User Administration

Virtual Desktop Service

NetApp
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User Administration

Managing User Accounts

Create New User(s)

Admins can add Users by clicking Workspaces > Users and Groups > Add/import

Users can be added individually or with a bulk import.

> Including accurate email and mobile phone # at this stage greatly improves the process of enabling MFA later.

Once you have created Users, you can click on their name to see details like when they were created, their connection status (whether they're currently logged in or not) and what their specific settings are.

Activating the Virtual Desktop for existing AD users

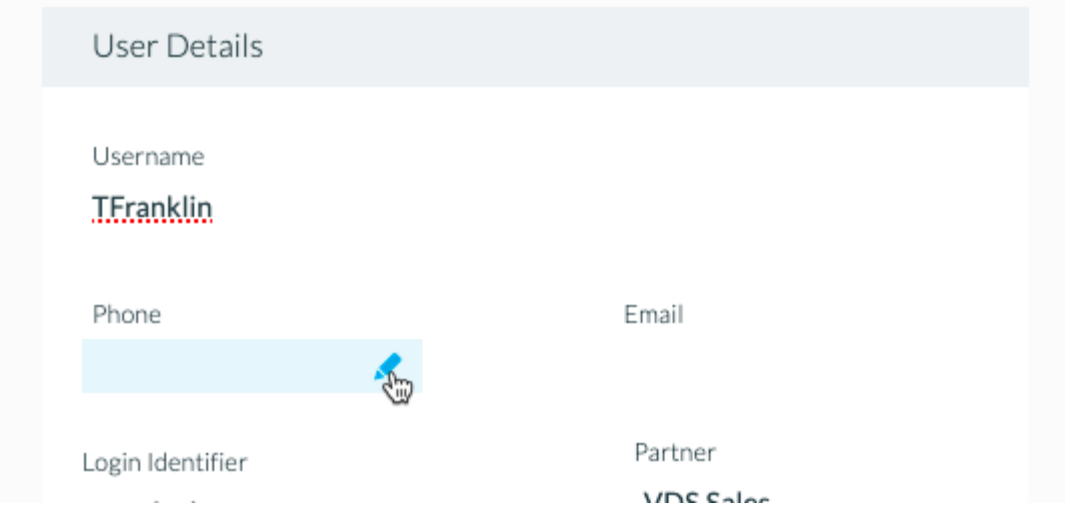
If users are already present in AD, you can simple activate the users' Virtual Desktop by clicking on the gear next to their name and then enabling their desktop.

> For Azure AD Domain Service only: In order for logins to work, the password hash for Azure AD users must be synced to support NTLM and Kerberos authentication. The easiest way to accomplish this task is to change the user password in Office.com or the Azure portal, which will force the password hash sync to occur. The sync cycle for Domain Service servers can take up to 20 minutes so changes to passwords in Azure AD typically take 20 minutes to be reflected in AADDS and thus in the VDS environment.

Delete user account(s)

Edit user info

On the user detail page changes can be made the the user details such as username and contact details. The email and phone values are used for the Self Service Password Reset (SSPR) process.



Edit user security settings

- VDI User Enabled – an RDS Setting that, when enabled, builds a dedicated VM session host and assigned this user as the only user that connect to it. As part of activating this checkbox the CWMS administrator is prompted to select the VM Image, Size and Storage Type.
  - WVD VDI users should be managed on the WVD page as a VDI hostpool.
- Account Expiration Enabled – allows the CWMS administrator to set an expiration date on the end user account.
- Force Password Reset at Next Login – Prompts the end user to change their password at next login.
- Multi-Factor Auth Enabled – Enables MFA for the end user and prompts them to setup MFA at next login.
- Mobile Drive Enabled – A legacy feature not used in current deployments of RDS or WVD.
- Local Drive Access Enabled – Allows the end user to access their local device storage from the cloud environment including Copy/Paste, USB Mass storage and system drives.
- Wake on Demand Enabled – For RDS users connecting via the CW Client for Windows, enabling this will give the end user permission to take their environment when connecting outside of normal working hours as defined by Workload Schedule.

Locked Account

By default, five failed login attempts will lock the user account. The user account will unlock after 30 minutes unless *Enable Password Complexity* is enabled. With password complexity enabled, the account will not automatically be unlocked. In either case, the VDS admin can manually unlock the user account from the Users/Groups page in VDS.

Reset user password

Resets the user password.

Note: When resetting Azure AD user passwords (or unlocking an account) there can be a delay of up to 20 minutes as the reset propagates through Azure AD.

Admin Access

Enabling this give the end user limited access to the management portal for their tenant. Common uses include providing an on-site employee access to reset peers' passwords, assign application or allow manual server wakeup access. Permissions controlling what areas of the console can be seen is set here as well.

Logoff user(s)

Logged on users can be logged off by the VDS admin from the Users/Groups page in VDS.

Applications

Displays the application deployed in this workspace. The check box provisions the apps to this specific user. Complete Application Management documentation can be found here. Access to applications can also be granted from the App interface or to Security Groups.

View/kill user processes

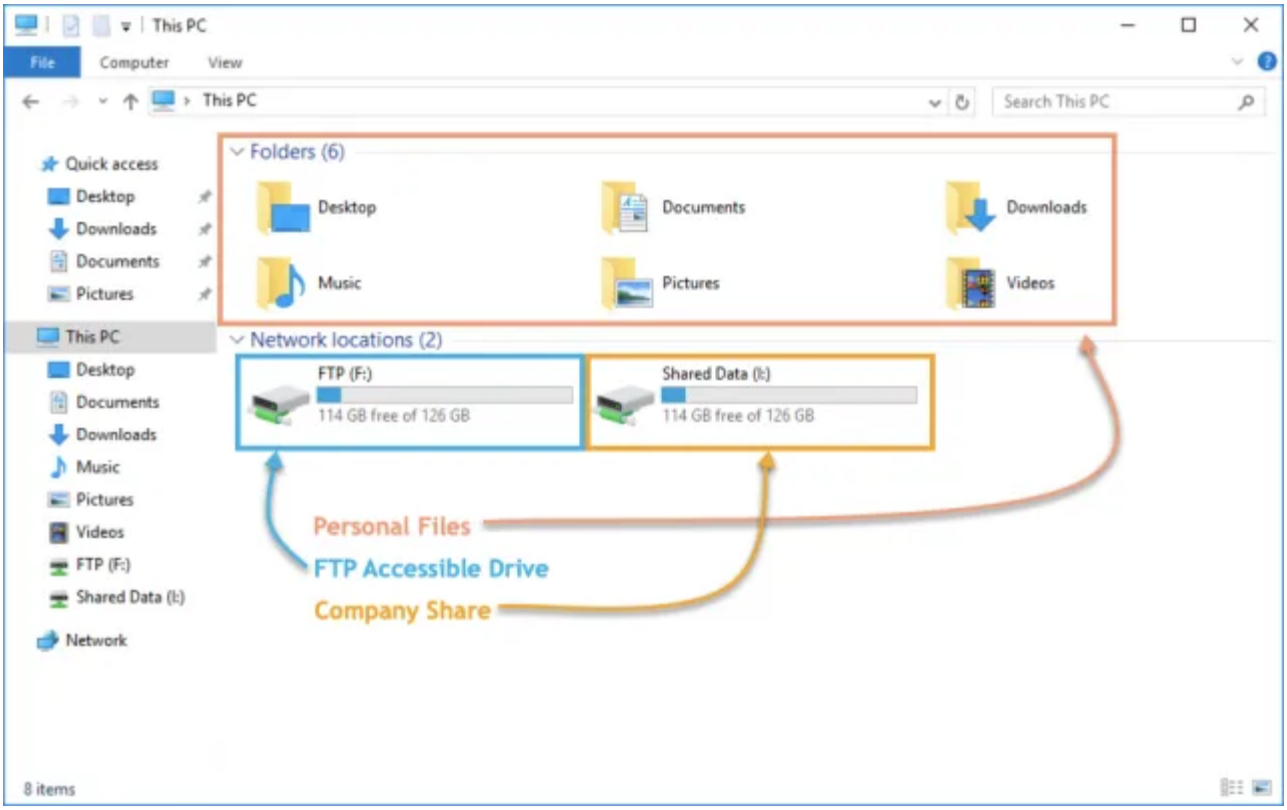
Displays the processes currently running in that user's session. Processes can be killed from this interface as well.

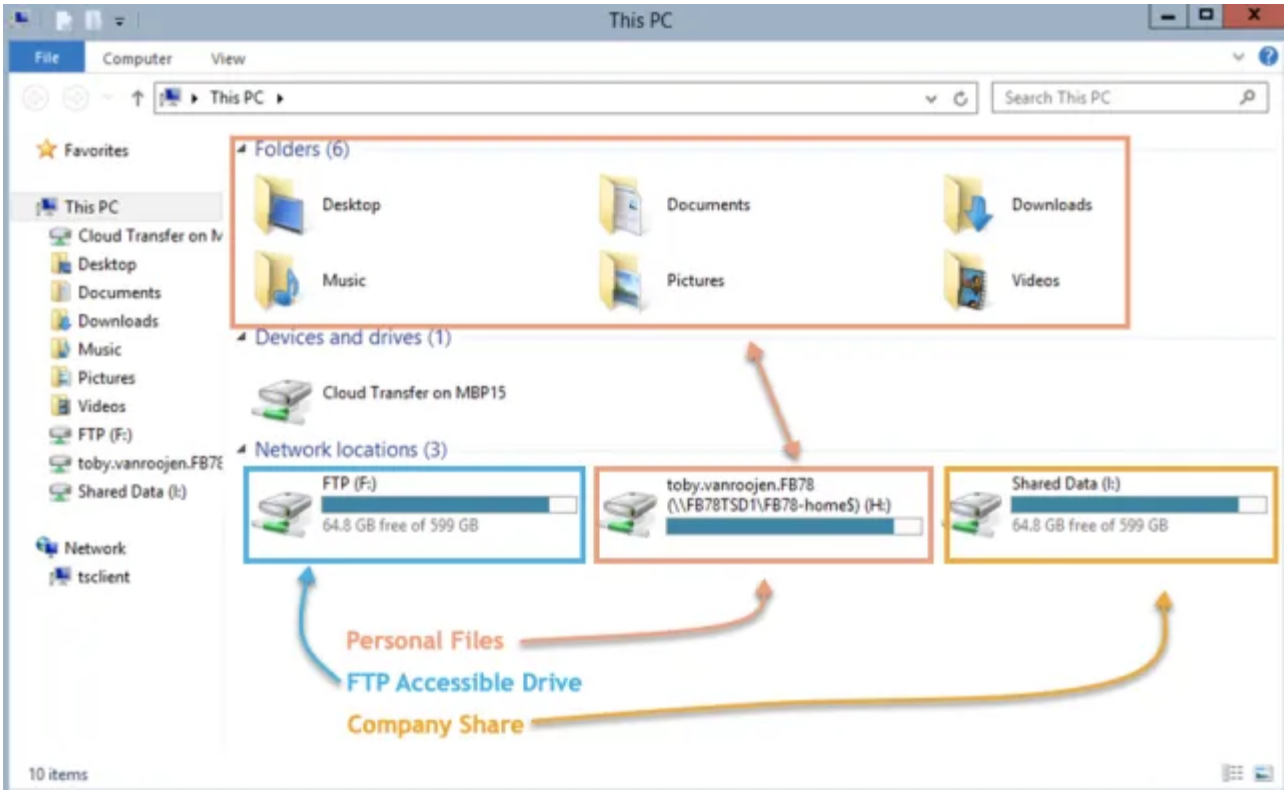
Managing Data Permissions

End user perspective

Virtual Desktop end users can have access to several mapped drives. These drives includes an FTPs accessible team share, a Company File Share and their Home drive (for their documents, desktop, etc…) . All of these mapped drives reference back to a central storage layer on either a storage services (such as Azure NetApp Files) or on a file server VM.

