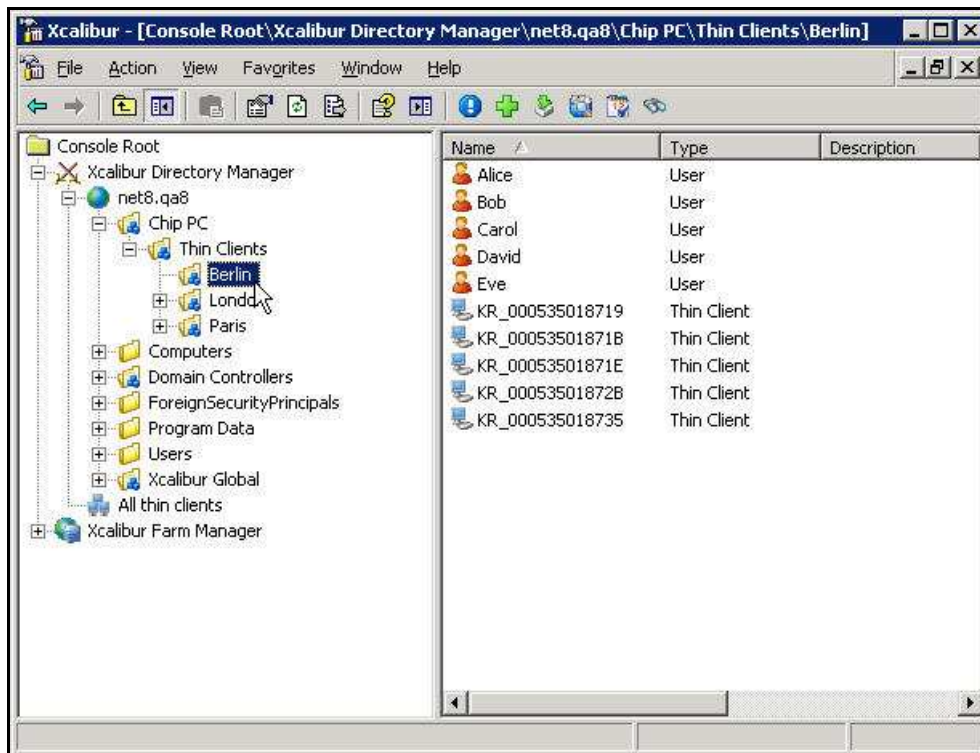
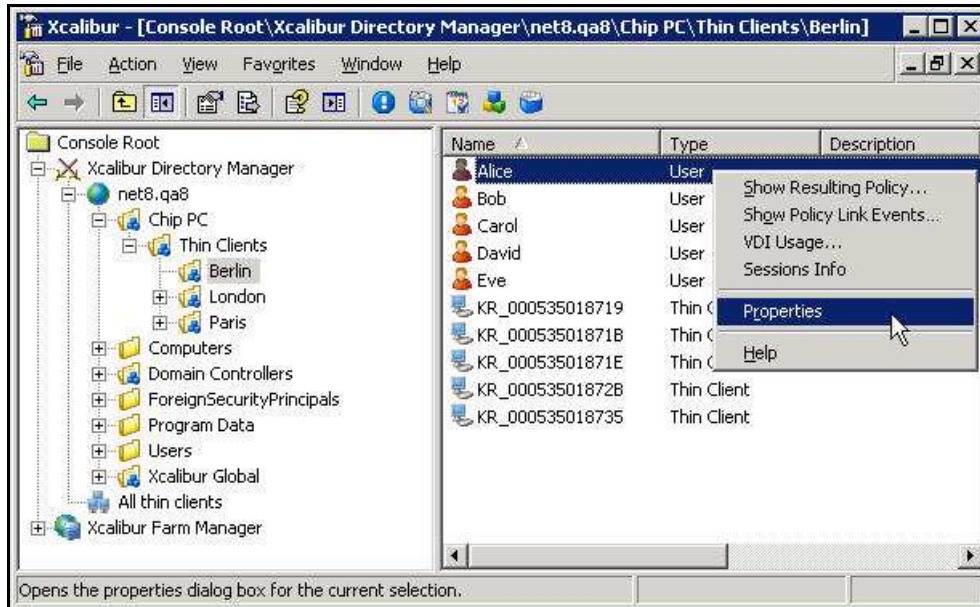


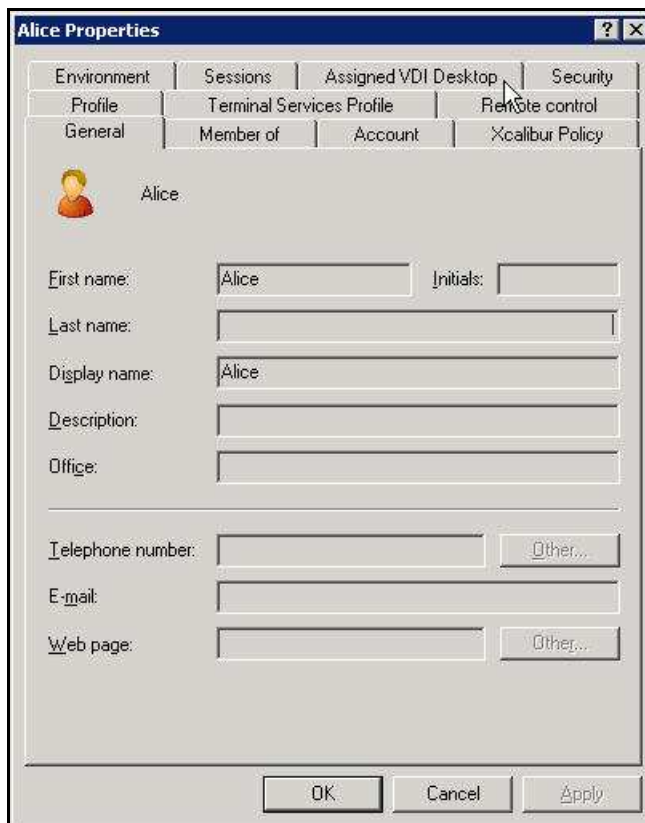
Figure 3-33: Xcalibur Management Console - Select Target OU

3. Right-click on the target user (**Alice** in this example) to display a menu.
4. On the menu, click **Properties** to display the **<User> Properties** dialog box.



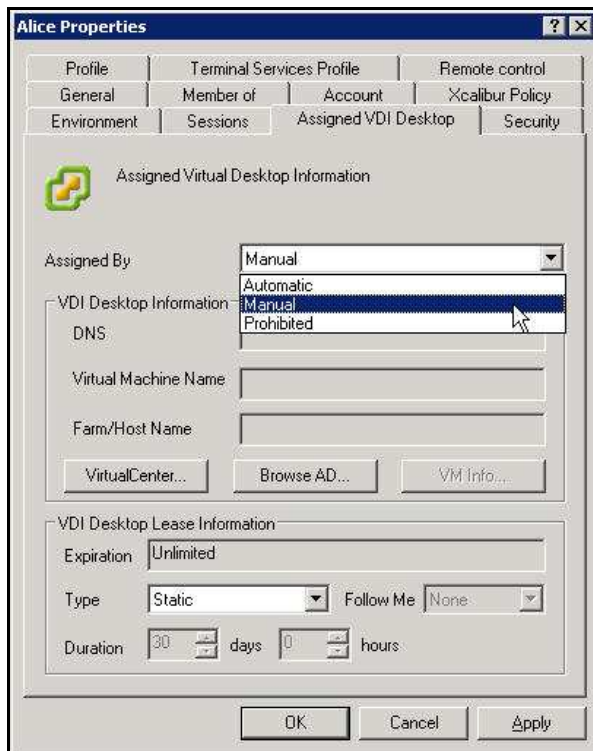
**Figure 3-34: Xcalibur Management Console**

5. In the **<User> Properties** dialog box, select the **Assigned VDI Desktop** tab.



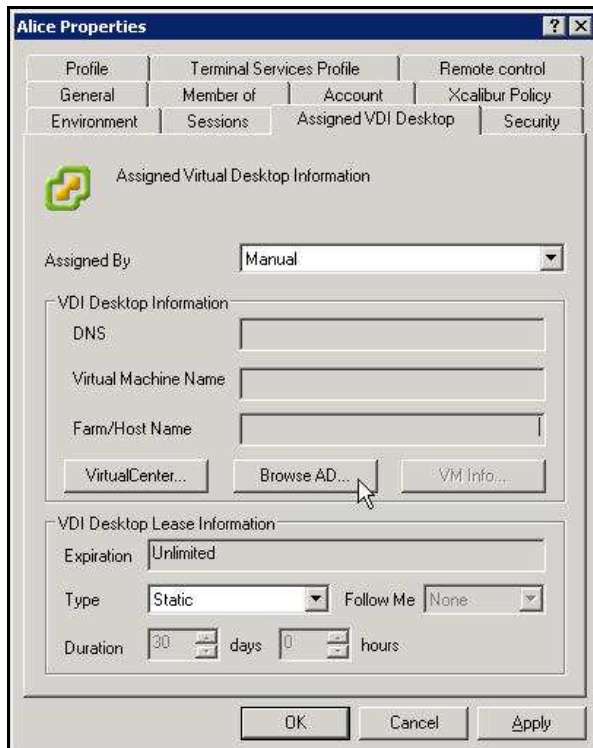
**Figure 3-35: <User> Properties Dialog Box – Assigned VDI Desktop Tab**

- In the **Assigned By** drop down list box select **Manual**.



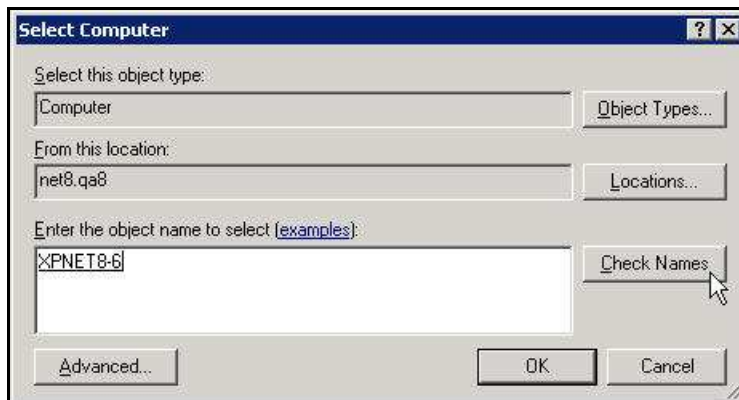
**Figure 3-36: <User> Properties Dialog Box – Assigned VDI Desktop Tab – Manual**

- Click **Browse AD...** to open the **Select Computer** dialog box.



**Figure 3-37: Assigned VDI Desktop Tab – Manual – Active Directory**

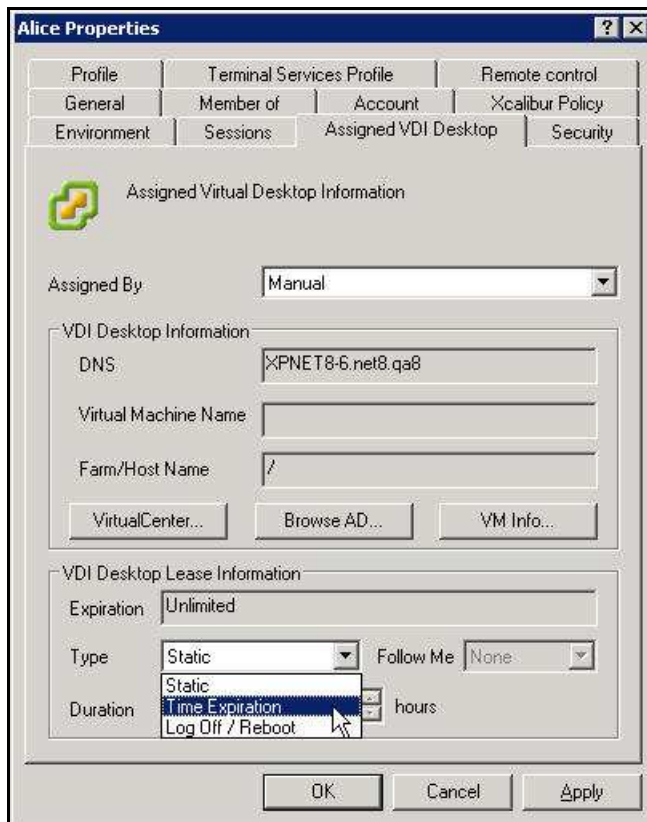
8. In the **Select Computer** dialog box, enter the name of the desired VD.



**Figure 3-38: Select Computer Dialog Box**

**NOTE** *The computer must have a valid “DNS Name” attribute. See the Appendix titled “Creating VDI Broker Compatible Accounts via Script”.*

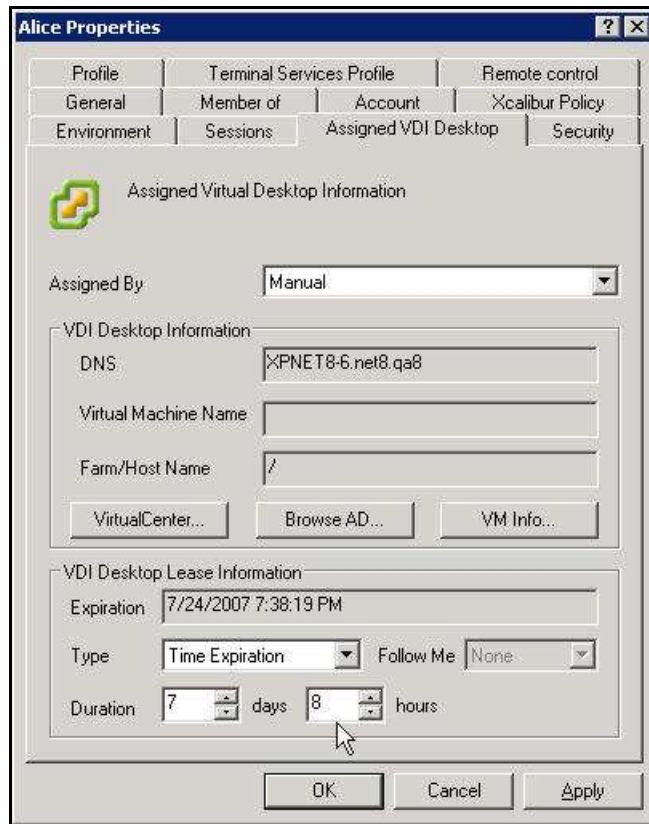
9. Click **Check Names** to verify that the VD name exist in the Active Directory.
10. Click **OK** to complete the VD selection and to return to the **<User> Properties** dialog box.



**Figure 3-39: Assigned VDI Desktop Tab – Automatic – Active Directory – Lease Type**

11. the **VDI Desktop Lease Information** section, perform the following:
  - 11.1. From the **Type** drop down list box, select one of the following lease types:
    - **Static** – for an unlimited lease duration (never expires).
    - **Time Expiration** – for a time limited lease that will expire after a preset duration.
    - **Log Off / Reboot** – for temporary lease that will expire when the user logs off or when the device is rebooted.

- 11.2. If a **Time Expiration** lease type is selected, enter the lease **Duration**. The lease expiration date and time appears in the **Expiration** field.



**Figure 3-40: Assigned VDI Desktop Tab – Manual – Active Directory – Lease Duration**

12. Click **OK** to complete the VD assignment procedure and to return to the Xcalibur Global Management Console.



## 5 Automatically Assigning a VD from a VMware Virtual Center to a Device

### 5.1 Xcalibur Farm Manager Permissions

In order to configure automatic VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Xcalibur Farm Manager:

- The Read Site Data and the Write Site Data permissions are required on the Administrative Suite.
- The Read Site Data and the Write Site Data permissions are required on the site where the automatic assignment will be configured.

**NOTE** *The above permissions are in addition to any other permissions required for Xcalibur Global Management.*

### 5.2 VMware Virtual Center Permissions

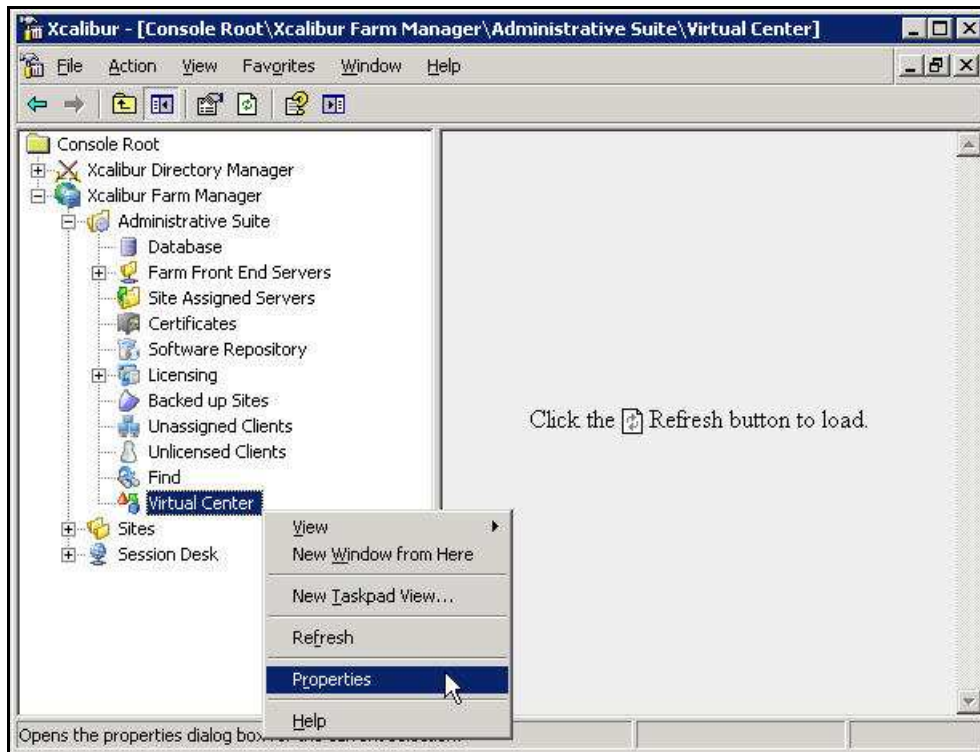
In order to perform VD assignments from the Virtual Center, a user must be created on the Virtual Center for the use of the Xcalibur VDI Broker. The user must be assigned the following permissions:

- Required: Read permission on the Virtual Center path to the VD.
- Optional: Additional permission to perform management tasks on the VD such as Shutdown, Restart, etc.

### 5.3 Xcalibur Global Virtual Center Settings

The Farm Manager Virtual Center Settings are configured using the following procedure:

13. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
14. In the Xcalibur Management Console window, open **Xcalibur Farm Manager / Administrative Suite** and select **Virtual Center**.

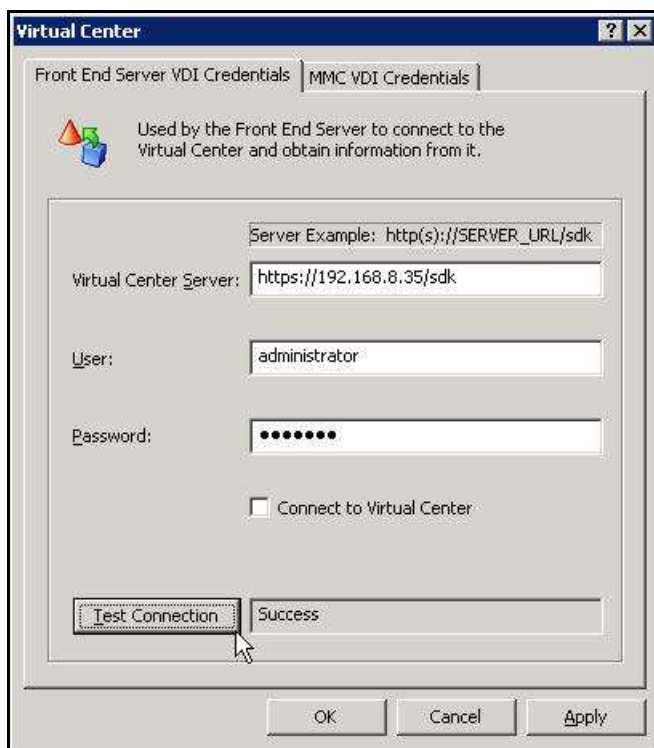


**Figure 3-41: Xcalibur Management Console - Select Virtual Center**

15. Right-click **Virtual Center**, on the menu click **Properties** to open the **Virtual Center** dialog box.

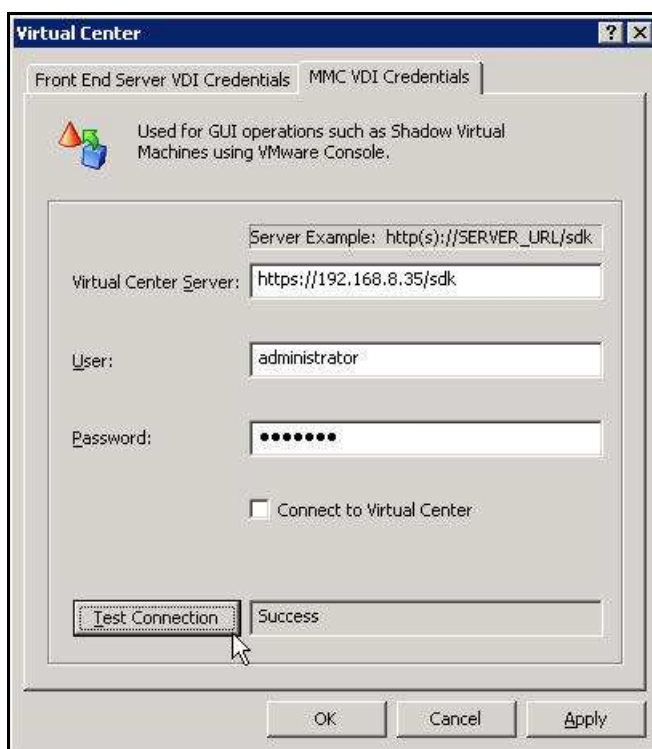
**NOTE** The *Virtual Center* dialog box is composed of two tabs each containing a separate set of parameters used to connect to the Virtual Center. This separation offers increased security by assigning different credentials to different Xcalibur Global components.

16. The **Front End Server VDI Credentials** tab contains the parameters used by the Xcalibur Global service to connect to the Virtual Center. The user selected will determine the permissions granted to the Xcalibur Global service when it interacts with the Virtual Center.
  - 16.1. In the **Virtual Center Server** text box, type the server’s URL.
  - 16.2. In the **User** text box, type the name of the Virtual Center user that was created in the previous section “VMware Virtual Center Permissions”.
  - 16.3. In the **Password** text box, type the user’s password.
  - 16.4. Uncheck the **Connect to Virtual Center** check box.
  - 16.5. Click **Test Connection** to verify that the parameters entered above are correct (if correct **Success** appears in box, if incorrect **Failure** appears in box).



**Figure 3-42: Virtual Center Dialog Box – Front End Server VDI Credentials Tab**

17. The **MMC VDI Credentials** tab contains the parameters used by the Xcalibur Global Management Console to connect to the Virtual Center. The user selected will determine the Xcalibur Global Management Console's permissions when it interacts with the Virtual Center. In addition to the permission to retrieve information about VDs, this could also include permissions to: Start, Shutdown, Reboot, and Suspend VDs.
  - 17.1. In the **Virtual Center Server** text box, type the server's URL.
  - 17.2. In the **User** text box, type the name of the Virtual Center user that was created in the previous section "VMware Virtual Center Permissions".
  - 17.3. In the **Password** text box, type the user's password.
  - 17.4. Uncheck the **Connect to Virtual Center** check box.
  - 17.5. Click **Test Connection** to verify that the parameters entered above are correct (if correct **Success** appears in box, if incorrect **Failure** appears in box).



