



**ProfileUnity™
with FlexApp™ Technology**

***Installation &
Configuration Guide***

Introduction

This guide has been authored by experts at Liquidware in order to provide information and guidance concerning the installation and configuration of ProfileUnity with FlexApp.

Information in this document is subject to change without notice. No part of this publication may be reproduced in whole or in part, stored in a retrieval system, or transmitted in any form or any means electronic or mechanical, including photocopying and recording for any external use by any person or entity without the express prior written consent of Liquidware Labs.

Liquidware Labs, Inc.

3600 Mansell Road

Suite 200

Alpharetta, Georgia 30022

U.S.A.

Phone: 678-397-0450

www.liquidware.com

©2020 Liquidware Labs Inc. All rights reserved. Stratusphere, ProfileUnity, FlexApp, FlexDisk and ProfileDisk are trademarks of Liquidware Labs. All other products are trademarks of their respective owners. 20-0612.6.8.3 R2

Contents

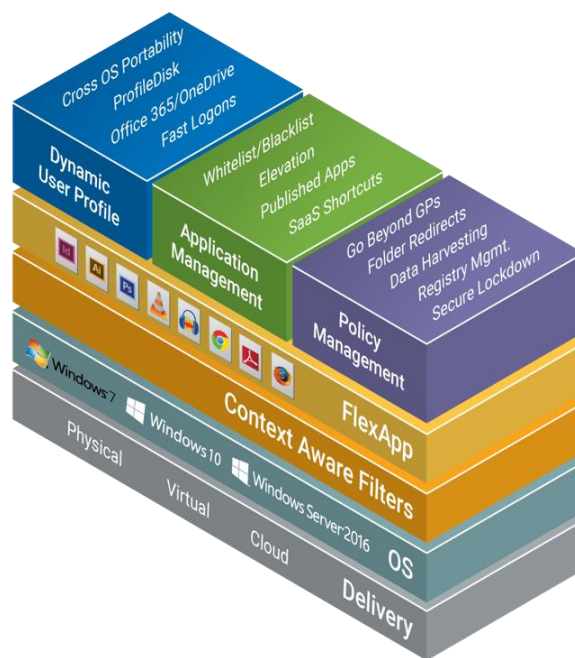
- PROFILEUNITY WITH FLEXAPP TECHNOLOGY OVERVIEW 4**
- SOFTWARE REQUIREMENTS 6**
 - MANAGEMENT CONSOLE REQUIREMENTS 6
 - FLEXAPP PACKAGING CONSOLE REQUIREMENTS 7
 - CLIENT REQUIREMENTS 7
 - (OPTIONAL) FLEXDISK REQUIREMENTS 8
 - ADDITIONAL REQUIREMENTS..... 8
 - Active Directory* 8
 - Using Cloud Storage with ProfileUnity (Optional)* 8
- CONFIGURING USERS AND COMPUTERS IN ACTIVE DIRECTORY 9**
 - CREATE A PROFILEUNITY COMPUTER ORGANIZATIONAL UNIT..... 9
- INSTALLING PROFILEUNITY 11**
- LOGGING IN TO THE MANAGEMENT CONSOLE FOR THE FIRST TIME 17**
- USING THE GUIDED CONFIGURATION WIZARD 19**
 - SELECT A TEMPLATE FOR CONFIGURATION 21
 - ASSIGN CLOUD STORAGE CREDENTIALS 22
 - ASSIGN VALUES TO TEMPLATE VARIABLES..... 23
 - Storage Path Permissions*..... 23
 - VHDX PROFILEDISK DEPLOYMENT..... 24
 - CONFIGURE ACTIVE DIRECTORY GPOS..... 25
 - CONFIRM YOUR SETTINGS & SAVE YOUR CONFIGURATION..... 27
- INSTALLING THE CLIENT SOFTWARE 29**
- LICENSE MANAGEMENT..... 31**
 - ACTIVATING OR UPDATING YOUR PRODUCT LICENSE 31
 - MANAGING USER LICENSES 33
 - REPORTING..... 34

MANUALLY PREPARING YOUR ENVIRONMENT TO USE THE PROFILEUNITY CLIENT	35
CREATE A GPO IN WINDOWS SERVER ACTIVE DIRECTORY	35
ASSIGN A GROUP POLICY COMPUTER STARTUP SCRIPT.....	37
ASSIGN A GROUP POLICY USER LOGOFF SCRIPT	40
CONFIGURE GPO ADMINISTRATIVE TEMPLATE SETTINGS.....	42
<i>Adding the ProfileUnity ADM Template.....</i>	<i>42</i>
<i>Configuring and Enabling Computer ADM Template Settings</i>	<i>45</i>
<i>Configuring and Enabling User ADM Template Settings.....</i>	<i>47</i>
USING SECONDARY PATHS FOR FAILOVER	49
EXAMPLE 1: BASIC FAILOVER WITH SINGLE SECONDARY PATH	49
EXAMPLE 2: FAILOVER WITH MULTIPLE SECONDARY PATHS.....	49
EXAMPLE 3: FAILOVER WITH MULTIPLE SECONDARY PATHS, MULTIPLE RULES.....	50
INSTALLING THE FLEXAPP PACKAGING CONSOLE SOFTWARE	51
TROUBLESHOOTING ASSIGNING STARTUP AND LOGOFF SCRIPTS.....	52
GETTING HELP INSTALLING PROFILEUNITY.....	53
USING ONLINE RESOURCES.....	53
CONTACTING SUPPORT	53
APPENDIX A - NOT USING NETLOGON?.....	54

ProfileUnity with FlexApp Technology Overview

ProfileUnity™ with FlexApp delivers feature-rich, yet affordable, User Environment Management and Application Layering for both virtual desktop deployments and physical PCs. ProfileUnity decouples user profiles, settings and data from the operating system thus ending the user migration cycle to new Windows desktops, including Amazon Workspaces, Citrix Virtual Apps and Desktops, VMware Horizon, and Microsoft RDSH or WVD. ProfileUnity's ongoing User Environment Management features centralized user and policy management with context aware settings that are only limited by your imagination.

ProfileUnity delivers a flexible universal profile that is compatible across multiple Windows versions. ProfileUnity boasts a lightweight agent and no complex software package to install on end-points. This cost-effective solution separately stores and dynamically applies user profiles, configurations, data, and select layered applications to a Windows OS in seconds at login, enabling organizations to be more flexible than ever before with their desktops.



ProfileUnity's FlexApp technology is designed to allow administrators to deploy corporate or department installed applications (DIA) without the burden of tedious base image management. FlexApp enables a potentially limitless number of applications to be stored separately from the Windows operating system yet 'snapped-in' in only seconds at login or, alternatively, at boot or on demand. Applications look native to the operating system, enabling compatibility of thousands of more applications than with other methods of application virtualization.

ProfileUnity offers these key advantages:

- ProfileUnity retains profiles in native Windows® formats, which keeps them backward and forward compatible across Windows operating systems. ProfileUnity is the perfect solution to harvest user profiles and user data from an older Windows OS and deliver it to a newer Windows OS just in time. Profiles can also co-exist across multiple Windows versions.
- ProfileUnity runs as a standalone system. No proprietary databases are used for user profiles or data. The lightweight client installs to endpoints without the need for software distribution or user downtime.

ProfileUnity is priced an average of 40 to 50 percent less than other user virtualization offerings, for faster ROI and a lower overall budget.

- ProfileUnity offers sophisticated features including Context-Aware Filters, Integration with Microsoft® Active Directory, Advanced Folder Redirection options, and more.
- ProfileUnity includes Application Rights Management for no added cost. These features enable you to elevate privileges for select users to run or install select applications and restrict users from running select applications in the base image.

Innovative FlexApp technology provides key benefits to customers, including:

- Simplifies management of non-persistent Windows environments dramatically because fewer master images must be maintained
- Promotes greater desktop virtualization ROI and economies of scale because more workers can use virtual or cloud desktops
- Reduces desktop administrator time on maintenance and troubleshooting activities
- Significantly lowers TCO as organizations realize optimal license use and reduce storage requirements
- Layers the application in the native locations throughout the Windows OS without application isolation
- Enables multi-cloud staging of applications from Amazon, Google, or Microsoft cloud storage

The top reasons that customers deploy ProfileUnity include:

- Speed up overall user login times
- Migrate or co-exist Windows Operating Systems – seamless onboarding to new desktops – physical, virtual, or cloud
- Fast profile handling – Office 365, OneDrive, and similar large profiles are easily handled with ProfileDisk
- Application Layering by group, department, or user – streamline image management
- Application Rights Management – restrict or elevate users to run select apps
- Replace Roaming Profiles – solving profile portability, granular, faster, dependable
- Lower costs of delivering VDI – lower storage and management costs
- Make more users compatible with virtual or cloud desktops – knowledge workers and power users can have the customizations and apps they demand
- Deliver context aware desktop experience – printer management, settings, shortcuts, etc. all based on custom filters
- Disaster Recovery - persona, data, apps restored in seconds to any Windows desktop (multi-cloud strategies are supported)
- Ongoing management of the desktop – provision settings, standards, registry modifications, desktop lockdown, and more
- One central user management console – Persona, Applications, Configurations, and central migration settings – for any and all Windows desktops

Software Requirements

ProfileUnity is available as a standalone product and consists of three parts: the Management Console, the FlexApp Packaging Console, and the Client. The ProfileUnity Management Console provides one central location where administrators can configure persona management and user and machine policies. The FlexApp Packaging Console allows administrators to configure and prepare any applications that will need to be configured for users and made available as a department installed application (DIA). The Client manages each user's settings and persona during their session.

The ProfileUnity standalone installer will guide you through the setup of the Management Console. The FlexApp Packaging Console and the Client are installed from the Administration area of the Management Console. Installation is straightforward and merely requires an administrator to answer a few simple prompts. There is one installer: ProfileUnity-Net_vX.X.X.exe. This installer contains not only the ProfileUnity software but all the prerequisites you will need including the Microsoft .NET Framework, Erlang OTP, RabbitMQ Server, and MongoDB Server.

Management Console Requirements

The ProfileUnity Management Console requires the following for installation:

Component	Requirements
Platforms Supported	Windows Server 2008 R2/2012/2012 R2/2016/2019. Only 64-bit versions where applicable are supported. Both physical and virtual instances are also supported.
Additional Software	<ul style="list-style-type: none">• Microsoft® .NET Framework 4.6.2 or higher• Erlang OTP• Rabbit MQ• MongoDB <p>All additional software is included with the ProfileUnity installer.</p>
Browsers Supported	Chrome 22.x, Firefox 12.x, and Internet Explorer 9.x or higher versions of these browsers. If you are using Internet Explorer 9, disable enhanced security.
CPU	2 CPUs 1 gigahertz (GHz) or faster
Memory	4 GB RAM
Storage	20 GB available hard disk space

The ProfileUnity Management Console requires your user account to have administrative privileges on the local machine for installation.

FlexApp Packaging Console Requirements

The ProfileUnity FlexApp Packaging Console requires the following for installation:

Component	Requirements
Platforms Supported	Windows 7/10 and Windows Server 2008 R2/2012/2012 R2/2016/2019. Both 32-bit and 64-bit versions where applicable are supported. The packaging console should be on a Windows operating system that can be reset after each package is created. Using a non-persistent pool or a virtual machine with a snapshot that can be rolled back is fully acceptable. Do not install the packaging console on the same machine where the ProfileUnity Management Console was installed.
Additional Software	Microsoft® .NET Framework 4.6.2 or higher
CPU	2 CPUs at 1 gigahertz (GHz) or faster
Memory	8 GB RAM
Storage	200 MB available hard disk space (32-bit) or 20 GB (64-bit)

The FlexApp Packaging Console has an additional bit-level requirement. The bit-level of the operating system on which you package applications with the FlexApp Packaging Console needs to match the operating system of the desktop to which you deploy applications. If you are packaging applications to be used in a 32-bit environment, you must use the Packaging Console on a 32-bit OS. If you are packaging applications to be used in a 64-bit environment, you must use the Packaging Console on a 64-bit OS.

Client Requirements

The ProfileUnity Client requires the following for installation:

Component	Requirements
Platforms Supported	Windows 7/8.1/10, Windows Server 2008 R2/2012/2012 R2/2016/2019, and Terminal Server or RDSH. Citrix Virtual Apps and Desktops 6.5-7 1909 (XenApp & XenDesktop), VMware View 5.2.x-7.11, and VMware View RDSH 7.11. Both 32-bit and 64-bit versions where applicable are supported. Both physical and virtual instances are also supported.
Additional Software	Microsoft® .NET Framework 4.6.2 or higher for use with ProfileDisk or FlexApp DIA
CPU	2 CPUs at 1 gigahertz (GHz) or faster
Memory	2 GB RAM minimum. Increase to 3GB RAM if using FlexApp.
Storage	200 MB available hard disk space (32-bit) or 20 GB (64-bit)

The ProfileUnity Client is dependent on a Microsoft domain infrastructure. Machines running the ProfileUnity Client must be members of the domain.

Any client machines making use of ProfileUnity's FlexApp features must have Windows 7 or higher installed. The clients can be deployed as physical desktops or as either persistent or non-persistent virtual desktops.

Additionally, write permission to the NETLOGON share on your domain controller is required to install the ProfileUnity Client. Please insure your user account has the necessary privileges prior to continuing. If you are not using the NETLOGON share on your domain controller, please see **Appendix A – Not Using NETLOGON** for more information.

(Optional) FlexDisk Requirements

FlexDisk is a VMDK distribution technology that can be used with ProfileUnity's FlexApp and ProfileDisk features as an alternative to using VHDs with these features. Generally, VHDs have less overhead and will work great for many organizations while VMDKs may be faster and more stable than VHDs in certain environments. The ProfileUnity FlexDisk technology requires the following for installation:

Component	Requirements
Desktops Supported	Windows 7/10, Windows Server 2008 R2/2012 R2/2016/2019 as a desktop, Citrix Virtual Apps and Desktops 6.5-7 1909 (XenApp & XenDesktop), VMware View 5.2.x-7.11, and VMware View RDSH 7.11. Both 32-bit and 64-bit versions where applicable are supported.
Additional Software	VMware vSphere vCenter and ESXi versions 5.5x-6.x
Other Requirements	VMDKs need to be on storage that is visible to the desktops. VMware vSphere licensing that supports HOTADD

Additional Requirements

Active Directory

ProfileUnity requires Active Directory to deploy its client files to the desktop and point the user to its configuration file. Users also must use Active Directory to login to their physical or virtual desktops.

Using Cloud Storage with ProfileUnity (Optional)

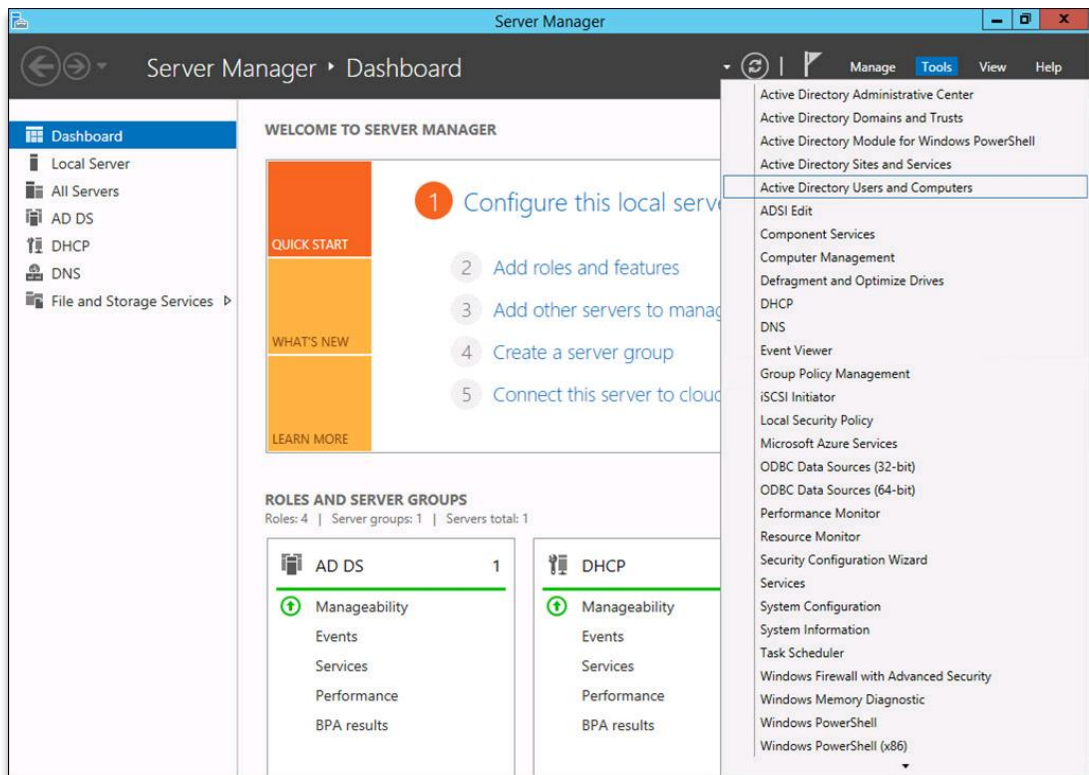
For those planning to utilize cloud storage with ProfileUnity, there is an additional document ***Using Cloud Storage with ProfileUnity*** that you should read. This document guides you through the process of setting up your cloud storage for use with ProfileUnity. The configuration of your cloud storage should be performed before using the ProfileUnity Management Console.