Depending on the configuration the user may of may not have the H: or F: drives exposed, they may only see their Desktop, Documents, etc… folders. Additionally, different Drive letters are occasionally set by the VDS administrator at deployment.





Managing permissions

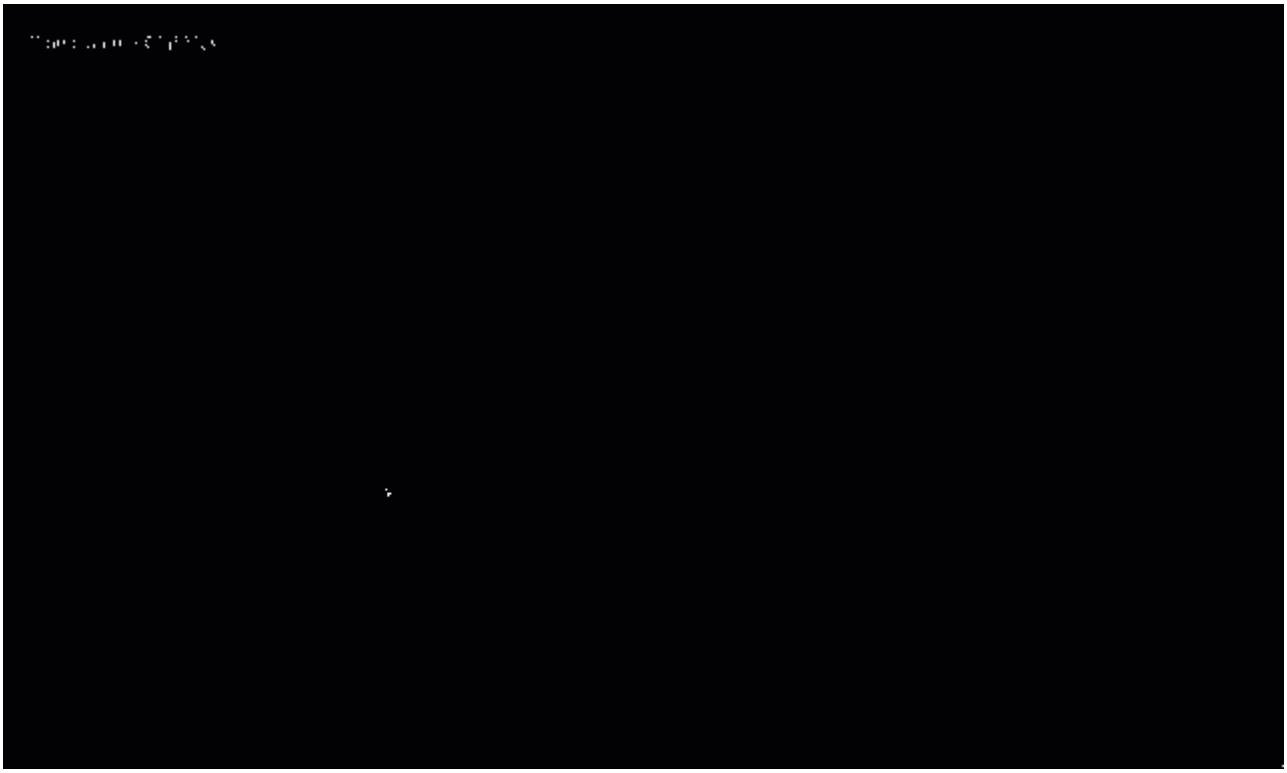
VDS allows admins to edit security groups and folder permissions, all from within the VDS portal.

Security groups

Security groups are managed by clicking: Workspaces > Tenant Name > Users & Groups > under the Groups Section

In this section you can:

1. Create new security groups
2. Add/Remove users to the groups
3. Assign applications to groups
4. Enable/Disable Local Drive access to groups



Folder permissions

Folder Permissions are managed by clicking: Workspaces > Tenant Name > Manage (in the Folders section).

In this section you can:

1. Add/Delete Folders
2. Assign permissions to user or groups
3. Customize permissions to Read Only, Full Control & None

Application Entitlement

Overview

VDS has a robust application automation and entitlement functionality built-in. This functionality allows users to have access to different applications while connecting to the same session host(s). This is accomplished by some custom GPOs hiding shortcuts along with automation selectively placing shortcuts on the users' desktops.

Applications can be assigned to users directly or via Security groups managed in VDS.

At a high level, the application provisioning process follows these steps.

1. Add App(s) to App Catalog
2. Add App(s) to the workspace
3. Install the Application on all Session Hosts
4. Select the Shortcut path
5. Assign apps to users and/or groups

Steps 3 & 4 can be fully automated with Scripted Events as illustrated below

Video Walkthrough

Video Page

Add applications to the App Catalog

VDS Application Entitlement starts with the App Catalog, this is a listing of all the applications available for deployment to end user environments.

To add applications to the catalog, follow these steps

1. Log in to VDS at https://manage.cloudworkspace.com using your primary admin credentials.
2. In the upper right, click the arrow icon next to your User Name and select Settings.
3. Click the App Catalog tab.
4. Click the Add App option in the Application Catalog title bar.
5. To add a group of applications, choose the Import Apps option.
    a. A dialog will appear that provides an Excel template to download that creates the correct format for the application list.
    b. For this evaluation NetApp VDS has created a sample application list for import it can be found here.
    c. Click on the Upload area and choose the application template file, click the Import button.
6. To add individual applications, choose the Add App button and a dialog box will appear.
    a. Enter the name of the application.

b. External ID can be used to enter an internal tracking identifier such as a product SKU or billing tracking code (optional).

c. Check the Subscription box if you want to report on the applications as a Subscription product (optional).

d. If the product does not install by version (for example Chrome) check the Version Not Required checkbox. This allows “continuous update” products to be installed without tracking their versions.

e. Conversely, if a product supports multiple named versions (ex: Quickbooks) you need to check this box so that you can install multiple versions and have VDS specific each available version in the list of applications that can be entitled for and end user.

f. Check “No User Desktop Icon” if you don’t want VDS to provision a desktop icon for this product. This is used for “backend” products like SQL Server since end users don’t have an application to access.

g. “App Must be Associated” enforces the need for an associated app to be installed. For example, a client server application may require SQL Server or mySQL to be installed as well.

h. Checking the License Required box indicates that VDS should request a license file to be uploaded for an installation of this application before it sets the application status to active. This step is performed on the Application detail page of VDS.

i. Visible to All – application entitlement can be limited to specific subpartners in a multi-channel hierarchy. For evaluation purposes, click the Check Box so that all users can see it in their available application list.

Add the application to the Workspace

To start the deployment process you’ll add the app to the workspace.

To do this, follow these steps

1. Click Workspaces
2. Scroll down to Apps
3. Click Add
4. Check box the application(s), enter required information, click Add Application, click Add Apps.

Manually install the application

Once the application has been added to the Workspace you’ll need to get that application installed on all session hosts. This can be done manually and/or it can be automated.

To manually install applications on session hosts, follow these steps

1. Navigate to Service Board.
2. Click on the Service Board Task.

3. Click on the Server Name(s) to connect as a local admin.
4. Install the app(s), confirm the shortcut to this app is found in the Start Menu path.
    a. For Server 2016 and Windows 10: C:\ProgramData\Microsoft\Windows\Start Menu\Programs.
5. Go back to the Service Board Task, click Browse and choose either the shortcut or a folder containing shortcuts.
6. Whichever you select is what will be displayed on the end user desktop when assigned the app.
7. Folders are great when an app is actually multiple applications. e.g “Microsoft Office” is easier to deploy as a folder with each app as a shortcut inside the folder.
8. Click Complete Installation.
9. If required, open the created Icon Add Service Board Task and confirm the icon has been added.