**Figure 3-43: Virtual Center Dialog Box – MMC VDI Credentials Tab**

18. Click **OK** to finish this procedure and return to Xcalibur Global Management Console.

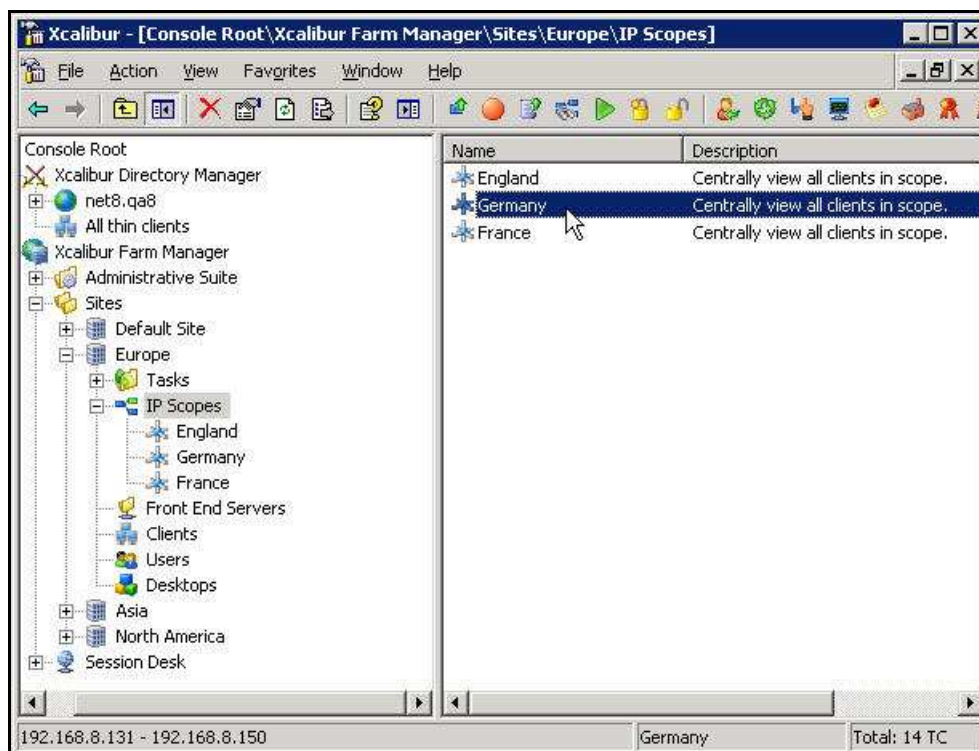
**IMPORTANT** *The Xcalibur Global Service must be restarted for the new Virtual Center settings to take effect.*

## 5.4 Xcalibur Global Device Settings

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.1 > Management Console** to launch the Xcalibur Global Management Console.

**NOTE** *Automatic VD assignment can be configured on the Farm / Site / Scope level using the exact same procedure. In this document the procedure will be described on the scope level.*

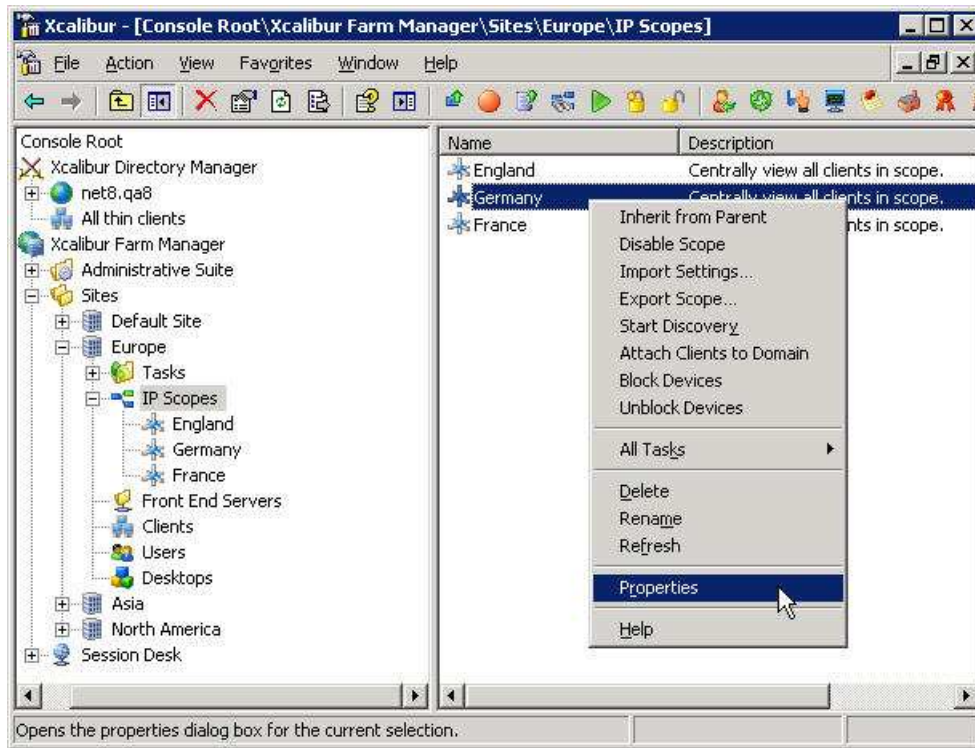
2. In the Xcalibur Management Console window, expand the folders under **Xcalibur Farm Manager** to reveal the target scope. In this example expand: **Sites \ Europe \ IP Scopes**.



**Figure 3-44: Xcalibur Management Console - Select Target Scope**

3. Select the target scope (In this example **Germany**).

4. Right-click on the target scope (**Germany** in this example) to display a menu.
5. On the menu, click **Properties** to display the **<Site \ Scope>** dialog box.



**Figure 3-45: Xcalibur Management Console – Target Scope > Properties**

- In the **<Site \ Scope>** dialog box, select the **Device VDI** tab.

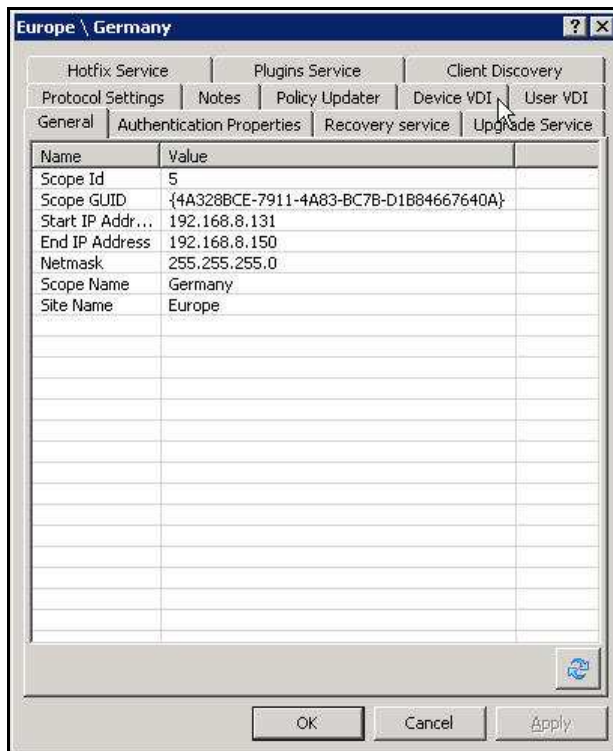


Figure 3-46: **<Site \ Scope>** Dialog Box

- Uncheck the **Inherit From Parent** check box.

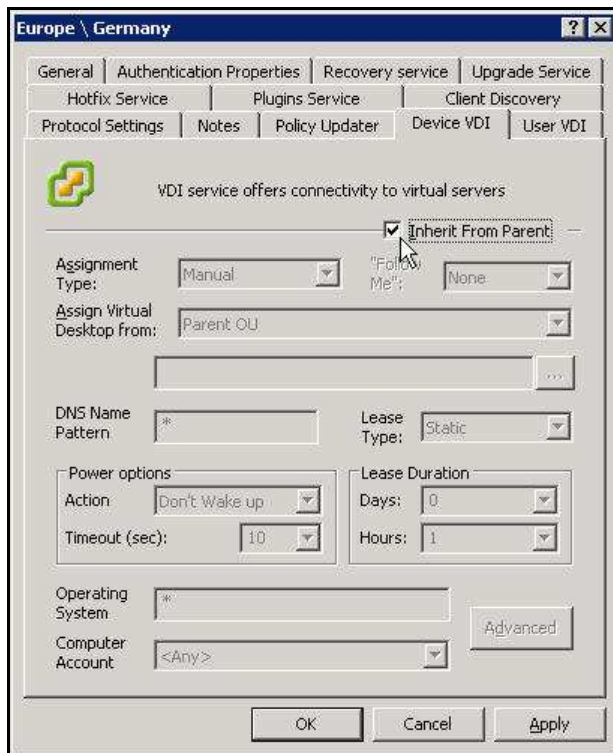
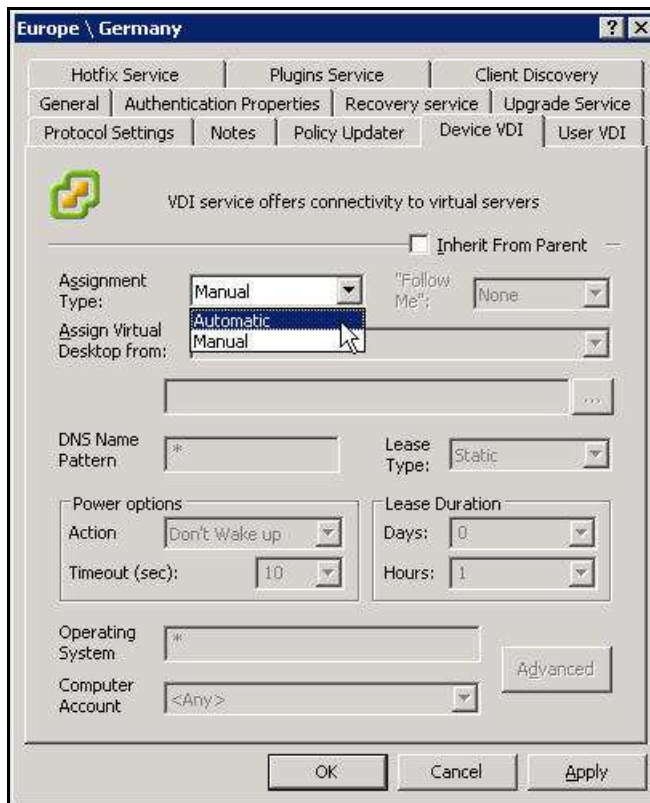


Figure 3-47: **<Site \ Scope>** Dialog Box - Device VDI Tab



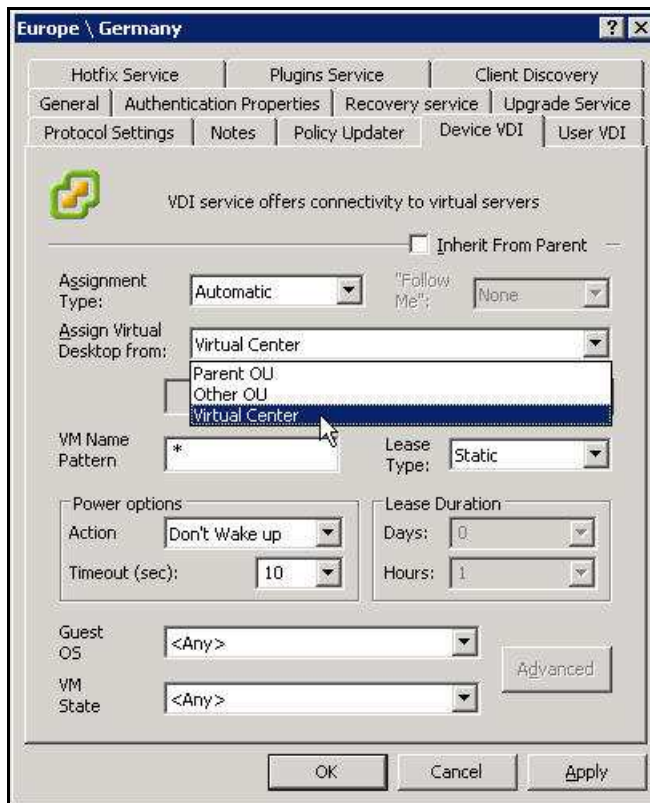
- In the **Assignment type** drop down list box, select **Automatic**.




**Figure 3-48: <Site / IP Scope> Dialog Box – Device VDI Tab**

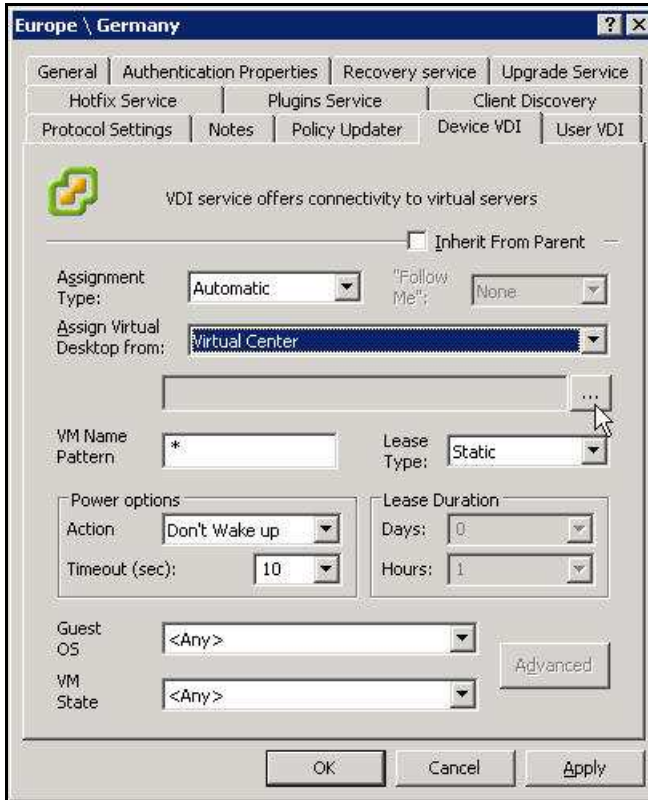


- In the **Assign Virtual Desktop from** drop down list box, select **Virtual Center**.



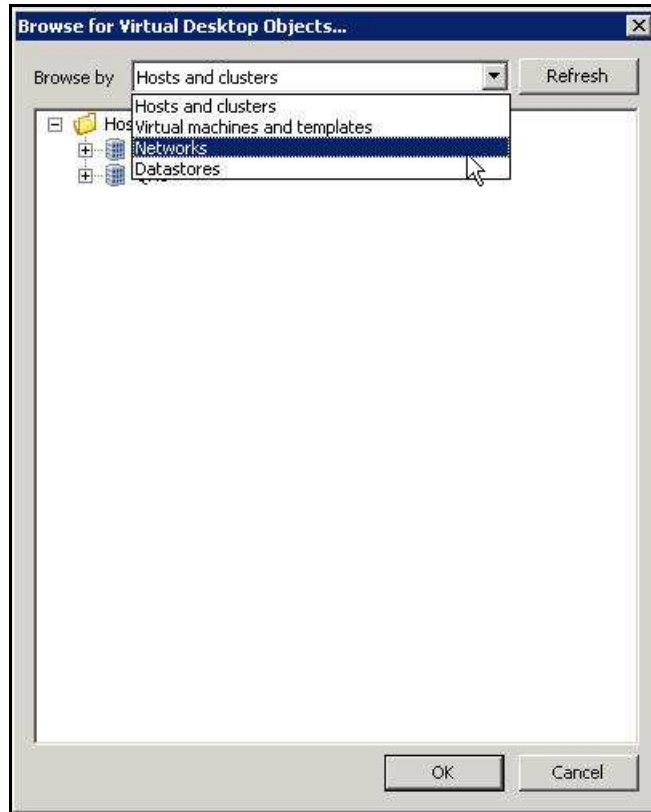
**Figure 3-49: <Site / IP Scope> Dialog Box – Device VDI Tab**

- Click the Browse button  to open the **Browse for Virtual Desktop Objects...** dialog box.



**Figure 3-50: Device VDI Tab – Virtual Center Browse Button**

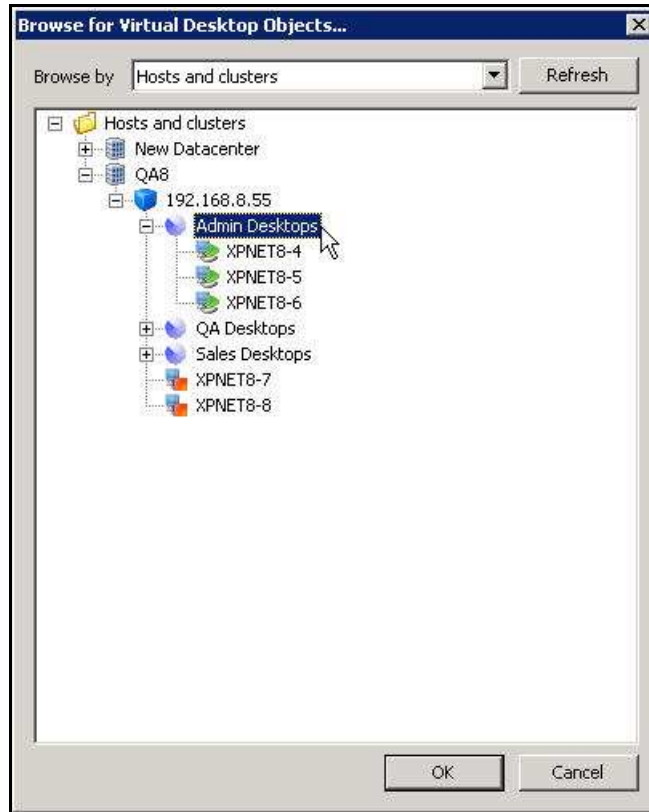
11. In the **Browse for Virtual Desktop Objects...** dialog box, perform the following:
  - 11.1. In the **Browse by** drop down list box, select a display format for the Virtual Center.



**Figure 3-51: Browse for Virtual Desktop Objects... Dialog Box**

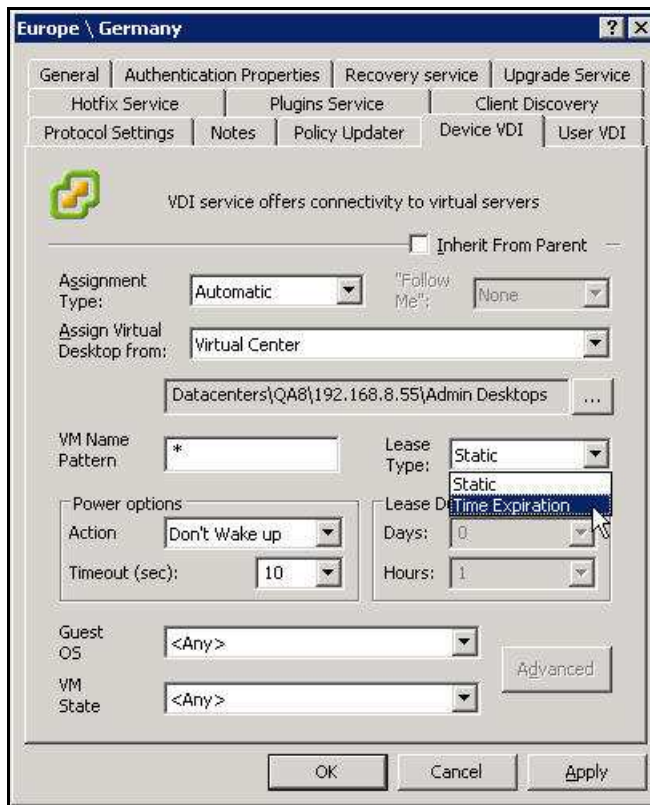
- 11.2. Browse Virtual Center and select the branch that contains the target VD's (**Admin Desktops** in this example).

**NOTE** *When using automatic assignment the allocation of VD's is dynamic and therefore specific VD selection is disabled.*



**Figure 3-52: Browse for Virtual Desktop Objects... Dialog Box**

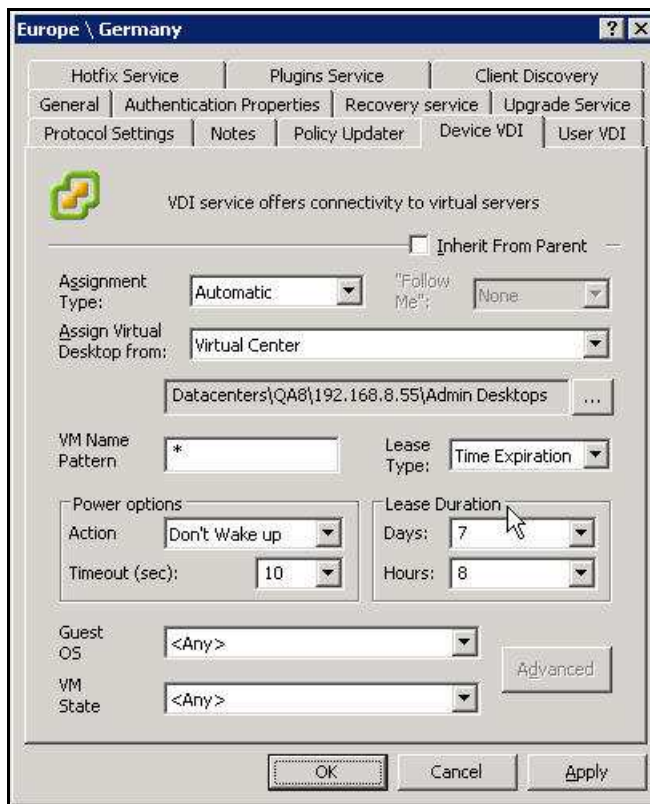
- 11.3. Click **OK** to complete the branch selection and to return to the **<Site \ Scope>** dialog box.



**Figure 3-53: Assigned VDI Desktop Tab – Automatic – Virtual Center – Lease Type**

12. From the **Lease Type** drop down list box, select one of the following lease types:
  - **Static** – for an unlimited lease duration (never expires).
  - **Time Expiration** – for a time limited lease that will expire after a preset duration.

- If a **Time Expiration** lease type is selected, enter the **Days** and **Hours** in the **Lease Duration** section.



**Figure 3-54: Assigned VDI Desktop Tab – Automatic – Virtual Center – Lease Duration**

- Click **OK** to complete the VD assignment procedure and to return to the Xcalibur Global Management Console.

## 6 Automatically Assigning a VD from a VMware Virtual Center to a User

**IMPORTANT** *Domain User Authentication must be activated on the scope containing the device receiving a VD assignment.*

*In Scope Properties \ Authentication Properties tab \ User Authentication Provider, verify that the Active provider is "Domain User Authentication Provider".*

### 6.1 Xcalibur Farm Manager Permissions

In order to configure automatic VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Xcalibur Farm Manager:

- The Read Site Data and the Write Site Data permissions are required on the Administrative Suite.
- The Read Site Data and the Write Site Data permissions are required on the site where the automatic assignment will be configured.

**NOTE** *The above permissions are in addition to any other permissions required for Xcalibur Global Management.*

### 6.2 VMware Virtual Center Permissions

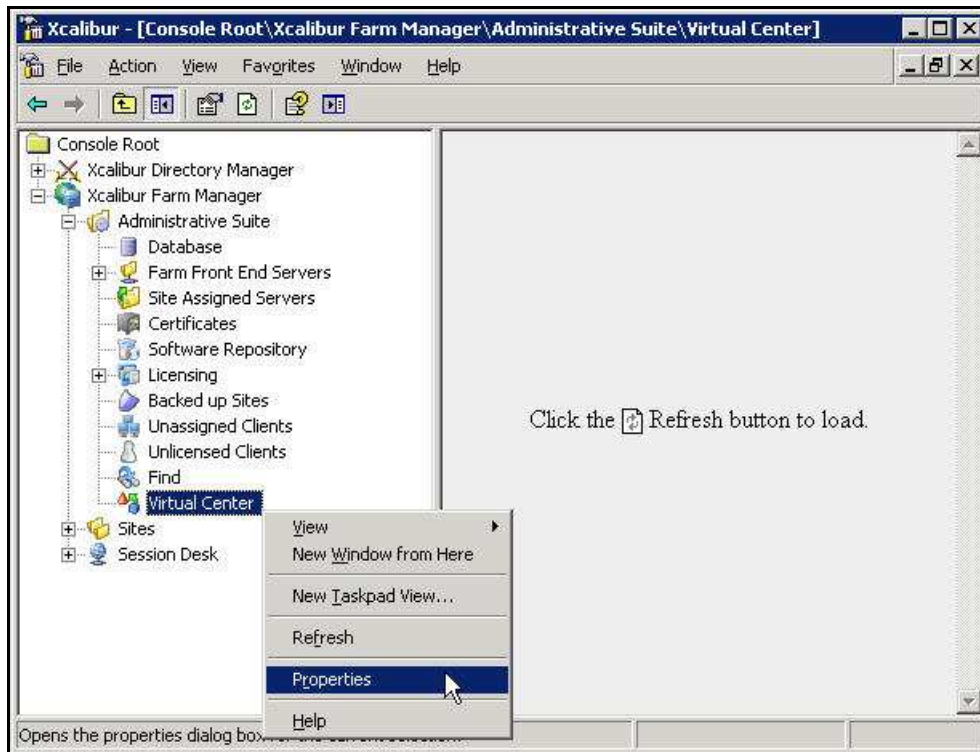
In order to perform VD assignments from the Virtual Center, a user must be created on the Virtual Center for the use of the Xcalibur VDI Broker. The user must be assigned the following permissions:

- Required: Read permission on the Virtual Center path to the VD.
- Optional: Additional permissions to perform management tasks on the VD such as Shutdown, Restart Etc.

