

# General Deployment of AIO Step by step

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### Overview

AIO	same or defer		
Host	same	shgbsvmas	<a href="#">VMAS - Workspaces</a>
Host Name	defer	AIO-13 or AIO-16 or AIO-19	
Role	defer	AIO-13 defers from AIO-16 & AIO-19	
OS Version	defer		
Original OS Language	same	English (en-us)	
Additional Language Packs	same	Simplified Chinese (zh-cn) Traditional Chinese (zh-tw)	
Exchange Build Number	defer		Exchange Server build numbers and release dates <a href="https://docs.microsoft.com/en-us/exchange/new-features/build-numbers-and-release-dates?view=exchserver-2019">https://docs.microsoft.com/en-us/exchange/new-features/build-numbers-and-release-dates?view=exchserver-2019</a>
Password Complexity	defer		
Certificate created and configured	same	Exchange self-generated	
Outlook Version	same	Microsoft 365 2019	
Outlook Language Packs	same	Simplified Chinese (zh-cn) English (en-us) Traditional Chinese (zh-tw)	
Outlook Anywhere enabled	same	Y	

AIO	same or defer		
OAB and EWS enabled	same	Y	
Network Monitor installed	same	Y	<a href="https://aka.ms/wxex">https://aka.ms/wxex</a>
Fiddler installed	same	Y	<a href="https://aka.ms/wxex">https://aka.ms/wxex</a>
Telnet25	same	Y	<a href="https://aka.ms/wxex">https://aka.ms/wxex</a>
ExTRA	same	Y	<a href="https://aka.ms/wxex">https://aka.ms/wxex</a>
Disable CRL check	same		Exchange 2010 Management Console (EMC) is very slow <a href="https://blogs.technet.microsoft.com/hawar/2011/06/03/exchange-2010-management-console-emc-is-very-slow/">https://blogs.technet.microsoft.com/hawar/2011/06/03/exchange-2010-management-console-emc-is-very-slow/</a> Configuring Exchange Servers Without Internet Access <a href="https://techcommunity.microsoft.com/t5/exchange-team-blog/configuring-exchange-servers-without-internet-access/ba-p/593692">https://techcommunity.microsoft.com/t5/exchange-team-blog/configuring-exchange-servers-without-internet-access/ba-p/593692</a>
NIC	same	Private IP	
ActiveSync device connectivity	same	Y	
Additional disk for Backup issue	same	Y	
Enable Windows Server Backup	same	Y	
Backup	same	Y	
Snap Shot	same	Y	
Lab known issue	defer		
FAQ			

## Deployment Step by step

(take the deployment of AIO-16 as example)

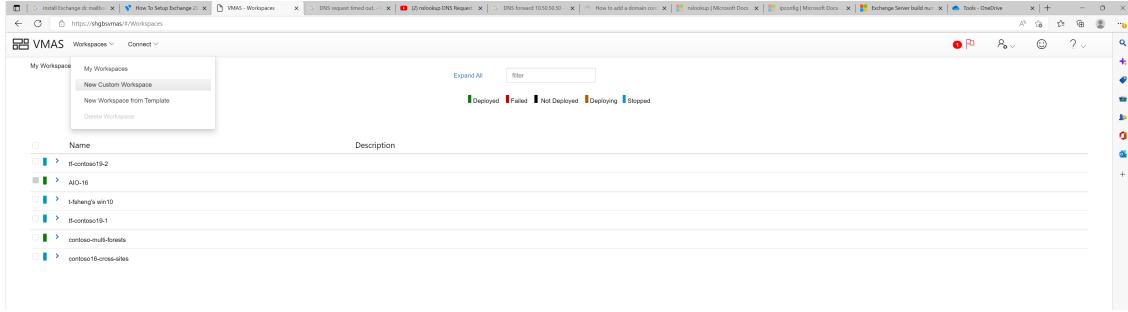
### References:

- [Microsoft Exchange 2019 Beginners Video Tutorials Series](#)

### Step 1: configure the all-in-one virtual machine on VMAs.

- 1.1. Log on [shgbsvmas - Workspaces](#).

## 1.2. Click on **Workspaces** on the top toolbar and click on **New Custom Workspace**.



1.3. In the pop up **New Workspace**, type </version> in the **Filter Operating Systems**, select the OS system of AIO, and click Next at the **Step 1**.

The screenshot shows the 'New Workspace' dialog box. At the top, it says 'Step 1' and has tabs for 'Step 2' and 'Step 3'. Below that, a message says 'You may either create a workspace from a template or you may build a custom workspace. Choose one.' There is a 'Template' toggle switch set to 'Custom', a search bar containing '2016', and a result count of '9 results'. A list of operating systems is shown with a '1' icon next to the first item. To the right of each item are three icons: a plus sign, a minus sign, and a heart. The list includes:

- Windows 2016 Datacenter (RTM)
- Windows 10 Enterprise x64 (2016 LTSB)
- Windows 2016 Standard Core (RTM)
- Windows 2016 Standard Core (1709)
- Windows 2016 Standard (RTM)
- Windows 2016 Datacenter Core (RTM)
- Windows 2016 Datacenter Core (1709)

At the bottom are 'Back', 'Next', and 'Cancel' buttons.

1.4. Click on **Private Network - Routable** and click on Next at the **Step 2**.

## New Workspace

Step 1

Step 2

Step 3

Select the network these machines will be connected to:



### Private Network - Routable

A private network is not shared to other networks, and allows network isolation.

### Shared Network

CorpNet

### VLAN

VLANs are private networks used to address specific issues. VLANs should only be used in advanced situations.

Back

Next

Cancel

1.5. Edit the name of your new workspace, and password. Then click on **Next** at the **Step 3** tab.

## New Workspace

Step 1

Step 2

Step 3

Done!

What do you want to name your new workspace?

t-fsheng's AIO 16

Administrator password

..



Confirm password

..



Back

Next

Cancel

1.6. Click on **Customize** at the **Done!**.

## New Workspace

Step 1 Step 2 Step 3

Done!

Ok we have everything we need!

You can now customize your workspace, such as adding additional disks or joining domains.

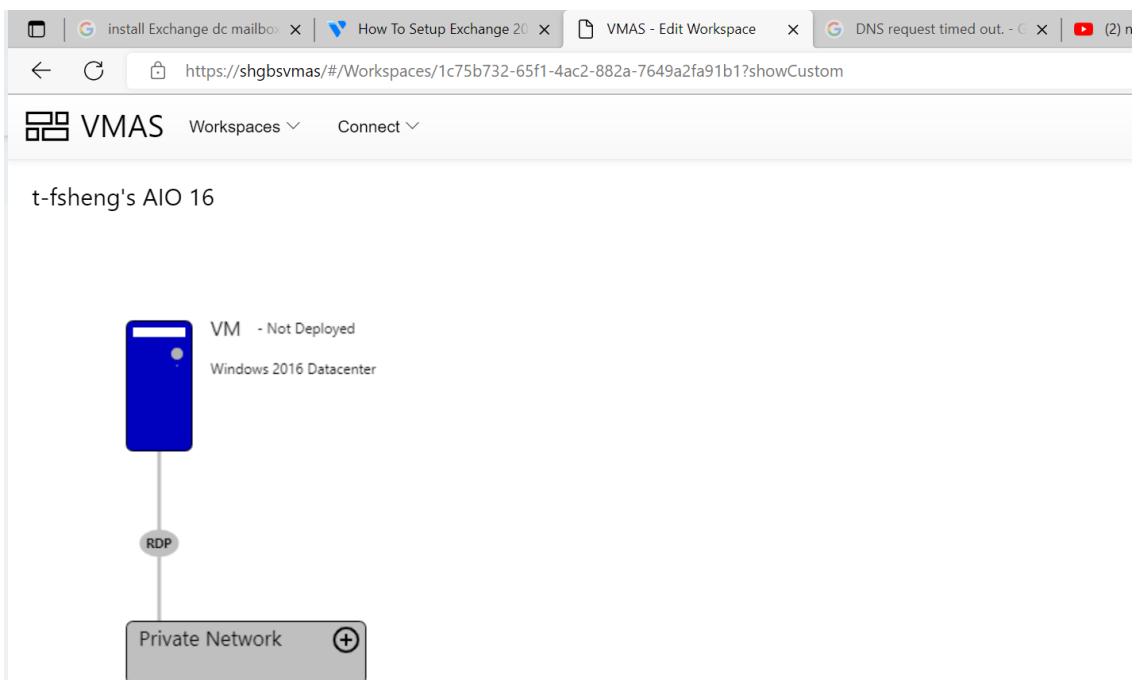
Customize

Back

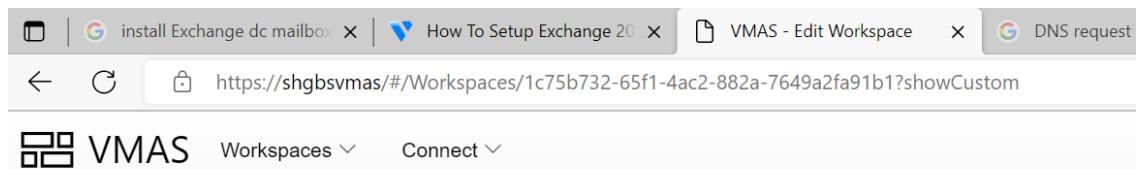
Next

Cancel

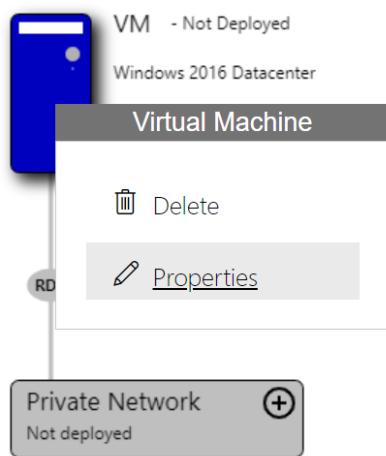
Now we can see one VM has been created.