Configuring Users and Computers in Active Directory

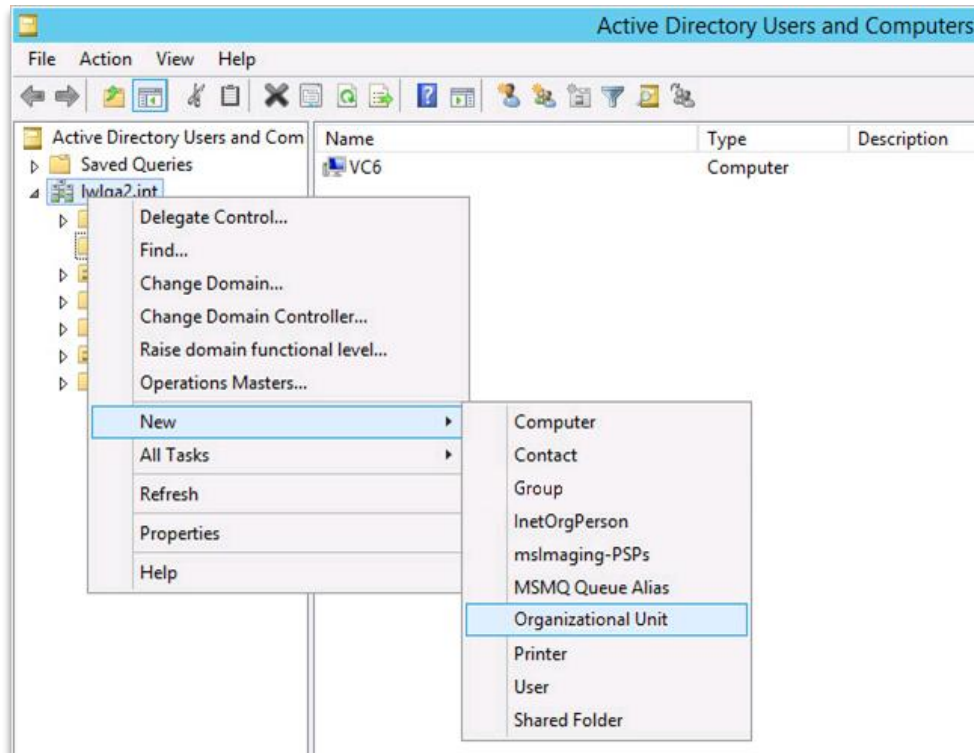
ProfileUnity uses Microsoft Active Directory (AD) and Group Policy Management for managing the users and computers configured to use the software and for activating the ProfileUnity Client without actually installing the agent on each of those individual physical or virtual desktops. Consequently, there are some administrative tasks outside of installing the ProfileUnity software where administrators need to configure some Active Directory and Group Policy settings. The ProfileUnity Management Console can automate configuring some of the Group Policy settings once the ProfileUnity Organizational Unit (OU) has been created.

Create a ProfileUnity Computer Organizational Unit

1. If you are using Windows Server 2012, start the Server Manager Dashboard. Click on the **Tools** menu, and select **Active Directory Users and Computers (ADUC)**. If you are using Windows Server 2008, go to **Start > Administrative Tools > Active Directory Users and Computers**.



2. To create a new ProfileUnity OU for your domain, right click on the domain name and select **New > Organizational Unit**. Give it any name you prefer such as “ProfileUnity Computers” or “ProfileUnity Desktops”.



3. Now you can either create new computers inside this newly created ProfileUnity computer OU, or you can move computers that already exist under your domain to this ProfileUnity OU. When you are finished, this ProfileUnity OU should contain all of the physical and virtual desktops that users will be allowed to login to and have ProfileUnity manage their user environment.

Installing ProfileUnity

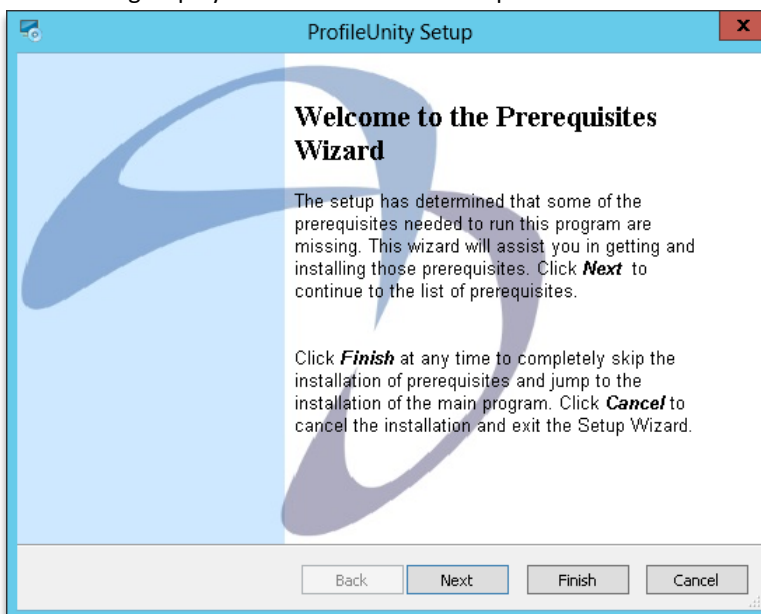
ProfileUnity is available only as a standalone product. The ProfileUnity standalone installer installs the ProfileUnity Management Console and downloads the software for the ProfileUnity FlexApp Packaging Console and the ProfileUnity Client. There is one installer, ProfileUnity-Net_vX.X.X.exe, which contains the Microsoft .NET Framework and other prerequisite software that you will need. Installation is straightforward and merely requires an administrator to answer a few simple prompts.

The ProfileUnity Management Console requires your user account to have administrative privileges on the local machine for installation. Additionally, write permission to the NETLOGON share on your domain controller or cloud storage path is required to install the ProfileUnity Client. Please ensure your user account has the necessary privileges prior to continuing.

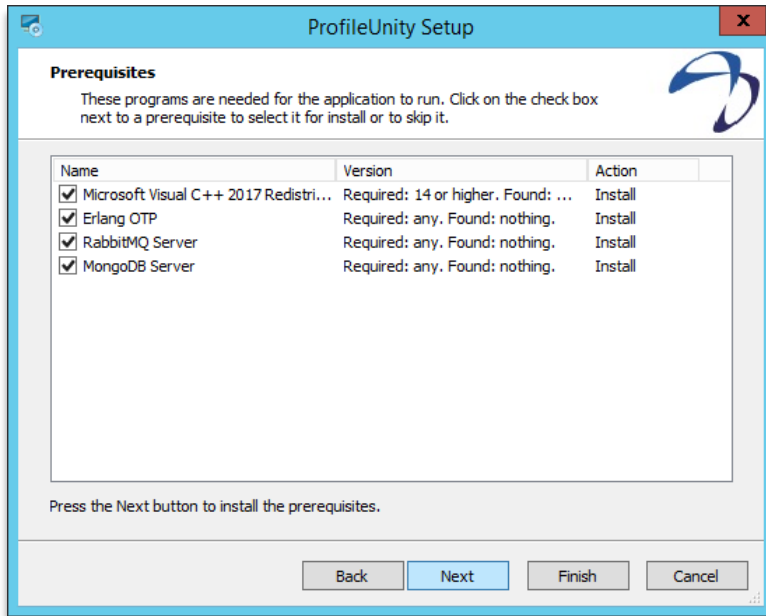
1. Browse to **ProfileUnity-Net_X.X.X.exe**, where “X.X.X” stands for the version number of the software, and execute the ProfileUnity standalone installer to begin the installation.
2. Please select your language and click **OK** to continue.



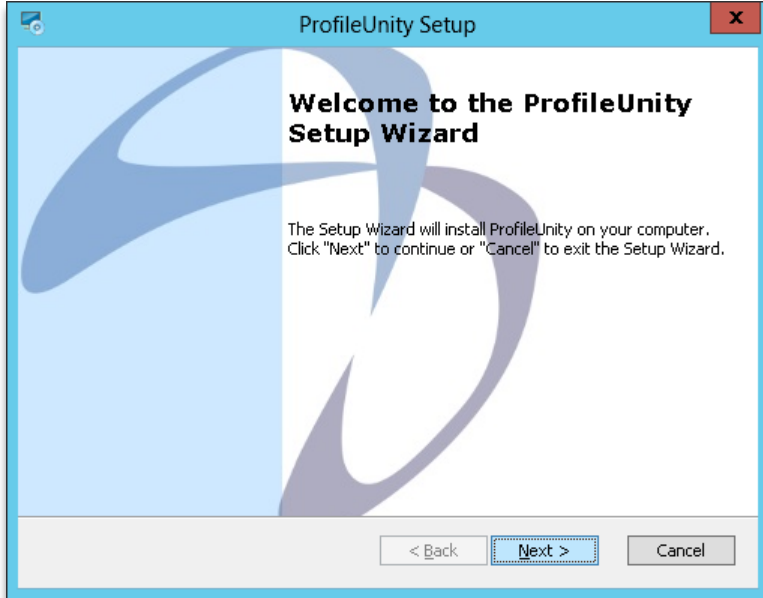
3. The installer checks to see if any prerequisites need to be installed. If so, the **Prerequisite Wizard** welcome screen dialog displays as shown. Click **Next** to proceed.



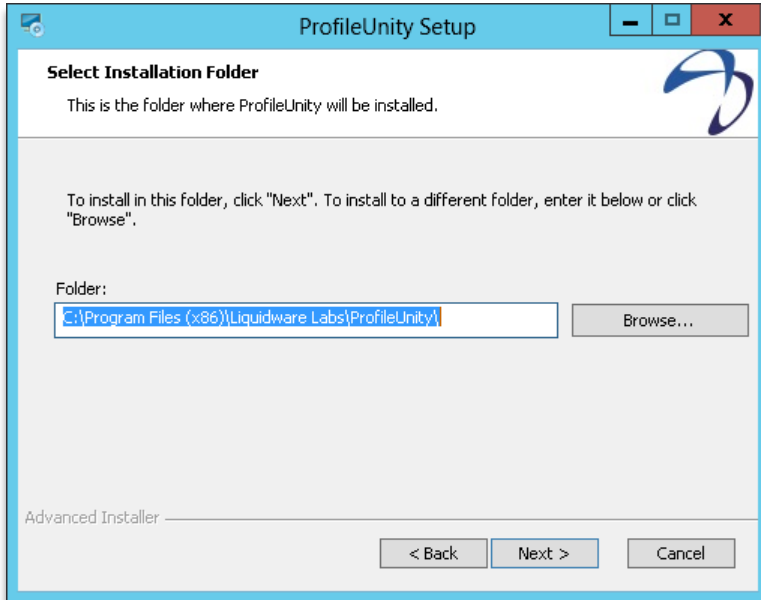
- Any prerequisite software your device needs will automatically be checked. Click **Next** to install the prerequisite software.



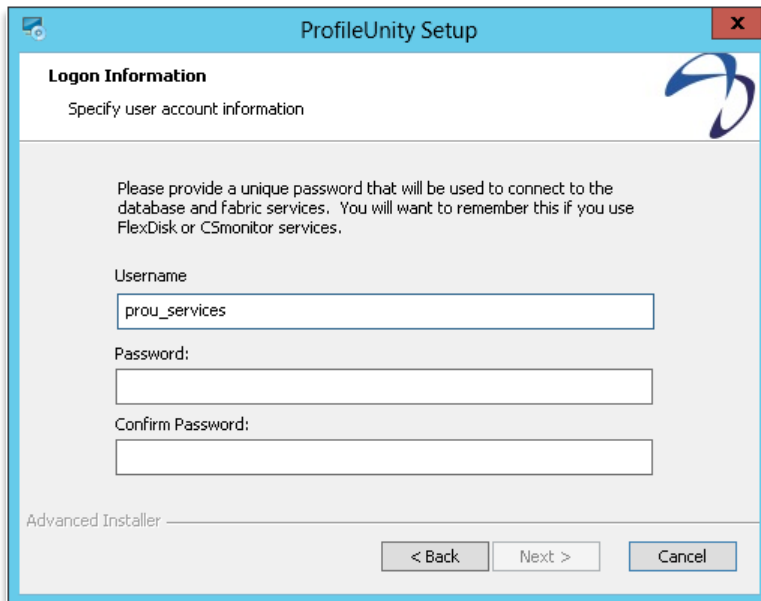
- Once the prerequisite software is installed, you will see the setup wizard for ProfileUnity. Click **Next** to proceed.



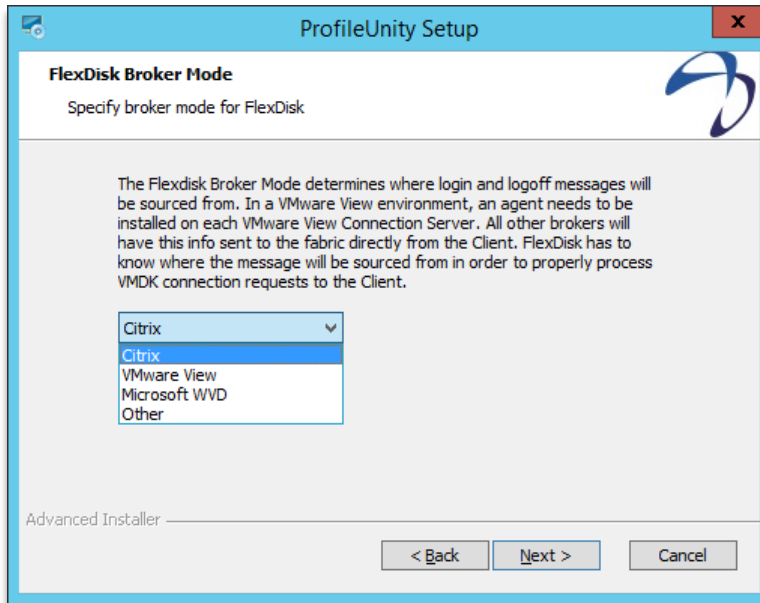
6. Please enter the folder on your local machine where you would like the Management Console installed, and then click **Next**.



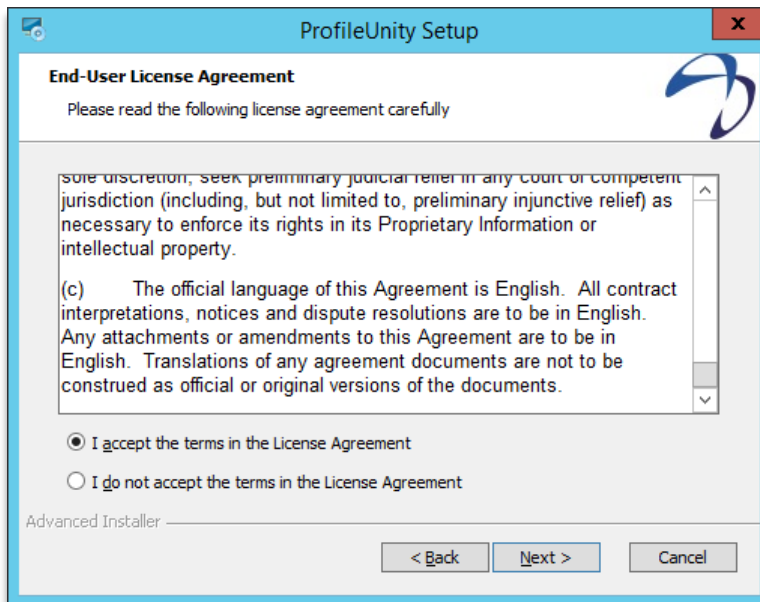
7. Please enter a password to be used to connect the database and fabric services. Your password must be at least 8 characters long and must contain 3 of the following characters:
- Lowercase letters
 - Uppercase letters
 - Numbers
 - Non-alphanumeric characters



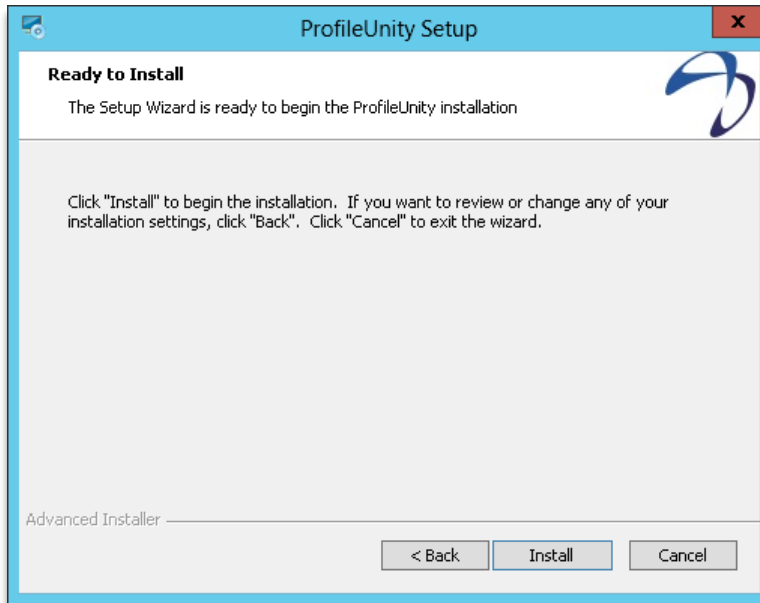
- Specify the broker mode for use with the optional FlexDisk VMDK delivery system. If you plan to use VHDs rather than VMDKs with ProfileDisk or FlexApp or do not plan to use either ProfileUnity feature, please select **Other** from the list. Click **Next** to proceed.



