

ELVO Administration and Installation Guide



Version: 1.10

Contents

1. Audience and Purpose	5
Document Organization	5
Notes	5
Related Documents	5
2. Why Virtualization?	5
VDI Benefits and Features	5
VDI Overview	6
VDI Workflow	7
End-User Authentication	7
Virtual Desktop Pool Management	8
Digital Security	8
VDI Components	8
EnterpriseLIVE Virtualization Orchestrator (ELVO)	8
VMware ESXi and vCenter	8
MobiKEY	9
3. EnterpriseLIVE Virtualization Orchestrator (ELVO)	9
Network	9
4. Creating, Configuring, and Connecting to an ELVO Pool	10
Virtual Pool (Regular) - Using VMware vCenter	10
Step 1 – Setting Up a Control Center	10
Step 2 – Creating a Pool	12
Step 3 – VM Template Setup	16
Step 4 – Creating ELVO Pool Instances	16
Step 5 – Pairing MobiKEY Users to the Pool	18
Step 6 – Registering MobiKEY Users to a Device	20
Physical Pool – Creating an ELVO Physical Pool	21
Step 1 – Creating a Pool	21

Step 2 – Setup of Physical Instances	22
Step 3 – Pairing MobiKEY Users to the Pool	23
Externally Managed Pool	24
Step 1 – Setting Up a Control Center	24
Step 2 – Creating a Pool	27
Step 3 – VM Template Setup	29
Step 4 – Using VMware Horizon / Configuring VM View Server	30
Step 5 – Dedicated Pool Setup.....	31
Step 6 – Floating Pool Setup	31
Step 7 – Associating the Template and Pairing MobiKEY Users to the Pool.....	31
Step 8 – Recompose.....	33
5. Settings and Configurations	34
Pool Settings.....	34
Edit Instance Configuration	35
Configuring Instances	37
Configuring Remotes	40
6. ELVO Management Tools.....	41
Reporting and Session History	41
Email Notification Settings	42
Database Management	43
Password Management Settings.....	43
7. Glossary of Terms	44
8. Route1 Support	49

© 2020 Route1 Inc. All rights reserved. Route1 Inc. is the owner of, or licensed user of, all copyright in this document, including all photographs, product descriptions, designs and images. No part of this document may be reproduced, transmitted or otherwise used in whole or in part or by any means without prior written consent of Route1 Inc. See <https://www.route1.com/terms-of-use/> for notice of Route1's intellectual property.

ELVO Administration and Configuration Guide

July 2020

1. Audience and Purpose

This guide contains the hardware and software installation and configuration procedures required to deploy the EnterpriseLIVE Virtualization Orchestrator (ELVO) into your network environment. It is intended for users who are familiar with VMware ESXi, VMware vCenter, VMware Horizon, Citrix, and/or Nutanix.

Document Organization

Portions of this document, for example the *Quick Start Guide: Creating, Configuring and Connecting to a Regular Pool*, have been written in chronological order. Therefore, it is important that the steps outlined in this document be followed in sequence to avoid any unnecessary deployment issues.

Notes

NOTE: A note indicates important information that will assist you with the deployment of your ELVO hardware and software.

Related Documents

This guide does not include installation procedures or configuration information for the following applications:

- VMware ESXi
- VMware vCenter
- VMware Horizon
- Citrix XenServer
- Nutanix

Visit www.vmware.com, www.citrix.com, and www.nutanix.com, to refer to each respective owner's manual for information on how to install and configure these appliances.

This guide is to be used in conjunction with the *EnterpriseLIVE Registration Guide*. The latter document outlines the steps required to set-up the .csv file that is used to create and/or associate MobiKEY users with their Host(s).

2. Why Virtualization?

Today's computer hardware was designed to run a single operating system and a single application, leaving most machines vastly underutilized. Virtualization, using Virtual Desktop Infrastructure (VDI), lets you run multiple virtual machines on a single physical machine, with each virtual machine sharing the resources of that one physical machine across multiple environments.

VDI Benefits and Features

- Where many desktops exist, VDI allows for consolidating all existing hardware resources into a cloud

(a centralized virtual infrastructure).

- There are two main types of clouds.
 - Physical Pool – consolidate existing hardware resources into one cloud.
 - Regular (Virtual) Pool – use different hypervisor types.
- Relies on mature hypervisor technology that runs in tens of thousands of customer environments.
- Provides total cost of ownership savings thanks to the following advantages:
 - A reduction in helpdesk support.
 - Centralized management.
 - Fits into any disaster recovery strategy.
 - Provides an easy way to rollout extra “temporary” user seats.
 - Increased access control to sensitive corporate information (no copy/paste/printing – optionally, or removable media) as the VDI Pool is locked in a corporate data center.
- Can be used as a strategy for digital rights management and business continuity.
- Support for VMware ESXi and VMware Horizon.

VDI Overview

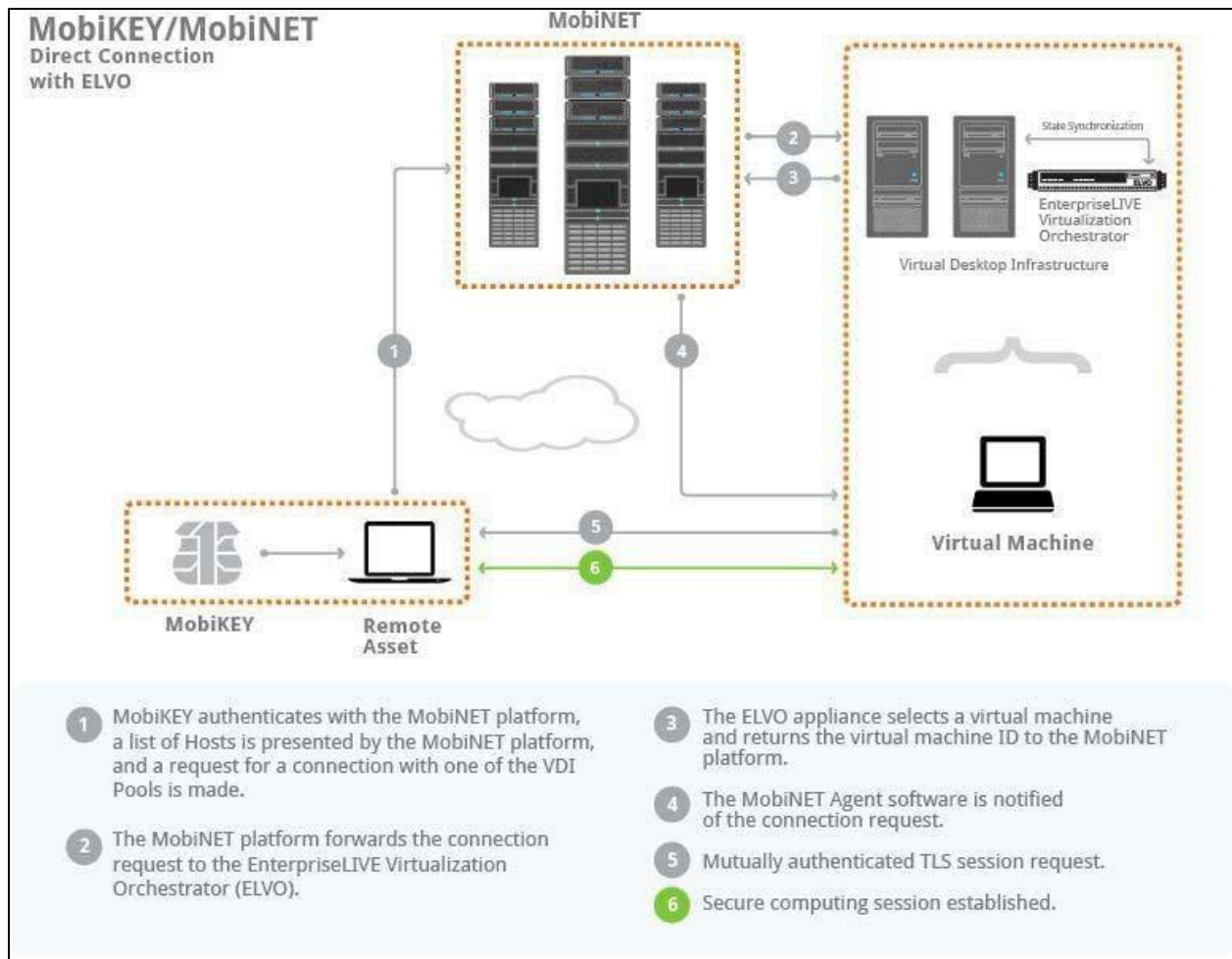
Route1’s VDI solution extends the traditional MobiKEY application software functionality to allow MobiKEY users to leverage the same secure remote desktop experience while accessing virtual machines in place of a traditional physical desktop. VDI provides the ability for IT administrators to create resource Pools, which enables the sharing of virtual machines and system resources between one or more groups of MobiKEY users.

When combined and deployed, these components provide a secure, centrally managed, end-to-end client virtualization solution, providing flexibility, ease of use and a reduced total cost of ownership.

The VDI solution does not require the IT administrator to open any inbound ports on the corporate firewall to allow the end-users to gain access to Virtual Pools and desktop Instances, neither when working inside the enterprise network environment nor remotely (outside of the enterprise environment).

The only network requirement is that the ELVO appliance be able to connect to the Route1 MobiNET platform infrastructure on port 443 using SSL/TLS.

VDI Workflow



End-User Authentication

In order to gain remote access to virtual desktop Pools, MobiKEY users must first have their identity validated by the MobiNET platform. This process is initiated when a user inserts their MobiKEY into a USB port on a Remote Asset. Once the MobiKEY application software is running, the splash screen will appear and a login prompt will be presented for the user to enter their MobiNET password. Once the password is successfully validated by the smart card, the private key within the smart card unlocks and allows the use of the corresponding digital certificate that is inside of the smart card. This certificate is a digitally signed statement which contains a public key and the name of the corresponding user or device, as well as the identity of the signing authority. It is used by the MobiNET platform and other components of the solution to authenticate users and devices. NOTE: for security reasons, each user has a limited number of attempts to successfully enter their MobiNET password before the smart card is locked and rendered inoperative.

Virtual Desktop Pool Management

The Route1 VDI solution includes the MobiKEY application software, MobiNET Agent software, and the ELVO appliance.

Digital Security

Digital certificates play a significant role in network authentication and in helping to secure and authenticate hardware devices as well as user identities. Certificates are electronic credentials that bind the identity of the certificate owner or the device to a public and private pair of electronic keys used to encrypt and digitally sign information. Signed digital certificates help to assure that the keys actually belong to the specified application, device, organization, or person, and that they can be trusted.

For example, all Route1 MC2 and MC3 devices contain certificates which are used for identification and validation by the MobiNET platform. Based upon the X.509 standard, the device identifier and associated public key are bound together upon issuance of the device certificate by Route1's Certificate Authority, which operates as part of a comprehensive PKI arrangement.

VDI Components

Route1's VDI solution is comprised of the following components, which, when configured, enable the virtualization of desktop resources:

EnterpriseLIVE Virtualization Orchestrator (ELVO)

The Route1 ELVO appliance is responsible for managing virtual machine Pools, as well as the allocation of available virtual machine resources for new session requests by MobiKEY users. The ELVO appliance interacts with a VMware ESXi and vCenter in order to handle the creation and allocation of virtual machines on demand. It also interacts with a system called the Connection Arbitrator, which operates within the MobiNET platform environment. This unique and powerful appliance provides end-users with a familiar desktop experience, while enabling IT administrators to seamlessly integrate a unified secure desktop consolidation strategy within their corporate data centers and maximize the utilization of system resources. Desktop consolidation streamlines the management of enterprise desktops and optimizes resource utilization, thus significantly reducing the total cost of ownership.

VMware ESXi and vCenter

The VMware ESXi and vCenter systems combine to host and manage the virtual desktops and application resources that end-users will connect to using their MobiKEY devices. Once installed and properly configured, the IT administrator will create a Virtual Machine (VM) template which will contain a Windows based operating system and the applications required by the users of a given resource Pool. Each time a new virtual desktop session is initiated, the user will connect to a cloned version of this VM template. This template also contains the MobiNET Agent software that is already configured with the IP address of the corresponding ELVO appliance. The MobiNET Agent software contacts the ELVO appliance to retrieve Pool configuration and credentials.

For additional information on VMware products, please contact your appropriate service provider.

Most virtual machine monitors in the market today rely on a built-in operating system to perform core virtualization tasks such as allocating hardware resources to the various virtual machines that run on top. This means that your virtual machines are only as reliable as the built-in operating system. VMware ESXi is based on the VMware ESXi architecture, which installs directly on the physical server and has no reliance on a general purpose operating system. VMware ESXi has an ultra thin design with no reliance on a general purpose operating system. This architecture avoids the requirements for security hardening, user access control, anti-virus tasks and patching associated with typical operating systems. Its ultra thin code base installs directly on the server hardware for ultimate reliability.

MobiKEY

The Route1 MobiKEY is a complete desktop, secure remote access technology that integrates multi- factor authentication and identity management in a mobile computing environment.

MobiKEY technology allows users to securely access data remotely without the need for expensive communications packages or cumbersome hardware. This patented technology is one of the most powerful and easy-to-use multi-factor authentication technologies available today.

MobiKEY technology is completely clientless and driverless, requiring no extra privileges on the Remote Asset where it is being used. Furthermore, the user leaves no trace or evidence of their computing session on the Remote Asset, while at the same time protecting the enterprise network from any viruses and malware.

The MobiKEY application software is powered by Route1's MobiNET platform and is a subscription-based service that enables users to access digital resources from anywhere at any time. Remote users are able to securely access their files and digital resources located on multiple Host Assets from any Remote Asset with an Internet connection. The MobiKEY technology does not transfer any files outside of corporate firewalls, nor from the outside in, and does not store any data on the Remote Asset, leaving zero footprint of the session on the Remote Asset.

3. EnterpriseLIVE Virtualization Orchestrator (ELVO)

NOTE: Before you begin your installation of the Route1 MobiNET Agent software, ensure that you have read and understood the following requirements:

Network

Route1's MobiNET Agent software does not require the IT administrator to open any inbound ports on the corporate firewall in order to allow the corporate user base to gain access to Virtual Pools and desktop Instances, either when working inside the corporate network environment or remotely (outside the corporate environment).

Route1's ELVO appliance requires outgoing connections on port 443 to the MobiNET platform. The

Hypervisor, in your network environment, must be able to access and be accessible by the ELVO appliance.

The Route1 VDI solution administrator must be able to access the ELVO appliance.