1.7. Right-click on this virtual machine, and click on **Properties**.



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- 1.8. In the pop up **VM**, edit the **Virtual Machine Label, Computer Name** and click on the next tab **Hardware**.

# VM

General    Hardware    Domain    User Accounts    Network    Other

Virtual Machine Label  
AIO-16

Computer Name  
AIO-16

VM Description

Language  
English

Color  
#0000bf

Save Changes    Cancel

1.9. Select the processors as 8, the Min as 8 GB. Then click on the icon **Edit**, select the size as 300 GB, and click on **Save**.

# VM

General    **Hardware**    Domain    User Accounts    Network    Other

Processors  
8    ▾  
1  
2  
4  
8  
12  
16  
24  
32

Memory Type  
Dynamic    ▾

Min  
8 GB    ▾

Max  
8 GB    ▾

+ Add Hard Drive

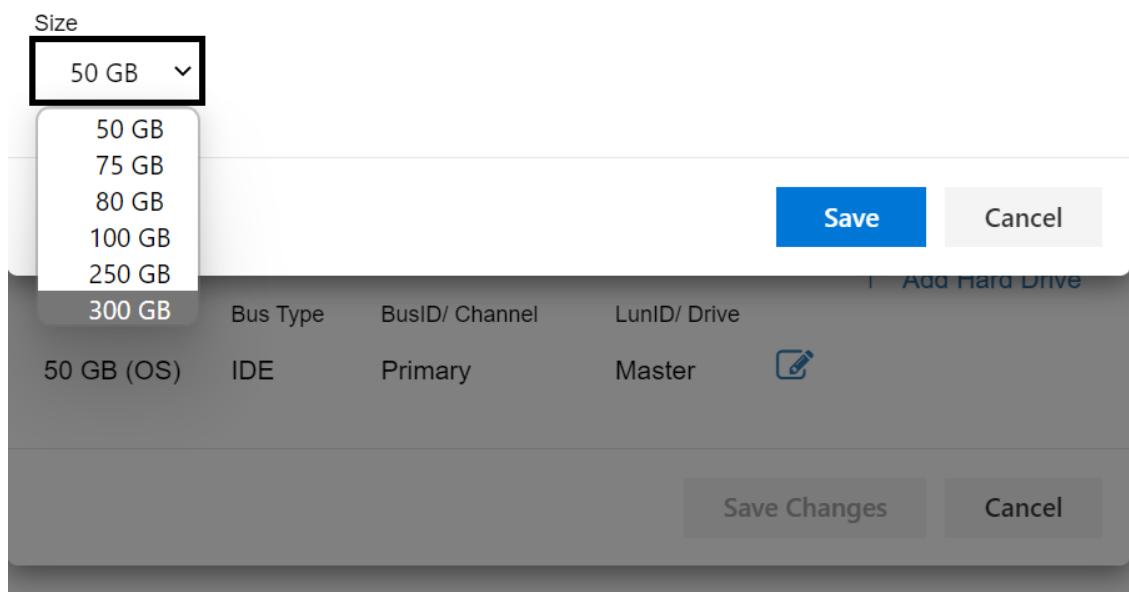
Bus Type  
IDE

BusID/ Channel  
Primary

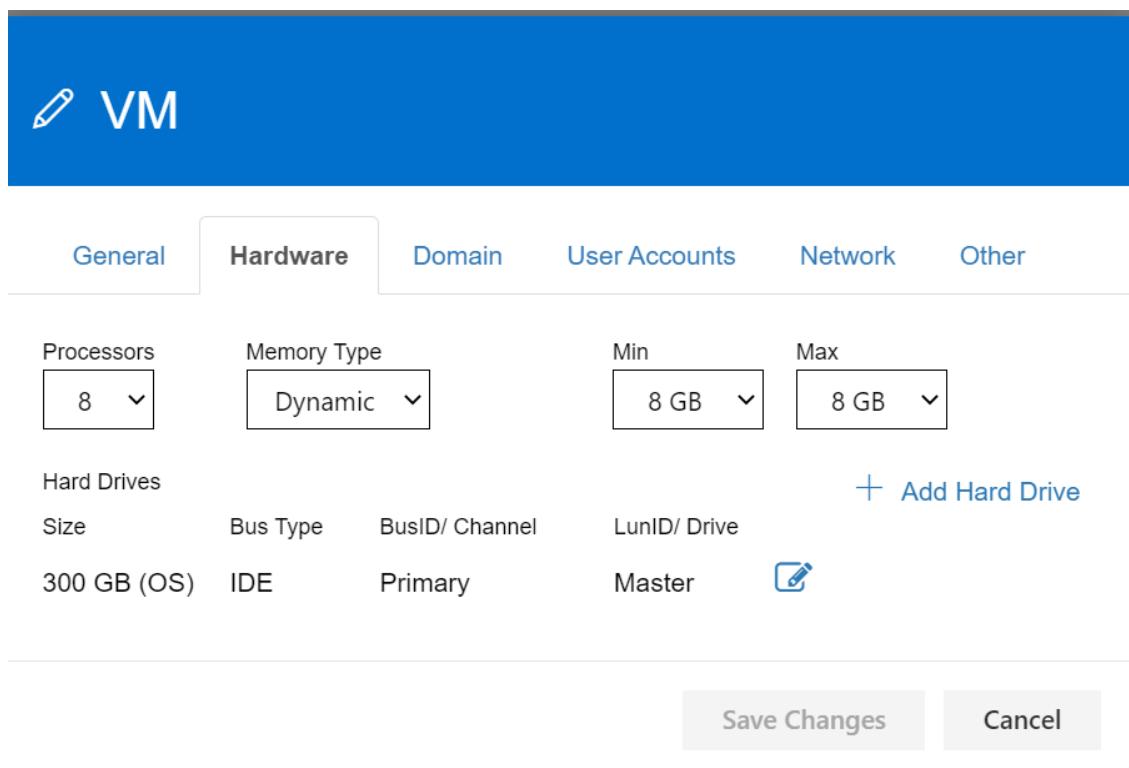
LunID/ Drive  
Master    

Save Changes    Cancel

## Edit Hard Drive



When you finish these steps, you can the configuration of Hardware like the below pic, then click on the next tab **Domain**.



1.10. In the **Domain** tab, select **Domain Role** as Domain Controller, and edit **Domain Name** as contoso.com, then click on **Save Changes**.

# VM

General    Hardware    **Domain**    User Accounts    Network    Other

Domain Role

Workgroup Member ▾

Workgroup Member  
Domain Controller

WORKGROUP

Save Changes    Cancel

# VM

General    Hardware    **Domain**    User Accounts    Network    Other

Domain Role

Domain Controller ▾

Domain Name

contoso.com

Domain NetBIOS Name

CONTOSO

Create DNS Server(recommended)

On

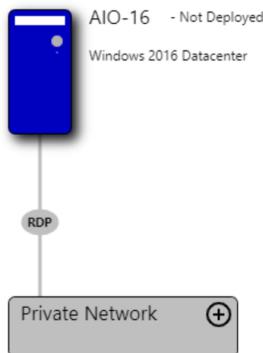
DNS Forwarder Addresses    [+ Add Address](#)

No addresses

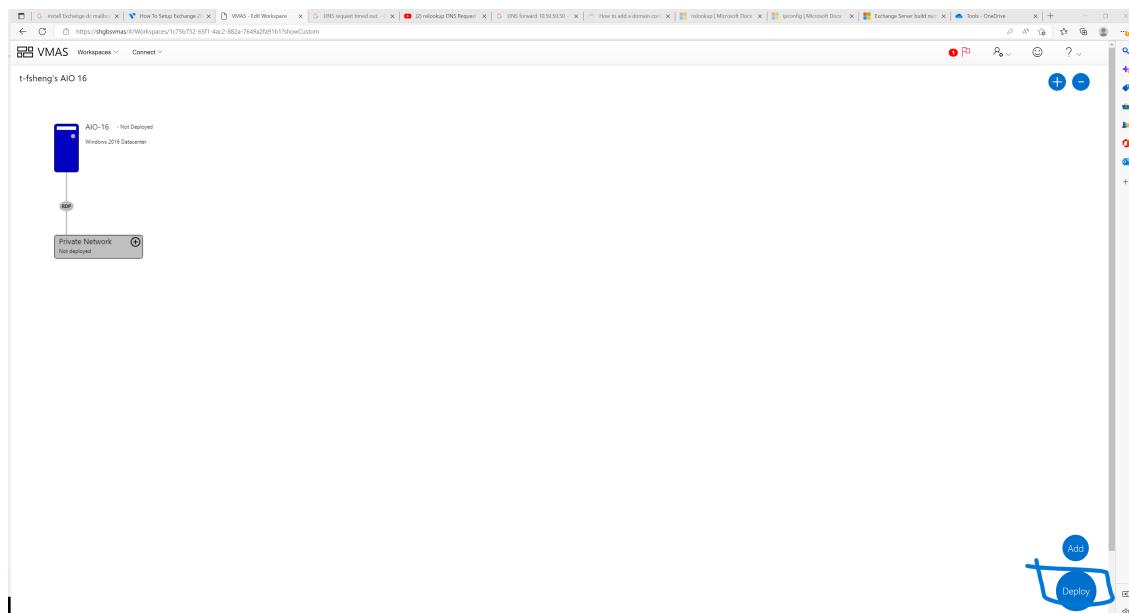
Save Changes    Cancel

When you finish these steps, you can see VMAs displays like the below pic.

