EXCHANGE
Servers are installed with GUI

>AD server
>Exchange server
>Pfsense
>Programs;
- . Net framework 4.7/4.8
- Visual C++ 2013
- Install-windowsfeature RSAT-ADDS
- Unified communications managed API 4.0 runtime
- URL rewrite

AD server x1

| COMPUTER name	ad01
domain	Mstile.com
Hardware	Hard disk:127 gb RAM :2048 CPU: 2
network	IP Address: 192.168.100.10 default gateway: 192.168.100.1 Dns: 8.8.8.8
Role:	Active directory

Exchange server:

COMPUTER name	ex01
domain	Mstile.com
Hardware	Hard disk:127 gb RAM :5000 CPU: 2

	Hard disk:100gb hard disk which is 100 gb i have put these of the following programs: ● Visual C++ 2013 ● . Net framework 4.7/4.8 ● Unified communications managed API 4.0 runtime ● URL rewrite DVD:exchange.iso
network	IP Address: 192.168.100.11 default gateway: 192.168.100.1 Dns: 192.168.100.10

Pfsense:

pfsense should be set with rules i.e unclick the reserved network
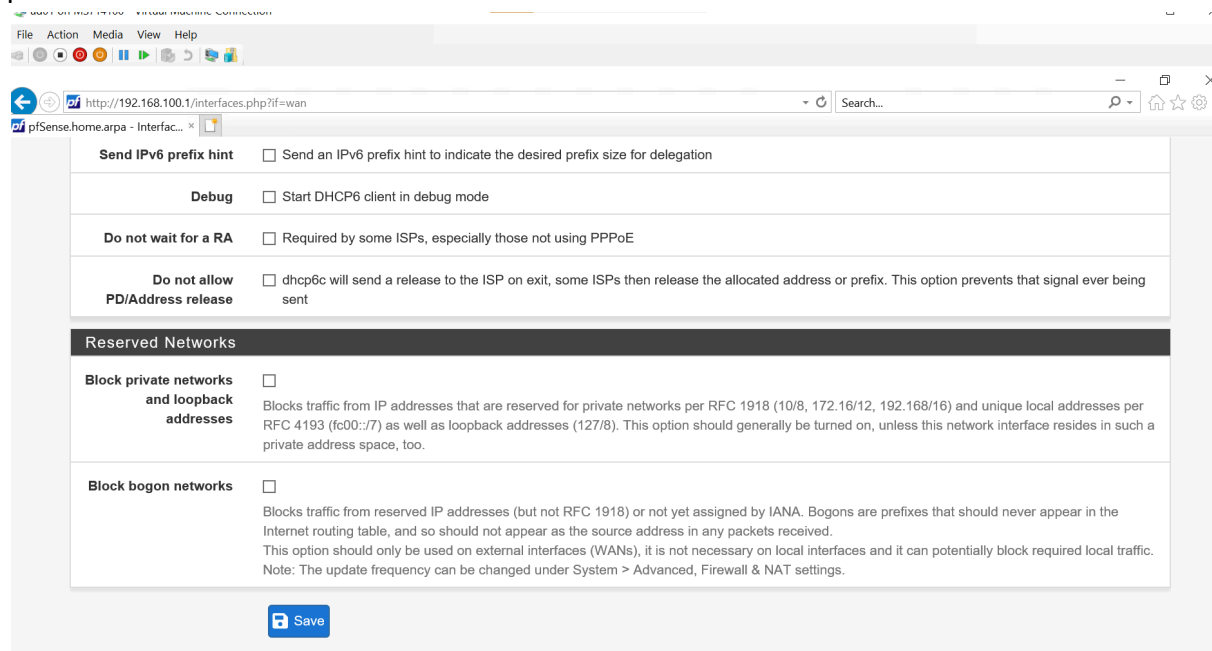
and then set interface>NAT

Firewall / NAT / Port Forward

Port Forward	1:1	Outbound	NPt

Rules

			Interface	Protocol	Source Address	Source Ports	Dest. Address	Dest. Ports	NAT IP	NAT Ports	Description	Actions
☐	✔	⤧	WAN	TCP	*	*	*	443 (HTTPS)	192.168.100.11	443 (HTTPS)		✏️ 🗐 🗑️

⬆ Add   ⬇ Add   🗑️ Delete   💾 Save   ➕ Separator

Destination	☐ Invert match.	Any ⌄ Type	/ ⌄ Address/mask
Destination port range	HTTPS ⌄ From port	Custom	HTTPS ⌄ To port	Custom

Specify the port or port range for the destination of the packet for this mapping. The 'to' field may be left empty if only mapping a single port.

