

Synergy Replicator on RSP

Deployment Guide

DEPLOYING SYNERGY REPLICATOR ON RSP

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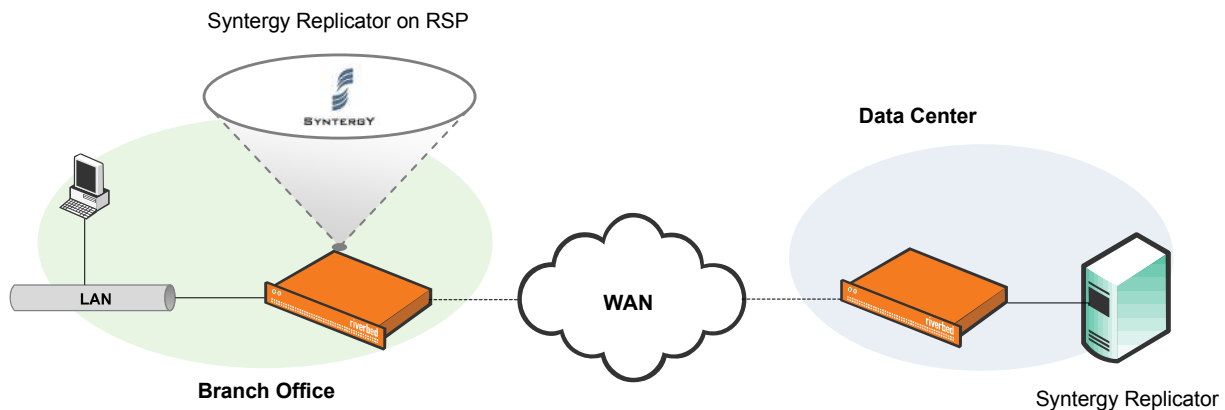
Introduction

Synergy Replicator is a content replication solution that runs within Microsoft SharePoint. Examples of SharePoint content that can be replicated include documents, events, pictures, tasks, and surveys. Content changed at one SharePoint site is automatically replicated to all others defined in the Replicator setup, keeping all content synchronized and up to date. This deployment guide details the steps required to deploy this solution on RSP.

Required Hardware and Software

- Synergy Replicator version 3.3.66.34 or later software
- Microsoft SharePoint Server 2007 SP2
- Windows SharePoint Services 3.0
- Windows Server 2008
- RiOS 6.0 or later
- RSP 6.0 or later
- 2 GB of available RSP memory
- 20 GB of available RSP disk space

Topology Details



Creating the Virtual Machine

The [RSP Package Creation Guide](#) details the steps necessary to create a virtual machine. Create the virtual machine with these properties:

- 1 network card
- At least 2 GB of memory
- At least 20 GB of Hard Disk space

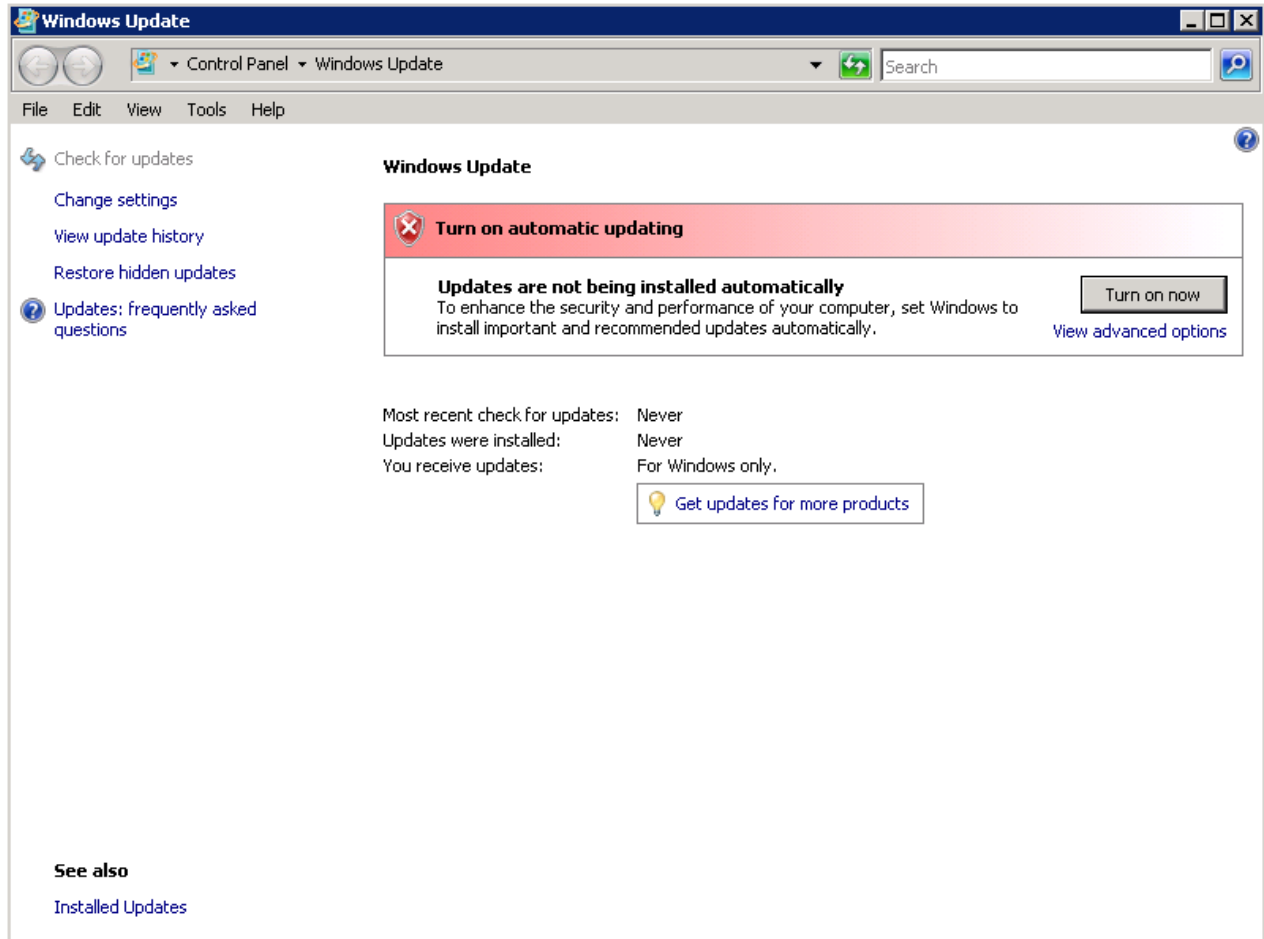
After creating the Virtual Machine install Windows Server 2008 as the Operating System.