## t-fsheng's AIO 16\*



1.11. Click on the **Deploy** button at the bottom of the screen, and wait for deploying.

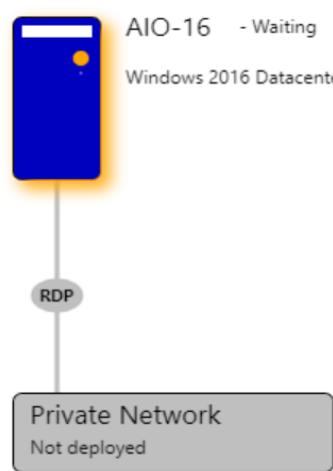


S | G install Exchange dc mailbox X | V How To Setup Exchange 20 X VMAS - Edit Workspace X G

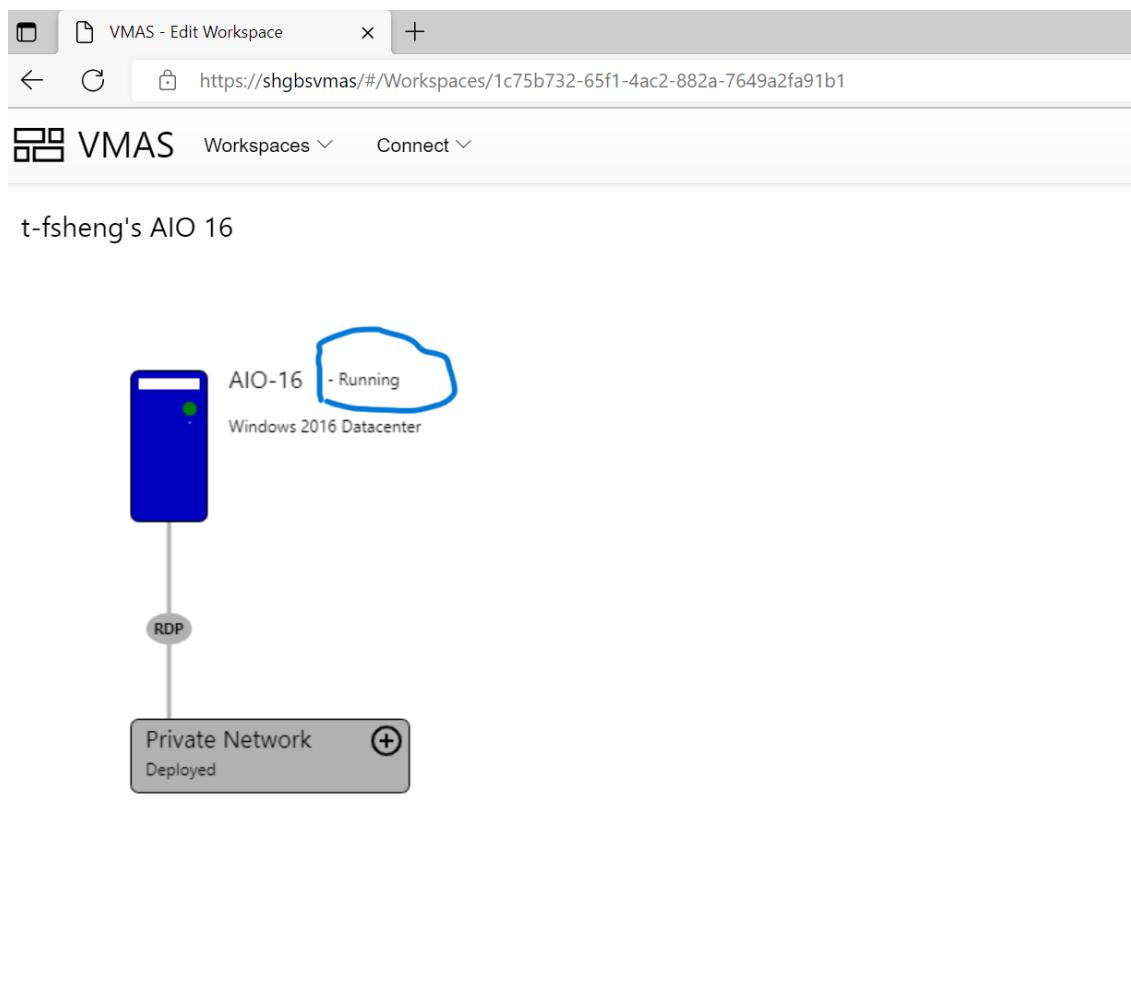
← ⏪ https://shgbsvmas/#/Workspaces/1c75b732-65f1-4ac2-882a-7649a2fa91b1

VMAS Workspaces Connect

t-fsheng's AIO 16



When the deployments on VMAs is finished, you can see the status of AIO is running.



## Step 2: login the AIO.

- 2.1. Click on **Connect** at the top toolbar, and click on **Download RDCMan File**.

VMAS - Edit Works x | Antispam in Office x | How to Send Email x | Connecting to a Te x | Microsoft Commu

← ⌂ https://shgbsvmas/#/Workspaces/2a1d9fff-2f25-4d17-a335-347128637077

VMAS Workspaces Connect

AIO-16

Download RDCMan File

AIO - Running  
Windows 2016 Datacenter

RDP

Private Network Deployed +

## 2.2. Open the file from RDCMan.exe.

File Edit Session View Remote Desktop Tools Help

New... Ctrl+N

Open... Ctrl+O

Save connection-multi-forest.rdp Ctrl+S

Save connection-multi-forest.rdp...

Save All

Close connection-multi-forest.rdp

Exit

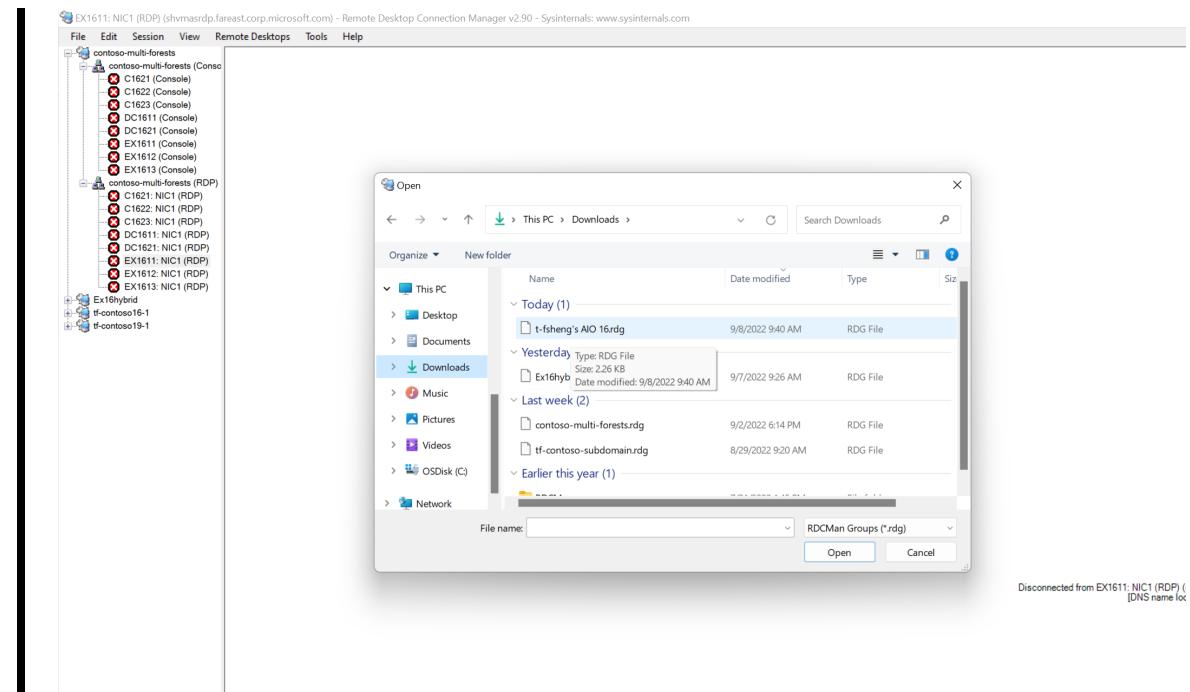
Ctrl+F4

File

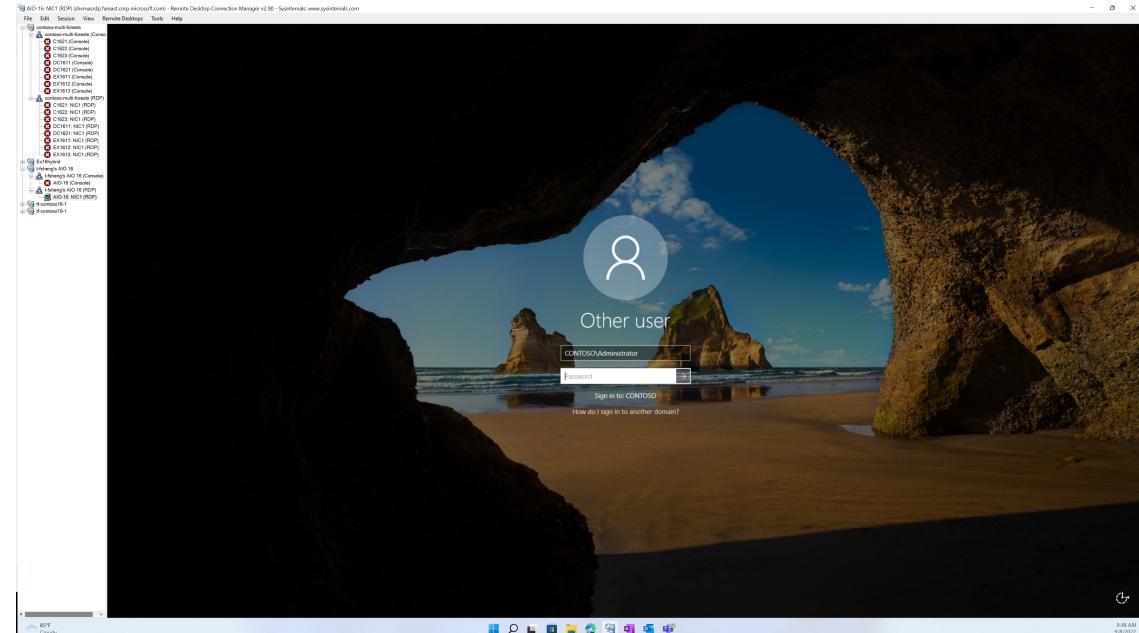
C:\Windows\NET\1\RDPSession\ip\RemoteAccess.microsoft.com - Remote Desktop Connection Manager v2.90 - Sprinter@www.sysinternals.com