4. Creating, Configuring, and Connecting to an ELVO Pool

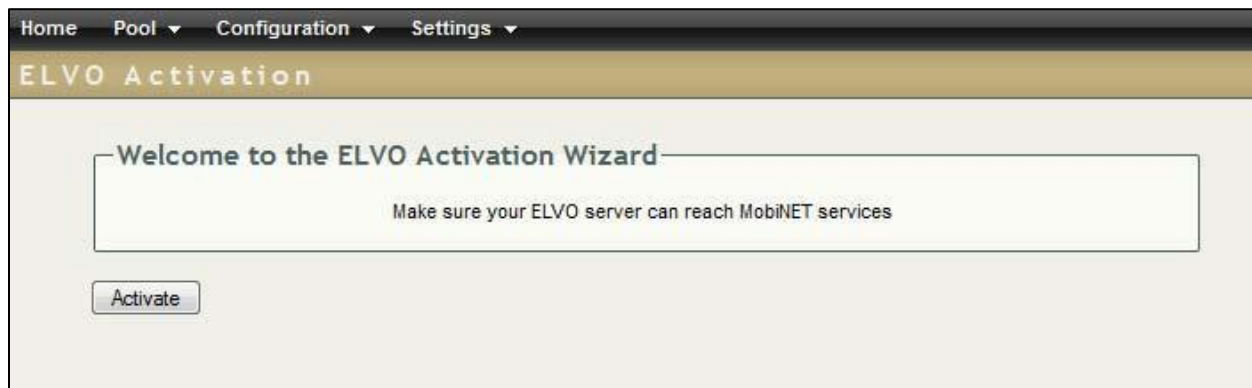
Virtual Pool (Regular) - Using VMware vCenter

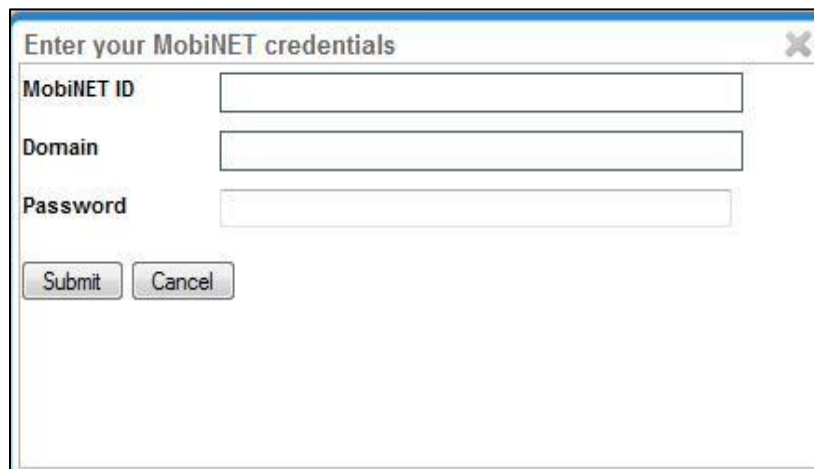
This section describes the steps that are necessary to create a new Pool of Virtual Instances.

Step 1 – Setting Up a Control Center

After the Control Center has been set up, the ELVO appliance must be configured so that it is able to communicate with the Control Center. Ensure both of these servers are powered on and running while you perform the following operations. Open a web browser and navigate to the ELVO Administration tool (ELVO-AT) which is running on the ELVO appliance.

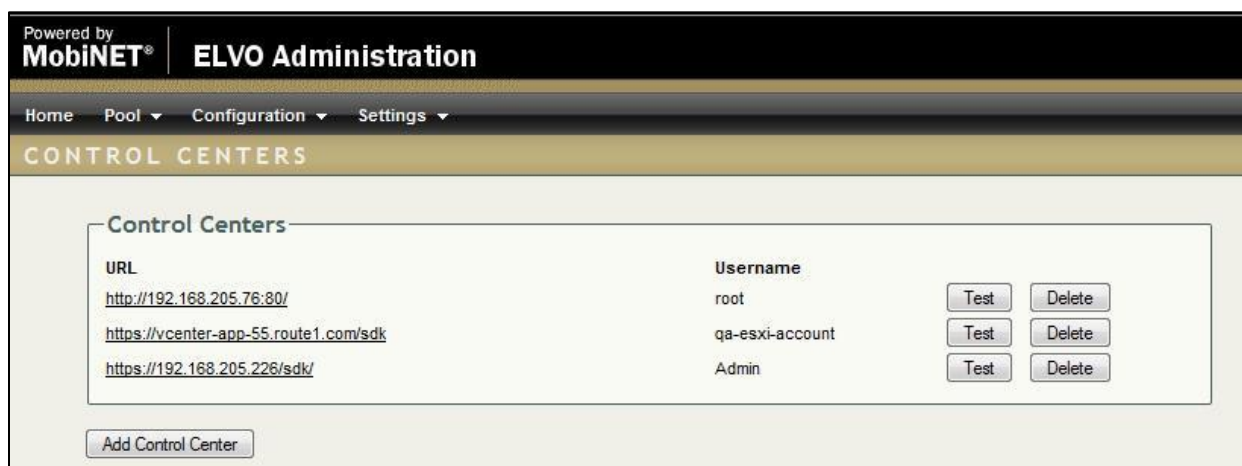
Log in to the ELVO Administration tool using the credentials provided by Route1. You will be prompted to activate the ELVO the very first time you do this. You will need to enter the ER Admin credentials you use for EnterpriseLIVE Registration. If you do not know these credentials, please contact Route1 prior to proceeding.





A dialog box titled "Enter your MobiNET credentials" with a close button (X) in the top right corner. It contains three input fields: "MobiNET ID", "Domain", and "Password". Below the fields are two buttons: "Submit" and "Cancel".

From the Configuration menu, select **"Control Center"**.



The screenshot shows the "ELVO Administration" interface. The top navigation bar includes "Home", "Pool", "Configuration", and "Settings". The "CONTROL CENTERS" section is active. Below the section header, there is a table with two columns: "URL" and "Username". The table lists three entries: "http://192.168.205.76:80/", "https://vcenter-app-55.route1.com/sdk", and "https://192.168.205.226/sdk/". The "Username" column lists "root", "qa-esxi-account", and "Admin". To the right of each row are "Test" and "Delete" buttons. At the bottom left, there is an "Add Control Center" button.

URL	Username	
http://192.168.205.76:80/	root	<button>Test</button> <button>Delete</button>
https://vcenter-app-55.route1.com/sdk	qa-esxi-account	<button>Test</button> <button>Delete</button>
https://192.168.205.226/sdk/	Admin	<button>Test</button> <button>Delete</button>

Add Control Center

Click on the **"Add Control Center"** button. The following screen will appear:



The screenshot shows the ELVO Administration web interface. At the top, it says "Powered by MobINET®" and "ELVO Administration". Below this is a navigation bar with links: "Home", "Pool", "Configuration", "Settings", and a "Log out" button. The main heading is "ADD CONTROL CENTER INFORMATION". Below this is a form titled "Add Control Center Information" with the following fields:

Add Control Center Information	
URL	<input type="text" value="https://vcenter.example.com/sdk/"/>
Username	<input type="text" value="User1"/>
Password	<input type="password" value="....."/>
Retype password	<input type="password" value="....."/>

At the bottom of the form are two buttons: "Add" and "Cancel".

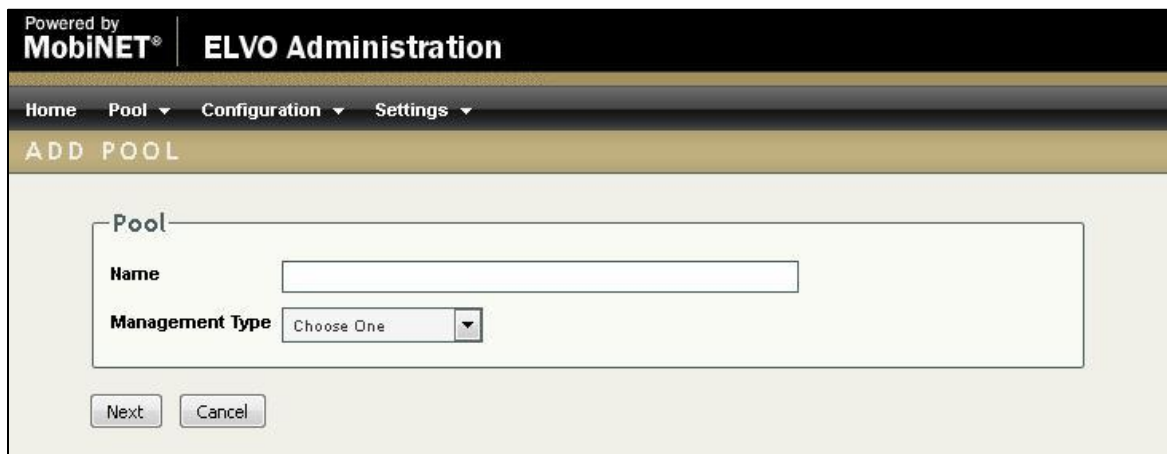
Enter the URL that the ELVO appliance will use to connect to vCenter, built from the vCenter address information. Since the ELVO will also require the proper credentials to connect to the vCenter, these credentials will need to be entered as well.

Once the **"Add"** button is clicked, the new Control Center is created and added to the list of Control Centers. At this point, a **"Test"** button will be visible and it is recommended to use this function after adding or modifying a Control Center to verify the configuration.

Step 2 – Creating a Pool

It is now time to create the Pool and retrieve the **Pool ID**.

You should still be logged into the ELVO Administration tool. From the Pool menu, select **"Add Pool"**. The following screen will appear:



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

ADD POOL

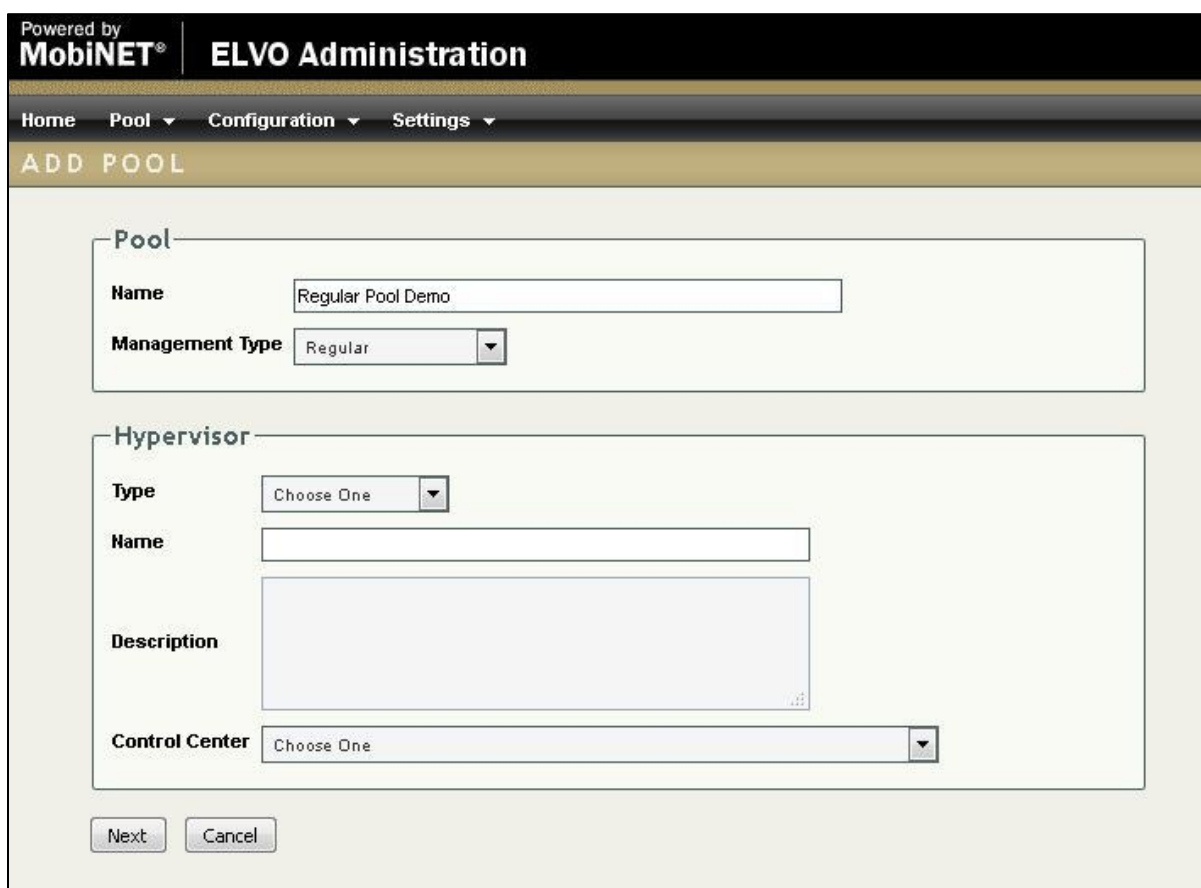
Pool

Name

Management Type

Next Cancel

Choose a Name for your new Pool. And Select “**Regular**” as the “**Management Type**”. More options will appear:



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

ADD POOL

Pool

Name

Management Type

Hypervisor

Type

Name

Description

Control Center

Next Cancel

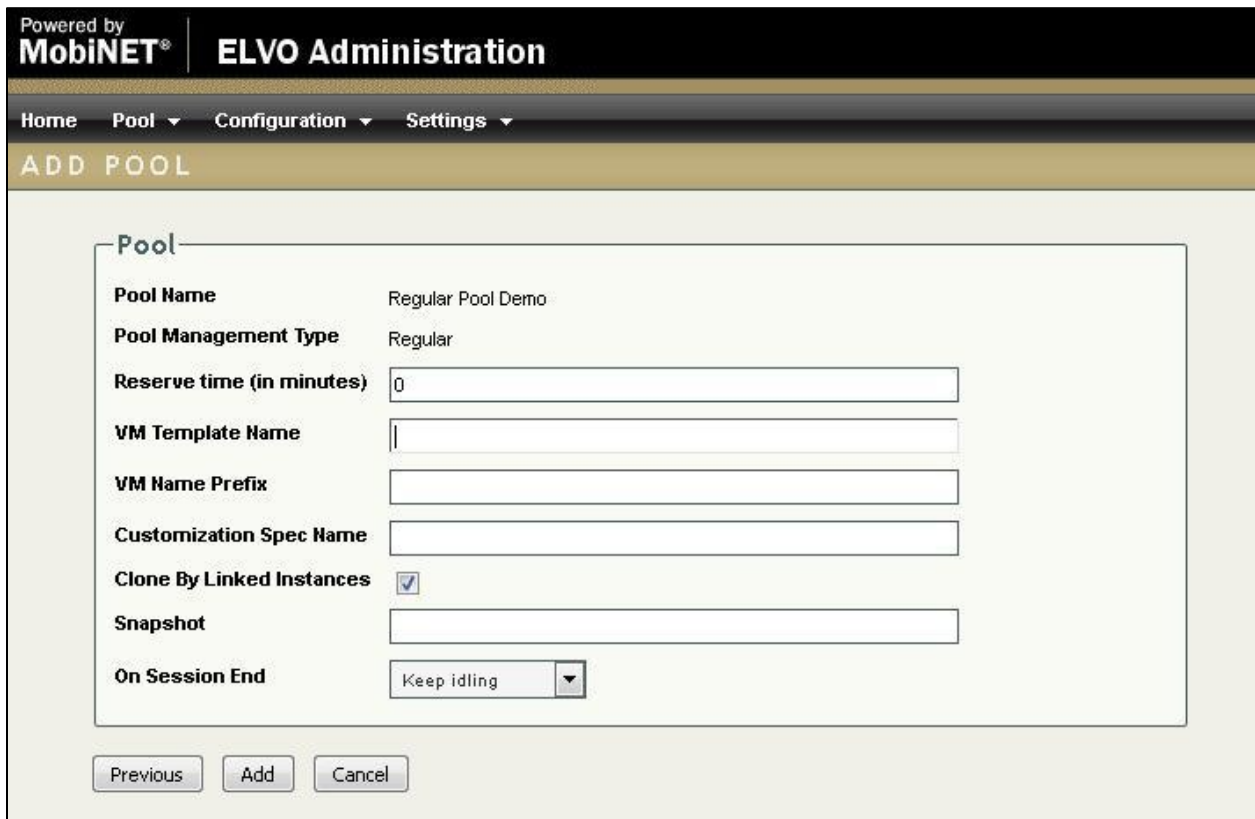
For the Hypervisor “**Type**” select “**VMware vSphere.**” (For example, choose the desired type) Provide a

unique Name for the Hypervisor (this name can be freely selected – it does not need to match any existing values).