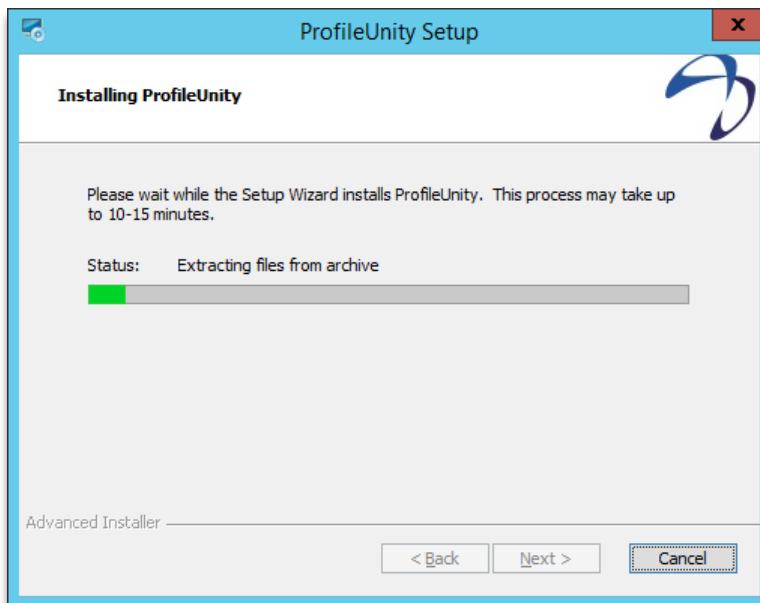
- Next, the License Agreement displays as shown. Please read the agreement and choose the “**I accept...**” option if you accept the terms of the agreement. Click **Next** to proceed.



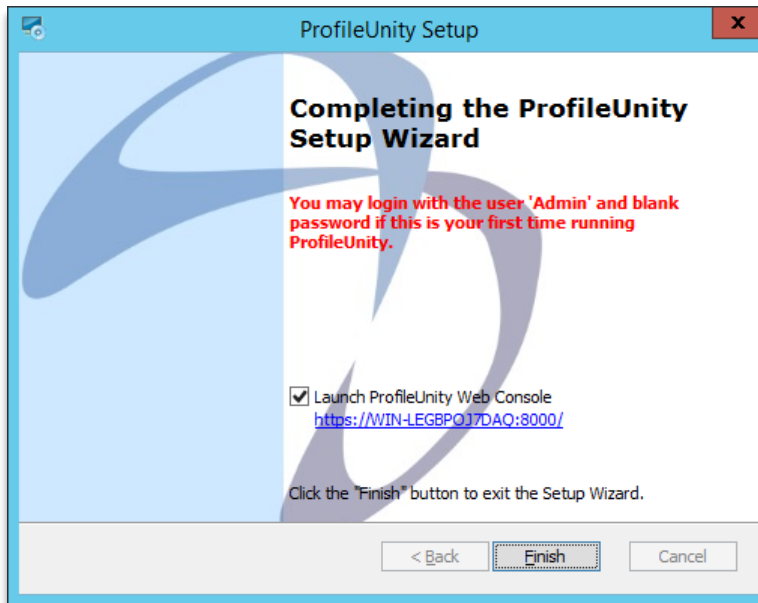
10. ProfileUnity is ready to install. Click **Install** to install the software or **Back** to change any of your installation settings.



11. The setup wizard installs your files.



12. Once the installation completes, click **Finish**.



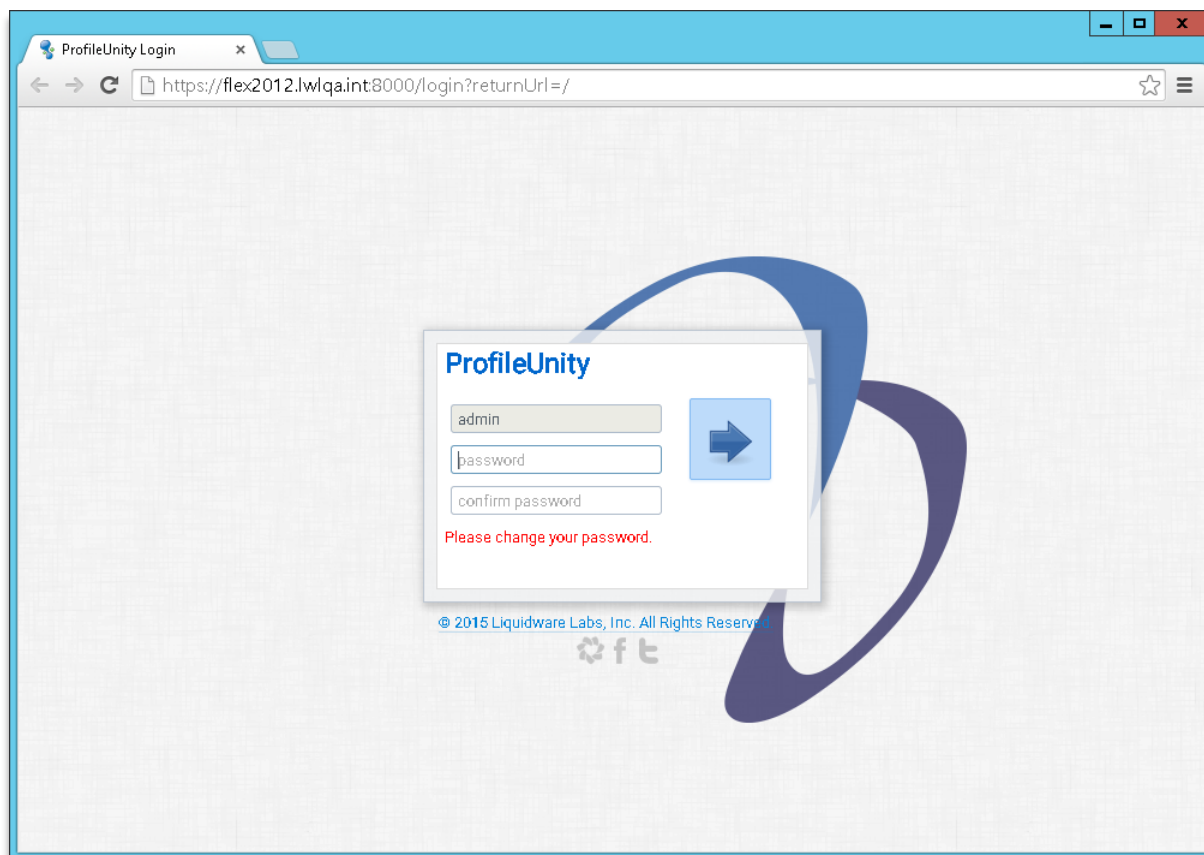
Logging in to the Management Console for the First Time

The first time you log in to the ProfileUnity Management Console, please use “admin” as your username and leave the password field blank. The Management Console will ask you to set up a password for the admin account at this time. This admin account can be used manage access for other users and can be used to login if LDAP authentication fails.

Your password must be at least 8 characters long and must include at least one character from three of the following categories:

- Upper case letters
- Lower case letters
- Numbers
- Non-alphanumeric characters

Please keep this information in a safe place so you can refer to it as needed.



ProfileUnity makes extensive use of Active Directory, including deploying client files and updated configurations to user’s desktops. Consequently, the first time you login to the ProfileUnity Management Console, ProfileUnity will ask you to configure a few global settings to help automate the setup of your environment for ProfileUnity.

You can grant other users access to the Profile Management Console by adding them to the list of valid Active Directory users. Simply type in the AD group and click **Add**. To remove groups, select **Remove** next to that group's name.

ProfileUnity's client tools and configuration files are typically installed on the NETLOGON share of your domain controller. If you are utilizing cloud storage, you will need point to your "configurations" folder. For example, S3://lw-profileunity-us-east-1/configurations. Please read **Using Cloud Storage with ProfileUnity**, for guidance on configuring your cloud storage. If you need to change where the client files are deployed in your environment, type in the new location for the **Deployment Path**.

These settings can also be edited later in the Administration Area of the Management Console.

Click **Save** to continue.

Global Settings

ProfileUnity needs to know what users from Active Directory can log in.

Domain Admins by default have the ability to log in and cannot be removed. You may add other groups.

Valid Active Directory Groups for Login

Administrators **Add**

* Domain Admins have full access

ATL Admins [Remove](#)

ORD Admins [Remove](#)

ProfileUnity needs a common domain location to deploy client tools and configuration files. Most of the time you can leave this alone unless you know what you are doing.

Deployment Path REQUIRED

\\wlqa.int\netlogon\profileunity

Overwrite files if they exist

Save

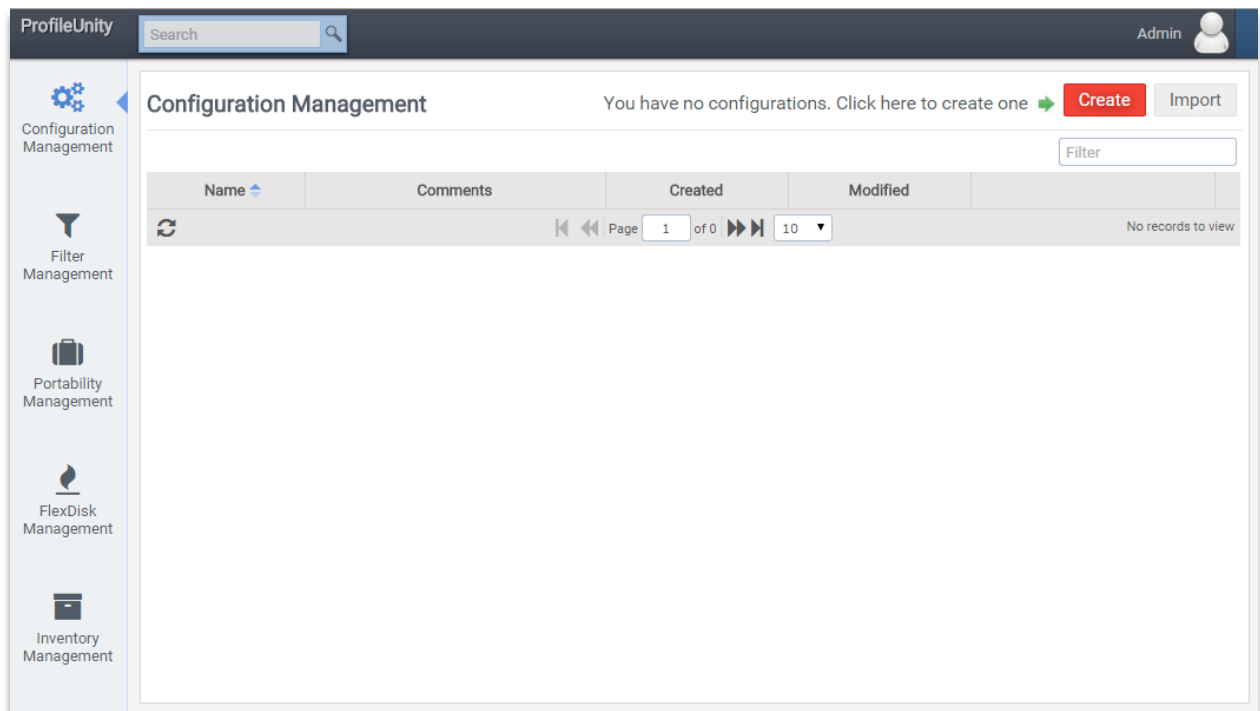
During the configuration process, ProfileUnity offers the option to automatically configure Active Directory using the Computer OU that you setup before installation. However, you must be logged in as an Active Directory admin to the ProfileUnity Management Console for this option to work correctly. Therefore, we recommend that you logout from the ProfileUnity "admin" account and log back in using your Active Directory Domain Admin account credentials before using the Guided Configuration Wizard.

Using the Guided Configuration Wizard

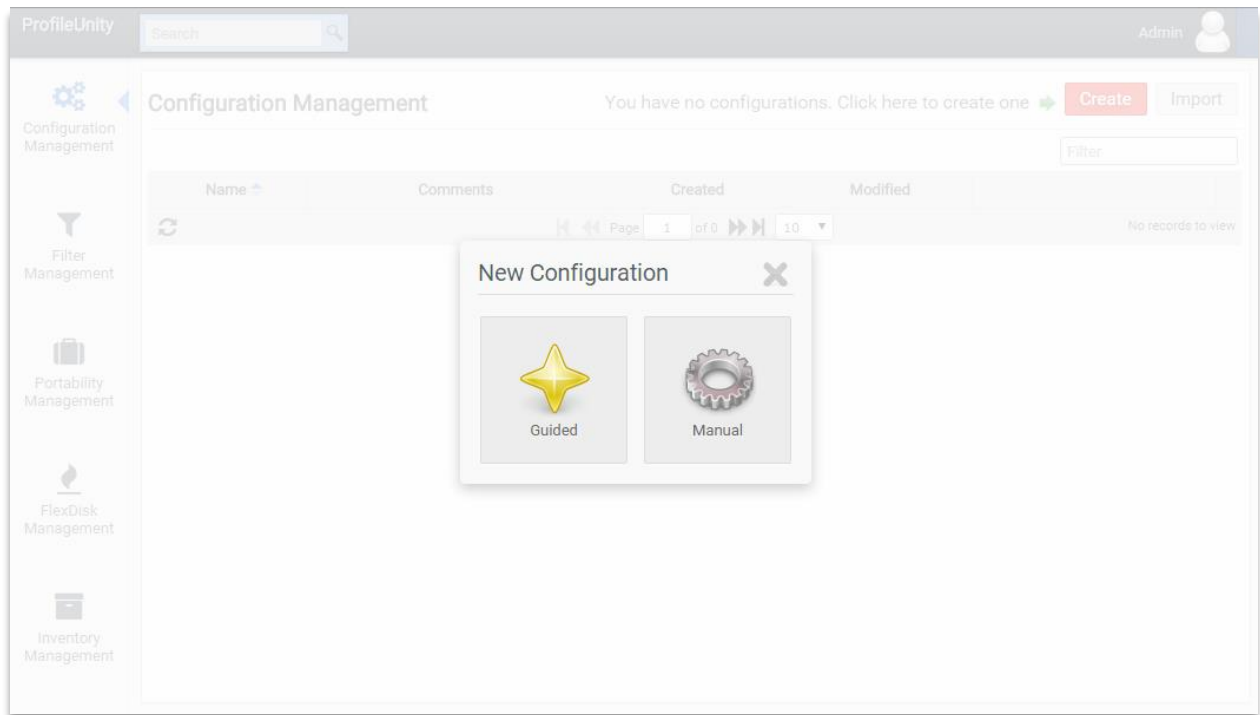
To configure your environment using the Management Console, ProfileUnity has an easy-to-use Guided Configuration Wizard. The Guided Configuration wizard is a step-by-step wizard that walks you through the creation and assignment of ProfileUnity groups and group policies. It also allows you to easily create a basic configuration for your environment that includes Profile Portability, Folder Redirection and migration of certain folders (if desired), and optionally turns on and configures FlexApp.

The first time you login to the ProfileUnity Management Console, the Guided Configuration Wizard will be started for you to help you automate the setup of your environment for ProfileUnity.

You may also choose to start the Guided Configuration Wizard anytime you create a new configuration from the **Configuration Management** section in the Management Console as seen below.



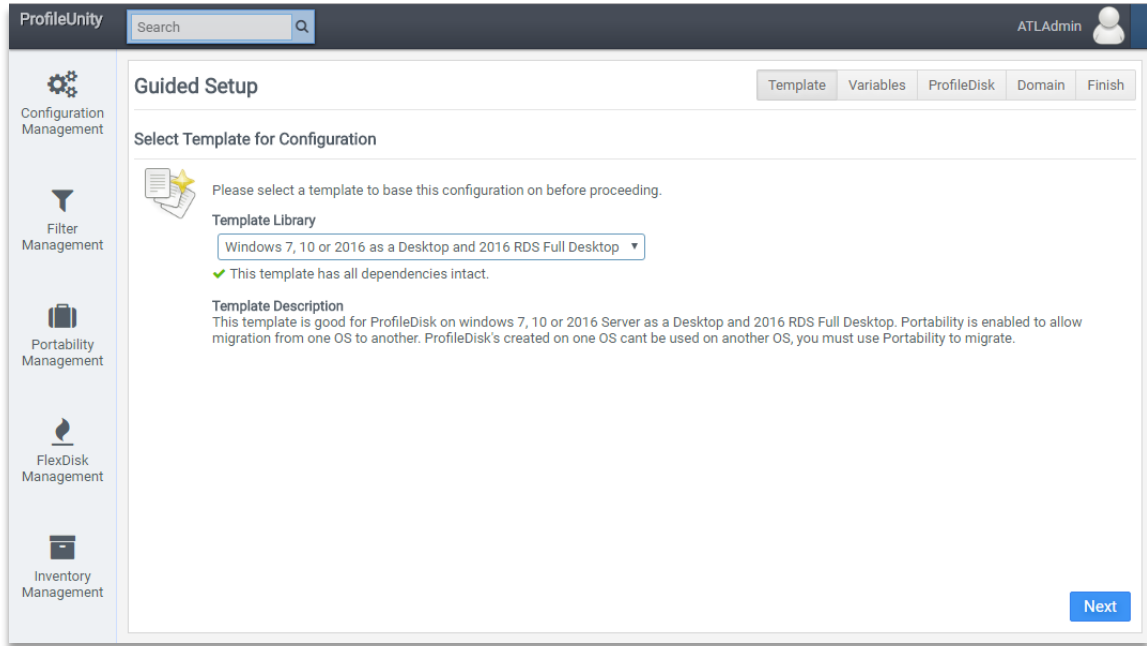
To start the wizard, click on the **Configuration Management** section in the navigation bar on the left. Click on the **Create** button. Select **Guided** to start the wizard for this new configuration.