Automate application installation

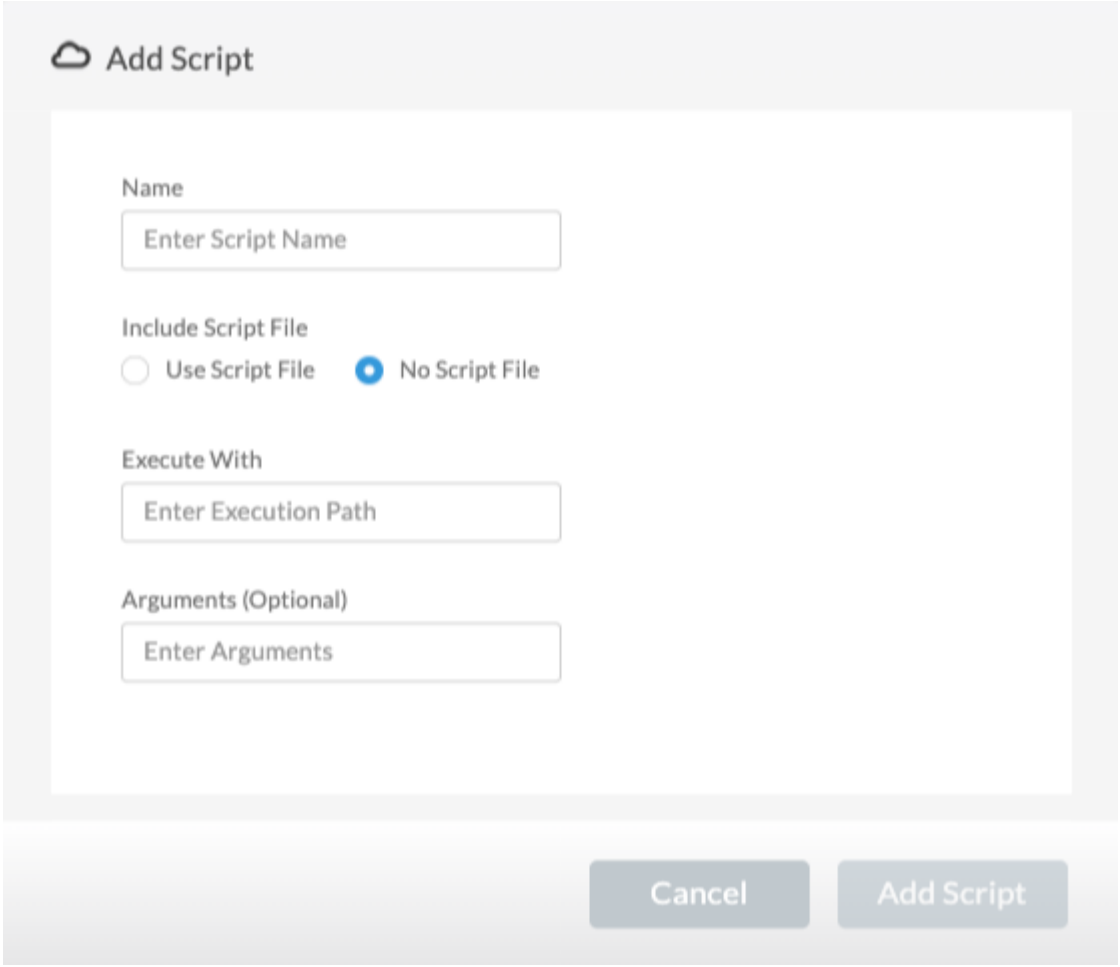
For reoccurring tasks or to perform the task across many hosts, the Scripted Events functionality in VDS can be used to fully automate installs. This automation can be performed with any number of scripting technologies, in this example we’ll use Chocolatey.

First, any host where you’ll automate installs will need Chocolatey pre-installed, this can be added to the VM image or automated as shown below.

To automate the install of Chocolatey, follow these steps

1. Installing Chocolatey is the first step, this utility can then be used to automate app installs. To do so, you’ll build a scripted event that executes Powershell.exe with the following arguments:
   ```
   Set-ExecutionPolicy Bypass -Scope Process -Force; iex New-Object System.Net.WebClient).DownloadString(‘https://chocolatey.org/install.ps1’))
   ```
2. Once the script is built it can be triggered in a variety of ways. The simplest is to manually run it but there are other options such as running this at *server create*.

Once the host(s) has Chocolatey, autoamte with Scripted events can install a wide variety of applications from the Chocolatey repository. A complete list of available applications can be foudn at https://chocolatey.org/packages



To automate the install of an applications, follow these steps (using 7-Zip as an example)

1. Navigate to Scripted Events > Script Repository > Add
2. Select `No Script File`
3. Execute With: `c:\programdata\chocolatey\choco.exe`
4. Arguments (Optional): *leave blank*
5. Once the Script is saved, the next step is to associate that script with a Trigger. Navigate to Scripted Events > Activities > Add
   a. Enter a name for the activity (e.g. *choco install 7-Zip*)

      Develop a consistent naming convention as the library of Scripts can get large

   b. Optionally give a description
   c. Select the script created in the previous section
   d. In *Enter Arguments (Optional):* enter `install 7zip -y -f` (which is found here: https://chocolatey.org/packages/7zip)
      i. `-y` is required to unattended installs
      ii. `-f` forces the install, even if the app was previously installed and is optional

e. Select the deployment

f. Check the enable checkbox

g. under *Trigger On* select *Application install*

h. Click *Add Application*

i. Select the application name (e.g. *7-Zip File Manager*)

j. Enter the shortcut path for the application icon (e.g. \\shortcuts\7-Zip File Manager.lnk)

You'll need to know the shortcut path during this creation wizard. This can be found by looking at other installs of the app or by doing a manual install on the machine and browsing to it from the service board entry.

k. Click Update > Add Activity

Going forward, the act of adding that application to the Workspace will trigger the install of that application across all session hosts.

Assign applications to users

Application entitlement is handled by VDS and application can be assigned to users in three ways

Assign Applications to Users

1. Navigate to the User Detail page.
2. Navigate to the Applications section.
3. Check the box next to all applications required by this user.

Assign users to an application

1. Navigate to the Applications section on the Workspace Detail page.
2. Click on the name of the application.
3. Check the box next to the users the application.

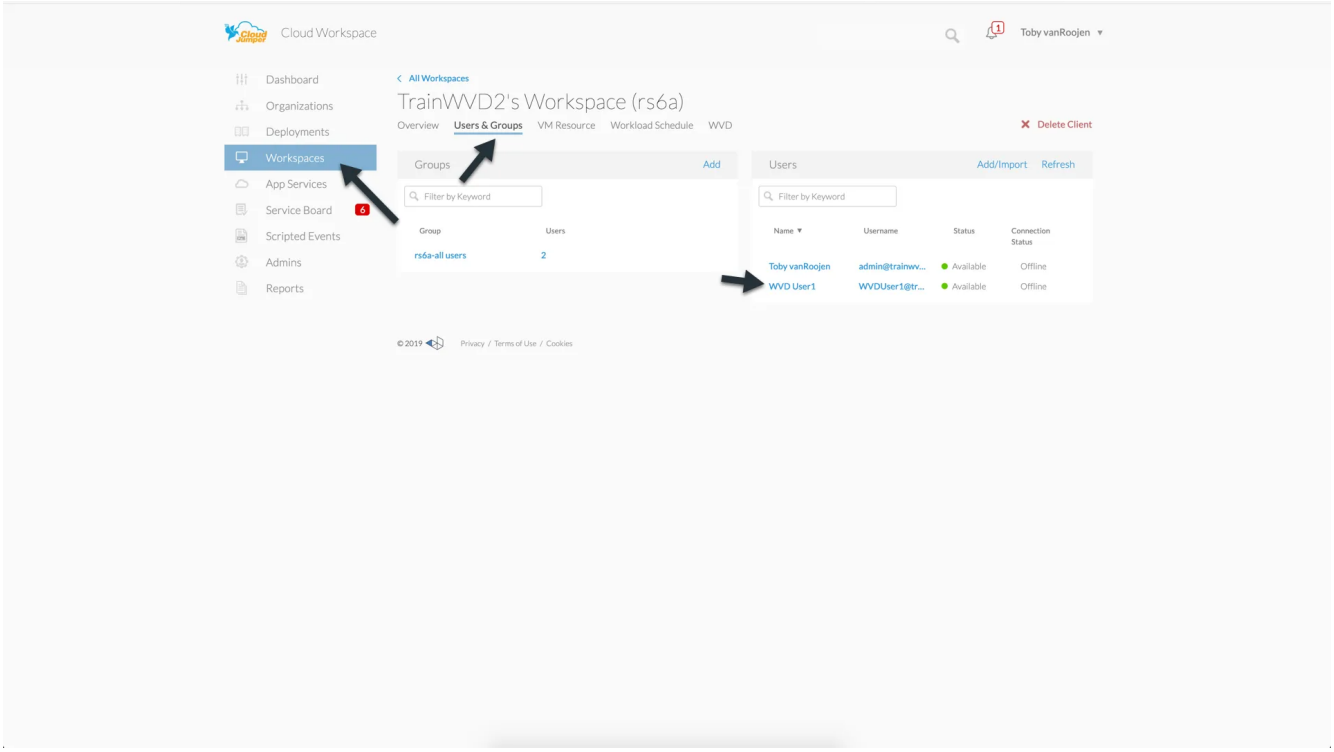
Assign applications and users to user groups

1. Navigate to the Users and Groups Detail.
2. Add a new group or edit an existing group.
3. Assign user(s) and application(s) to the group.