### 6.3 Xcalibur Global Virtual Center Settings

The Farm Manager Virtual Center Settings are configured using the following procedure:

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, open **Xcalibur Farm Manager / Administrative Suite** and select **Virtual Center**.



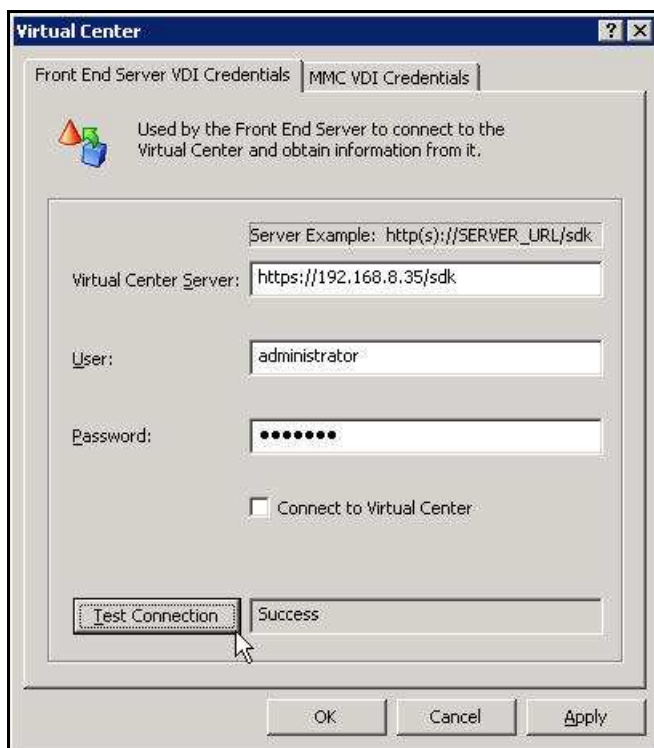
**Figure 3-55: Xcalibur Management Console - Select Virtual Center**

3. Right-click **Virtual Center**, on the menu click **Properties** to open the **Virtual Center** dialog box.



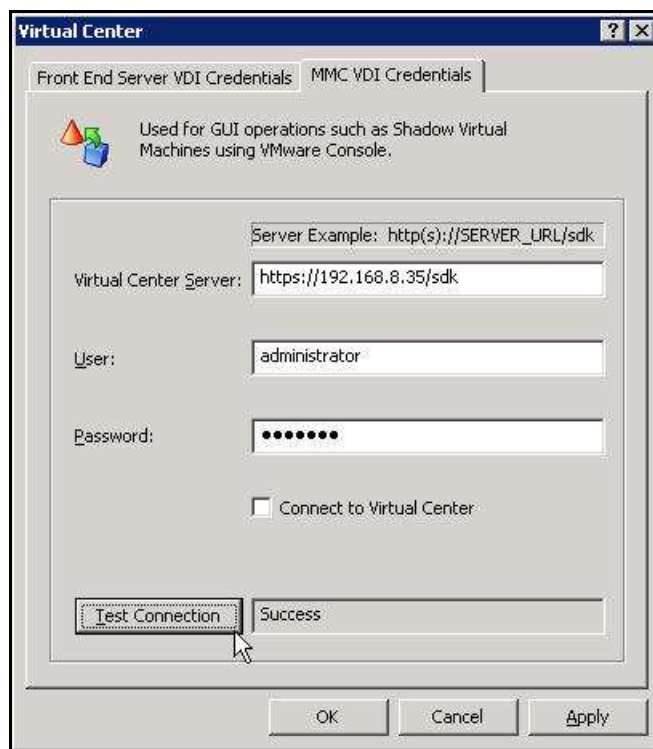
**NOTE** The Virtual Center dialog box is composed of two tabs each containing a separate set of parameters used to connect to the Virtual Center. This separation offers increased security by assigning different credentials to different Xcalibur Global components.

4. The **Front End Server VDI Credentials** tab contains the parameters used by the Xcalibur Global service to connect to the Virtual Center. The user selected will determine the permissions granted to the Xcalibur Global service when it interacts with the Virtual Center.
  - 4.1. In the **Virtual Center Server** text box, type the server's URL.
  - 4.2. In the **User** text box, type the name of the Virtual Center user that was created in the previous section "VMware Virtual Center Permissions".
  - 4.3. In the **Password** text box, type the user's password.
  - 4.4. Uncheck the **Connect to Virtual Center** check box.
  - 4.5. Click **Test Connection** to verify that the parameters entered above are correct (if correct **Success** appears in box, if incorrect **Failure** appears in box).



**Figure 3-56: Virtual Center Dialog Box – Front End Server VDI Credentials Tab**

5. The **MMC VDI Credentials** tab contains the parameters used by the Xcalibur Global Management Console to connect to the Virtual Center. The user selected will determine the Xcalibur Global Management Console's permissions when it interacts with the Virtual Center. In addition to the permission to retrieve information about VDs, this could also include permissions to start, shutdown, reboot, and suspend VDs.
  - 5.1. In the **Virtual Center Server** text box, type the server's URL.
  - 5.2. In the **User** text box, type the name of the Virtual Center user that was created in the previous section "VMware Virtual Center Permissions".
  - 5.3. In the **Password** text box, type the user's password.
  - 5.4. Uncheck the **Connect to Virtual Center** check box.
  - 5.5. Click **Test Connection** to verify that the parameters entered above are correct (if correct **Success** appears in box, if incorrect **Failure** appears in box).



**Figure 3-57: Virtual Center Dialog Box – MMC VDI Credentials Tab**

6. Click **OK** to finish this procedure and return to Xcalibur Global Management Console.

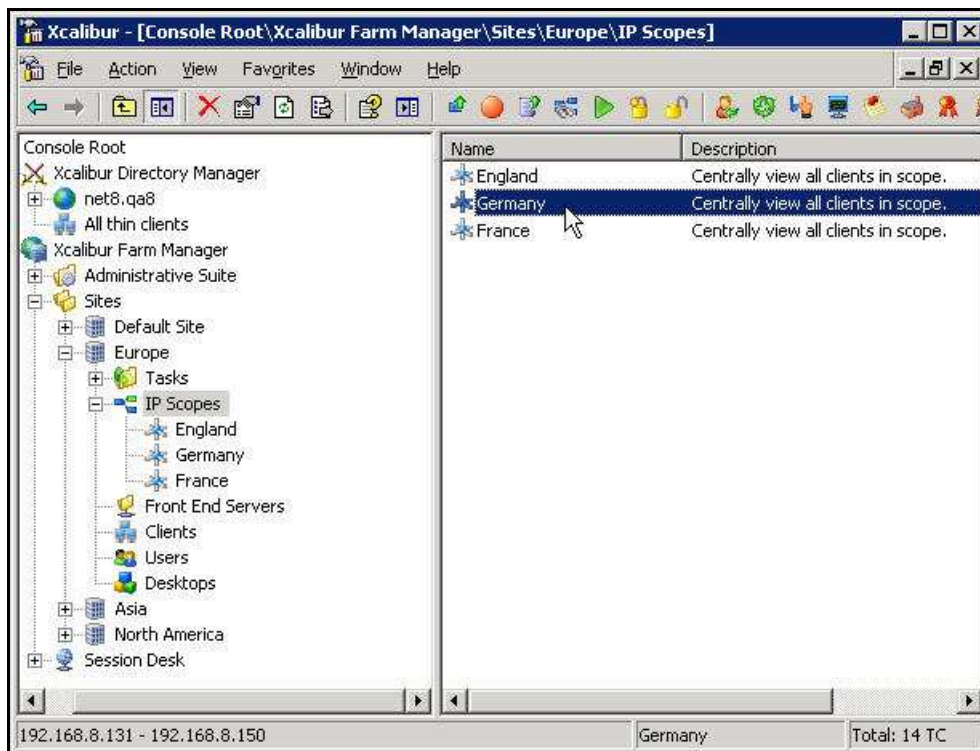
**IMPORTANT** *The Xcalibur Global Service must be restarted for the new Virtual Center settings to take effect.*

## 6.4 Xcalibur Global User Settings

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.1 > Management Console** to launch the Xcalibur Global Management Console.

**NOTE** *Automatic VD assignment can be configured on the Farm / Site / Scope level using the exact same procedure. In this document the procedure will be described on the scope level.*

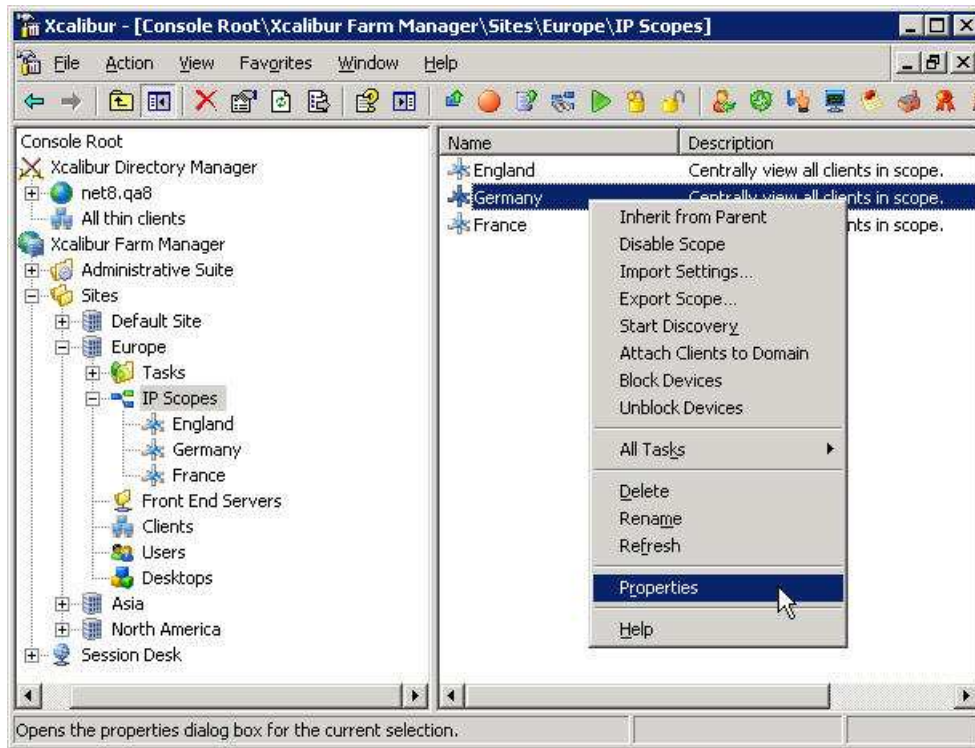
2. In the Xcalibur Management Console window, expand the folders under **Xcalibur Farm Manager** to reveal the target scope. In this example expand: **Sites \ Europe \ IP Scopes**.



**Figure 3-58: Xcalibur Management Console - Select Target Scope**

3. Select the target scope (In this example **Germany**).

4. Right-click on the target scope (**Germany** in this example) to display a menu.
5. On the menu, click **Properties** to display the **<Site | Scope>** dialog box.



**Figure 3-59: Xcalibur Management Console – Target OU > Properties**

- In the **<Site \ Scope>** dialog box, select the **User VDI** tab.

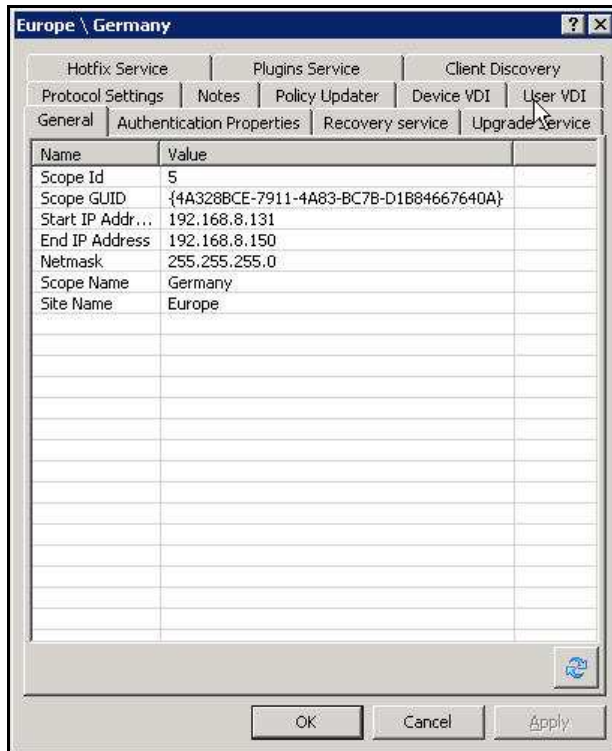


Figure 3-60: **<Site \ Scope>** Dialog Box

- Uncheck the **Inherit From Parent** check box.

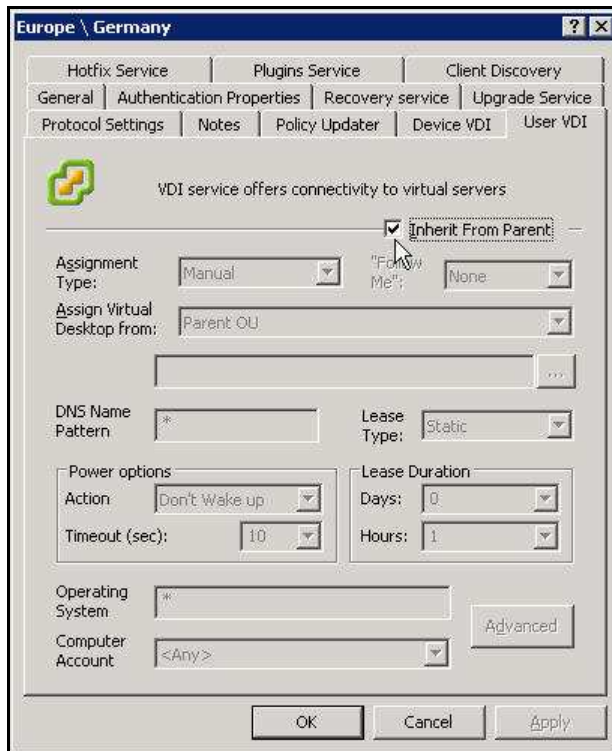
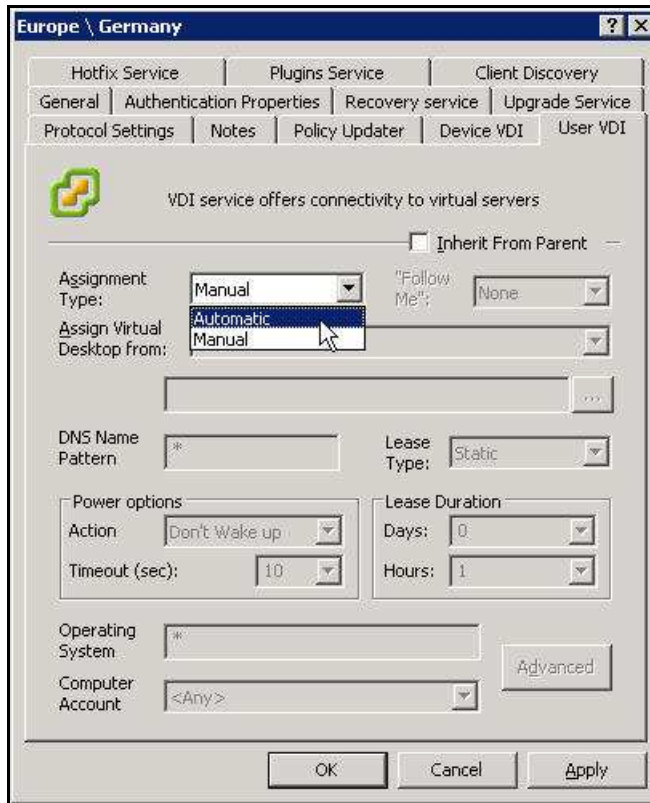


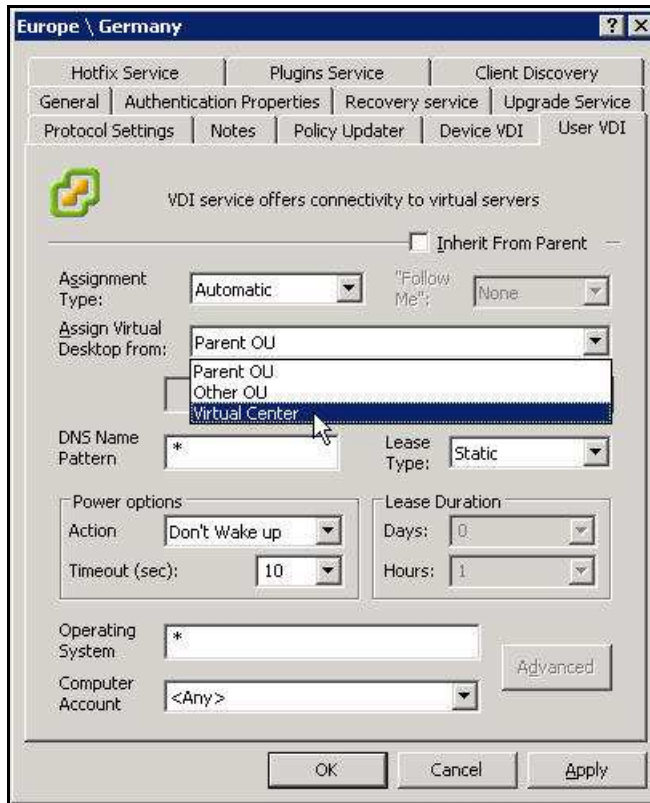
Figure 3-61: **<Site \ Scope>** Dialog Box - User VDI Tab

- In the **Assignment type** drop down list box, select **Automatic**.




**Figure 3-62: <Site \ Scope> Dialog Box – VDI Tab**

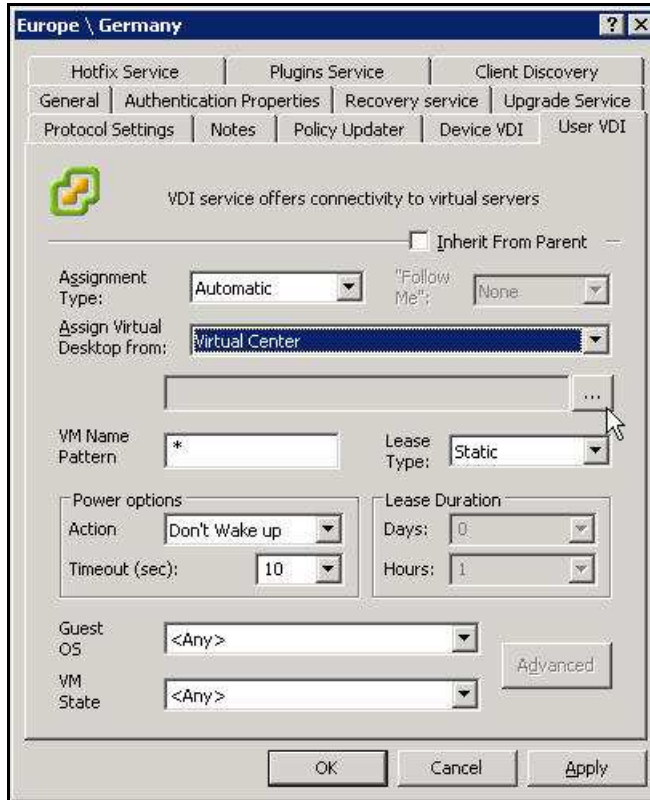
- In the **Assign Virtual Desktop from** drop down list box, select **Virtual Center**.



**Figure 3-63: <Site \ Scope> Dialog Box – Device VDI Tab**



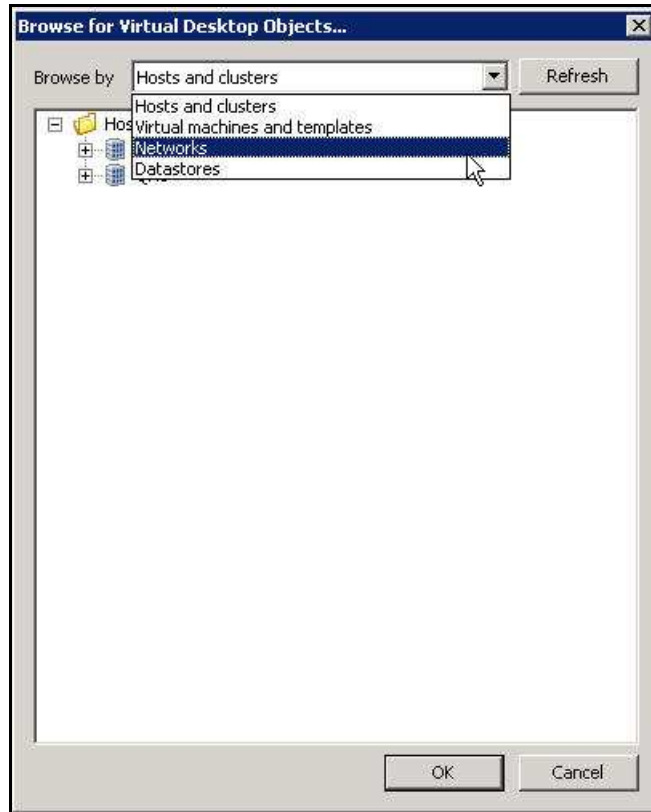
- Click the Browse button  to open the **Browse for Virtual Desktop Objects...** dialog box.



**Figure 3-64: Device VDI Tab – Virtual Center Browse Button**



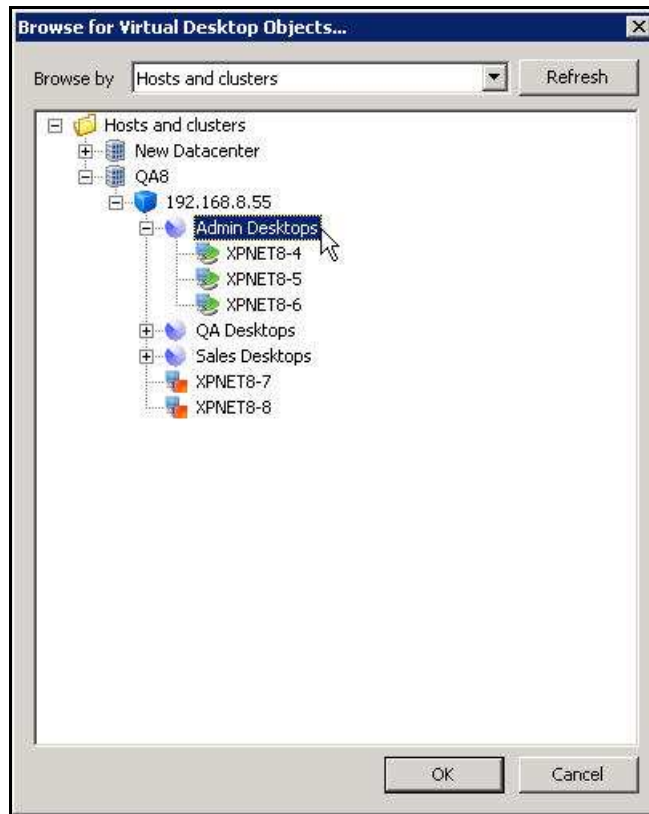
11. In the **Browse for Virtual Desktop Objects...** dialog box, perform the following:
  - 11.1. In the **Browse by** drop down list box, select a display format for the Virtual Center.