Installing SharePoint

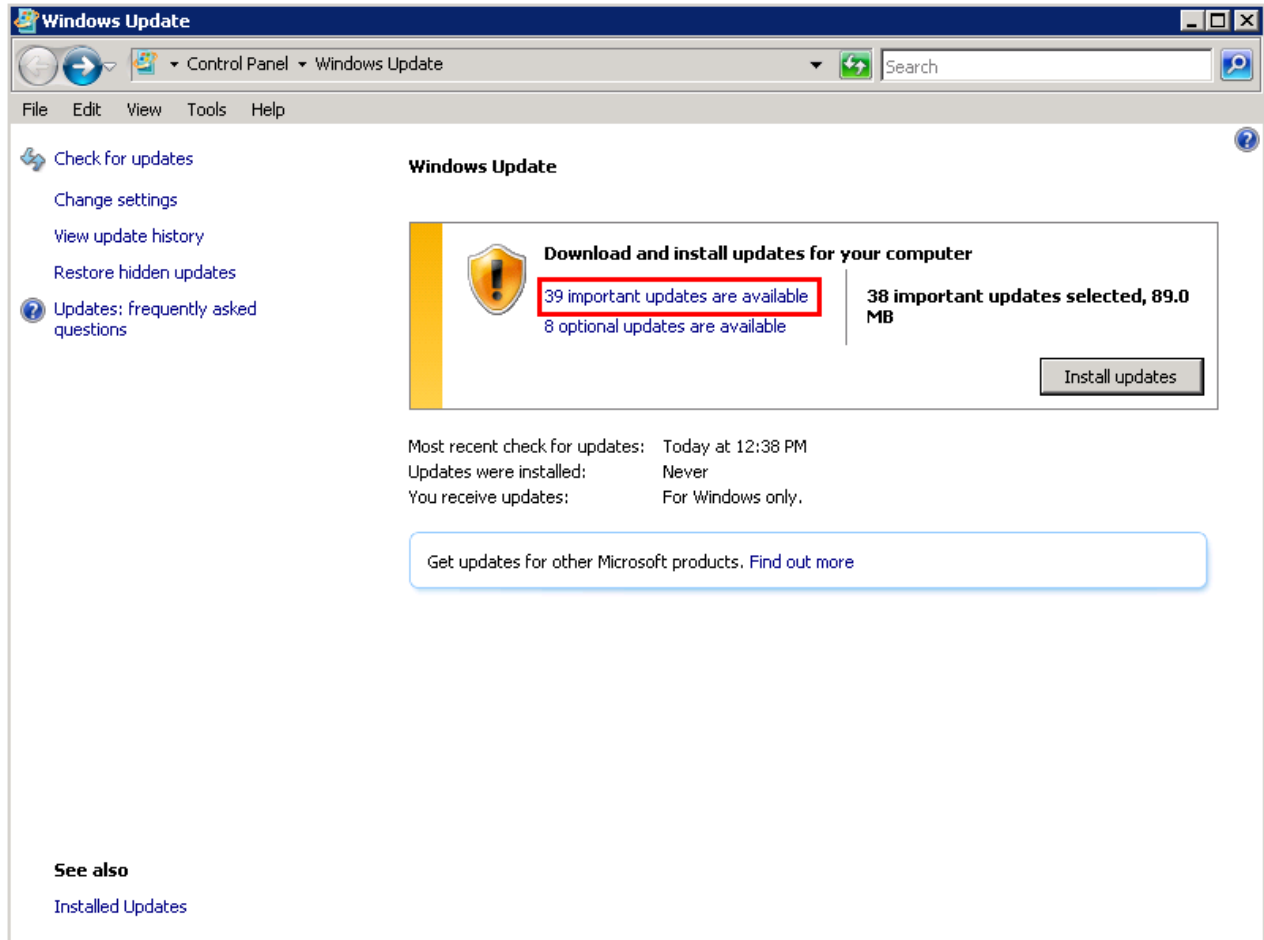
This section will detail the steps to install SharePoint. The first step is to install Microsoft .NET Framework 3.5 which is required by SharePoint and not packaged with Windows Server 2008.