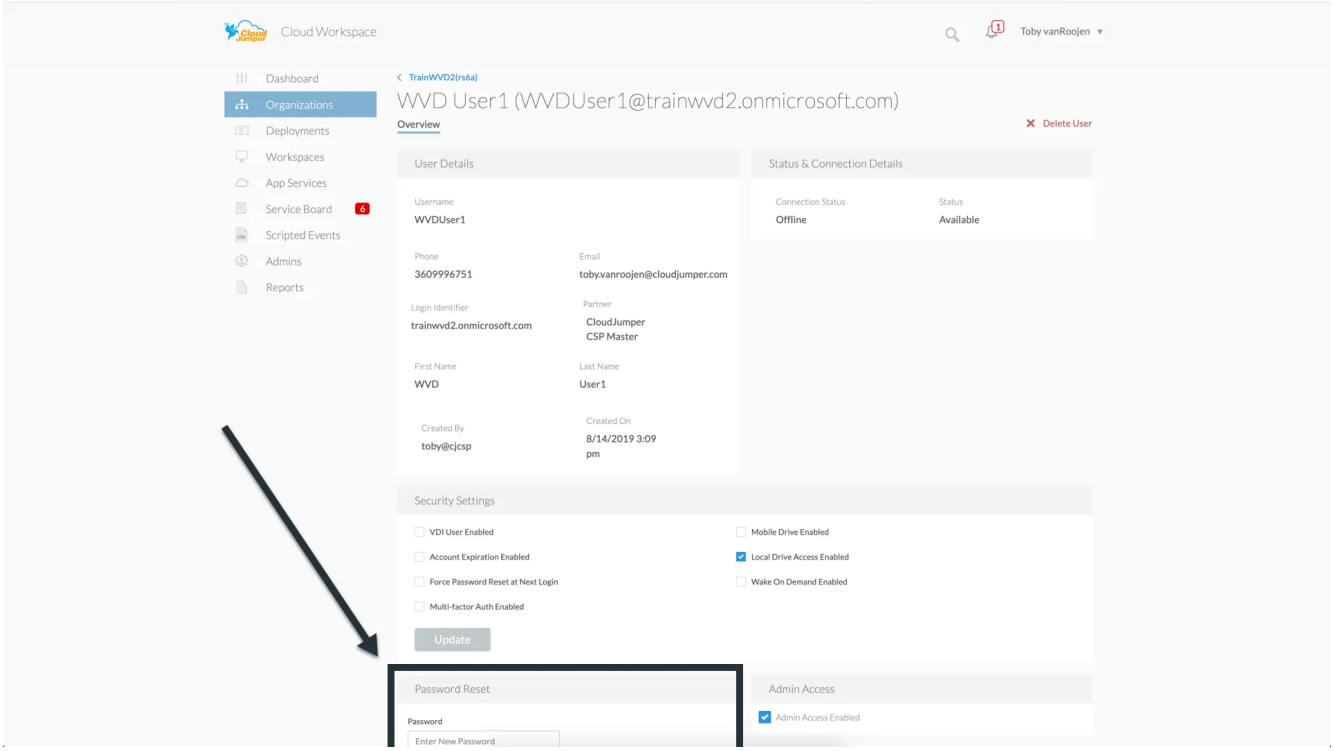
Reset User Password

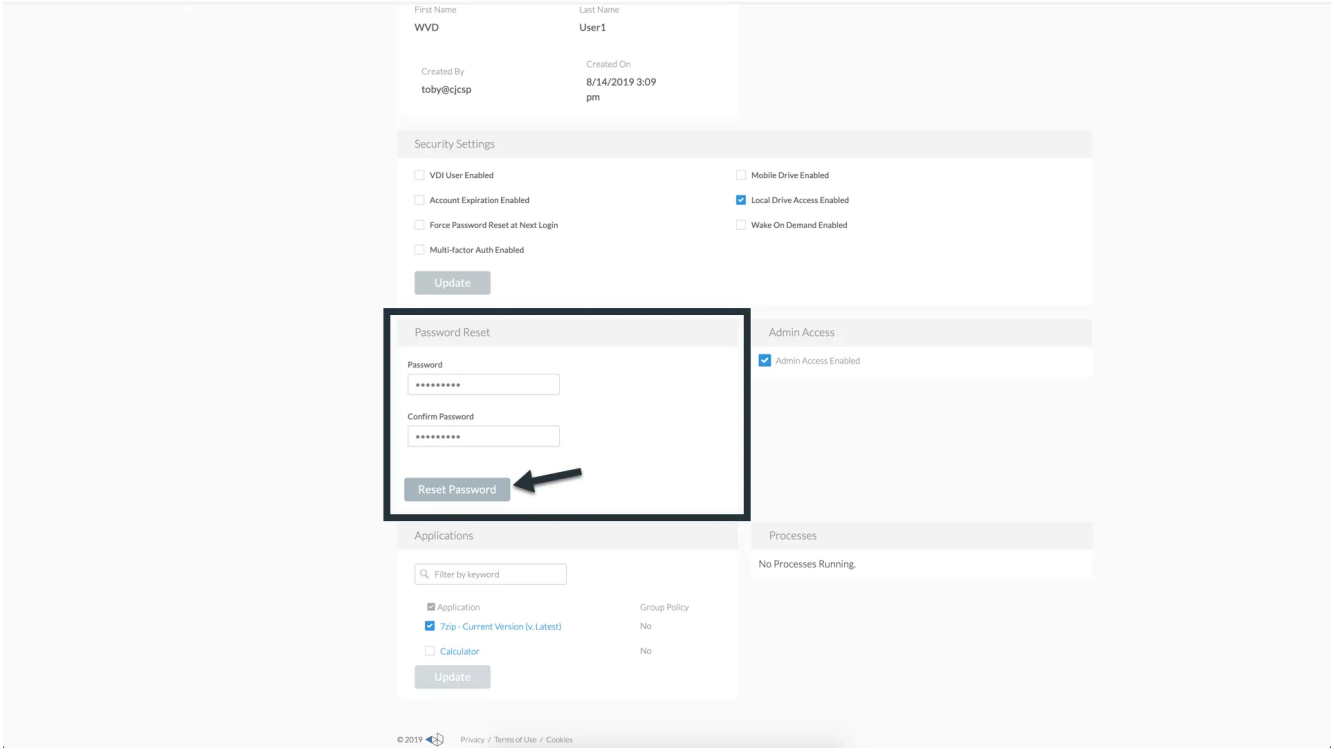
Reset user password steps

1. Navigate to the Used Detail page in VDS



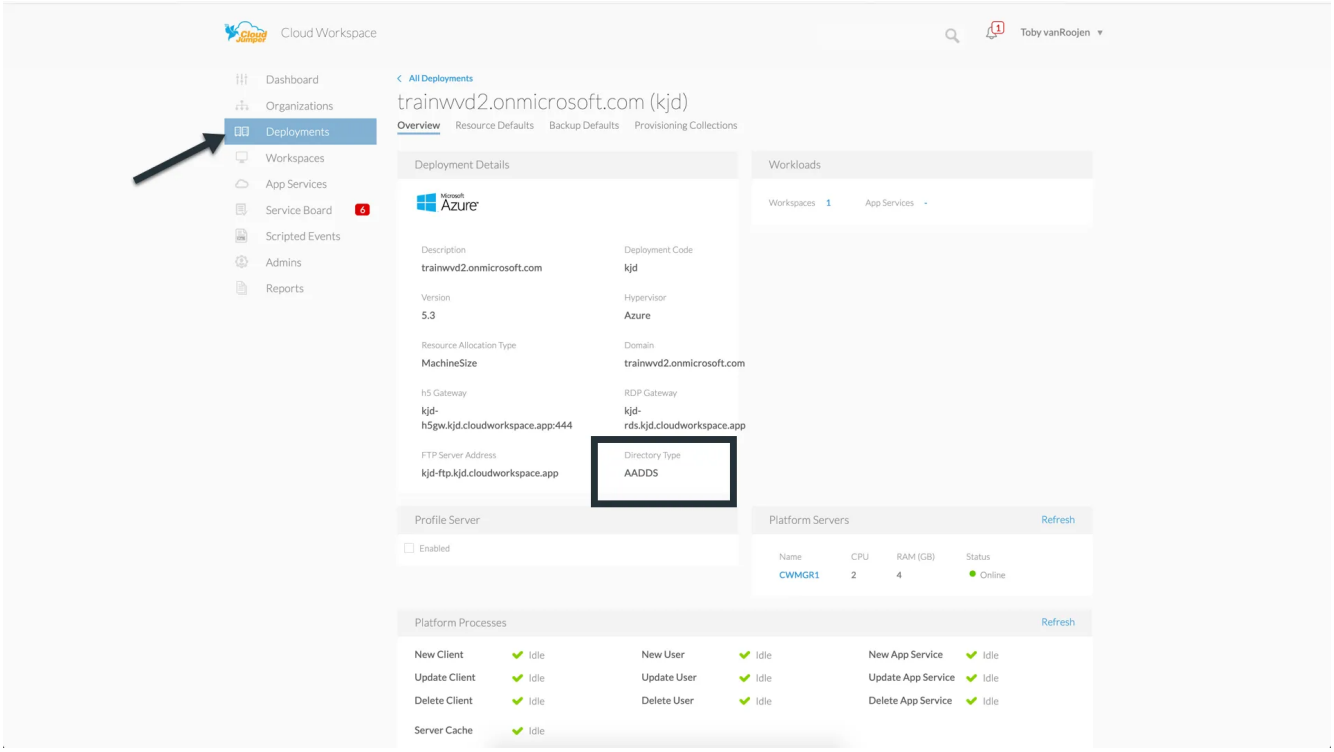
2. Find the Password Section, enter the new PW twice and click





Time to take effect

- For environments running an “Internal” AD on VMs in the environment the password change should take effect immediately.
- For environments running Azure AD Domain Services (AADDS) the password change should take about 20 minutes to take effect.
- The AD type can be determined on the Deployment Details Page:



Self service password reset (SSRP)

The NetApp VDS Windows client and the NetApp VDS web client will provide a prompt for users that enter an incorrect password when logging into a v5.2 (or later) virtual desktop deployment. In the event that the user has locked their account, this process will unlock a user's account as well.

Note: users must have already entered a mobile phone number or an email address for this process to work.

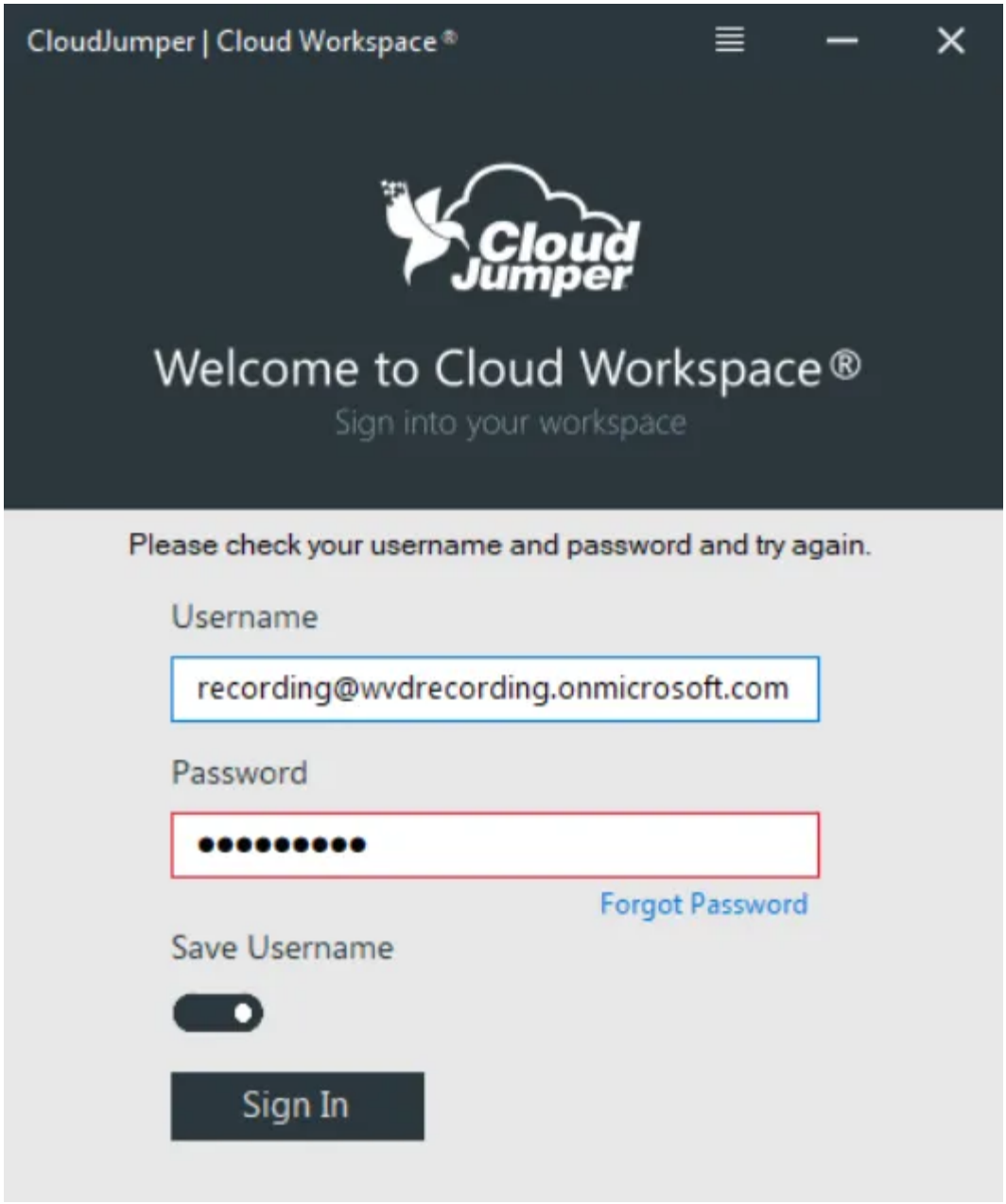
SSPR is supported with:

- NetApp VDS Window Client
- NetApp VDS Web Client

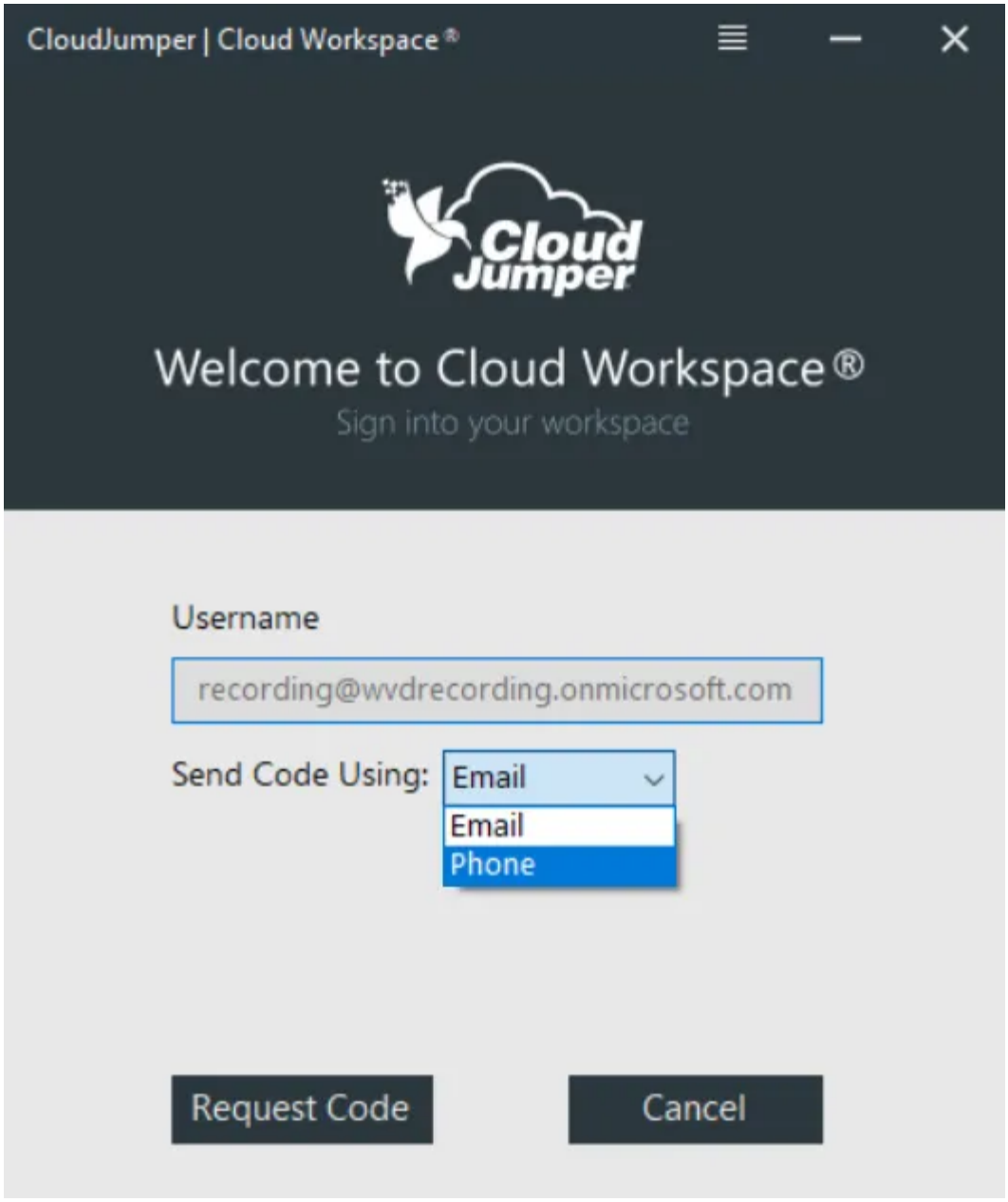
In this set of instructions, you will walk through the process of using SSPR as a simple means to enable users to reset their passwords and unlock their accounts.

NetApp VDS Windows client

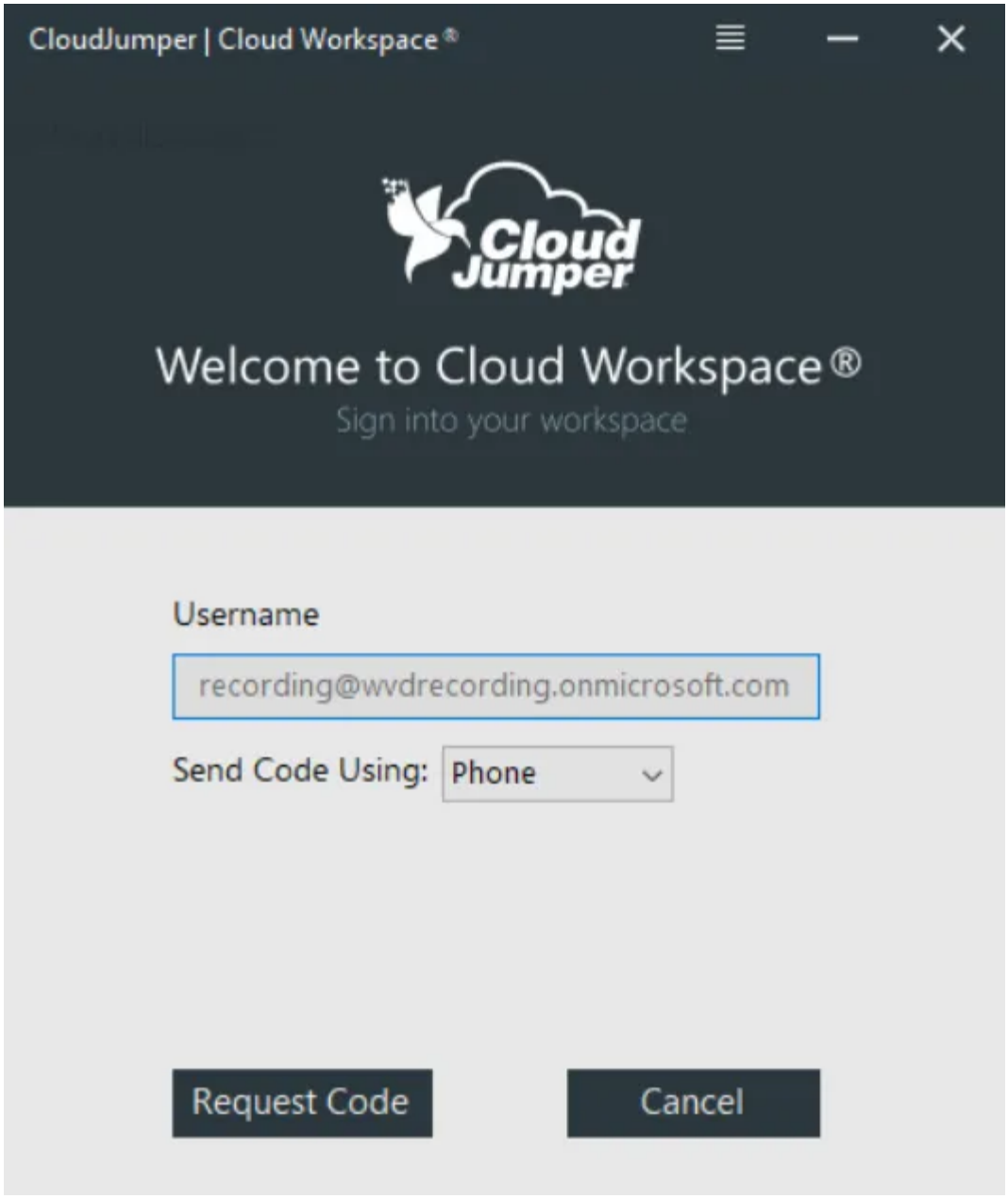
1. As an end user, click the Forgot Password link to continue.



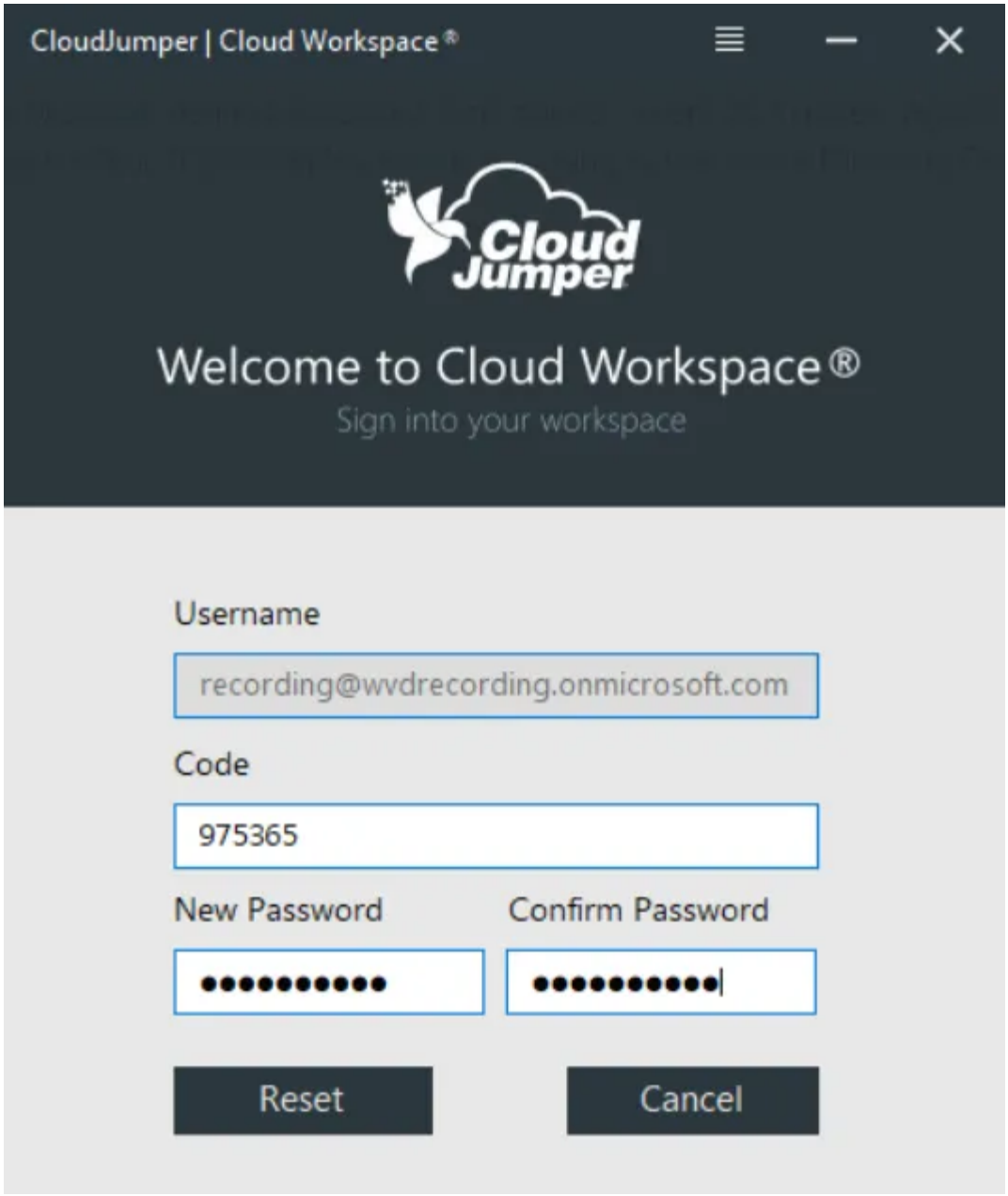
2. Select whether to receive your code via your mobile phone or via email.



3. If an end user has only provided one of those contact methods, that will be the only method displayed.

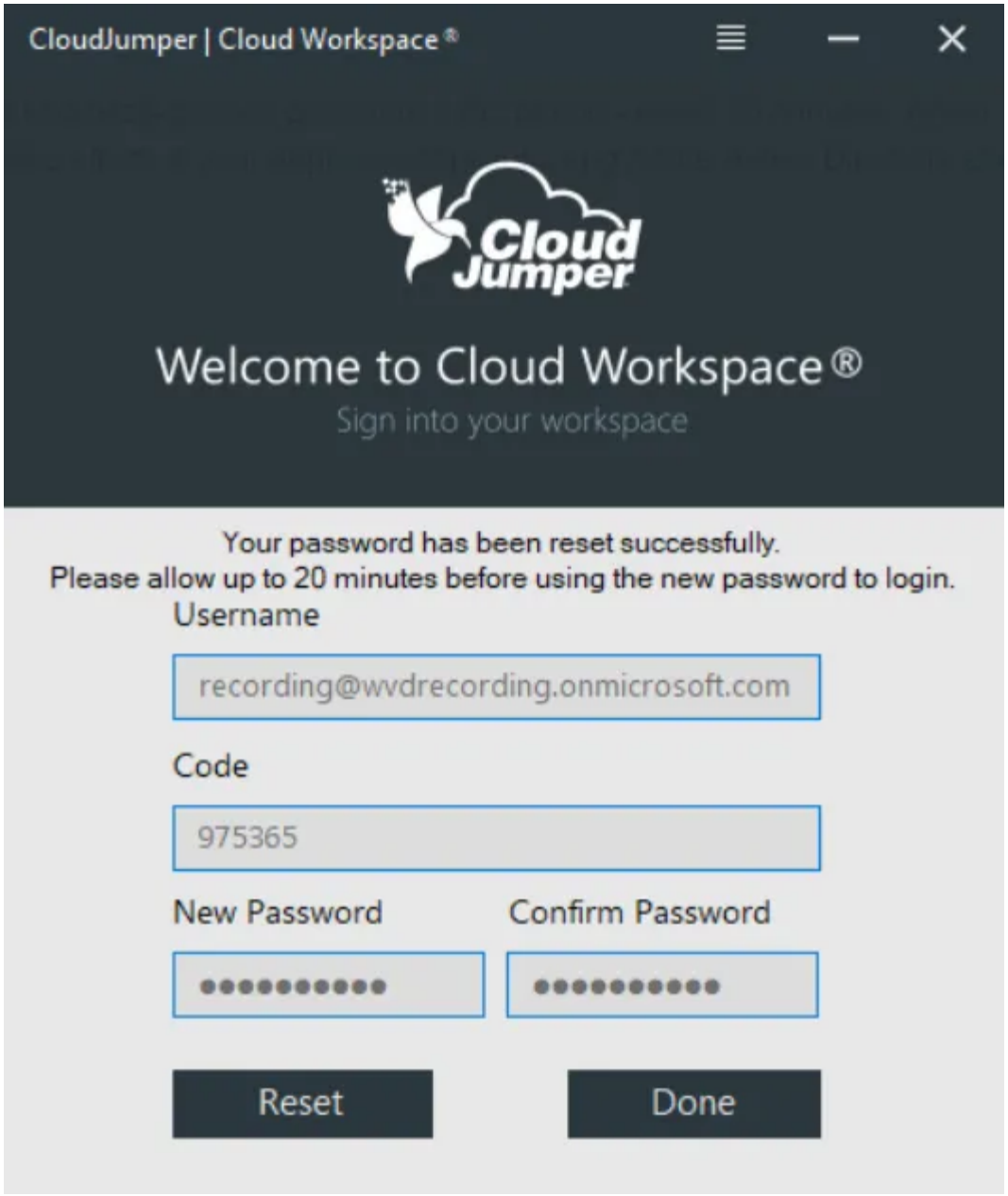


4. After this step, users will be presented with a Code field where they should enter the numeric value received either on their mobile device or in their inbox (depending which was selected). Enter that code followed by the new password and click Reset to proceed.



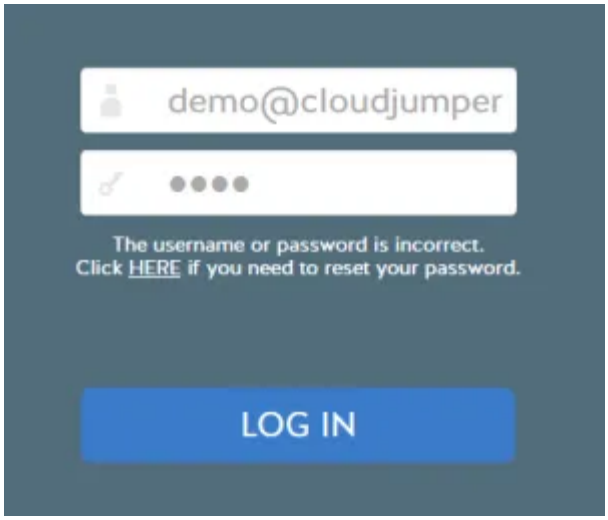
5. Users will see a prompt informing them that their password reset has been completed successfully – click Done to proceed to complete the logon process.

> If your deployment is using Azure Active Directory Domain Services, there is a Microsoft-defined password sync period – every 20 minutes. Again, this is controlled by Microsoft and cannot be changed. With this in mind, VDS displays that the user should wait for up to 20 minutes for their new password to take effect. If your deployment is not using Azure Active Directory Domain Services, the user will be able to log in again in seconds.

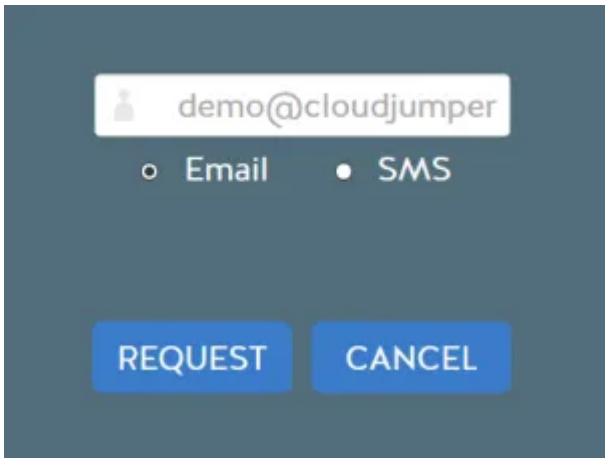


HTML5 portal

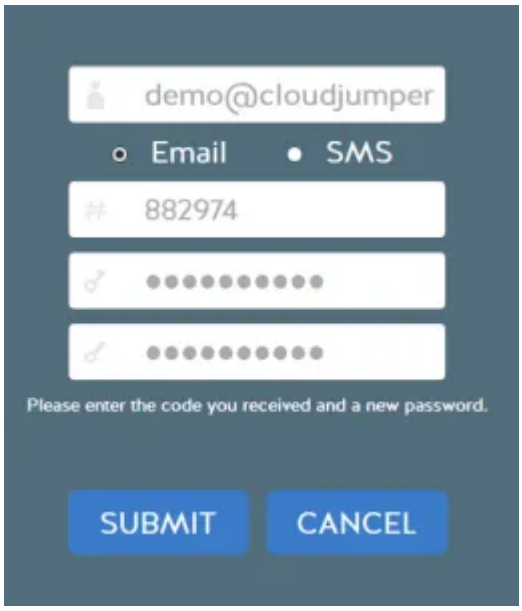
1. If the user fails to enter the correct password when attempting to login through the HTML5, they will now be presented with an option to reset the password:



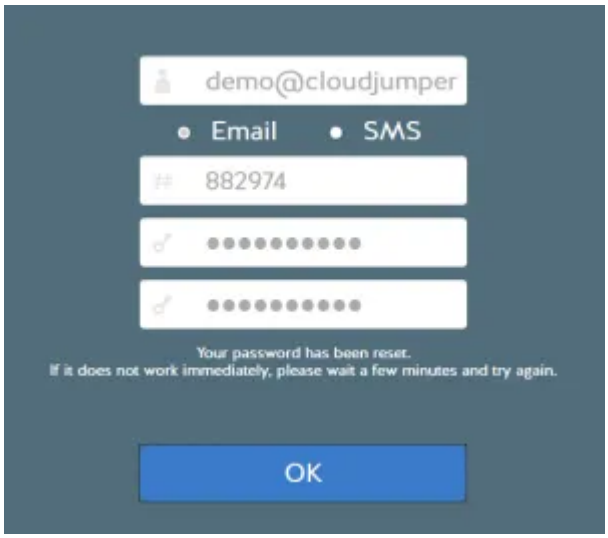
2. After clicking on the option to reset their password, they will be presented with their reset options:



3. The ‘Request’ button will send a generated code to the option selected (in this case the user’s email). The code is valid for 15 minutes.



4. The password has now been reset! It is important to remember that Windows Active Directory will often need a moment to propagate the change so if the new password does not work immediately, just wait a few minutes and try again. This is particularly relevant for users residing in an Azure Active Directory Domain Services deployment, where a password reset could take up to 20 minutes to propagate.



Enabling self service password reset (SSPR) for users

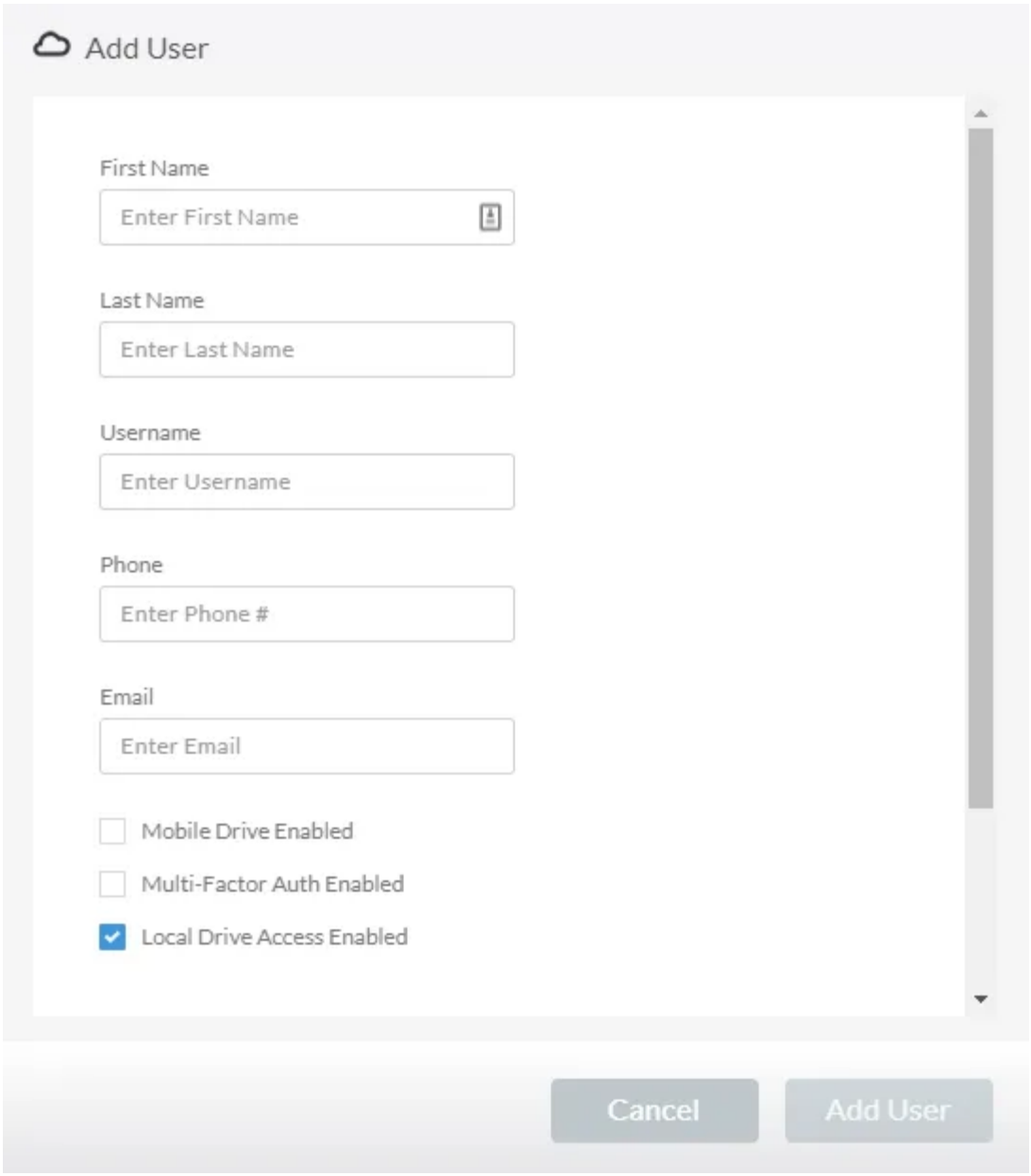
To use Self Service Password Reset (SSPR), administrators must first enter a mobile phone number and/or an email account for an end user There are two ways to enter a mobile number and email addresses for a virtual desktop user as detailed below.

In this set of instructions, you will walk through the process of configuring SSPR as a simple means for end users to reset their passwords.

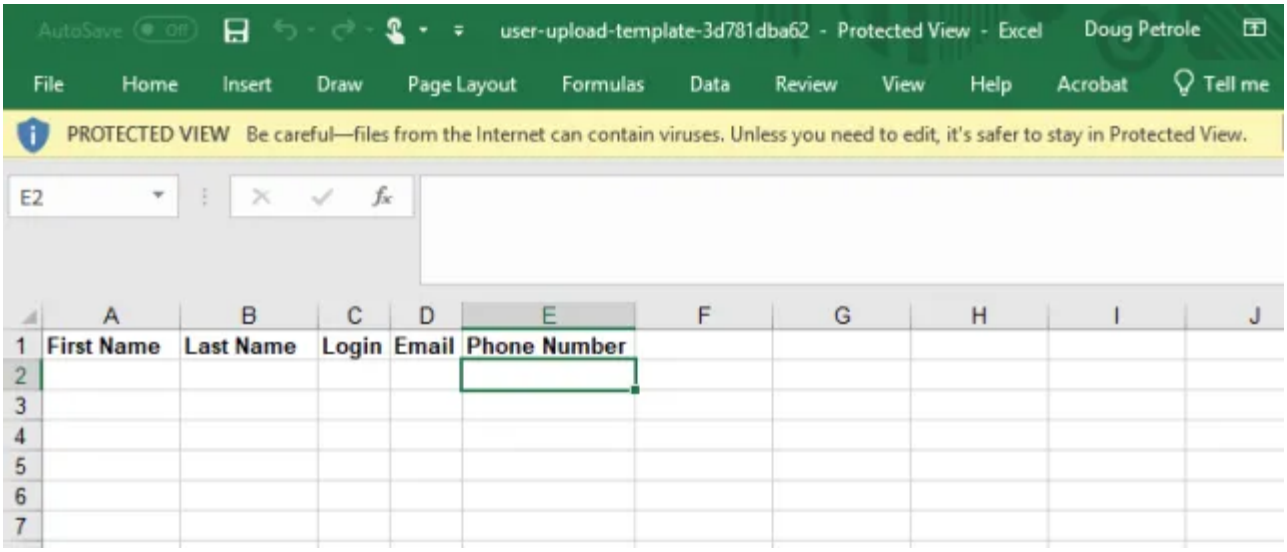
Bulk importing users via VDS

Start by navigating to the Workspaces module, then Users & Groups and then clicking Add/Import.

You can enter these values for users when creating them one by one:



Or you can include these when bulk-importing users downloading and uploading the preconfigured Excel XLSX file in with this content filled out:



Supplying the data via the VDS API

NetApp VDS API – specifically this call https://api.cloudworkspace.com/5.4/swagger/ui/index#!/User/User_PutUser – provides the ability to update this information.

Updating existing user phone

Update the users' phone number on the User Detail Overview page in VDS.

Using other consoles

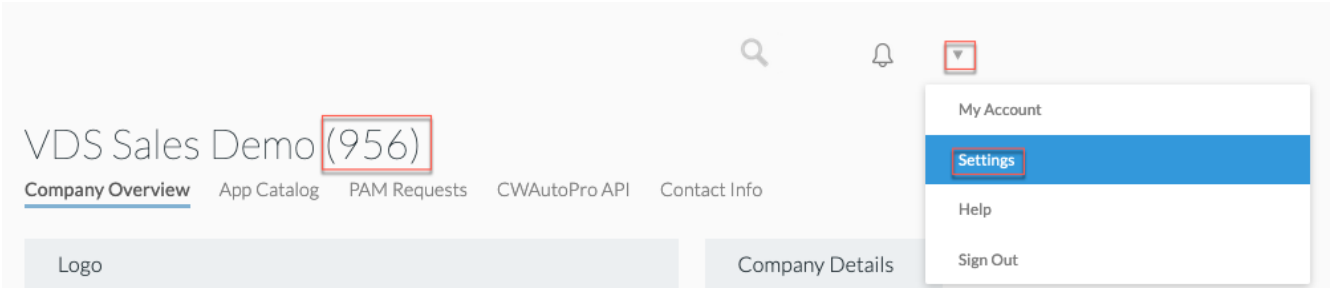
Note: you currently cannot provide a phone number for a user via the Azure Console, Partner Center or from the Office 365 Admin console.

