Installing VDI/DaaS Applications on Windows 10 IoT LTSC 2021 Thin Clients

Document and Version Control			
Version	Created by	Date	Authorized & checked by
1.0	Jason Hudson	16/11/2022	Kevin Greenway

1.
2.
3.

Contents

1. About This Document

In this document we'll give you an overview of how to customize your Windows 10 IoT LTSC 2021 device. We'll show you how to install the applications that you specifically need to meet your own organization's infrastructure requirements.

It will walk you through installing 3 VDI/DaaS client applications, Citrix Workspace App, VMware Horizon Client, and Microsoft's Remote Desktop Client.

We'll point you in the direction of sites to visit, so you can download the latest client apps mentioned above and show you how to install them locally on your thin client devices.

We'll take you on a tour of 10ZiG Manager's built in "Package Manager" and show you how to custom build your favorite VDI/DaaS client into an installer package, ready for deployment to your 10ZiG Windows 10 IoT LTSC 2021 device.

We'll also give you examples of deployment options for each package and explain the use case for each option, so you have several methods at your disposal, especially if there's one that benefits you specifically.

2. Changes to the 10ZiG Windows 10 IoT Standard Software Stack

Traditionally, the standard 10ZiG Windows 10 build came with a set of popular VDI/DaaS clients pre-installed. It was recognised that a better approach would be to give customers the ability to configure the units to their own specific business needs.

This would mean if a customer only had requirements for its thin clients to access a specific VDI/DaaS environment, let's say for example VMware Horizon desktops, then they would simply install the VMware Horizon client on their 10ZiG devices. This would mean that in future they would only need to be concerned with keeping that VDI/DaaS client up to date.

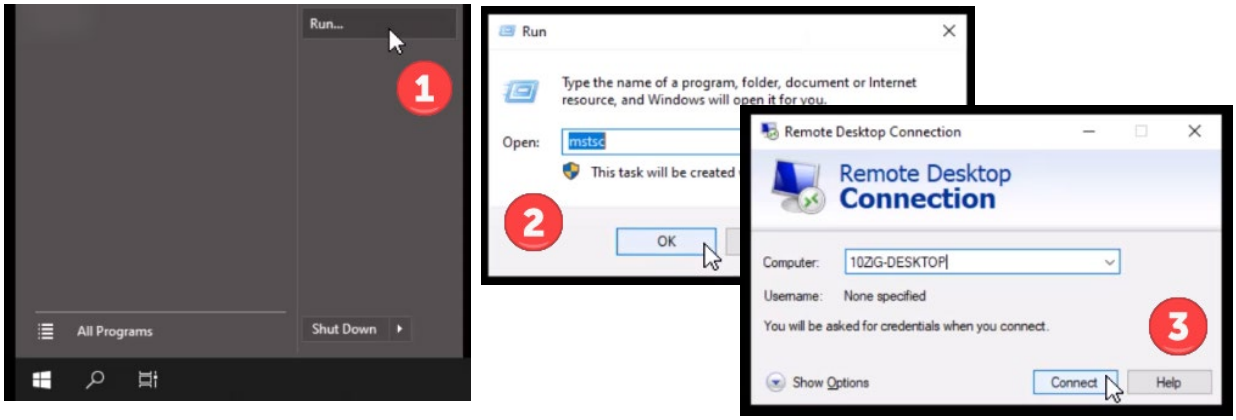
Taking this approach to build management, frees up the space overhead normally taken by pre-installed surplus clients, application software that your organization never had use for in the beginning.

NOTE:

- The VDI/DaaS client download locations mentioned in this document may be subject to change, as the client vendor updates their site content from time to time.

- This document specifically covers Citrix Workspace App (Citrix), Remote Desktop Client (Microsoft), VMware Horizon Client (VMware Horizon). For other VDI/DaaS solutions please seek vendor documentation or discuss your requirements with 10ZiG Technical Support. Click this contact link for further information.

- Microsoft's Remote Desktop Services (RDS) client is integrated into Windows 10 IoT by default and can be launched from the Windows "Start menu", by clicking "Run" and then typing mstsc and enter or navigating to C:\Windows\System32\mstsc.exe.



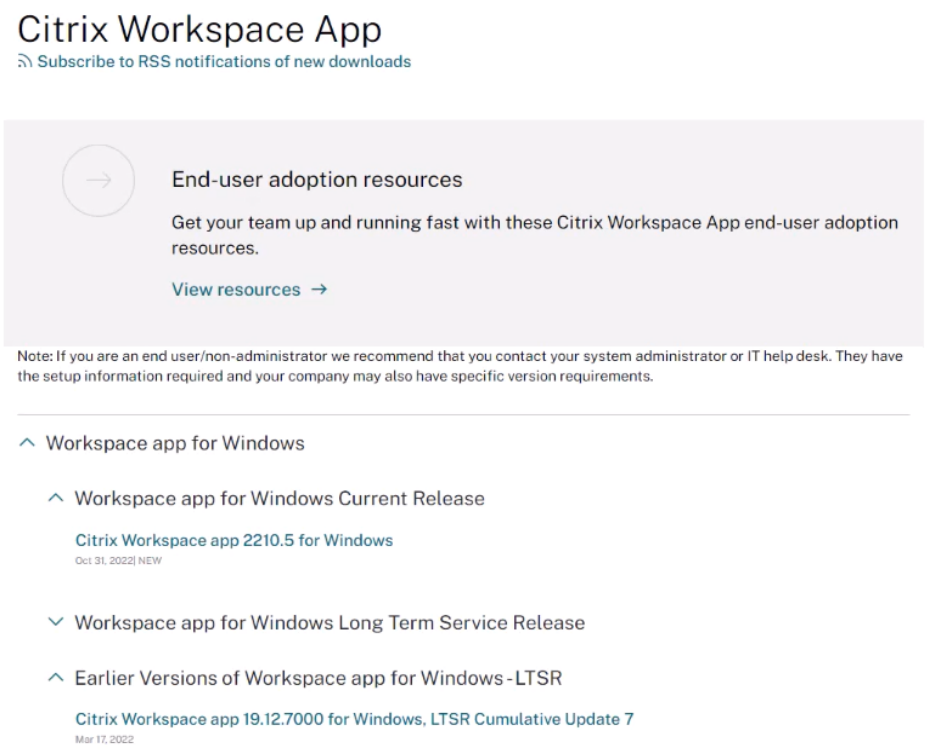
3. Where to find your VDI/DaaS client installers

We mentioned, at the start of this guide, that we'd be focusing on installing 3 VDI/DaaS clients, Citrix Workspace App, VMware Horizon Client, and Microsoft's Remote Desktop client, used for AVD(Azure Virtual Desktop) and Windows 365 Cloud PC.

You can normally find the client installer on the vendor's website under a downloads section, we've also included a list of the VDI/DaaS client installer locations below.

Citrix Workspace-App

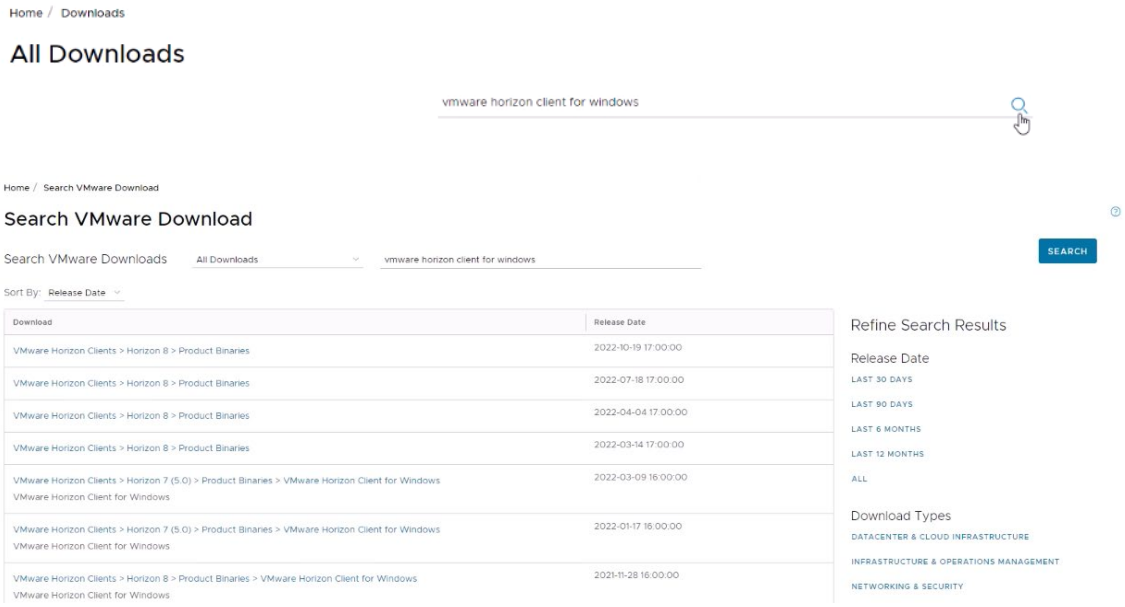
https://www.citrix.com/downloads/workspace-app/



VMware Horizon Client

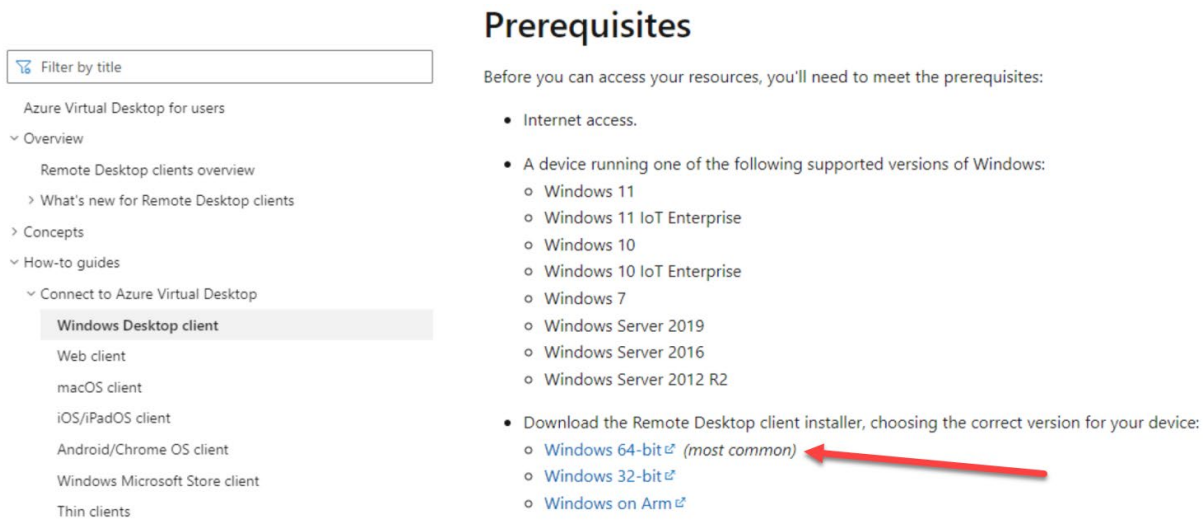
https://customerconnect.vmware.com/en/downloads/#all_products

Inside the search box, type in VMware Horizon Client for Windows and click the magnifying glass to find your required client for download.



Microsoft Remote Desktop Client

https://learn.microsoft.com/en-us/azure/virtual-desktop/users/connect-windows

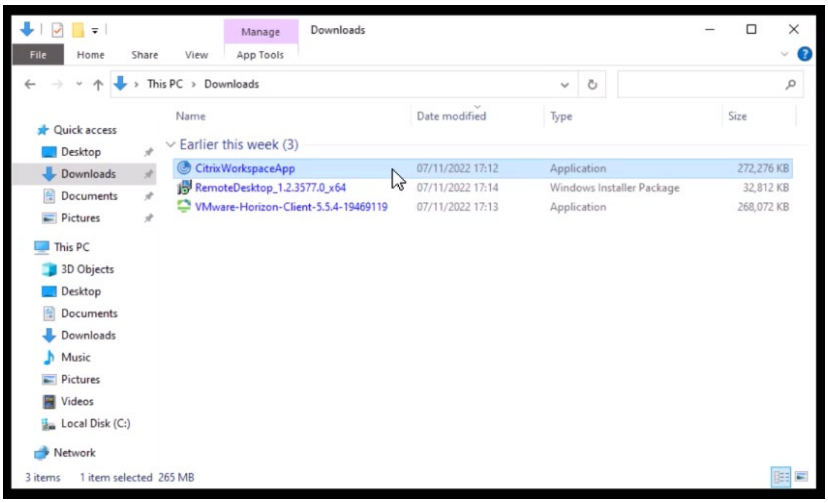


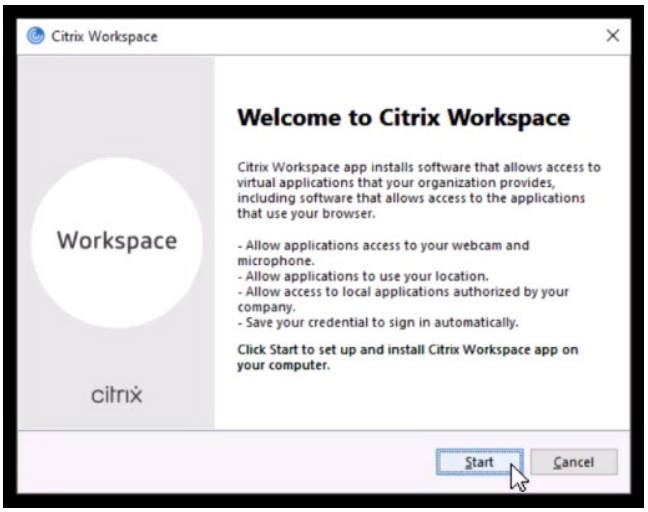
4. Installing the VDI/DaaS clients locally on the Windows 10 IoT LTSC 2021 device

In this section, we're going to show you how to download your VDI/DaaS clients locally and then install them from the command line, on the physical 10ZiG endpoint.