Disconnect from D:\Windows\NET\1 (RDP) [Unknown host] (DNS name lookup failed)

9:40 AM 9/6/2022



### 2.3. Double-click on the <server name> and login.



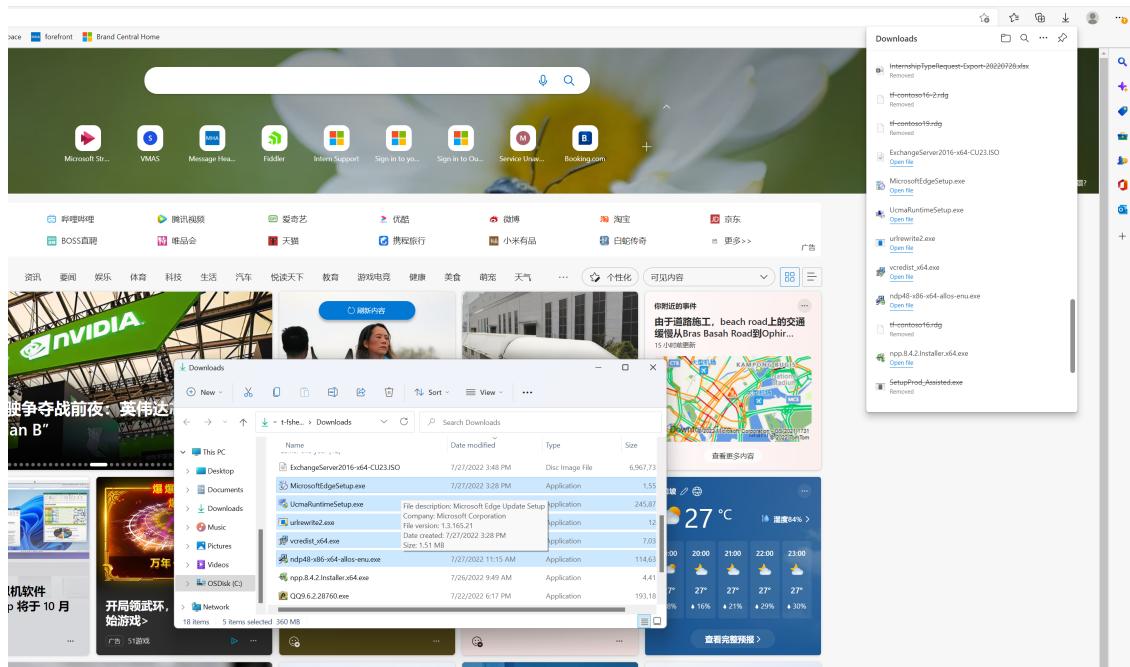
### Step 3: install necessary applications.

Apps need to be installed in all OS versions of AIOs are mentioned in this part:

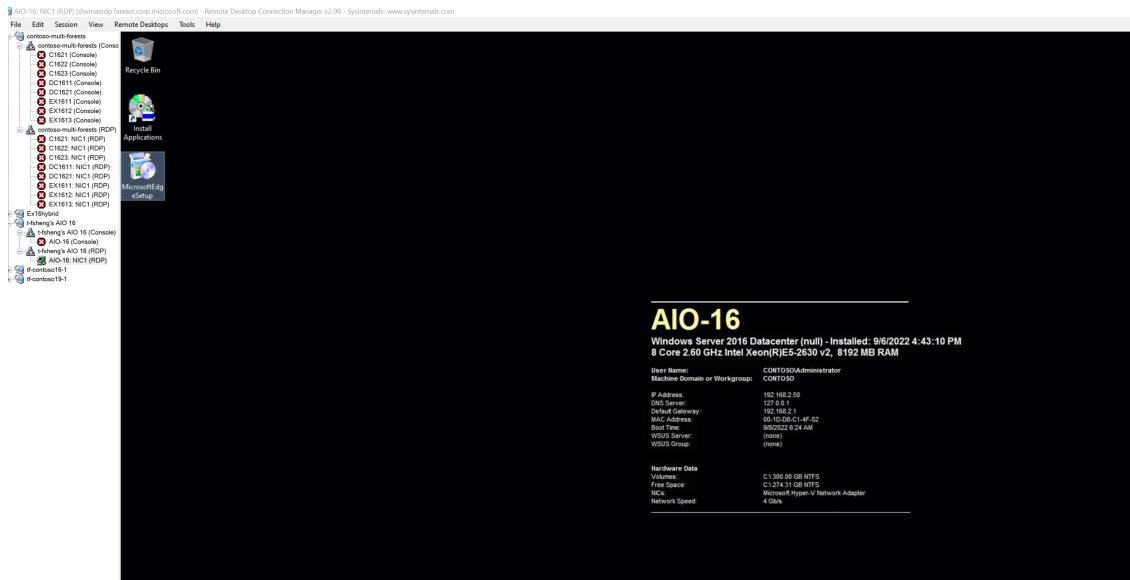
- Microsoft Edge Browser
- .NET Framework 4.8
- Visual C++ Redistributable Package for Visual Studio 2013
- Unified Communications Managed API 4.0 Runtime

#### 3.1. First install Edge Browser.

##### 3.1.1 Copy **MicrosoftEdgeSetup.exe** from the on-premises machine.



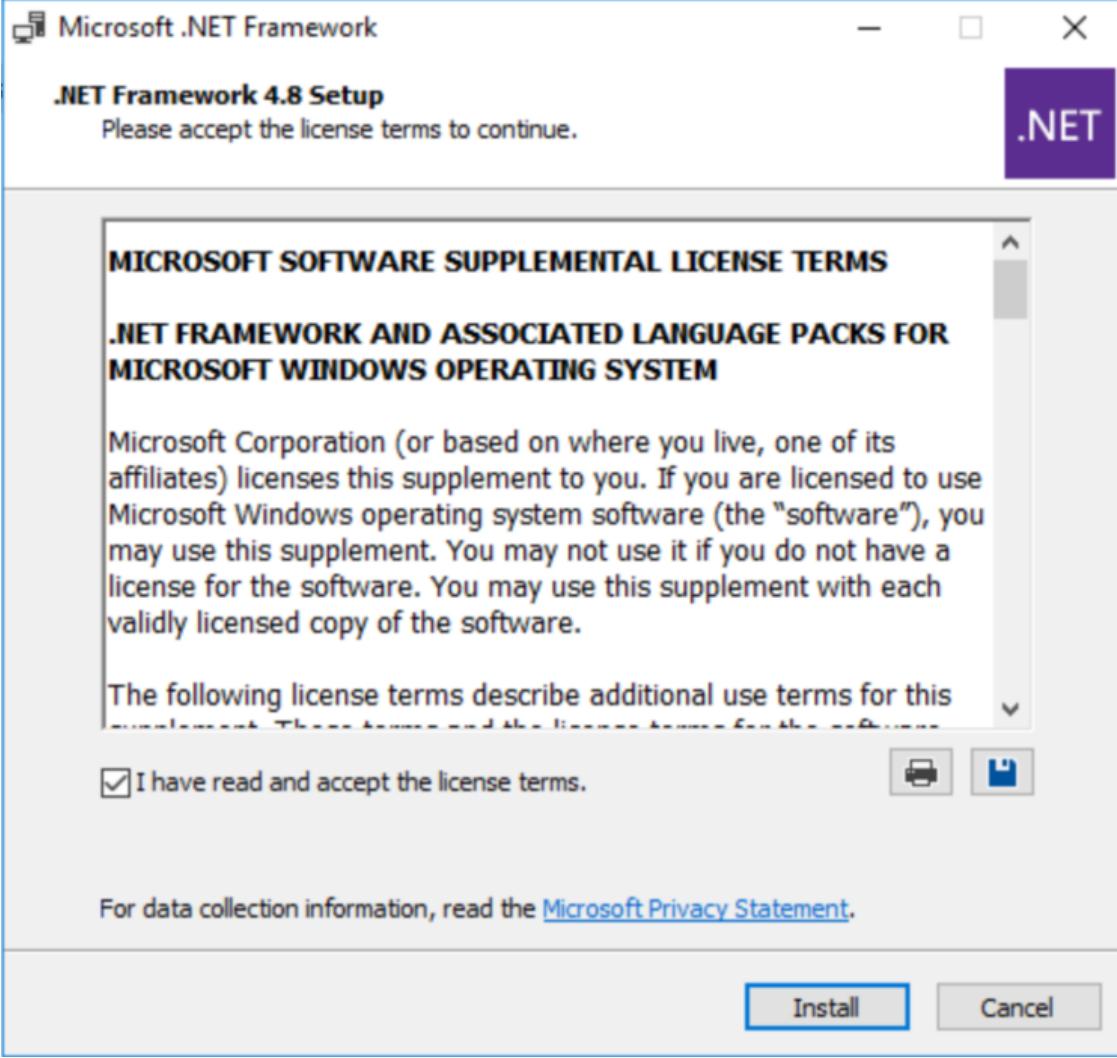
### 3.1.2 Paste it to the virtual machine, and install it.



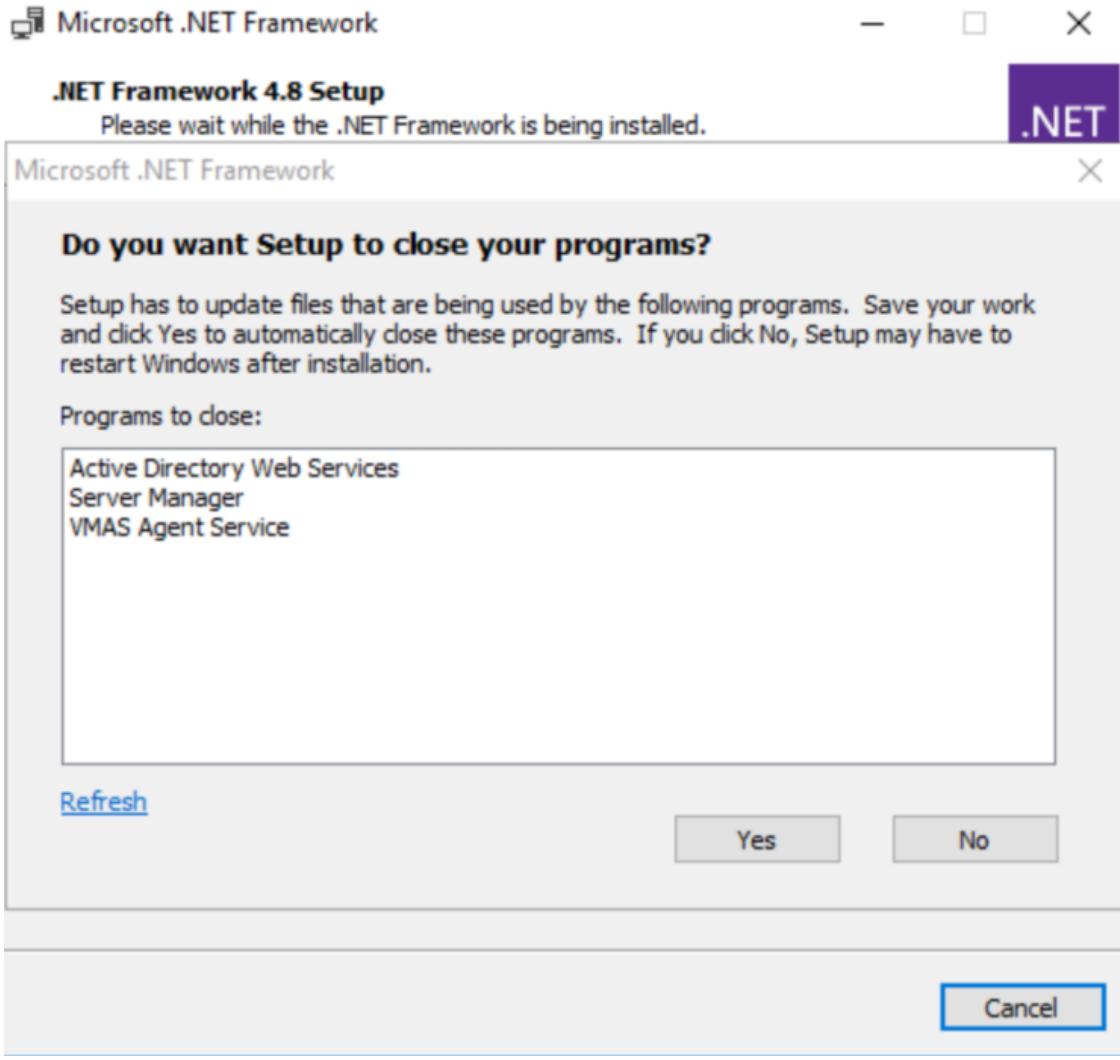
3.1.3 Don't forget to configure the default browser as Microsoft Edge. For more information, see [Change default apps](#).

## 3.2. Open the edge and Install [.NET Framework 4.8](#).

### 3.2.1 Double-click, and select "I have...".



3.2.2 In the pop-up, Click on "Yes".



3.2.3 The installation of .Net Framework 4.8 is complete.

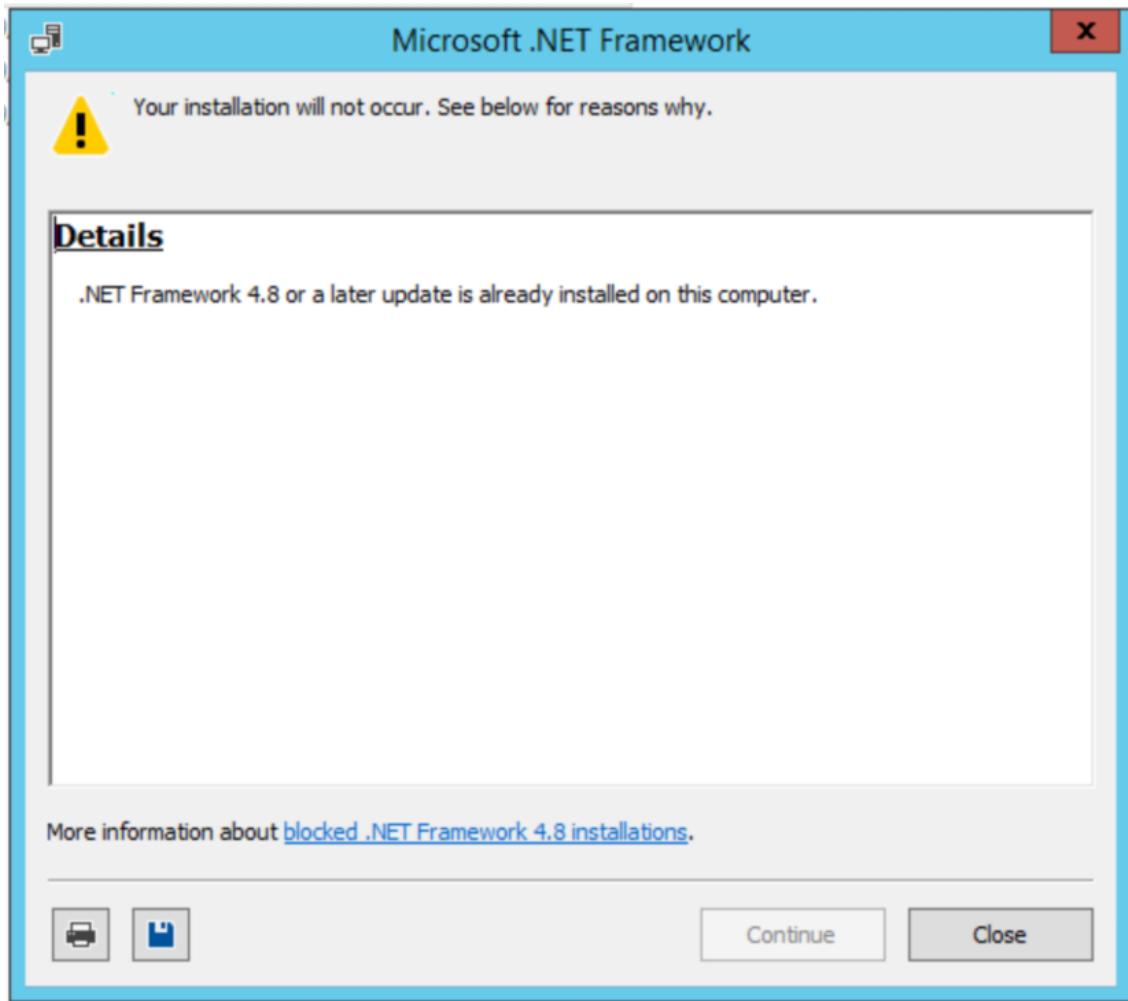
## Installation Is Complete

.NET Framework 4.8 has been installed.

Check for more recent versions on [Windows Update](#).

Finish

If you have already installed it, you will see this pop-up.



### 3.3. Install [Visual C++ Redistributable Package for Visual Studio 2013](#).

Important: Selecting a language below will dynamically change the complete page content to that language.

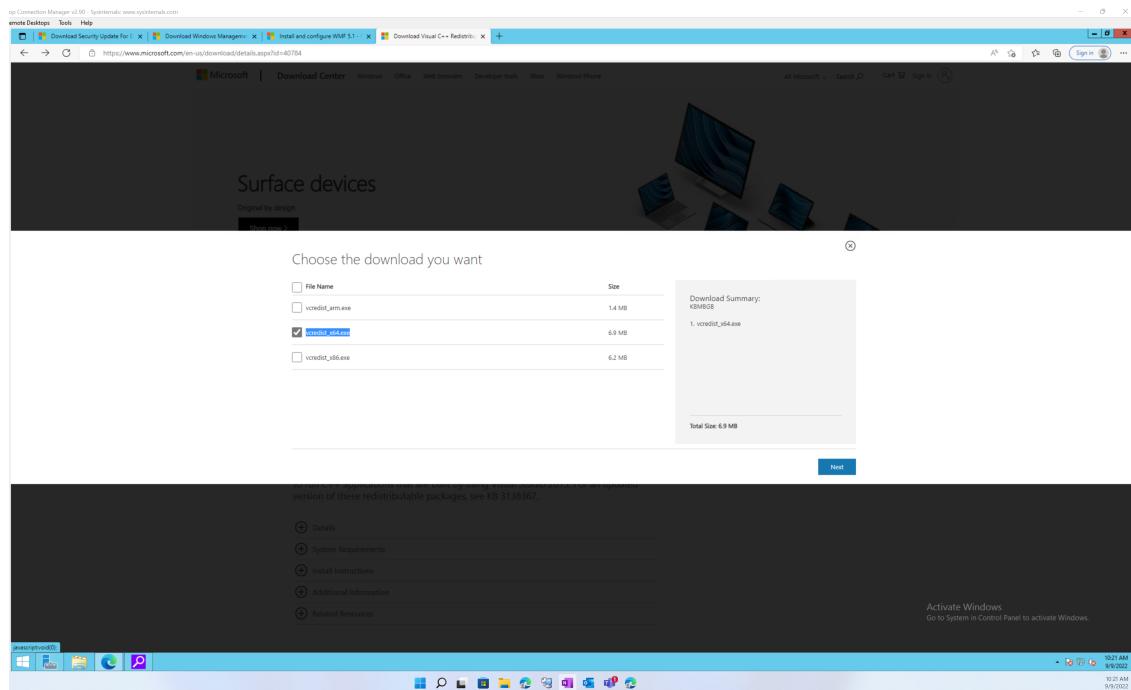
Select Language: English

The Visual C++ Redistributable Packages install run-time components that are required to run C++ applications that are built by using Visual Studio 2013. For an updated version of these redistributable packages, see KB 3138967.

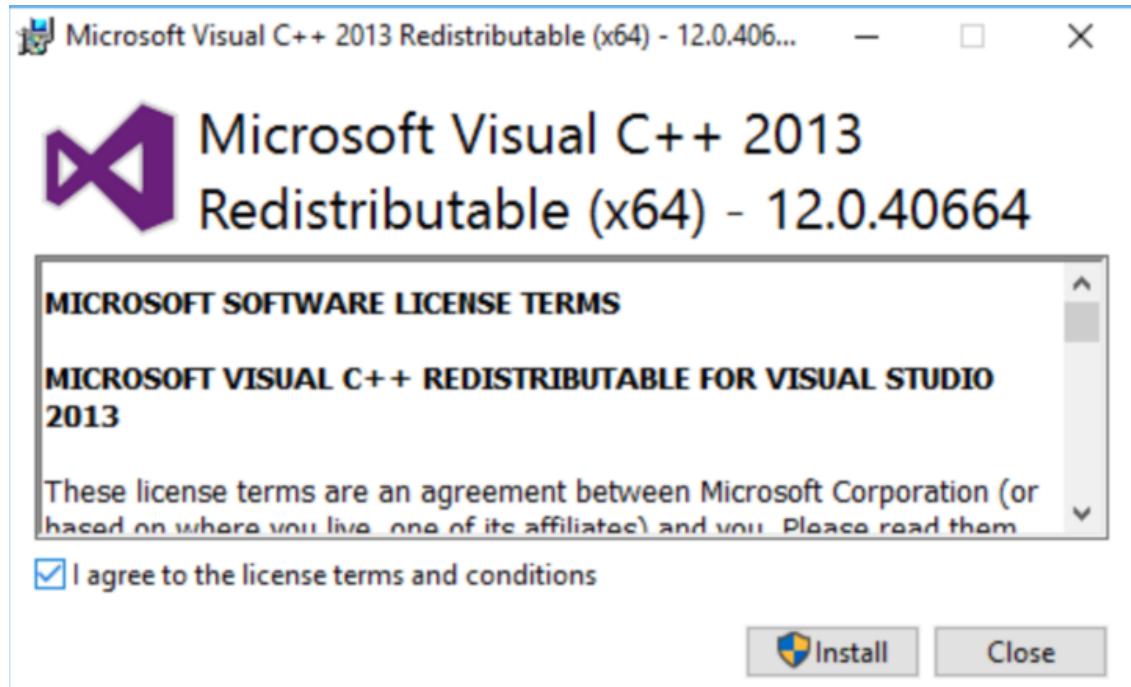
⊕ Details  
⊕ System Requirements  
⊕ Install Instructions  
⊕ Additional Information  
⊕ Related Resources

Activate Windows  
Go to System in Control Panel to activate Windows.

#### 3.3.1 Select **vcredist\_x64.exe** and click on **Next**.



3.3.2 Double-click on the exe and choose "I agree...", then install.



3.3.3 The installation of Visual C++ Redistributable Package for Visual Studio 2013 is complete.



# Microsoft Visual C++ 2013 Redistributable (x64) - 12.0.40664

Setup Successful

**Close**

## 3.4 Install [Unified Communications Managed API 4.0 Runtime](#).

### 3.4.1 Click on **Download** button and wait for the process.

The screenshot shows a Microsoft web browser window with multiple tabs open. The active tab displays the Microsoft 365 landing page. Below it, a modal window for the 'Unified Communications Managed API 4.0 Runtime' is visible. The modal includes a language selection dropdown set to 'English' and a prominent red 'Download' button. Below the download button, there is descriptive text about UCMA 4.0 and links for 'Details', 'System Requirements', and 'Install Instructions'. At the bottom right of the modal, there is a link to 'Activate Windows'.

### 3.4.2 Double-click on the **UcmaRuntimeSetup.exe** and in the pop-up, click on **Next**.



## Unified Communications Managed API 4.0 Runtime

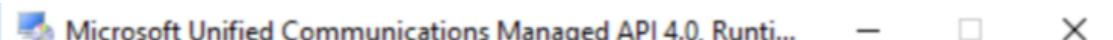
### Microsoft Unified Communications Managed API 4.0, Runtime Setup

- Microsoft Visual C++ 2012 x64 Minimum Runtime - 11.0.50727
- Microsoft Server Speech Platform Runtime (x64)
- Microsoft Speech Platform VXML Runtime (x64)
- Microsoft Server Speech Recognition Language - TELE (en-US)
- Microsoft Server Speech Text to Speech Voice (en-US, Helen)
- Microsoft Lync Server 2013, Bootstrapper Prerequisites Installer Package
- Microsoft Unified Communications Managed API 4.0, Runtime

Next >

Cancel

3.4.3 Select "I have read and accept..." and click on **Install**.



## Unified Communications Managed API 4.0, Runtime Setup

Please accept the license terms to continue.



### MICROSOFT SOFTWARE LICENSE TERMS

#### MICROSOFT UNIFIED COMMUNICATIONS MANAGED API 4.0 RUNTIME

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft

I have read and accept the license terms.



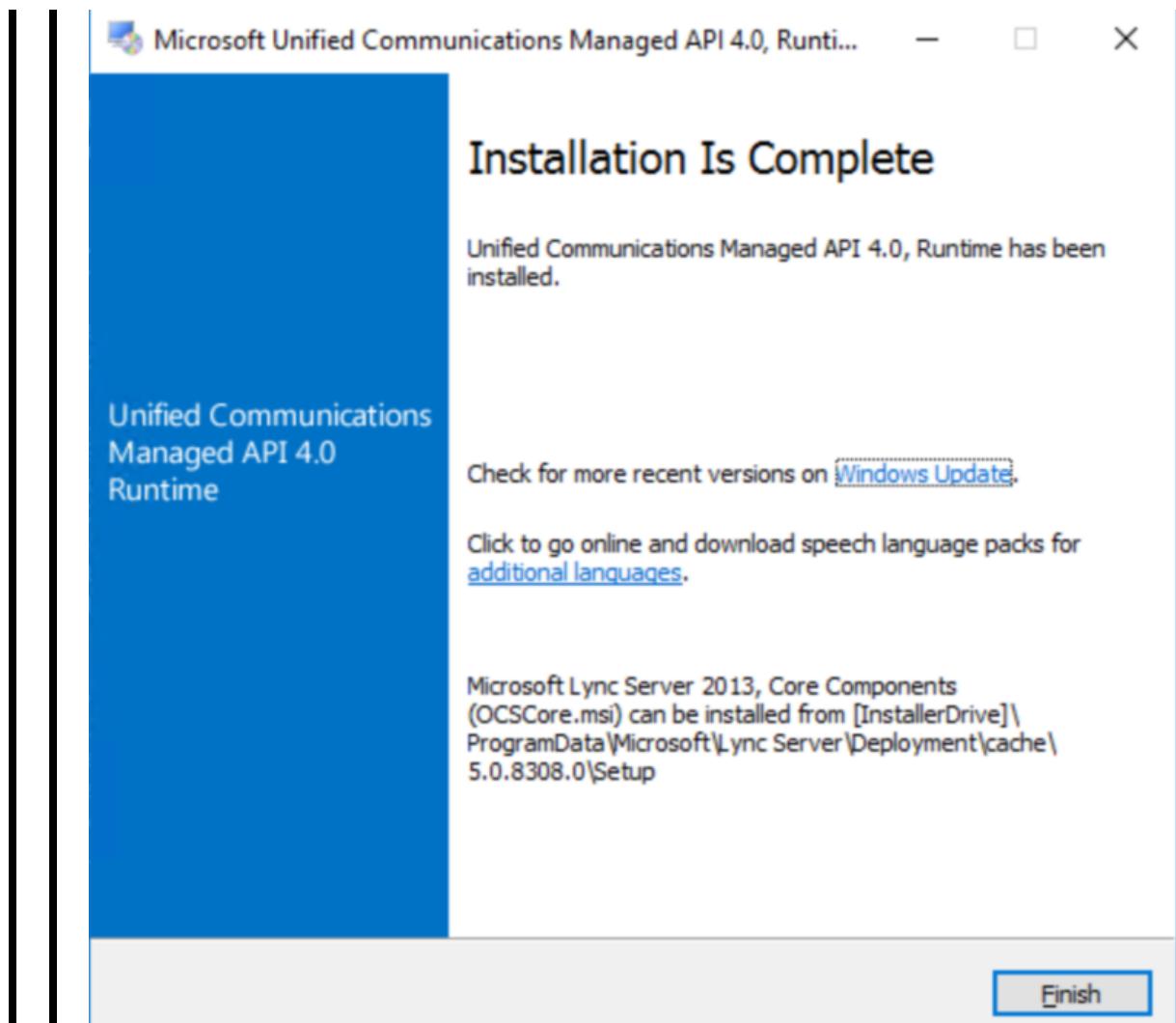
Yes, send information about my setup experiences to Microsoft Corporation.