Also provide a Description for this Hypervisor. This text is arbitrary and is simply used to assist in recognizing the Hypervisor.

From the “**Control Center**” drop down list, select the URL that was configured in *Step 1*.

Click “**Next**”.



The screenshot shows the 'ADD POOL' form in the ELVO Administration interface. The form is titled 'Pool' and contains the following fields and options:

- Pool Name:** Regular Pool Demo
- Pool Management Type:** Regular
- Reserve time (in minutes):** 0
- VM Template Name:** (empty text box)
- VM Name Prefix:** (empty text box)
- Customization Spec Name:** (empty text box)
- Clone By Linked Instances:** ☒
- Snapshot:** (empty text box)
- On Session End:** Keep idling (dropdown menu)

At the bottom of the form are three buttons: 'Previous', 'Add', and 'Cancel'.

Now you can configure the Pool settings.

“**Reserve time**” - This will determine how long an Instance in the Pool remains available to the last person who connected, before becoming available for all other users to connect to. It is set in minutes. It will also determine the wait before any “**On Session End**” action is taken after the last disconnect.

“**VM Template Name**” – Name of the template to clone additional Instances from. This name must match what is in vCenter.

“**VM Name Prefix**” – Name of the Instances that are clones of the template.

“Customization Spec Name” – Name of the Customization Specification file in vCenter.

“Clone By Linked Instances” – This is selected by default. Linked Instances are based on the **“Snapshot”** of the template virtual machine. This Instance shares the virtual disks of its parent (template virtual machine) but basically runs off of a snapshot. This option enables clones to be spawned quickly. If this option is not checked the **“Snapshot”** field below will become greyed out as it is no longer needed. If this option is not selected, the cloned Instances will be **“Full Clones”**. A full clone is an independent copy of a virtual machine that shares nothing with the parent. This will take more time to complete. Please refer to vCenter documentation for more details on the difference between Full and Linked clones.

“Snapshot” – Name of the snapshot that was taken and to be used from the **“VM Template Name”**.

“On Session End” – Keep Idling, Shutdown or Destroy are the options in the dropdown menu. And are actions that will be applied after a Data Session is completed, and the **“Reserve time”** has completed. Click **“Add”**. And enter the ER Admin Credentials you used before to Activate the ELVO.



A dialog box titled "Enter your MobiNET credentials" with a close button (X) in the top right corner. It contains three input fields: "MobiNET ID", "Domain", and "Password". Below the input fields are two buttons: "Submit" and "Cancel".

You will then be brought to the home page where you will see the Pools listed.

Powered by MobiNET® ELVO Administration							
Home Pool Configuration Settings							
HOME							
Pools							
				Filter: <input type="text"/>			
Name	Type	ID	VM Template	Status			
Physical Pool Demo	Physical	45C5369924C5E5C673BBF0A4F32C4C4B	N/A	Active	Remotes	Instances (0)	
Regular Pool Demo	VMware vSphere	0F74DB5C3AB38A23E2DE0E1EEB64306D	Demo Template	Active	Remotes	Instances (0)	

Step 3 – VM Template Setup

With the Pool now created, it is time to build a template virtual machine image that will be later cloned to create Pool Instances.

From vSphere, create a virtual machine. The name of the virtual machine must match the value used in the “**VM Template Name**”.

Since a copy of the MobiNET Agent software will need to appear in each Pool Instance, it is necessary to install the MobiNET Agent software in the template virtual machine.

The MobiNET Agent installer may be distributed using various channels, but in all cases you will need to locate and run the installer executable Setup.exe or MobiNETAgent.msi.

Using MobiNETAgent.msi:

Run the following command, being sure to use the appropriate value for the ELVO address (in place of **192.0.2.1**), and the **POOLID** value for the **Pool** that you just created.

```
msiexec /i MobiNETAgent.msi REBOOT=ReallySuppress /qn /L*vx  
"%ALLUSERSPROFILE%\MobiNETAgentInstall.log"  
CONFIGDIR=https://192.0.2.1:443/SessMngrSrv2/SessionManager  
POOLID=0F74DB5C3AB38A23E2DE0E1EEB64306D
```

Using Setup.exe:

Run Setup.exe with the following arguments, being sure to use the appropriate value for the ELVO address (in place of **192.0.2.1**), and the **POOLID** value for the **Pool** that you just created in Step 2.

```
Setup.exe /V"CONFIGDIR=https://192.0.2.1:443/SessMngrSrv2/SessionManager  
POOLID=0F74DB5C3AB38A23E2DE0E1EEB64306D REBOOT=ReallySuppress"
```

Once the MobiNET Agent software install completes, shut down the VM, take a snapshot naming it using the “**Snapshot**” name you chose for your Pool. Then convert it to a template in vSphere.

Step 4 – Creating ELVO Pool Instances

With a proper template in place, it is now possible to create Instances for this Pool. An Instance is a virtual machine to which a user can connect. In this example, the Instances will be Linked Instances.

From the Home page Pool list, click the “**Instances**” link (in the far right column) for your Pool.

On the Instances screen, click the “**Create Linked Instance**” button in the Actions section. This will add a new Instance to the Pool.

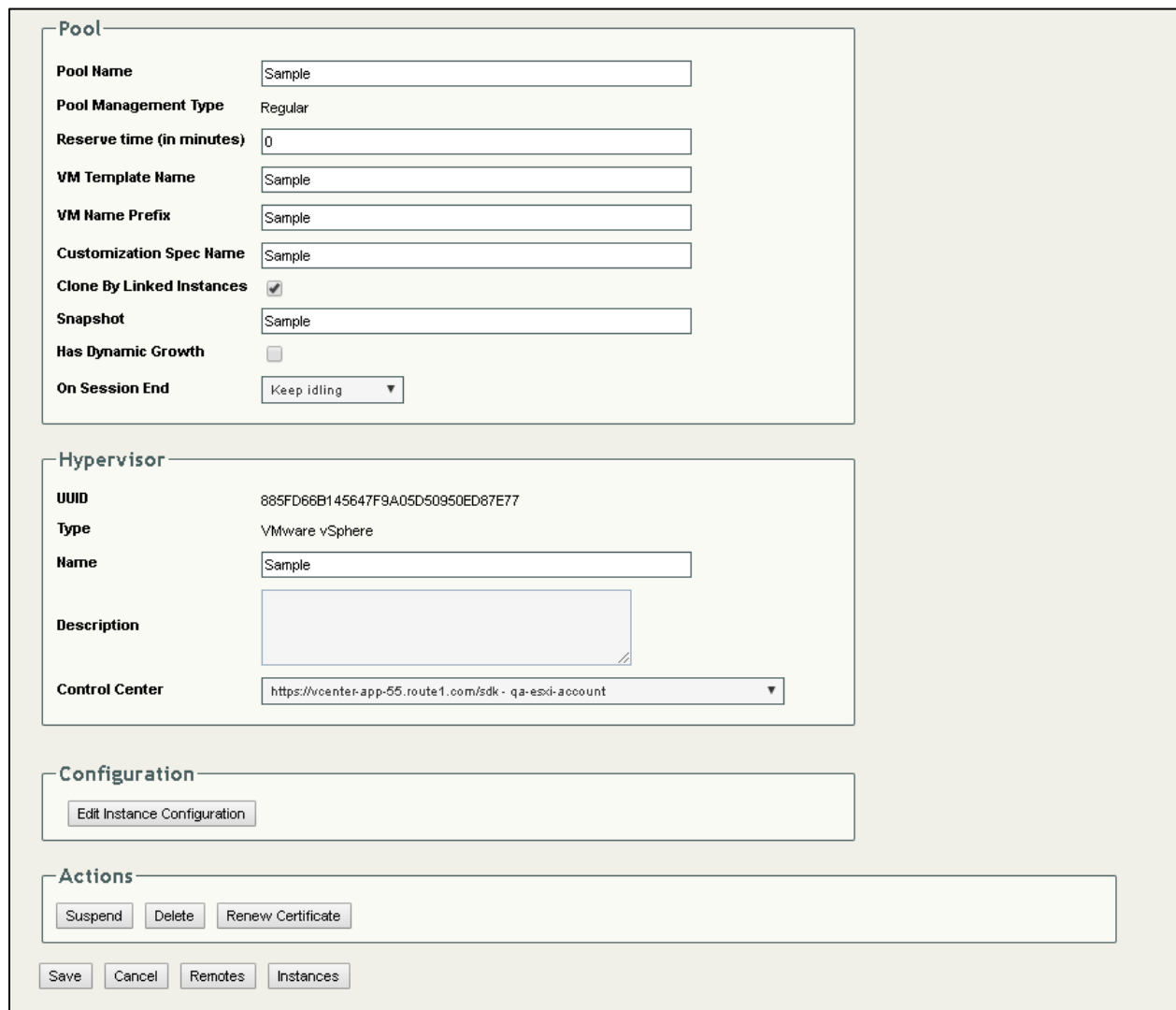
Once the new Instance is created, you must power it on by clicking the “**Power On**” button (in the right-

hand column). The process may take a few minutes before the Instance is available for use.

Note – if the **“Clone By Linked Instances”** option is not selected in the Pool settings. The option to create new Instances in this section will be **“Create Full Instance”**, and will take place in that manner.

*There is also another option to have Instances dynamically cloned automatically.

If you click on your Pool name, it will take you to the Pool’s settings.



The screenshot displays the 'Pool' settings page, which is organized into several sections:

- Pool Section:** Contains input fields for 'Pool Name' (Sample), 'Pool Management Type' (Regular), 'Reserve time (in minutes)' (0), 'VM Template Name' (Sample), 'VM Name Prefix' (Sample), 'Customization Spec Name' (Sample), a checked 'Clone By Linked Instances' checkbox, a 'Snapshot' field (Sample), an unchecked 'Has Dynamic Growth' checkbox, and an 'On Session End' dropdown menu set to 'Keep idling'.
- Hypervisor Section:** Includes a 'UUID' field (885FD66B145647F9A05D50950ED87E77), a 'Type' dropdown menu (VMware vSphere), a 'Name' field (Sample), a 'Description' text area, and a 'Control Center' dropdown menu showing the URL 'https://vcenter-app-55.route1.com/sdk - qa-esxi-account'.
- Configuration Section:** Features a single button labeled 'Edit Instance Configuration'.
- Actions Section:** Contains three buttons: 'Suspend', 'Delete', and 'Renew Certificate'.

At the bottom of the page, there is a row of four buttons: 'Save', 'Cancel', 'Remotes', and 'Instances'.

You will now see a **“Has Dynamic Growth”** option available. If you check this box more options will appear:

Has Dynamic Growth

☒

Minimum Idle Limit

Maximum Idle Limit

Growth Rate

Minimum Limit

Maximum Limit

Shrink Action

Shut Down Guest

▼

NOTE: *Idle* is defined as the VM is immediately connectable (registered, powered on and not in session).

Minimum Idle Limit –Minimum number of VMs this Pool should keep as idle. When the number of idle VMs goes below this limit, then the Dynamic Pool will see if there is any VM that can be turned on or create new ones.

Maximum Idle Limit - Maximum number of VMs this Pool should keep as idle. When the number of idle VMs goes above this limit, then the Dynamic Pool will start reducing it based on the Shrink Action selected (below).

Growth Rate – Value by which the Pool will grow while trying to satisfy the Minimum Idle Limit.

Minimum Limit – Minimum number of idle VMs at start up.

Maximum Limit – Maximum total number of VMs whether idle, powered off or in the process of registering.

Shrink Action – Options used when reducing the Pool size to Maximum Idle Limit:

- Shut down Guest
- Destroy idle VMs

Step 5 – Pairing MobiKEY Users to the Pool

MobiKEY users can now be paired with this Pool. Please refer to the *EnterpriseLIVE Registration Guide* for the steps required to create a valid .csv file that is used to associate MobiKEY users (also known as ‘Remotes’) with a Host.

After completing the EnterpriseLIVE Registration process, all pairings to a Pool must be authorized using the ELVO-AT.

Return to the ELVO-AT and from the Pools menu, click the **“Remotes”** link (in the second column from the right) for your Pool. The following screen will appear:



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

REMOTES

Remotes for **"POOLNAME"**

No remotes available

Domain Certificate Not set yet

Automatically Accept Remotes ☐

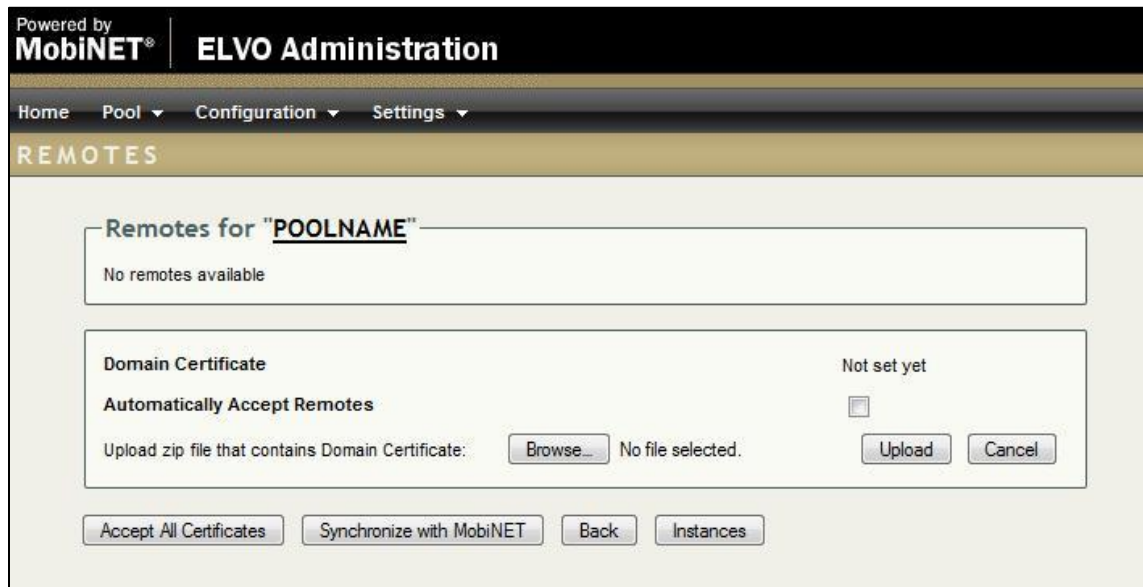
Set Domain

Accept All Certificates Synchronize with MobiNET Back Instances

Click the **"Accept All Certificates"** button. When prompted, enter the ER Admin credentials that were provided to you by Route1.

