An informal, informative and step-by-step guide to installing and deploying applications using

Citrix XenApp 6.5 SCCM 2012 Connector SP1

Codenamed Project Modi – Released in August, 2013 on Citrix.com

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The XenApp 6.5 Connector for Microsoft System Center Configuration Manager 2012 was by Citrix released in March 2013. In September, Citrix released a Service Pack (SP1) for it codenamed “Modi”. This document explains how to setup and use the Modi Connector.

The Connector enables IT administrators to orchestrate the tasks required to deliver applications both to end-users and XenApp Servers seamlessly with SCCM. With the Connector, you can:

- Extend the SCCM 2012 user-centric and rules-based application delivery capabilities to deliver applications to users in the most appropriate manner for the device they are using: MSI, App-V, CAB, Mobile, or XenApp. All this, using SCCM 2012 Console, as a single pane of glass.

- Enable users to access applications delivered by XenApp from the SCCM Application Catalog as well as Citrix Receiver.

- Without any user downtime, orchestrate the process of deploying applications to XenApp farms from within the SCCM console, both directly, for traditionally managed farms, as well as for streamed farms when used in conjunction with Provisioning Services.

- Leverage all existing infrastructure investments and resource definitions across XenApp and SCCM.

How do I know that I have all my pre-requisites setup correctly before I install Modi?

If there was no XenApp Connector for SCCM, you could still use SCCM and XenApp to deliver XenApp apps to end users, but it would be a disjointed two-step administrative process.

1. The first step would be to use the SCCM console to deploy applications to all XenApp servers
2. Second step would be to use the XenApp Console to them publish the apps to users once the app has been deployed. Using the XenApp Connector, these two steps can be combined into a single step in a single console.

The Connector provides a unified workflow that combines these into one step. So the most important pre-requisites before installing the Connector is to make sure that that these two steps above can be done independently and that each step works flawlessly.

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>How can I check that this works?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Pushing MSI and AppV packages from SCCM to XenApp 6.5 servers</td>
<td>Using the SCCM Console, create an Application and deploy it to the XenApp farm collection as an MSI Deployment type (as well as App-V 4 or 5 Deployment Type, if you care about App-V). Make sure the app gets installed and that it can be run on the XenApp 6.5 server.</td>
</tr>
</tbody>
</table>
Step 2: Publishing applications from XenApp AppCenter to users using Receiver

Once the app has been deployed in Step 1 above, use the XenApp AppCenter console to **publish** the application to users using the Application publishing wizard.

Step 3: Launch the application from Citrix Receiver 3.4 or higher

As an end-user, make sure you can **subscribe** to (via self-service) and then **launch** (once the subscribed application gets added to the Start Menu) the application that you just published in Step 2 above using Citrix Receiver (Receiver.exe). Note:

a. Receiver needs to be configured in Single-Sign on mode (i.e. Receiver shouldn’t prompt you to enter credentials when you open it. If it does, follow these steps to configure Single Sign On first.)
b. Receiver 3.4 or above needs Storefront 1.0 or higher to be configured as the backend web-service.

Once you have confirmed that your XenApp and SCCM environments are working as expected, you are now ready to deploy Modi.

**What are the steps to deploy Modi?**

Modi can be download [here](#). Extract the .zip file and take a moment to explore the various components as shown in the figure below. Note the _SP1 suffix for the Connector meta-installer.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date modified</th>
<th>Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Components</td>
<td>8/27/2013 10:55 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>Windows</td>
<td>8/27/2013 10:55 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>XenApp PCM Concentrator</td>
<td>8/27/2013 10:55 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>ProductVersion</td>
<td>8/27/2013 10:53 AM</td>
<td>TXT File</td>
<td>1 KB</td>
</tr>
<tr>
<td>XenAppConnectorConfigMgr2012_sp1</td>
<td>8/26/2013 4:28 PM</td>
<td>Application</td>
<td>58,539 KB</td>
</tr>
</tbody>
</table>

**Follow these steps**

**Step 1:** Install **Citrix Receiver** either from the Client Components folder or from [Citrix.com](#).

**Where?** On all your end-point devices.

**Why is this step important?** Receiver allows users to subscribe and launch XenApp applications. Version 3.4 or higher of Receiver contains full support for the Connector.