Then we'll talk you through a few examples of command line options that you have available when installing them and later on, we'll show you how to carry out the same installations using the "10ZiG Manager" to package and deploy your VDI/DaaS clients.

Optionally, you can always just run the installers from the command line without any options and also double-click install it from within an explorer window like below, and you'll be met with a familiar installer dialog box.

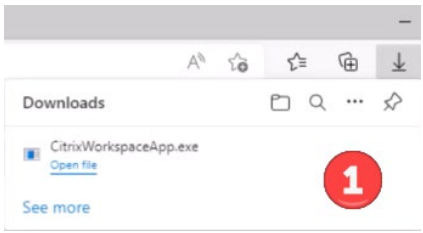




One thing to note is that if you're downloading and installing your clients locally, then these will be held in the folder "C:\Users*username*\Downloads", where "*username*" is the name of the logged on user that is downloading the content. In our examples, this location will be "C:\Users\Administrator\Downloads".

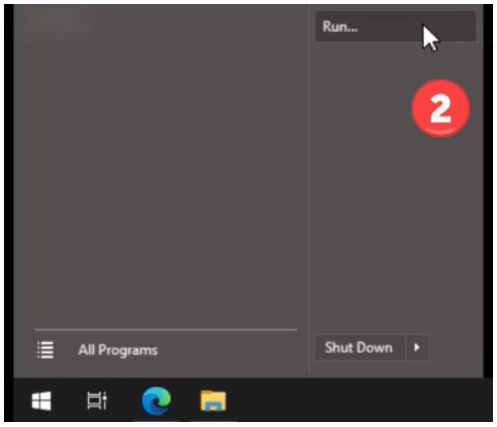
4.1 Locally Installing the Citrix Workspace-App on your Windows 10 IoT LTSC 2021 device

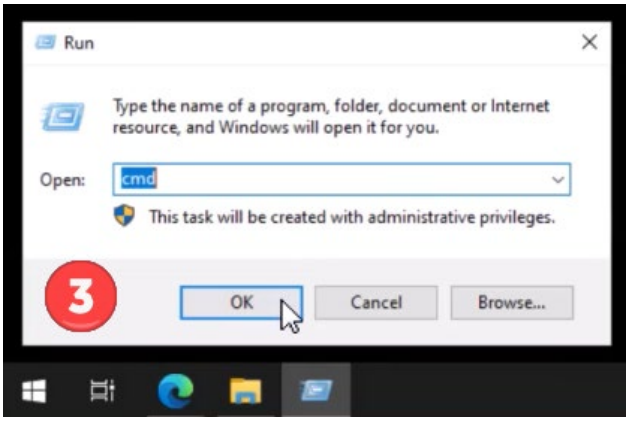
If you click the download link on the Citrix client download page, you'll see the client installer being saved to your user's download folder, as we mentioned above. 1



Navigating to your "Downloads" folder via the CMD window

Once this is complete, open a DOS CMD window from the "Start Menu", by clicking "Run" 2 and typing in CMD and pressing enter or clicking "OK". 3

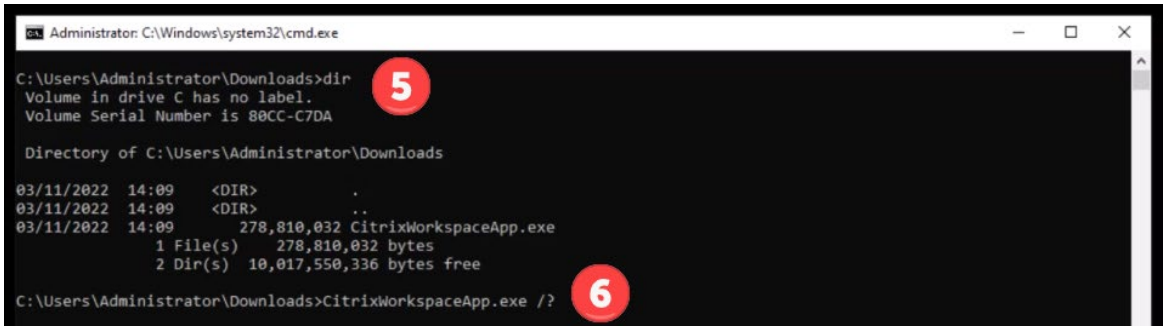


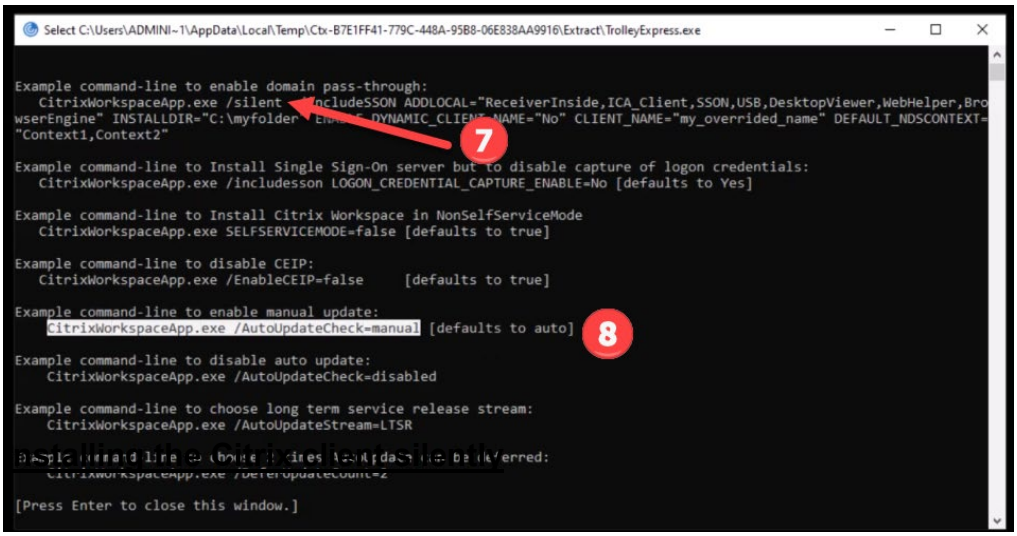


Once inside the window, you'll normally see the user's command prompt "C:\Users*YourUsername*", as we mentioned. We're logged in as "Administrator" so our prompt is "C:\Users\Administrator".

We need to change directory to a subfolder below this named "Downloads" so inside the command window, we type in cd downloads and press enter 4. You should see the command prompt now change to C:\Users\Administrator\Downloads as shown below :-

If we type in dir and press enter, 5 you can see the recently downloaded file in there. If you type the installer filename, followed by a forward slash, question mark and press enter 6, then you'll be shown a help screen with some of the options or switches that you can apply during the installation process.





One example of command line options was to run the installer silently 7 with the command line CitrixWorkspaceApp.exe /silent. You would most likely want to use this method when installing the client remotely with your “10ZiG Manager” installer package.

Enabling/Disabling Auto Update of your Citrix Client

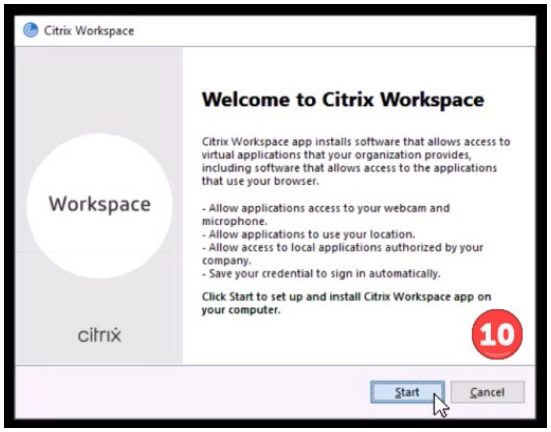
Another option when you install the client, is to prevent auto updates happening for the client on your Windows 10 IoT LTSC 2021 devices. 8 This would be useful if your device image was tried and tested and you had a strict requirement to keep your estate on the same level of VDI/DaaS software, until you decided to update it, following rigorous testing of any new client software release. So, the command line for this would be CitrixWorkspaceApp.exe /AutoUpdateCheck=manual 9 .Note, that leaving this option out of your installer command would mean that the client would periodically check for any new updates.

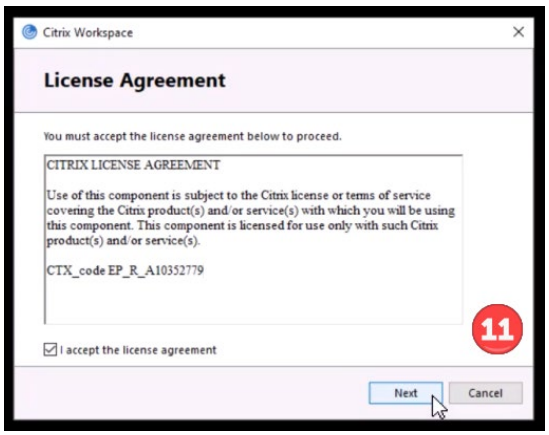
Installing the Citrix client Interactively

We are going to install this Citrix client interactively, without an AutoUpdateCheck, so you can see what happens during the whole process. Remember, when we do this with “10ZiG Manager” we’ll hide the installation process from our users, so as not to interfere with their normal day to day operation.

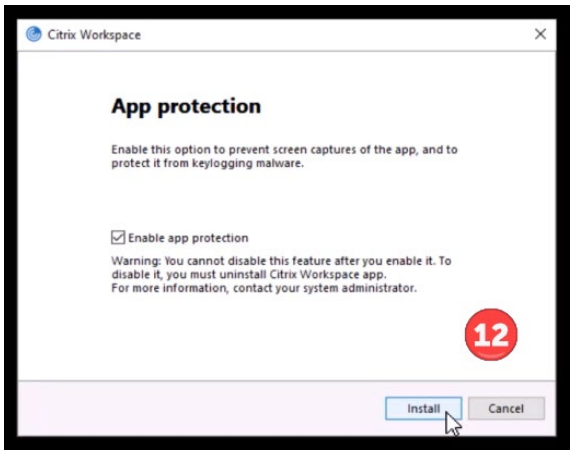
```
C:\Users\Administrator\Downloads>CitrixWorkspaceApp.exe /AutoUpdateCheck=manual
```
9

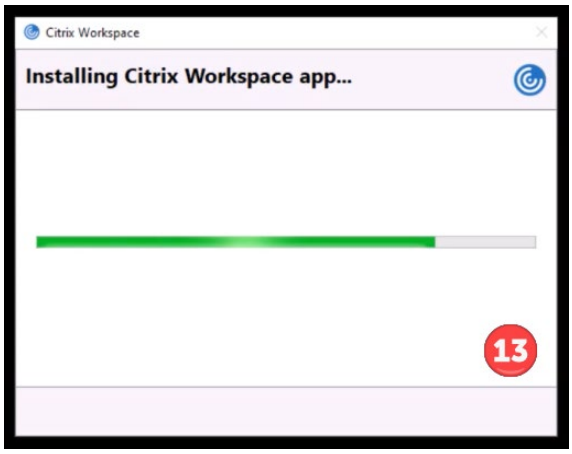
You’ll see the installer dialog appear, so click Start to continue 10 , accept the license agreement, and then click Next. 11



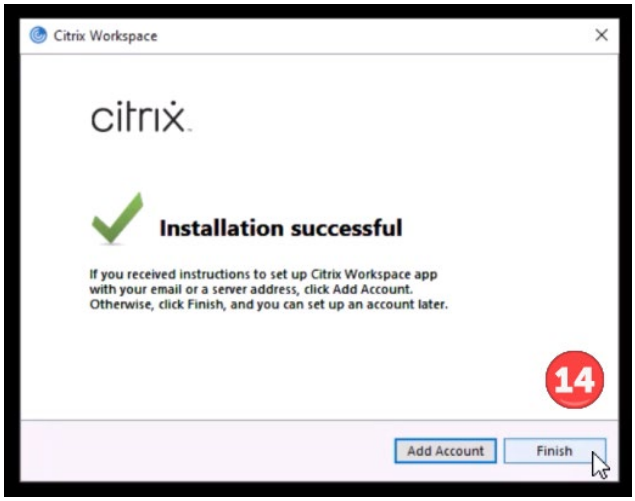


If you wish to prevent any screen captures of the app in future and also keylogging malware from attacking the client, then tick the “Enable app protection” box and then click Install as shown below. 12