Installing Microsoft .NET Framework 3.5

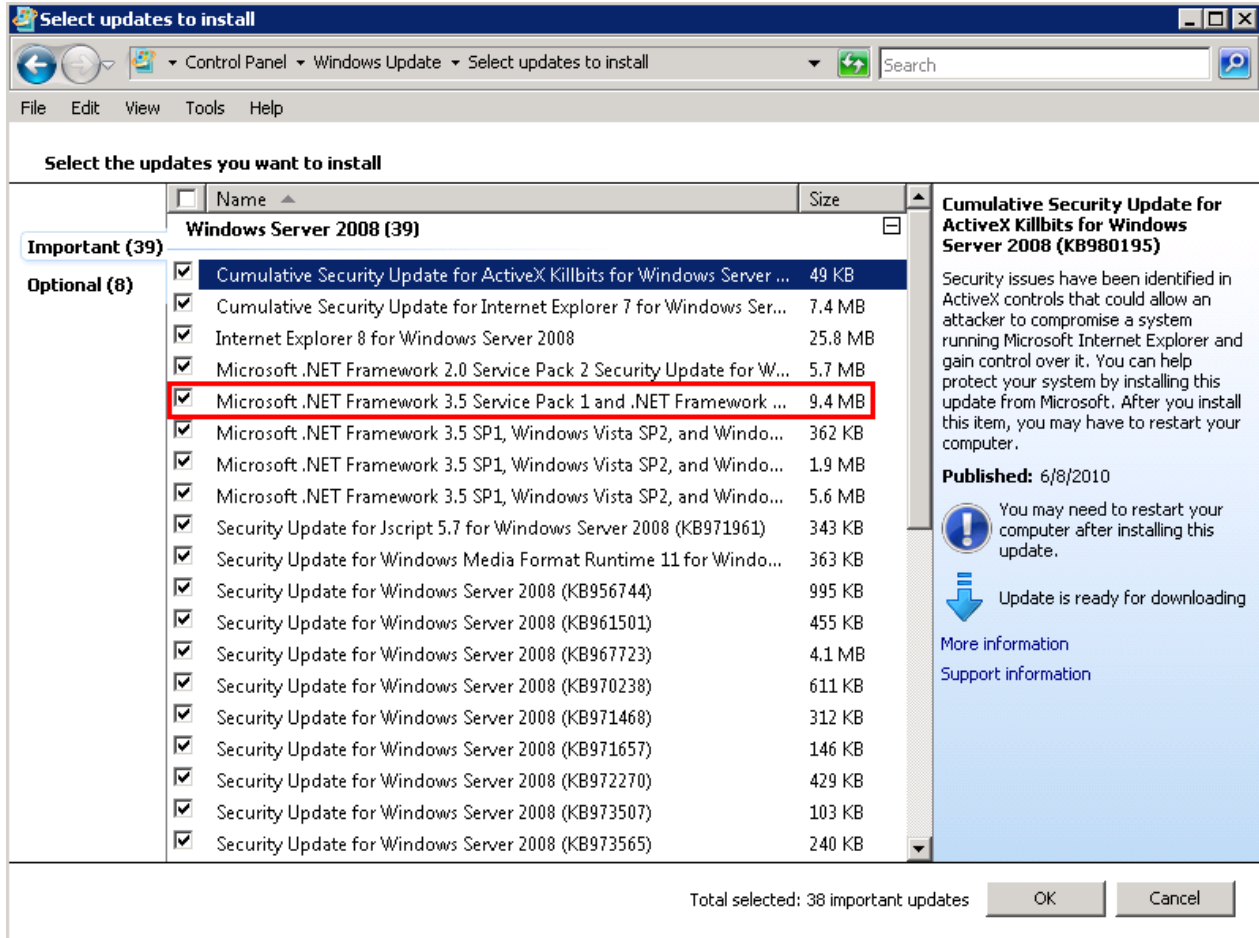
The .NET Framework 3.5 can be installed through the use of Windows Update which is located under the *Control Panel*.



1. By default Windows Update is disabled. Enable it by clicking *Turn on now* to turn automatic updates, or go to *View advanced options* for other update options such as automatically checking for updates but not installing. After doing so click on *Get updates for more products* to allow Windows Update to also update other Microsoft products.



