Exchange 2013 DAG and upgrade to Exchange 2016

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Overview

In this Assignment we will be configuring Exchange 2013 on 2 Servers with a **DAG** setup. The initial prerequisites will be installed from powershell. Once Exchange 2013 is up and running we will need to configure most things in **Exchange Management Shell**.

Requirements

- windows server 2012 R2 (2)
- 4GB RAM
- 2 CPU
- 2 NICS
- Join the servers to a domain
- Install VMware Tools
- Windows Updates
- An extra E:/ drive of at least 80GB

Once you are finished with the few requirements we can begin with the initial setup for windows server 2013. First you need to download exchange 2013 from microsoft official site.(https://www.microsoft.com/en-us/evalcenter/evaluate-exchange-server-2013). After you're finished downloading the exe, find where it is and extract it. Now before we begin the setup for exchange we must have all the prerequisites installed.

Prerequisite commands

Install-WindowsFeature AS-HTTP-Activation, Desktop-Experience, NET-Framework-45-Features, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, Web-Mgmt-Console, 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

setup /PrepareSchema /IAcceptExchangeServerLicenseTerms
setup /PrepareAD /OrganizationName:RAT /IAcceptExchangeServerLicenseTerms

Once you have executed all the prerequisite commands and restarted the server, look for the file **setup.exe** in the file you extracted earlier and execute it. Now we can begin the installation of exchange 2013. Before the installation make sure add 2 directories in your **E** drive for the storage, and when asked to select a location in the **setup.exe** select the folders you added in the **E** drive. Leave everything else in the installation default, and click **Next**.

Once you are inside **Exchange admin center** as an admin user, go to **Recipients**, **mailboxes** click the **+** and add some users. To see if the users are actually added go to your **Exchange Management Shell** and type **Get-Mailbox**.

To change the database name go to **EMS** and Type **Get-MailboxDatabase -Identity "Mailbox Database 123456789" | set-MailboxDatabase -Name "new name"**. To find the information about the current database in EAC go to **Servers**, **Database**, and it will show your **Database** information(or "Get-MailboxDatabase" in **EMS**).

Complete up to this point on the second Exchange server!

Senders/Receivers

Update Exchange 2013

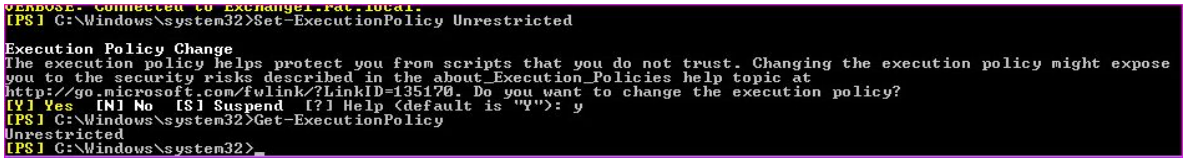
To see your Exchange to version go to **EMS** and type:
Get-ExchangeServer | Format-List Name, Edition, AdminDisplayVersion

Prerequisites

Type in **EMS**

Set-ExecutionPolicy Unrestricted

Type “**Y**” and hit **enter**
Then type **Get-ExecutionPolicy Unrestricted**



Now go download Cumulative Update 20 for Exchange Server 2013 (https://www.microsoft.com/en-us/download/details.aspx?id=56717&6B49FDFB-8E5B-4B07-BC31-15695C5A2143=1).