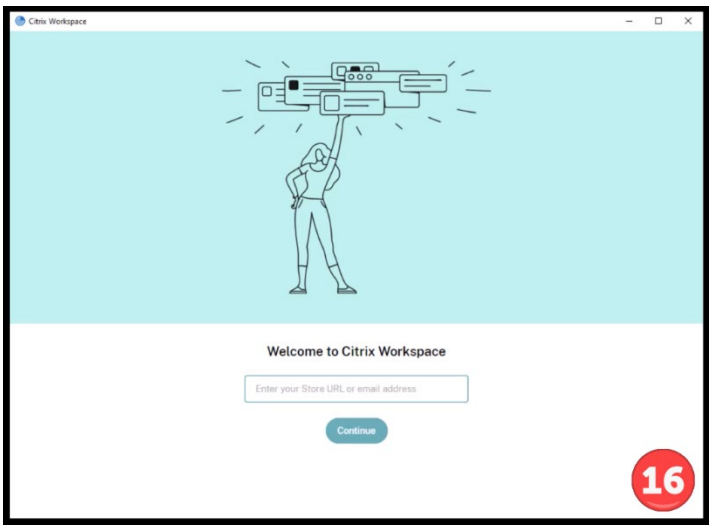




The client install will commence 13 and then you’ll see the “Installation successful” message, so just click on the Finish button. 14

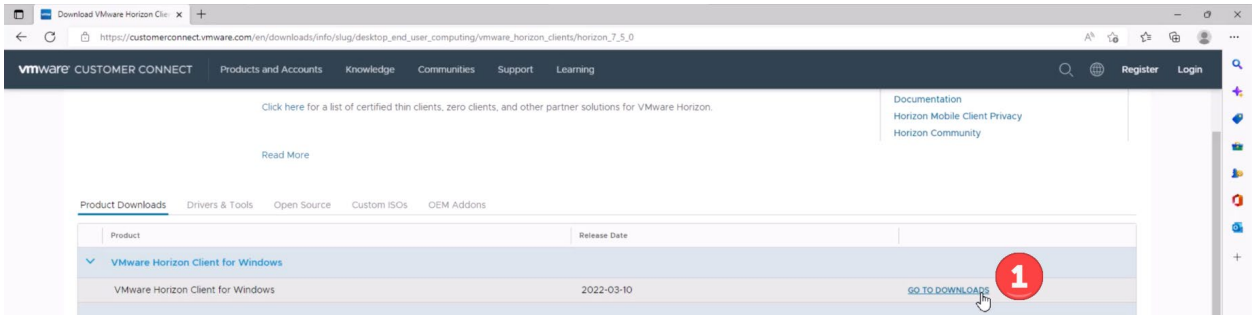


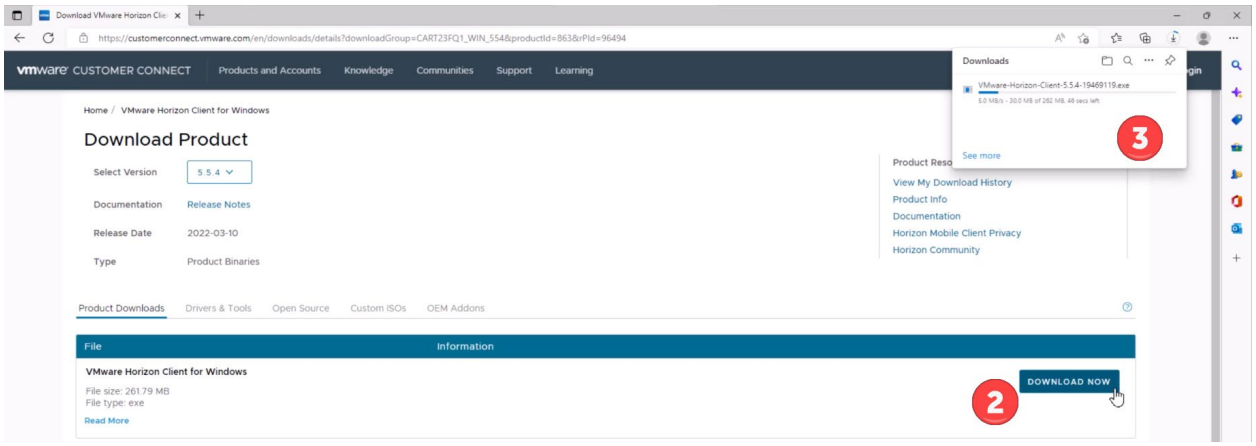
If we click on the “Start Menu” again 15 , you can see that the app has been installed successfully, and clicking on it will launch the Citrix Workspace App. 16



4.2 Locally Installing the VMware Horizon client on your Windows 10 IoT LTSC 2021 device

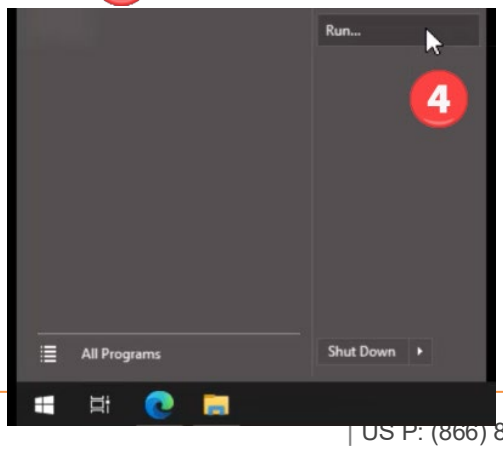
If you click the download link on the VMware Horizon client download page, 1 and then “Download Now”, 2 you’ll see the client installer being saved to your user’s download folder. 3

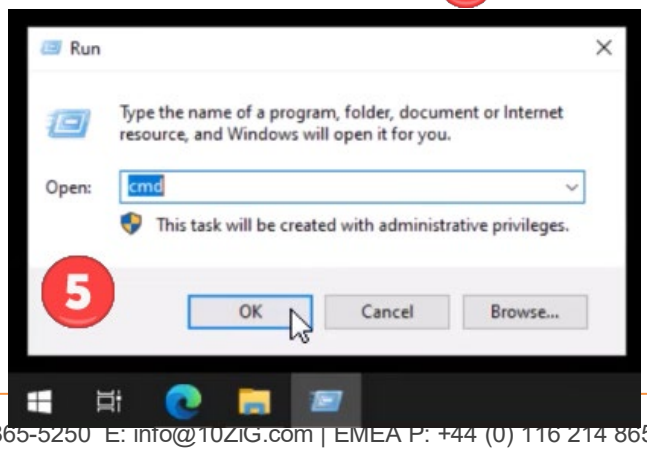




Navigating to your “Downloads” folder via the CMD window

Once this is complete, open a DOS CMD window from the “Start Menu”, by clicking “Run” 4 and typing in CMD and pressing enter or clicking “OK”. 5

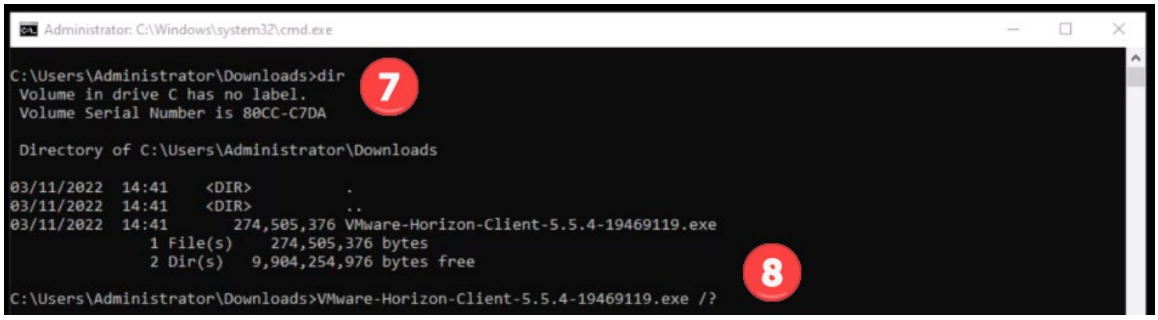


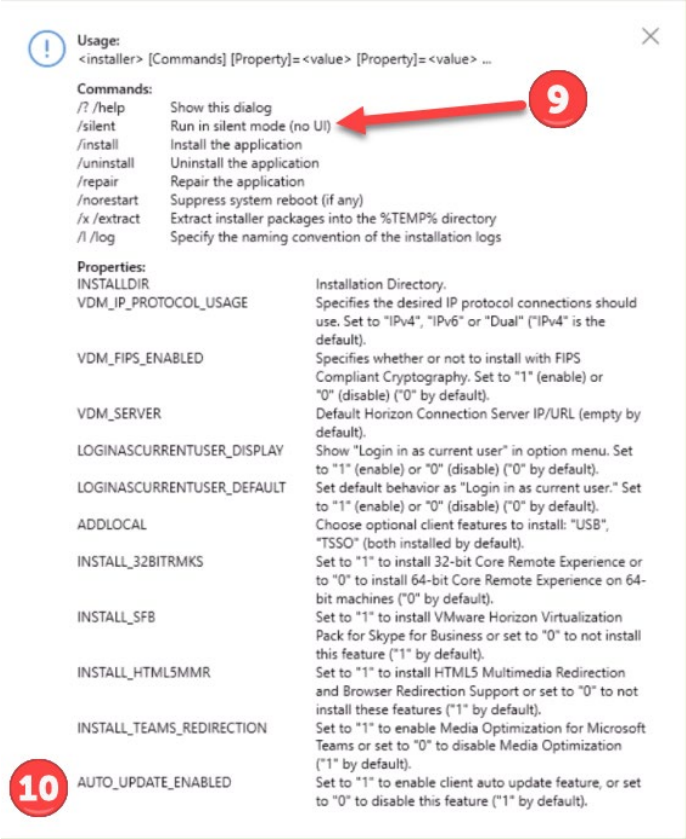


Once inside the window, you'll normally see the user's command prompt "C:\Users*YourUsername*", as we mentioned. We're logged in as "Administrator" so our prompt is "C:\Users\Administrator".

We need to change directory to a subfolder below this named "Downloads" so inside the command window, we type in cd downloads and press enter 6. You should see the command prompt now change to C:\Users\Administrator\Downloads as shown below :-

If we type in dir and press enter, 7 you can see the recently downloaded file in there. If you type the installer filename, followed by a forward slash, question mark and press enter 8, then you'll be shown a help screen with some of the options or switches that you can apply during the installation process.





Installing the VMware Horizon client silently

One example of command line options was to run the installer silently 9 with the command line VMware-Horizon-Client-5.5.4-19469119.exe /silent. You would most likely want to use this method when installing the client remotely with your “10ZiG Manager” installer package. Please note that the installer “.exe” above is version specific and you’ll need to tailor it to suit your particular installer product.

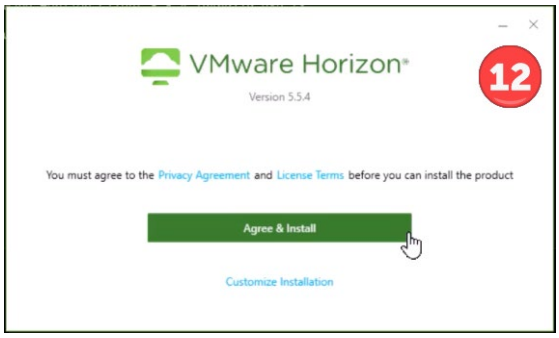
Enabling/Disabling Auto Update of your Horizon client

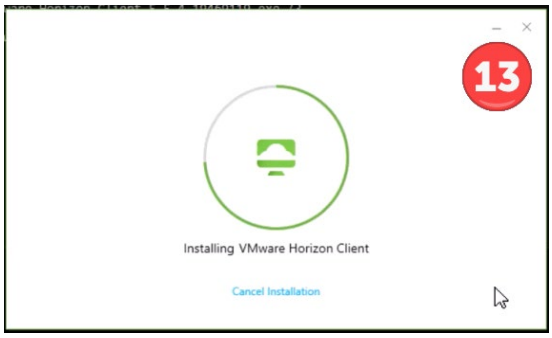
Another option when you install the client, is to prevent auto updates happening for the client on your Windows 10 IoT LTSC 2021 devices. 10 This would be useful if your device image was tried and tested and you had a strict requirement to keep your estate on the same level of VDI/DaaS software, until you decided to update it, following rigorous testing of any new client software release. So, the command line for this would be VMware-Horizon-Client-5.5.4-19469119.exe AUTO_UPDATE_ENABLED=0 11 Note, that leaving this option out of your installer command would mean that the client would periodically check for any new updates.

Installing the VMware Horizon client Interactively

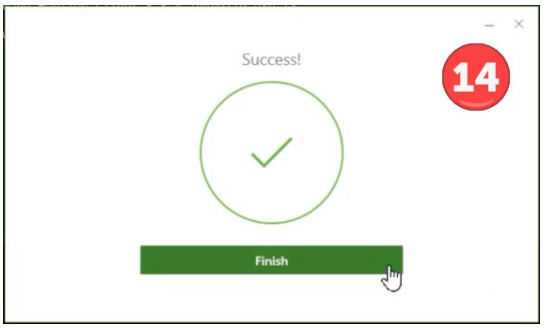
We are going to install this VMWare Horizon client interactively without an Auto Update and without the silent option, so you can see what happens during the whole process. Remember, when we do this with “10ZiG Manager” we’ll hide the installation process from our users, so as not to interfere with their normal day to day operation.