Redirect target IP	Single host ⌄ Type	192.168.100.11 Address

Enter the internal IP address of the server on which to map the ports. e.g.: 192.168.1.12 for IPv4
In case of IPv6 addresses, in must be from the same "scope",
i.e. it is not possible to redirect from link-local addresses scope (fe80:*) to local scope (::1)

Redirect target port	HTTPS ⌄ Port	Custom

Specify the port on the machine with the IP address entered above. In case of a port range, specify the beginning port of the range (the end port will be calculated automatically).

and then save.

*HTTPS://wanaddress/owa

always use

Step1#

>Since AD server have AD roles and are connected with IP addresses and also we have Exchange server connected dns with ad server.Remember to shut down the firewall on both server.turn off the all three domain,publick,private.
so in EXchange server we will mount the hard disk and start installation of the programmes.

- Visual C++ 2013
- . Net framework 4.7/4.8
- Unified communications managed API 4.0 runtime
- URL rewrite
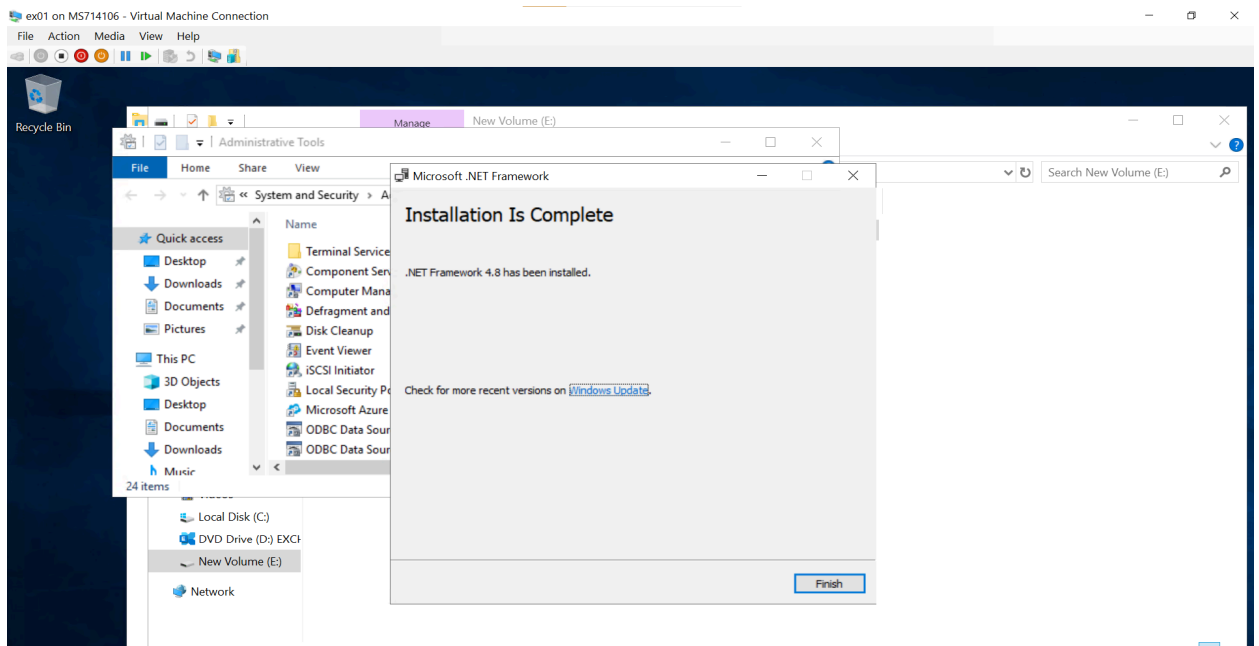
>.net framework:next ,finish and then restart the system.