Please note that the number of steps in the Guided Configuration Wizard varies depending on which template you pick in the first step and whether you are logged in using an Active Directory account or not.

Select a Template for Configuration

Please choose a template from the library on which to base your configuration. Liquidware has created configuration templates that automatically pre-configure settings based on the goals you are trying to achieve in your environment. You also have the ability to add or import custom templates into this library from the Administration area.



The screenshot shows the ProfileUnity web interface. At the top, there is a search bar and the user name 'ATLAdmin'. The left sidebar contains navigation links for Configuration Management, Filter Management, Portability Management, FlexDisk Management, and Inventory Management. The main content area is titled 'Guided Setup' and includes a progress bar with steps: Template, Variables, ProfileDisk, Domain, and Finish. The current step is 'Select Template for Configuration'. Below this, there is a message: 'Please select a template to base this configuration on before proceeding.' A 'Template Library' dropdown menu is set to 'Windows 7, 10 or 2016 as a Desktop and 2016 RDS Full Desktop'. A green checkmark indicates 'This template has all dependencies intact.' Below this is a 'Template Description' section with the text: 'This template is good for ProfileDisk on windows 7, 10 or 2016 Server as a Desktop and 2016 RDS Full Desktop. Portability is enabled to allow migration from one OS to another. ProfileDisk's created on one OS cant be used on another OS, you must use Portability to migrate.' A blue 'Next' button is located at the bottom right of the main content area.

Click **Next** to proceed.

Assign Cloud Storage Credentials

If the template chosen makes use of Cloud Storage for user profiles and ProfileUnity's configuration files, then you will be given the opportunity to configure your Cloud Storage settings. Otherwise, this step will not be included. Please read **Using Cloud Storage with ProfileUnity** for guidance on configuring your cloud storage.

If no Cloud Storage credentials have previously been saved, the wizard will ask you for two sets of credentials – the ProfileUnity Console and the ProfileUnity Client user account credentials. You may add other cloud storage credentials by clicking on the **Add Cloud Credentials** button and providing the necessary information. If you need to edit existing credentials, you will need to exit the wizard and go to the Administration area to make any changes in the Cloud Storage Settings section.

In addition to the credentials, you will need to supply the cloud storage path for configuration files, which will need to be in the "configurations" folder. You will also need to supply the cloud storage path for user portability files, which will need to be in the "portability" folder. For example, you may have something similar to:

```
S3://lw-profileunity-us-east-1/configurations
```

```
S3://lw-profileunity-us-east-1/portability
```

if you are using Amazon S3 cloud storage.

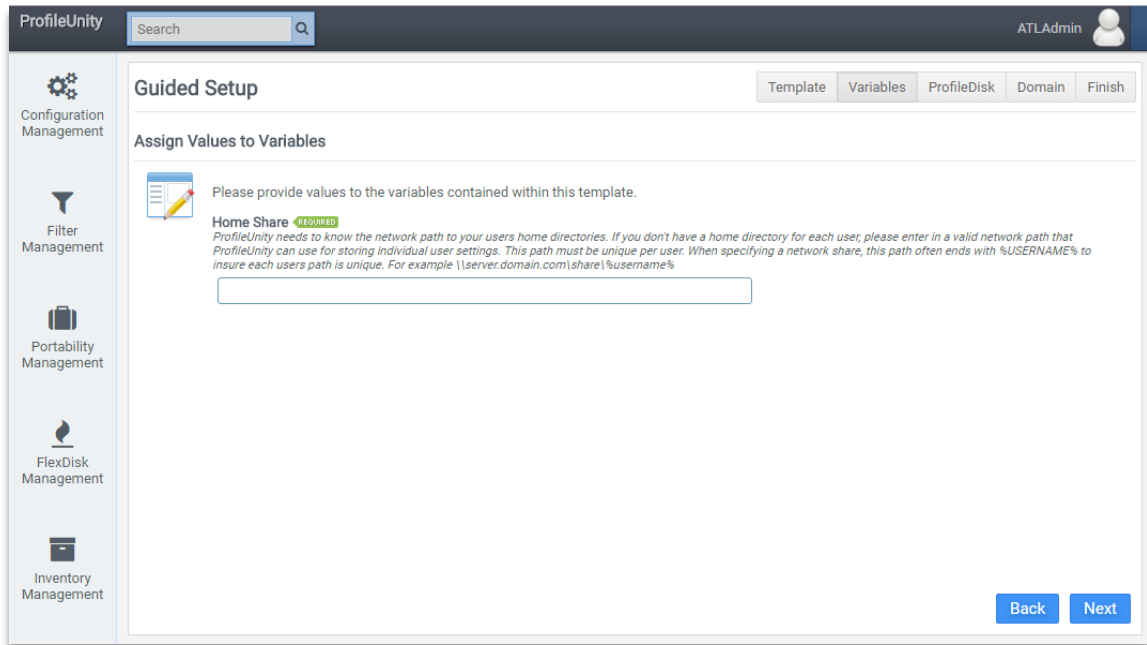
The screenshot shows the ProfileUnity Guided Setup wizard. The left sidebar contains navigation options: Configuration Management, Filter Management, Portability Management, FlexDisk Management, and Inventory Management. The main content area is titled 'Assign Cloud Storage Credentials' and includes a progress bar with steps: Template, Cloud Storage, Variables, Domain, and Finish. The wizard prompts the user to provide credentials for the console and client, and to specify cloud storage paths for configurations and portability. The paths shown are S3://(bucket)/configurations and S3://(bucket)/portability. A 'Validate Cloud Credentials' button is at the bottom, with a note that it is not recommended to use the same credentials for both locations. 'Back' and 'Next' buttons are also present.

When you are done configuring the settings, click **Validate Cloud Credentials**.

Click **Next** to proceed.

Assign Values to Template Variables

With the use of templates, there will be one or more variables in the template that need values which are specific to your environment assigned to them. For example, you will need to configure a default home directory or location where the user's settings and data will be stored on an existing server in your network. Remember to include %username% in the path to make it so that each user will have a unique data folder. Then enter any other values that may be requested.



Click **Next** to proceed.

Storage Path Permissions

ProfileUnity needs the appropriate permissions configured on the storage path for proper operation.

NTFS Permissions

Listed below are the recommended to level NTFS permissions for the storage path.

User Account	Recommended Permissions	Folder
Administrator	Full Control	This folder, Subfolders, and Files
Authenticated User	Modify	This folder only
Creator/Owner	Modify	Subfolders and files only

Alternatively, you can specify Everyone Full Control for testing purposes.

Share Permissions

The recommended share permissions for the storage path are Everyone Full Control.

VHDX ProfileDisk Deployment

If the template chosen includes the use of a ProfileDisk, then you will be given an opportunity to configure the ProfileDisk settings. Otherwise, this step will not be included.

The screenshot shows the ProfileUnity web interface during a 'Guided Setup' phase. The left sidebar contains navigation options: Configuration Management, Filter Management, Portability Management, FlexDisk Management, and Inventory Management. The main content area is titled 'VHD ProfileDisk Deployment' and includes a progress bar with steps: Template, Variables, ProfileDisk, Domain, and Finish. The current step is 'ProfileDisk Deployment', which includes a table for 'ProfileDisk Assignments' and several configuration fields. The table has columns for 'Assignments' and 'Path', with one row for 'All Users'. Below the table are fields for 'Override Virtual Disk Path(s)', 'Override Size in GB', 'Override Format(s)', and 'Override Deployment Path', each with a checked checkbox and a text input field.

Assignments	Path
All Users	

View 1 - 1 of 1

Override Virtual Disk Path(s) REQUIRED
 \\lwlqa.int\homesare\%username%\ProfileDisk\%username%_ProfileDisk.vhdx

Override Size in GB REQUIRED
 20

Override Format(s)
 Expandable

Override Deployment Path REQUIRED
 \\lwlqa.int\netlogon\profileunity

Back Next

Click **Next** to proceed.

You will then be asked whether ProfileUnity should deploy the ProfileDisk configuration for you. Select **Yes** for ProfileUnity to automatically deploy the configuration.

Configure Active Directory GPOs

If you are logged in as an Active Directory admin to the ProfileUnity Management Console, the next step in the guided configuration is to configure Active Directory so that ProfileUnity can be activated without physically installing the Client on all of your desktops.

If you click **Run GPO Integration**, ProfileUnity will attempt to configure Active Directory using the Computer OU that you setup before installation. However, you must be logged in as an Active Directory admin to the ProfileUnity Management Console for this option to work correctly.

Otherwise, click **Next** if you prefer to configure Active Directory yourself. Also click **Next**, if you have already configured Active Directory on a prior run through the Guided Configuration Wizard, or if you are not currently logged in as an Active Directory admin. ProfileUnity will ask you to confirm that you do not want to automate the AD configuration. You can always choose to re-login later as an Active Directory admin and have ProfileUnity automate the Active Directory configuration when creating another configuration. Just remember that Active Directory must be configured before ProfileUnity will work for your users.

The instructions for manually configuring Active Directory can be found in the section called **Manually Preparing Your Environment to Use the ProfileUnity Client**.

The AD Configuration is applied globally to all ProfileUnity Configurations. Active Directory does not need to be re-configured for every new Configuration that is created. Therefore, you can choose to skip this step by either clicking on **Next** or you can check **Always skip this step** so that you don't see this step the next time you run the wizard.

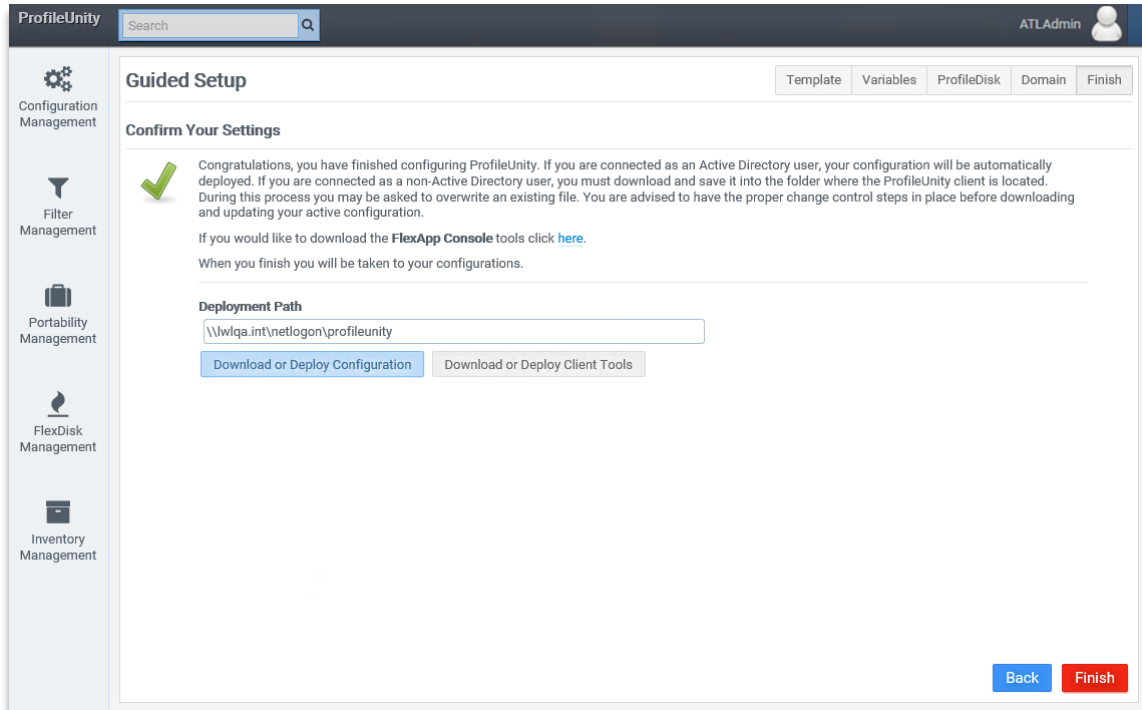
The screenshot shows the ProfileUnity Management Console interface. The top navigation bar includes the ProfileUnity logo, a search bar, and the user name 'ATLAdmin'. The left sidebar contains navigation links for Configuration Management, Filter Management, Portability Management, FlexDisk Management, and Inventory Management. The main content area is titled 'Guided Setup' and shows a progress bar with steps: Template, Variables, ProfileDisk, Domain, and Finish. The current step is 'Active Directory GPOs and License Group'. The page explains that ProfileUnity is activated by group policy settings and offers two options: 'Run GPO Integration' (which automatically configures Active Directory) or 'Next' (which allows manual configuration). It lists 'Computer Configuration' (Assign startup.exe as a startup script) and 'User Configuration' (Configure ADM template settings, Assign logoff.exe as a logoff script). Below this, there is a section for 'Automatic GPO Integration' where the user can select an Active Directory Computer OU (Organizational Unit) from a dropdown menu. There is also a field for 'Override INI Path' with a note that it defaults to the deployment path. A red 'Run GPO Integration' button is prominently displayed. At the bottom, there is a checkbox for 'Always skip this step' and 'Back' and 'Next' buttons.

After clicking **Run GPO Integration**, ProfileUnity automatically configures a few items. The wizard will configure the Group Policy Object for the ProfileUnity Computer OU you select. In addition, the wizard will deploy the client tools to a ProfileUnity subdirectory in the location you specified for the **Deployment Path** in an earlier step. This is typically your NETLOGON share of your domain controller.

When done with the AD Configuration, click **Next** to proceed.

Confirm Your Settings & Save your Configuration

As a final step, the wizard needs to create a configuration that incorporates the settings as you set them in the previous steps and includes basic configuration for all Portability Management rule sets as well. These configuration changes need to be made available to the ProfileUnity Client so that it can apply your settings with each user login. Each configuration is stored in an INI file. Follow the steps below to create this configuration file that will need to be saved to the same location where the ProfileUnity Client is installed.



If you are logged in as an Active Directory user with write permissions to the **Deployment Path**, the configuration file can be deployed directly to the **Deployment Path**. To have ProfileUnity copy the Configuration INI file to the specified **Deployment Path**:

1. Click on the **Download or Deploy Configuration** button.
2. Select the “Domain” **Platform** option and confirm the **Deployment Path** is correct.
3. Click the **Deploy** button.

If you are logged in as a non-Active Directory user or do not have write permissions to the **Deployment Path**, you will need to download and manually copy the configuration file to the same folder where the ProfileUnity Client either is or will be located. To download the configuration file:

1. Click on the **Download or Deploy Configuration** button.
2. Select the “Download” **Platform** option.
3. Click the **Deploy** button.
4. Extract the downloaded ZIP file contents to your **Deployment Path** manually.

For those using cloud storage, please read *Using Cloud Storage with ProfileUnity*, for guidance on configuring your cloud storage. Your deployment path will need point to your “configurations” folder. For example, your deployment path may look something like this:

```
S3://lw-profileunity-us-east-1/configurations
```

if you are using Amazon S3 cloud storage.

If you are using cloud storage and logged in as an Active Directory user, the configuration file can be deployed directly to the cloud **Deployment Path**. To have ProfileUnity copy the Configuration INI file to the specified **Deployment Path**:

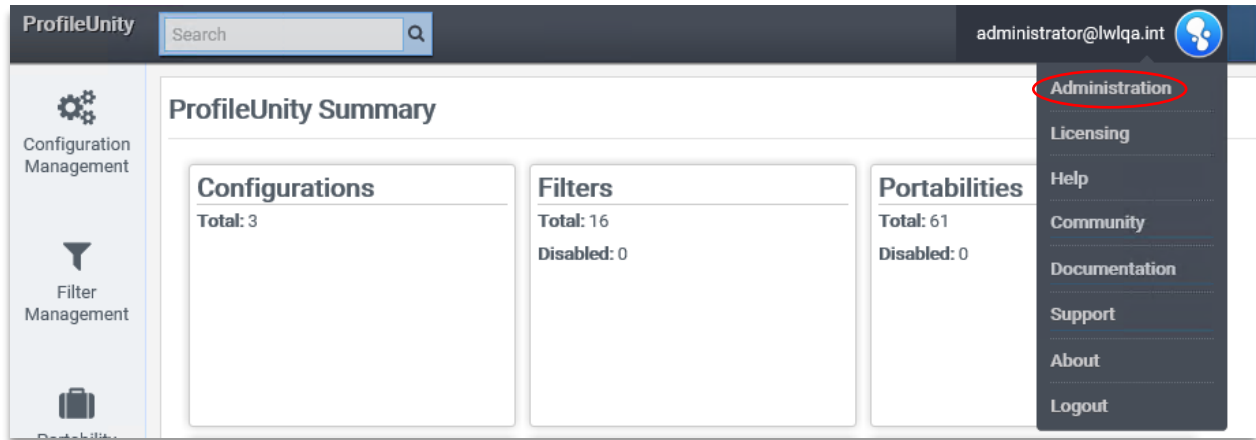
1. Click on the **Download or Deploy Configuration** button.
2. Select the “Cloud” **Platform** option and confirm the **Deployment Path** is correct.
3. Choose your ProfileUnity Console account for the **Cloud Credentials**.
4. Click the **Deploy** button.

In similar way, you may download or deploy the ProfileUnity Client Tools from this final step of the Guided Configuration Wizard if you have not done so already. A link to download the FlexApp Packaging Console is also included in this step. Please note that if you choose not to download or deploy either software package now, you can access both the Client Tools and the FlexApp Packaging Console from the Administration section of the ProfileUnity Management Console at any time.

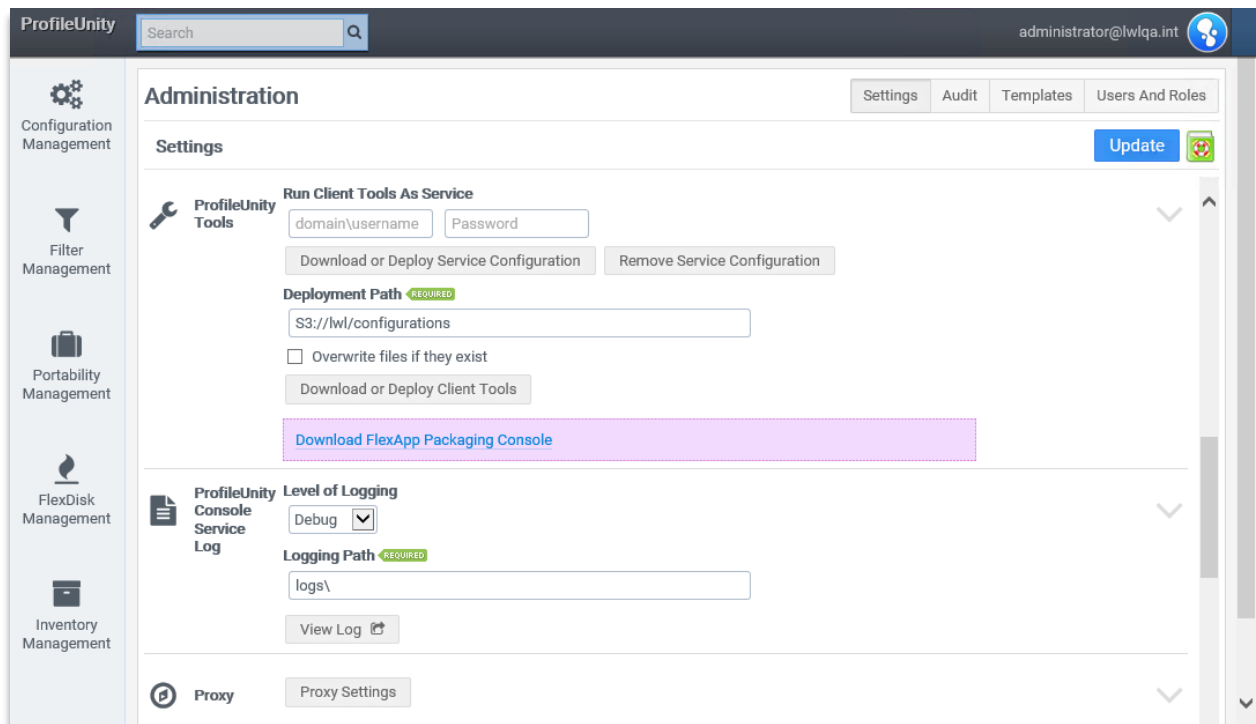
When done with the wizard, click **Finish** to end.

Installing the Client Software

If you chose to automate your environment setup by using the Guided Configuration Wizard, you had the option of installing the ProfileUnity Client files to the deployment path you provided. However if you chose to manually setup your environment, you will need to locate, download, and extract the Client files to a subdirectory for ProfileUnity on the NETLOGON share of your domain controller. If you are using cloud storage, you will need to follow the manual instructions in the next section to setup your computer login script for use with cloud storage. Login to the ProfileUnity Management Console and go to the Administration area. To get there, go to your user name at the top right of the Management Console and select **Administration** from the drop-down list.



Scroll down to the ProfileUnity Tools section.



ProfileUnity can deploy the Client Tools for you from the ProfileUnity Tools section.

1. In the **Deployment Path** field, enter a UNC path to where the Client Tools and configuration files should be copied. In most cases, this will be a ProfileUnity subdirectory under the NETLOGON share on your domain controller. For example: \\CompanyDomain\netlogon\ProfileUnity.
2. To save these deployment settings, click on the blue **Update** button in the top right corner of the Settings page.
3. After the deployment settings have been saved, click on **Download or Deploy Client Tools** in the ProfileUnity Tools section.
4. Select your **Platform** option. If you are logged into the ProfileUnity Management Console with a domain account that has write permissions to the **Deployment Path**, select “Domain”. If not, select “Download”.
5. Click the **Deploy** button. If you choose the “Domain” option, this will copy all the Client Tools files to the directory you specified for the **Deployment Path**.
6. If you selected “Download” instead of “Domain”, you will need to extract the downloaded ZIP file contents to your **Deployment Path** manually.

If you are not using the NETLOGON share on your domain controller, please see **Appendix A – Not Using NETLOGON** for more information.

License Management

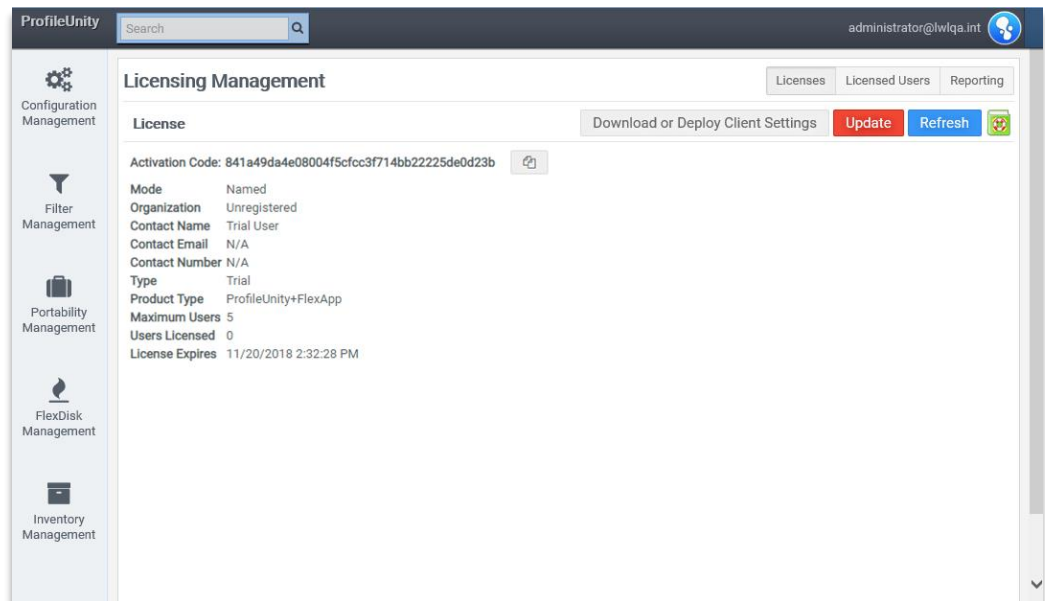
ProfileUnity with FlexApp v6.8.0 introduced a new licensing service that is built into the ProfileUnity Management Console. The new licensing service provides improved license management and greater flexibility with real-time usage in your environment. Because the ProfileUnity Management Console is processing license requests in real-time, the console should remain up and running at all times.

By default, ProfileUnity is designed to operate in evaluation mode for up to 5 users and up to 15 days. Once the evaluation period expires, administrators will no longer be able to download any changes to their Configurations. To request an extended evaluation period or to purchase a software license, please contact our [Liquidware Sales Team](#).

Activating or Updating Your Product License

ProfileUnity requires an activation process that generates a software license based on the combination of an Activation Code and a License Code. The two codes are combined in a secure Activation Portal and a unique license is generated for your ProfileUnity Management Console. License Codes are provided via email and sent to your organization's ProfileUnity Administrator. Your Activation Code can be found in the ProfileUnity Management Console after installation. To activate your license:

1. In the ProfileUnity Management Console, navigate to Licensing Management by hovering over your user name at the top right of the Management Console and select **Licensing** from the drop-down list.



- In a separate browser window, go to the [ProfileUnity Activation Portal](#).



- Enter your **License Code** which can be found in the ProfileUnity License email that was sent to you from Liquidware.
 - Enter your **Activation Code** which can be found in the ProfileUnity Management Console on the Licenses tab of the License Management area.
 - Click the **Proceed** button in the activation portal and copy the generated license text.
- In the Licensing Management area of the console, click the red **Update** button.
 - Paste the license text into the space provided.
 - Click on the blue **Import** button.
 - Click on the gray **Download or Deploy Client Settings** button to copy an updated clientsettings.xml to the ProfileUnity Deployment Path. This file is used by the ProfileUnity Client as end points are requesting a license when connecting back to the ProfileUnity Management Console.

Managing User Licenses

The Licensed Users tab contains two tables. The first table displays users that are currently licensed for ProfileUnity. The second table displays a list of users whose license requests failed at login due to the number of users requesting licenses exceeding the license count. Administrators have the option to remove users from these searchable, sortable lists in order to free up licenses. The **Export to file** option allows you to export the users in that list to a CSV file.

The screenshot shows the ProfileUnity web interface. At the top, there is a search bar and the user role 'Administrator'. The main content area is titled 'Licensing Management' and has three tabs: 'Licenses', 'Licensed Users', and 'Reporting'. The 'Licensed Users' tab is active, displaying a table with columns: User Name, Computer Name, Domain, Mode, Last Logon, and Last Logout. Below the table are pagination controls showing 'Page 1 of 1' and 'View 1 - 10 of 10'. An 'Export to File' link is visible below the table.

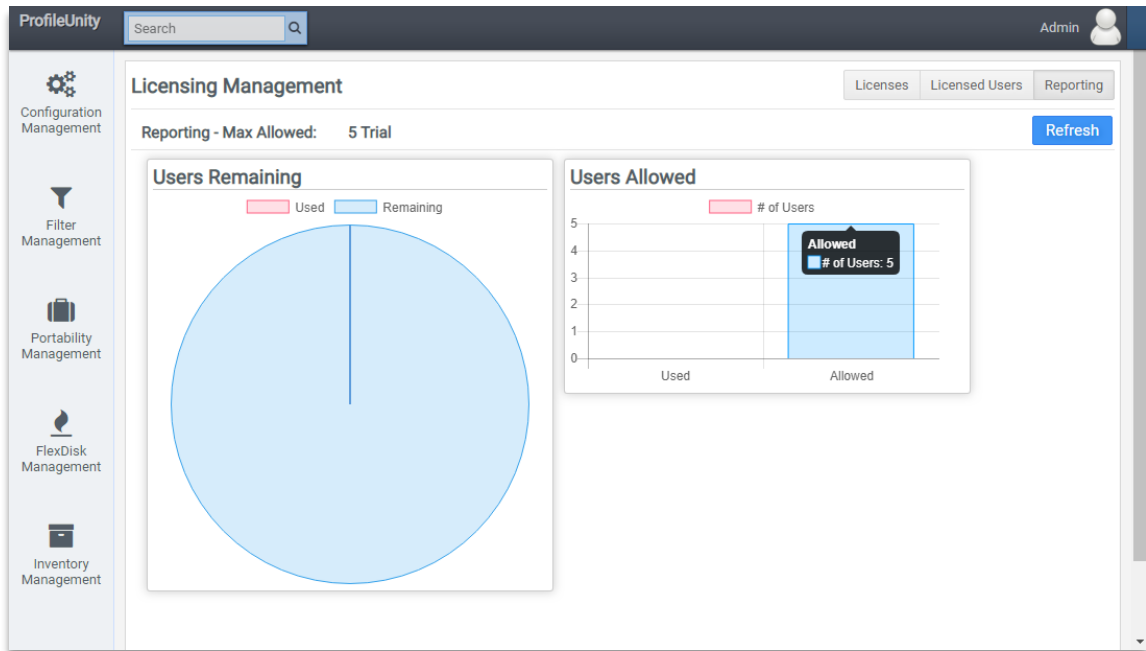
<input type="checkbox"/>	User Name	Computer Name	Domain	Mode	Last Logon	Last Logout	
<input type="checkbox"/>	lphadw jnyoss	dpxgpdd	zlgcr.com	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	kvjwwo zwin	liuzbk	wwwqg.net	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	epvuaf uddfv	wzpybm	yfmfsh.com	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	lzcjsf mzkmpqr	qzqmvu	kbxn.net	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	pddkpw cmgffr	qipibx	jfdz.net	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	joblek whczuep	tlhe	lblll.net	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	fyzkzy nkua	oqubnlh	lfmssl.net	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	npsanmq hrzvbtt	kmqgray	eefalhs.net	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	nedghy dbhjq	qtfo	xhvsed.net	Concurrent User	2018-11-15 12:45:58		
<input type="checkbox"/>	jjph wbybpbp	klaqta	pszetm.com	Concurrent User	2018-11-15 12:45:58		

Below the 'Licensed Users' table, there is an 'Export to File' link and a 'Failed Logins' section. The 'Failed Logins' section has a table with columns: User Name, Computer Name, Domain, Mode, Last Logon Attempt, and a trash icon column. Below this table are pagination controls showing 'Page 1 of 101' and 'View 1 - 10 of 1,001'. An 'Export to File' link is also present below the 'Failed Logins' table.

<input type="checkbox"/>	User Name	Computer Name	Domain	Mode	Last Logon Attempt	
<input type="checkbox"/>	qxxtmre ihzyekq	rcqb	pjagyip.com	Concurrent User	2018-11-09 17:22:00	
<input type="checkbox"/>	adawi rpooua	jmseiaw	ysdstn.net	Concurrent User	2018-11-13 11:00:34	
<input type="checkbox"/>	yqrvubj blgc	ajbb	bxop.com	Concurrent User	2018-11-13 11:00:34	
<input type="checkbox"/>	zlgpx yjbfqdm	dffpovz	rygwau.net	Concurrent User	2018-11-13 11:00:34	
<input type="checkbox"/>	qosbq jahab	mfes	gmppg.net	Concurrent User	2018-11-13 11:00:34	
<input type="checkbox"/>	umek bzklfip	yxvzsv	ltlyaw.net	Concurrent User	2018-11-13 11:00:34	
<input type="checkbox"/>	dllht nuxnae	sbxi	frxss.com	Concurrent User	2018-11-13 11:00:34	
<input type="checkbox"/>	kewmdrz pjdgwfi	ppix	ymdh.com	Concurrent User	2018-11-13 11:00:34	
<input type="checkbox"/>	trsonk kecbbjh	omlvrgp	jjvtyu.net	Concurrent User	2018-11-13 11:00:34	
<input type="checkbox"/>	bklv rcbauqk	qwjasq	kuoiu.net	Concurrent User	2018-11-13 11:00:34	

Reporting

The Reporting tab in License Management allows administrators to see how many licenses they own vs. how many licenses are currently being used.

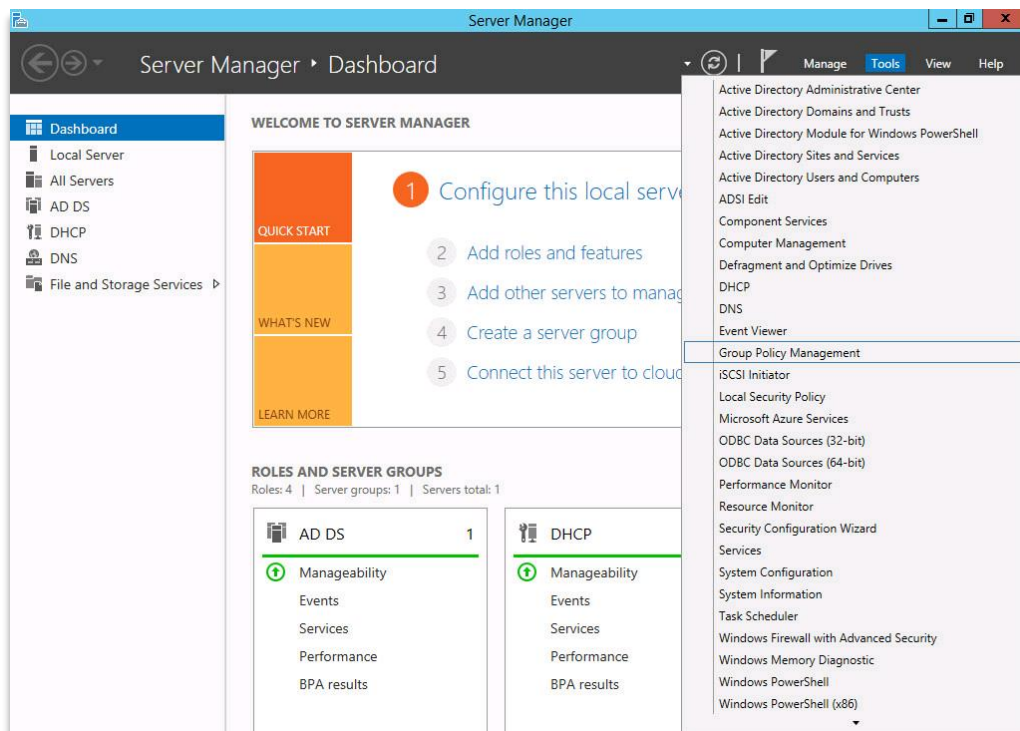


Manually Preparing Your Environment to Use the ProfileUnity Client

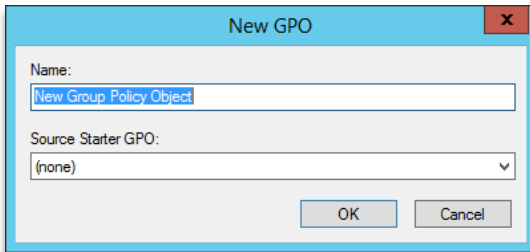
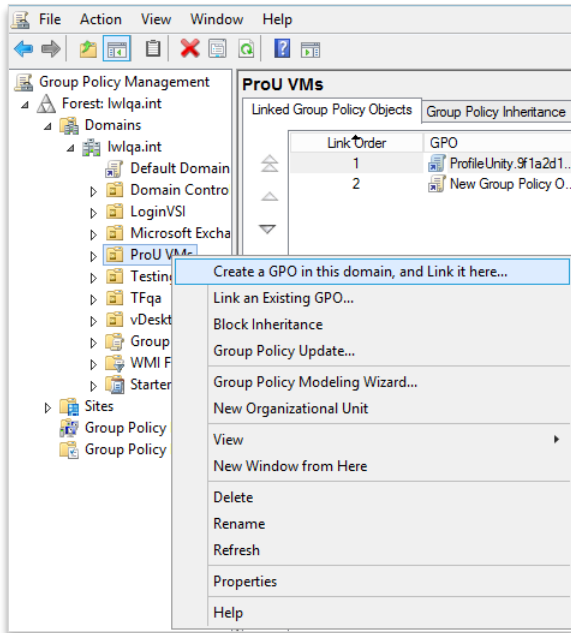
ProfileUnity was designed to deliver flexible profiles across your environment without having to distribute the software to each individual machine. The ProfileUnity Client takes advantage of Microsoft Active Directory (AD) and Group Policy Objects (GPOs) to accomplish its work. This section covers the changes that will need to be made to the environment. Administrators can make these changes manually following these instructions or they can skip this section and use the Guided Configuration Wizard in the Management Console to have ProfileUnity automate these environment changes.