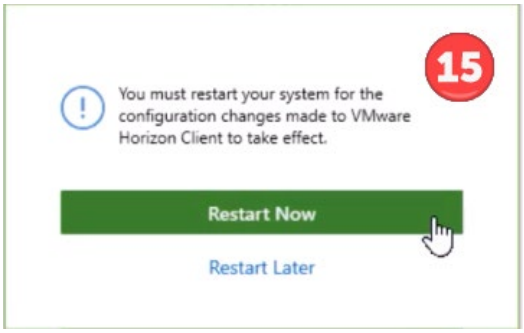
You’ll see the installer dialog appear, so click Agree & Install 12 to accept the license agreement and begin the installation. 13



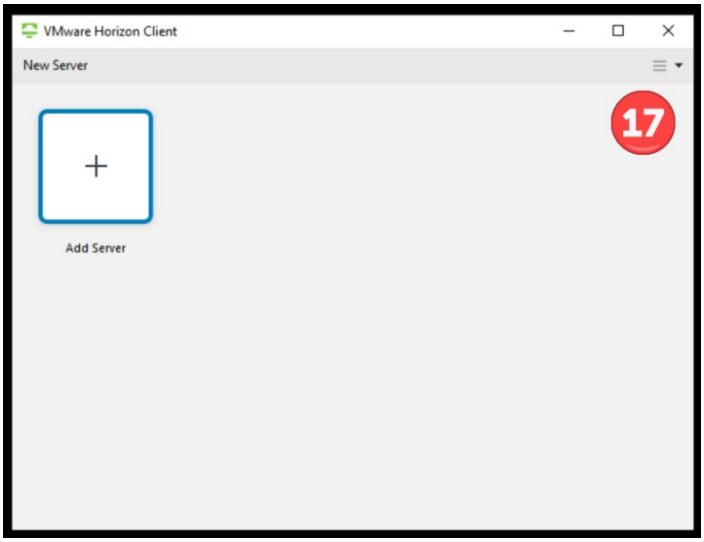


A few minutes later, you’ll see the installation success message appear, click Finish 14 and then click the Restart Now button and wait for your client to boot back up again.





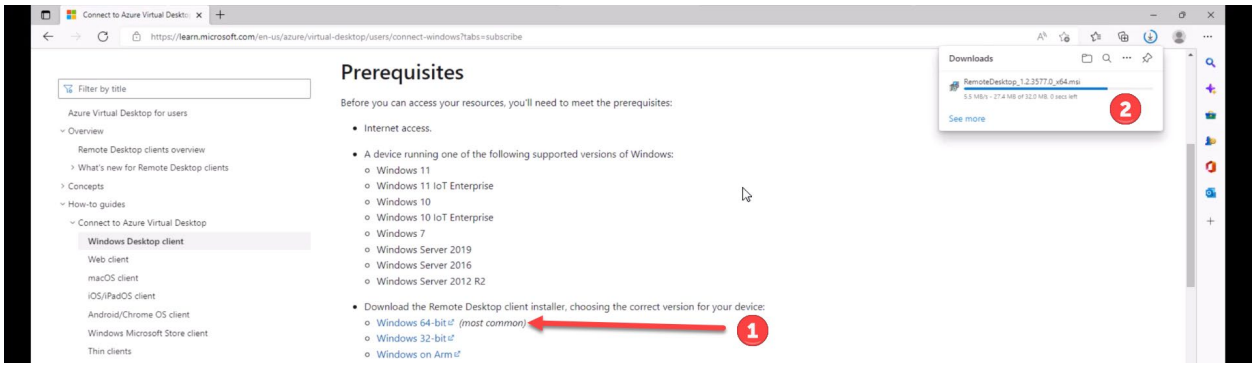
If we click on the “Start Menu” 16, you can see that the app has been installed successfully and clicking on it will launch the VMware Horizon client. 17



4.3 Locally Installing the Remote Desktop Client on your Windows 10 IoT LTSC 2021 device

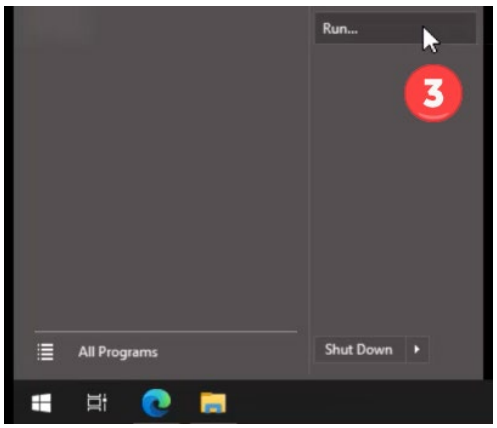
This client is used for connections to AVD (Azure Virtual Desktop) and Windows 365 Cloud PC environments.

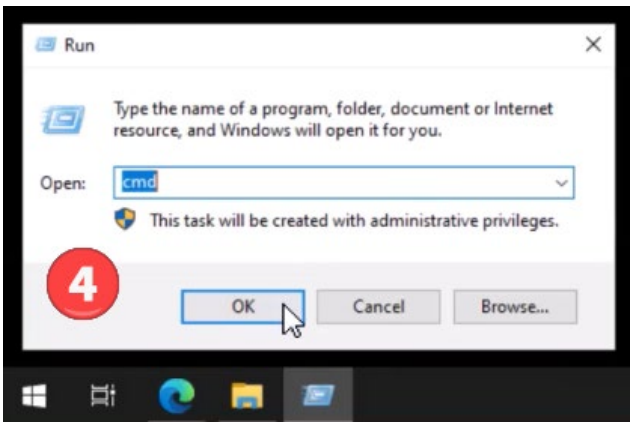
If you click the download link on the Remote Desktop Client download page, 1 you'll see the client installer being saved to your user's download folder. 2



Navigating to your "Downloads" folder via the CMD window

Once this is complete, open a DOS CMD window from the "Start Menu", by clicking "Run" 3 and typing in CMD and pressing enter or clicking "OK". 4

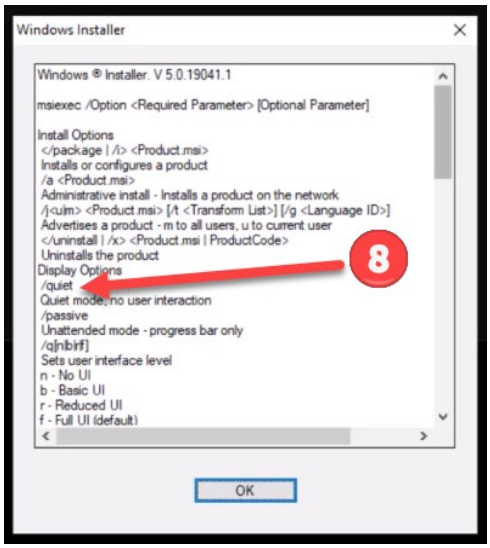




Once inside the window, you'll normally see the user's command prompt "C:\Users*YourUsername*", as we mentioned. We're logged in as "Administrator" so our prompt is "C:\Users\Administrator".

We need to change directory to a subfolder below this named "Downloads" so inside the command window, we type in cd downloads and press enter 5. You should see the command prompt now change to C:\Users\Administrator\Downloads as shown below :-

If we type in dir and press enter 6, you can see the recently downloaded file in there. If you type the installer filename, followed by a forward slash, question mark and press enter 7, then you'll be shown a help screen with some of the options or switches that you can apply during the installation process.



Installing the Remote Desktop Client silently

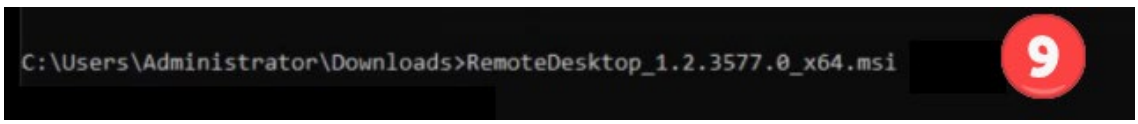
One example of command line options was to run the installer silently 8 with the command line RemoteDesktop_l.2.3577.0_x64.msi /quiet. You would most likely want to use this method when installing the client remotely with your "10ZiG Manager" installer package.

Enable/Disable Auto Update of your Remote Desktop Client

The Remote Desktop Client will periodically check to see if there is an update available and give your users the option to update it or not and won't force an update. So best practice would be to advise your users in accordance with your company policy.

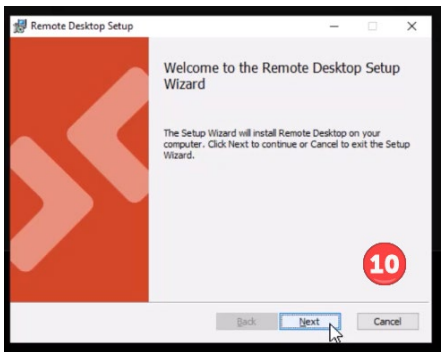
Installing the Remote Desktop Client Interactively

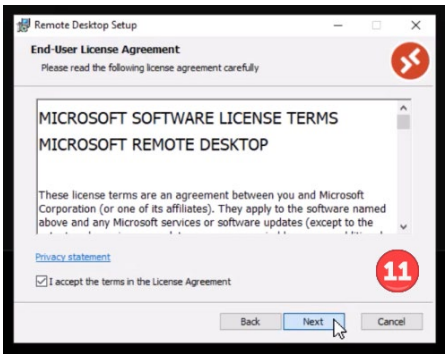
We are going to install this Remote Desktop Client interactively without the quiet option 9, so you can see what happens during the whole process. Remember, when we do this with "10ZiG Manager" we'll hide the installation process from our users, so as not to interfere with their normal day to day operation.

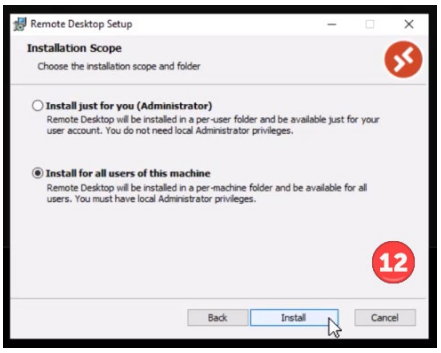


You'll see the Welcome setup wizard, click Next 10 and then tick the accept the license agreement message and click Next. 11

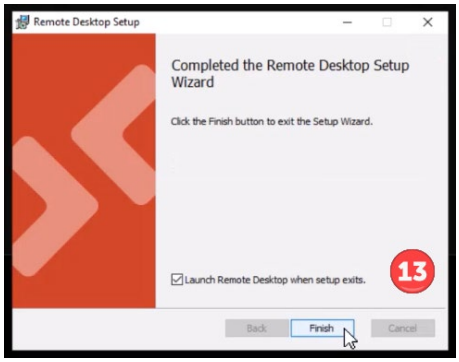
Select "Install for all users" on the "Installation Scope" screen and click Install. 12

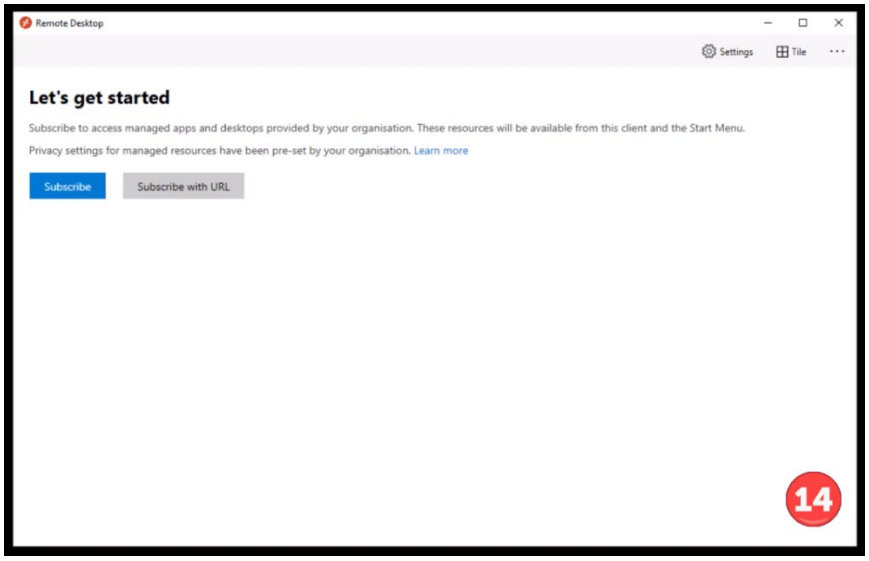






Once the wizard has completed, click Finish 13 and the Remote Desktop Client will launch. 14





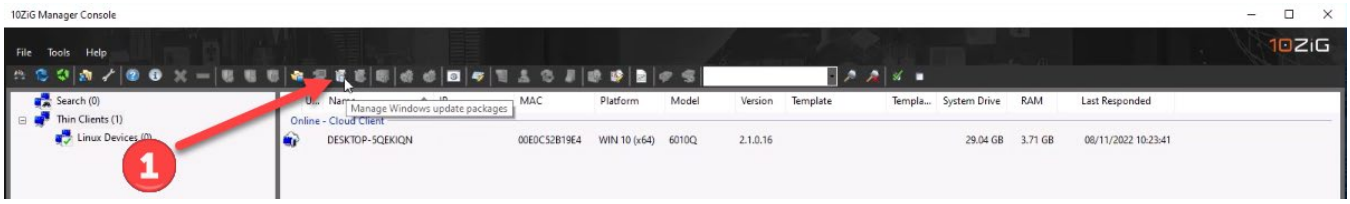
5. Installing the VDI/DaaS clients remotely, via the 10ZiG Manager

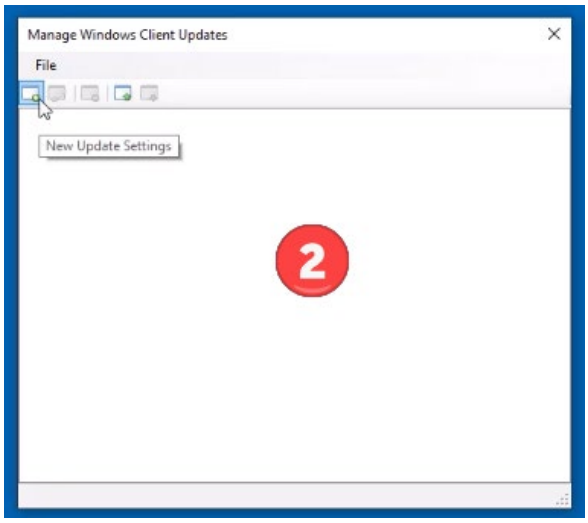
In this section, we're going to show you how to create Windows 10 IoT LTSC 2021 installation packages for your VDI/DaaS clients and then install them remotely, all via the 10ZiG Manager.