>visual code++2013

>microsoft unified communication managed API 4.0
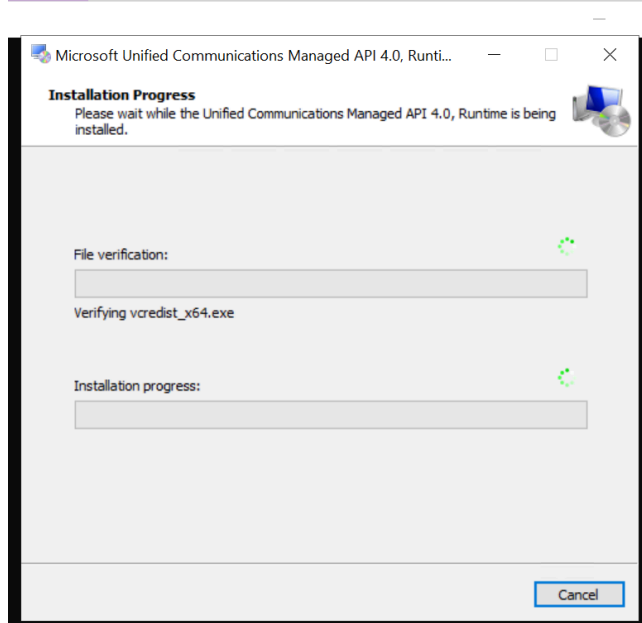
now we need to Install the Remote Server Administration Toolkit and other required components via elevated PowerShell using the below command.

- ○ Install-WindowsFeature Server-Media-Foundation,
  NET-Framework-45-Features, RPC-over-HTTP-proxy, RSAT-Clustering,
  RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt,
  RSAT-Clustering-PowerShell, WAS-Process-Model, Web-Asp-Net45,
  Web-Basic-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing,

Web-Dyn-Compression, Web-Http-Errors, Web-Http-Logging,
Web-Http-Redirect, Web-Http-Tracing, Web-ISAPI-Ext, Web-ISAPI-Filter,
Web-Lgcy-Mgmt-Console, Web-Metabase, Web-Mgmt-Console,
Web-Mgmt-Service, Web-Net-Ext45, Web-Request-Monitor, Web-Server,
Web-Stat-Compression, Web-Static-Content, Web-Windows-Auth, Web-WMI,
Windows-Identity-Foundation, RSAT-ADDS

>after that we will install a rewrite module. and then restart the system.

Install exchange server 2019

so now we need to install the setup. but before that we need to prepare the schema and
Active directory.

so we can go to powershell and use invoke-command in our physical computer or we can
use powershell directly from an exchange server.

```
 .\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON /PrepareSchema
    .\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON /PrepareAD
/OrganizationName:"Mstile"
```

now click on dvd and open exchange.iso file .then go to Setup and start the process
micrsoftexhange.iso>setup>license>i agree>next>use recommended settings>Choose
Mailbox Role and check 'Automatically install Windows Server roles and features
required to install Exchange Server.' Then click 'next´>Select the location where you
want to install the Exchange Server and click 'next.' Prefer location other than the
system drive.i.e (e,f…)>write the organization name:"mstile">check the readiness
and then install.
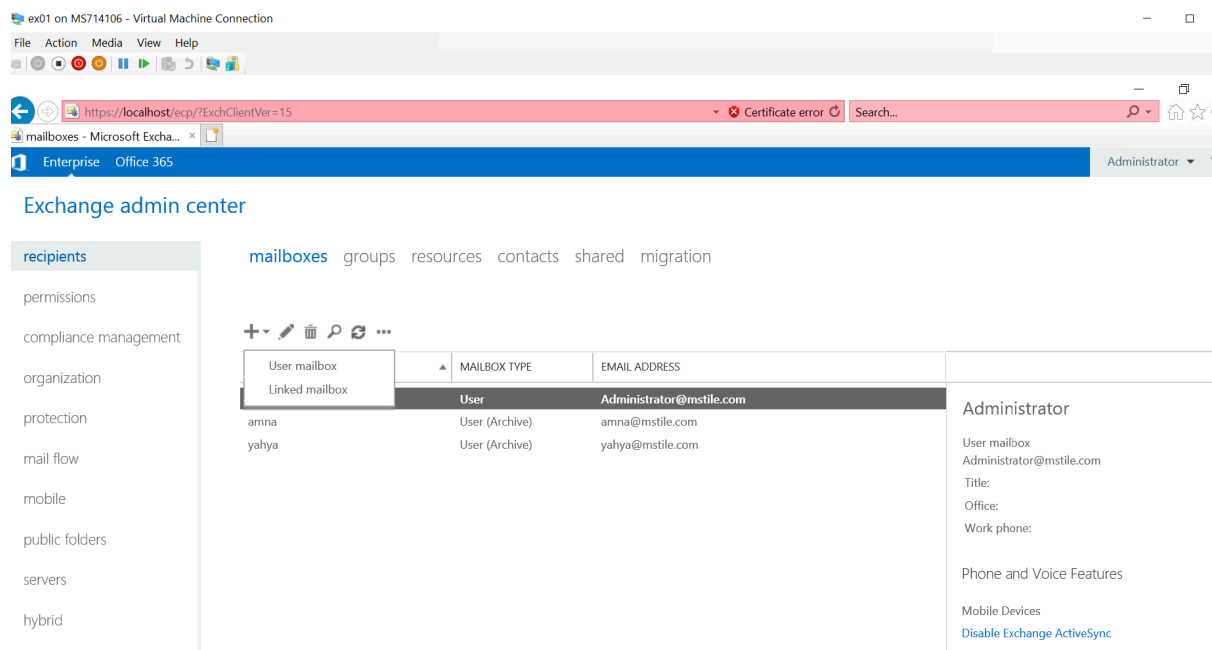
SETUP OUTLOOK!