**Step 2:** Check that Receiver can connect to Storefront and enumerate XenApp published apps.

**Where?** On any end-point device.

**Why is this step important?** The XenApp DT handler requires Receiver to be fully setup and communicating with Storefront to enumerate apps.

**Step 3:** Install the XenAppDTHandler_x64 (or x86)_sp1.msi

**Where?** All XenApp Servers, Windows client end-point machines (like Win7, Win8) etc.

**Why is this step important?** The XenApp DT handler is the critical bridge between the SCCM agent and Receiver on the end-point. It knows how to handle applications configured with the XenApp Deployment

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1 You need Receiver 3.4 with Storefront only if you want to deploy XenApp applications via the SCCM agent directly to the user’s Windows desktop using SCCM’s new user centric model. If you don’t care about desktop integration and want to simply publish XenApp DT based applications via Citrix WebInterface or a legacy PN Agent, the Connector can help you to do that as well.
<table>
<thead>
<tr>
<th>Step 4: Install the XenAppAgent__64.msi</th>
<th>All XenApp Servers.</th>
<th>The XenApp agent performs graceful orchestration of application installs on the XenApp server.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 5: Install the actual Connector and the Citrix extension plugin (<strong>XenAppConnectorConfigMgr2012_sp1.exe</strong>) for the SCCM Console.</td>
<td>The Connector can be installed on any Windows Server 2008 R2 or Windows 2012 server. The Citrix Console extension can only be installed on a machine with the SCCM Console. For a simple PoC, you can install the Connector+Console Extension on the same machine as the SCCM Console/Site server.</td>
<td>The Citrix Console extension adds Citrix related UI semantics into the SCCM Console - such as Citrix XenApp Deployment Type, XenApp Publications etc.</td>
</tr>
<tr>
<td>Step 6: Configuring the Connector</td>
<td>Once the installer in Step 5 completes, it launches a configuration wizard.</td>
<td>The configuration wizard lets you configure the various parameters for the Connector.</td>
</tr>
</tbody>
</table>

Here are screenshots and explanations for each step in more detail.

**Step 1: Install Citrix Receiver 3.4 (or higher)**

Install Citrix Receiver that is on the Modi layout that you just downloaded or from Citrix.com. Receiver should be installed and configured to point to Storefront. Remember to setup single sign on shown [here](#).
Welcome to Citrix Receiver Setup

Click Install to install Citrix Receiver on your computer.

Installing
Please wait while Citrix Receiver is installed...
Step 2: Check connectivity between Receiver and Storefront

Before proceeding further to step 3, it’s a good idea to make sure that when you open Receiver on the end-point, you are able to see, subscribe and launch published applications through self-service via pass-through authentication (Receiver must not prompt you to enter credentials).

Step 3: Install the XenApp DT Handler MSI

Choose the flavor of XenApp DT (Deployment Type) MSI based on the operating system. Install it on the same end-point/desktop client (this could be a XenDesktop virtual desktop) where you installed Receiver and additionally, on your XenApp worker as well.
Step 4: Install the XenApp Agent MSI

Install the XenAppAgent_x64 MSI on all XenApp servers (workers).

Step 5: Install the Connector and Console extension plugin

Here’s the most important part – Installing the actual Connector. The Connector contains two components. 1- The actual Connector Service and 2- the Citrix extension plugin for the SCCM console. For the purposes of a small pilot deployment, you can install both components of the Connector on the same machine, i.e. on the SCCM Console.
XenApp 6.5 Connector (SP1) for Configuration Manager 2012

Please wait. The XenApp 6.5 Connector (SP1) for Configuration Manager 2012 setup is now initializing...

Accept the license agreement to continue

CITRIX(R) LICENSE AGREEMENT

Use of this component is subject to the Citrix license covering the Citrix product(s) with which you will be using this component. This component is only licensed for use with such Citrix product(s).

CTX_code: EP_R_A32490

I accept the terms of this license agreement
Select the features to be installed

- XenApp 6.5 Connector (SP1) for Configuration Manager 2012
  - XenApp Connector Service
  - Configuration Manager Console Extension

Install location: C:\Program Files\Citrix\XenApp Connector for ConfigMgr 2012

Ready to install

Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.
Installing XenApp 6.5 Connector (SP1) for Configuration Manager 2012

Please wait while Setup installs XenApp 6.5 Connector (SP1) for Configuration Manager 2012...
That’s it as far as initial install. Now let’s look at how to configure the Connector.

**Step 6: Configuring the Connector**

The Connector is actually a .NET Windows Service that invokes various tasks (such as App Publishing, Farm Synchronization etc). It needs certain rights and privileges to run these tasks and create log files etc. Make sure that the permissions, shown below, are correctly configured before stepping through the rest of the wizard.
Connector Servers

The Connector is the bridge between Citrix XenApp and Microsoft System Center Configuration Manager 2012.

Specify the XenApp Controller and, optionally, the Power & Capacity Management Concentrator that the Connector will use, with fully qualified domain names (e.g., "server.domain.com").

XenApp Controller:

Specify Power & Capacity Management Parameters (Optional):

Power & Capacity Management Concentrator:

Power & Capacity Management Concentrator Remote PowerShell Port:

Validating XenApp Controller...

Configuration Manager Site

Identify the System Center Configuration Manager site with which XenApp will be integrated. This information can be found in the System Center Configuration Manager console.

SMS Provider (e.g., "server.yourcompany.com"): [PNL3:SCCMST05:SCCM:local]

SMS Provider Remote PowerShell Port:

Site Code (e.g., "ABC"): [SC1]
Note that on successful validation of the XenApp Controller, the XenApp Farm name is shown on the title bar.

This next screen is new to the SP1 version of the Connector. Carefully choose the Maintenance Window settings for the XenApp Farm Collection that you are planning managing. For the purpose of a test/lab environment, go with the first option.

For a Production deployment, it is recommended that you set your Maintenance Windows to periods of low activity (eg: 1-4 am on every Sunday).

Note: On subsequent runs of the Connector or if you are upgrading from the RTM version of the Connector, your existing Maintenance Window settings (if they exist) are displayed in a Read-Only mode. If you want to change them, please go to the Configuration Manager console.
Software Installation Maintenance Window

The following Maintenance Window(s) have been configured for the XenApp Farm Collection being managed by this Connector. Note that this is a read-only view. If these need to be modified, please use the Maintenance Window settings in the Configuration Manager console.

Existing Maintenance Windows

Citrix Service Window

- Effective Date: 09/25/2013
- Start: 10:00 AM
- End: 10:00 AM
- Duration: 1 day
- UTC: False
- Recurrence Pattern: Daily
- Recur Every: Day
- Type: General

Settings Summary

The choices below will now be applied. Click Back to make changes, or Apply to continue.

⚠️ Make sure that the Citrix XenApp DT Handler is installed on all client devices.

Advanced Settings

**Connector Service Account**

- Account: sccm.local\admin0

**Connector Servers**

- XenApp Controllers: PPNL3-SCCMX0\SCCM.local

**Configuration Manager Site**

- SMS Provider: PPNL3-SCCMST0\SCCM.local\5985
- Site Code: SC1

**Software Installation Maintenance Window**

- Create Maintenance Window for XenApp servers: True
Application Deployment using the Connector

Now that the Connector components have been successfully installed, let’s look at how to deploy XenApp applications to your users using the Connector.

In this example, the SCCM admin wants to deploy Microsoft Word as a Microsoft App-V 5.0 application to the XenApp Servers and then subsequently deliver it to end-users.

Note: Due to a bug in SCCM 2012, the SCCM administrator account under which the Connector Service is configured (Step 6 in this guide) as well as the administrator running the SCCM console to publish Citrix XenApp applications, both need to have their Security Scope set to “All” as shown in the screenshot below, even if they are an SCCM Full Administrator (Security Scope of “Default” will not work).
The first step is to define an Application in SCCM. Under Software Library > Application Management > Applications, create a new Application.
Follow the screenshots outlined below to define Microsoft Word as an application in SCCM.

1. In the "General" tab, select the location of the Microsoft Office software that you want to import. This can be done automatically or manually. If you choose automatic detection, specify the location using the "Browse" button.

2. After specifying the location, go to the "Import Information" tab. Here, you will see that the application information has been successfully imported from the Microsoft Application Virtualization 5 file.

3. The details include the application name, version, and the location of the package. You can view these details by clicking on the "Details" section. If you need to modify any details from the imported information, click "Prev". To exit the wizard without creating the application, click "Cancel".
Specify information about this application

Name: Microsoft Word 2013

Success: The Create Application Wizard completed successfully

- Application name: Microsoft Word 2013
- Requirement rules
- Content location: \localhost\S\Apps\Package\Office 2013
- Number of files: 3
- Content files: Path to the files
Once Microsoft Word has been defined, the next step is to deploy it to XenApp servers. However, before doing so, set the properties of the application in the Deployment Type to include just Word.

Follow the steps shown below to push Microsoft Word 2013 to XenApp servers.

Right click on the application and choose the Deploy option.
Note that the XenApp farm structure has been conveniently pre-imported for you by the Connector as an SCCM Device Collection. Select the device collection represented by the Farm name.

Note: The pre-requisite for deploying apps using the App-V 4 DT is that the AppV 4.6 SP1 RDS client needs to be installed on the XenApp Servers. For App-V 5 DT, the AppV 5.0 RDS Client needs to be installed. For you to be able to deploy both App-V 4.6 and App-V 5.0, the App-V 4.6 SP2 RDS client needs to be installed in addition to App-V 5.0.
There are two choices available for application deployment. Since this deployment targets XenApp Servers where the app must be physically present, choose the Purpose field as Required (gets pushed as a Mandatory deployment).
Specify the user experience for the installation of this software on the selected devices.

User experience settings for this deployment:

- User notifications: Display in Software Center and show all notifications.

When this installation deadline is reached, allow the following activities to be performed outside the maintenance window:

- Software installation
- System restart [required to complete the installation]

Specify Configuration Manager and Operations Manager alert options.

Configuration Manager generates alerts when this application is deployed:

- Threshold for successful deployment:
  - Create a deployment alert when the threshold is lower than the following:
    - Percent success: [value]
    - After: [date and time]

- Threshold for failed deployment:
  - Create a deployment alert when the threshold is higher than the following:
    - Percent failure: [value]

Enable System Center Operations Manager maintenance mode if you want Operations Manager to generate alerts when this application is deployed.

- Enable System Center Operations Manager maintenance mode
- Generate System Center Operations Manager alert when a software installation fails
Once Microsoft Word has been set for deployment, the XenApp Agent service that was previously installed, running on the XenApp Server, detects the pending application deployment and then interacts with the SCCM agent to install the application. Because this is an App-V 5 virtual application, the application isn’t physically installed in the traditional sense (although the application does have a .exe extension, it runs within the AppV-5 cache when launched). It also adds a short cut to the Start Menu and registers the App-V package on the system.
Before proceeding further, check to make sure that the application was correctly installed on the XenApp Server by checking the Deployment status to the XenApp Farm collection in the Monitoring wonderbar section. It should be green (meaning Success). This usually does not happen immediately after deployment (could take several minutes).

In a small PoC deployment, you probably don’t want to wait that long. On the XenApp server that you have targeted the deployment to, find the “Configuration Manager” app in Control Panel and manually trigger the install by running the Machine Policy Retrieval and Evaluation Cycle (note: this only triggers an event to start evaluating for pending deployments, and doesn’t trigger an immediate install).

The next step is to define a XenApp Deployment Type (DT) for this application. This is the DT that is used as a delivery vehicle to deploy the application to end-users.

Right click on the Microsoft Word application and choose Create Deployment Type from the context menu.
From the list of Deployment Types, choose Citrix XenApp.
Click on New... in the above screen and walk through the wizard below to create a new XenApp publishing.
**XenApp application publishing**

Enter the name and description that you want to be displayed to the clients for this application.

**XenApp display names:**

- Microsoft Word 2011

**Application description:**

Applications are organized into folders in the Citrix AppCenter Console. Enter an existing application folder.

- Administrative folder: Applications\ConfigMgt12

**Type**

Choose the type of application you want to publish:

- XenApp installed application
- App-V 4 virtual application
- App-V 5 virtual application
XenApp Publishing Wizard

XenApp application publishing

Choose the App-V package and application within the package that you wish to publish.

App-V package: Microsoft Office 2013

Application: Microsoft Word

Package GUID: 3fe3ecf6-cbab-4e05-aa63-79a8e2084ee7

Version GUID: 52305d9173d3485d-935c-fa2c6559158

XenApp Publishing Wizard

XenApp application publishing

Configure the appearance and location of the application shortcut.

Application icon:

Icons: [Image]
Change icon...

Client application folder:

Application shortcut placement:

☐ Add shortcut to the client's desktop
Click Finish (advanced settings need not be configured).
Confirm the settings for this deployment type

To change these settings, click Previous. To apply the settings, click Next.

The Create Deployment Type Wizard completed successfully

To exit the wizard, click Close.
Prioritize the Citrix XenApp Deployment Type as the highest priority. Typically, this may not be the case (eg: if a local version of the app either AppV or MSI is available, you’d like users to use that as a first choice) but for the purposes of a simple PoC to test the XenApp DT, set it as the highest priority.

Once the XenApp Deployment Type has been created, specify the users/groups that you want to deliver the application to via the XenApp DT. This is done by creating another Deployment targeting those users. Follow these steps below to create a Deployment.
Click on Browse and select the user collection that you want to deploy to (XenApp users).
Select the Distribution Point for the content to be distributed from.

There are two options to deploy the application via XenApp to users. You can either push it as a mandatory application to their desktops so it appears on their desktop Start Menus or you can allow them to subscribe to it via the SCCM Application Catalog (Self-Service). For the purposes of a small PoC/pilot deployment, set this as Available. The advantage is that you can manually trigger and then observe first-hand what happens when application deployment kicks in (if you set it to Mandatory instead, you cannot deterministically know before-hand exactly when the application will be deployed).
Leave default settings intact in the following page.
Leave default settings intact in the following page.

Leave default settings here.
That’s it. With these steps completed, the IT administrators set of tasks is completed. When the deployment cycles kick in, both in the Connector as well as in SCCM, the applications will get installed and published on the XenApp Servers. Now, the app is available for users to subscribe to.

In the Thor TechPreview, the Connector’s Publishing task automatically runs every 5 minutes by default and publishes them into the XenApp farm. However, for instantaneously publishing it, run the Publishing task manually by clicking on the icon. You will find it in the Start Menu of the computer running the Connector. Subsequently, you can also verify in AppCenter that the application has been published and that its status is Enabled.

Hints and Tips

In the Thor TechPreview, the Connector’s Publishing task automatically runs every 5 minutes by default and publishes them into the XenApp farm. However, for instantaneously publishing it, run the Publishing task manually by clicking on the icon. You will find it in the Start Menu of the computer running the Connector. Subsequently, you can also verify in AppCenter that the application has been published and that its status is Enabled.
The end-user’s experience for applications delivered as a XenApp DT is consistent with other Deployment Types. From the SCCM Application Catalog, choose Word and Click Install.

While evaluating requirements, the Application Catalog evaluates requirements to decide the best Deployment Type to use for the deployment as shown below.

**APPLICATION INSTALLATION**

Please wait while the application that you requested is being prepared.
Do not close this page until the status reads Complete.

Status: Evaluating requirements, this may take several minutes...

It then deploys the application and confirms deployment.
Launch the Application from the Start Menu.

The user is now able to use Word just as if it was a locally installed application!