After the certificates have been accepted, the Remotes page for this Pool will show the **Remote ID** and **Username** for all of the Remotes associated with this Pool.

Alternatively, you may set the Pool to **"Automatically Accept Remotes"**. This will pair every Remote without the need to manually accept them each time you upload a .csv using EnterpriseLIVE Registration. For this approach, you will need to generate and save the domain certificates during the EnterpriseLIVE Registration process. Once the domain certificates are generated, return to the ELVO-AT Remotes page and click on **"Set Domain"**. This will allow you to browse to the location of your saved domain certificates and upload the zip file. You will receive a confirmation message once completed. Proceed to check the box **"Automatically Accept Remotes"** to complete the process. Final confirmation will be received stating **"Automatic Acceptance of Remotes"** is enabled for Pool **"POOLNAME"**.



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

REMOTES

Remotes for "**POOLNAME**"

No remotes available

Domain Certificate Not set yet

Automatically Accept Remotes ☐

Upload zip file that contains Domain Certificate: No file selected.

Step 6 – Registering MobiKEY Users to a Device

The Pool is now ready to accept connections from MobiKEY users. However, the MobiKEY users themselves still need to register their devices.

MobiKEY Classic 2 (MC2) / MobiKEY Classic 3 (MC3) users:

Distribute to each MobiKEY user the unique License Key that was generated for them through EnterpriseLIVE Registration in *Step 5*. NOTE: the License Keys generated are user specific.

Have the MobiKEY users run the MobiKEY application software and complete the registration wizard. During this process, they will be prompted for their unique License Key.

MobiKEY Fusion users:

Have the MobiKEY users run the MobiKEY application software and complete the registration wizard. They will not require the License Key.

Once the registration process is complete, the MobiKEY users will see a list of Hosts with which they have been paired. This list will include the Pool name for the Pool created in *Step 1*.

The MobiKEY user may now connect to this Pool.

Should additional pairings be required in the future for this Pool, repeat *Steps 5* through *6*.

Physical Pool – Creating an ELVO Physical Pool

The following example values will be used in some of the procedure below:

IP address of the ELVO appliance:	192.0.2.1
Pool name:	POOLNAME
Reserve time (in minutes):	2

Step 1 – Creating a Pool

NOTE: If using a **Physical Pool**, there is no need to create a Control Center.

Open a web browser and navigate to the ELVO Administration tool which is running on the ELVO appliance. Based on the sample IP address of the ELVO (listed above), the URL would be:

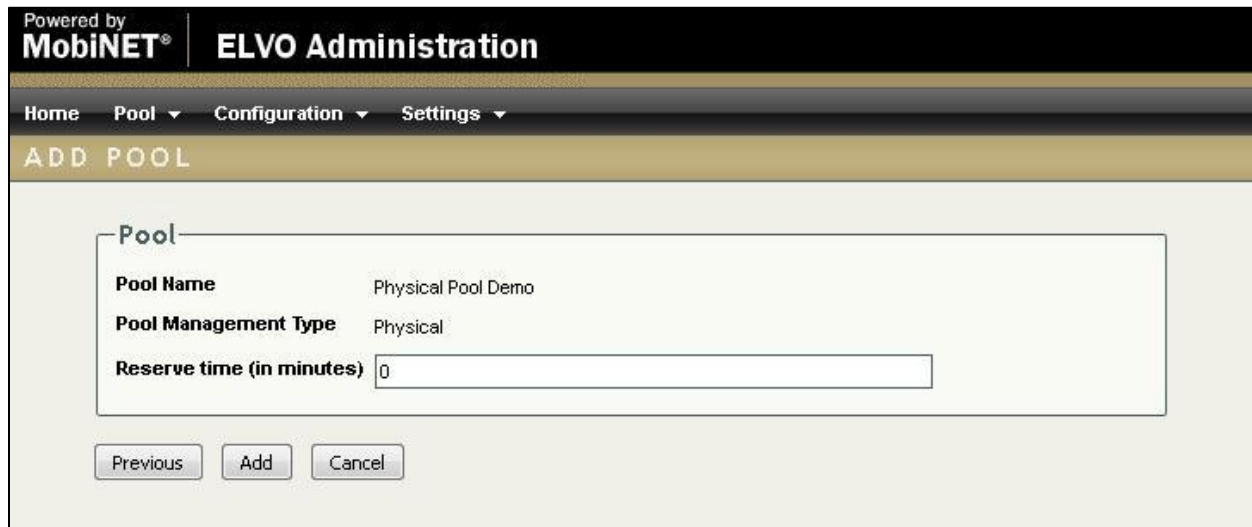
<https://192.0.2.1/elap>

Log in to the ELVO-AT using the credentials provided by Route1. It is now time to create the Pool and retrieve the Pool ID.

From the Pool menu, select **“Add Pool”**. The following screen will appear:



Choose a **“Name”** for your new Pool. And Select **“Physical”** as the **“Management Type”**. Click **“Next”**.



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

ADD POOL

Pool

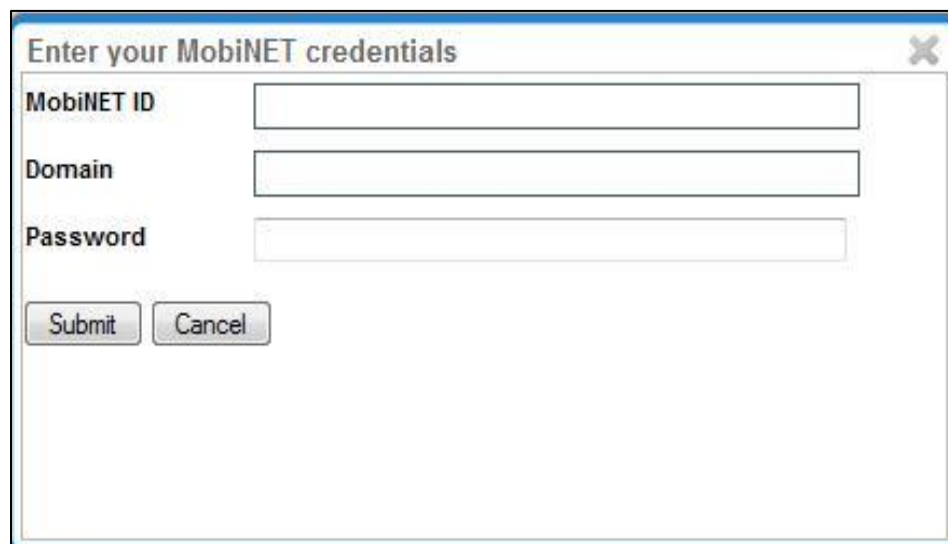
Pool Name Physical Pool Demo

Pool Management Type Physical

Reserve time (in minutes)

Here you can review the **Pool Name** and select the **“Reserve time”**. The **“Reserve time”** will determine how long an Instance in the Pool remains available to the last person who connected, before becoming available for all other users to connect to. It is set in minutes. Click **“Add”** to proceed or **“Previous”** to change the **“Pool Management Type”** or **Pool Name**.

Enter the Credentials provided by Route1.



Enter your MobiNET credentials

MobiNET ID

Domain

Password

Step 2 – Setup of Physical Instances

With the Pool now created, it is time to add Physical Instances to the Pool.

Since a copy of the MobiNET Agent software will need to appear in each Pool Instance, it is necessary to install the MobiNET Agent software in every Physical Instance that will be part of the Pool.

The MobiNET Agent installer may be distributed using various channels, but in all cases you will need to locate and run the installer executable *Setup.exe* or *MobiNET Agent.msi*.

Using MobiNETAgent.msi:

Run the following command, being sure to use the appropriate value for the ELVO address (in place of 192.0.2.1), and the POOLID value for the Pool that you just created in *Step 1*.

```
msiexec /i MobiNETAgent.msi REBOOT=ReallySuppress /qn /L*vx  
"%ALLUSERSPROFILE%\MobiNETAgentInstall.log"  
CONFIGDIR=https://192.0.2.1:443/SessMngrSrv2/SessionManager  
POOLID=26F28BE463EE82DBAFA759333CFA0F6C
```

Using Setup.exe:

Run *Setup.exe* with the following arguments, being sure to use the appropriate value for the ELVO address (in place of 192.0.2.1), and the POOLID value for the Pool that you just created in *Step 1*.

```
Setup.exe /V"CONFIGDIR=https://192.0.2.1:443/SessMngrSrv2/SessionManager  
POOLID=26F28BE463EE82DBAFA759333CFA0F6C REBOOT=ReallySuppress"
```

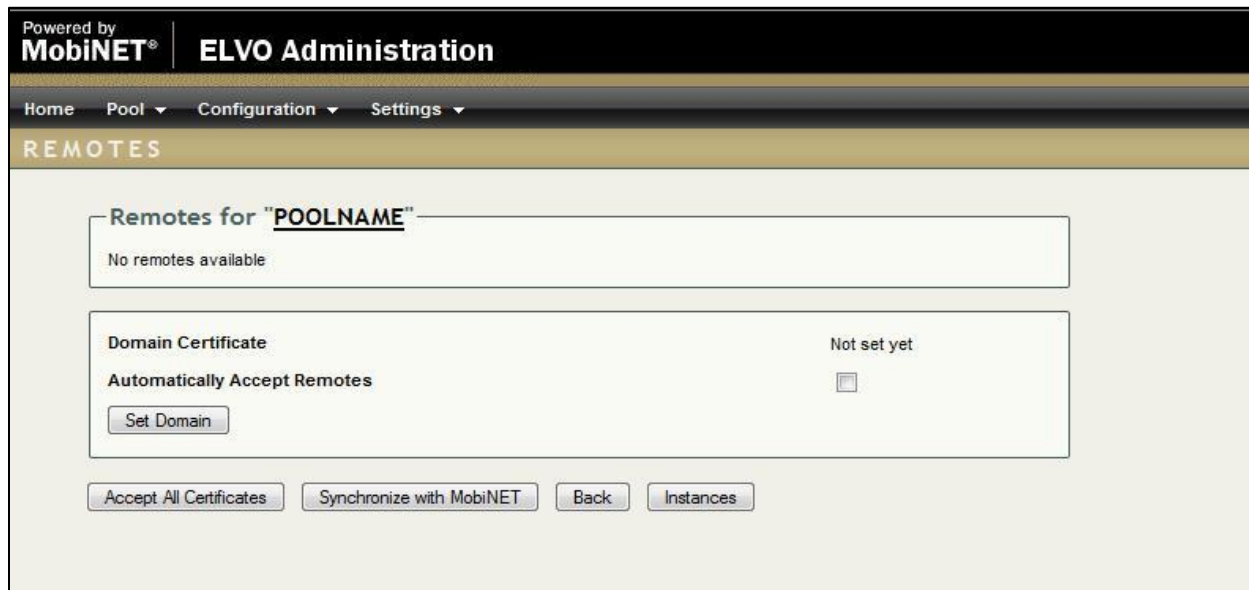
Once the MobiNET Agent software install completes, the Physical Instance must be restarted.

Step 3 – Pairing MobiKEY Users to the Pool

MobiKEY users can now be paired with this Pool. Please refer to the *EnterpriseLIVE Registration Guide* for the steps required to create a valid .csv file that is used to associate MobiKEY users (also known as ‘Remotes’) with a Host. This process will also create a series of License Keys that will be required in *Step 4*.

After completing the EnterpriseLIVE Registration process, all pairings to a Pool must be authorized using the ELVO-AT.

From the Pools menu, click the **“Remotes”** link (in the second column from the right) for your Pool. The following screen will appear:



Click the **“Accept All Certificates”** button. When prompted, enter the ER Admin credentials that were provided to you by Route1 (the same credentials that were used when uploading the .csv file).

After the certificates have been accepted, the Remotes page for this Pool will show the Remote ID and Username for all of the Remotes that are associated with this Pool.

Alternatively, you may set the Pool to Automatically Accept the Remotes. This will pair every Remote without the need to manually accept them each time you upload a .csv using EnterpriseLIVE Registration. For this approach, you will need to generate and save the domain certificates during the EnterpriseLIVE Registration process. Once the domain certificates are generated, return to the ELVO-AT Remotes page and click on **“Set Domain”**. This will allow you to browse to the location of your saved domain certificates and upload the zip file. You will receive a confirmation message once completed. Proceed to check the box **“Automatically Accept Remotes”** to complete the process. Final confirmation will be received stating **“Automatic Acceptance of Remotes”** is enabled for Pool **“POOLNAME”**.

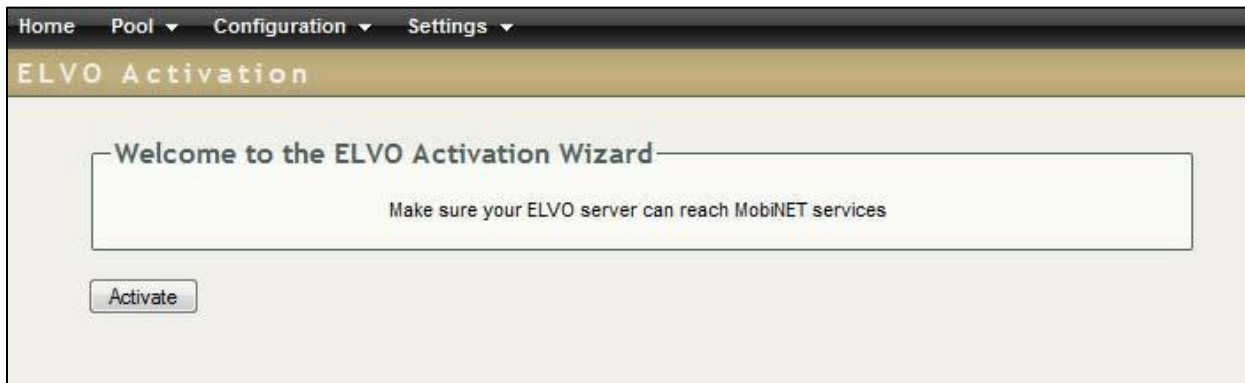
Externally Managed Pool

Externally managed Pools are designed to allow the administration to take place entirely using the desired supported Hypervisor, rather than through ELAP itself. Step 4 below goes into additional details for VMware Horizon (VMware View) specifically.