Customize SSPR sending address

NetApp VDS can be configured to send the confirmation email *from* a custom address. This is a service provided to our service provider partners who wish for their end users to receive the reset password email to be sent from their own customized email domain.

This customization requires some additional steps to verify the sending address. To start this process, please open a support case with VDS support requesting a custom "Self Service Password Reset Source Address". Please define the following:

- Your partner code (this can be found by clicking on *settings* under the upper-right down arrow menu. See screenshot below)



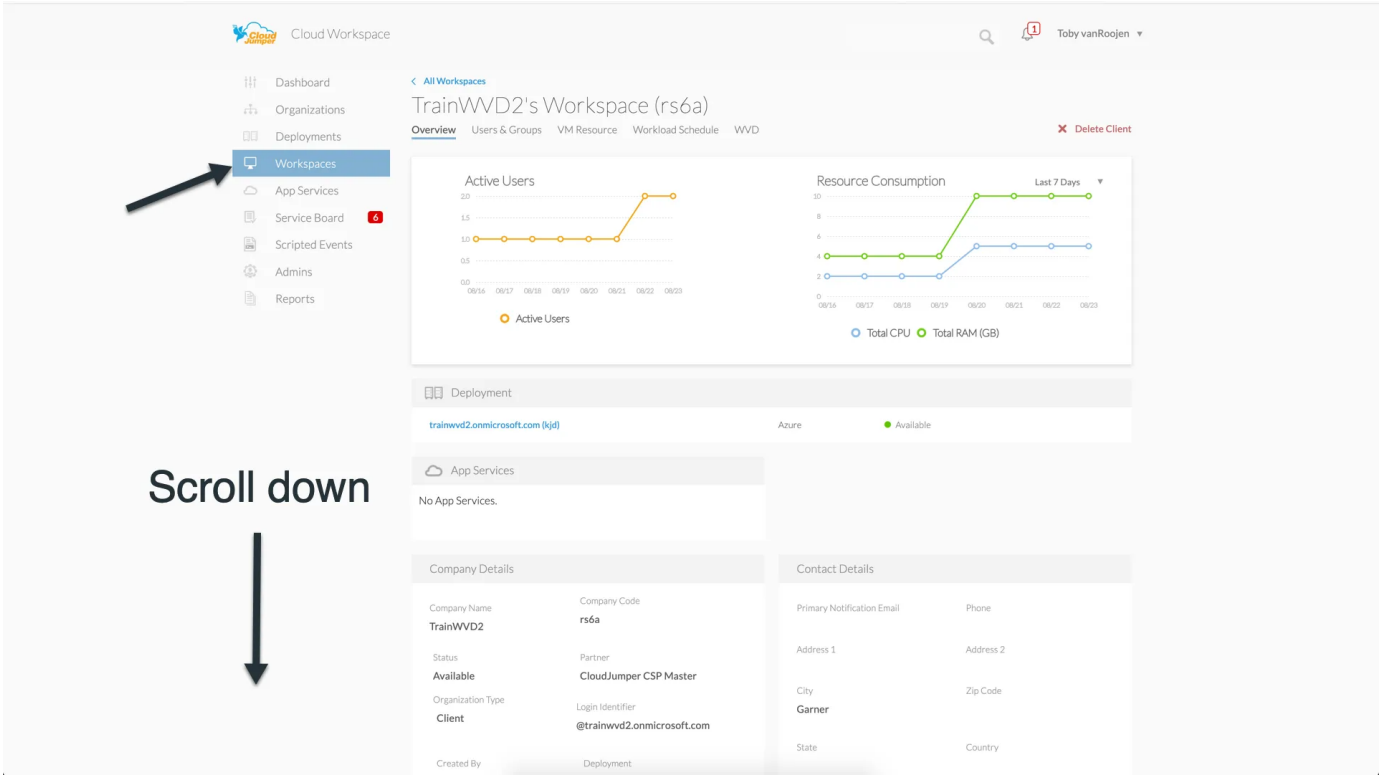
- Desired "from" address (which must be valid)
- To which clients the setting should apply (or all)

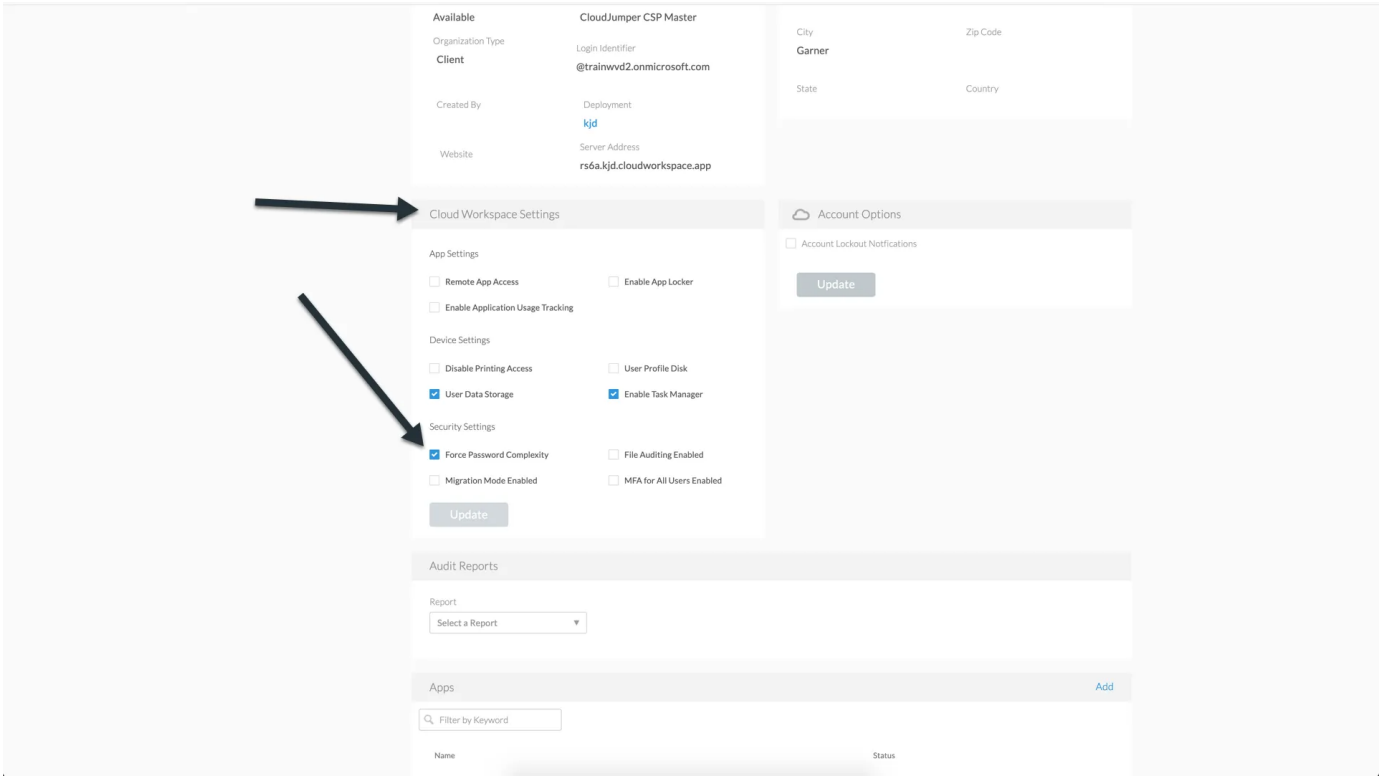
Opening a support case can be done by emailing: VDSsupport@netapp.com

Once received, VDS support will work to validate the address with our SMTP service and activate this setting. Ideally you'll have the ability to update public DNS records on the source address domain to maximize email deliverability.

Password complexity

VDS can be configured to enforce password complexity. The setting for this is on the Workspace Detail Page in the Cloud Workspace Settings section.





Password complexity: Off

Policy	Guideline
Minimum Password Length	8 characters
Maximum Password Age	110 days

Policy	Guideline
Minimum Password Age	0 days
Enforce Password History	24 passwords remembered
Password Lock	Automatically lockout will occur after 5 incorrect entries
Lock Duration	30 minutes

Password complexity: On

Policy	Guideline
Minimum Password Length	8 characters Not contain the user's account name or parts of the user's full name that exceed two consecutive characters Contain characters from three of the following four categories: English uppercase characters (A through Z) English lowercase characters (a through z) Base 10 digits (0 through 9) Non-alphabetic characters (for example, !, $, #, %) Complexity requirements are enforced when passwords are changed or created.
Maximum Password Age	110 days
Minimum Password Age	0 days
Enforce Password History	24 passwords remembered
Password Lock	Automatically lock will occur after 5 incorrect entries
Lock Duration	Remains locked until administrator unlocks

Multi-Factor Authentication (MFA)

Overview

NetApp Virtual Desktop Service (VDS) includes an SMS/Email based MFA service at no additional charge. This service is independent of any other services (e.g. Azure Conditional Access) and can be used to secure administrator logins to VDS and user logins to virtual desktops.

MFA basics

- VDS MFA can be assigned to admin users, individual end users or applied to all end users
- VDS MFA can send SMS or Email notifications
- VDS MFA has a self-service initial setup and reset function

Guide scope

This guide walks you thru the setup of MFA along with an illustration of the end user experience

This guide covers the following subjects:

1. Enabling MFA for Individual Users
2. Requiring MFA for All Users
3. Enabling MFA for Individual Administrators
4. End User Initial Setup

Enabling MFA for individual users

MFA can be enabled for individual users on the user detail page by clicking *Multi-factor Auth Enabled*

Workspaces > Workspace Name > Users & Groups > User Name > Multi-factor Auth Enabled > Update

MFA can also be assigned to all users, if this setting is in place, the checkbox will be checked and *(via Client Settings)* will be appended to the checkbox label.

Requiring MFA for all users

MFA can be enabled and enforced across all users on the workspace detail page by clicking *MFA for All Users Enabled*

Workspaces > Workspace Name > MFA for All Users Enabled >Update

Enabling MFA for individual administrators

MFA is also available for administrator accounts accessing the VDS portal. This can be enabled per administrator on the admin detail page.
Admins > Admin Name > Multi-Factor Auth Required > Update

Initial setup

On the first login after enabling MFA, the user or admin will be prompted to enter an email address or mobile phone number. They'll receive a confirmation code to enter and confirm successful enrollment.

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