For more information, read the [Data Collection Policy](#).

[Install](#)

[Cancel](#)

3.4.4 The installation of Unified Communications Managed API 4.0 Runtime is completed.

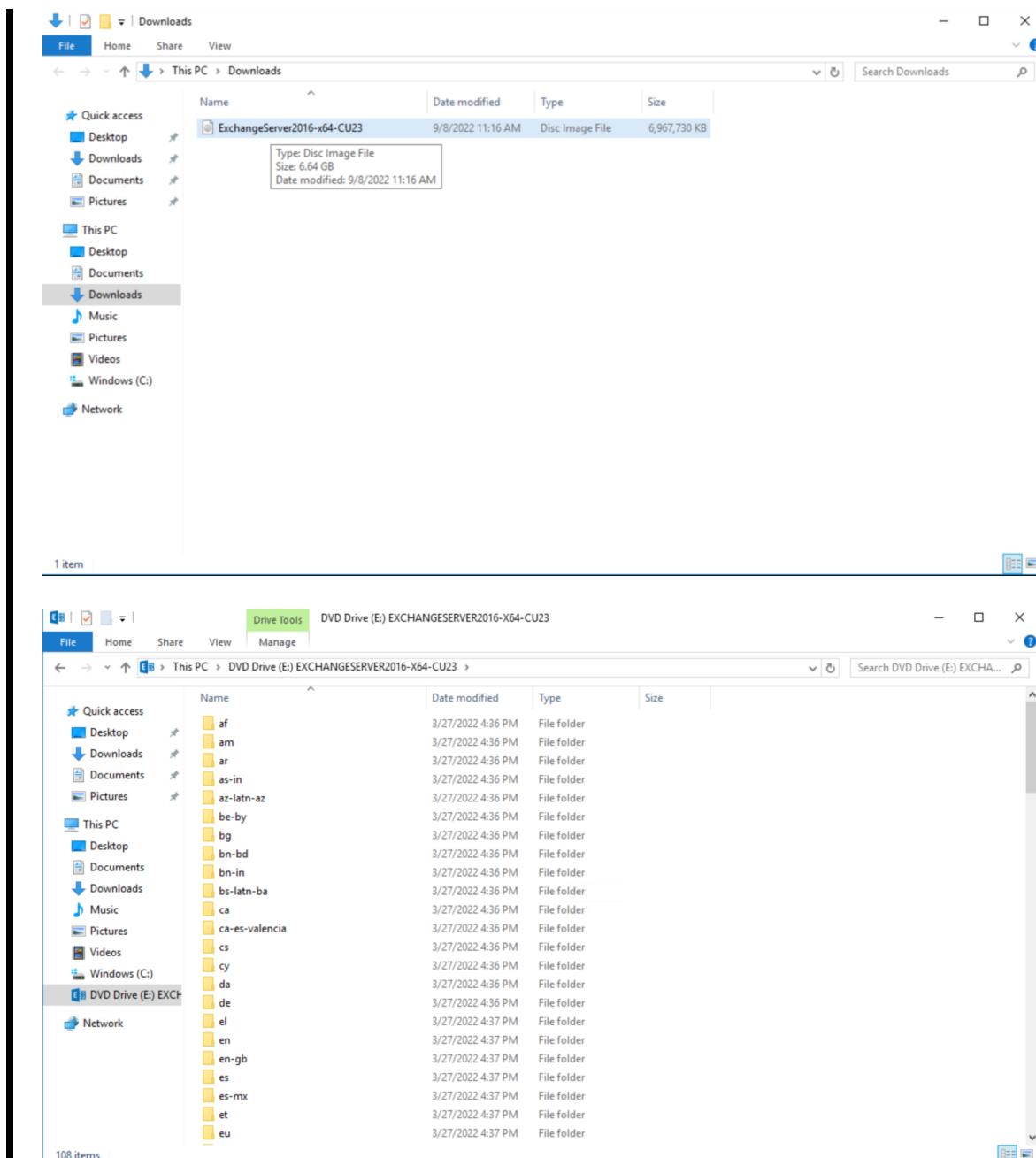


After the above apps installed, there are other necessary apps should be installed on AIOs with different OS system.

- For more information of **AIO-13**'s necessary apps in the deployment, go to [AIO-13 LAB SETUP](#).
- For more information of **AIO-16**'s necessary apps in the deployment, go to [AIO-16 LAB SETUP](#).
- For more information of **AIO-19**'s necessary apps in the deployment, go to [AIO-19 LAB SETUP](#).

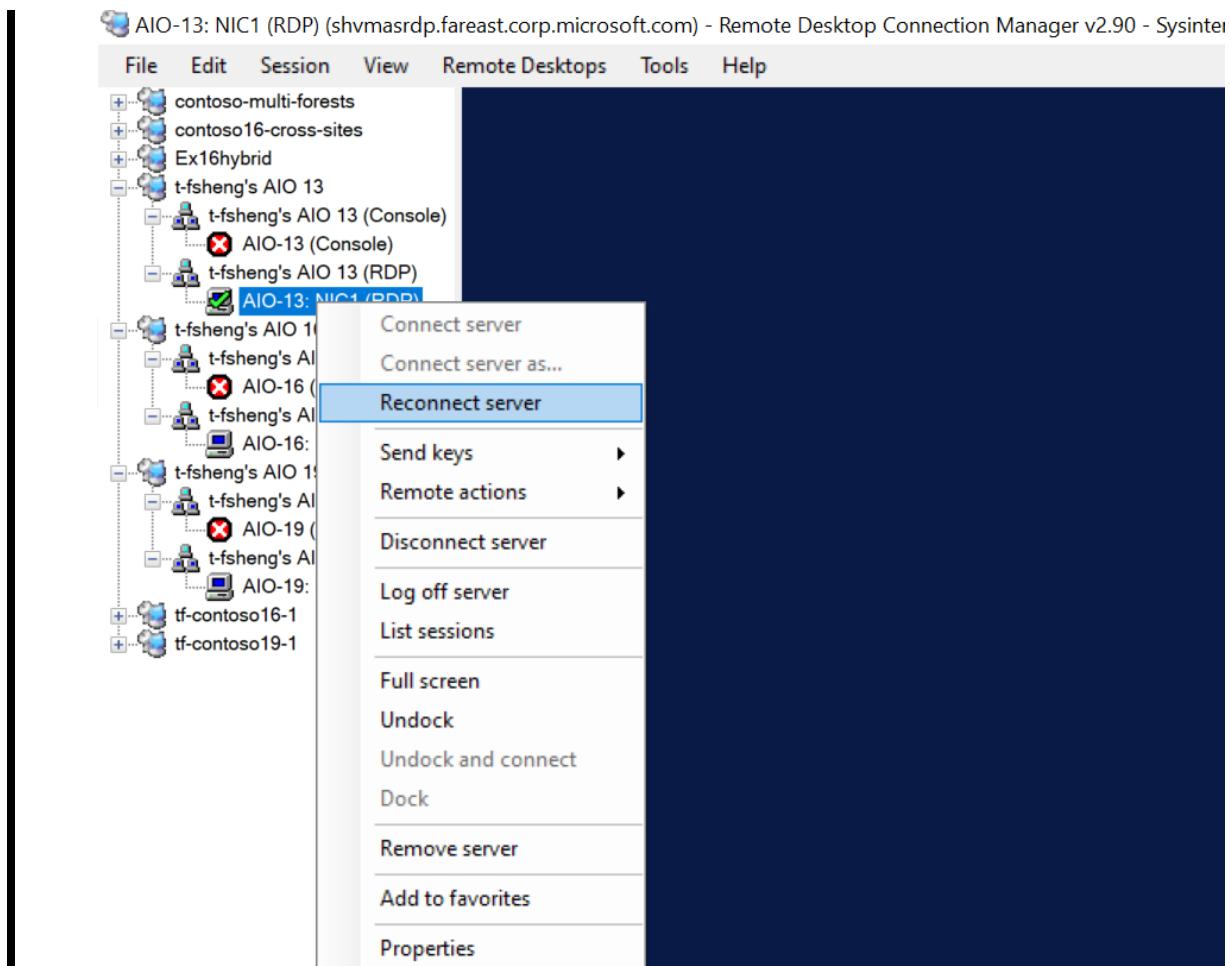
#### **Step 4: pending the ISO.**

Double-click on the <Disk Image File> and let the ISO stay pending.



**When you finish the above steps, restart your system and reconnect. Do the following actions:**

- Restart the system: **WIN icon --> Power --> Restart.**
- Click on the AIO at the left side of console and click on **Reconnect server.**



## Step 5: install windows features.

Details are different due to different OS system on AIO.

For more information of AIO-13's preparation, see [Step 5 in AIO-13 LAB SETUP](#).

For more information of AIO-16's preparation, see [Step 5 in AIO-16 LAB SETUP](#).