**Figure 3-65: Browse for Virtual Desktop Objects... Dialog Box**

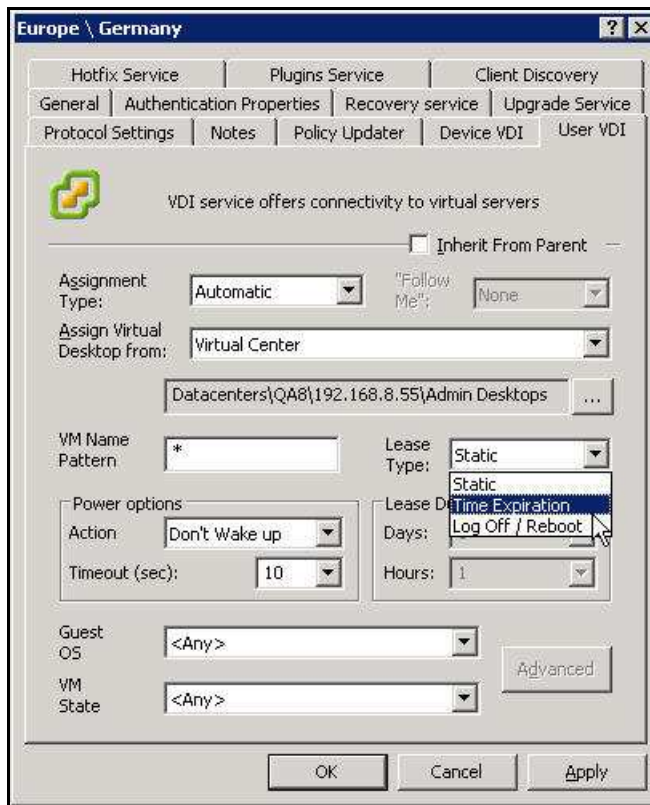
- 11.2. Browse the Virtual Center and select the branch that contains the target VD's (**Admin Desktops** in this example).

**NOTE** *When using automatic assignment the allocation of VD's is dynamic and therefore specific VD selection is disabled.*



**Figure 3-66: Browse for Virtual Desktop Objects... Dialog Box – OK Unavailable**

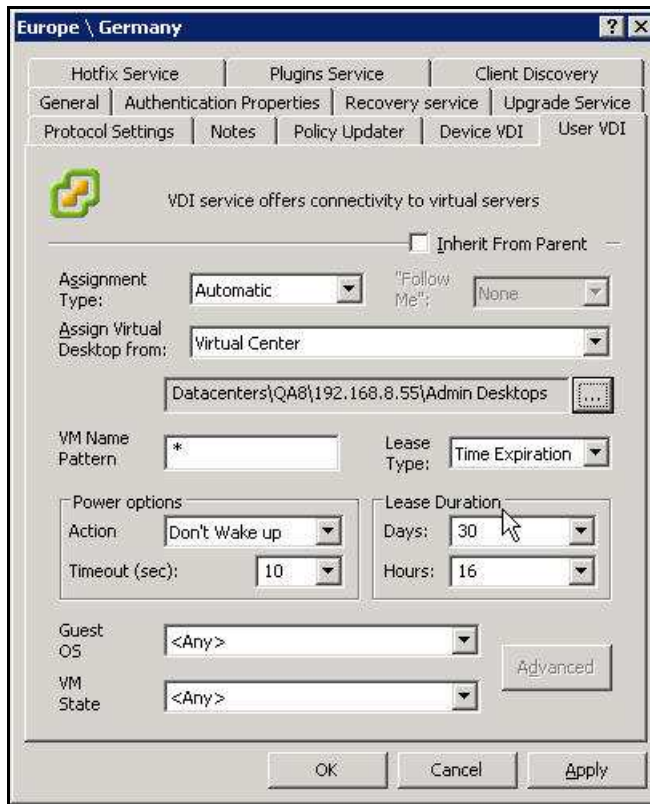
- 11.3. Click **OK** to complete the branch selection and to return to the **<Site \ Scope>** dialog box.



**Figure 3-67: Assigned VDI Desktop Tab – Automatic – Virtual Center – Lease Type**

12. From the **Lease Type** drop down list box, select one of the following lease types:
  - **Static** – for an unlimited lease duration (never expires).
  - **Time Expiration** – for a time limited lease that will expire after a preset duration.
  - **Log Off / Reboot** – for temporary lease that will expire when the user logs off or when the device is rebooted.

If a **Time Expiration** lease type is selected, enter the **Days** and **Hours** in the **Lease Duration** section.



**Figure 3-68: Assigned VDI Desktop Tab – Automatic – Virtual Center – Lease Duration**

13. Click **OK** to complete the VD assignment procedure and to return to the Xcalibur Global Management Console.

## 7 Automatically Assigning a VD from the Active Directory to a Device

### 7.1 Active Directory Permissions

In order to perform VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Active Directory:

- The Read permission is required on the parent OU containing the VDs that will be assigned.

### 7.2 Xcalibur Farm Manager Permissions

In order to configure automatic VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Xcalibur Farm Manager:

- The Read Site Data and the Write Site Data permissions are required on the site where the automatic assignment will be configured.

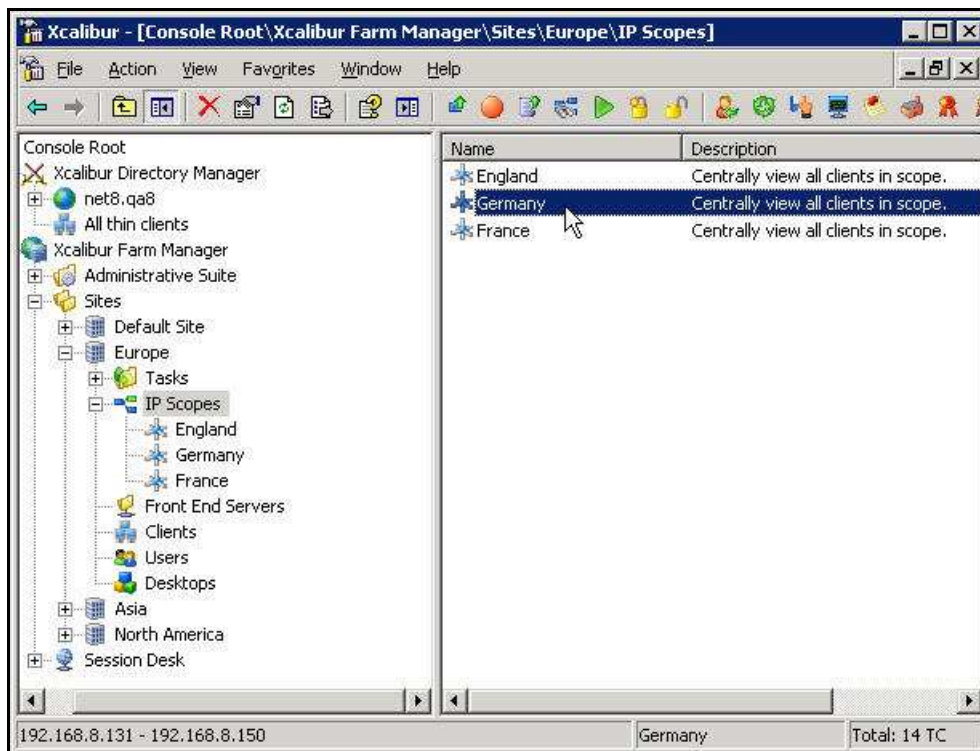
**NOTE** *The above permissions are in addition to any other permissions required for Xcalibur Global Management.*

### 7.3 Xcalibur Global Device Settings

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.1 > Management Console** to launch the Xcalibur Global Management Console.

**NOTE** Automatic VD assignment can be configured on the Farm / Site / Scope level using the exact same procedure. In this document the procedure will be described on the scope level.

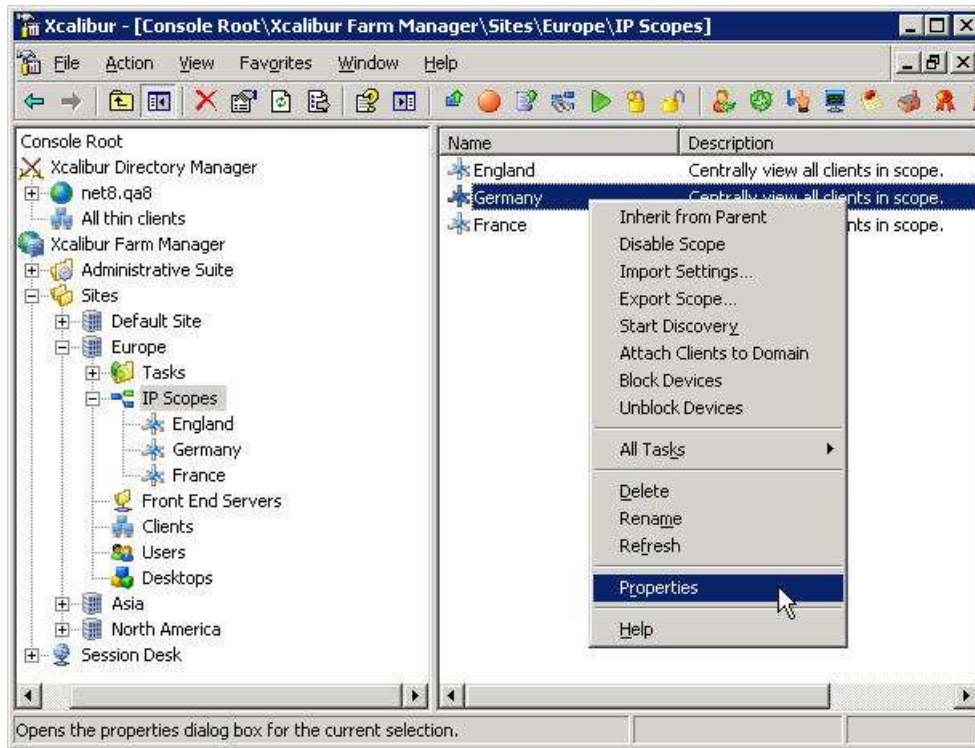
2. In the Xcalibur Management Console window, expand the folders under **Xcalibur Farm Manager** to reveal the target scope. In this example expand: **Sites \ Europe \ IP Scopes**.



**Figure 3-69: Xcalibur Management Console - Select Target OU**

3. Select the target scope (In this example **Germany**).

4. Right-click on the target scope (**Germany** in this example) to display a menu.
5. On the menu, click **Properties** to display the **<Site | Scope>** dialog box.



**Figure 3-70: Xcalibur Management Console – Target OU > Properties**

- In the **<Site \ Scope>** dialog box, select the **Device VDI** tab.

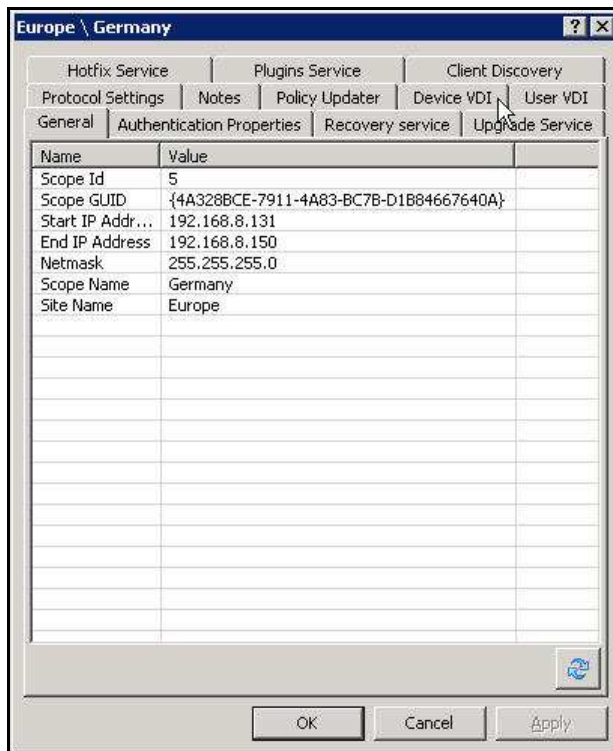


Figure 3-71: **<Site \ Scope>** Dialog Box

- Uncheck the **Inherit From Parent** check box.

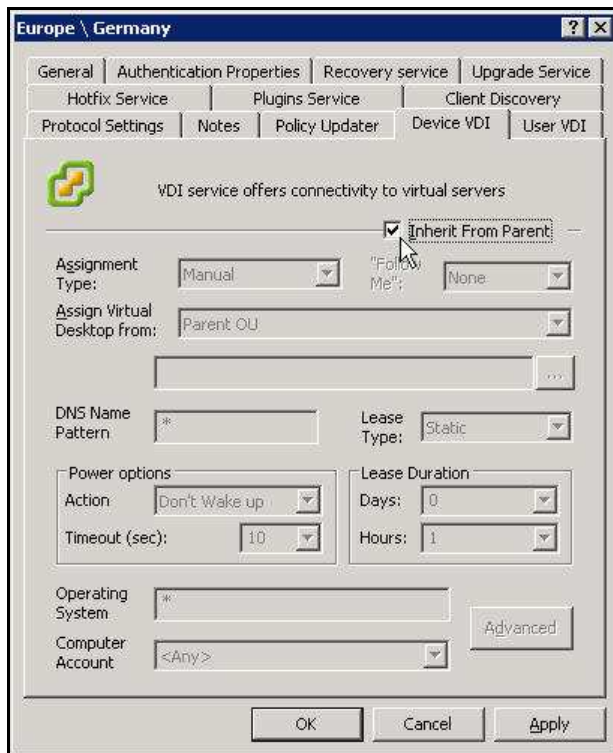
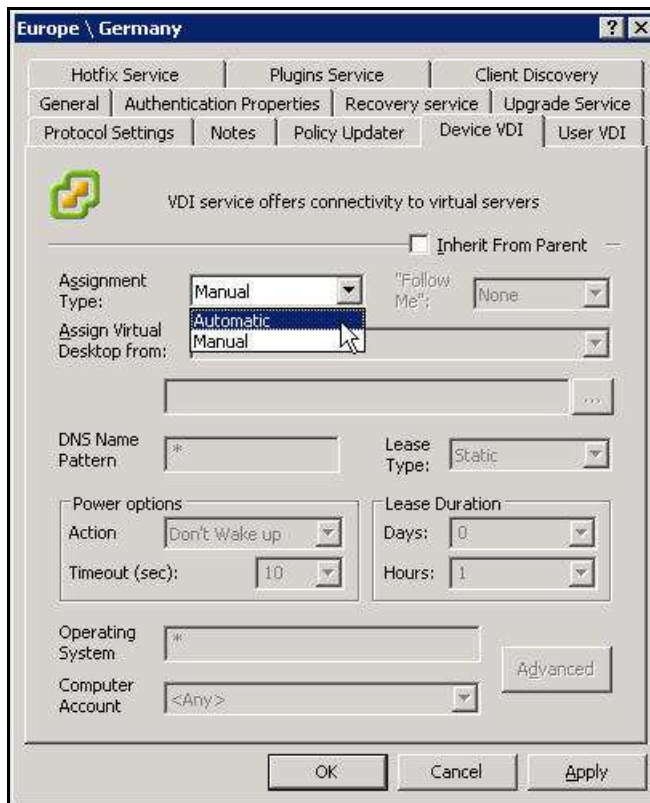


Figure 3-72: **<Site \ Scope>** Dialog Box - Device VDI Tab



- In the **Assignment type** drop down list box, select **Automatic**.



**Figure 3-73: <Site / IP Scope> Dialog Box – VDI Tab**

9. In the **Assign Virtual Desktop from** drop down list box, select one of the following:
  - Select **Parent OU** to assign the VD from the parent OU of the device requesting a VD assignment.
  - Select **Other OU** to enter a specific OU from which the VDs will be assigned.

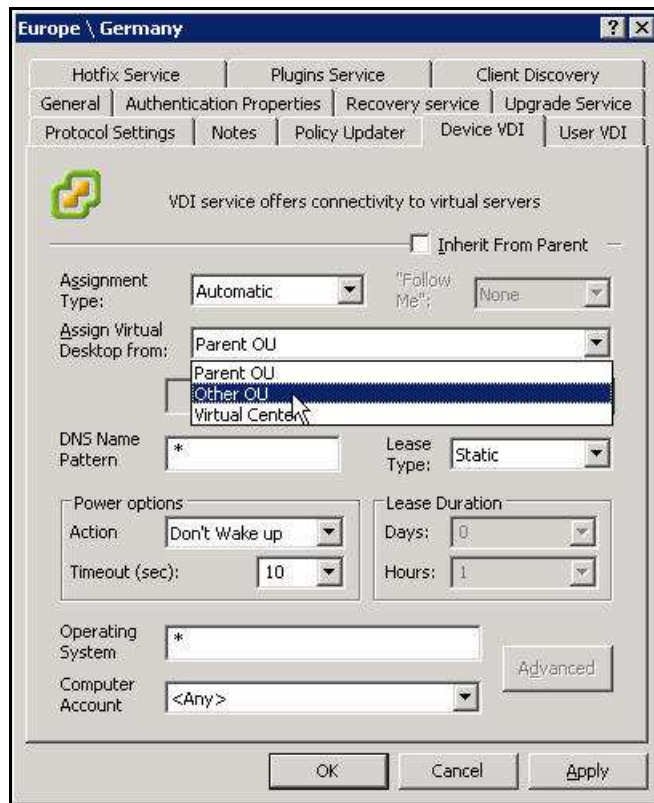

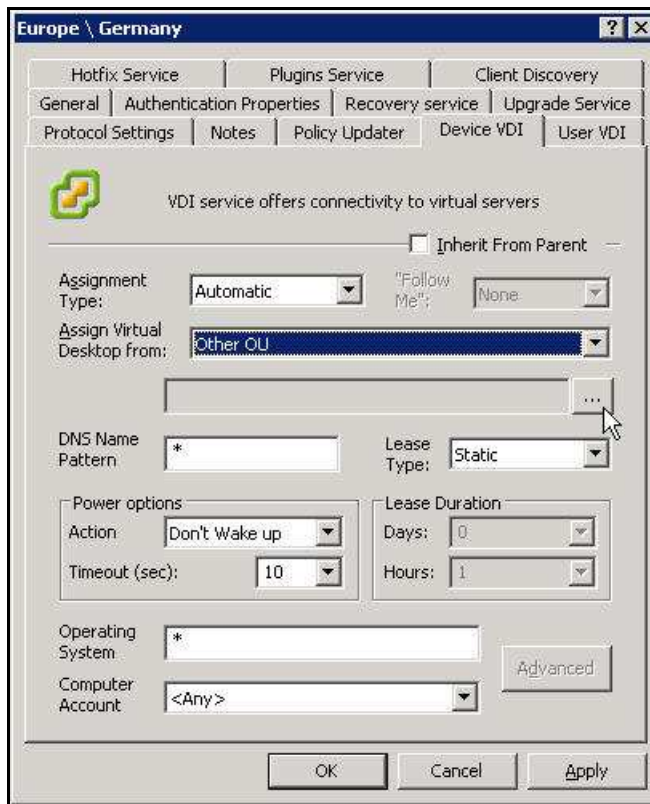


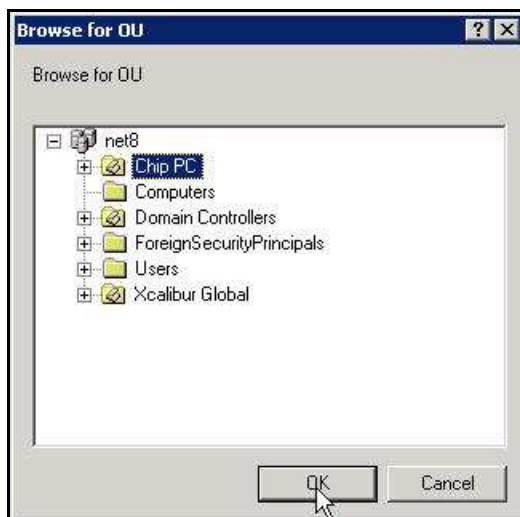
Figure 3-74: <Site \ Scope> Dialog Box – Device VDI Tab

- Click the Browse button  to open the **Browse for OU** dialog box.



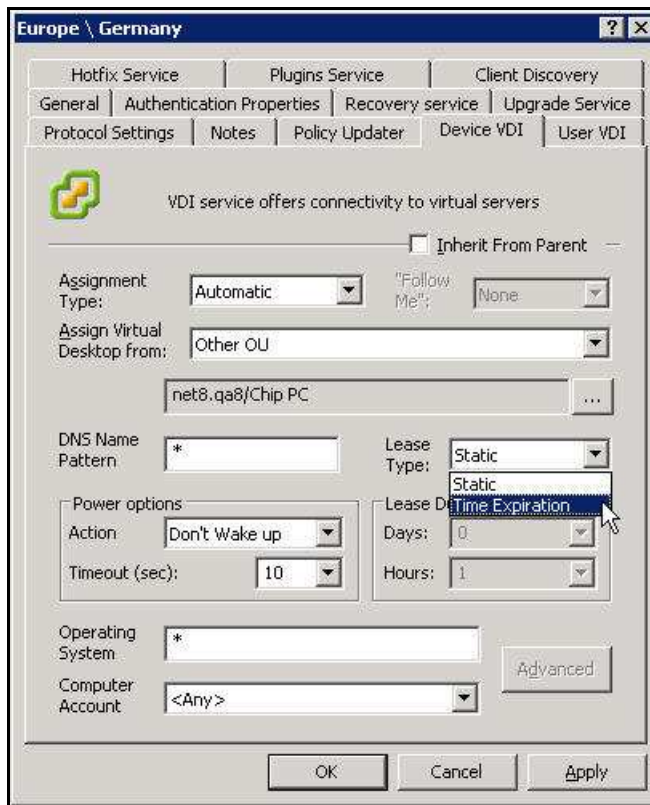
**Figure 3-75: Device VDI Tab – Active Directory - Browse Button**

- In the **Browse for OU** dialog box, select the OU containing the VD's that will be assigned.



**Figure 3-76: Browse for OU dialog box**

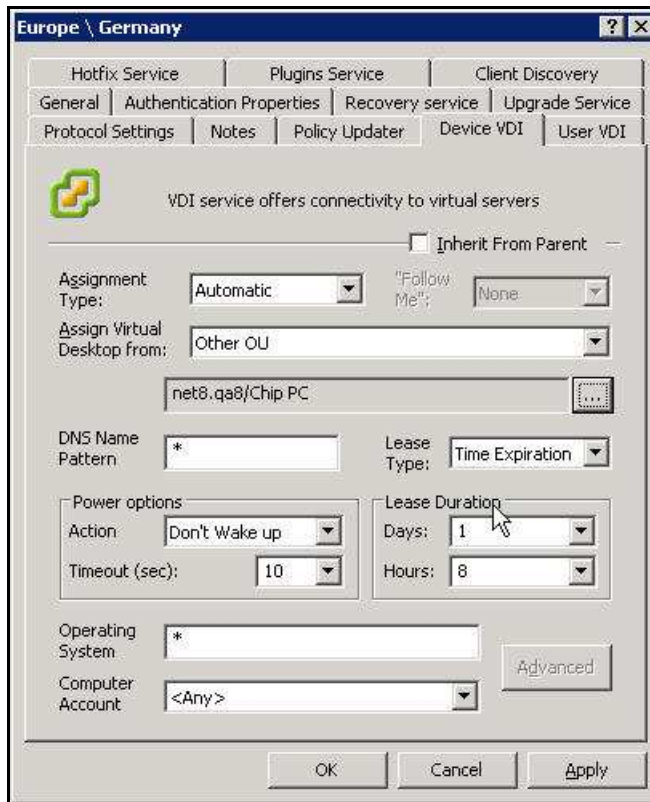
- Click **OK** to complete the OU selection and to return to the **<Site \ Scope>** dialog box.