Create a GPO in Windows Server Active Directory

1. If you are using Windows Server 2012, start the Server Manager Dashboard. Click on the **Tools** menu, and select **Group Policy Management** to open the Group Policy Management Console. If you are using Windows Server 2008, go to **Start > Administrative Tools > Group Policy Management** to open the Group Policy Management Console.



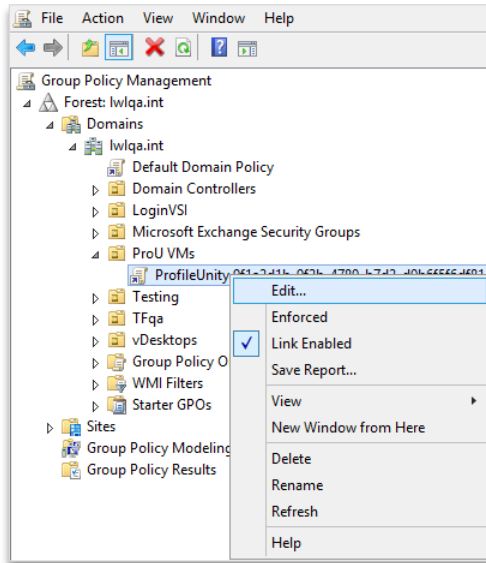
2. Right click on your ProfileUnity Computer OU, and select **Create a GPO in this domain, and Link it here...** to create a group policy and link it to this OU. Give this group policy object any name you prefer such as "ProfileUnity".



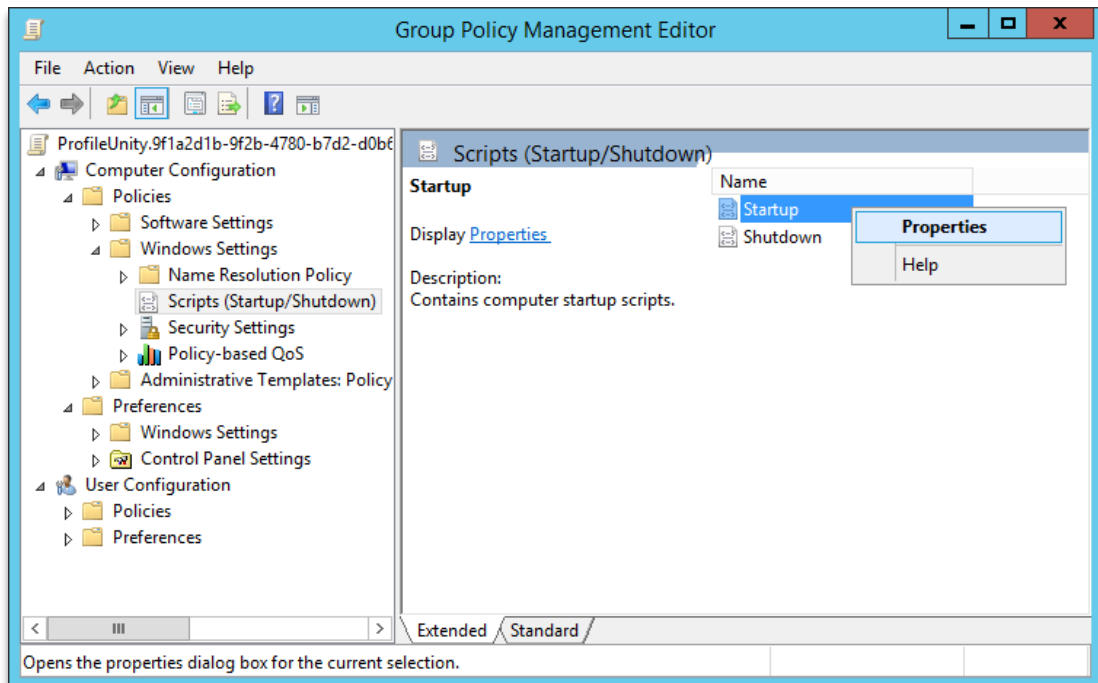
Assign a Group Policy Computer Startup Script

Loading user profile information by the ProfileUnity Client is triggered through Group Policy computer startup scripts. To configure the startup script for the ProfileUnity GPO:

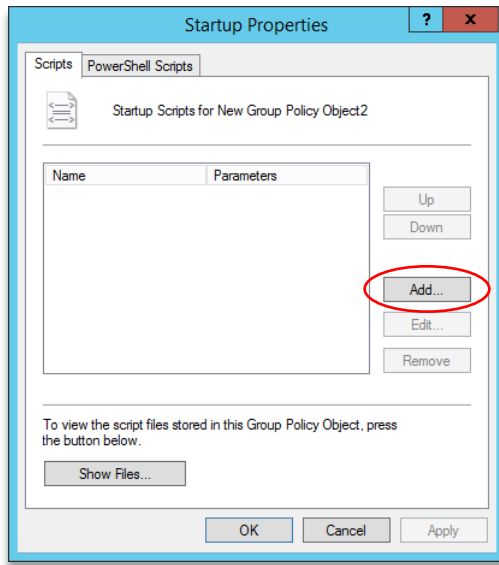
1. From the Group Policy Management Console on your server, find your ProfileUnity Group Policy Object. Right click on the GPO and select **Edit...** to open up the Group Policy Management Editor.



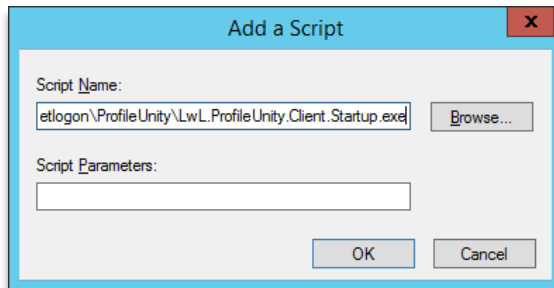
2. Inside the editor, navigate on the left to **Computer Configuration > Policies > Windows Settings > Scripts (Startup/Shutdown)**. On the right in the main settings window, right click on **Startup** and select **Properties** to setup the startup script.



3. Click the **Add** button to add a new startup script.



4. (If you are using cloud storage, skip to step 5.) Otherwise, assign the startup script. Liquidware provides two startup scripts that are located where the ProfileUnity Client software was deployed. Choose the appropriate script based on the end user device's operating system. (If you have a mix of devices in your environment where some end points require the VBS script and other end points require the startup EXE, you will need to setup two different ProfileUnity Computer OUs with different GPOs.) Click **OK** and then **Apply** to save your changes.



For Windows 7, 8.1, Windows Server 2008 R2/2012 R2/2016 and higher devices:

Script Name:

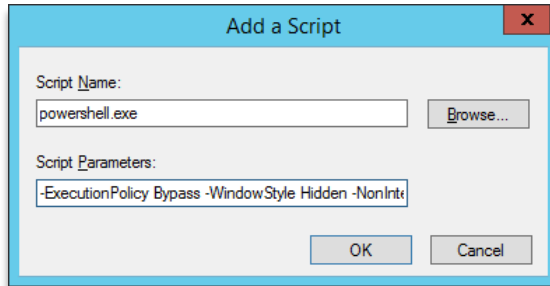
\\<domain name>\netlogon\ProfileUnity\LwL.ProfileUnity.Client.Startup.exe

Script Parameters:

No Parameters needed

NOTE: This policy should be applied to the OU(s) that contains the computers that will execute ProfileUnity. You will need to replace <domain name> in the above example with the name of your domain so that the path resolves to your NETLOGON path.

5. (For devices using cloud storage only.) Assigning the startup script is a bit different for environments using cloud storage. Instead of running the startup script directly, you will need to have PowerShell execute the script. Copy the script and parameters from below. Click **OK** and then **Apply** to save your changes.



For devices using cloud storage:

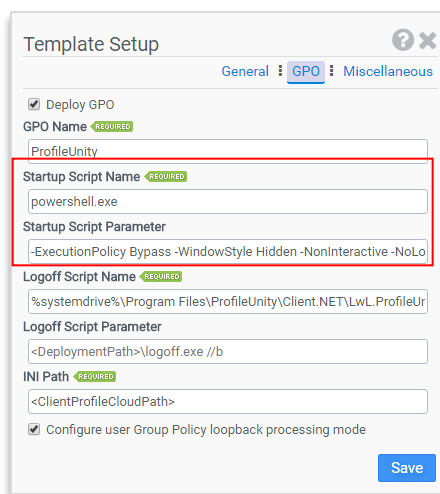
Script Name:

powershell.exe

Script Parameters:

The script parameters change depending on the version of ProfileUnity you are running. Please refer to [this KB article on how to modify the startup GPO used for cloud based desktops](#) and select the parameters based on your version of ProfileUnity (versions 6.7.5 and higher).

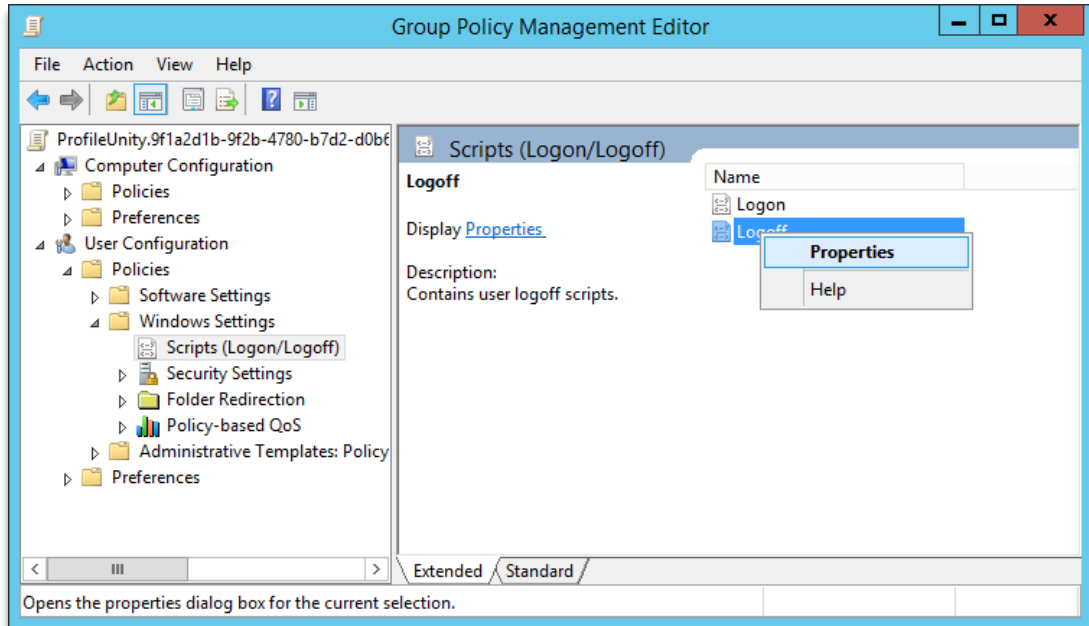
NOTE: This policy should be applied to the OU(s) that contains the computers that will execute ProfileUnity. You will need to update the script parameters with the correct script version to run any time you update your ProfileUnity software. This script parameter can be found by opening a cloud storage template for editing in the ProfileUnity Management Console Administration section. Go to the "GPO" section of the Template Setup and copy the Startup Script Parameter.



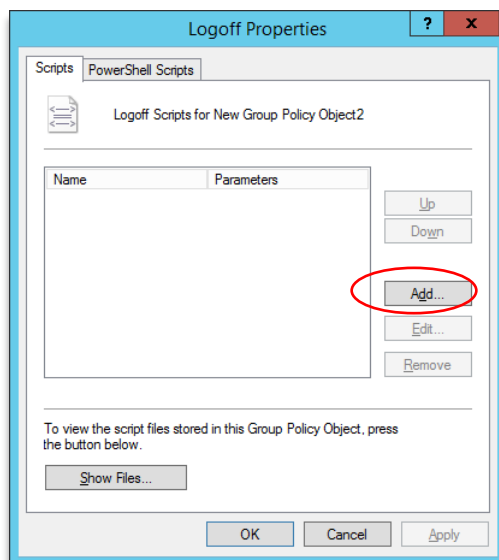
Assign a Group Policy User Logoff Script

Saving user profile information by the ProfileUnity Client is triggered through Group Policy user logoff scripts. To configure the logoff script for the ProfileUnity GPO:

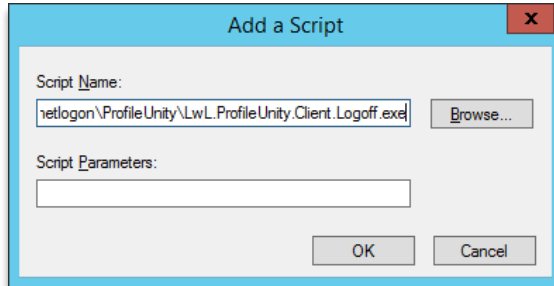
1. Inside the Group Policy Management Editor, navigate on the left to **User Configuration > Policies > Windows Settings > Scripts (Logon/Logoff)**. On the right in the main settings window, right click on **Logoff** and select **Properties** to setup the logoff script.



2. Click the **Add** button to add a new logoff script.



- (If you are using cloud storage, skip to step 4.) Otherwise, assign the logoff script. Liquidware provides two logoff scripts that are located where the ProfileUnity Client software was deployed. Choose the appropriate script based on the device's operating system. (If you have a mix of devices in your environment where some end points require the VBS script and other end points require the startup EXE, you will need to setup two different ProfileUnity Computer OUs with different GPOs.) Click **OK** and then **Apply** to save your changes.



For Windows 7, 8.1, Windows Server 2008 R2/2012 R2/2016 and higher devices:

Script Name:

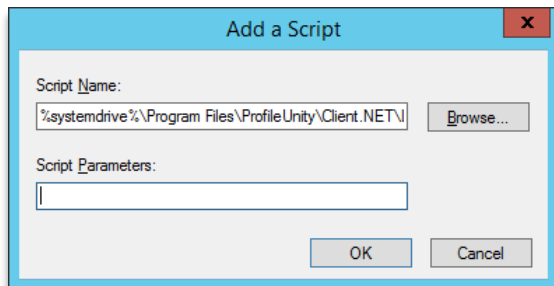
\\<domain name>\netlogon\ProfileUnity\LwL.ProfileUnity.Client.Logoff.exe

Script Parameters:

No Parameters needed

NOTE: This policy should be applied to the OU(s) that contains the users that will execute ProfileUnity. You will need to replace <domain name> in the above example with the name of your domain so that the path resolves to your NETLOGON path.

- (For cloud storage only.) Assigning the logoff script is a bit different for environments using cloud storage. You will need to reference the user's local logoff script.



For devices using cloud storage:

Script Name:

%systemdrive%\Program Files\ProfileUnity\Client.NET\LwL.ProfileUnity.Client.Logoff.exe

Script Parameters:

No Parameters needed

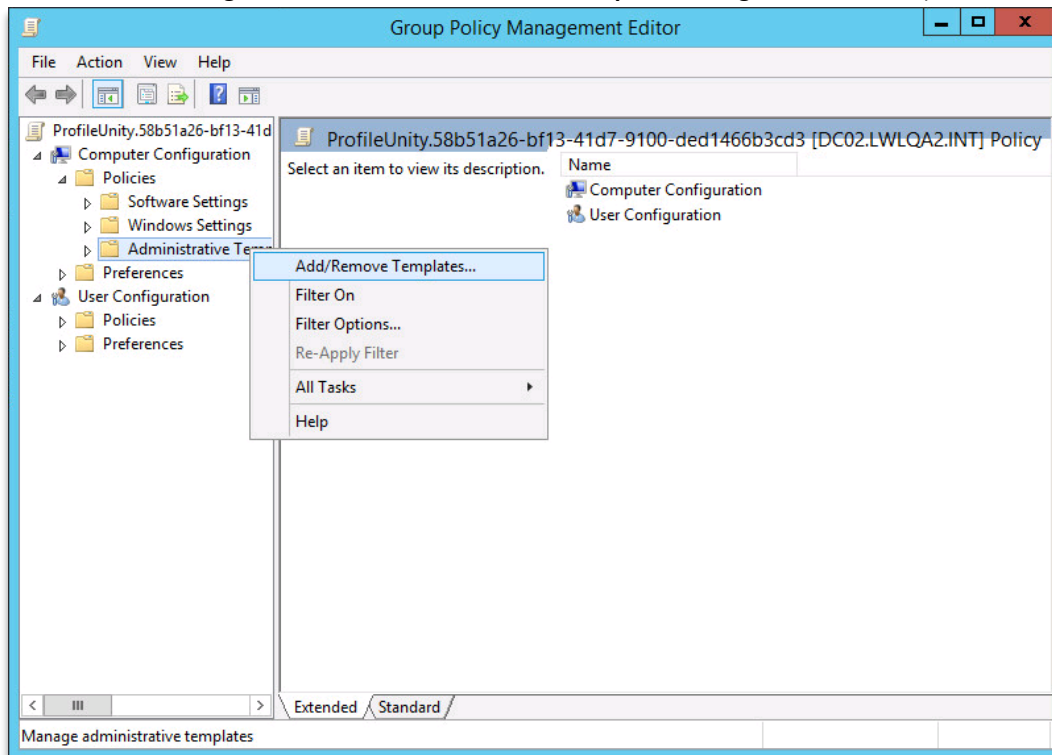
NOTE: This policy should be applied to the OU(s) that contains the users that will execute ProfileUnity.