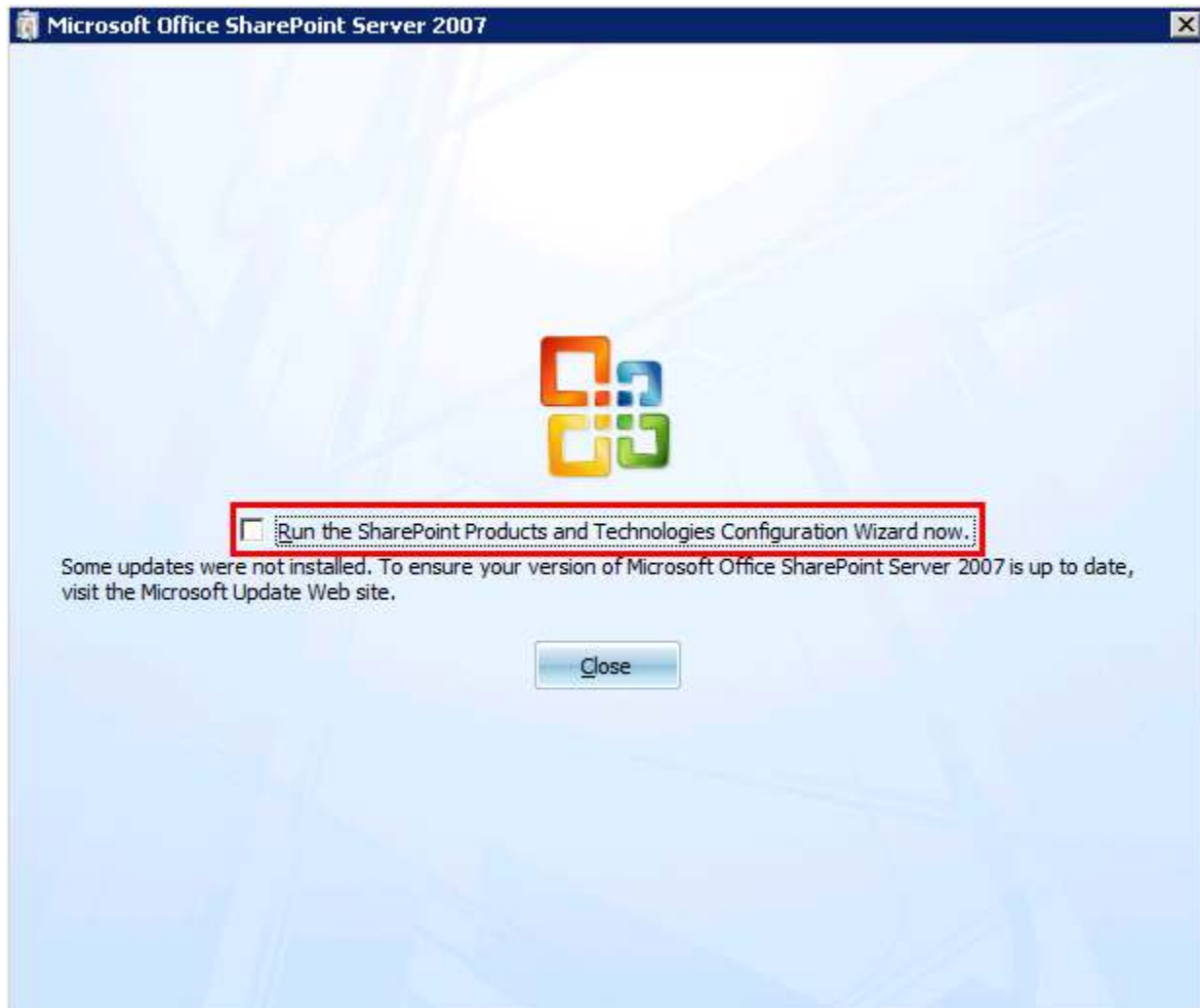
2. After enabling Windows Update the first thing it will do is update itself, after which it will check for other updates. This may take some time after which the above screen will be displayed. Click in the red highlighted area to verify that .NET Framework 3.5 will be installed.



- .NET Framework 3.5 should be listed amongst the other updates. Click the back arrow to go back to the previous screen and then click *Install updates*.

Installing Microsoft SharePoint Server 2007

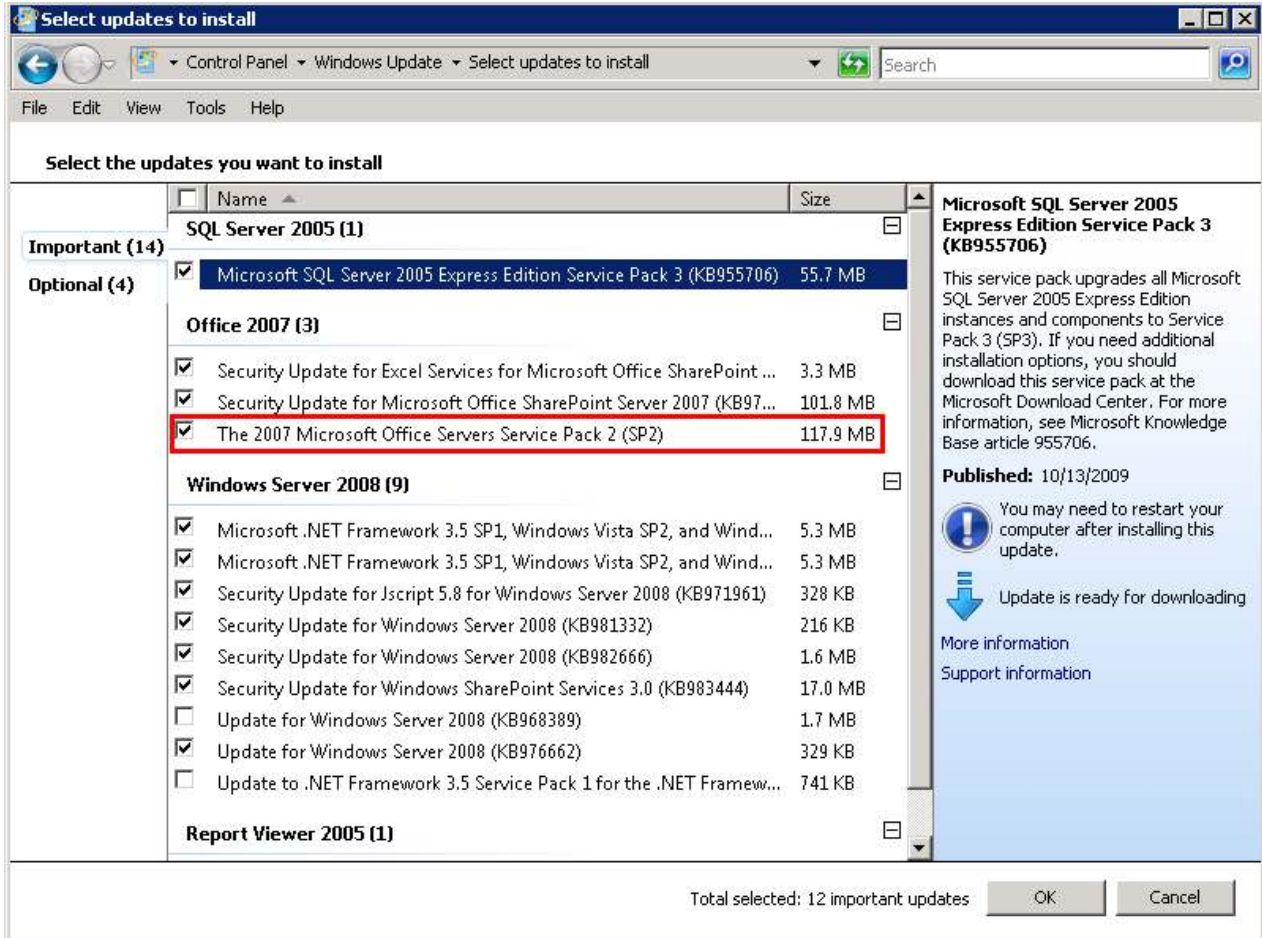
Now that .NET Framework 3.5 is installed we can proceed with installing Microsoft SharePoint Server 2007. The installation is straightforward and the only decision that will need to be made is whether to do a *Basic* or *Advanced* install. For the purposes of this deployment guide a *Basic* install will be used.