**Figure 3-77: Assigned VDI Desktop Tab – Automatic – Active Directory – Lease Type**

13. From the **Lease Type** drop down list box, select one of the following lease types:
  - **Static** – for an unlimited lease duration (never expires).
  - **Time Expiration** – for a time limited lease that will expire after a preset duration.

- If a **Time Expiration** lease type is selected, enter the **Days** and **Hours** in the **Lease Duration** section.



**Figure 3-78: Assigned VDI Desktop Tab – Automatic – Active Directory - Lease Duration**

- Click **OK** to complete the VD assignment procedure and to return to the Xcalibur Global Management Console.

## 8 Automatically Assigning a VD from the Active Directory to a User

**IMPORTANT** *Domain User Authentication must be activated on the scope containing the device receiving a VD assignment.*

*In Scope Properties \ Authentication Properties tab \ User Authentication Provider, verify that the Active provider is "Domain User Authentication Provider".*

### 8.1 Active Directory Permissions

In order to perform VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Active Directory:

- The Read permission is required on the parent OU containing the VDs that will be assigned.

### 8.2 Xcalibur Farm Manager Permissions

In order to configure automatic VD assignments, the user running the Xcalibur Global Management Console must have the following permissions in the Xcalibur Farm Manager:

- The Read Site Data and the Write Site Data permissions are required on the site where the automatic assignment will be configured.

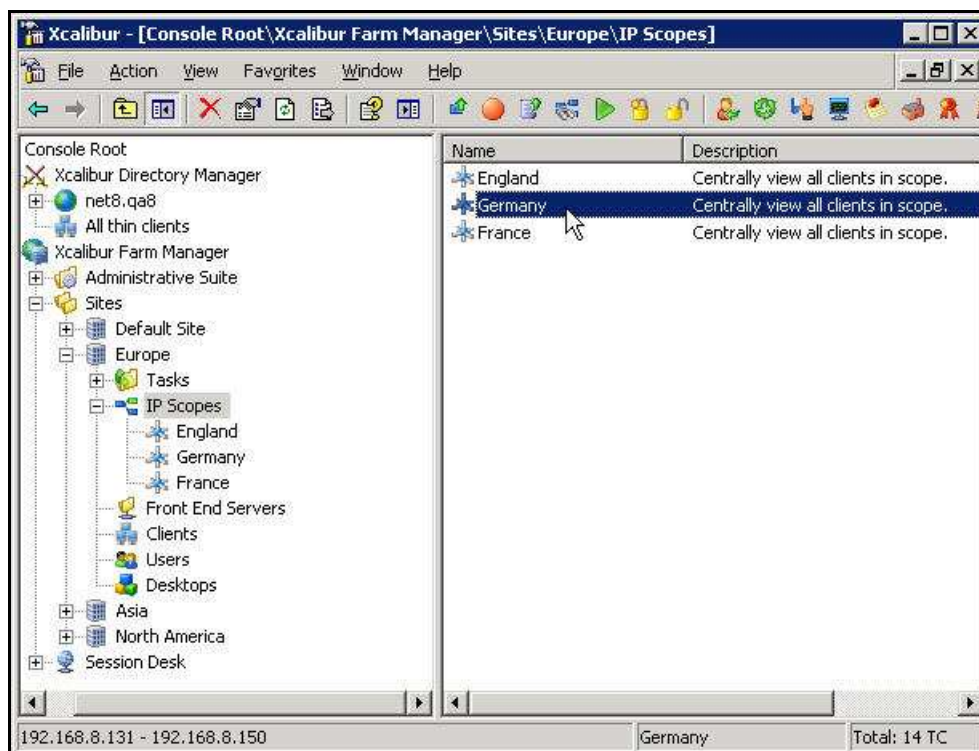
**NOTE** *The above permissions are in addition to any other permissions required for Xcalibur Global Management.*

### 8.3 Xcalibur Global User Settings

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.1 > Management Console** to launch the Xcalibur Global Management Console.

**NOTE** Automatic VD assignment can be configured on the Farm / Site / Scope level using the exact same procedure. In this document the procedure will be described on the scope level.

2. In the Xcalibur Management Console window, expand the folders under **Xcalibur Farm Manager** to reveal the target scope. In this example expand: **Sites \ Europe \ IP Scopes**.

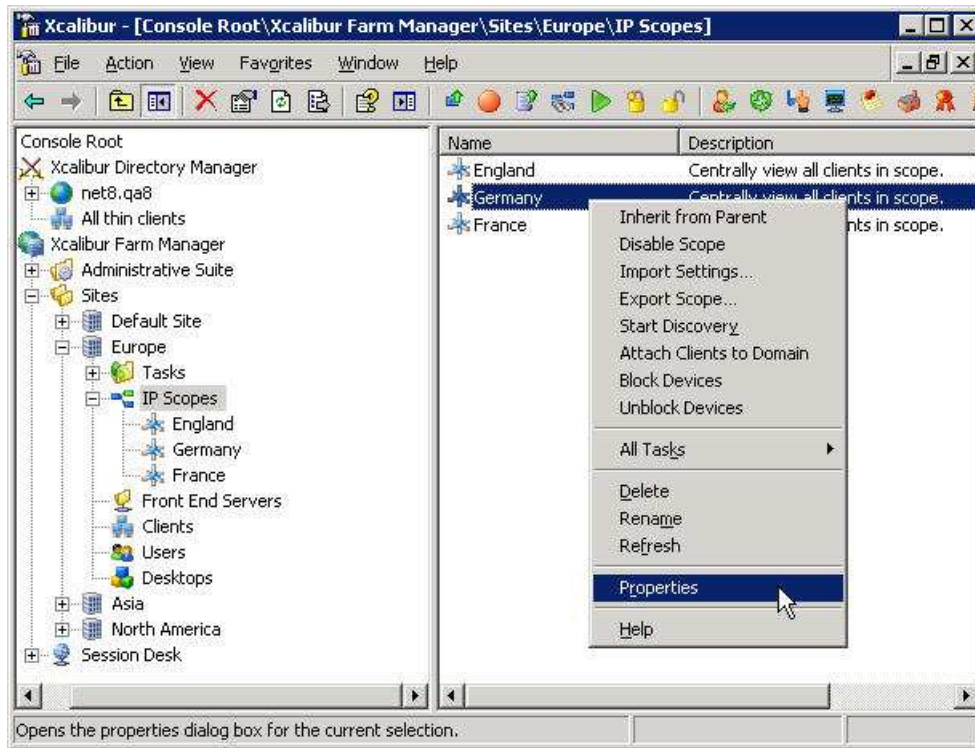


**Figure 3-79: Xcalibur Management Console - Select Target OU**

3. Select the target scope (In this example **Germany**).



4. Right-click on the target scope (**Germany** in this example) to display a menu.
5. On the menu, click **Properties** to display the **<Site | Scope>** dialog box.



**Figure 3-80: Xcalibur Management Console – Target OU > Properties**



- In the **<Site \ Scope>** dialog box, select the **User VDI** tab.

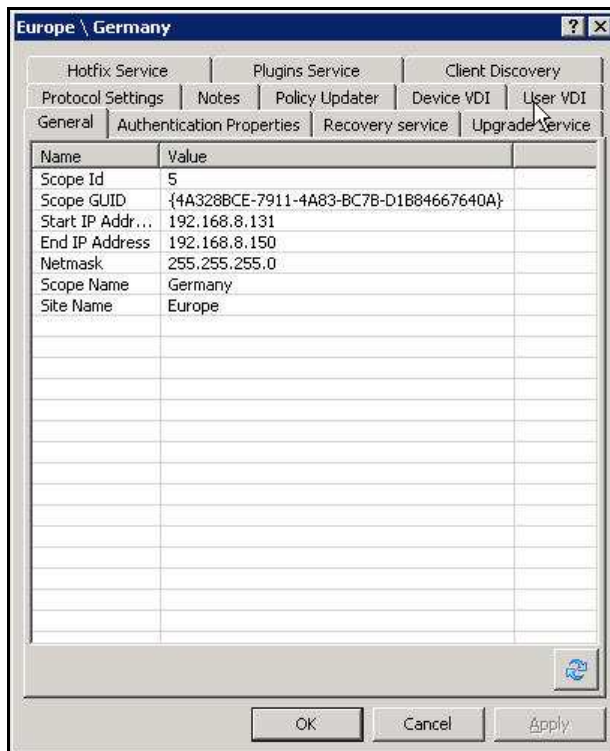


Figure 3-81: **<Site \ Scope>** Dialog Box – User VDI Tab

- Uncheck the **Inherit From Parent** check box.

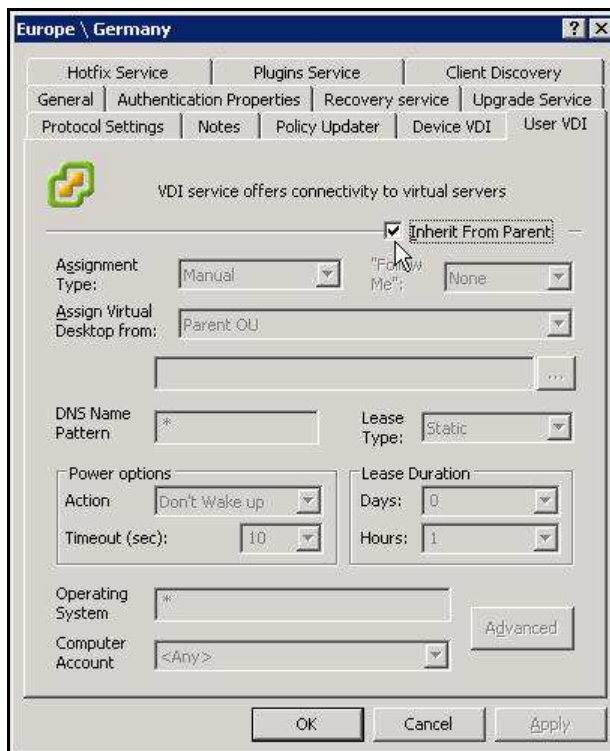
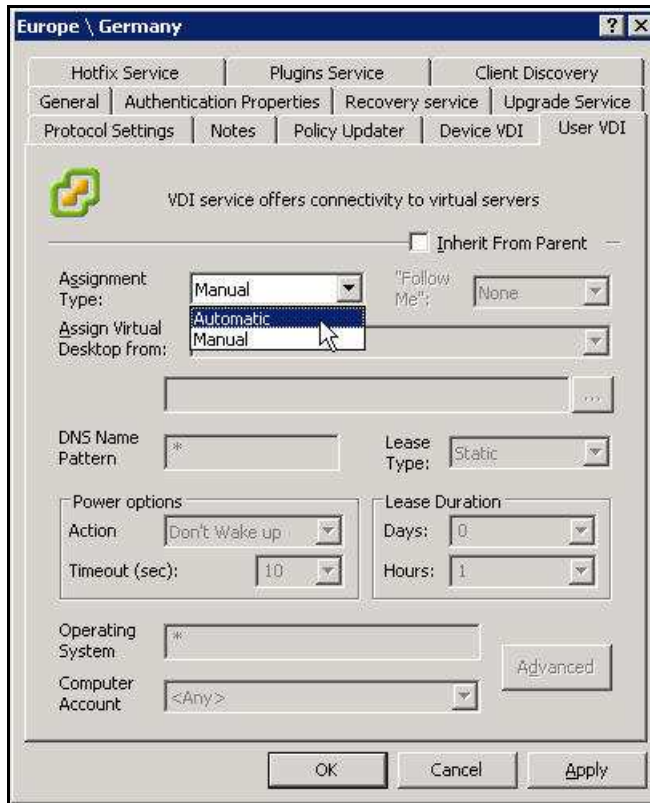


Figure 3-82: **<Site \ Scope>** Dialog Box – User VDI Tab

- In the **Assignment type** drop down list box, select **Automatic**.



**Figure 3-83: <Site / IP Scope> Dialog Box – VDI Tab – Assignment Type**

9. In the **Assign Virtual Desktop from** drop down list box, select one of the following:
  - 9.1. Select **Parent OU** to assign the VD from the parent OU of the user requesting a VD assignment.
  - 9.2. Select **Other OU** to enter a specific OU from which the VDs will be assigned.

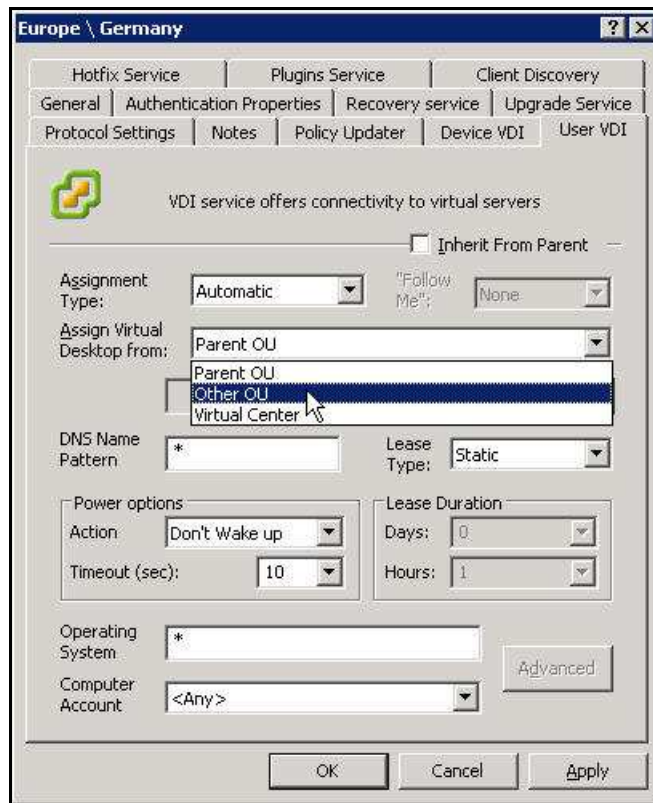

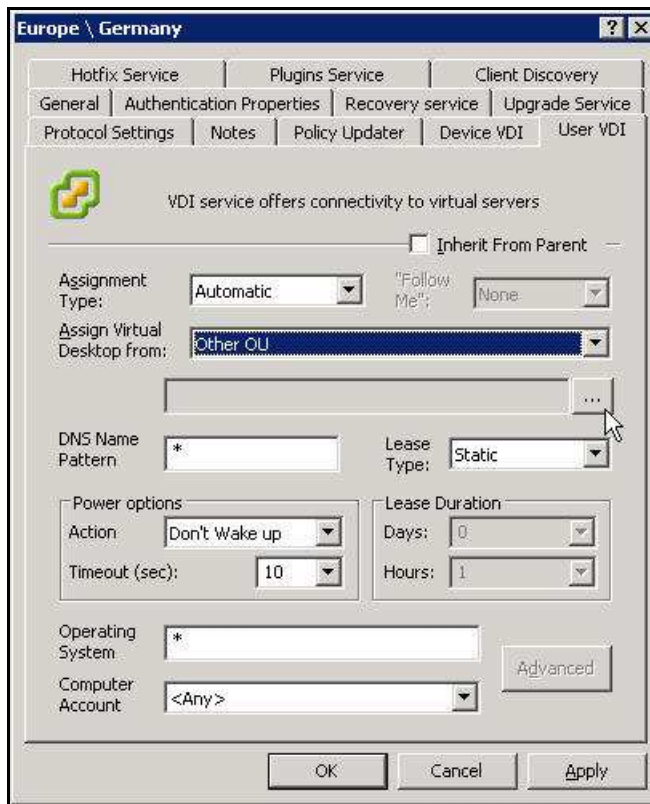


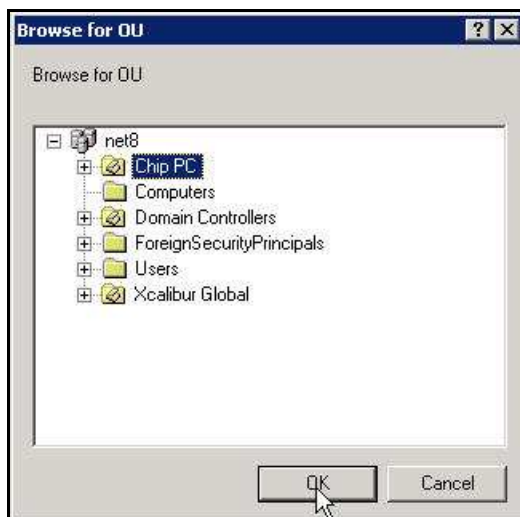
Figure 3-84: <Site \ Scope> Dialog Box – Device VDI Tab

- Click the Browse button  to open the **Browse for OU** dialog box.



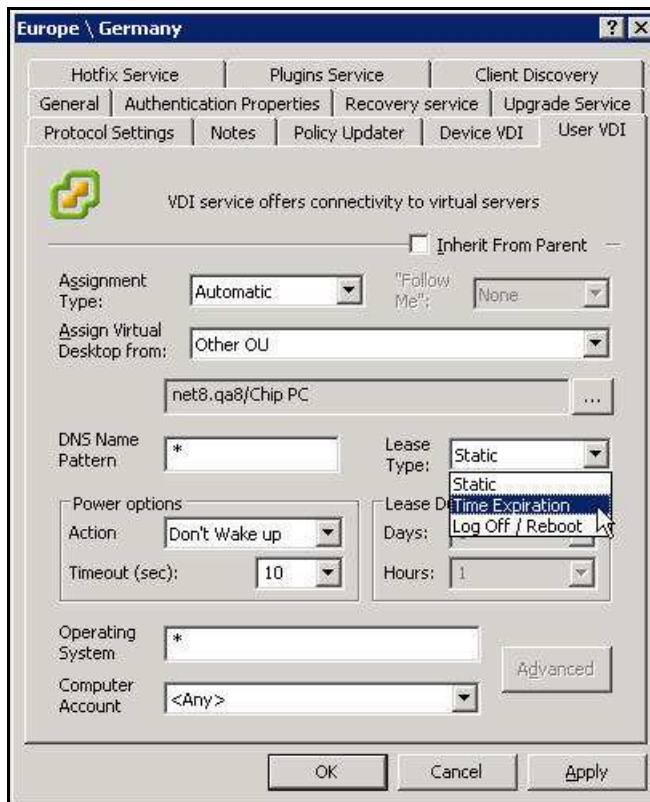
**Figure 3-85: Device VDI Tab – Active Directory - Browse Button**

- In the **Browse for OU** dialog box, select the OU containing the VD's that will be assigned.



**Figure 3-86: Browse for OU Dialog Box**

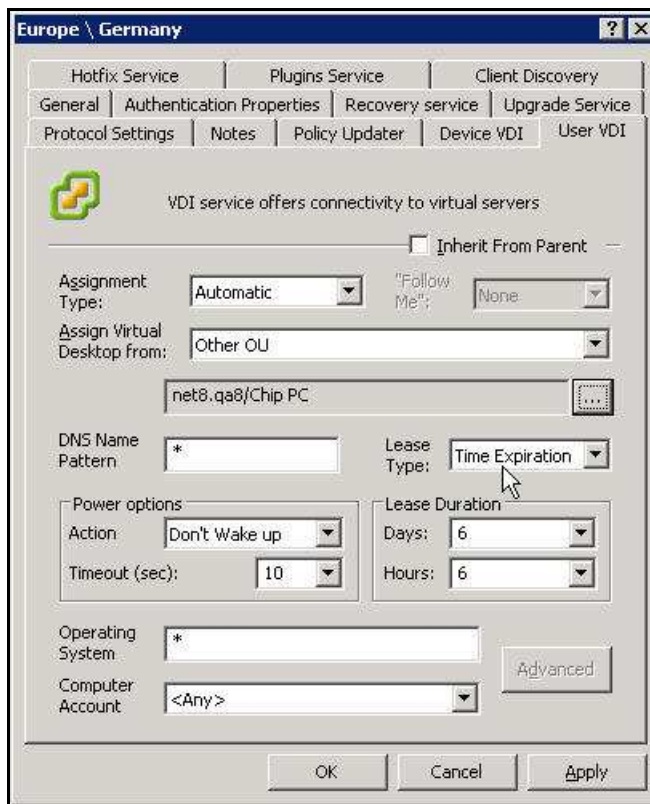
- Click **OK** to complete the OU selection and to return to the **<Site \ Scope>** dialog box.



**Figure 3-87: Assigned VDI Desktop Tab – Automatic – Active Directory – Lease Type**

13. From the **Lease Type** drop down list box, select one of the following lease types:
  - **Static** – for an unlimited lease duration (never expires).
  - **Time Expiration** – for a time limited lease that will expire after a preset duration.
  - **Log Off / Reboot** – for temporary lease that will expire when the user logs off or when the device is rebooted.

- If a **Time Expiration** lease type is selected, enter the **Days** and **Hours** in the **Lease Duration** section.



**Figure 3-88: Assigned VDI Desktop Tab – Automatic – Active Directory – Lease Duration**

- Click **OK** to complete the VD assignment procedure and to return to the Xcalibur Global Management Console.

## Chapter 4 Monitoring

This chapter explains how to monitor VD assignments. Monitoring allows us to keep track of various VD assignment information such as: lease expiration, assignment method, active user, active device, etc. There are two monitoring interfaces available for VD assignments:

- The **Desktops** section – used to monitor assignments within a particular site.
- The **Find** option – used to monitor assignments based on advanced cross-site queries.

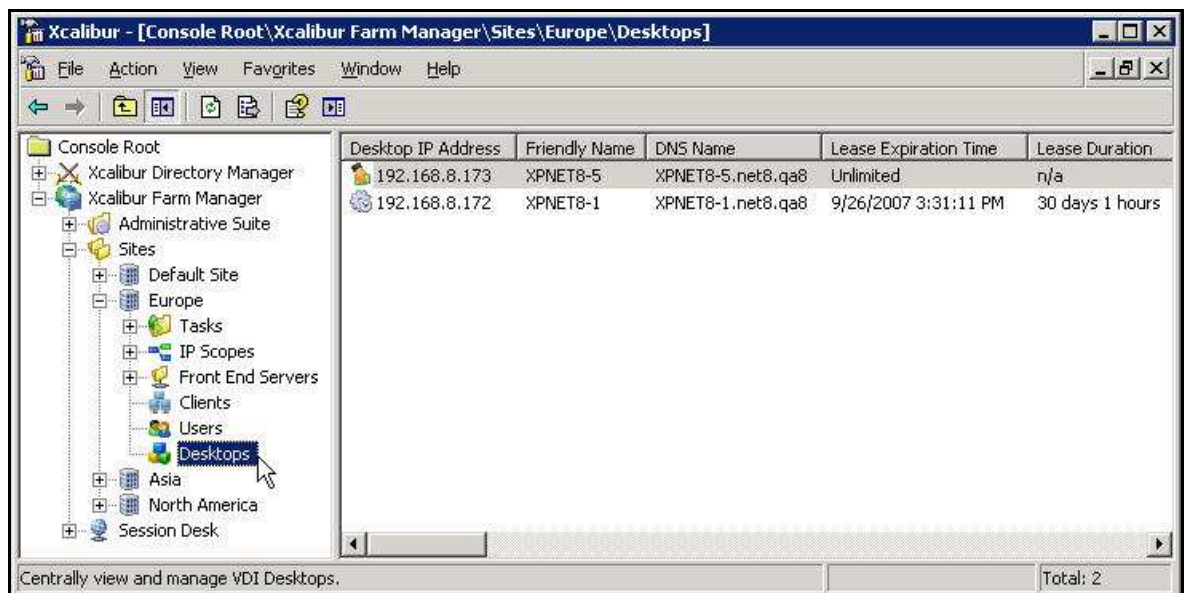
### Using Desktops to Monitor VD Assignments

A **Desktops** section is found in each of the sites and it lists all VD assignments for devices belonging to the site or for users that are logged-on to devices belonging to the site. This Section explains how to access the Desktops section and how to monitor the listed VD assignments. In addition, there is an overview of some of the management options that are available in the **Desktops** section.