Type in **EMS**
setup.exe /PrepareSchema /IAcceptExchangeServerLicenseTerms

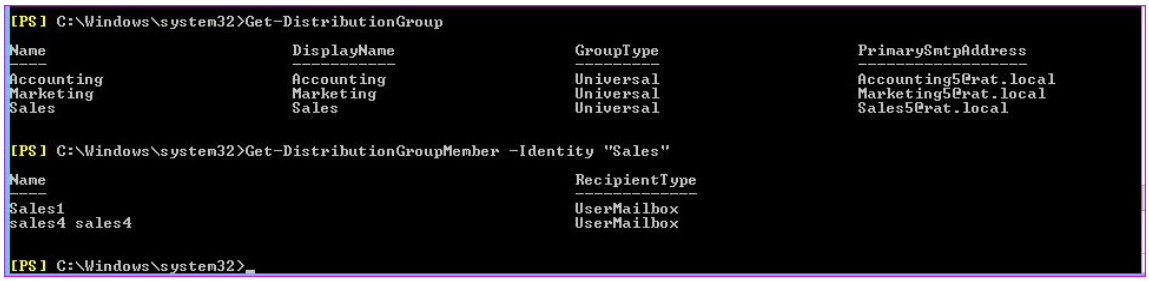
Once that command has completed type:
setup.exe /PrepareAD /IAcceptExchangeServerLicenseTerms

In PowerShell Install clustering
Install-WindowsFeature RSAT-Clustering-CmdInterface

Now go into file explorer and execute the setup.exe inside the CU 20 directory you extracted earlier, this will install the latest 2013 Cumulative Update.

Adding Users To A Group

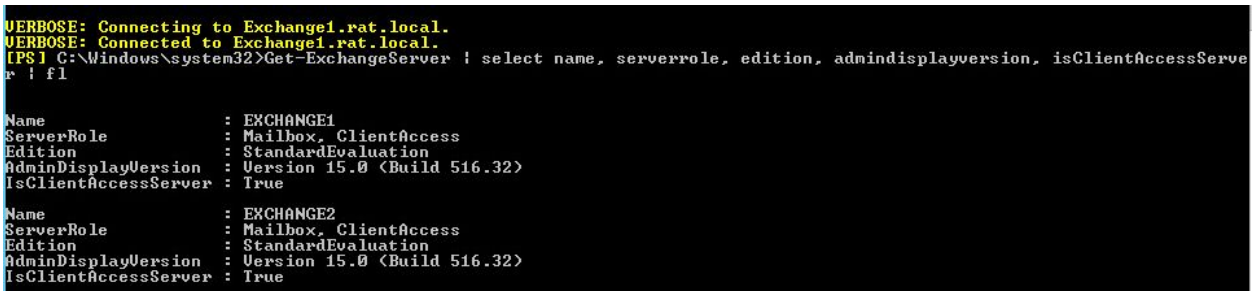
Adding a user to a group in **EMS** is Similar to adding a user to an OU,
First create the Distributiongroup:
New-DistributionGroup -Name “Sales”
Then add a user to the newly created group:
Add-DistrubutionGroupMember -Identity “Sales” -Member “sales1@rat.local”



Verify via the EMS (Exchange Management Shell) that the Client Access and Mailbox Roles are installed properly

Run the following command to see the Exchange servers and what Server Roles they are running:

Get-ExchangeServer | select name, serverrole, edition, admindisplayversion, isClientAccessServer | fl



Setup Local Emailing

First go to **Mail flow** > **Accepted domains** click **+** give the new Accepted Domain a name and under **Accepted domain** type in ExchangeDBName.Domain.local and click **Save**. Make sure to add both Exchange instances and your actual domain to the accepted domains.

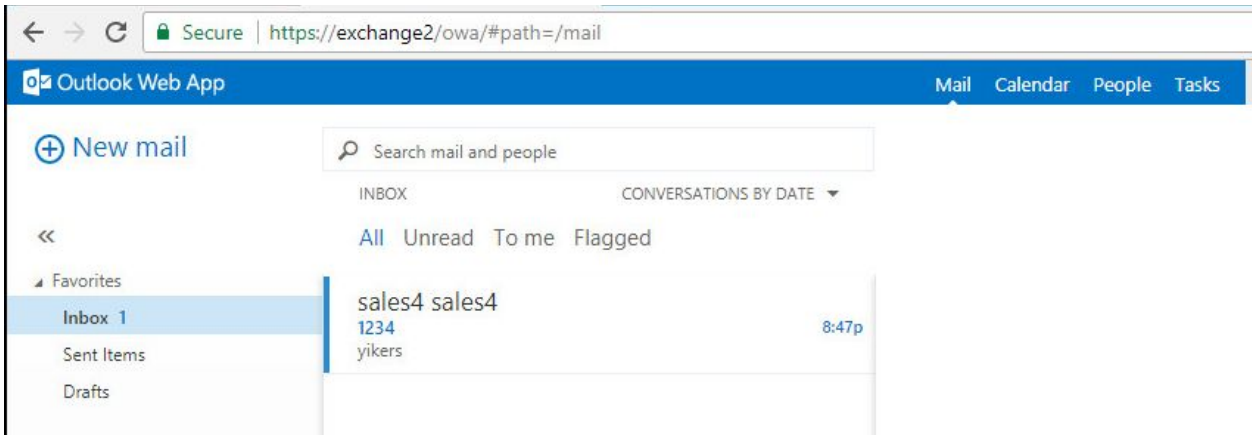
Next go to **Send Connectors** and click **+**, type in a **Name** and select **Internal**, then click **Next**. On the next page click **+** and type **Exchange1.rat.local**, then **save**. Then click **Next**. On the next page select **Exchange Server authentication**, click **Next**. On this page click **+** and under **FQDN** type ***** then click **save**. On the next page click **+** then select **EXCHANGE1** and click **Ok**, then click **Finish**. **Make sure to repeat this but for Exchange2.**

Accessing the Outlook Web App (OWA)

To access the **Outlook Web App** go to the DNS name for the Exchange server you wish to login with a ***/owa*** at the end:

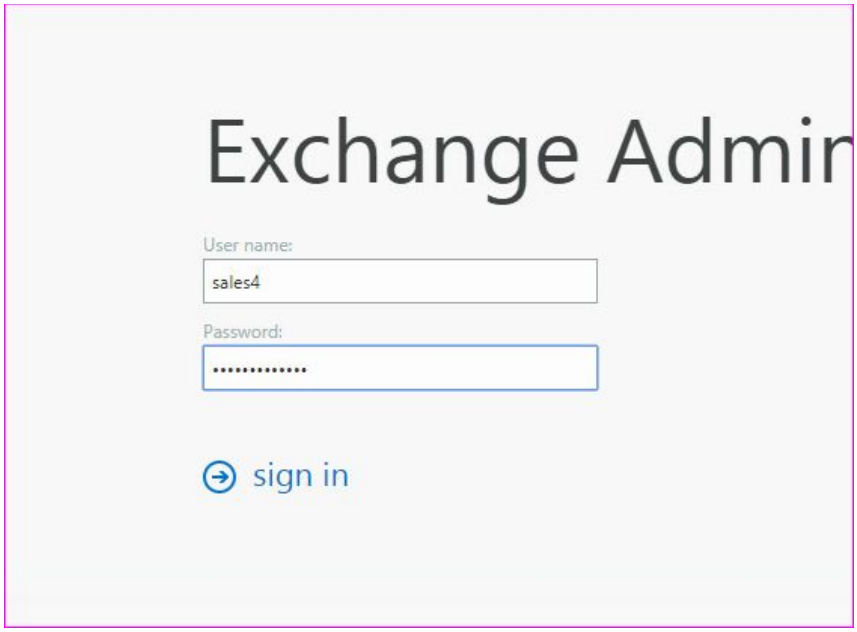
https://exchange1/owa
https://exchange2/owa

From here you can login to your mailboxes and **view/send mail.**



Alias

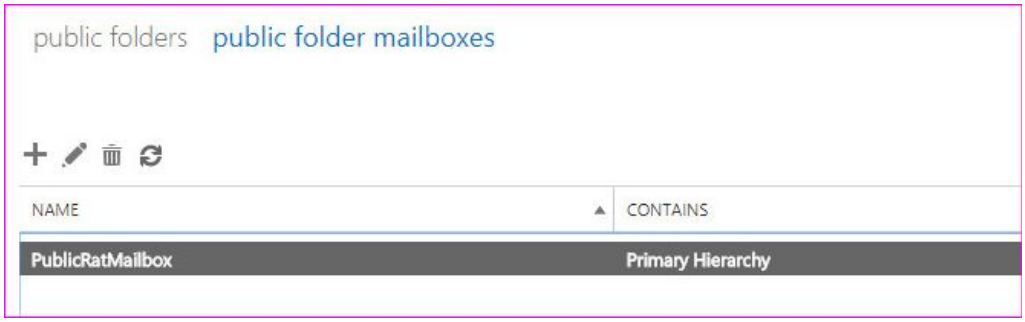
To add an Alias go to **Server** > **Virtual directories** and double click **owa**, go into the **Authentication** tab, and browse for your domain name, click **save**, then do this for your other server. Now you can log into **OWA** without specifying rat/user. Now in **EMS** type **iisreset**.



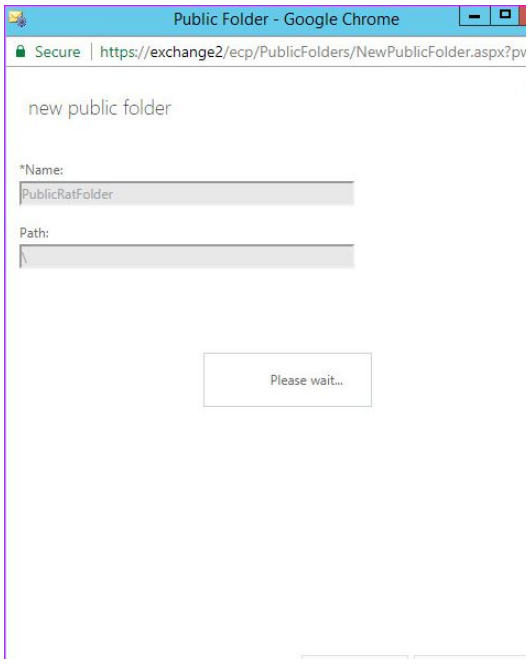
Public Folders

First create a public folder type **EMS**:
New-Mailbox -PublicFolder -Name PublicMailboxname

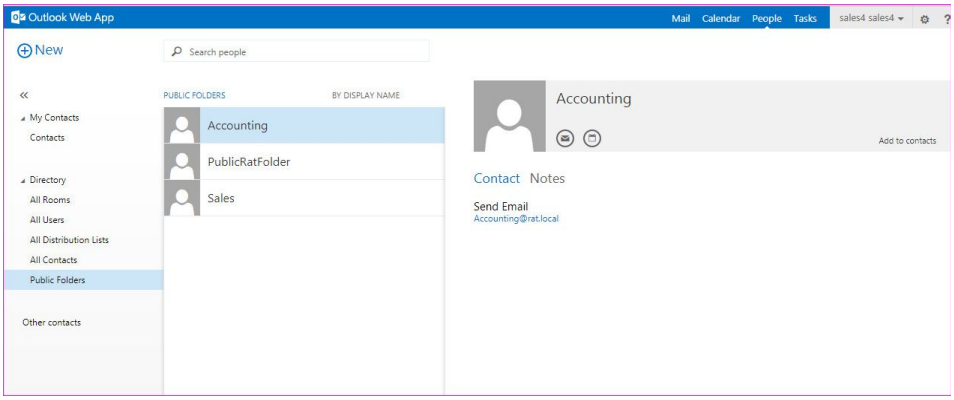
Now in OWA after a refresh your public folder will show up.



Click the **+** to add subdirectories with permissions of your choice, I choose the administrator to have all privileges, and normal end users to have only permissions of the things they've created.



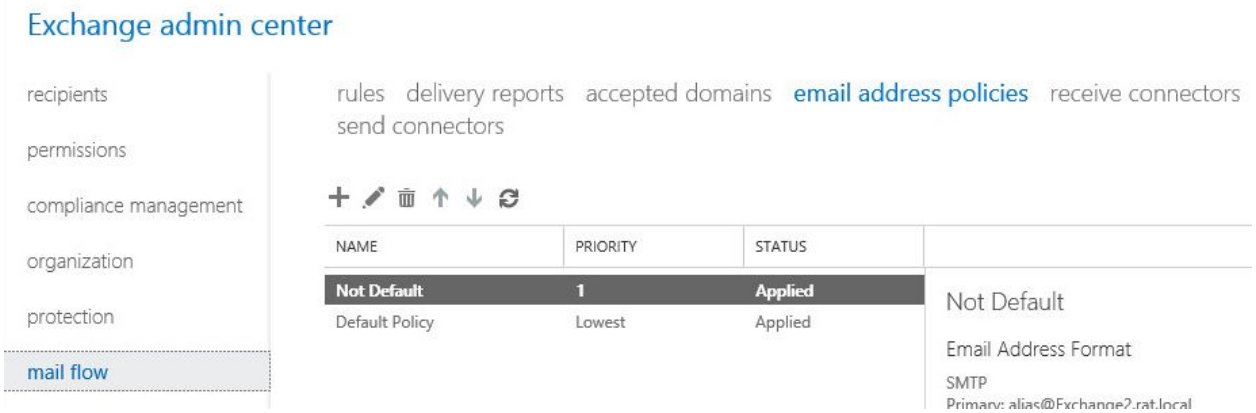
You can access/use the Public folders you created by logging on to a user you specified to be allowed to use public folders, and going to **People** > **Public Folders** in **OWA**.



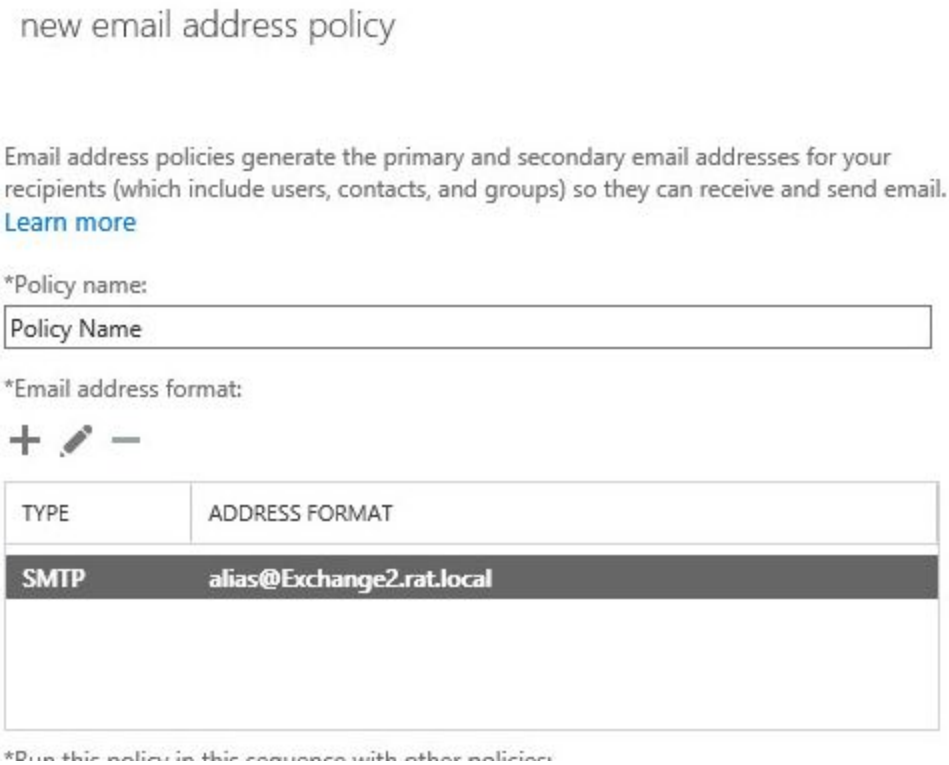
Email Address Policies

You can have different domains that email will be sent from by setting up **Email Address Policies**.

To do this go to your **Exchange Admin Center** and select **Mail Flow-> Email Address Policies**