During the local installation process in the previous section, we showed you some command line options that you might want to use in order to deploy to your clients in a "silent" or "quiet" manner. This would then remove the need for your users to interact with the installation process and is useful for both out of business hours deployment and also if you need to force an update.

How to launch 10ZiG Manager's Package Manager

Inside the 10ZiG Manager, if you click on the "Timer" 1 icon on the menu bar, the packer manager will open up and you'll be presented with the "Manage Windows Client Updates" screen as below 2 :-



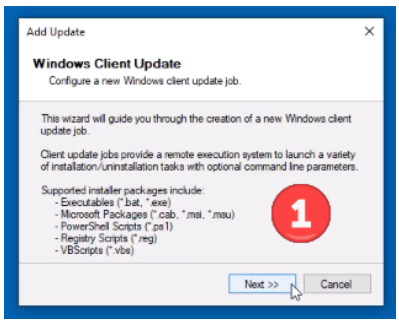


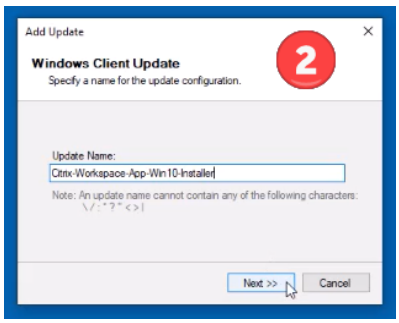
5.1 Building the Citrix Workspace App installer

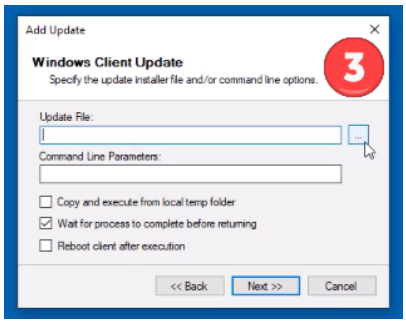
Inside the package manager, we need to click the “New Update Settings” icon and we’ll be presented with the “Add Update” screen, where we need to click Next. 1

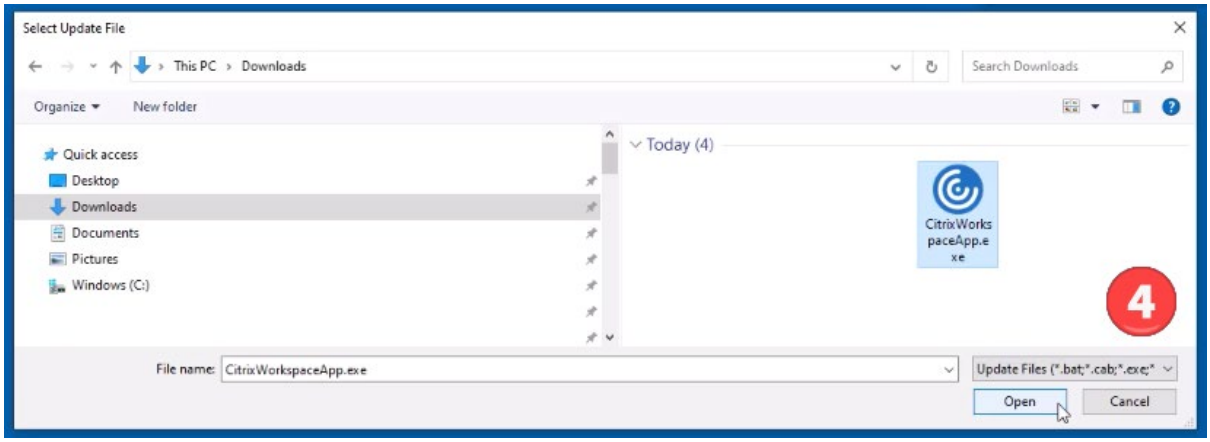
Then we need to create a name for our installer package, we’re calling this something meaningful and using Citrix-Workspace-App-Win10-Installer. We click Next to continue. 2

On the next screen, we click the 3 dots 3 next to the “Update File” field and browse to our installer location, this will probably be in your local downloads folder as shown here. 4









Select the VDI/DaaS application installer and click Open.

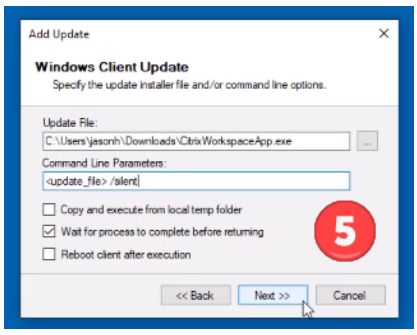
When we return to the installer file screen, we can now enter any command line parameters that we would like to use during the installation on the Windows 10 IoT LTSC 2021 thin client. This is typically the installer name that we just selected from the downloads folder, but we can use the name <update_file> if we wish.

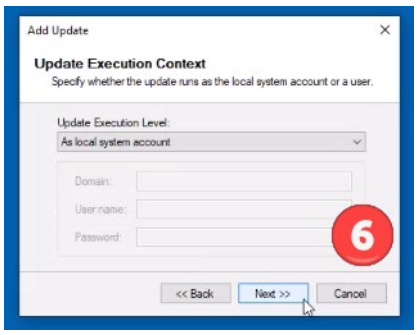
Using the name <update_file>, is useful when you want to copy and install the application to the local temp folder, as an option “tick box” below. This will copy the VDI/DaaS installer to the “C:\Windows\Temp” folder in a new subfolder, created by the Windows 10 OS. This VDI/DaaS installer will then be run from there.

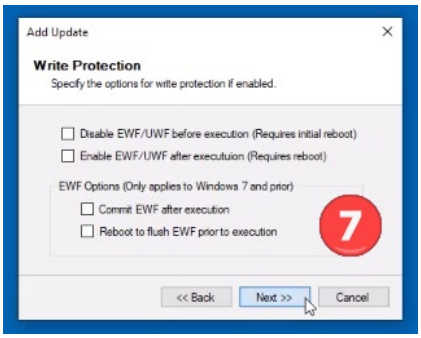
In our example, we are going to set this to be the name <update_file> and also add an additional /silent option, so that the deployment package will not interact with our user when it is being installed. Once we’re happy, we click Next 5

We’re asked who we want to run the installer as, so we keep it “As Local system account and click Next 6.

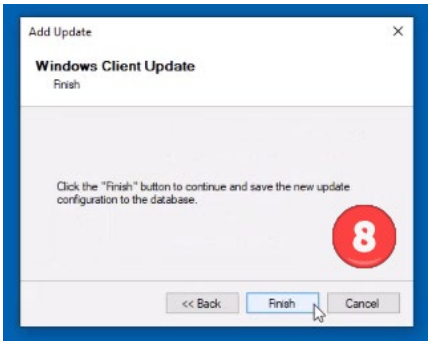
We’re now asked about write protection options. If we have UWF, Unified Write Filter enabled on the devices, then we would tick these boxes, but we don’t, so we click Next 7 .

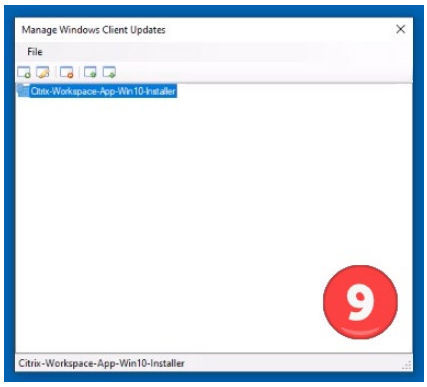






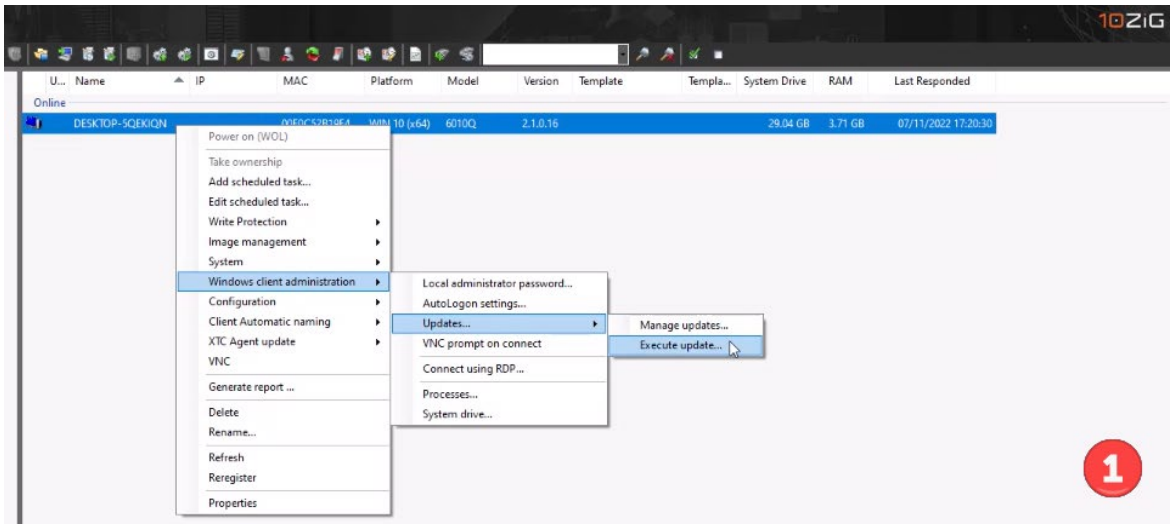
On the final creation screen, we click Finish 8 and our package will be created and displayed in the package list. 9





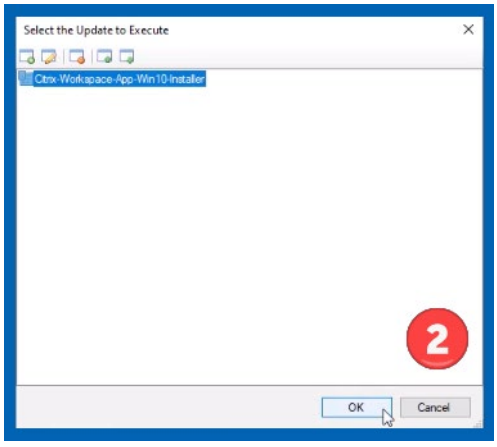
5.1.1 Deploying and installing the Citrix Workspace App via 10ZiG Manager

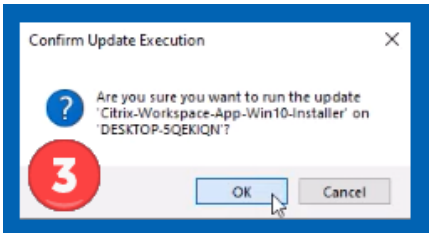
Inside 10ZiG Manager, we need to right-click on the client that we wish to deploy to, select Windows client administration, Updates and then Execute update 1



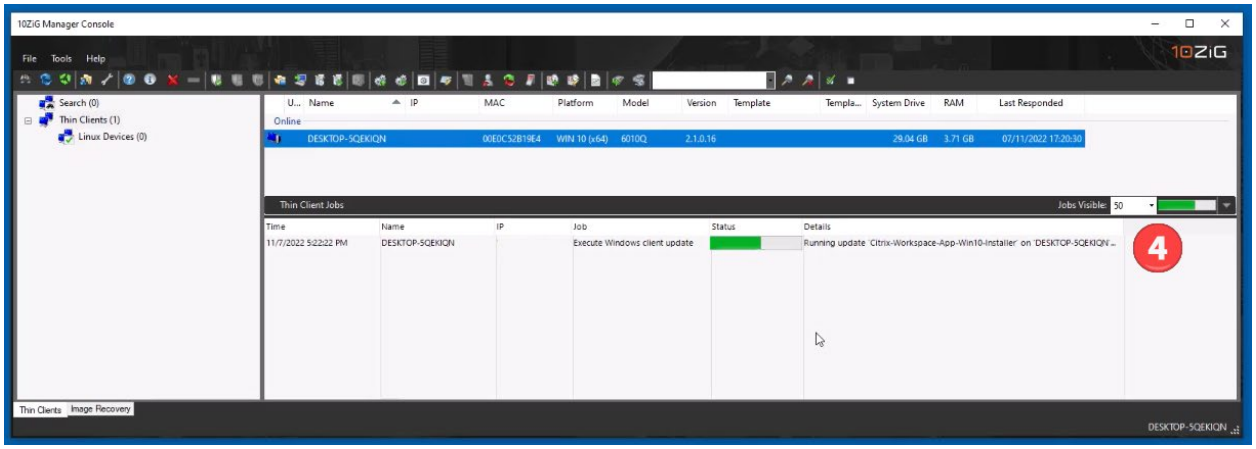
Next, we highlight the client in the list and click OK. 2