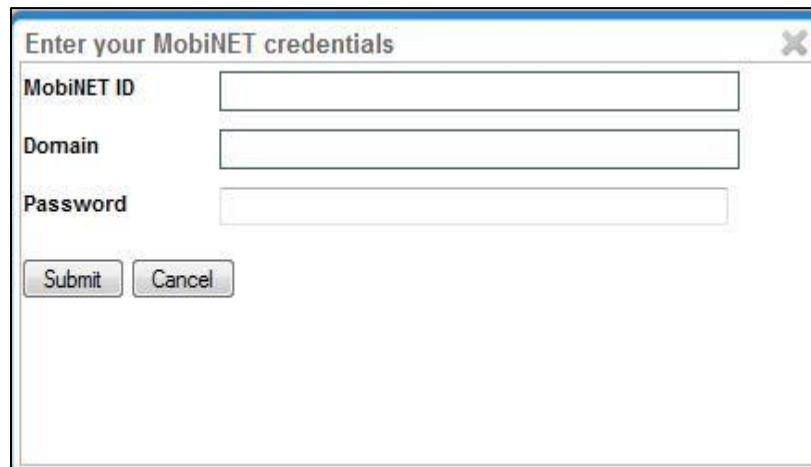
Step 1 – Setting Up a Control Center

After the Control Center has been set up, the ELVO appliance must be configured so that it is able to communicate with the Control Center. Ensure both of these servers are powered on and running while you perform the following operations. Open a web browser and navigate to the ELVO Administration tool (ELVO-AT) which is running on the ELVO appliance.

Log in to the ELVO Administration tool using the credentials provided by Route1. You will be prompted to activate the ELVO the very first time you do this. You will need to enter the ER Admin credentials you use for EnterpriseLIVE Registration. If you do not know these credentials, please contact Route1 prior to proceeding.

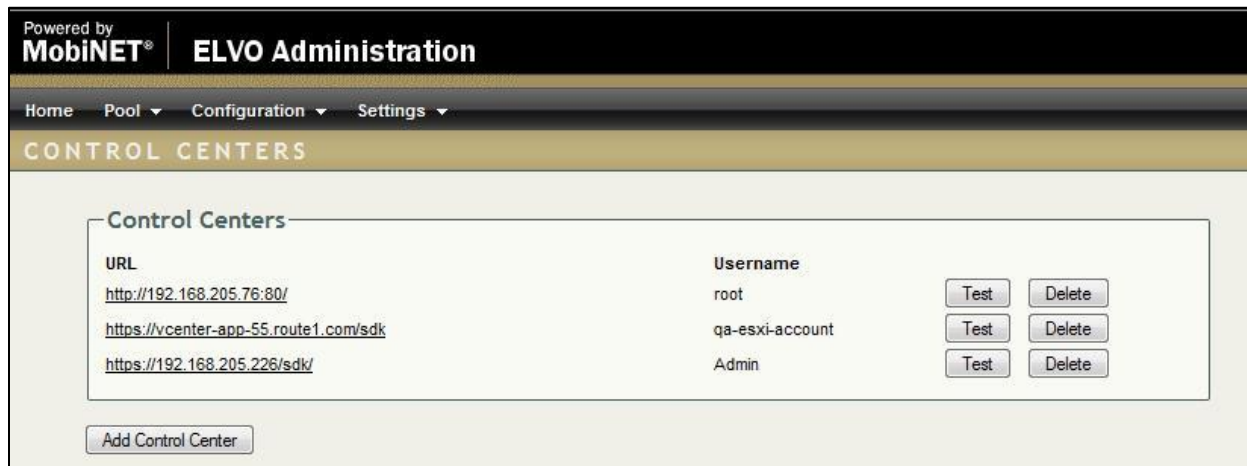


The screenshot shows the ELVO Activation Wizard interface. At the top, there is a navigation bar with links: Home, Pool, Configuration, and Settings. Below this, the title "ELVO Activation" is displayed. The main content area contains a box with the text "Welcome to the ELVO Activation Wizard" and a sub-instruction "Make sure your ELVO server can reach MobiNET services". At the bottom left of this box is an "Activate" button.



The screenshot shows a dialog box titled "Enter your MobiNET credentials". It contains three input fields: "MobiNET ID", "Domain", and "Password". Below the input fields are two buttons: "Submit" and "Cancel".

From the Configuration menu, select "**Control Center**".



URL	Username		
http://192.168.205.76:80/	root	Test	Delete
https://vcenter-app-55.route1.com/sdk	qa-esxi-account	Test	Delete
https://192.168.205.226/sdk/	Admin	Test	Delete

Click on the **“Add Control Center”** button. The following screen will appear:



Add Control Center Information

URL:

Username:

Password:

Retype password:

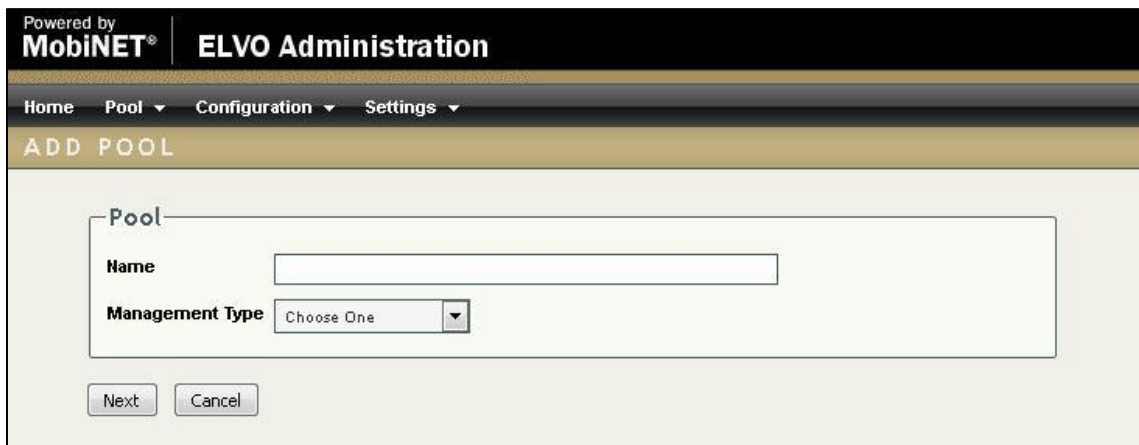
Enter the URL that the ELVO appliance will use to connect to vCenter, built from the vCenter address information. Since the ELVO will also require the proper credentials to connect to the vCenter, these credentials will need to be entered as well.

Once the **“Add”** button is clicked, the new Control Center is created and added to the list of Control Centers. At this point a **“Test”** button will be visible and it is recommended to use this function after adding or modifying a Control Center to verify the configuration.

Step 2 – Creating a Pool

It is now time to create the Pool and retrieve the **Pool ID**.

You should still be logged into the ELVO Administration tool. From the Pool menu, select **“Add Pool”**. The following screen will appear:



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

ADD POOL

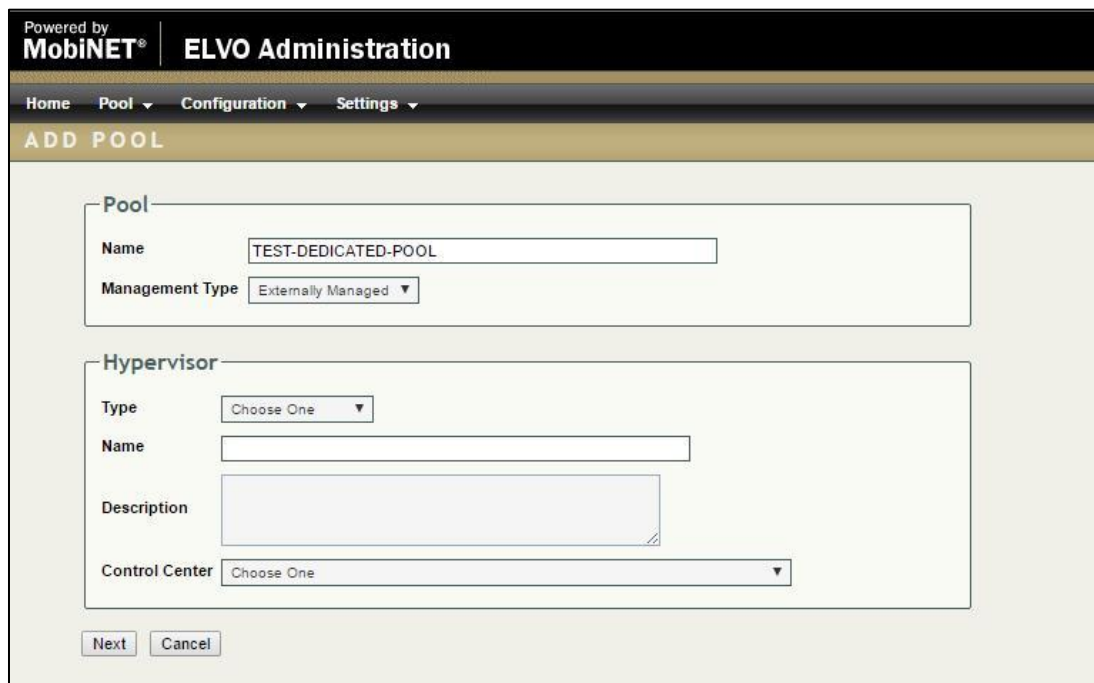
Pool

Name

Management Type Choose One ▼

Next Cancel

Choose a **“Name”** for your new Pool. And Select **“Externally Managed”** as the **“Management Type”**. More options will appear:



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

ADD POOL

Pool

Name

Management Type Externally Managed ▼

Hypervisor

Type Choose One ▼

Name

Description

Control Center Choose One ▼

Next Cancel

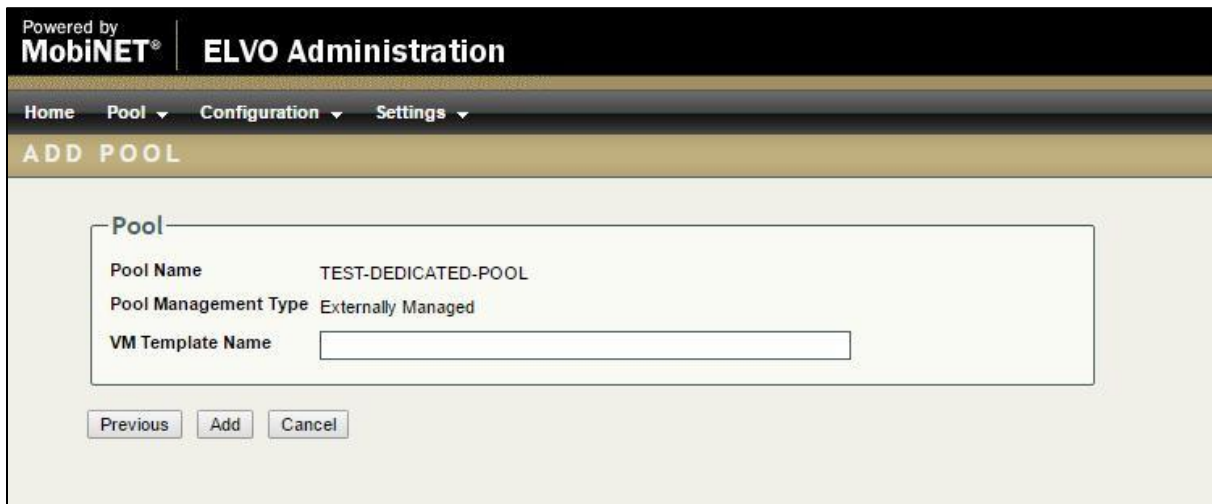
For the Hypervisor **“Type”** select **“VMware vSphere”**.

Provide a unique **“Name”** for the Hypervisor (this name can be freely selected – it does not need to match any existing values).

Also provide a **“Description”** for this Hypervisor. This text is arbitrary and is simply used to assist in recognizing the Hypervisor.

From the **“Control Center”** drop down list, select the URL that was configured in *Step 1*.

Click **“Next”**.



The screenshot shows the 'ELVO Administration' interface. At the top, it says 'Powered by MobiNET®'. Below that is a navigation bar with 'Home', 'Pool', 'Configuration', and 'Settings'. The 'ADD POOL' section is highlighted. The form contains the following fields:

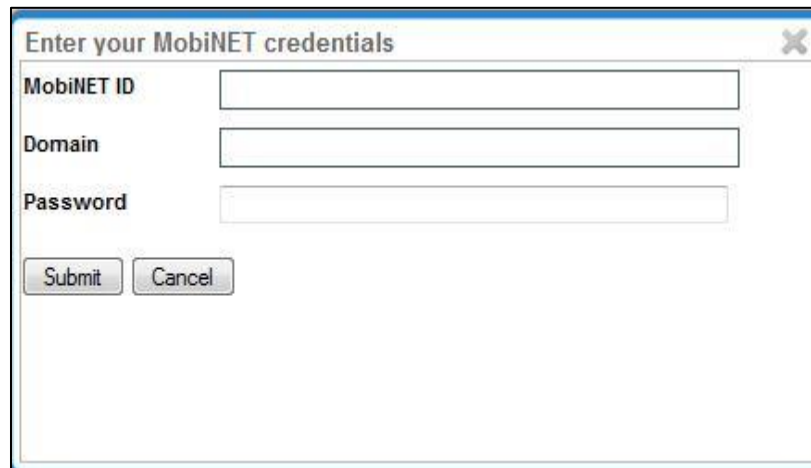
Pool	
Pool Name	TEST-DEDICATED-POOL
Pool Management Type	Externally Managed
VM Template Name	<input type="text"/>

At the bottom of the form are three buttons: 'Previous', 'Add', and 'Cancel'.

Now you can configure the Pool settings:

VM Template Name – Name of the template to clone additional Instances from. This name must match what is in VMware Horizon.

Click **“Add”**. And enter the ER Admin Credentials you used before to activate the ELVO.



Step 3 – VM Template Setup

With the Pool now created, it is time to build a template virtual machine image that will be later cloned to create Pool Instances.

From vSphere, create a virtual machine. The name of the virtual machine must match the value used in the “**VM Template Name**” field in *Step 2*.

Since a copy of the MobiNET Agent software will need to appear in each Pool Instance, it is necessary to install the MobiNET Agent software in the template virtual machine.

The MobiNET Agent installer may be distributed using various channels, but in all cases, you will need to locate and run the installer executable *Setup.exe* or *MobiNETAgent.msi*.

Using MobiNETAgent.msi:

Run the following command, being sure to use the appropriate value for the ELVO address (in place of 192.0.2.1), and the **POOLID** value for the **Pool** that you just created in *Step 2*.

```
Msiexec /i MobiNETAgent.msi REBOOT=ReallySuppress /qn /L*vx
"%ALLUSERSPROFILE%\MobiNETAgentInstall.log"
CONFIGDIR=https://192.0.2.1:443/SessMngrSrv2/SessionManager
POOLID=26F28BE463EE82DBAFA759333CFA0F6C
```

Using Setup.exe:

Run *Setup.exe* with the following arguments, being sure to use the appropriate value for the ELVO address (in place of 192.0.2.1), and the **POOLID** value for the Pool that you just created in *Step 2*.

```
Setup.exe /V"CONFIGDIR=https://192.0.2.1:443/SessMngrSrv2/SessionManager
```

POOLID=26F28BE463EE82DBAFA759333CFA0F6C REBOOT=ReallySuppress"

Once the MobiNET Agent software install completes, shut down the VM, and take a snapshot naming it specifically for your Pool.