#### 1 Accessing the Desktops Section

Perform the following steps to access the **Desktops** section:

1. In the Xcalibur Management Console window, expand the path: **Xcalibur Farm Manager \ Administrative Suite \ Sites**.
2. Select the site that contains the target desktops (in this example: **Europe**).
3. Within the selected site, select **Desktops**.



**Figure 4-1: Xcalibur Farm Manager – Desktops**

**NOTE** *The list of Desktops can be sorted by any one of the information fields. Similarly the Filter option within the View menu, enables the list to be filtered based on values in any one of the information fields.*



## 2 Monitoring Listed VD Assignments

After selecting the **Desktops** section, a list of VD assignments appears in the right pane. Each line represents an assignment of a VD to a user or to a device. The lines are divided into columns listing the major properties that define the VD assignment including:

- The IP address of the VD
- The Lease Expiration Time
- The IP of the Device
- The assignment method
- The VD NetBIOS name
- The Device NetBIOS name
- The User name





Two additional monitoring options are available via the Desktops section:

- The VD assignment icons – provide summary information regarding the VD assignment method and the lease status.
- The VDI Usage properties – provides detailed information regarding all of the properties that define the VD assignment.

### 2.1 VD Assignment Icons






In the list of VD assignments that appear in the Desktops section, each line is preceded by an icon indicating the assignment method and the status of the lease assignment (refer to Table 4-1).

**Table 4-1: Desktop Status Icon**

Icon	Description
Assignment Method: <b>Prohibited</b>	
	The device/user is prohibited from being assigned a VD.
Assignment Method: <b>Automatic</b>	
	Expired lease.
	Valid lease. Will expire upon Device Restart or User Log-off.
	Valid lease. One of the following types: <ul style="list-style-type: none"> <li>■ Time Expiration – will expire after a fixed period.</li> <li>■ Static (unlimited) – will never expire.</li> </ul>



**Table 4-1: Desktop Status Icon - continued**

Icon	Description
Assignment Method: <b>Manual</b>	
	Valid lease. One of the following types: <ul style="list-style-type: none"> <li>■ Time Expiration – <b>more</b> then 30% of lease time remains.</li> <li>■ Static (unlimited) – will never expire.</li> <li>■ Will expire upon Device Restart or User Log-off.</li> </ul>
	Valid lease. Time Expiration – <b>less</b> then 30% of Lease time remains.
	The Lease has expired.
<b>Error Status</b>	
	There has been a Device error <sup>1</sup>
	There has been a User error <sup>1</sup>

<sup>1</sup> In the event of an unexpected and/or illegal mode (not listed in the table above), an error will appear as a Device error or a User error depending on the Assigned To object type.

## 2.2 VDI Usage Properties

The VDI Usage properties are all of the properties that define the VD assignment.

Perform the following steps to view the VDI Usage properties:

1. Select the **Desktops** section to view a list of VD assignments in the right pane.

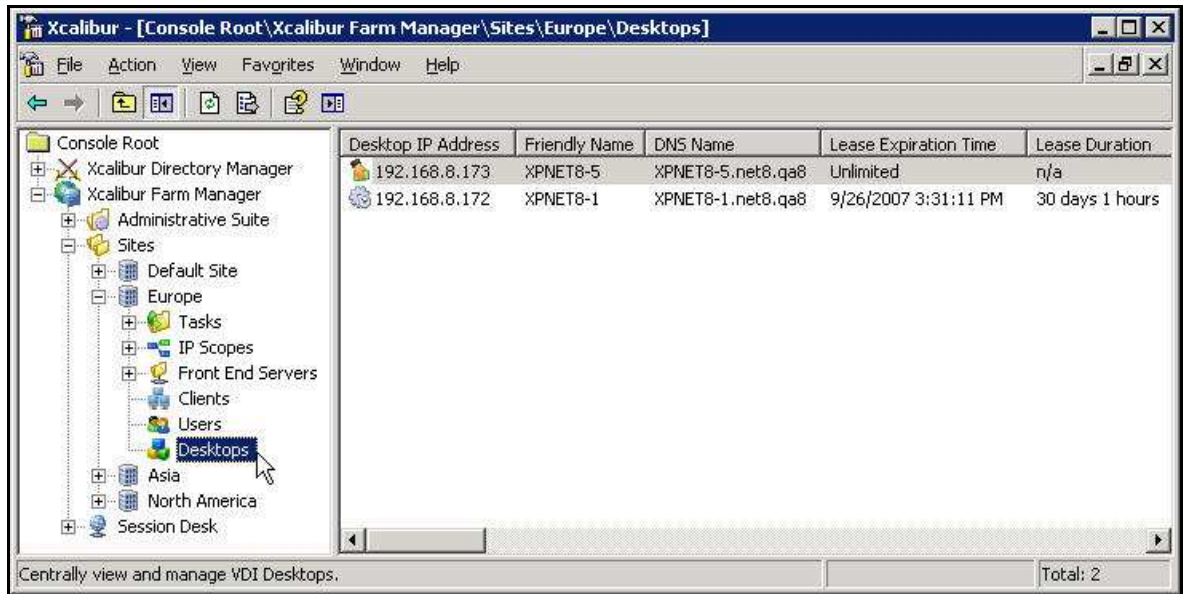


Figure 4-2: Xcalibur Farm Manager - Desktops

2. In the right pane, select and right-click the desired assignment to display a menu.

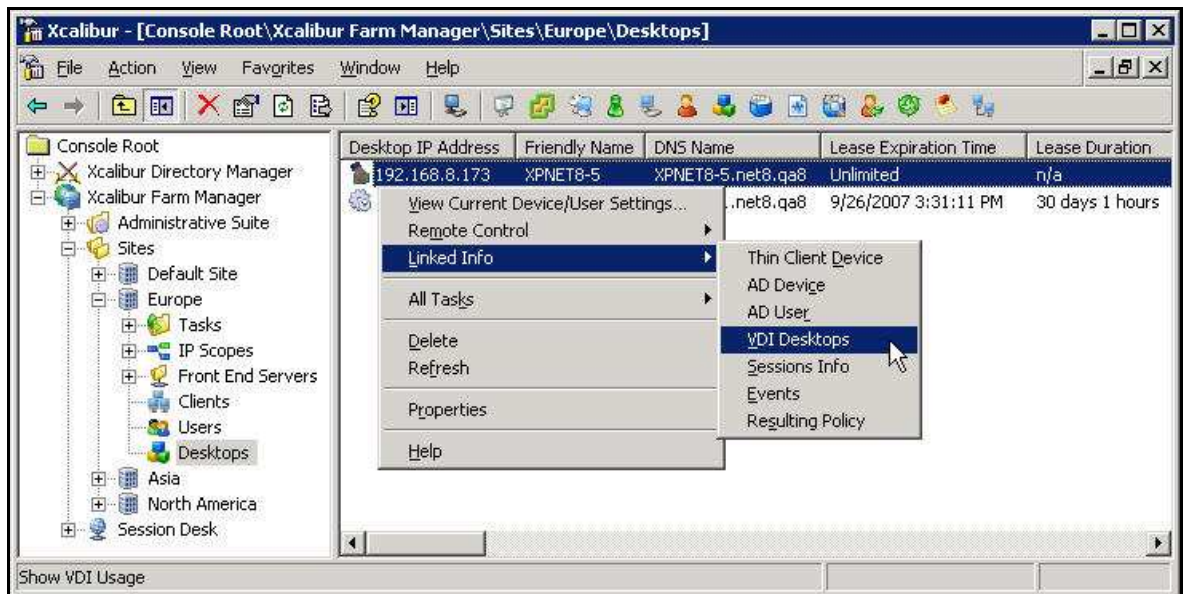


Figure 4-3: Desktop Menu - Linked Info

3. In the menu, click **Properties** or **Linked Info > VDI Desktops** to display **VDI Usage Properties** dialog box.

4. Select the **VDI usage** tab to view properties related to the lease and properties related to the assigned user/device.

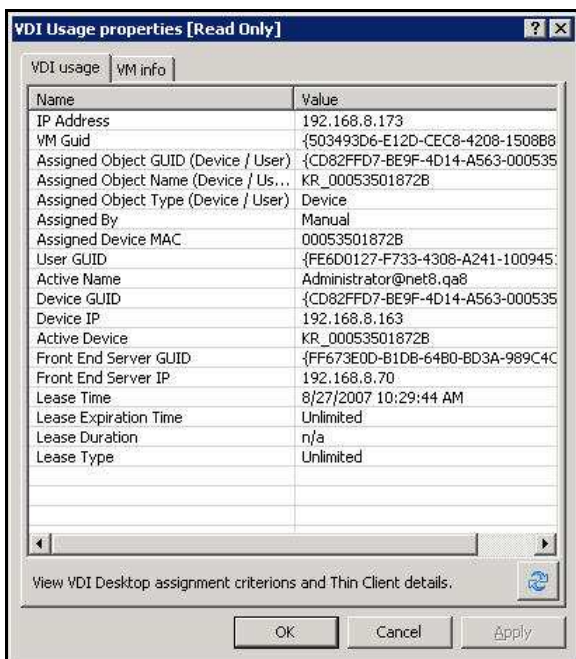


Figure 4-4: VDI Usage Properties – VDI Usage Tab

5. Select the **VM info** tab to view properties related to the assigned VD.

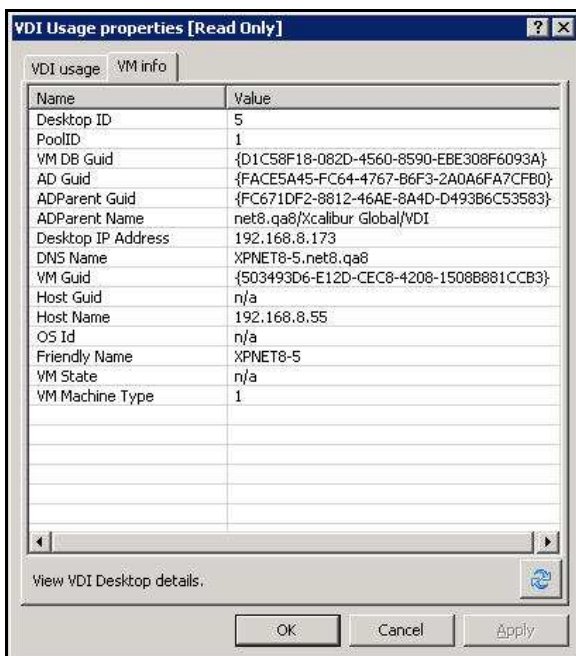


Figure 4-5: VDI Usage Properties – VM Info Tab

### 3 Desktops Management Options

A number of management options can be performed on the VD assignments via the **Desktops** section. Following are a few selected management options:

- Remote Control
- General Tasks

#### 3.1 Remote Control

Three remote control options are available:

- Thin Client (VNC) – remote control the device using the VNC plug-in.
- Virtual Desktop (VM Console) – remote control the VD using the VMware Remote Console utility.
- Virtual Desktop Session (RDP/ICA) – shadow an active session using the RDP client.

Perform the following steps to use a remote control option:

1. Select the **Desktops** section to view a list of VD assignments in the right pane.
2. In the right pane, select and right-click the desired assignment to display a menu.
3. On the menu, click **Remote Control** and select the desired remote control option.

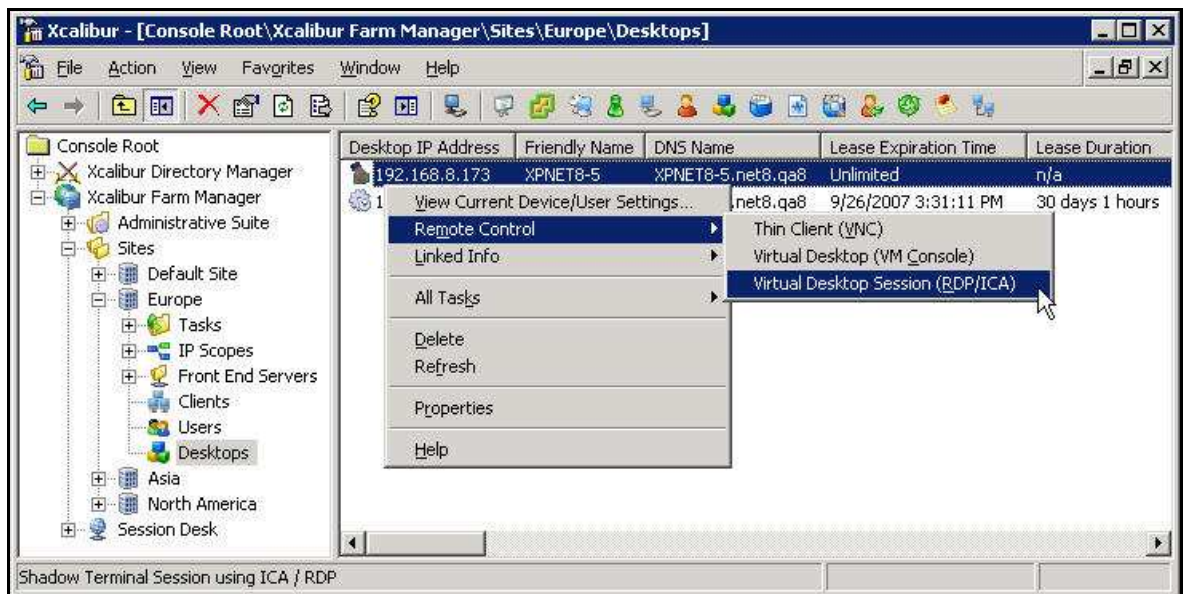


Figure 4-6: Desktops - Menu – Remote Control

### 3.2 General Tasks

Five general task options are available:

- Log-off User
- Reboot Device
- Send Message – sends a message to the device.
- Ping Client – pings the device.
- Ping Desktop – pings the VD.

Perform the following steps to use a general task option:

1. Select the **Desktops** section to view a list of VD assignments in the right pane.
2. In the right pane, select and right-click the desired assignment to display a menu.
3. On the menu, click **All Tasks** and select the desired general task option.

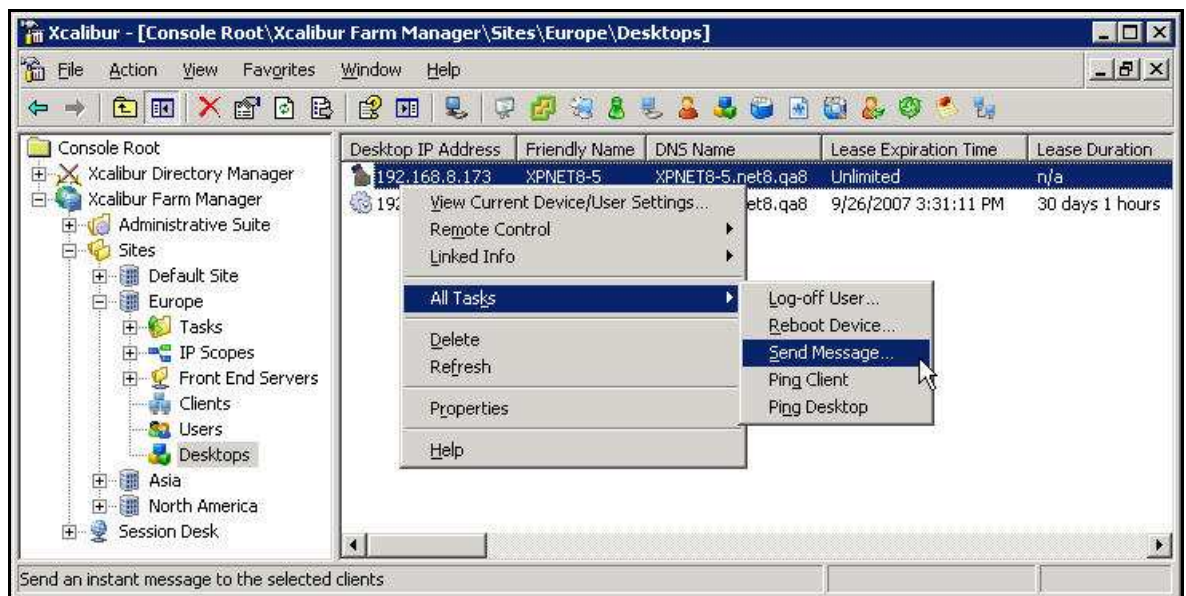


Figure 4-7: Desktop - Menu – All Tasks



## Using Find to Monitor VD Assignments

**Find** is used to locate and monitor VD assignments across sites based on used specified criteria input to search engine. This Section explains how to access and use the **Find** section and how to monitor the listed VD assignments.

### 1 Using Find to Search for VD Assignments

1. In the Xcalibur Management Console window, expand the path: **Xcalibur Farm Manager \ Administrative Suite**
2. Select and right-click **Find** to open a menu.
3. On the menu, click **New > VDI Search....**

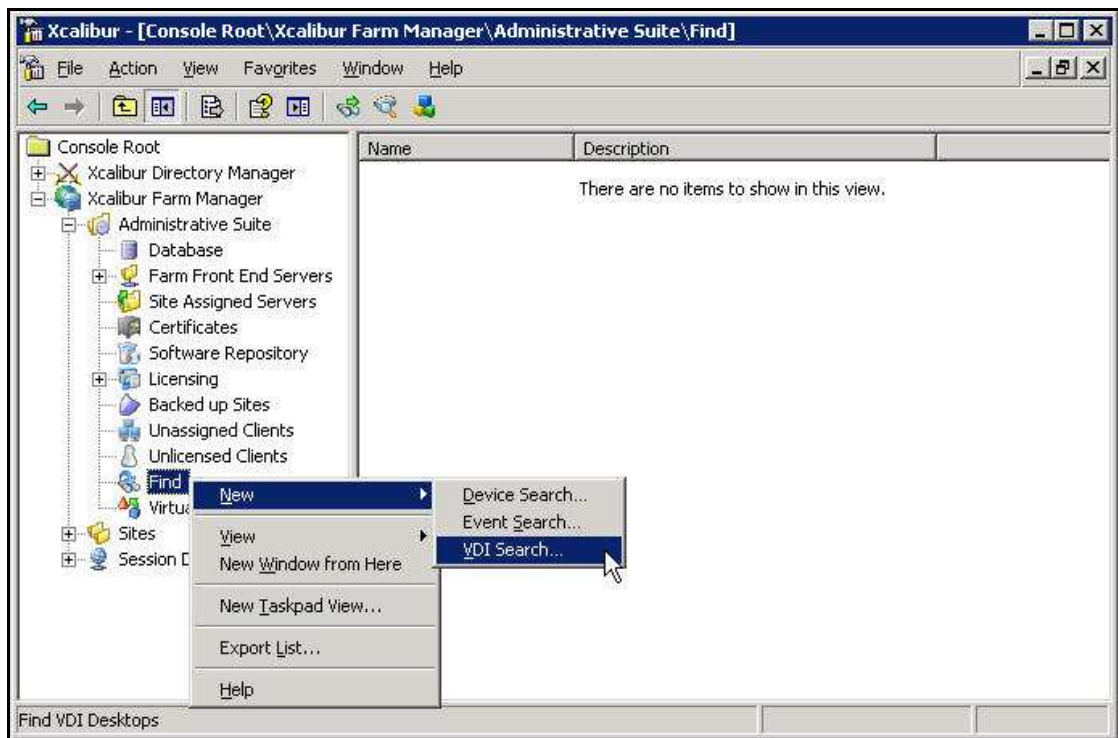
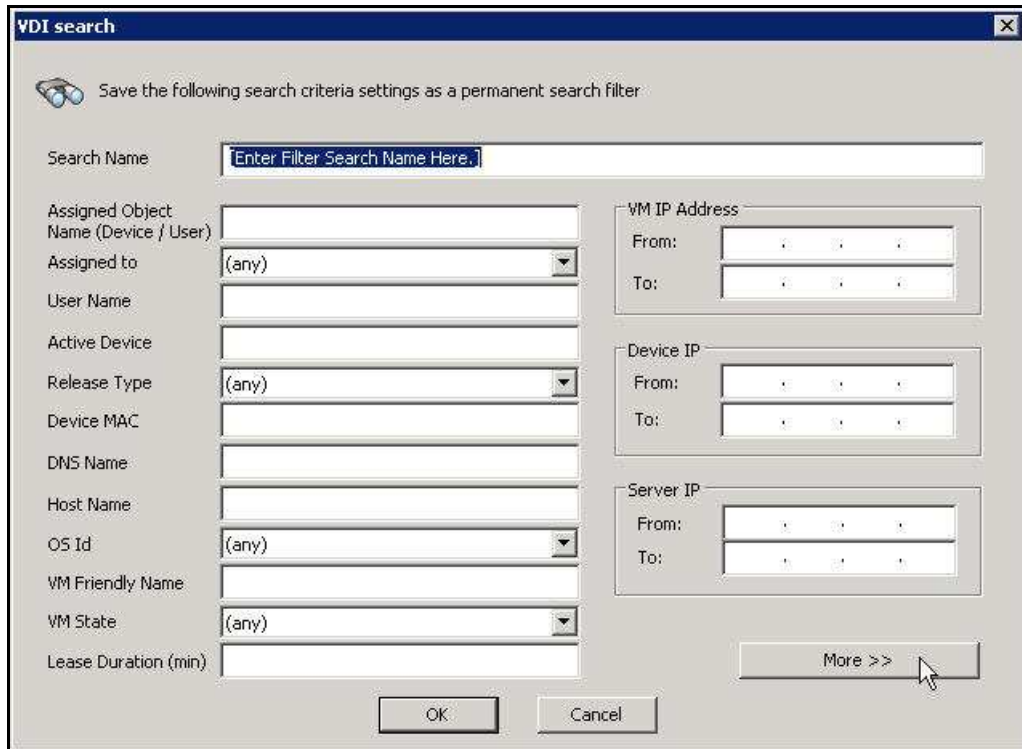


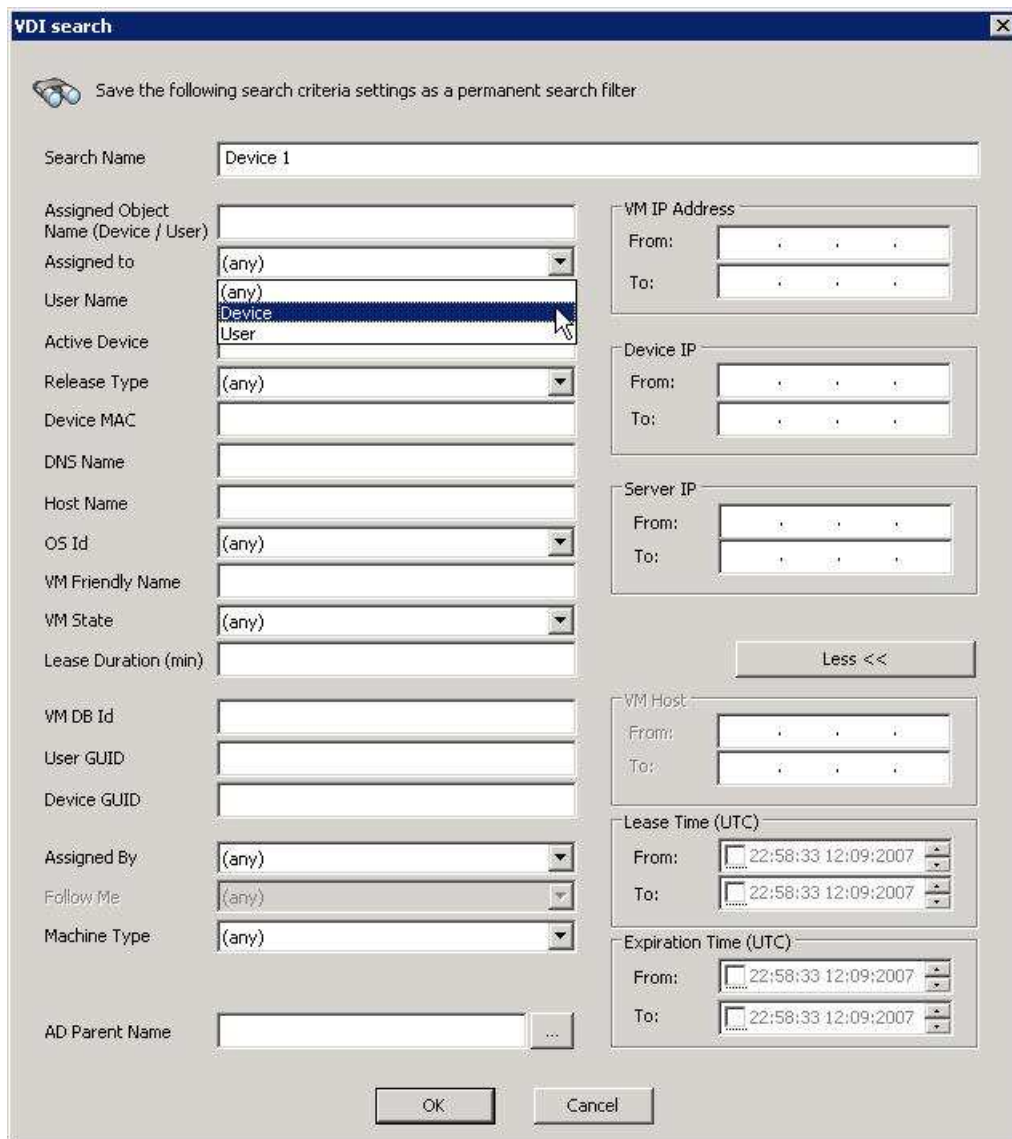
Figure 4-8: Xcalibur Farm Manager - Find

4. In the **VDI Search** dialog box, click **More >>** to display more search filtering criteria.



**Figure 4-9: VDI Search Dialog Box**

- In the **Search Name** text box, type in a name for the search (in this example: **Device 1**).