Login to EAC(exchange admin center) and go to servers>edit>outlook anywhere>negotiate>your external and internal url "ex01.mstile.com."
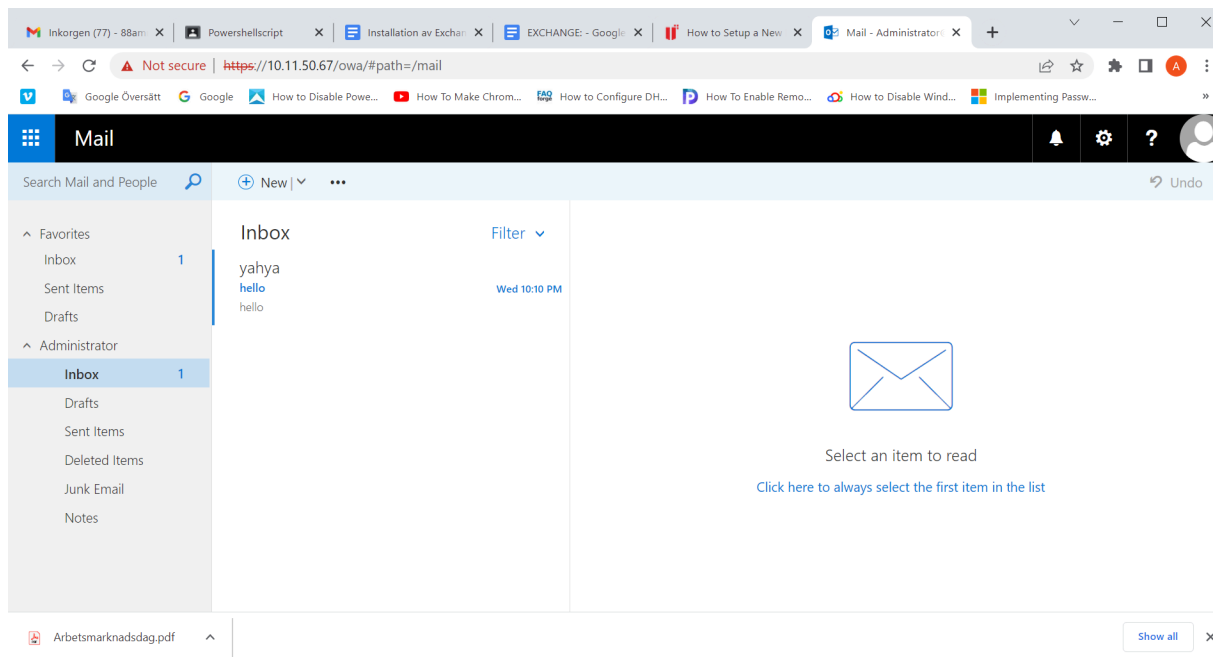
setting service connection point:SCP

SCP>powershell of exchange management shell>
Set-ClientAccessService –Identity NameOfExchange2019Server –AutoDiscoverServiceInternalUri
https://mail.YourDomainName.com/Autodiscover/Autodiscover.xml

After fixing the pfsense firewall rules use the wan address on your local host to see are we able to connect with owa.

Ritning på demomiljö se ut: