Deploy the client as an Azure RemoteApp program

Microsoft Azure RemoteApp helps you provide secure, remote access to applications from many different user devices. This white paper walks you through the process of deploying the Microsoft Dynamics AX 2012 R3 client as a RemoteApp application.

White paper
Haytham Said
November 2015

Send feedback.
www.microsoft.com/dynamics/ax
Contents

Prepare the image 4

Import the template image (Optional) 10

Create a hybrid deployment of RemoteApp that uses a VNet (Standard Plan and Premium (HA)) 13

Select the imported image, or import directly from the image repository 14

Create an Azure AD directory 16

Sync users from your local AD DS directory to Azure AD 17

Download the RemoteApp client and connect to AX 2012 R3 26
Deploy the client as an Azure RemoteApp program

Microsoft Azure RemoteApp brings the functionality of the on-premises Microsoft RemoteApp program, which is backed by Remote Desktop Services, to Azure. Azure RemoteApp helps you provide secure, remote access to applications from many different user devices.

When you move RemoteApp to Azure, you can take advantage of the storage, scalability, and global reach of Azure without having to worry about a complex on-premises configuration. Microsoft provides maintenance of Azure, which ensures its reliability and lets you focus on more important issues, such as creating the best apps for your business. Another advantage of Azure RemoteApp is its accessibility—your users can access RemoteApp programs from Microsoft Windows, iOS, Mac OS X, and Android devices. They can use your apps in the environment that they prefer, while you use the Azure portal to manage those apps.

Azure RemoteApp lets IT teams empower their workforce to use any app that can run on Microsoft Windows Server 2012 R2 on a variety of devices—and all of this is based in the Azure cloud, where it can easily be scaled and updated.

Microsoft Dynamics AX 2012 R3 is a business solution that supports both operational and administrative processes of organizations. This single solution comes with localizations—in the box—for 36 countries/regions. Microsoft Dynamics AX has a specialized focus on manufacturing, retail, service industries, and public sector, and includes capabilities such as financial management, manufacturing, retail, business intelligence and reporting, supply chain management, and human capital management.

AX 2012 R3 is certified to run on the Azure infrastructure as a service (IaaS) platform. By using Microsoft Dynamics Lifecycle Services (LCS), you can deploy several AX 2012 R3 topologies to your Azure cloud in just a few clicks.

One of the great features of Azure RemoteApp is that you can plug it into your infrastructure and deploy the Microsoft Dynamics AX client. This white paper walks you through the process of deploying the AX 2012 R3 client as an Azure RemoteApp application. It includes sections for the following steps:

1. Prepare the image.
2. Import the template image into the RemoteApp template images repository.
3. Create the collection.
4. Select the imported image, or import it directly from the image repository.
5. Create an Azure Active Directory (Azure AD) directory.
6. Sync users from your local Active Directory Domain Services (AD DS) directory to Azure AD.
8. Add the Host A record in your Active Directory Domain Name System (DNS).

For Azure RemoteApp plans and pricing, see the RemoteApp Pricing web page.
Prepare the image

This white paper assumes that you have already deployed AX 2012 R3 CU8 or CU9 by using Lifecycle Services.

1. On your computer, install Azure PowerShell and Open PowerShell ISE. (For instructions, see How to install and configure Azure PowerShell.)
2. Run the Add-AzureAccount command, and then enter your account credentials.
3 Go to the Azure portal, and make a note of your LCS-created storage account name, subscription name, and LCS-created cloud service name. (We recommend that you choose all of these after LCS deployment. Make sure that your Cloud service and storage account are deployed in the same Region.)

<table>
<thead>
<tr>
<th>cloud services</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
</tr>
<tr>
<td>AX2012R3-Demo</td>
</tr>
<tr>
<td>AX2012R3-Demo-0001</td>
</tr>
<tr>
<td>AX2012R3-DevTest-AUTOAXDEV-D</td>
</tr>
<tr>
<td>AX2012R3-DevTest-DEVMSDS-D</td>
</tr>
<tr>
<td>AX2012R3-DevTest-TSHSDS-D</td>
</tr>
</tbody>
</table>

4 In Notepad, edit the script that is provided, and enter the information that you noted in the previous step. You must also uncomment the release you want to deploy (CU8 or CU9).

```powershell
# Make sure your storage account and the selected Cloud Service are in the same Region
# The image will be automatically deleted after the capture.

# Todo: Fill in your storage account name that is created by LCS
$staccount = "YourStorage account"

# Todo: Fill in your subscription name
$subscr = "YourSubName"

Select-AzureSubscription -SubscriptionName $subscr -Current
Set-AzureSubscription -SubscriptionName $subscr -CurrentStorageAccountName $staccount

# Todo Uncomment the release that Match your Deployed AX2012 R3 CU (CU8 or CU9) CU9 is selected by default
#CU9 $family = "aab47c5acae74e5e8c005b26c8f3e828__Dynamics-AX-2012-R3-6.3.1000.309-ARA-OS-Win2012R2-Oct15"

# Todo Uncomment your release
#CU8 $family = "aab47c5acae74e5e8c005b26c8f3e828__Dynamics-AX-2012-R3-6.3.1000.309-ARA-OS-Win2012R2-May15"
```
5 Run the script from PowerShell ISE.

When the script has finished running, you should see the following output.

6 Go to the Azure portal, and wait for your virtual machine (VM) to finish provisioning. When it has finished, connect to it by using the user name and password in the script. Make sure that you connect to the RDP with the /admin parameter.
7 Right-click the **Start** button, and then click **Command Prompt (Admin)**.

8 Enter the following command.

```
C:\Windows\System32\sysprep\sysprep.exe /generalize /oobe /shutdown
```
After the process is completed, go to the Azure portal, select your cloud service, and then select the VM that you just created. (After Sysprep runs, the VM should be stopped.)
10 Click the machine. Click **Dashboard**, and then click **Capture**.
11 In the dialog box, enter a name and description for the image, and then select the **I have run Sysprep on the virtual machine** check box. (Note that the VM will be deleted.)

12 After the process is completed, click **Virtual machines > Images**, and make sure that your image is registered.

**Import the template image (Optional)**

**Note:** If you want to maintain different images in your RemoteApp image repository, complete this procedure. If not, skip to the next procedure: *Create a hybrid deployment of RemoteApp that uses a VNet (Standard Plan (Test) and Premium (HA)).*

1 Go to the [Azure portal](https://portal.azure.com).
2 In the navigation pane on the left, click **RemoteApp**.
3 Click **Template images**.
4 Click **Import or upload a template image**.

5 In the wizard that appears, click **Import an image from your Virtual Machines library (recommended)**.
6 Select your Microsoft Dynamics AX RemoteApp image, and then select the confirmation check box.

7 Enter the name of your image and the location. You must select the location where your Microsoft Dynamics AX 2012 servers reside.
When the RemoteApp image has been imported, the status changes to **Ready**.

![RemoteApp Collections](image)

**Create a hybrid deployment of RemoteApp that uses a VNet (Standard Plan and Premium (HA))**

1. Click **RemoteApp collections**.
2. Click **Create a RemoteApp collection**.

![Create RemoteApp Collection](image)

3. Select **Create with VNet**, select the virtual network that your servers belong to, and then select the subnet to deploy your collection to. Make sure that the **Join local domain** option is set to **Yes**.

![Virtual Network](image)

4. Select **Premium** for high availability topologies, and **Premium** or **Standard** for test topologies.
Select the imported image, or import directly from the image repository

1. The status of the collection that you created should be **Input Required**. Click the collection.

![RemoteApp Collections](remoteapp.png)

2. Click to join the local domain. (Use **Dynamicsinstalluser** and make sure that account can join machines to the domain.)

![Domain Details](domain.png)
3 Click **Link an existing template image**, and then select the template image.

**Note:** You can also import an image from your Virtual Machines library. In this case, you do not have to import the template image. However, this white paper walks you through the process of importing a template image.
4 Wait until provisioning for the collection is completed.

<table>
<thead>
<tr>
<th>REMOTEAPP COLLECTIONS</th>
<th>TEMPLATE IMAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>The trial period for subscription ends on 10/19/2015. Click here to activate your subscription.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
<th>REMOTE DESKTOP CLIENT URL</th>
<th>VNET</th>
</tr>
</thead>
<tbody>
<tr>
<td>ax2012r3cu9cl</td>
<td>Provisioning</td>
<td><a href="https://www.remoteapp.windowsazure.com/">https://www.remoteapp.windowsazure.com/</a></td>
<td>AX2012R3-Production.AX...</td>
</tr>
</tbody>
</table>

Create an Azure AD directory

Now that you have created your RemoteApp collection, you must add the users who should be able to use your remote resources. The users that you provide access to must exist in the Active Directory tenant that is associated with the subscription that you used to create the RemoteApp collection.

1 In the navigation pane in the Azure portal, click **Active Directory**, and create a new directory. (Later, you will have to change your subscription to this directory.)

2 You can optionally add the user as a global admin (Microsoft account) for this directory.
Sync users from your local AD DS directory to Azure AD

1. Select the directory that you just created. Click **Directory integration**, activate the directory, and then save your changes.

2. Connect to your Active Directory VM, and download [Azure AD Connect](https://microsoft.com).

![Azure AD Directory Integration](image-url)
3 Follow the steps in [Integrating your on-premises identities with Azure Active Directory](#). Be sure to create an administrator account that has the Global Admin role in Azure AD. Click Active Directory in the Azure portal, and then add the user. Enter the user name in the following format: `UserName@YourAzureAD.onmicrosoft.com`. 

![ADD USER](image-url)
Note: After you click Create, you will be prompted to change the temporary password that is generated. In Internet Explorer, start InPrivate Browsing, and go to http://manage.windowsazure.com. Enter the user name of
the user that you just created and the temporary password, and then change the password. You can also add this user as a co-admin from the **Settings** menu in the Azure portal and then associate it with your subscription.

<table>
<thead>
<tr>
<th>EMAIL ADDRESS</th>
<th>subscription</th>
<th>SUBSCRIPTION ID</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:youuser@directory.onmicrosoft.com">youuser@directory.onmicrosoft.com</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4 Connect to your Active Directory VM by using Remote Desktop Protocol (RDP), and start the Azure AD Connect program that you downloaded in step 2. Click **Use express settings**, and then select the administrator account that you just created to connect to your Azure AD directory.
5 On the Connect to AD DS page, select the Sync Service user account or the administrator account. In the following screen shot, @contoso.com represents your local domain.

![Connect to AD DS page screenshot](image1.png)

6 On the Ready to configure page, click Install.

![Ready to configure page screenshot](image2.png)
7 In the Azure portal, click **Active Directory**, and go to your directory. Check the **Last sync** status.

<table>
<thead>
<tr>
<th>integration with local active directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOMAINS VERIFIED FOR DIRECTORY SYNC</td>
</tr>
<tr>
<td>DOMAINS PlANNED FOR SINGLE SIGN ON</td>
</tr>
<tr>
<td>DIRECTORY SYNC</td>
</tr>
<tr>
<td>LAST SYNC</td>
</tr>
</tbody>
</table>

8 Go to your Active Directory domain controller. Right-click your Active Directory domain, and then click **Properties**. In the **Alternate UPN suffix** field, add your Azure AD domain. The domain name should be in the following format: YourAzureAD.onmicrosoft.com
After a while, synchronization should start, and you will see the users synced to your Azure AD directory, as shown here.

9 Go back to your Active Directory machine, and open **Active Directory Users and Computers**. Right-click a user (in this example, we are using Sara Thomas), click **Properties**, and then, on the **Account** tab, select the local Active Directory domain name and user principal name (UPN) suffix from step 8.

10 In the Azure portal, click **RemoteApp** in the navigation pane.
11 Select your collection, and then click **User access**. Then add your users in the following format: Username@YourAzureAD.onmicrosoft.com
**Note:** Validation will fail if you did not associate your subscription with your new directory. You can create this association from the **Settings** menu in the Azure portal. Click **Subscriptions**, click **Edit directory**, and then update your subscription. If you receive a message that all co-admins will be removed, click **OK**. You can add the co-admins again later.
Deploy the client as an Azure RemoteApp program

Download the RemoteApp client and connect to AX 2012 R3

After a user is validated, go to https://www.remoteapp.windowsazure.com/ on any device that you want. In the upper-right corner, select Install client.

In some cases, you will receive a “Service not available” error message, because the default IP address of the load balancer differs from the IP address of your Application Object Server (AOS) load balancer. In this case, you must change the IP address of your AOS load balancer by changing your host files to match your environment.

**Note:** The default IP address in the host file entry is 10.1.1.6 AOSLoadBalancer.

Follow these steps to change the IP address of your AOS load balancer.

2. Click your AOS VM, and then click All settings > Load balanced sets.
3 Make a note of the LoadBalancer IP address (highlighted yellow in the following screen shot). We will use it later.

4 Connect to your AD VM through LCS or the Azure portal.
5 Click **Server Manager**, click **Tools**, and then select **DNS**.

![Server Manager](image)

6 Add a new Host A record.
7 Enter the properties for 10.1.1.x AOSLoadBalancer by using the IP address that you noted in step 4.

You should now be able to run Microsoft Dynamics AX without receiving “Service not available” error messages.
Microsoft Dynamics is a line of integrated, adaptable business management solutions that enables you and your people to make business decisions with greater confidence. Microsoft Dynamics works like and with familiar Microsoft software, automating and streamlining financial, customer relationship, and supply chain processes in a way that helps you drive business success.

United States and Canada toll-free: (888) 477-7989

Worldwide: (1) (701) 281-6500

www.microsoft.com/dynamics