For more information of AIO-19's preparation, see [Step 5 in AIO-19 LAB SETUP](#).

## Step 6: install exchange server.

Details are different due to different OS system on AIO. **This step is the same on AIO-13 and AIO-16.**

For more information of AIO-13's preparation, see [Step 6 in AIO-13 LAB SETUP](#).

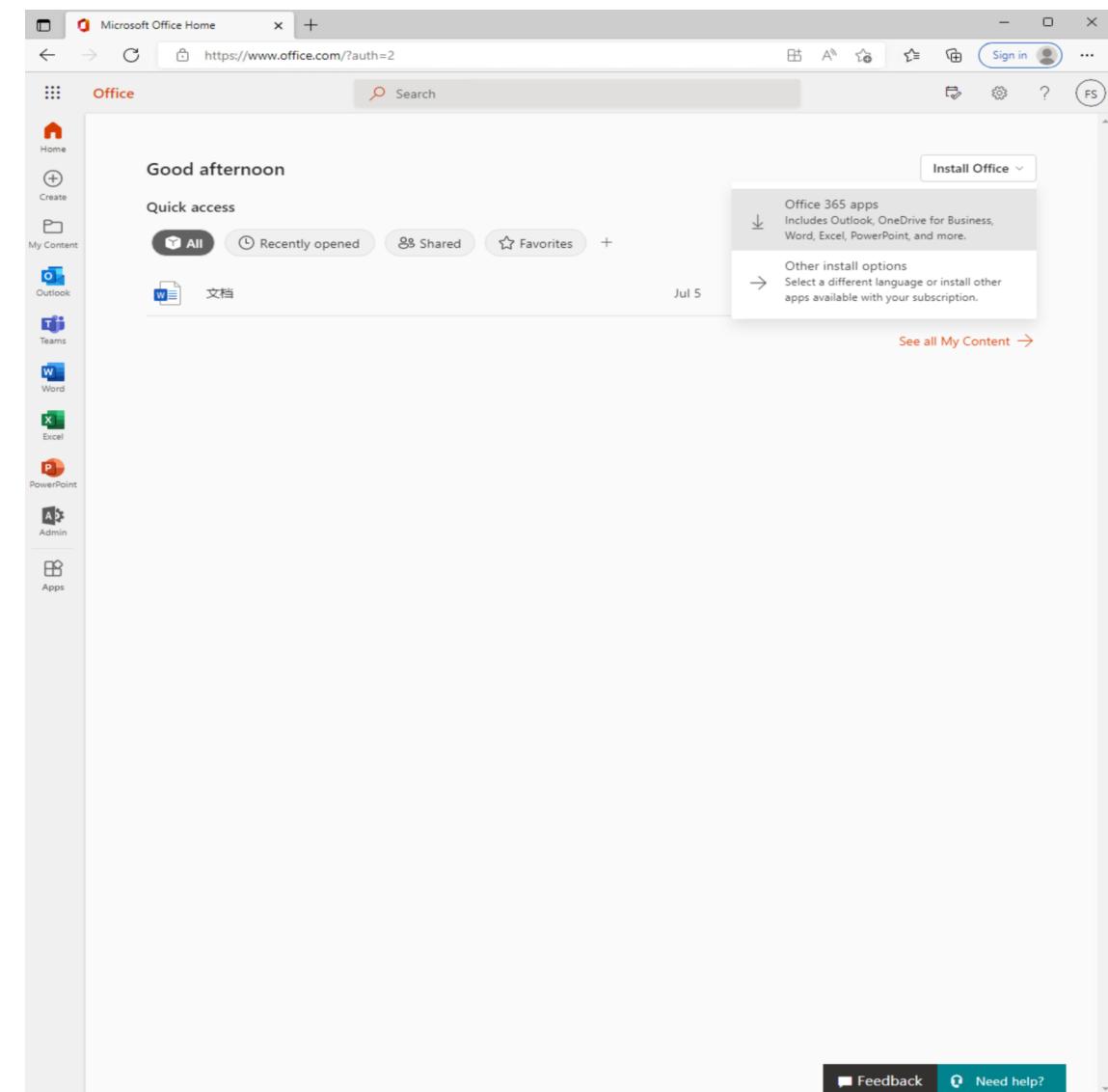
For more information of AIO-16's preparation, see [Step 6 & Step 7 in AIO-16 LAB SETUP](#).

For more information of AIO-19's preparation, see [Step 6 & Step 7 in AIO-19 LAB SETUP](#).

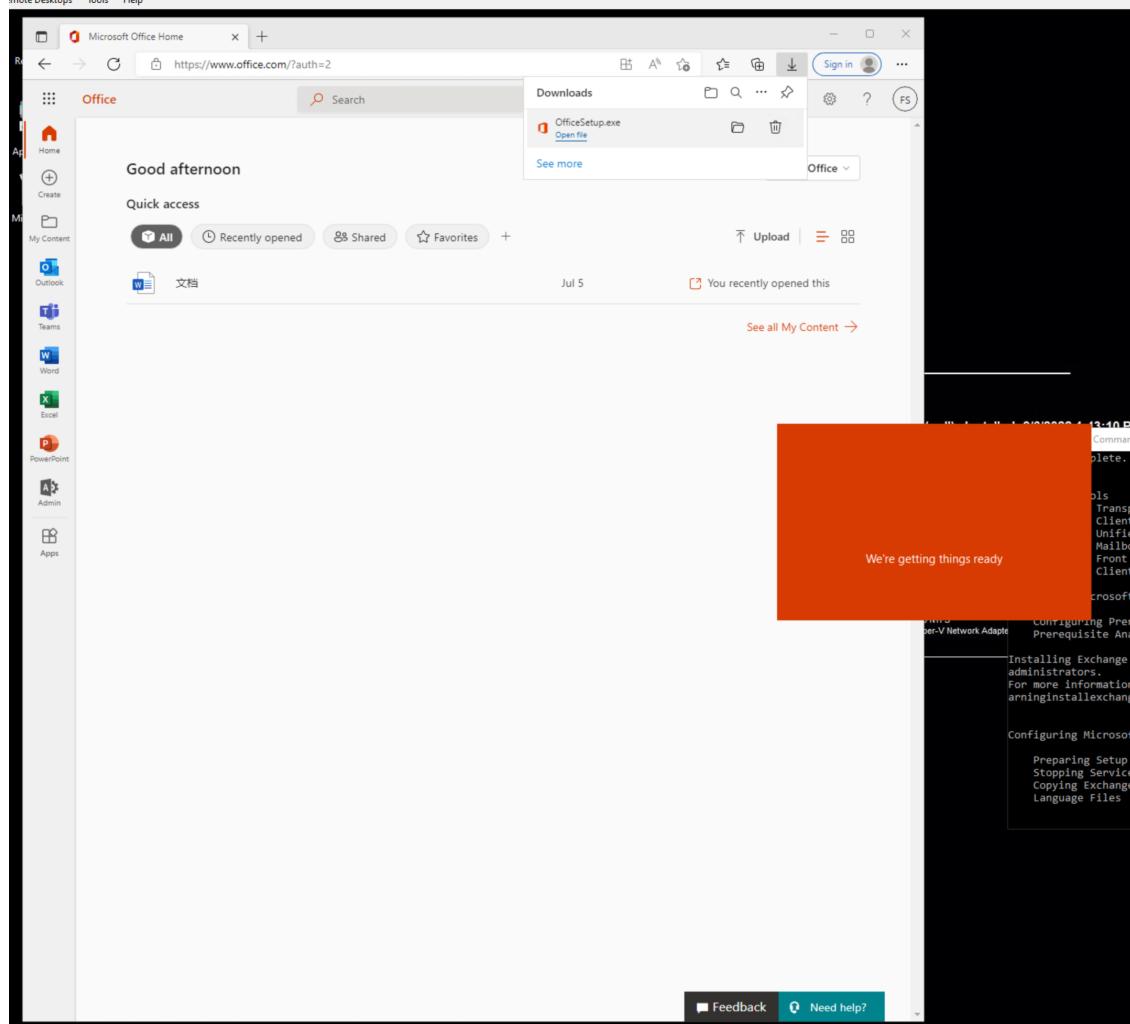
## Step 7: install o365.

7.1. Open [Office 365 Login | Microsoft Office](#) with Edge and sign in as  
<alias>@xxx.onmicrosoft.com.

7.2. Download o365 apps.



### 7.3. Install.



Please stay online while Office downloads

We'll be done in just a moment.

Then the **outlook** is installed.

## Preparation mentioned in Overview.

- Configure Language packs.  
\*\* See more details in [Configure Language packs](#)

- Make sure Outlook Anywhere enabled.  
\*\* See more details in [Make sure Outlook Anywhere enabled](#)
- Make sure OAB and EWS enabled.  
\*\* See more details in [Make sure OAB and EWS enabled](#)
- Install Network Monitor.  
\*\* See more details in [Install Network Monitor 3.4](#)
- Install Fiddler.  
\*\* See more details in [Use Fiddler](#)
- Install Telnet25.  
\*\* See more details in [Install Telnet25](#)
- Install ExTRA.  
\*\* See more details in [Install ExTRA](#)
- Disable CRL check.  
\*\* See more details in [Disable CRL check](#)
- Make sure ActiveSync device connectivity enabled.  
\*\* See more details in [Enable ActiveSync device connectivity](#)
- Prepare additional disk for Backup issue.  
\*\* See more details in [Prepare additional disk for Backup issue.](#)
- Prepare backup for databases on AIO.  
\*\* See more details in [Prepare backup for databases](#)
- Create snap shots for AIO.  
\*\* See more details in [Create snap shots](#)