Step 4 – Using VMware Horizon / Configuring VM View Server

The externally managed Pools can be setup so the ELVO will communicate with VMware Horizon and allow management of the ELVO Pools through the VMware Horizon administration web portal. There are two different types of externally managed Pools that are available through this method, Floating and Dedicated Pools. This section describes the steps that are necessary to create a new externally managed Pool of Virtual Instances.

"Add VMware View PowerShell Connection" - checkbox needs to be checked.

A new section called VM View Server will appear. Fill in the following fields with the required information below.

URL - should be filled in with the URL of the VMware Horizon server URL.

Port - this is the port the ELVO will be contacting the VMware Horizon server through.

Use Https - check this box off if you are using an https URL.

User Name - this is the username of a user with admin access to VMware Horizon server.

Password - enter the password to the user you are trying to connect to VMware Horizon with.

Authentication Scheme - leave as the default setting unless it is otherwise required.

VM Pool Name - the magnifying glass will query VMware Horizon and come back with a dropdown list of all available Pool Names. This step is run after VMware Horizon Pool is setup completely.

Add VMware View PowerShell Connection ☒

VM View Server

URL

Port

Use Https ☐

User Name

Password

Authentication Scheme

VM Pool Name

Step 5 – Dedicated Pool Setup

The Dedicated Pool can be created through VMware Horizon Administration web portal and the Pool can be linked to the ELVO externally managed Pool that was created previously. Consulting the VMware Horizon setup guide you can customize the settings required for the dedicated Pool being created. A key feature of Dedicated Pools is the ability to assign a MobiNET User to a specific Instance and each time that user tries to do a data session they will only be able to access that specific Instance.

Step 6 – Floating Pool Setup

The Floating Pool can be created through VMware Horizon Administration web portal and the Pool can be linked to the ELVO externally managed Pool that was created previously. Consulting the VMware Horizon setup guide you can customize the settings required for the Floating Pool being created. The Floating Pool allows users to connect to the first available Instance in a round-robin format. If the same MobiNET User does a data session again they will be given the next available Instance. This allows for a more dynamic number of Instances to be in the Pool as no single MobiNET User will be assigned to an Instance.

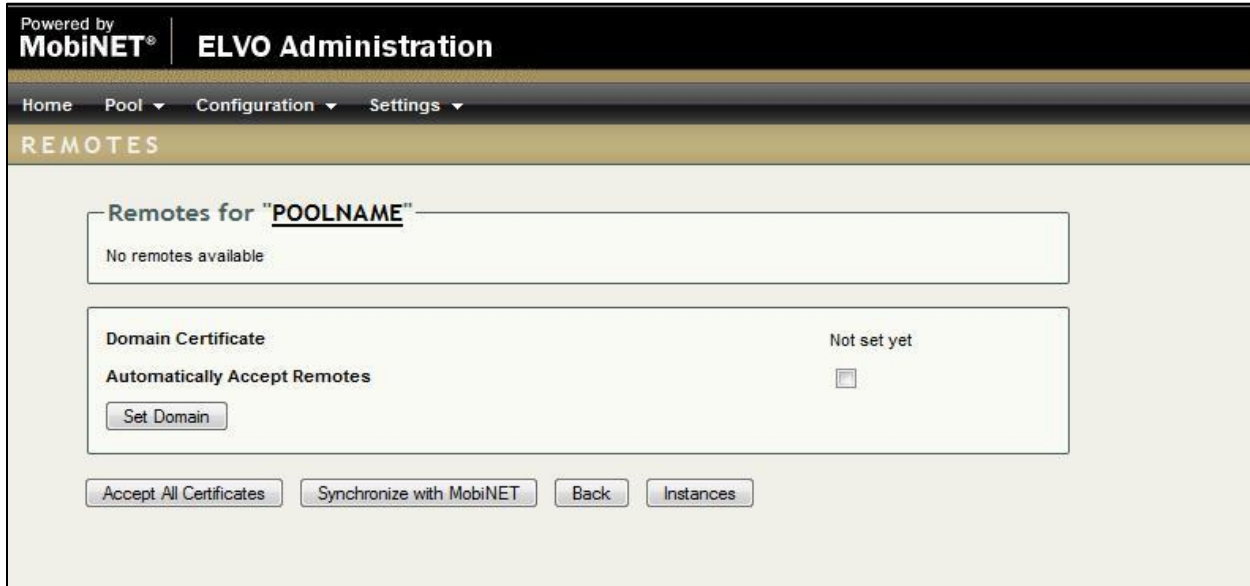
Step 7 – Associating the Template and Pairing MobiKEY Users to the Pool

Go to the Edit Pool page by clicking on the externally managed Pool that was previously created. In the **VM View Server** section the “**VM Pool Name**” can be searched for by clicking on the magnifying glass. Once the search is complete select the VM Pool you created in VMware View and click “**Save**”.

MobiKEY users can now be paired with this Pool. Please refer to the EnterpriseLIVE Registration Guide for the steps required to create a valid .csv file that is used to associate MobiKEY users (also known as ‘Remotes’) with a Host.

After completing the EnterpriseLIVE Registration process, all pairings to a Pool must be authorized using the ELVO-AT.

Return to the ELVO-AT and from the Pools menu, click the **“Remotes”** link (in the second column from the right) for your Pool. The following screen will appear:



The screenshot shows the 'Remotes' page in the ELVO Administration interface. At the top, it says 'Powered by MobiNET®' and 'ELVO Administration'. Below this is a navigation bar with 'Home', 'Pool', 'Configuration', and 'Settings'. The main heading is 'REMOTES'. The content area is titled 'Remotes for "POOLNAME"' and shows 'No remotes available'. Below this is a section for 'Domain Certificate' with the status 'Not set yet' and a checkbox for 'Automatically Accept Remotes'. There is a 'Set Domain' button. At the bottom, there are four buttons: 'Accept All Certificates', 'Synchronize with MobiNET', 'Back', and 'Instances'.

Click the **“Accept All Certificates”** button. When prompted, enter the ER Admin credentials that were provided to you by Route1 (the same credentials that were used when uploading the .csv file).

After the certificates have been accepted, the Remotes page for this Pool will show the **Remote ID** and **Username** for all of the Remotes that were associated with this Pool.

Alternatively, you may set the Pool to **“Automatically Accept Remotes”**. This will pair every Remote without the need to manually accept them each time you upload a .csv using EnterpriseLIVE Registration. For this approach, you will need to generate and save the domain certificates during the EnterpriseLIVE Registration process. Once the domain certificates are generated, return to the ELVO-AT Remotes page and click on **“Set Domain”**. This will allow you to browse to the location of your saved domain certificates and upload the zip file. You will receive a confirmation message once completed. Proceed to check the box **“Automatically Accept Remotes”** to complete the process. Final confirmation will be received stating **“Automatic Acceptance of Remotes”** is enabled for Pool **“POOLNAME”**.

From the Pools list, click the **“Instances”** link (in the far right column) for your Pool. From here you can assign MobiNET Users to individual Instances for Dedicated Pools. An assigned user will only be able to connect to the Instance they are assigned to. Click on the **“MobiNET User Assigned”** dropdown menu to select a MobiNET User you wish to be able to connect to that Instance.

[Home](#)
[Pool](#)
[Configuration](#)
[Settings](#)

INSTANCES

Instances for "DOI-DED-POOL"

In session - 0, Shut down - 0, Suspended - 0, Reserved - 0

Name	VM ID	In Data Session	Status	MobiNET Status	MobiNET User Assigned
DOI-DED-POOL-4	4CA...BA1	No Sessions	Powered On	Registered	Choose One
DOI-DED-POOL-5	412...CC3	No Sessions	Powered On	Registered	Choose One
DOI-DED-POOL-1	FBA...A47	No Sessions	Powered On	Registered	Choose One
DOI-DED-POOL-2	ED5...59C	No Sessions	Powered On	Registered	Choose One
DOI-DED-POOL-7	611...2DE	No Sessions	Powered On	Registered	Choose One
DOI-DED-POOL-3	F3F...37C	No Sessions	Powered On	Registered	Choose One

Total: 6

Actions

[Create Linked Instance](#)
[Synchronize VM Names](#)
[Reset Pool State](#)

[Back](#)
[Refresh](#)
[Remotes](#)

Step 8 – Recompose

The Recompose feature allows for you to update the Template VM and push that update onto all Instances within the Pool.

In the **"Edit Pool"** details page in the Actions window there is the **"Recompose"** feature. If you select the **"Recompose"** option, click the **"Magnifying Glass"** for the **"Snapshot to Recompose to"** field, once it is done searching VMware Horizon server a dropdown menu will appear with all snapshot options associated with that VM template. Select the snapshot you wish to update the other Instances in the Pool to and select if you want to **"Force log off"** or **"Stop on error"**. Once you run the recompose feature, you can monitor it on VMware Horizon administration web portal.

Force log off – any users logged into a data session will be forcibly logged out of the data session so the recompose feature can run on that Instance.

Stop on error - if the recompose feature comes across an error while updating the Instances the process will terminate so further errors don't occur.

Suspend
Delete
Renew Certificate

Recompose

VM Template Name
DOI-DED-POOL

Snapshot to Recompose to

Force log off
☐

Stop on error
☐

5. Settings and Configurations

Pool Settings

Configuration

Actions

Edit Instance Configuration – the user is able to create new nodes, delete selected nodes and make changes on certain nodes within the Instance Configuration, if permitted.

Suspend/Resume – suspends/activates the services for the selected Pool.

Delete – deletes the selected Pool.

Renew Certificate – renews the Pool certificate. Please contact Route1 for your ticket number.

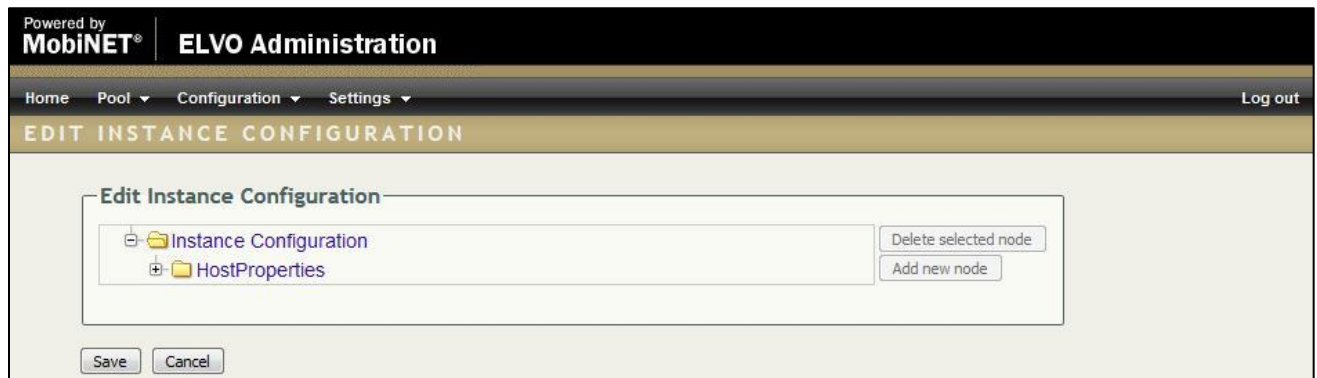
Save – saves any changes made to the Pool information.

Cancel – cancels all changes made and returns to the Home page.

Remotes – directs the user to the list of Remotes for the current Pool.

Instances – directs the user to the list of Instances for the current Pool.

Edit Instance Configuration



Delete selected node – deletes the selected node from the Instance Configuration.

Add new node – adds a new node to the current configuration under the selected root.

Save – saves any changes made to the Instance Configuration.

Cancel – returns the user back to the list of Pools.

The **HostProperties** node contains a number of sub-nodes each of which contain configuration values.

The **DataSession** subfolder:

Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings Log out

EDIT INSTANCE CONFIGURATION

Edit Instance Configuration

- Instance Configuration
 - HostProperties
 - Connection
 - LoggingOptions
 - DataSession
 - DisableInputs
 - RemoveWallpaper
 - DisableDesktopPattern
 - DisableFontSmoothing
 - DisableWindowDrags
 - CanChangeResolution
 - LockSetting
 - DisableSleepMode
 - HideHostCursor
 - HasInactiveTimeout
 - ForceInactiveTimeout
 - InactiveTimeoutMinutes
 - MultiMonitor
 - LastLoginHigh
 - LastLoginLow
 - Printing
 - Sound
 - Subscription
 - ProxyConfiguration

Delete selected node

Add new node

True
True
True
False
True
True
3
False
False
True
False
20
True
0
0

Save Cancel

DisableInputs – disables the local monitor, mouse, keyboard and speakers (attached to your physical Host) during a MobiKEY session.

