



Applications

Virtual Desktop Service

NetApp

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Table of Contents

Applications 1

 Application Entitlement 1

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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

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.

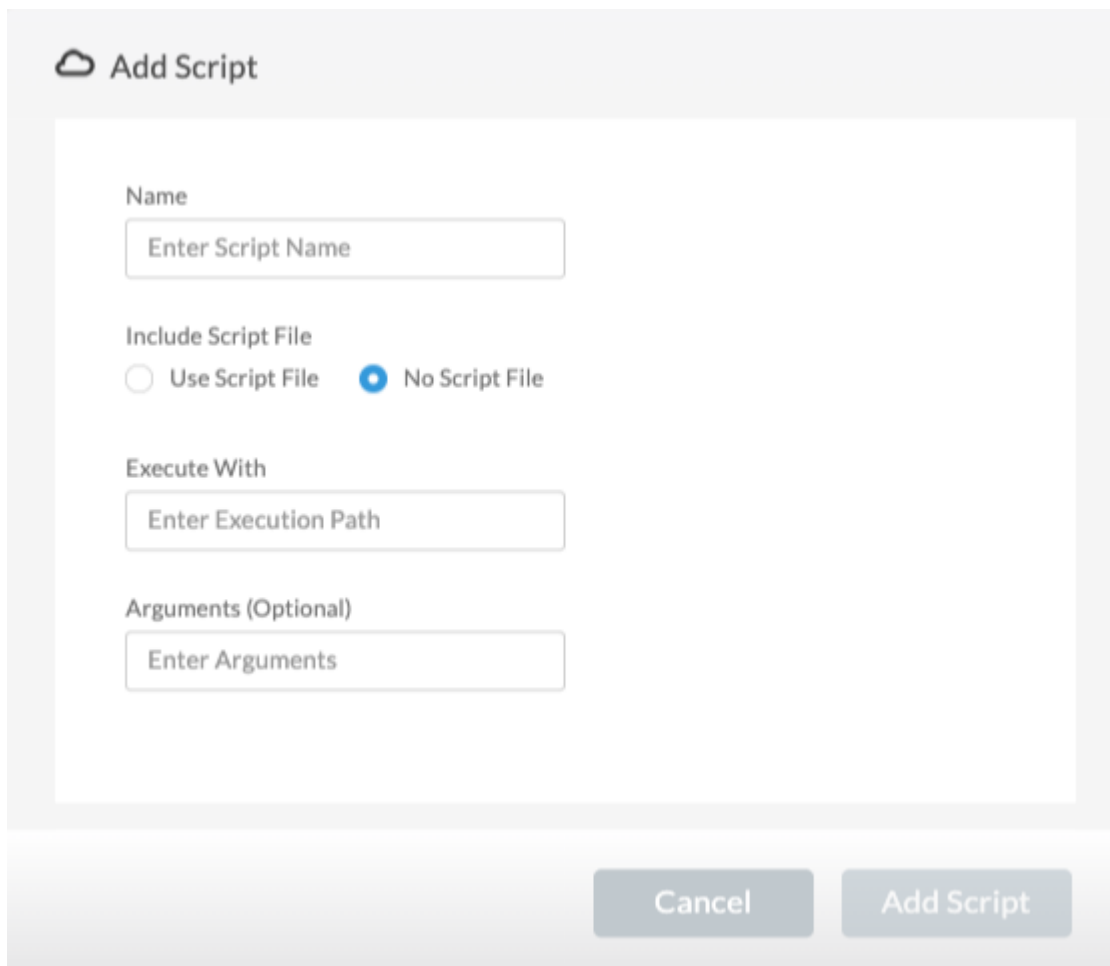
To automate the install of Chocolatey, follow these steps

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, automate with Scripted events can install a wide variety of applications from the Chocolatey repository. A complete list of available applications can be found at <https://chocolatey.org/packages>



The screenshot shows a dialog box titled "Add Script" with a cloud icon. It contains several input fields and radio buttons. The "Name" field has a placeholder "Enter Script Name". The "Include Script File" section has two radio buttons: "Use Script File" (unselected) and "No Script File" (selected). The "Execute With" field has a placeholder "Enter Execution Path". The "Arguments (Optional)" field has a placeholder "Enter Arguments". At the bottom right, there are two buttons: "Cancel" and "Add Script".

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.

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