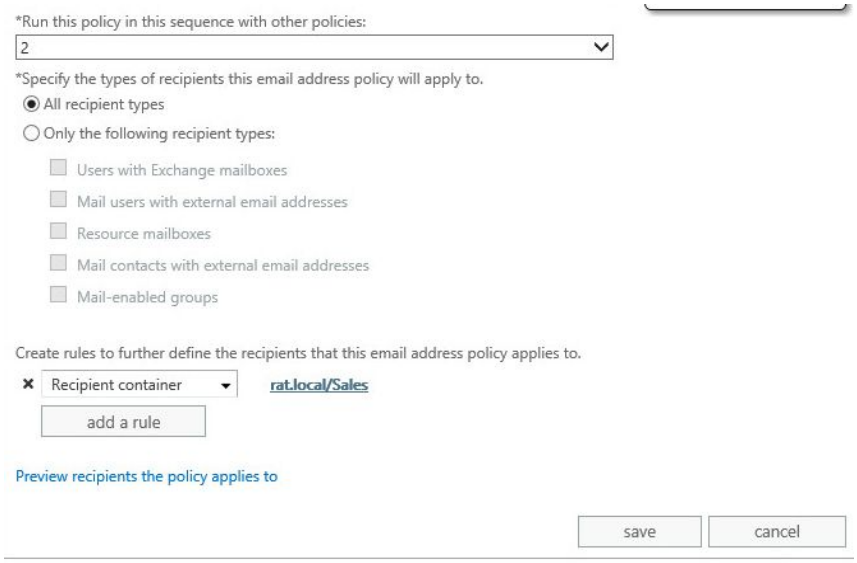


Create a new policy with the + button and give it a name, as well as specify the **Email address format** for the users you wish to apply this policy to.

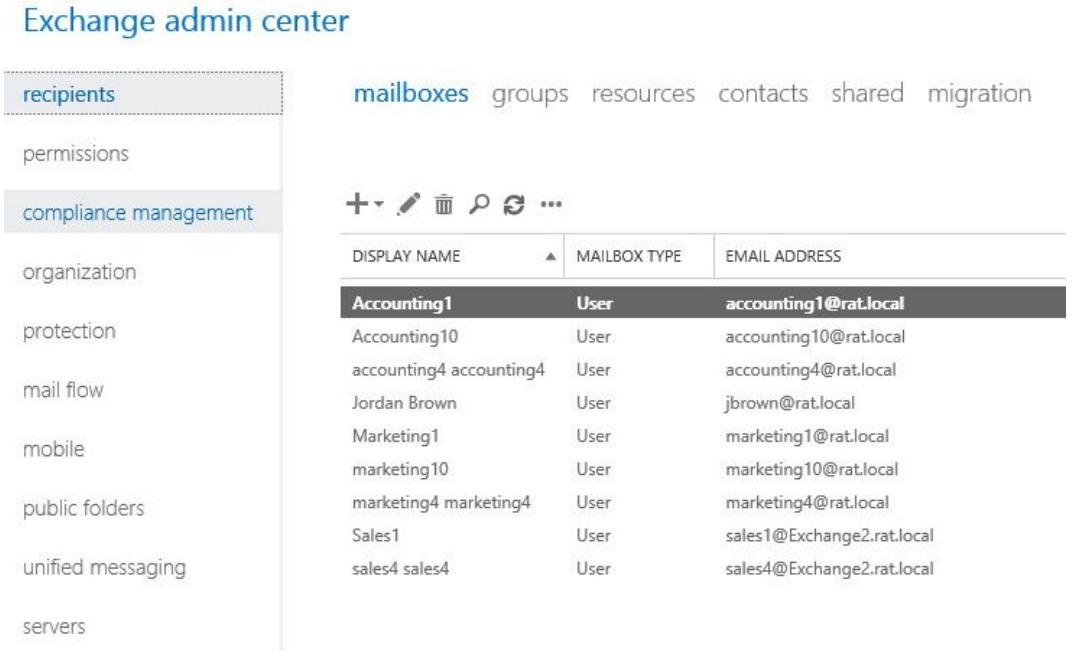


In our case we chose our **Exchange2.rat.local** but you could set this to anything as long as there is DNS records for it.

Specify **All Recipient Types** and then **Add a rule** at the bottom for a **Recipient Container** selecting the **OU** containing the users you wish to apply the policy to, in my case the **Sales OU.**

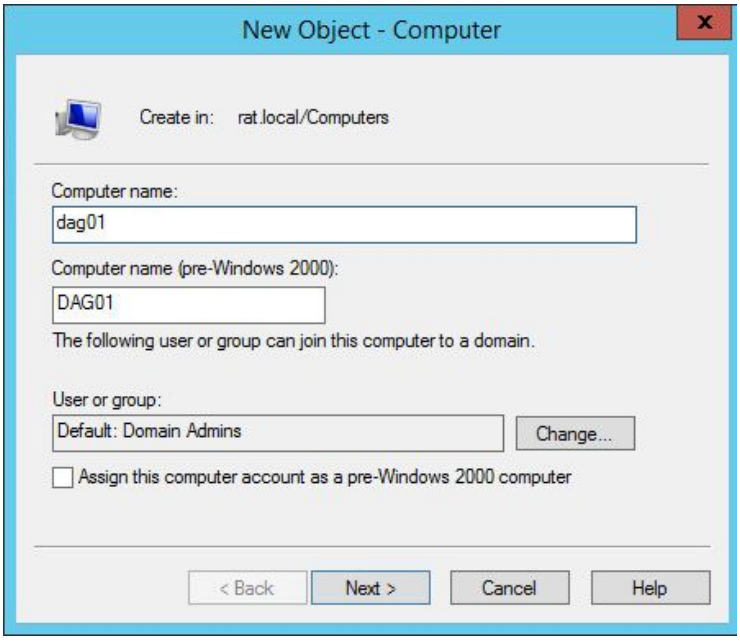


After that, make sure the policy is applied and take a look at your **Mailboxes** to see if the changes took effect, and as you can see our Sales users now have different domains that their emails are being sent from.

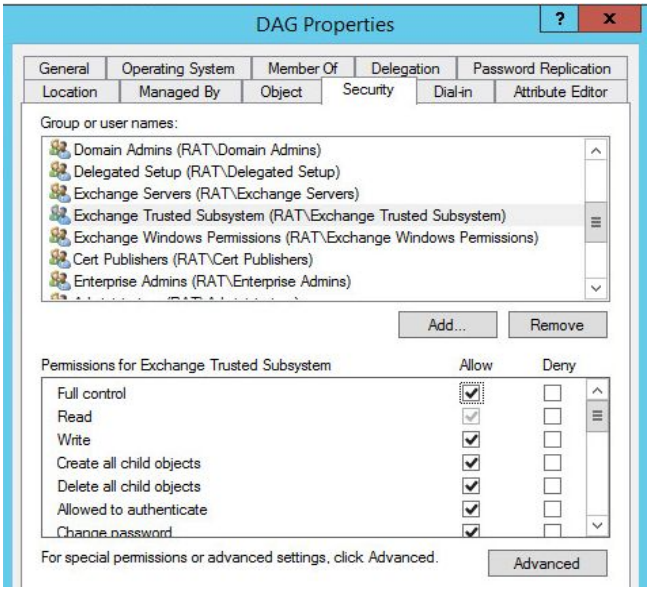


DAG

To setup a **DAG**, start on your **Domain Controller**, and go to **Active DIrectory Users and Computers**. Make sure you allow advanced options in the view tab.
Open your domain, and go to **Computers** where we'll create a computer object for the **DAG**.