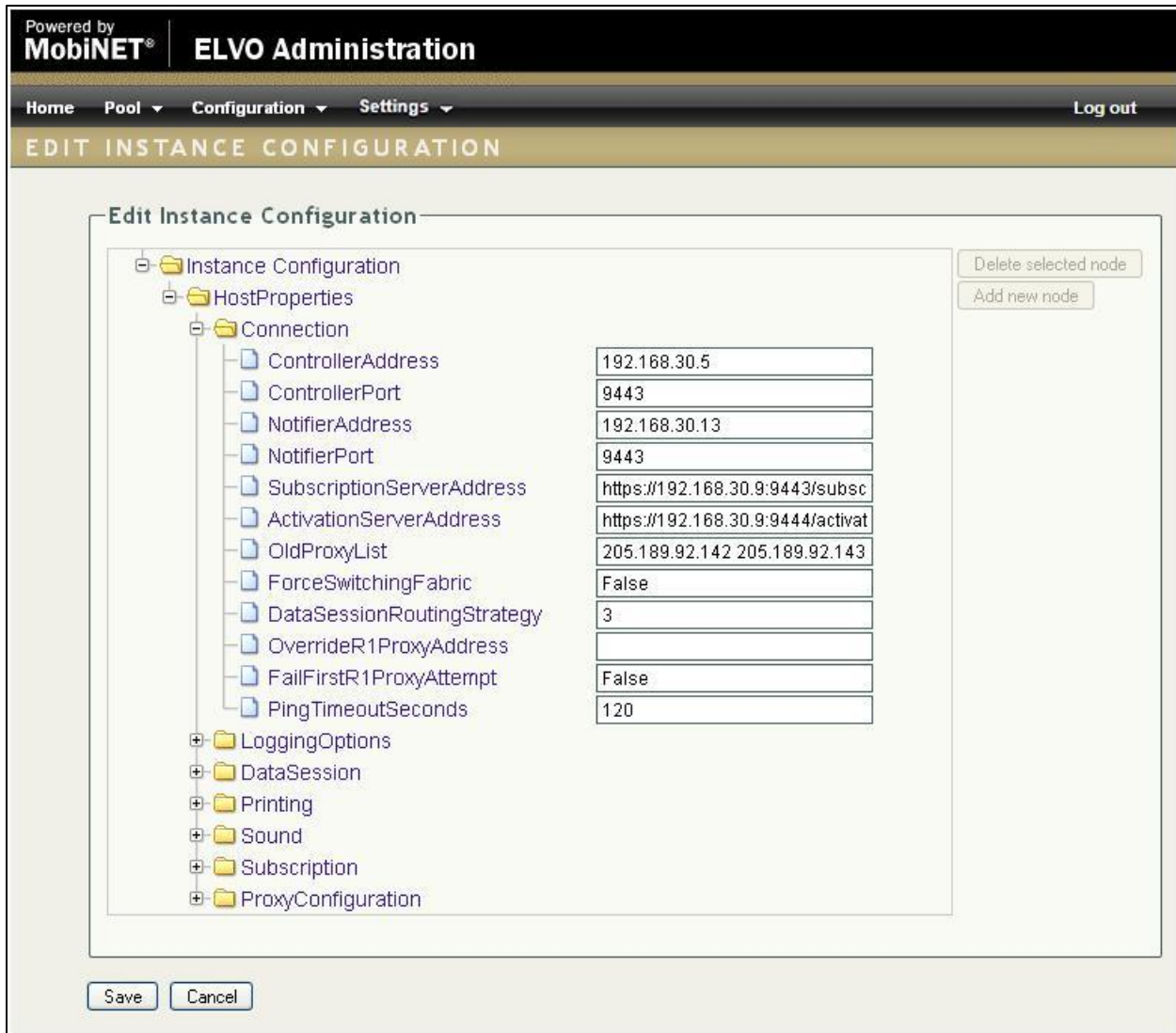
LockSetting – a numerical value indicating the action to be taken by the Host Instance when a data session ends:

- 0 = Maintain Host state (take no action)
- 1 = Lock the Host such that a Windows login will be required to unlock the account
- 3 = Force a log off of the current Windows user (unsaved data will be lost)

HasInactiveTimeout – setting this Boolean value to 'True' will instruct the Host Instance to exit the MobiKEY session after a period of inactivity indicated by *InactiveTimeoutMinutes*.

InactiveTimeoutMinutes – the number of minutes after which an inactive data session will automatically be terminated by the Host Instance.

The **Connection** subfolder:



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings Log out

EDIT INSTANCE CONFIGURATION

Edit Instance Configuration

- Instance Configuration
 - HostProperties
 - Connection

ControllerAddress	192.168.30.5
ControllerPort	9443
NotifierAddress	192.168.30.13
NotifierPort	9443
SubscriptionServerAddress	https://192.168.30.9:9443/subsc
ActivationServerAddress	https://192.168.30.9:9444/activat
OldProxyList	205.189.92.142 205.189.92.143
ForceSwitchingFabric	False
DataSessionRoutingStrategy	3
OverrideR1ProxyAddress	
FailFirstR1ProxyAttempt	False
PingTimeoutSeconds	120
 - LoggingOptions
 - DataSession
 - Printing
 - Sound
 - Subscription
 - ProxyConfiguration

Buttons: Delete selected node, Add new node, Save, Cancel

DataSessionRoutingStrategy – a numerical value indicating the network connection routing between the Host Instance and Remote Asset connecting to that Instance:

- 0 = Always attempt a direct connection
- 1 = Automatic – allow MobiNET to determine the optimal connection
- 2 = Always use the MobiNET Switching Array
- 3 = Always use the MobiNET Switching Array in encapsulated mode

Configuring Instances

From the **“HOME”** screen, you can manage Instances that are currently associated with a Pool or create

new Instances for a Pool by clicking the “Instances” link for the appropriate Pool record. Once the link is clicked, the following screen appears:



The screenshot shows the ELVO Administration interface. At the top, it says 'Powered by MobiNET®' and 'ELVO Administration'. Below this is a navigation bar with 'Home', 'Pool', 'Configuration', and 'Settings'. The main heading is 'INSTANCES'. The content area is titled 'Instances for "Regular Pool Demo"'. It shows a table with columns: Name, VM ID, In Data Session, Status, and MobiNET Status. There are three rows of instances, each with a 'Shut Down' button. Below the table is an 'Actions' section with buttons for 'Create Linked Instance', 'Synchronize VM Names', and 'Reset Pool State'. At the bottom are 'Back', 'Refresh', and 'Remotes' buttons.

Name	VM ID	In Data Session	Status	MobiNET Status
⊕ Demo Clone-11	4C8...92D	No Sessions	Powered On	Registered Shut Down
⊕ Demo Clone-12	DA4...206	No Sessions	Powered On	Registered Shut Down
⊕ Demo Clone-13	8EF...2C3	No Sessions	Powered On	Registered Shut Down

Total: 3

Actions

[Create Linked Instance](#) [Synchronize VM Names](#) [Reset Pool State](#)

[Back](#) [Refresh](#) [Remotes](#)

*Some of these options will be slightly different and available depending on the type of Pool you have created. In the screenshot above a “Regular” Pool was used that has the “Dynamic Growth” option enabled.

Power On/Off – Instance Status changes to Powered On/Off accordingly.

Create Full Instance – creates an independent but identical copy of the template virtual machine specified when creating the selected Pool. The ongoing operation of a Full Instance is entirely separate from its parent (template virtual machine). In Dynamic Pools, this feature will not be selectable.

Create Linked Instance – creates a new Instance based on the snapshot of the template virtual machine. This Instance shares the virtual disks of its parent (template virtual machine) but basically runs off of a snapshot. It is important to specify the snapshot name under Pool information to be able to create a Linked Instance. In Dynamic Pools, this feature will not be selectable.

When either a Full or Linked Instance is being created, the VM Name appears with the status ‘Pending Cloning’. Once created, the VM gets an ID and its status changes to ‘Powered Off’. NOTE: If the Instance failed to clone, it will have a ‘Pending Cloning’ status, and an explanation of the problem will appear in the ‘Note’ field, which becomes visible once the Instance record is expanded when the user clicks the ‘+’ button next to the Instance Name (an expanded record is shown below). The “Delete” button enables

the user to remove Instances which are no longer needed from the list.

Synchronize VM Names – VM names are synchronized with the Hypervisor.

Reset Pool State – this button can be used to clean up and remove any Instances that failed to clone properly. If the “**Snapshot Name**” was incorrect for example, the Instances would fail to be created.

Back – returns the user back to the list of Pools.

Refresh – the Instances page is reloaded reflecting information changes.

Remotes – directs the user to the list of Remotes for the current Pool.

You may edit an Instance by clicking on the **Instance Name** in the first column. The following screen will appear:

Powered by
MobiNET®

ELVO Administration

Home
Pool
Configuration
Settings

EDIT INSTANCE

Instance

Name	Demo Clone-11	<button>Rename</button>
VM ID	4C8A2D42C3AF8DA316C8BE184CC7992D	
In Data Session	No	
Last Data Session	Not Available	
Last Remote	Not Available	
Confirmed	Yes	
Creation Date	2016.10.20 at 15:13:43 UTC	
Status	Powered On	<button>Shut Down</button>
Template Used	Demo Template	
Snapshot Used	Demo Snapshot	
Note	Register Successfully	

Actions

Create Instance Configuration

Update Power State

Suspend

Delete

Back

Rename – allows this Instance to be renamed.

Power On/Off – Instance Status changes to Powered On/Off accordingly.

Edit Instance Configuration – navigates to the Edit Instance Configuration screen for this Instance.

Update Power State – synchronize the power state with the hypervisor.

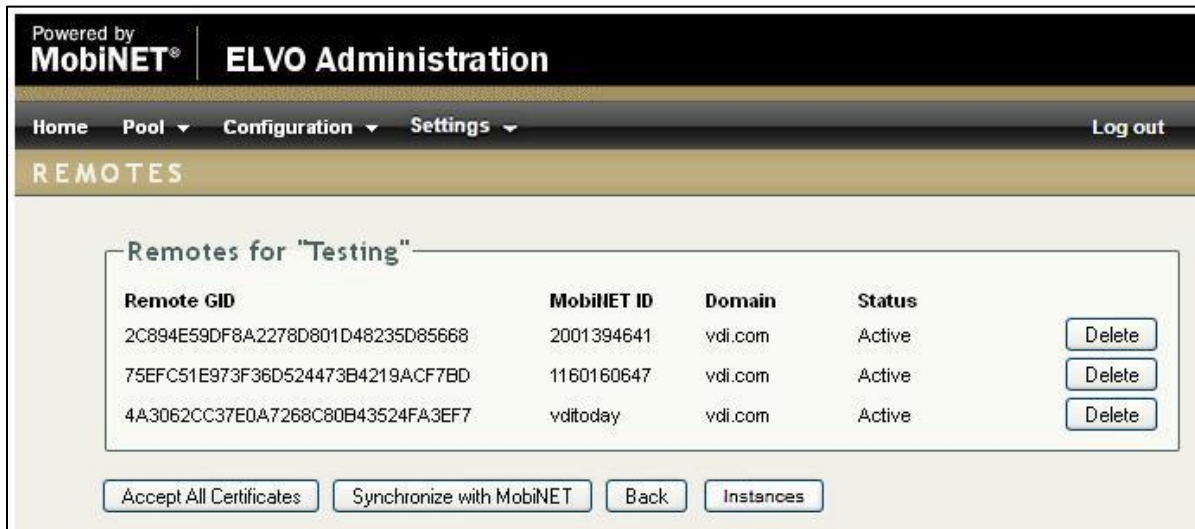
Suspend – suspends this Instance.

Delete – deletes this Instance from the selected Pool and the VMware ESXi server.

Back – returns the user back to the list of Instances.

Configuring Remotes

From the “**Home**” screen, select the Pool in which you want to manage users (Remotes) that are currently associated with it or activate new ones. Once the “**Remotes**” link is clicked, the following screen appears:



The screenshot shows the ELVO Administration interface. The top navigation bar includes 'Home', 'Pool', 'Configuration', and 'Settings'. The main heading is 'REMOTES'. Below this, a section titled 'Remotes for "Testing"' contains a table with the following data:

Remote GID	MobiNET ID	Domain	Status	
2C894E59DF8A2278D801D48235D85668	2001394641	vdi.com	Active	Delete
75EFC51E973F36D524473B4219ACF7BD	1160160647	vdi.com	Active	Delete
4A3062CC37E0A7268C80B43524FA3EF7	vditoday	vdi.com	Active	Delete

At the bottom of the interface, there are four buttons: 'Accept All Certificates', 'Synchronize with MobiNET', 'Back', and 'Instances'.

Delete – deletes the association of the selected Remote from this Pool. If a Remote is deleted by mistake, you will need to associate the user to this Pool again, see the *EnterpriseLIVE Registration Guide*. **NOTE:** The same MobiNET ID can be used when restoring the association.

Accept All Certificates – accepts certificates for any new Remotes in a ‘pending’ state and adds these Remotes to the list of Remotes associated to this Pool, displaying their GID and other relevant information (this assumes that new users have been associated to the currently selected Pool, please refer to the *EnterpriseLIVE Registration Guide* for instructions on how to create new associations). If there are no pending Remotes, a message ‘No certificates were accepted’ is returned.

Synchronize with MobiNET – synchronizes information on Remotes currently associated to this Pool with the MobiNET database, and displays a message of successful synchronization upon completion.

Back – returns the user back to the list of Pools.

Instances – directs the user to the list of Instances for the current Pool.

6. ELVO Management Tools

Reporting and Session History

In the Instance section you will have the ability to view and run reports on the session history for each Instance and Remote connection.



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

INSTANCES

Instances for "POOLNAME"

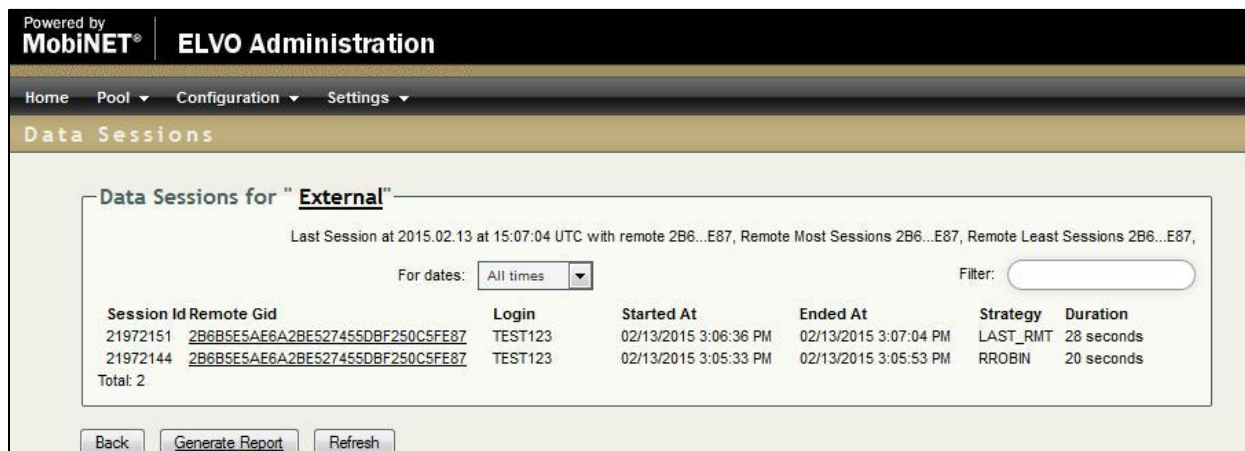
In session - 0, Shut down - 0, Suspended - 0, Reserved - 0

Name	VM ID	In Data Session	Status	MobiNet Status
External	96B...A41	No Sessions	NA	Registered

Total: 1

[Back](#) [Refresh](#) [Remotes](#)

Click on “**Sessions**” of an Instance to display the current history, which can be configured to display for different periods of time from the drop-down menu. Additionally, you may click on the “**Reports**” button to generate a connection Report for the selected Instance.



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

Data Sessions

Data Sessions for "External"

Last Session at 2015.02.13 at 15:07:04 UTC with remote 2B6...E87, Remote Most Sessions 2B6...E87, Remote Least Sessions 2B6...E87,

For dates: Filter:

Session Id	Remote Gid	Login	Started At	Ended At	Strategy	Duration
21972151	2B6B5E5AE6A2BE527455DBF250C5FE87	TEST123	02/13/2015 3:06:36 PM	02/13/2015 3:07:04 PM	LAST_RMT	28 seconds
21972144	2B6B5E5AE6A2BE527455DBF250C5FE87	TEST123	02/13/2015 3:05:33 PM	02/13/2015 3:05:53 PM	RROBIN	20 seconds

Total: 2

[Back](#) [Generate Report](#) [Refresh](#)

Click on the “**Remote GID**” to show all the Instances this particular Remote has connected to. You may toggle the time period to be displayed from the drop-down menu and run a report.

Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

Data Sessions

Data Sessions By Remote 'TEST123/2B6B5E5AE6A2BE527455DBF250C5FE87'

Last Session at 2015.02.13 at 15:07:04 UTC with vm 'External', Most Sessions with 'External', Least Sessions with 'External',

For dates: All times Filter:

Session Id	Vm Gid	Vm Name	Started At	Ended At	Strategy	Duration
21972151	F7DD2D4249D5EE5B9CB38CF2D4120BA8	External	02/13/2015 3:06:36 PM	02/13/2015 3:07:04 PM	LAST_RMT	28 seconds
21972144	F7DD2D4249D5EE5B9CB38CF2D4120BA8	External	02/13/2015 3:05:33 PM	02/13/2015 3:05:53 PM	RROBIN	20 seconds
21972133	113E2D42FE1C7623C3D9196B54CF50CB	External	02/13/2015 2:35:18 PM	02/13/2015 2:35:53 PM	RROBIN	35 seconds

Total: 3

Back Generate Report Refresh

Email Notification Settings

In the “**Configuration**” menu item “**Email Notification**” you will be able to add email addresses to receive alerts from the ELVO, choose what those alerts are, and who is to receive them.

Alert Recipients

Email	Usage is reaching max	VM Usage is maxed out	Allocation Fail	Cloning Fail	Dynamic Growth Disabled
qa@route1.com	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
test@test.com	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

[+](#)

Usage is reaching max – a Pool has one Instance left from the maximum not in use.

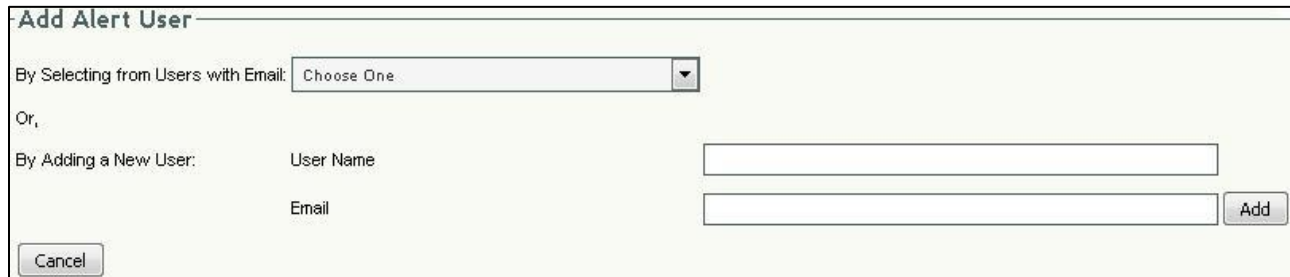
VM Usage is maxed out – all Instances in a Pool are in use and no more Instances can be cloned because of the **maximum** limit set for the Pool.

Allocation Fail – an Instance cannot be assigned to a user to connect to.

Cloning Fail – an Instance fails to clone successfully.

Dynamic Growth Disabled – dynamic growth option is disabled for a Pool, this will happen automatically after three failed attempts to clone an Instance as a failsafe to prevent further attempts from failing.

Clicking the “+” sign will open additional options to select a user or add a new one to receive alerts.



Add Alert User

By Selecting from Users with Email:

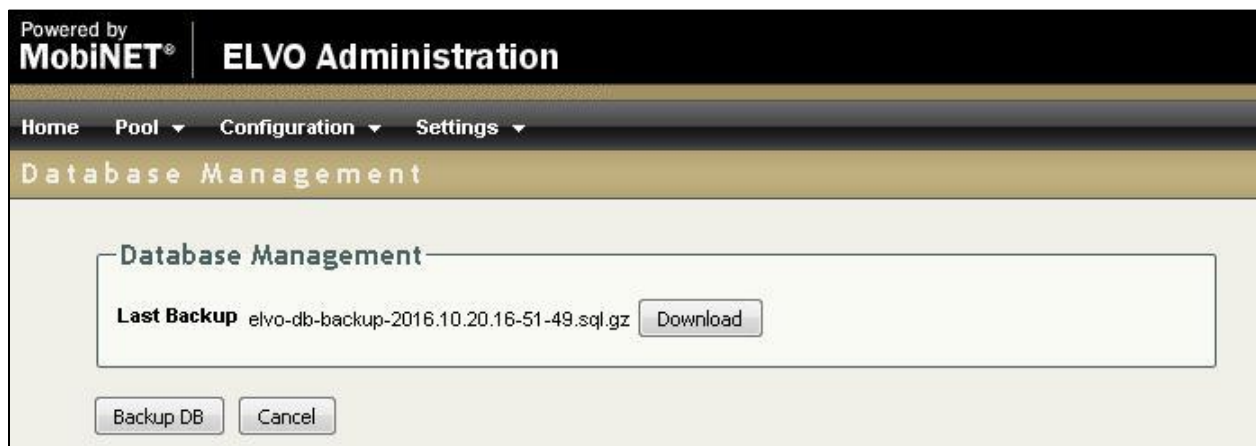
Or,

By Adding a New User:

User Name	<input type="text"/>
Email	<input type="text"/>

Database Management

In the “**Configuration**” menu item “**Database Management**” you will be able to back-up the ELVO database and save it locally.



Powered by **MobiNET®** | **ELVO Administration**

Home Pool Configuration Settings

Database Management

Database Management

Last Backup elvo-db-backup-2016.10.20.16-51-49.sql.gz

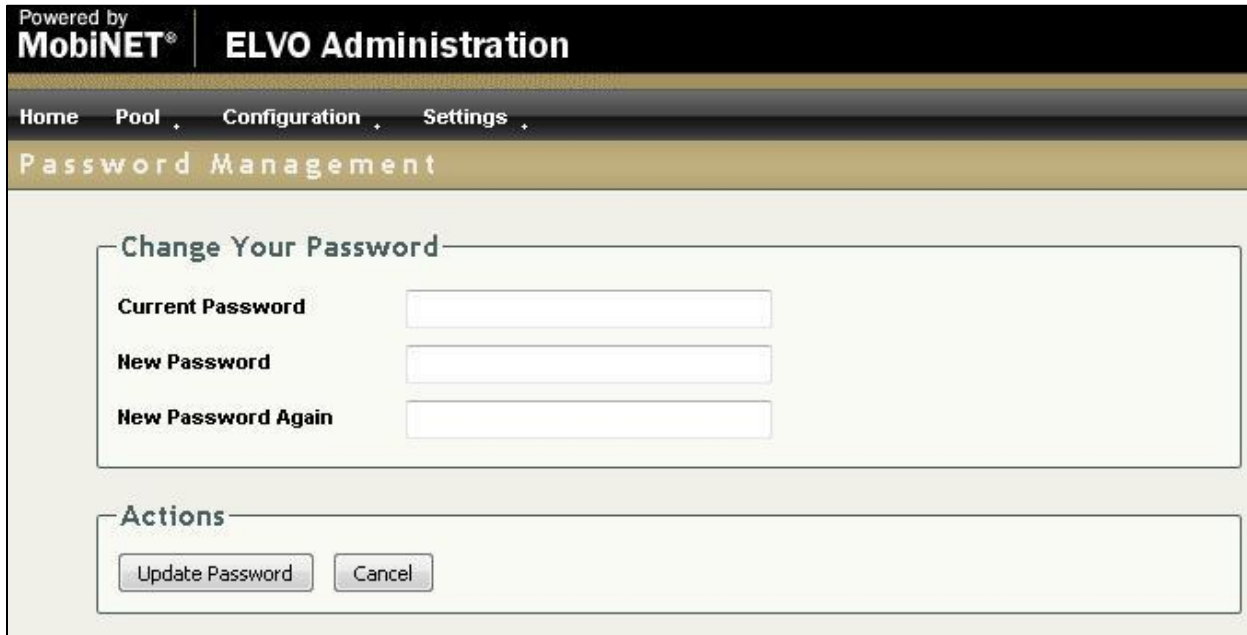
Backup DB – takes and saves a backup of the ELVO database and displays the file which includes the date at which the last backup was taken.

Download – downloads the backup file so it can be saved and stored.

Cancel – returns to the **Home** page.

Password Management Settings

In “**Settings**” under “**Change Password**” you can change the sysadmin log in password.



Update Password – once the current password and new password have been entered (twice for the new password) the password will be updated.

Cancel – returns to the **Home** page.

7. Glossary of Terms

A

Active Directory: the database that holds information about component locations, users, groups, passwords, and security information.

Administrator: the individual or individuals responsible for the maintenance of and software that comprises a computer network. This normally includes the deployment, configuration, maintenance and monitoring of active network equipment.

Authentication: the act of establishing or confirming something (or someone) as authentic. This might involve confirming the identity of a person, the origins of an artifact, or assuring that a computer program is a trusted one.

B

Business Continuity: an activity performed by an organization to ensure that critical business functions will be available to customers, suppliers, regulators, and other entities that must have access to those

functions.

C

CAC: the Common Access Card (CAC) is a smart card, which acts as the standard identification for U.S. government military personnel. The CAC is used to access U.S. government resources.

Comma separated values (CSV) file: used for the digital storage of data structured in a table of lists form, where each associated item (member) in a group is in association with others also separated by the commas of its set. Each line in the CSV file corresponds to a row in the table. Within a line, fields are separated by commas, each field belonging to one table column. CSV files are often used for moving tabular data between two different computer programs, for example between a database program and a spreadsheet program.

Configuration: an arrangement of functional units according to their nature, number, and chief characteristics. Often, configuration pertains to the choice of hardware, software, firmware, and documentation. The configuration affects system function and performance.

D

DEFIMNET: this refers to a private instance of MobiNET.

Deployment: the assembly or transformation from a packaged form to an operational working state; moving a product from a temporary or development state to a permanent or desired state.

E

ELVO Administration Tool (ELVO-AT): a VDI administration tool that allows administrators to register new Pools with the EnterpriseLIVE Virtualization Orchestrator (ELVO), pair MobiKEY users to Pools, and change the default settings of the MobiNET Agent software that resides in each of the Pools.

EnterpriseLIVE Registration (ER): a tool that allows IT administrators to enroll MobiKEY users in bulk and pair the MobiKEY users to any number of Host Assets. CAC and PIV user associations are device agnostic and are associated with the existing certificates on the smart card while ER generates unique License Keys for MobiKEY Classic 3 (MC3) and MobiKEY mobile application users. The user simply needs to enter that License Key or insert their smart card to finalize their registration.

EnterpriseLIVE Virtualization Orchestrator (ELVO): an enterprise class VDI session management server that enables IT departments to seamlessly integrate a unified secure desktop consolidation strategy within their corporate datacenters.

H

Hardware: the physical artifacts of a technology. It may also mean the physical components of a computer system, in the form of computer hardware.

Host Asset: "Host Asset" or "Host" shall mean the Asset that has the MobiNET Agent software installed on it. The Host may be a single host computer system, a series of host computer systems, a virtual computer or machine, a network, a server based system or any other host system on which the MobiNET Agent software is running.

Hypervisor: a program that allows multiple operating systems to share a single hardware host. Each operating system appears to have the host's processor, memory, and other resources all to itself. However, the hypervisor is actually controlling the host processor and resources by allocating what is needed to each operating system in turn and making sure that the Remote Asset operating systems (called virtual machines) cannot disrupt each other.

I

Instance: a computer system, capable of running an operating system and other software applications. An Instance can be a physical computer system (such as a desktop PC); such an Instance is called a Physical Instance. An Instance can also be a virtual computer system or virtual machine, emulating a physical computer system; such an Instance is called a Virtual Instance.

M

MobiKEY Application Software: a subscription-based service that enables users to access digital resources from anywhere at any time.

MobiKEY Device: MobiKEY technology's patented enabling device. Built on portable USB or smart card hardware for multi-factor authentication.

MobiNET: Route1's universal identity management system and service delivery platform.

MobiNET Agent Software: Software deployed on the device being accessed (the "Host Asset" or "Host") when users are remote.

MobiNET ID: The unique ID that has been created for the associated user.

N

Network topology: is the study of the arrangement or mapping of the elements (links, nodes, etc.) of a network, especially the physical (real) and logical (virtual) interconnections between nodes.

O

Operating system (Abbr. OS or O/S): an interface between hardware and user; it is responsible for the management and coordination of activities and the sharing of the resources of the computer.

P

Password: a secret word or string of characters that is used for authentication, to prove identity or gain access to a resource (example: an access code is a type of password). The password should be kept secret from those not allowed access.

Physical Instance: a physical computer system (such as a desktop PC), capable of running an operating system and other software applications.

PIV Card: the PIV (Personal Identity Verification) Card is a smart card, which acts as the standard identification for U.S. government civilian personnel. The PIV Card is used to access U.S. government resources.

Pool: a collection of Instances. A Physical Pool consolidates existing, stand-alone Physical and Virtual Instances into one cloud. A Virtual Pool uses a hypervisor to consolidate Virtual Instances.

Ports: applications running on TCP/IP open connections to other computers using something called ports. Ports allow multiple applications to reside on a single computer - all talking TCP/IP.

R

Remote Asset: shall mean the internet-enabled asset that is accessing a Host using the MobiKEY technology.

Routing: the act of moving information across a network, from a source to a destination.

S

Session: a semi-permanent interactive information interchange, also known as a dialogue, a conversation or a meeting, between two or more communicating devices, or between a computer and user.

Software: a collection of computer programs, procedures and documentation that perform some tasks on a computer system.

Secure Sockets Layer (SSL): cryptographic protocols for internet secure communications.

V

VDI (Virtual Desktop Infrastructure): an overall desktop virtualization network topology solution.

Virtualization: a technique used to implement an environment that provides a complete simulation of the underlying hardware. The result is a system in which all software capable of execution on the raw hardware can be run in the virtual machine.

Virtual Instance: a virtual computer system or virtual machine, emulating a physical computer system, capable of running an operating system and other software applications.

Virtual Machines: a software implementation of a machine (computer) that executes programs like a physical machine.

W

Windows: a series of software operating systems and graphical user interfaces produced by Microsoft®.

8. Route1 Support

Network Operations Support

support@route1.com

Telephone: +1 416-848-8391

Toll Free: +1 866-286-7330

Support: +1 866-371-1781 (Available from 12 am on Monday to 11 pm on Friday, and 8 am to 8 pm on each of Saturday and Sunday. All times are Eastern)

Office Locations

Arizona

5590 W. Chandler Boulevard, Suite 3
Chandler, Arizona. 85226

Colorado

1200 W. Mississippi Ave.
Denver, CO 80223

Florida

951 Broken Sound Parkway, Suite 108
Boca Raton, Florida. 33487

Ohio

9902 Carver Road, Suite 203
Blue Ash, Ohio 45242

Tennessee

6031 Century Oak Drive
Chattanooga, Tennessee. 37416

Virginia

9962 Brook Road, Suite 607
Glen Allen, Virginia. 23059

Canada

Corporate Head Office
8 King St. East, Suite 600
Toronto, Ontario. M5C 1B5

Sales Enquiries

sales@route1.com

+1 866-371-1780

+1 416-814-2608