**Figure 4-10: VDI Search Dialog Box - Full**

- Use the drop down list boxes and text boxes to further define the search as required (refer to Table 4-2).


**NOTE** *The search criteria are cumulative; each new criteria will either further narrow the results or have no effect (if it does not apply). The search results are those that have met all the input criteria.*



**Table 4-2: VDI Search Dialog Box Definitions**

Box	Description
Search Name	A user-friendly name for the current search
Assigned Object Name (Device/User)	If the name that was assigned to the Device or User that is target of the search, is known type it in here.
Assigned to	To select to search by User or Device, select in the drop-down list: <ul style="list-style-type: none"> <li>■ (any) default</li> <li>■ Device</li> <li>■ User</li> </ul>
User name	If the User name of the target is known, type it in here.
Active Device	
Release Type	To select to search by Release Type, select in the drop-down list: <ul style="list-style-type: none"> <li>■ (any) default</li> <li>■ Unlimited</li> <li>■ Time Expiration</li> <li>■ User Logoff/Device Reboot</li> </ul>
Device MAC	If the MAC address of the target is known, type it in here.
DNS Name	If the DNS name of the target is known, type it in here.
Host Name	If the Host name of the target is known, type it in here.
OS Id	Select the OS (Operating System type) in the drop-down list
VM Friendly Name	If the VM Friendly name of the target is known, type it in here
VM State	To search by VM State, select in the drop-down list: <ul style="list-style-type: none"> <li>■ (any) default</li> <li>■ Off</li> <li>■ On</li> <li>■ Suspended</li> </ul>
Lease Duration (min)	If the Lease duration in minutes of the target is known, type it in here
VM DB Id	If the VM DB Id of the target is known, type it in here
User GUID	If the User GUID of the target is known, type it in here
Device GUID	If the Device GUID of the target is known, type it in here

**Table 4-2: VDI Search Dialog Box Definitions - continued**

Box	Description
<b>Assigned By</b>	To search by Assignment, select in the drop-down list: <ul style="list-style-type: none"> <li>■ <b>(any)</b> default</li> <li>■ <b>Automatic</b></li> <li>■ <b>Manual</b></li> <li>■ <b>Prohibited</b></li> </ul>
<b>Follow Me</b>	
<b>Machine Type</b>	To search by Machine Type, select in the drop-down list: <ul style="list-style-type: none"> <li>■ <b>(any)</b> default</li> <li>■ <b>VM</b></li> <li>■ <b>VM Template</b></li> </ul>
<b>AD Parent Name</b>	Click the browse  button to open a dialog box and navigate to the AD parent directory
<b>VM IP Address</b>	Search range of VM IP addresses, type in beginning and end addresses
<b>Device IP</b>	Search range of Device IP addresses, type in beginning and end addresses
<b>Server IP</b>	Search range of Server IP addresses, type in beginning and end addresses
<b>Lease Time (UTC)</b>	Search range for Lease assignment begin time (UTC), select time range
<b>Expiration Time (UTC)</b>	Search range for Lease expiration time (UTC), select time range

- In the **VDI Search** dialog box, click OK after completing the desired search criteria.

8. In the Xcalibur window, under **Find** select the search name (in this example: **Device 1**), the results of the search are then displayed in the right pane.

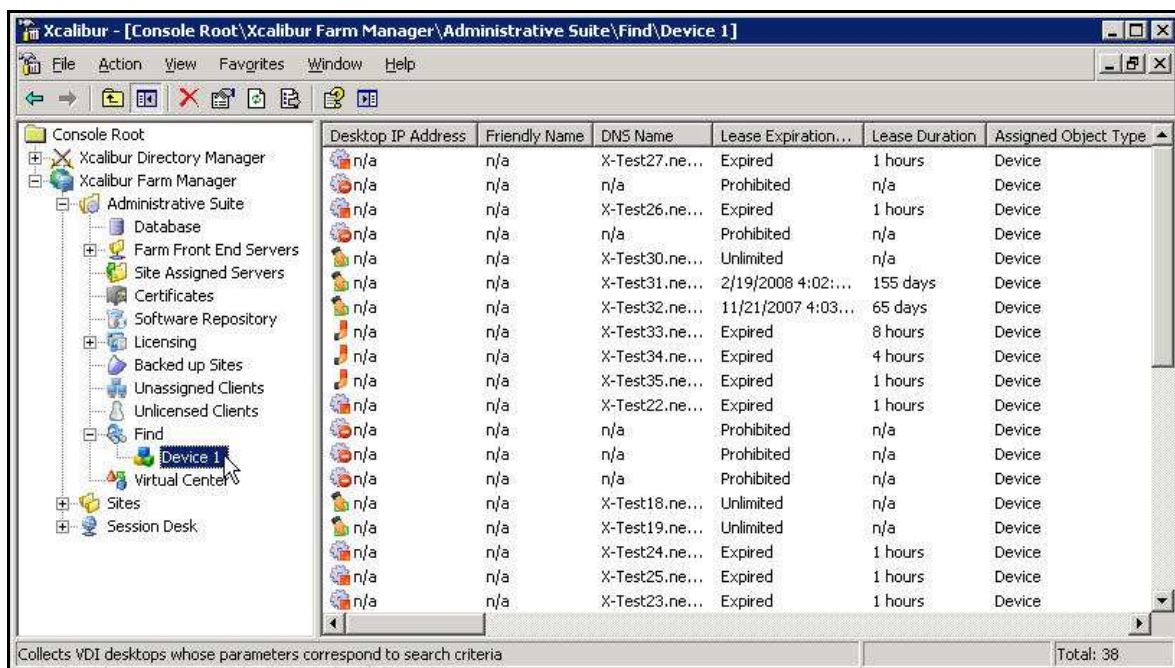


Figure 4-11: Xcalibur Farm Manager – Find – Search Monitor

**NOTE** The search is ongoing and the results are continuously updated.

**NOTE** Multiple searches can be launched simultaneously; they are listed chronologically below the first search.

## 2 Monitoring Listed VD Assignments

Refer to Monitoring Listed VD Assignments in previous Chapter.

## 3 Desktops Management Options

Refer to Desktops Management Options in previous Chapter.

## Chapter 5 Advanced VD Assignment

### Filtering

## Appendix A Prohibited VD Assignment

### 1 Introduction

This Appendix describes the procedures for the options of prohibiting either

- VD Assignment to a Device
- VD Assignment to a User

### 2 Prohibiting VD Assignment to a Device

To prohibit VD assignment to a device:

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, expand the tree under **Xcalibur Directory Manager** to reveal the OU that contains the target device. In this example expand: **net8.qa8 \ Chip PC \ Thin Clients \ Berlin**.

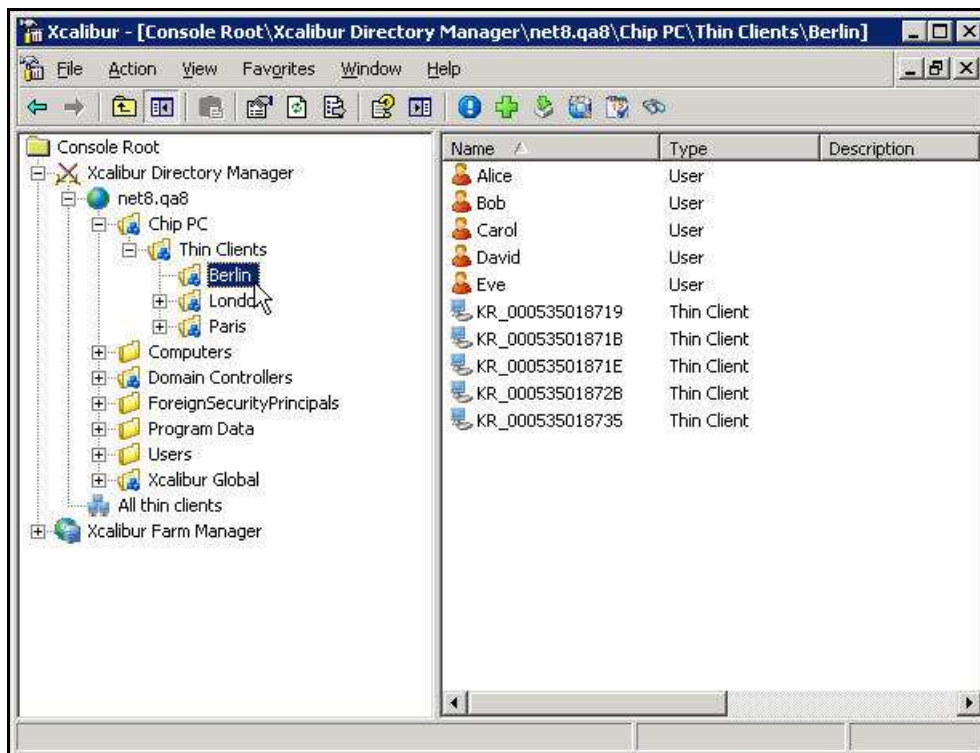
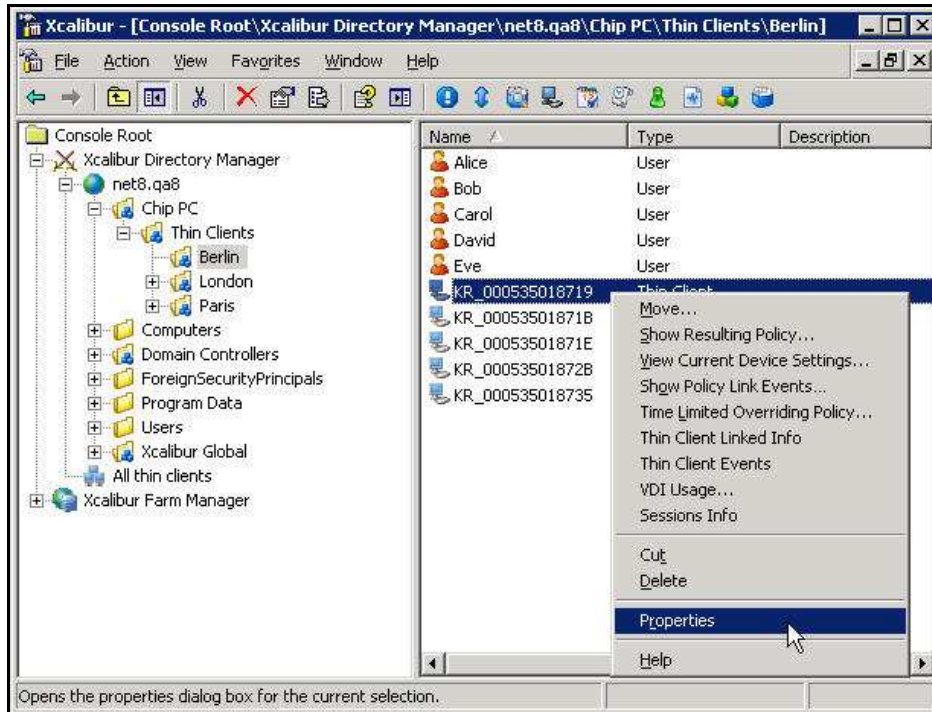


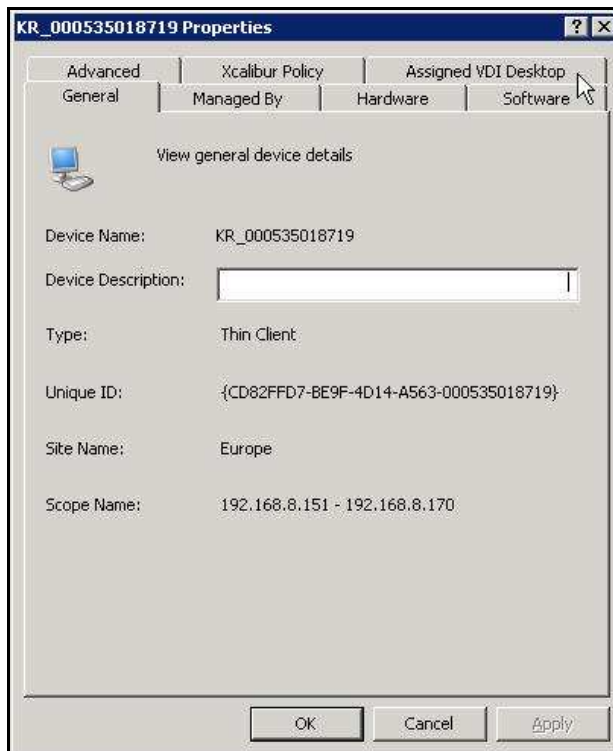
Figure 5-1: Xcalibur Management Console - Select Target OU

3. Right-click on the target device (**KR\_000535018719** in this example) to display a menu.
4. On the menu, click **Properties** to display the **<Device> Properties** dialog box.



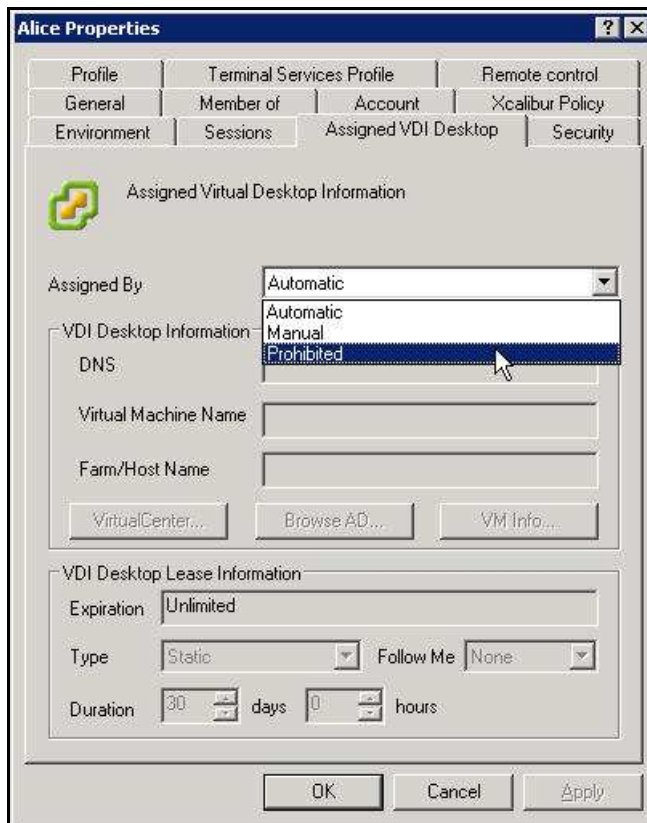
**Figure 5-2: Xcalibur Management Console – Device - Menu**

5. In the **<Device> Properties** dialog box, select the **Assigned VDI Desktop** tab.



**Figure 5-3: <Device> Properties Dialog Box – Assigned VDI Desktop Tab**

- In the **Assigned By** drop down list box select **Prohibited**.



**Figure 5-4: <Device> Properties Dialog Box – Assigned VDI Desktop Tab – Manual**

- Click **OK** to complete the procedure and to return to the Xcalibur Global Management Console.



### 3 Prohibiting VD Assignment to a User

To prohibit VD assignment to a User:

1. On the Task Bar, click **Start > Programs > Xcalibur Global 1.2 > Management Console** to launch the Xcalibur Global Management Console.
2. In the Xcalibur Management Console window, expand the tree under **Xcalibur Directory Manager** to reveal the OU that contains the target user. In this example expand: **net8.qa8 \ Chip PC \ Thin Clients \ Berlin**.

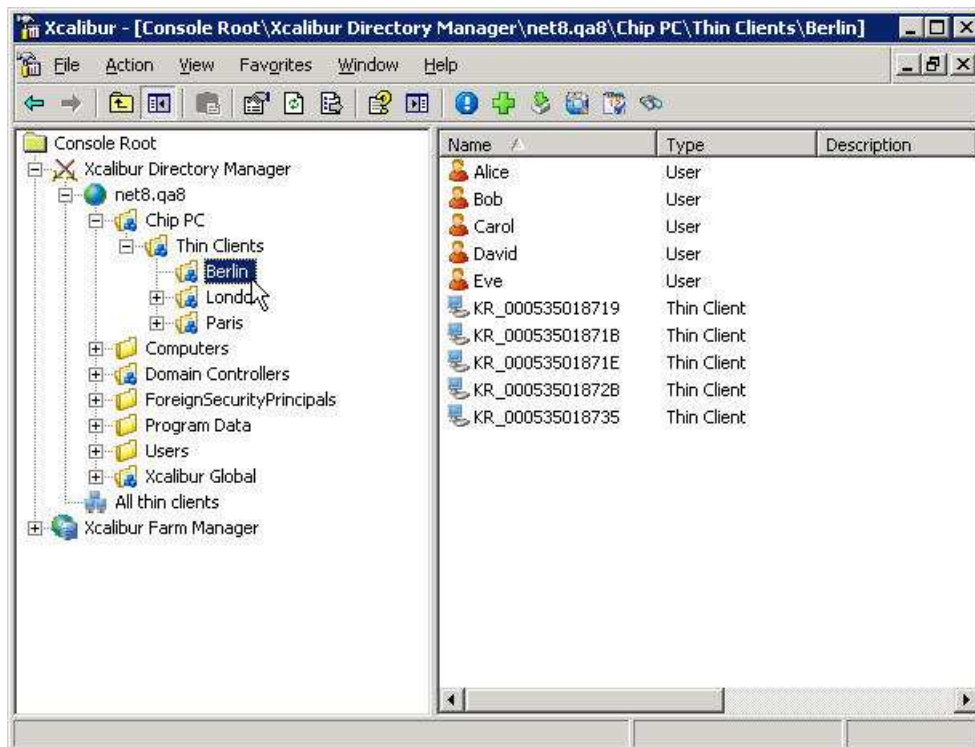
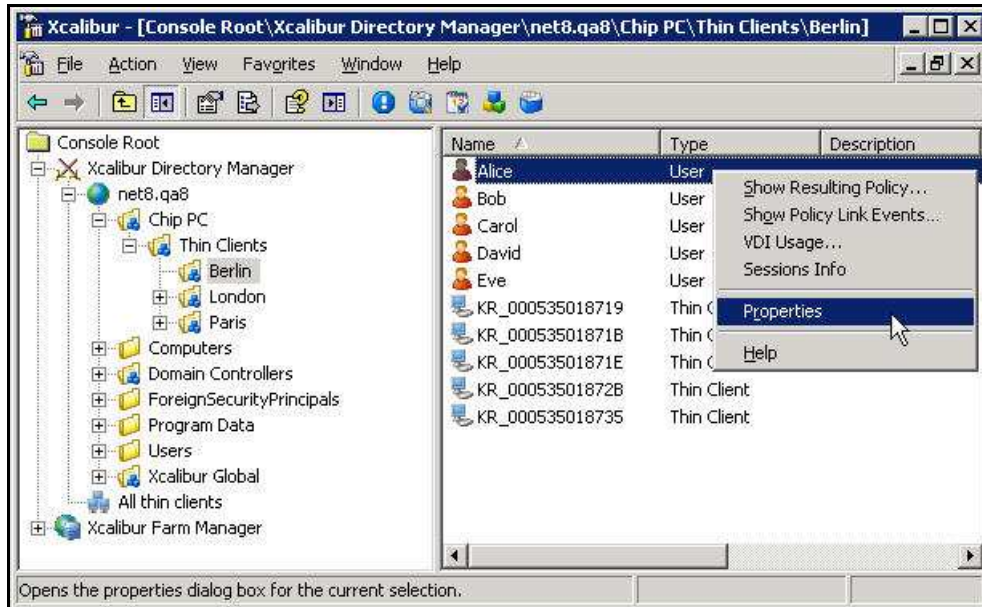


Figure 5-5: Xcalibur Management Console - Select Target OU



3. Right-click on the target user (**Alice** in this example) to display a menu.
4. On the menu, click **Properties** to display the **<User> Properties** dialog box.



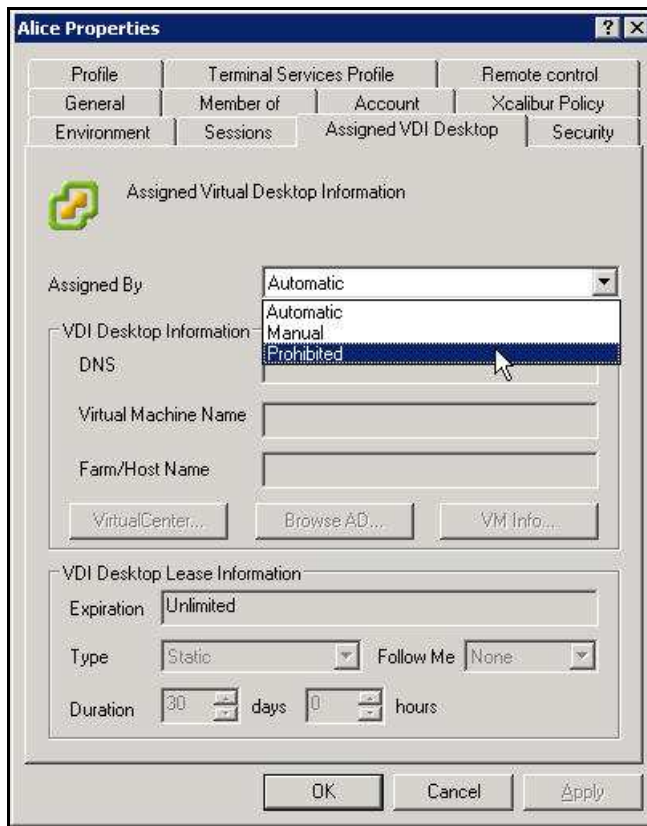
**Figure 5-6: Xcalibur Management Console**

5. In the **<User> Properties** dialog box, select the **Assigned VDI Desktop** tab.



**Figure 5-7: <User> Properties Dialog Box – Assigned VDI Desktop Tab**

- In the **Assigned By** drop down list box select **Prohibited**.



**Figure 5-8: <User> Properties Dialog Box – Assigned VDI Desktop Tab – Manual**

- Click **OK** to complete the procedure and to return to the Xcalibur Global Management Console.

# Appendix B How to Install the VDI Broker Plug-in onto TCs

## 1 Objectives

This appendix explains how to use Xcalibur Global to install the VDI Broker plug-in onto thin clients.

The procedure is based on the following steps:

1. Select the OU containing the target TCs
2. Create an Xcalibur Policy that is linked to the target OU
3. Configure the Xcalibur Policy to install the VDI Broker plug-in

## 2 Procedure

### 2.1 Select the OU Containing the Target TCs

1. Launch the Xcalibur Global Management Console by clicking on **Start > Programs > Xcalibur Global 1.2 > Management Console**.
2. In the left pane of the Xcalibur Management Console, expand the tree under **Xcalibur Directory Manager** to reveal the OU that contains the target TCs. In this example expand: **net8.qa8 \ Chip PC \ Thin Clients**. In this example expand: **net8.qa8 \ Chip PC \ Thin Clients**.

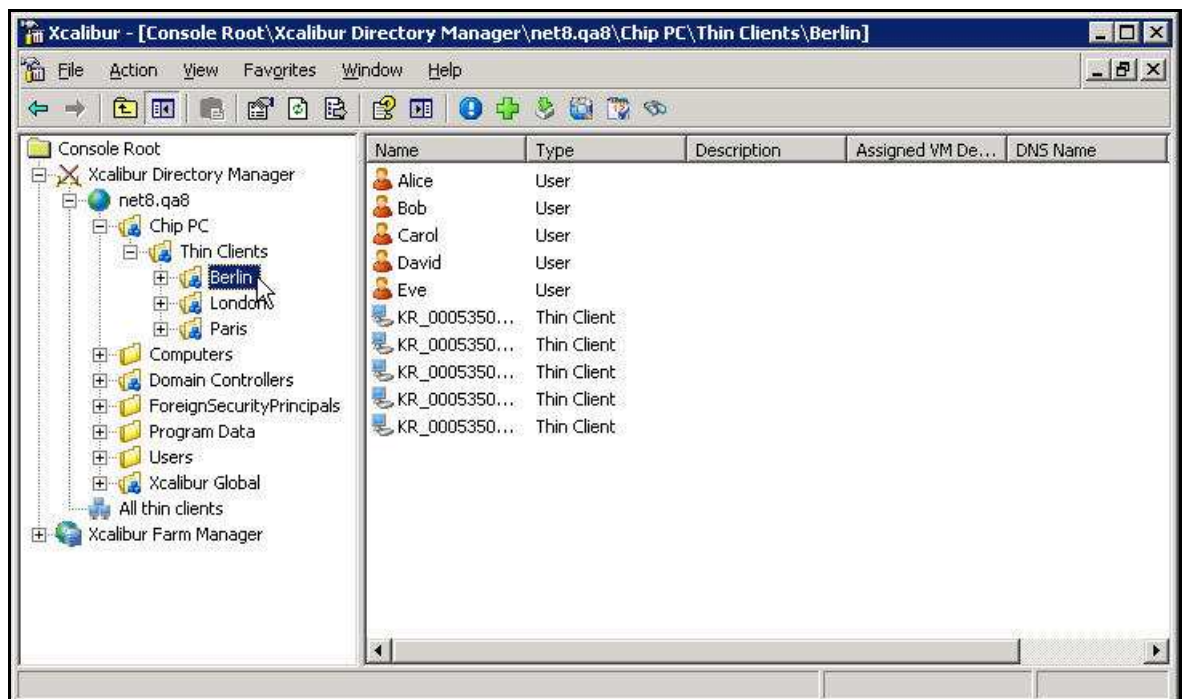


Figure 5-9: Xcalibur Management Console - Select Target OU

3. In the expanded folders, select the target OU (In this example **Berlin**).

## 2.2 Create an Xcalibur Policy that is Linked to the Target OU

1. Right-click on the target OU (**Berlin** in this example) to display a menu.
2. On the menu, click **Properties** to display the **<OU> Properties** dialog box.

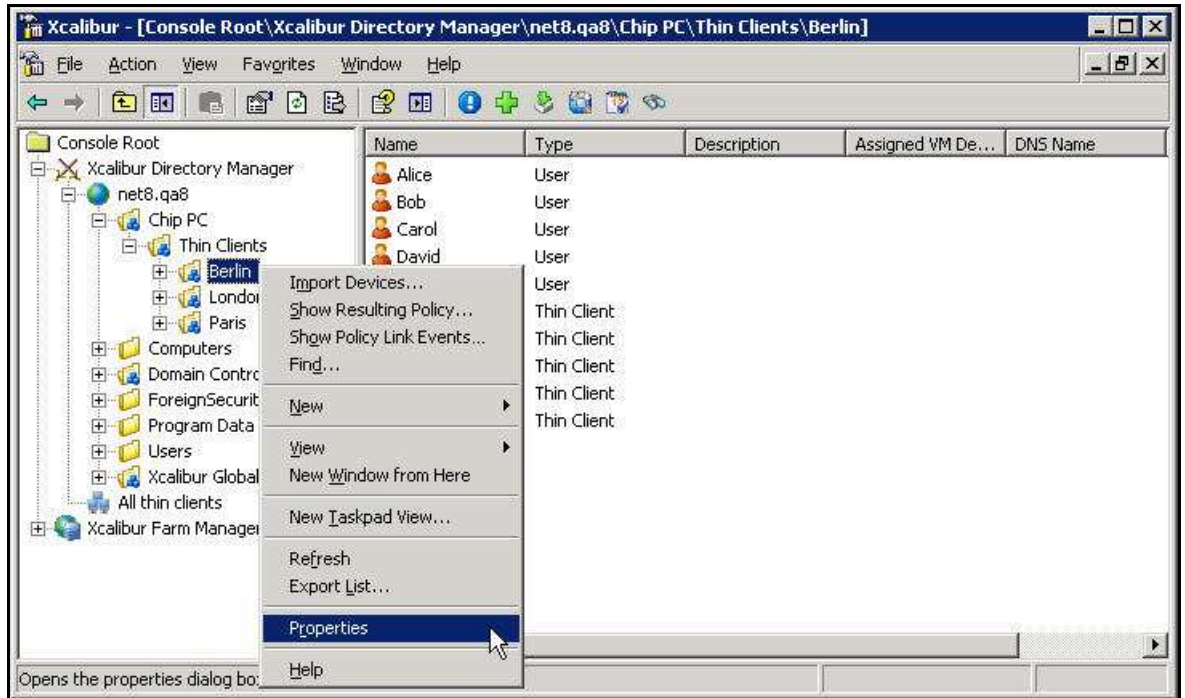
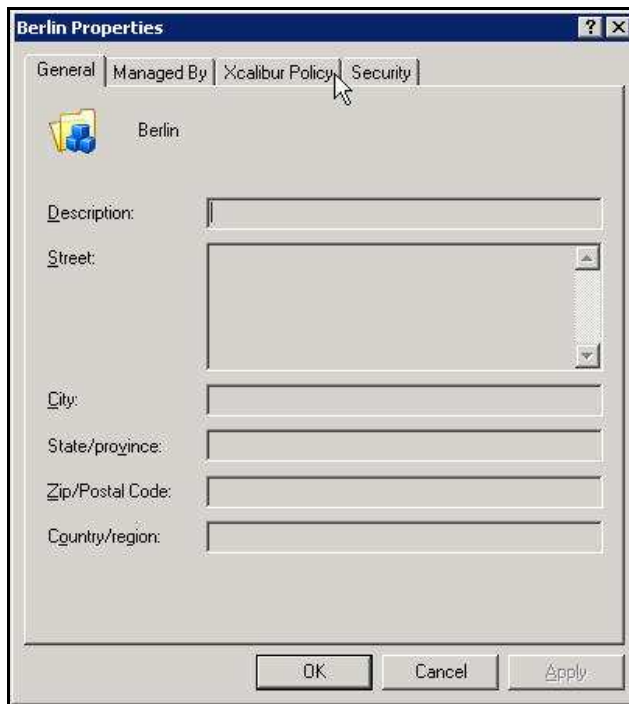


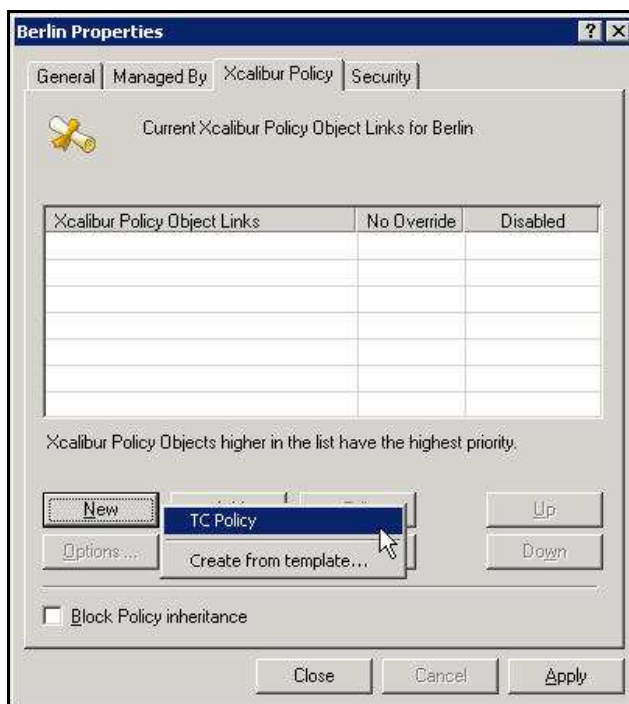
Figure 5-10: Xcalibur Management Console – Target OU > Properties

3. In the **<OU> Properties** dialog box, select the **Xcalibur Policy** tab.



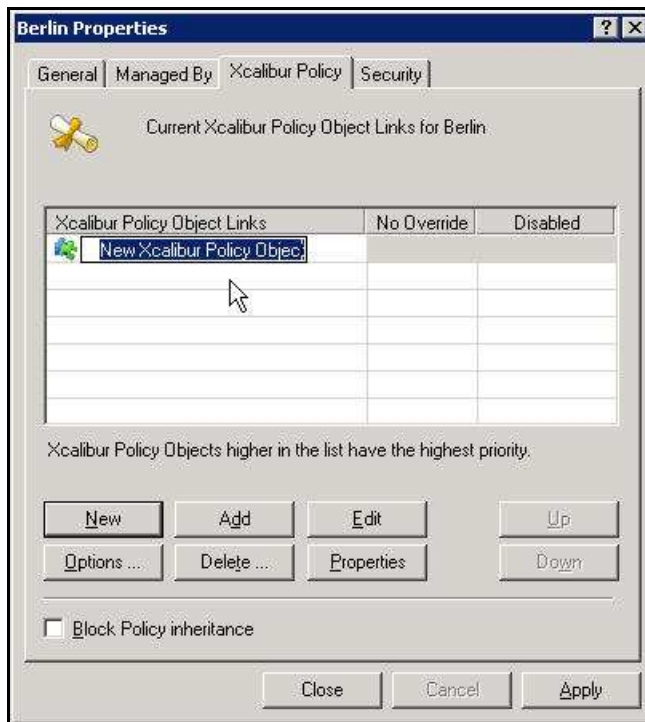
**Figure 5-11: <OU> Properties Dialog Box – Select Xcalibur Policy Tab**

4. In the **Xcalibur Policy** tab, click **New** to open a menu.



**Figure 5-12: Xcalibur Policy Tab – New > TC Policy**

5. On the menu, select **TC Policy** to create a **New Xcalibur Policy Object** that will appear in the **Xcalibur Policy Object Links** column.



**Figure 5-13: Xcalibur Policy Tab – New Xcalibur Policy Object**

6. Type a new policy name (“**Device – VDI Broker Plug-in**” in this example) over the default name “**New Xcalibur Policy Object**”.

## 2.3 Configure the Xcalibur Policy to install the VDI Broker Plug-in

1. Select the newly created policy (“**Device – VDI Broker Plug-in**” in this example) and click **Edit** to open the **Policy Editor** window.

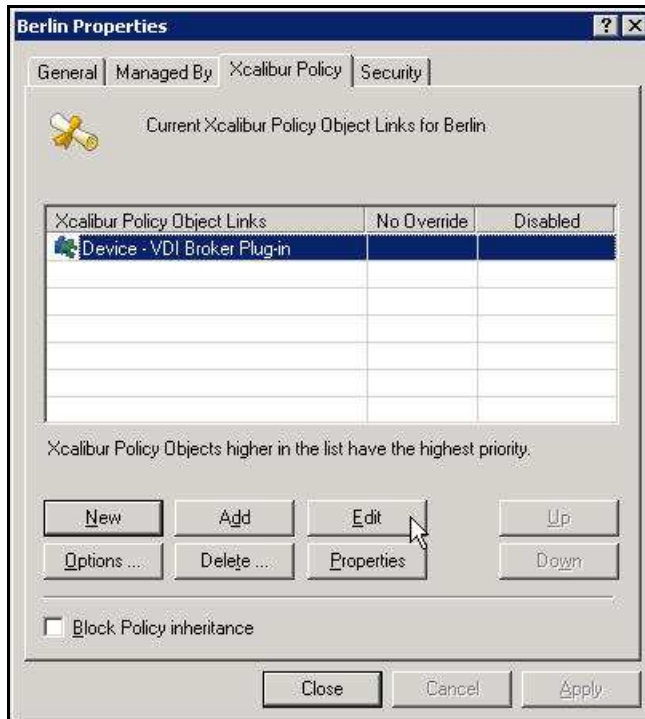
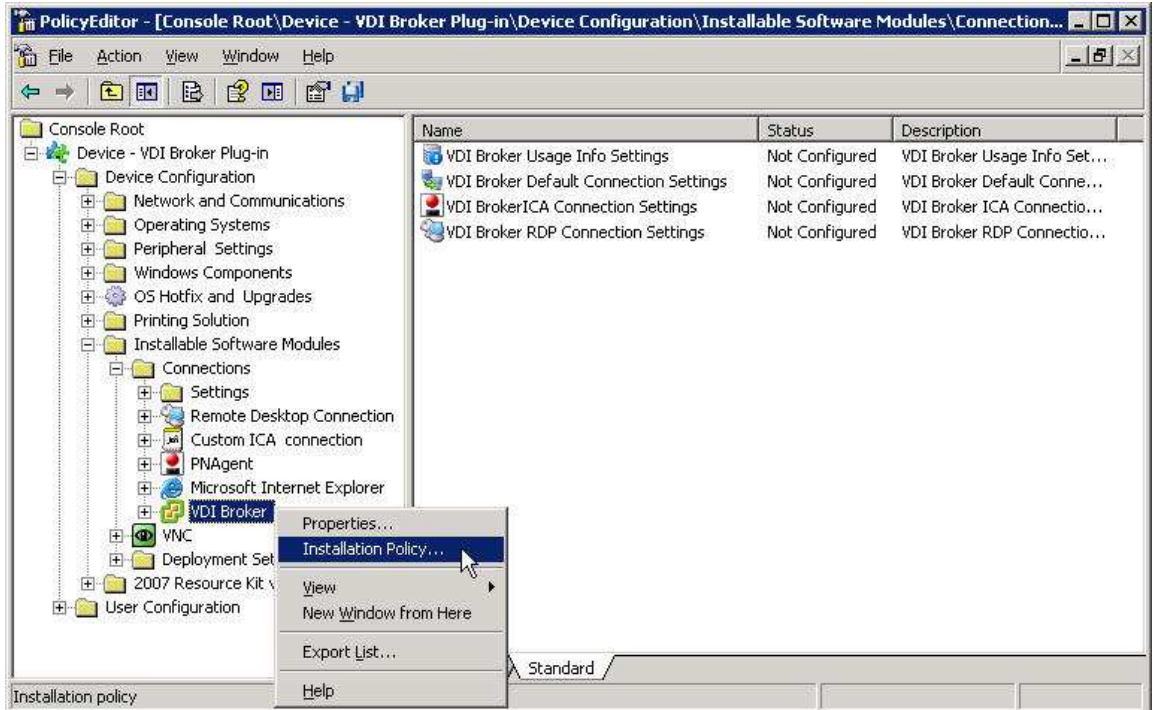


Figure 5-14: Xcalibur Policy Tab – Edit New Policy



2. In the Policy Editor window, expand the following path:  
**<Policy Name> \ Device Configuration \ Installable Software Modules \ Connections**

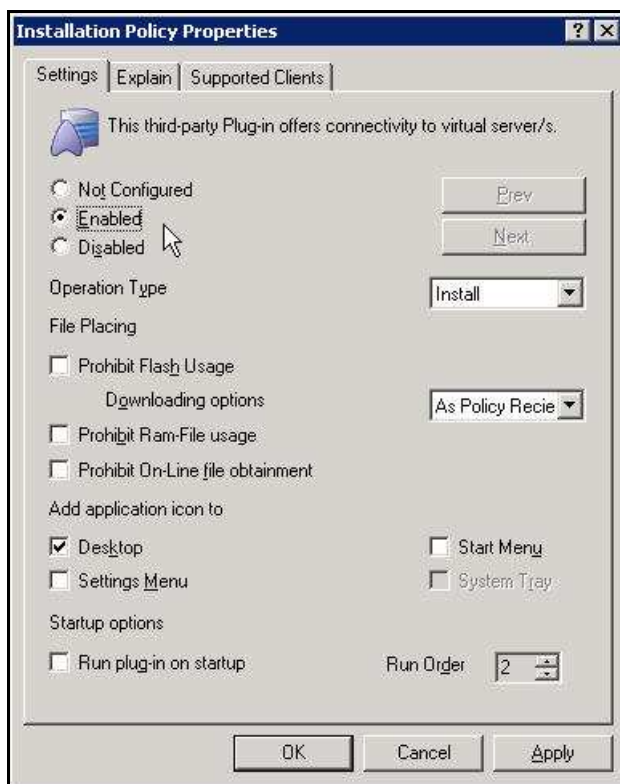


**Figure 5-15: Policy Editor Window – VDI Broker - Installation Policy**

3. Under **Connections**, select and right-click **VDI Broker** to open a menu.
4. On the menu, click **Installation Policy...** to open the **Installation Policy Properties** dialog box.



5. In the **Installation Policy Properties** dialog box, perform the following:
  - 5.1. Select **Enabled**



**Figure 5-16: Installation Policy Properties Dialog Box**

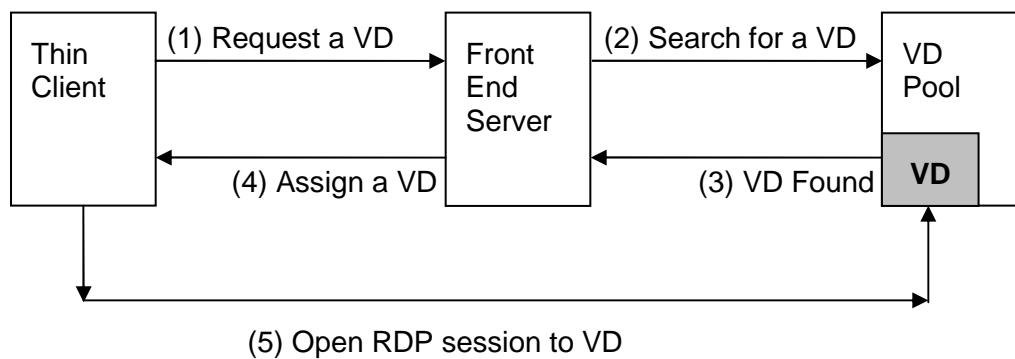
- 5.2. Optional: Select **Run plug-in on startup** to automatically launch a VDI session when the thin client starts up.
  - 5.3. Click **OK** to return to the **Policy Editor** window.
6. In the **Policy Editor** window, on the **File** menu, click **Exit** to return to the **<OU> Properties** dialog box.
7. In the **<OU> Properties** dialog box, click **Close** to complete the procedure and return to the Xcalibur Global Management Console.

### 3 Process Outcome:

- Xcalibur Global now has a policy that will install the VDI Broker plug-in.
- The policy is linked to the OU that was selected.
- The policy will affect all devices within the OU and any child OUs (as long as there are no restrictions on policy inheritance).

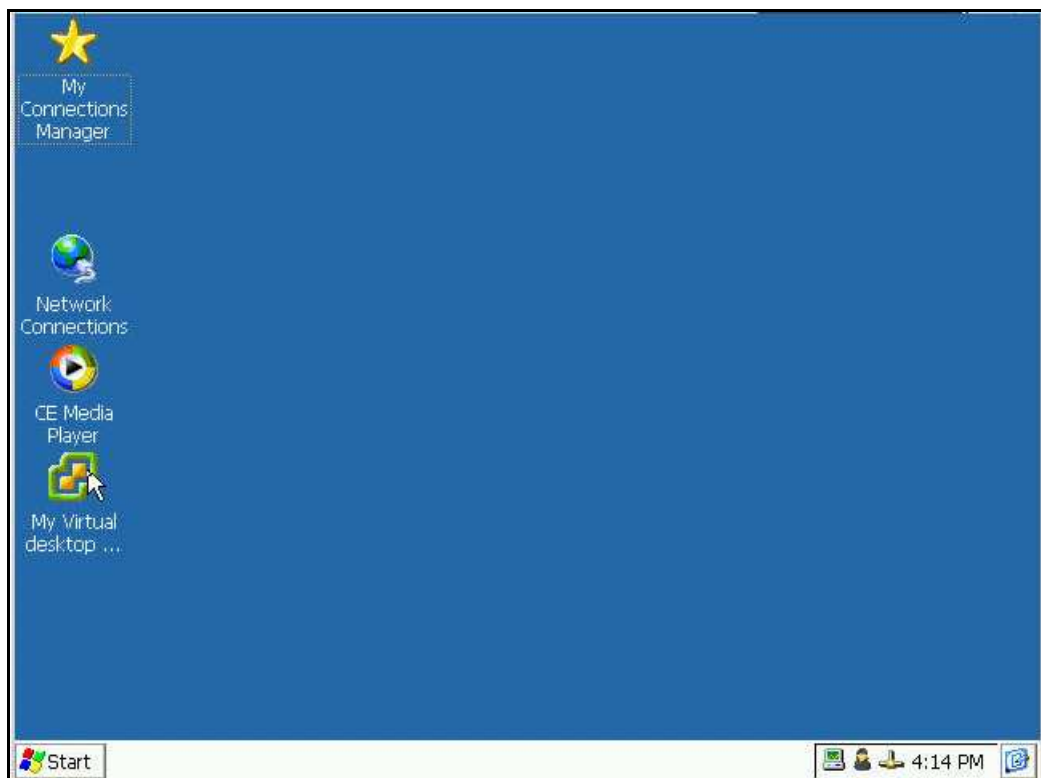
## Appendix C How to Launch a Virtual Desktop Session

This appendix describes the procedure for launching a virtual desktop session from the thin client. The following flowchart offers a general illustration of the opening of a Desktop Session:



**Figure 5-17: Opening Desktop Session Flowchart**

1. On the Desktop, click on the **My Virtual desktop connection** icon to launch the Virtual Desktop session.



**Figure 5-18: Window's Desktop – My Virtual Desktop Connection Icon**

The following events will follow:

- 1.1. The **VDI Launcher** dialog box appears with the **Waiting for VDI reply...** message. This indicates that the thin client has requested a VD assignment from the server and is now waiting for a reply.



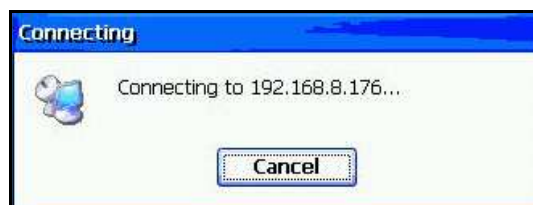
**Figure 5-19: VDI Launcher Dialog Box - Waiting for VDI reply...**

- 1.2. The **VDI Launcher** dialog box message changes to **Starting VDI session...** after receiving a VD assignment from the server and initiating a VDI session.



**Figure 5-20: VDI Launcher Dialog Box - Starting VDI session...**

- 1.1 The **Connecting** dialog box appears indicating that the thin client has now initiated an RDP connection to the assigned VD.



**Figure 5-21: Connecting Dialog Box**

- 1.3. The **Log On to Windows** dialog box appears indicating that the RDP connection has been successfully established.



**Figure 5-22: Log On to Windows Dialog Box**

2. Enter user credentials to log on to the Virtual Desktop.

## **Appendix D    Creating VDI Broker Compatible Accounts via Script**