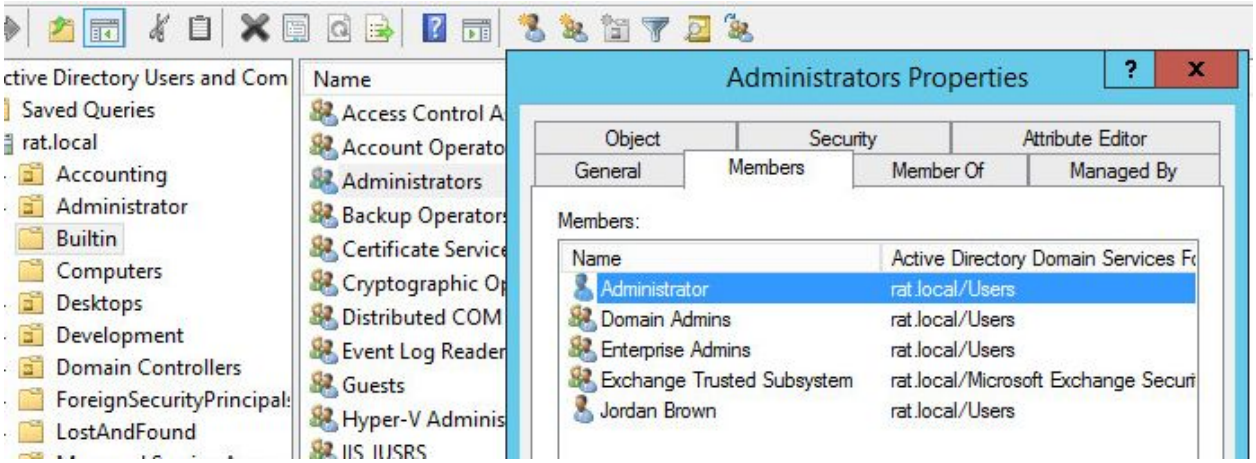


Name it **dag01** and click OK and Finish to create it. Go into Properties->Security of **dag01** and add **Exchange Trusted Subsystem** with **Full Control**. Also add your **1st Exchange Server** to this, also with **Full Control.**



Then disable the computer object after by right clicking it and selecting **Disable account**.

Next go into the **Builtin** section of ADUC and select the Administrators group. Add **Exchange Trusted Subsystem** to the Administrators.

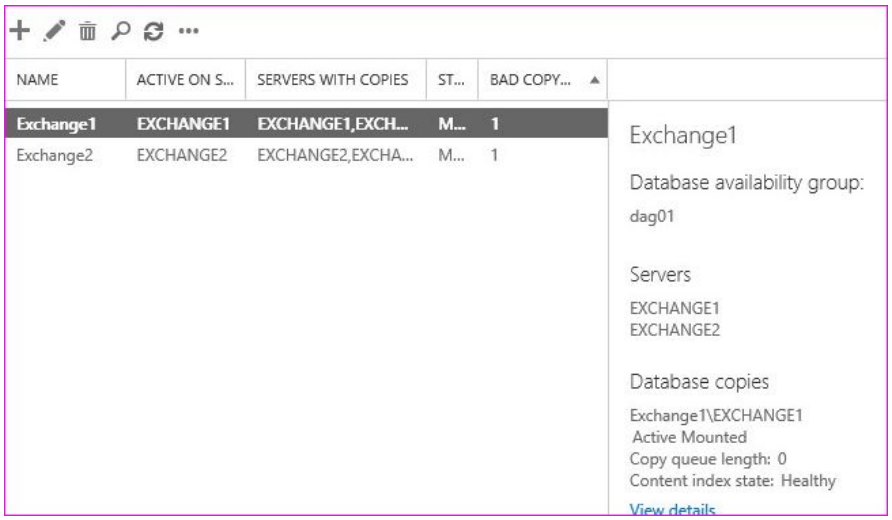


Now on this server(**DC1** in our case), create a **dag01 directory** and remember the path as we will need it.
Example:
F:\dag01

Once you have configured the initial start up log into **OWS** as an admin and go to **server** > **database availability groups** and click the **+**.

Type in what you want the **DAG**'s name to be, type in the witness server (your **DC**), specify the directory you created on your **DC**, and associate this **DAG** with an IP. Click **save**.

Now right above the DAG you've created click **Manage DAG Membership**, inside click the **+**, add both exchange servers, and click **save**. once that is finished go to the **databases** tab and click **... add database copy browse** for the mailbox server and select a host, click **save**. Repeat the part inside the database tab again for the second server.



Summary

This project turned out to be quite troublesome, the first half where you need to get Exchange installed, and the Cumulative update worked just fine; but the second half where you try to get **DAG** up and running was full of random errors. Also setting policies for separate domains was configured, but emails outside our traditional domain (rat.local) stopped receiving email.

Resources

- https://www.youtube.com/watch?v=_A2pXVq9tN4
- https://www.youtube.com/watch?v=gmj2VX2bM0k
- https://technet.microsoft.com/en-us/library/jj651147(v=exchg.160).aspx
- http://www.mustbegeek.com/configure-dag-in-exchange-2013/
- https://technet.microsoft.com/en-ca/library/bb124423(v=exchg.150).aspx#BKMK_Configuring