We're now asked to confirm that we want to run the update, so we click OK. 3

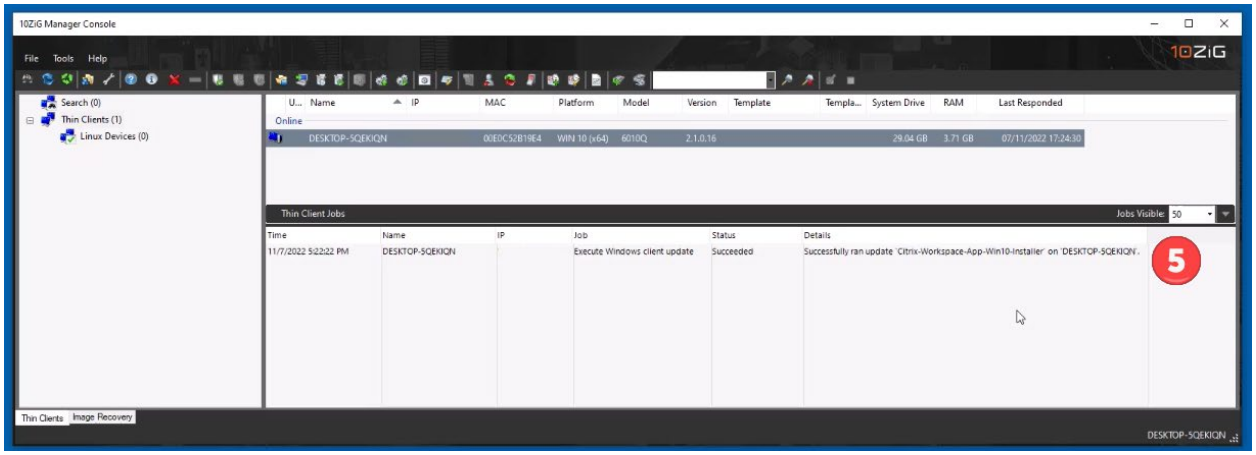




In the “Thin Client Jobs” window, you’ll see that the update is running on the client. 4



And a few moments later, it has installed successfully. 5



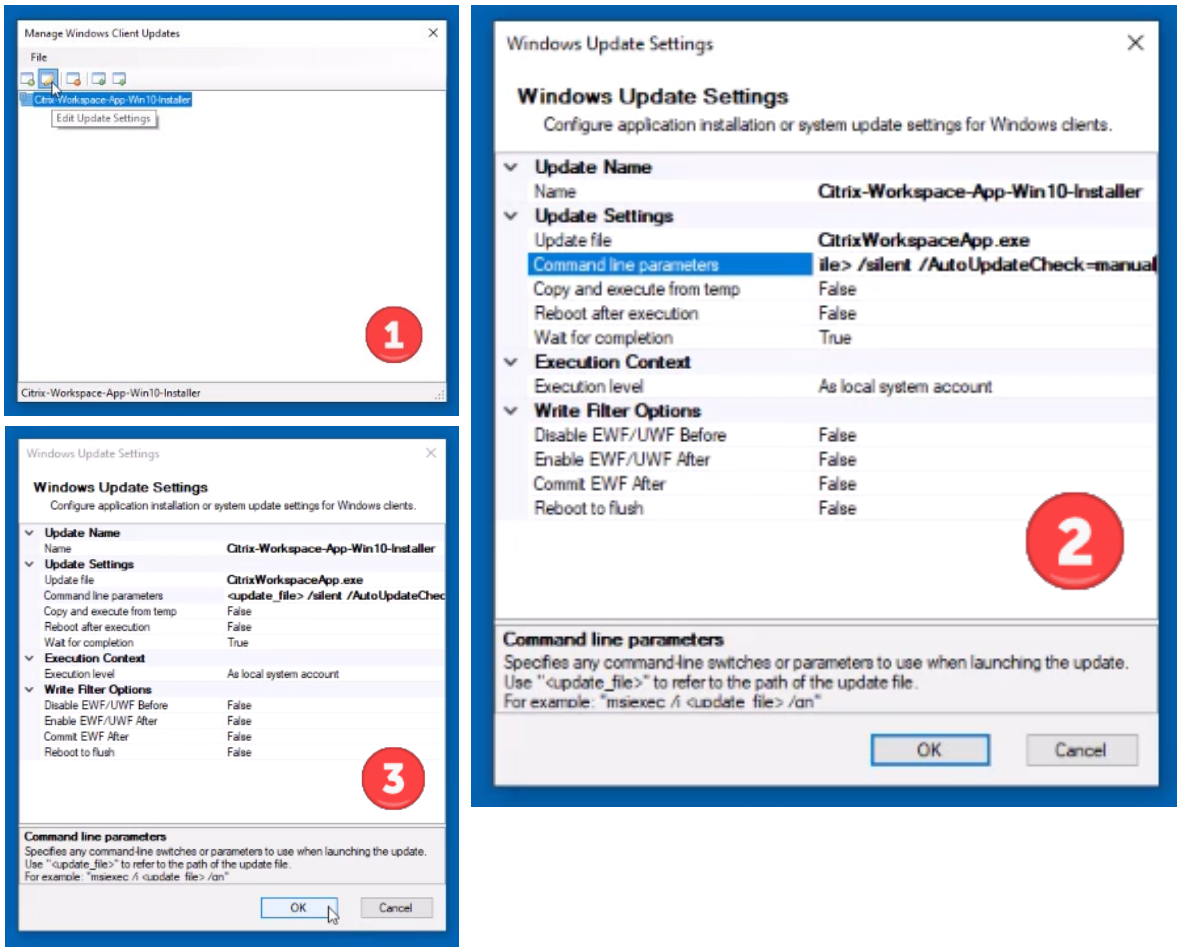
5.1.2 Modifying the Citrix Installer to Prevent Client Auto-Update

This section will show you how to modify your existing 10ZiG Manager installer package, so that it installs on your remote client and switches off “auto-update”.

We did this because we might not want our clients to auto-update to a software level, that we haven’t tested yet and not ready to release into the “LIVE” environment.

Editing an existing installer package

Inside the package manager, if we highlight and select the package in the list and either double-click it or then click the “edit” pencil icon 1. Then we’ll be taken into edit mode for the package. Inside here, we can add the parameter /AutoUpdateCheck=manual to the end of the command line parameters field 2 and then click OK to save the package. 3

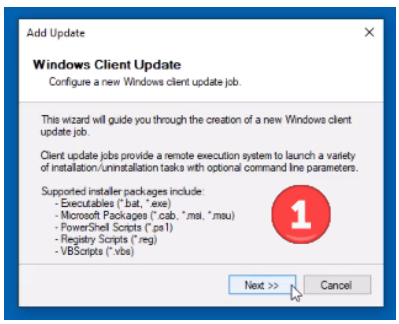


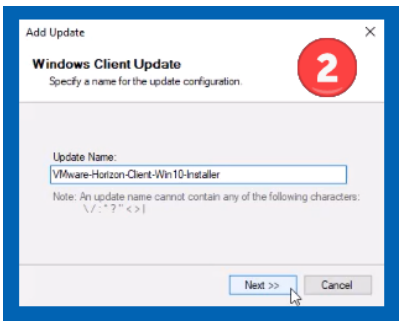
5.2 Building the VMware Horizon Client installer

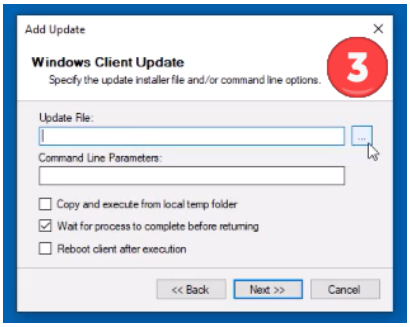
Inside the package manager, we need to click the “New Update Settings” icon and we’ll be presented with the “Add Update” screen, where we need to click Next. 1

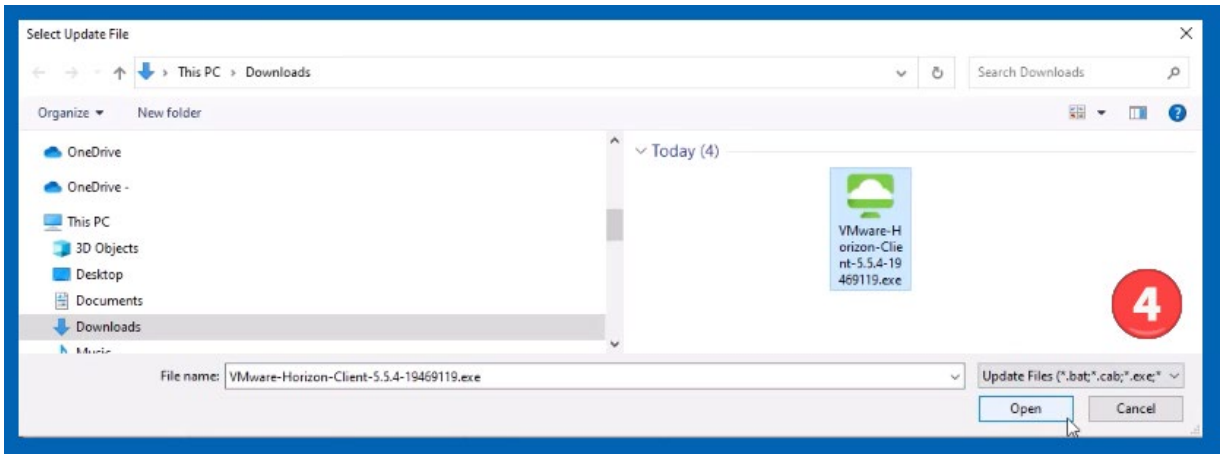
Then we need to create a name for our installer package, we’re calling this something meaningful and using VMware-Horizon-Client-Win10-Installer. We click Next to continue. 2

On the next screen, we click the 3 dots 3 next to the “Update File” field and browse to our installer location, this will probably be in your local downloads folder as shown here. 4









Select the VDI/DaaS application installer and click Open.

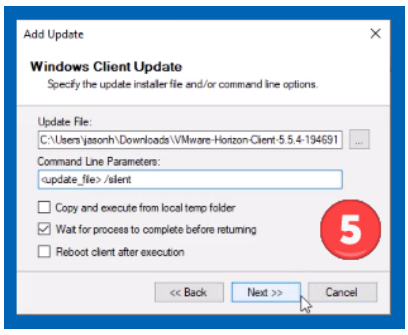
When we return to the installer file screen, we can now enter any command line parameters that we would like to use during the installation on the Windows 10 IoT LTSC 2021 thin client. This is typically the installer name that we just selected from the downloads folder, but we can use the name <update_file> if we wish.

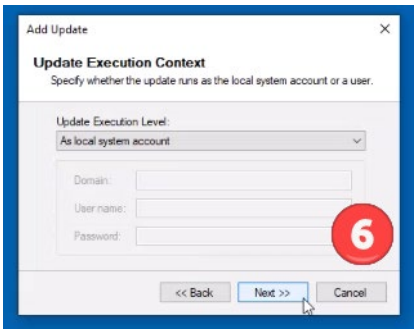
Using the name <update_file>, is useful when you want to copy and install the application to the local temp folder, as an option “tick box” below. This will copy the VDI/DaaS installer to the “C:\Windows\Temp” folder in a new subfolder, created by the Windows 10 OS. This VDI/DaaS installer will then be run from there.

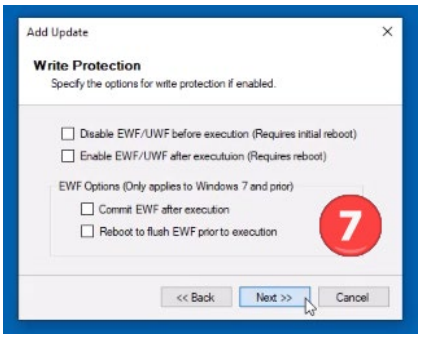
In our example, we are going to set this to be the name <update_file> and also add an additional /silent option, so that the deployment package will not interact with our user when it is being installed. Once we’re happy, we click Next 5

We’re asked who we want to run the installer as, so we keep it “As Local system account and click Next 6.

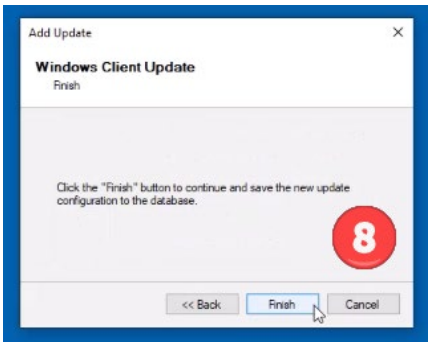
We’re now asked about write protection options. If we have UWF, Unified Write Filter enabled on the devices, then we would tick these boxes, but we don’t, so we click Next 7 .