Configure GPO Administrative Template Settings

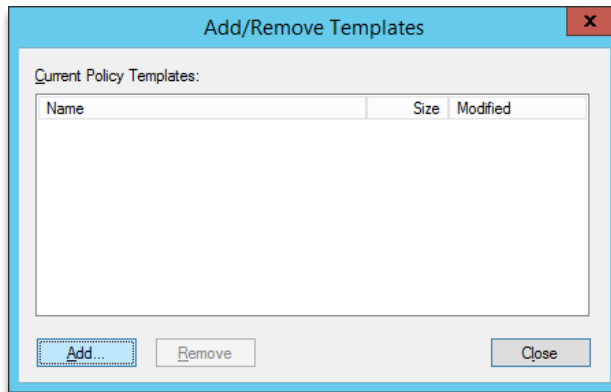
The ProfileUnity Client Tools include ADM and ADMX Administrative Templates for configuring GPO settings so that ProfileUnity is applied to select AD computers at startup and users upon their next login. The Classic Administrative Template (ADM) can be used on all Windows desktops from Windows XP and higher to Windows Server 2003 and higher. The newer file format, ADMX, is only for use with user machines running Windows 7 or higher or Windows Server 2008 or higher.

Adding the ProfileUnity ADM Template

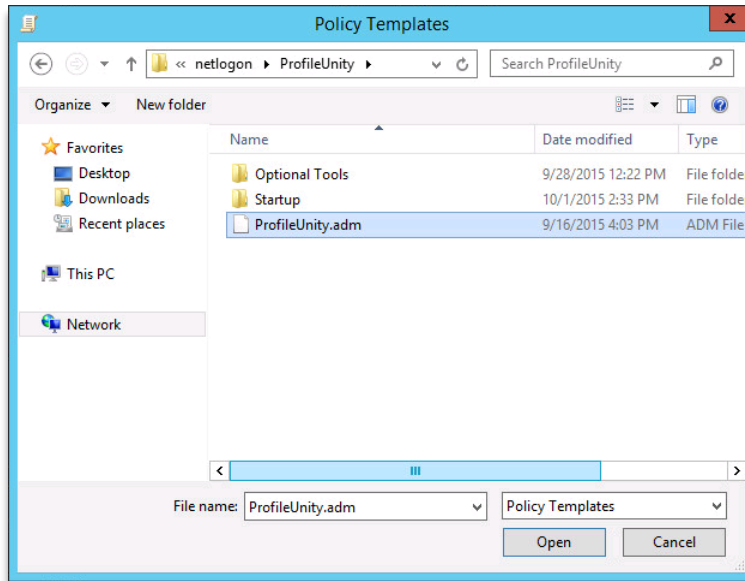
1. Inside the Group Policy Management Editor, navigate on the left to **Computer Configuration > Policies > Administrative Templates**. Right click on the GPO and select **Add/Remove Templates...**
(Since the ProfileUnity ADM contains both computer and user settings, you can also add the template under the **User Configuration** section instead of the **Computer Configuration** section.)



2. Click the **Add** button to add a new template.

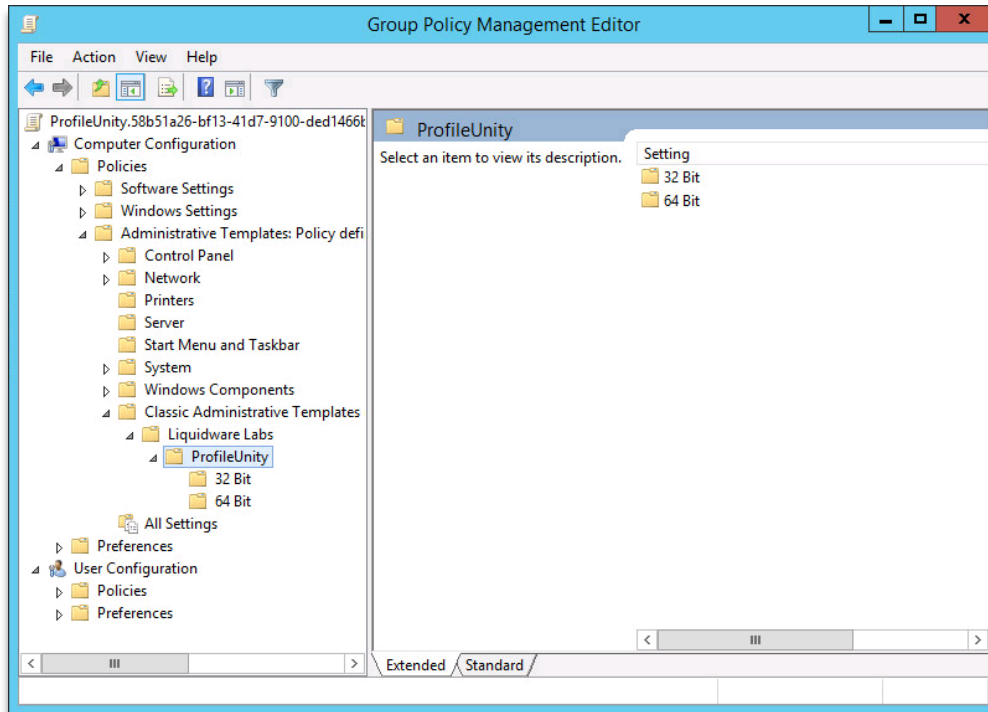


3. Browse to the location where you extracted the ProfileUnity Client files (by default this is the NETLOGON\ProfileUnity folder) and select the **ProfileUnity.adm** template. Then click **Open**.



4. **Close the Add dialog.** The ProfileUnity ADM template will be added in the following locations:

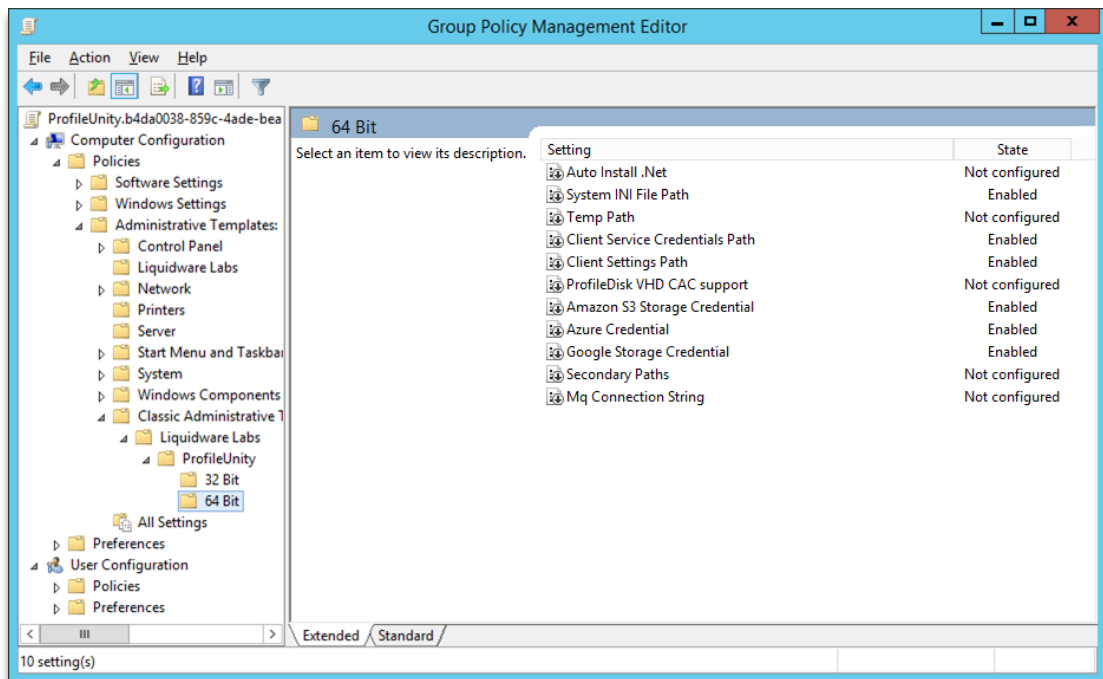
Windows Platform	Location of ProfileUnity ADM Settings
Windows 7 and higher, Windows Server 2008 and higher	Computer Configuration (and User Configuration) > Policies > Administrative Templates > Classic Administrative Templates (ADM) > Liquidware Labs > ProfileUnity



Configuring and Enabling Computer ADM Template Settings

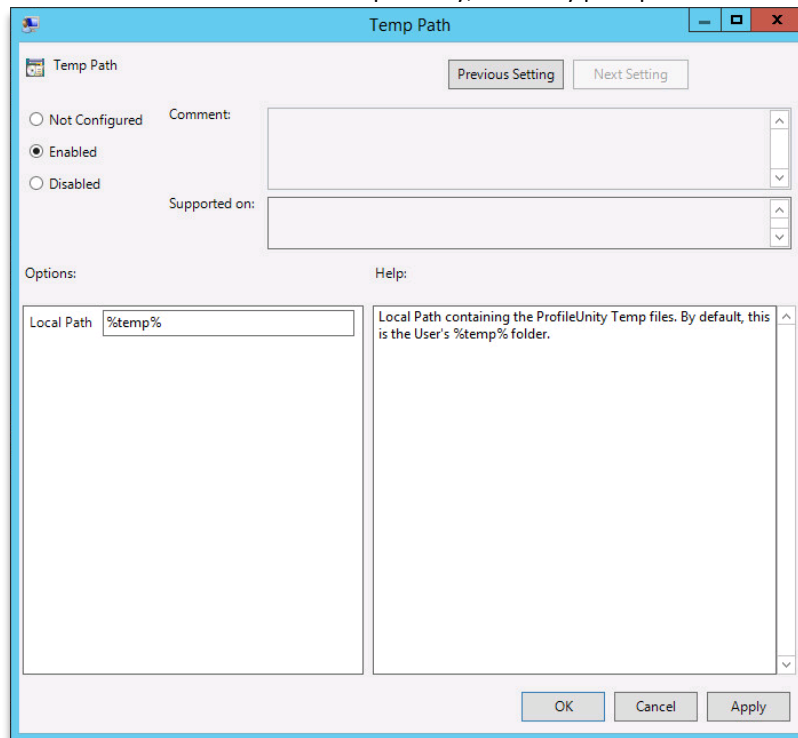
1. From the Group Policy Management Editor, navigate on the left to **Computer Configuration > Policies > Administrative Templates > Classic Administrative Templates (ADM) > Liquidware Labs > ProfileUnity**. There are settings listed for 32-bit and 64-bit computers.

Note: These registry settings are not stored in a policy key since they are considered preferences. Therefore, if the Group Policy Object that implements these settings is ever removed, these registry settings will remain.



- a. **Auto Install .NET** – Automatically installs Microsoft .NET Framework if missing.
- b. **System INI File Path** – Specifies the UNC or cloud storage path containing the ProfileUnity INI configuration files. By default, this is the ProfileUnity\Startup folder in the NETLOGON share on your domain controller. For cloud storage, you will need point to your configurations folder. For example, S3://lw-profileunity-us-east-1/configurations.
- c. **Temp Path** – Specifies the local path containing the ProfileUnity temp files. By default, this is the User's %temp% folder.
- d. **Client Service Credentials Path** – Specifies the path to the Client service executable's credentials file. By default, this is the ProfileUnity folder in the NETLOGON share on your domain controller. For cloud storage, you will need point to your configurations folder. For example, S3://lw-profileunity-us-east-1/configurations.
- e. **Client Settings Path** – Specifies the path to the clientsettings.xml configuration file. This file handles client side settings for requesting licensing, ProfileDisk VHD configurations, and FlexDisk configurations. By default, this is the ProfileUnity folder in the NETLOGON share on your domain controller. For cloud storage, you will need point to your configurations folder. For example, S3://lw-profileunity-us-east-1/configurations.

- f. **ProfileDisk VHD CAC Support** – ProfileDisk when leveraging Common Access Card (CAC) Security requires a setting so we know to impersonate the ProfileUnity as a Service user when connecting to the file share. We can NOT impersonate a CAC user for security reasons. We leverage ProfileUnity as a Service user name and password. This also means the minimum requirement for ProfileDisk VHD with CAC, is to have the ProfileUnity as a Service account full control on the file share. When it comes to ProfileDisk VMDK and CAC this setting is NOT required.
 - g. **Amazon S3 Storage Credential** – Holds encrypted Amazon S3 storage credentials. To get encrypted credentials, go to the Cloud Storage Settings section of the ProfileUnity Management Console Administration Area. Click Copy to Clipboard next to the Amazon Client Credentials. This will copy the encrypted credentials to the clipboard and then you can paste them here.
 - h. **Azure Credential** – Holds encrypted Azure storage credentials. To get encrypted credentials, go to the Cloud Storage Settings section of the ProfileUnity Management Console Administration Area. Click Copy to Clipboard next to the Azure Client Credentials. This will copy the encrypted credentials to the clipboard and then you can paste them here.
 - i. **Google Storage Credential** – Holds encrypted Google storage credentials. To get encrypted credentials, go to the Cloud Storage Settings section of the ProfileUnity Management Console Administration Area. Click Copy to Clipboard next to the Google Client Credentials. This will copy the encrypted credentials to the clipboard and then you can paste them here.
 - j. **Secondary Paths** – This setting allows administrators to specify both a primary path prefix and secondary path prefixes for the storage of INI Configuration files, Portability files and FlexApp packages. This allows for failover protection should access to the primary location fail. Mixing UNC paths with cloud paths is allowed.
 - i. **Example 1:** s3://b1/f1 > s3://b2/f1, gs://b3/f1.
 - ii. **Example 2:** \\n1\f2 > \\n2\f2, \\n3\f2, gs://b5/f2
 - k. **Mq Connection String** – Holds encrypted message queue connection string.
2. Right click on any of the 32-bit options and select **Edit** to change the ADM policy setting.
 3. Select the **Enabled** radio button. Optionally, fill in any path parameters. Then click **OK**.

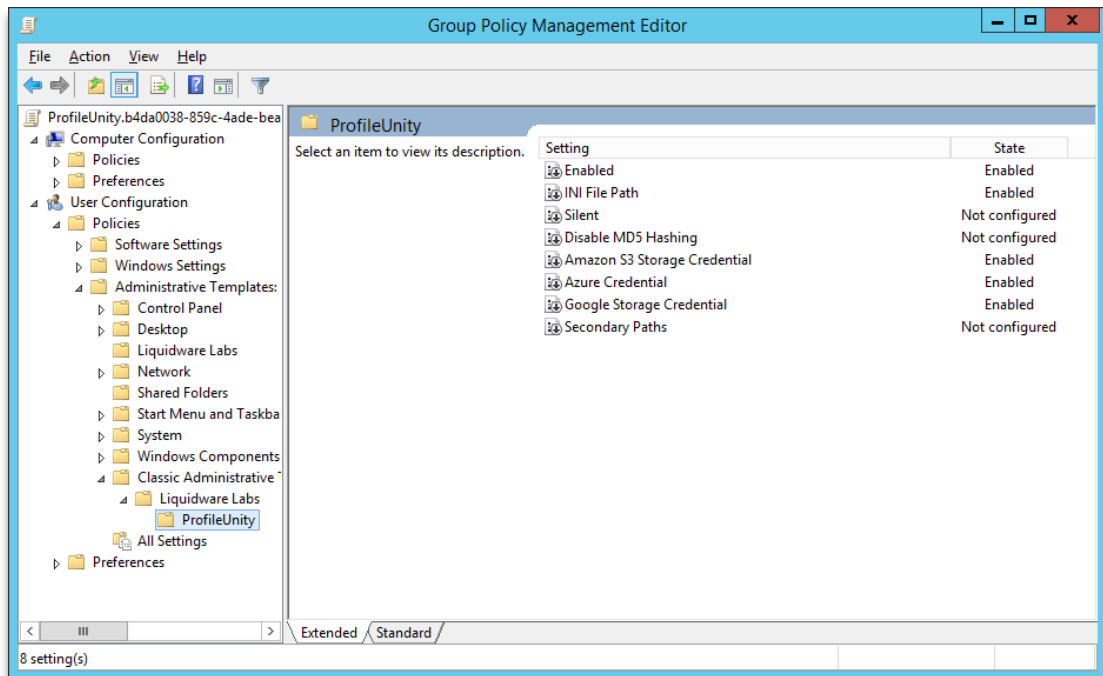


4. Repeat the same steps with the 64-bit ADM policy settings.

Configuring and Enabling User ADM Template Settings

1. From the Group Policy Management Editor, navigate on the left to **User Configuration > Policies > Administrative Templates > Classic Administrative Templates (ADM) > Liquidware Labs > ProfileUnity**. There are user settings listed. Two settings – **Enabled** and **INI File Path**– must be enabled. The others are optional.

Note: These registry settings are not stored in a policy key since they are considered preferences. Therefore, if the Group Policy Object that implements these settings is ever removed, these registry settings will remain.

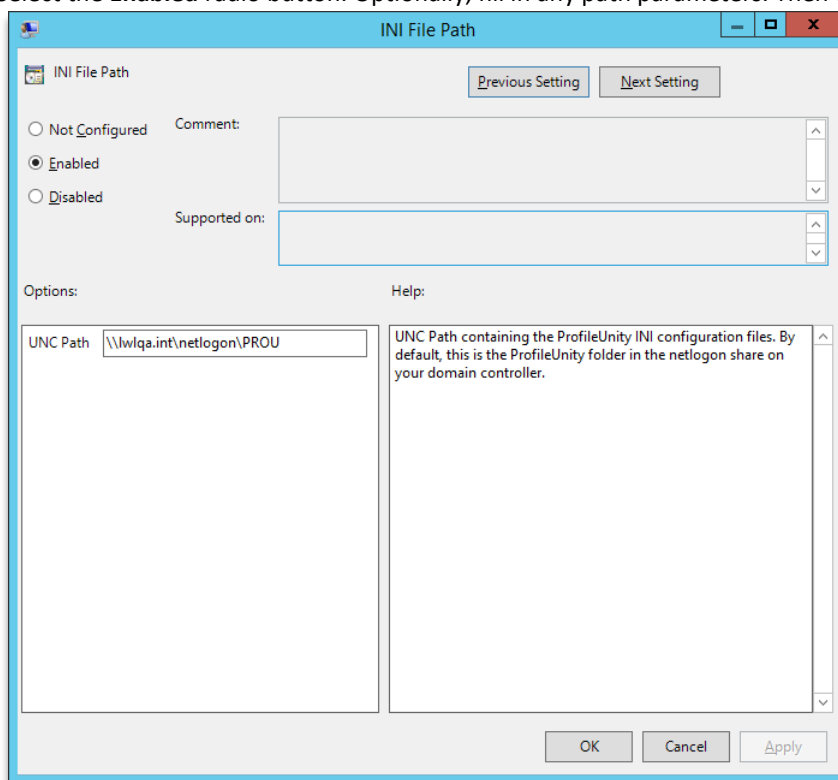


- a. **Enabled** – Allows ProfileUnity to be enabled on a per user basis.
- b. **INI File Path** – Specifies the UNC or cloud storage path containing the ProfileUnity INI configuration files. By default, this is the ProfileUnity folder in the NETLOGON share on your domain controller. For cloud storage, you will need point to your configurations folder. For example, S3://lw-profileunity-us-east-1/configurations.
- c. **Silent** — The ProfileUnity splash screen seen on desktops at startup is helpful in that it displays which configurations are being run and assists in troubleshooting logon and logoff processes executed by ProfileUnity. After a ProfileUnity configuration has been refined, the splash screen can be turned off (if desired) by enabling this option to allow ProfileUnity to run silently.
- d. **Disable MD5 Hashing** — (formerly Disable Time Stamp) To prevent saving parts of the profile that have not changed since the last login, the Portability engine has replaced doing a time stamp check with using a manifest and hashing algorithm. In most cases, it is important to have the hashing algorithm running in order to save time at logon or logoff. The check also helps

avoid most last-write-wins conflicts. However, in some cases you might need to enable this setting to disable Portability archive hashing and force ProfileUnity to disregard the cached files.

- e. **Amazon S3 Storage Credential** – Holds encrypted Amazon S3 storage credentials. To get encrypted credentials, go to the Cloud Storage Settings section of the ProfileUnity Management Console Administration Area. Click Copy to Clipboard next to the Amazon Client Credentials. This will copy the encrypted credentials to the clipboard and then you can paste them here.
- f. **Azure Credential** – Holds encrypted Azure storage credentials. To get encrypted credentials, go to the Cloud Storage Settings section of the ProfileUnity Management Console Administration Area. Click Copy to Clipboard next to the Azure Client Credentials. This will copy the encrypted credentials to the clipboard and then you can paste them here.
- g. **Google Storage Credential** – Holds encrypted Google storage credentials. To get encrypted credentials, go to the Cloud Storage Settings section of the ProfileUnity Management Console Administration Area. Click Copy to Clipboard next to the Google Client Credentials. This will copy the encrypted credentials to the clipboard and then you can paste them here.
- h. **Secondary Paths** – This setting allows administrators to specify both a primary path prefix and secondary path prefixes for the storage of INI Configuration files, Portability files and FlexApp packages. This allows for failover protection should access to the primary location fail. Mixing UNC paths with cloud paths is allowed.
 - i. **Example 1:** s3://b1/f1 > s3://b2/f1, gs://b3/f1.
 - ii. **Example 2:** \\n1\f2 > \\n2\f2, \\n3\f2, gs://b5/f2

- 2. Right click on any of the options and select **Edit** to change the ADM policy setting.
- 3. Select the **Enabled** radio button. Optionally, fill in any path parameters. Then click **OK**.



- 4. Repeat the same steps with any remaining ADM policy settings.

Using Secondary Paths for Failover

Whether your ProfileUnity GPO was setup manually using the prior section or your environment configuration was automated by the Guided Configuration Wizard, there is a particular setting that is helpful in maintaining high availability. ProfileUnity supports **Secondary Paths**, which allows for one or more specified paths to act as a failover when the primary path becomes unavailable. This feature currently supports local network (UNC) and cloud-based paths for your configuration files (including INI configurations, ClientSettings.xml, etc.), FlexApp packages, and Portability files.

To enable **Secondary Paths**, please see both **Configuring and Enabling Computer ADM Template Settings** and **Configuring and Enabling User ADM Template Settings** under the **Manually Preparing Your Environment to Use the ProfileUnity Client** section in this guide.

Once Secondary Paths are enabled, you can then enter paths with rules based on examples which follow, keeping in mind the following syntax:

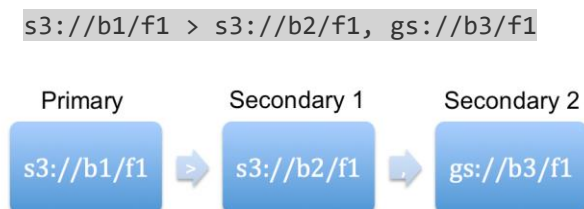
- The greater than symbol (>) follows the primary path and signals the shift between the primary and secondary paths.
- A comma (,) separates secondary paths, if multiple secondary paths are given.
- A vertical bar or pipe (|) separates rules if multiple rules are configured.

Example 1: Basic Failover With Single Secondary Path



- The `s3://b1/f1` (bucket1, folder1) is an Amazon S3 cloud path set as the primary path and what ProfileUnity would be configured to use.
- The `s3://b2/f1` (bucket2, folder1) is also an Amazon S3 cloud path that is set as the secondary path. This path is using a different bucket, which will ProfileUnity will failover to only if the primary path is unavailable.

Example 2: Failover With Multiple Secondary Paths



- The `s3://b1/f1` (bucket1, folder1) is an Amazon S3 cloud path set as the primary path and what ProfileUnity would be configured to use.
- The `s3://b2/f1` (bucket2, folder1) is also an Amazon S3 cloud path that is set as the first

secondary path. This path is using a different bucket, which ProfileUnity will first try to failover to if the primary path is unavailable.

- The `gs://b3/f1` (bucket2, folder1) is a Google Cloud path that is set as the next secondary path. This path would be tried if both the primary and first secondary path are unavailable.

Example 3: Failover With Multiple Secondary Paths, Multiple Rules

```
s3://b1/f1 > s3://b2/f1, gs://b3/f1 | \\n1\f2 > \\n2\f2, gs://b5/f2
```



There are two rules present in this example separated by the vertical bar (|) symbol. Rules are processed in the order in which they are entered.

For Rule 1:

- The `s3://b1/f1` (bucket1, folder1) is an Amazon S3 cloud path set as the primary path and what ProfileUnity would be configured to use.
- The `s3://b2/f1` (bucket2, folder1) is also an Amazon S3 cloud path that is set as the first secondary path. This path is using a different bucket, which ProfileUnity will first try to failover to if the primary path is unavailable.
- The `gs://b3/f1` (bucket2, folder1) is a Google Cloud path that is set as the next secondary path. This path would be tried if both the primary and first secondary path are unavailable.

For Rule 2:

- The `\\n1\f2` (network path 1, folder2) is a UNC path set as the primary path and what ProfileUnity would be configured to use.
- The `\\n2\f2` (network path 2, folder2) is also a UNC path that is set as the first secondary path. ProfileUnity will first try to failover to this location if the primary path is unavailable.
- The `gs://b5/f2` (bucket2, folder1) is a Google Cloud path that is set as the next secondary path. This path would be tried if both the primary and first secondary path are unavailable.

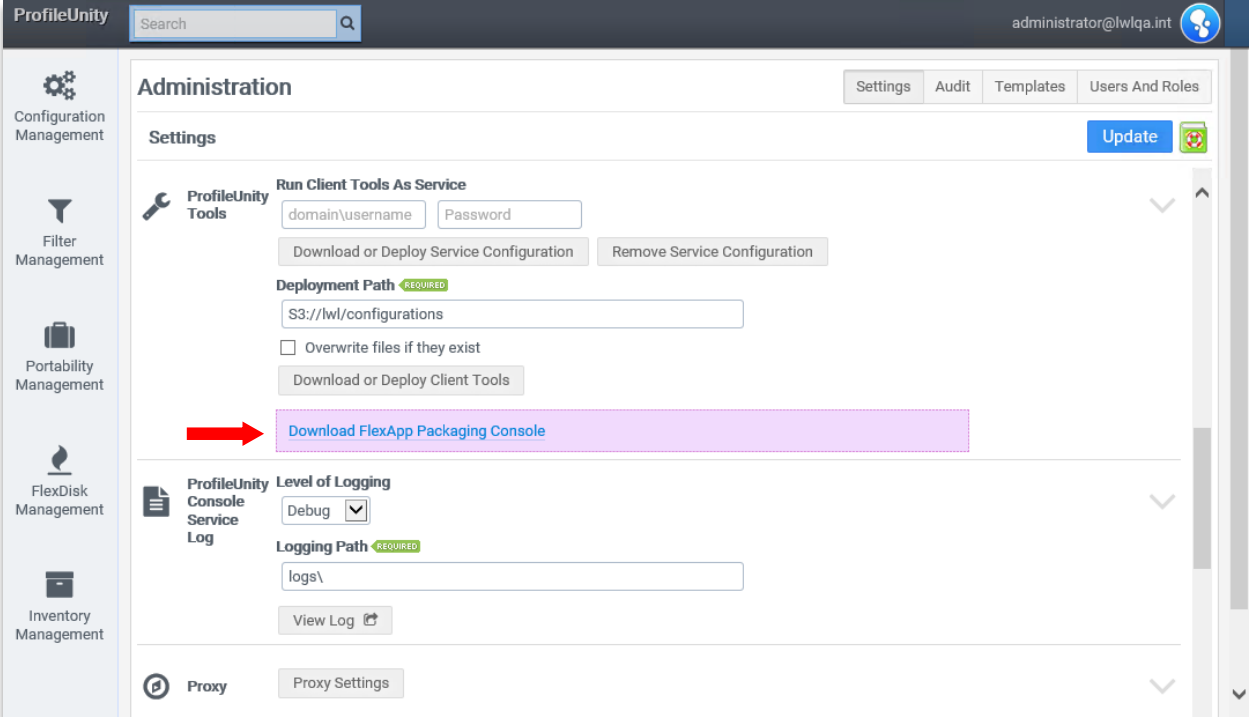
Please note that these rules are universal. So whether the primary path is configured in ProfileUnity for configuration files, FlexApp packages or Portability files, it will be applied to all. Also note that while the examples given only show up to two secondary paths per rule, there are technically no limits on how many can be added.

Installing the FlexApp Packaging Console Software

Department installed applications include those that are still managed by IT staff or desktop administrators and delivered to users but are not included in a master image. ProfileUnity with FlexApp DIA is enabled by the administrator for select users or groups within the ProfileUnity Management Console from a list of application packages. Admins package these applications using the FlexApp Packaging Console.

Please review the system requirements at the beginning of this document or the FlexApp Packaging Console Manual for more information on FlexApp Packaging Console requirements. Note that the FlexApp Packaging Console should NOT be installed on the same machine as the ProfileUnity Management Console, and that there is another bit-level operating system requirement for the packaging console that changes depending on each user's operating system.

Login to the desktop where you will install the FlexApp Packaging Console and then login to the ProfileUnity Management Console to download the FlexApp Packaging Console installer from the Administration area. To get there, go to your user name at the top right of the Management Console and select **Administration** from the drop-down list. Scroll down to the ProfileUnity Tools section and click on **Download FlexApp Packaging Console**. Copy the installer to the packaging console desktop, and run the installer before creating a snap shot or composing. For more information on installing and using the FlexApp Packaging Console, please see the ***FlexApp Packaging Console Manual***.



The screenshot displays the ProfileUnity Administration console interface. The top navigation bar includes the ProfileUnity logo, a search field, and the user name 'administrator@lwlqa.int'. The main content area is titled 'Administration' and contains several sections:

- Settings**: Includes an 'Update' button and a 'ProfileUnity Tools' section with fields for 'Run Client Tools As Service' (username and password), 'Download or Deploy Service Configuration', and 'Remove Service Configuration'.
- Deployment Path**: A text field containing 'S3://lwl/configurations' and a checkbox for 'Overwrite files if they exist', with a 'Download or Deploy Client Tools' button.
- Download FlexApp Packaging Console**: A button highlighted with a red arrow and a purple background.
- ProfileUnity Console Service Log**: Includes a 'Level of Logging' dropdown set to 'Debug', a 'Logging Path' text field containing 'logs\', and a 'View Log' button.
- Proxy**: A 'Proxy Settings' button.

Troubleshooting Assigning Startup and Logoff Scripts

While the Guided Configuration Wizard does a great job of automatically setting up your environment to use ProfileUnity, there have been some cases where the wizard was unable to properly assign computer startup and user logoff scripts to the GPO. In most cases, the wizard was prevented from making these system changes by antivirus software or other security processes. You can manually assign the startup and logoff scripts using the instructions in the **Manually Preparing Your Environment to Use the ProfileUnity Client** section or contact our Support team if you need more help.

Getting Help Installing ProfileUnity

If you have questions or run into issues while installing and configuring ProfileUnity with FlexApp, Liquidware is here to help. Our goal is to provide you with the knowledge, tools, and support you need to be productive.

Using Online Resources

Liquidware maintains various kinds of helpful resources on our [Customer Support Portal](#). If you have questions about your product, please use these online resources to your full advantage. The Support Portal includes product forums, a searchable Knowledge Base, documentation, and best practices among other items. You can visit our website at <https://www.liquidware.com/support>.

Contacting Support

If you wish to contact our Support staff for technical assistance, please either log a request on the [Liquidware Customer Support Portal](#) or give us a call. Prior to Logging a Case you may want to review these helpful tips:

- Check the Product Documentation included with your Liquidware Product.
- Try to see if the problem is reproducible.
- Check to see if the problem is isolated to one machine or more.
- Note any recent changes to your system and environment.
- Note the version of your Liquidware product and environment details such as operating system, virtualization platform version, etc.

To speak directly with Support, please use the following numbers:

Main Line:	1-678-397-0460
Toll Free in US & Canada:	1-866-914-9665
Europe/Middle East/Africa:	+44 800 014 8097
Toll Free in Europe	
UK:	0800 014 8097
Netherlands:	0800 022 5973
Switzerland:	0800 561 271

Appendix A - Not Using NETLOGON?

By default, the ProfileUnity Client installs to the NETLOGON share on your domain controller. This path is recommended but is not required. The NETLOGON share is a DFS replicated path that is available on all properly functioning domain controllers. Installing ProfileUnity to this path prevents a single point of failure. If at least one domain controller is online ProfileUnity can operate. Additionally, this path allows ProfileUnity to scale through load distribution across domain controllers.

If you choose to install the ProfileUnity client to an alternative UNC path you will need to perform the following two steps:

1. Specify the alternative UNC path when running the Client installer.
2. Specify the alternative UNC path when manually configuring Group Policy. You will need to specify this path for the startup script, the INI File Path, and the logoff script.

Another alternative is to use cloud storage. For those planning to utilize cloud storage with ProfileUnity, there is an additional document, **Using Cloud Storage with ProfileUnity**, that you should read. This document guides you through the process of setting up your cloud storage for use with ProfileUnity. The configuration of your cloud storage should be performed before using the ProfileUnity Management Console. Please pay close attention to the cloud storage related instructions throughout this guide, especially when using the Guided Configuration Wizard and using the section on manually configuring your GPO settings.

NOTE: The Group Policy startup script will execute using the computer's credentials. The ProfileUnity Client and the Group Policy logoff script will execute using the user's credentials. The recommended way to setup the alternative UNC path is to allow either Authenticated Users or Everyone read access. This permission setup will allow both the computer and the user to access ProfileUnity.