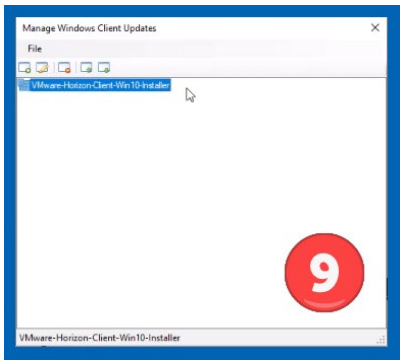






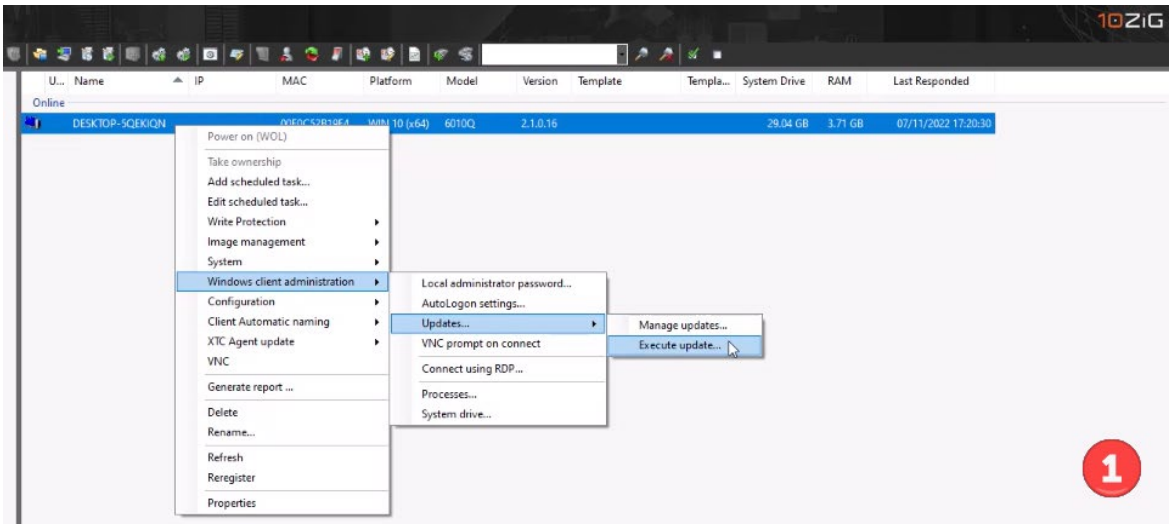
On the final creation screen, we click Finish 8 and our package will be created and displayed in the package list. 9





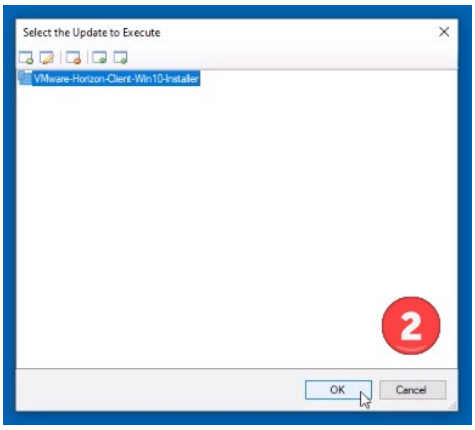
5.2.1 Deploying and installing the VMware Horizon Client via 10ZiG Manager

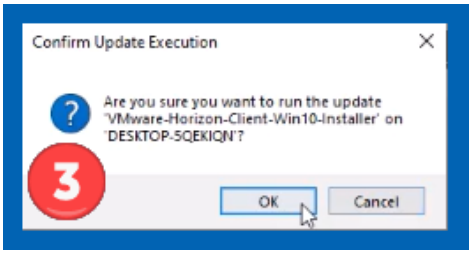
Inside 10ZiG Manager, we need to right-click on the client that we wish to deploy to, select Windows client administration, Updates and then Execute update 1



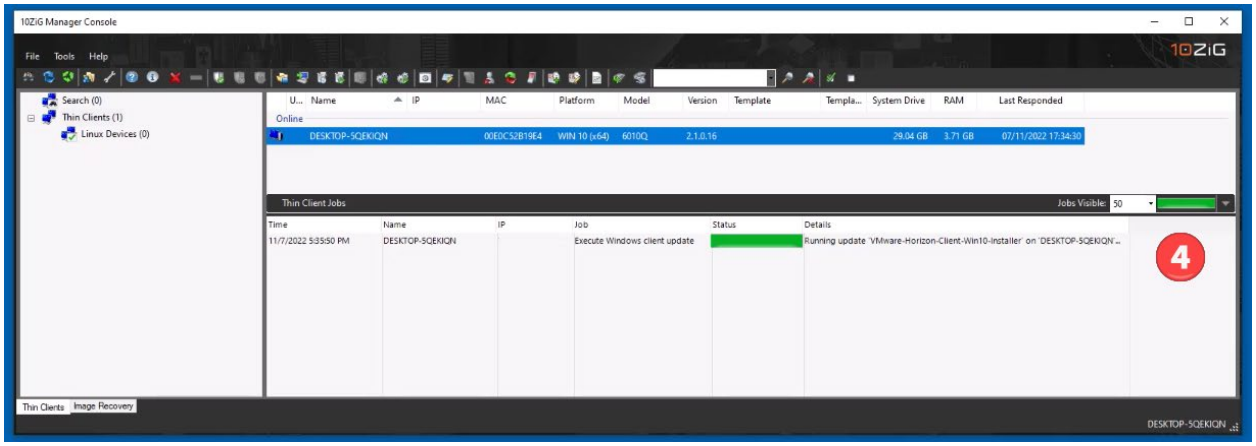
Next, we highlight the client in the list and click OK. 2

We're now asked to confirm that we want to run the update, so we click OK. 3

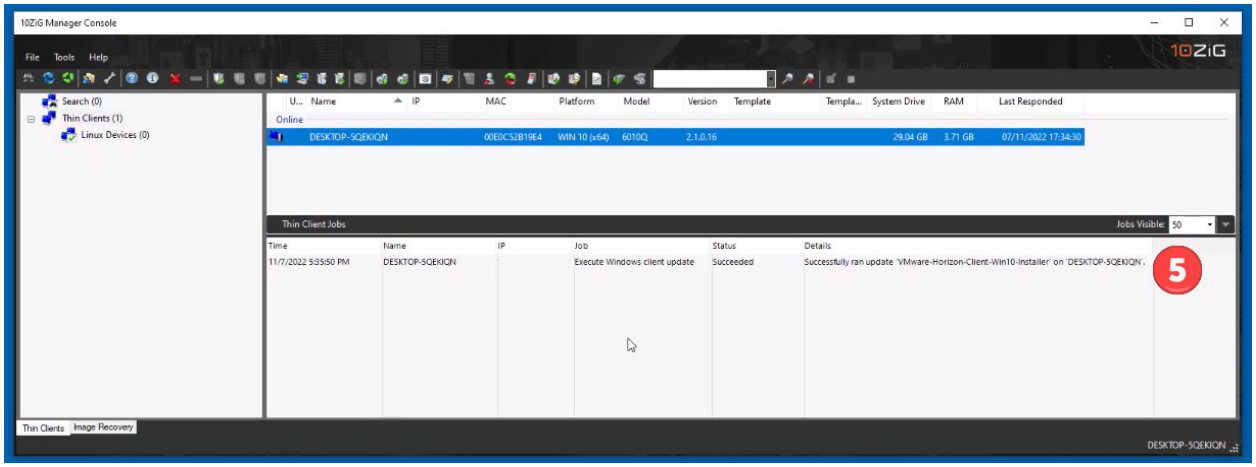




In the “Thin Client Jobs” window, you’ll see that the update is running on the client. 4



And a few moments later, it has installed successfully. 5



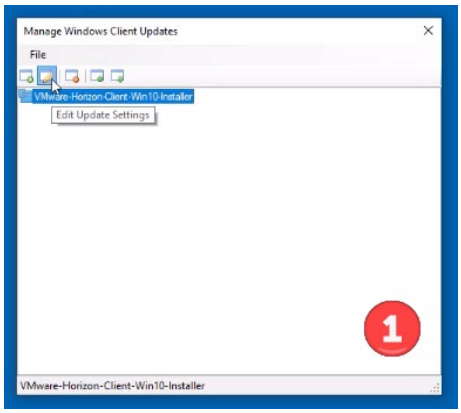
5.2.2 Modifying the VMware Horizon Installer to Prevent Client Auto-Update

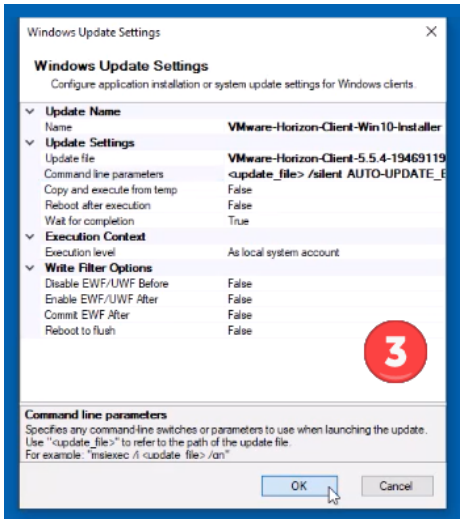
This section will show you how to modify your existing 10ZiG Manager installer package, so that it installs on your remote client and switches off “auto-update”.

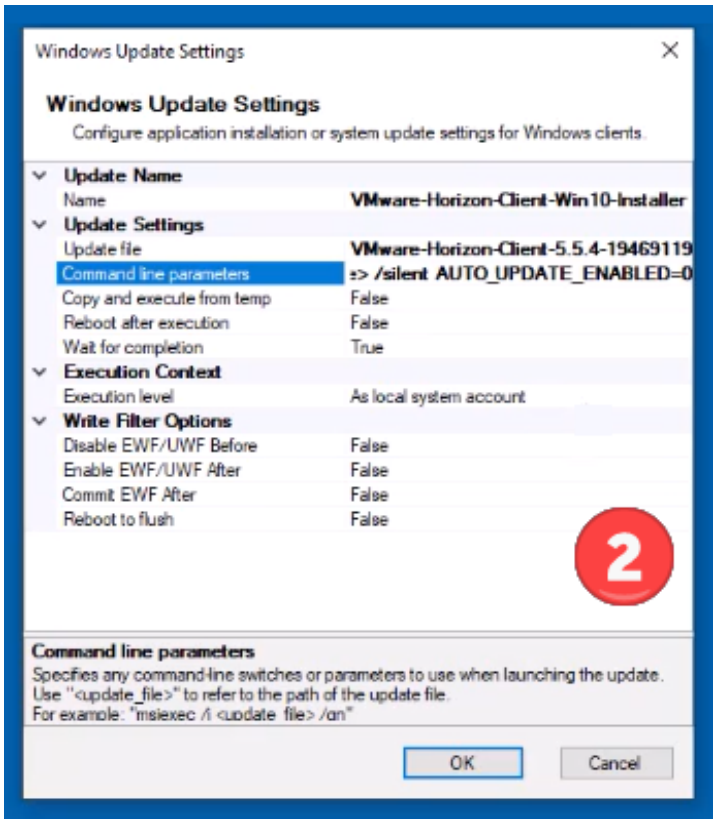
We did this because we might not want our clients to auto-update to a software level, that we haven’t tested yet and not ready to release into the “LIVE” environment.

Editing an existing installer package

Inside the package manager, if we highlight and select the package in the list and either double-click it or then click the “edit” pencil icon 1. Then we’ll be taken into edit mode for the package. Inside here, we can add the parameter AUTO_UPDATE_ENABLED=0 to the end of the command line parameters field 2 and then click OK to save the package. 3





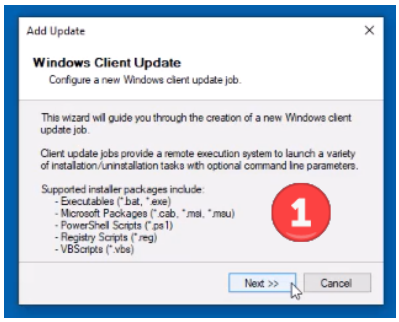


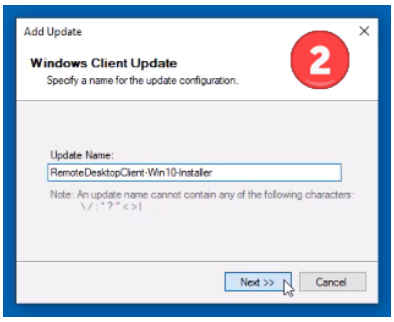
5.3 Building the Microsoft Remote Desktop Client installer

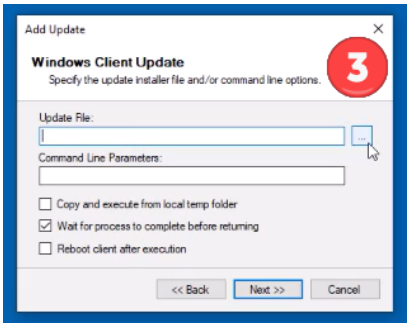
Inside the package manager, we need to click the “New Update Settings” icon and we’ll be presented with the “Add Update” screen, where we need to click Next. 1

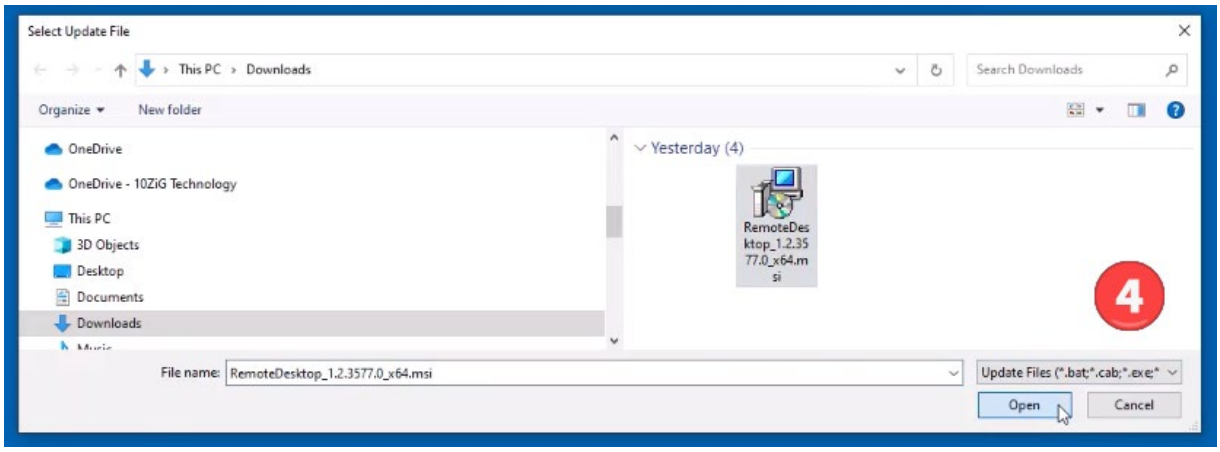
Then we need to create a name for our installer package, we’re calling this something meaningful and using RemoteDesktopClient-Win10-Installer. We click Next to continue. 2

On the next screen, we click the 3 dots 3 next to the “Update File” field and browse to our installer location, this will probably be in your local downloads folder as shown here. 4









Select the VDI/DaaS application installer and click Open.

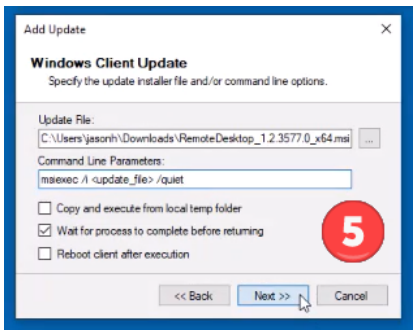
When we return to the installer file screen, we can now enter any command line parameters that we would like to use during the installation on the Windows 10 IoT LTSC 2021 thin client. This is typically the installer name that we just selected from the downloads folder, but we can use the name <update_file> if we wish.

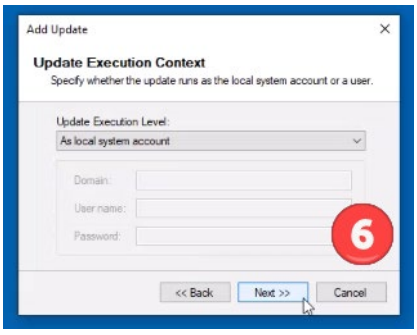
Using the name <update_file>, is useful when you want to copy and install the application to the local temp folder, as an option “tick box” below. This will copy the VDI/DaaS installer to the “C:\Windows\Temp” folder in a new subfolder, created by the Windows 10 OS. This VDI/DaaS installer will then be run from there.

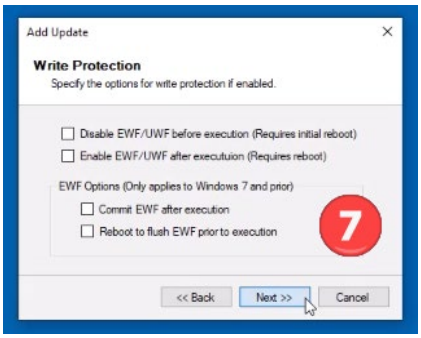
In our example, we are going to set this to be msiexec /i <update_file> and also add an additional /quiet option, so that the deployment package will not interact with our user when it is being installed. Once we’re happy, we click Next 5

We’re asked who we want to run the installer as, so we keep it “As Local system account and click Next 6.

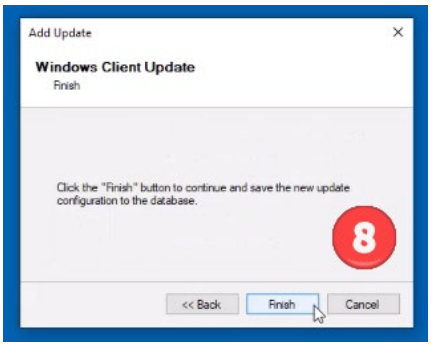
We’re now asked about write protection options. If we have UWF, Unified Write Filter enabled on the devices, then we would tick these boxes, but we don’t, so we click Next 7 .

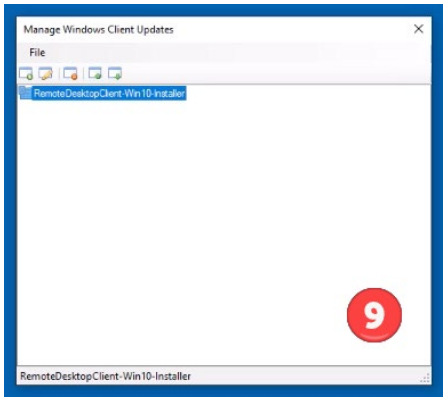






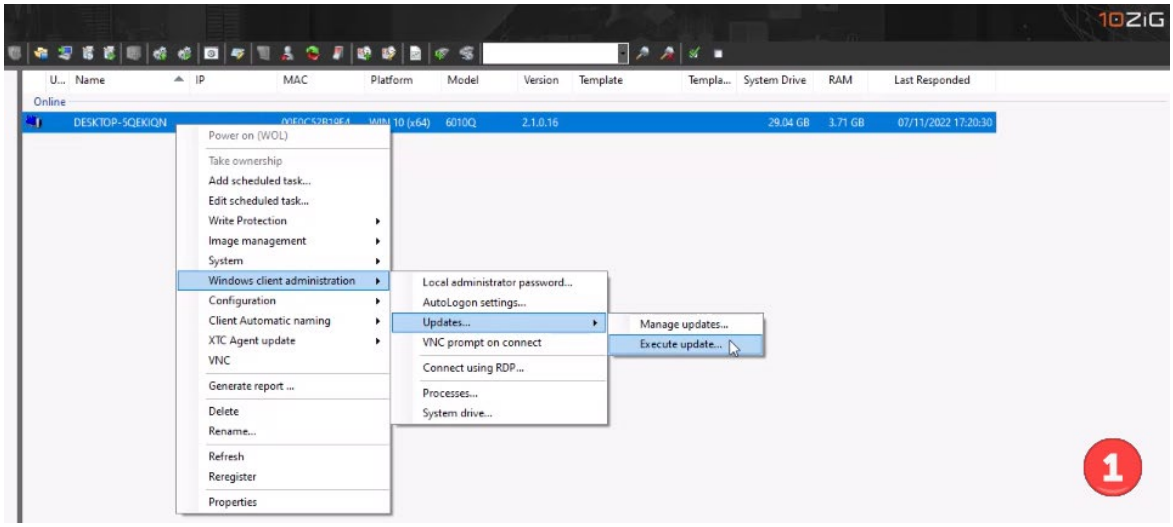
On the final creation screen, we click Finish 8 and our package will be created and displayed in the package list. 9





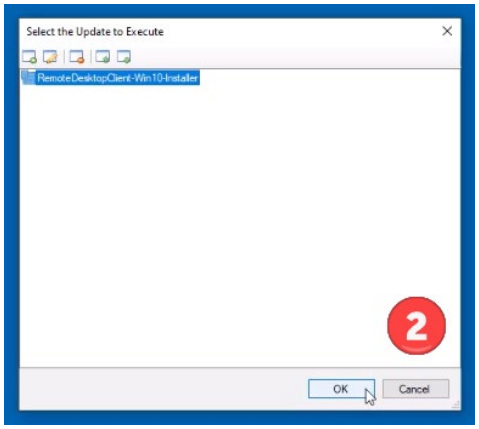
5.3.1 Deploying and installing the Microsoft Remote Desktop Client via 10ZiG Manager

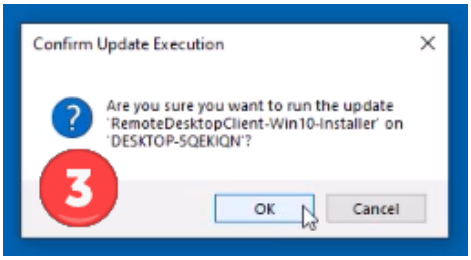
Inside 10ZiG Manager, we need to right-click on the client that we wish to deploy to, select Windows client administration, Updates and then Execute update 1



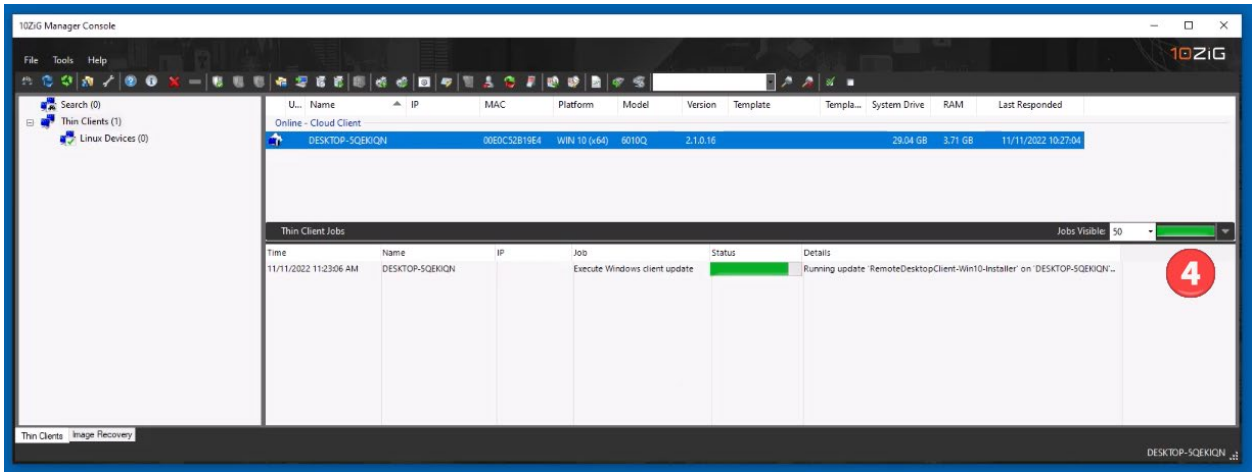
Next, we highlight the client in the list and click OK. 2

We're now asked to confirm that we want to run the update, so we click OK. 3

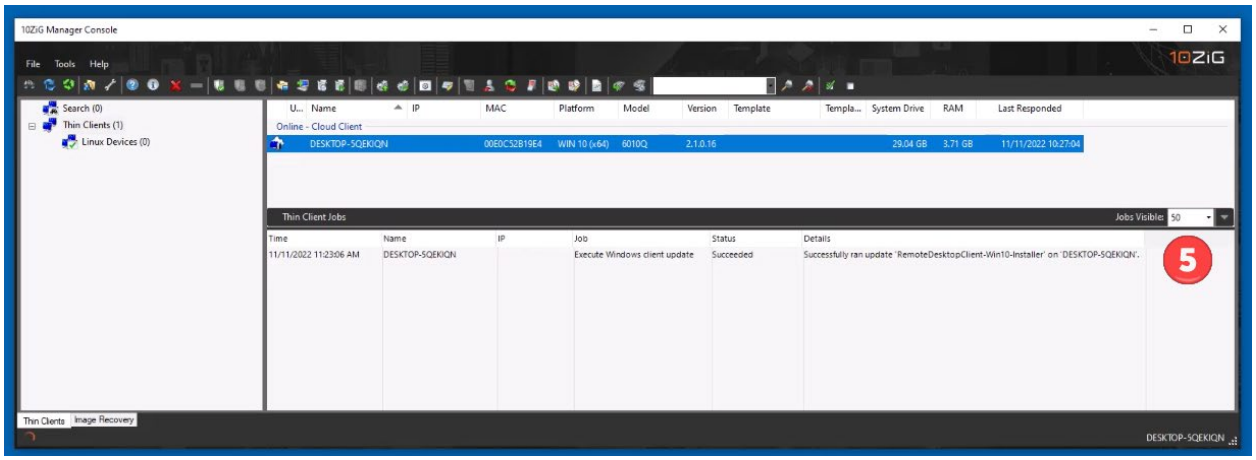




In the “Thin Client Jobs” window, you’ll see that the update is running on the client. 4



And a few moments later, it has installed successfully. 5



Support

If you require support for any of the information within this document, please contact your region's nearest Technical Support Center.

10ZiG Technology, Inc.

Headquarters USA (North America)

23309 N 17th Dr - Ste 100
Phoenix, AZ 85027

Phone 866-865-5250

support@10zig.com

sales@10zig.com

www.10zig.com

Headquarters UK (EMEA)

10ZiG Technology Limited

7 Highcliffe Road
Leicester
LE5 1TY
UK

Phone +44 (0)116 2148661

support@10zig.eu

sales@10zig.eu

www.10zig.eu