On the final screen before finishing the install, unselect the *Run the SharePoint Products and Technologies Configuration Wizard now* checkbox as the configuration will fail pending the next step.

Re-running Windows Update

In order to successfully complete configuration of SharePoint Server Windows Update needs to be run again. This time a patch for SharePoint Server will need to be installed.



Before completing the update, ensure *The 2007 Microsoft Office Servers Service Pack 2 (SP2)* is selected.

Completing Configuration of SharePoint Server

Now that the required patches are installed the configuration of SharePoint Server can be completed. This can be done by navigating to *Start | All Programs | Microsoft Office Server | SharePoint Products and Technologies Configuration Wizard* and stepping through the wizard.

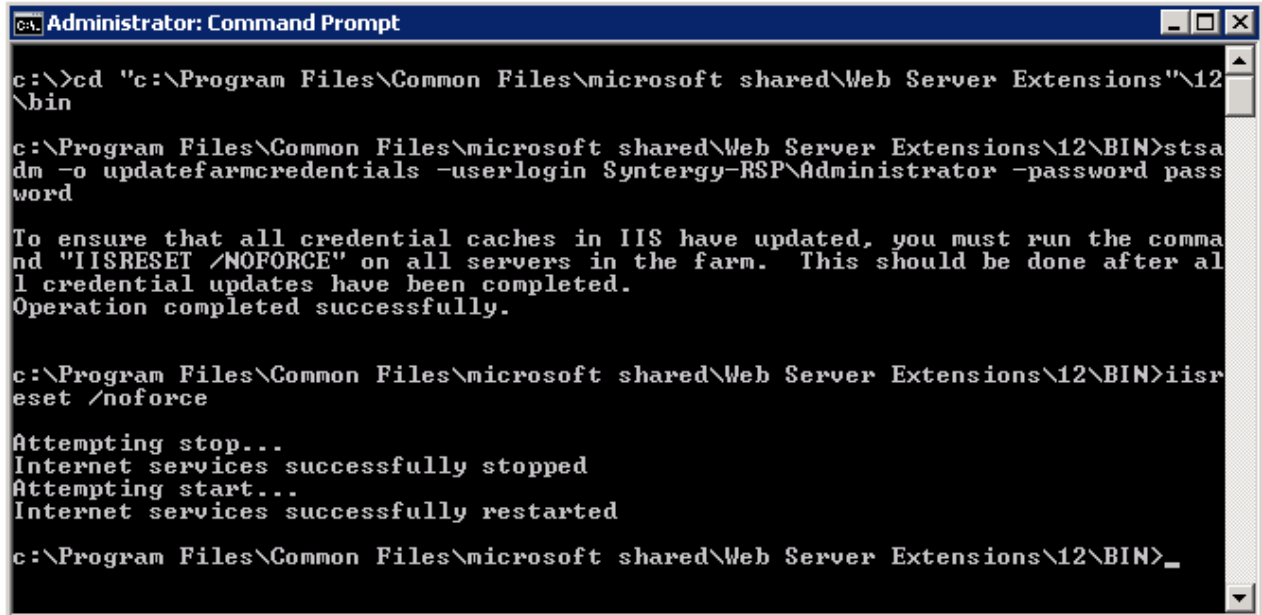
Installing Windows SharePoint Services

Now that SharePoint Server has been configured, Windows SharePoint Services 3.0 can be installed and configured. The installation here is also straightforward with the only decision needing to be made is between *Basic* or *Advanced*. For the purposes of this deployment guide a *Basic* install will be used. Upon completing the install proceed to the configuration step which will complete without any errors.

It is recommended to run another round of Windows Update to get any Windows SharePoint Services patches that might be available.

Installing Synergy Replicator

Replicator requires the credentials of the SharePoint Central Administration Application Pool user, and this user must be an Administrator on the system Replicator will be installed on. By default this is not the case. We will install the built-in *Administrator* as the SharePoint Central Administration Application Pool user.

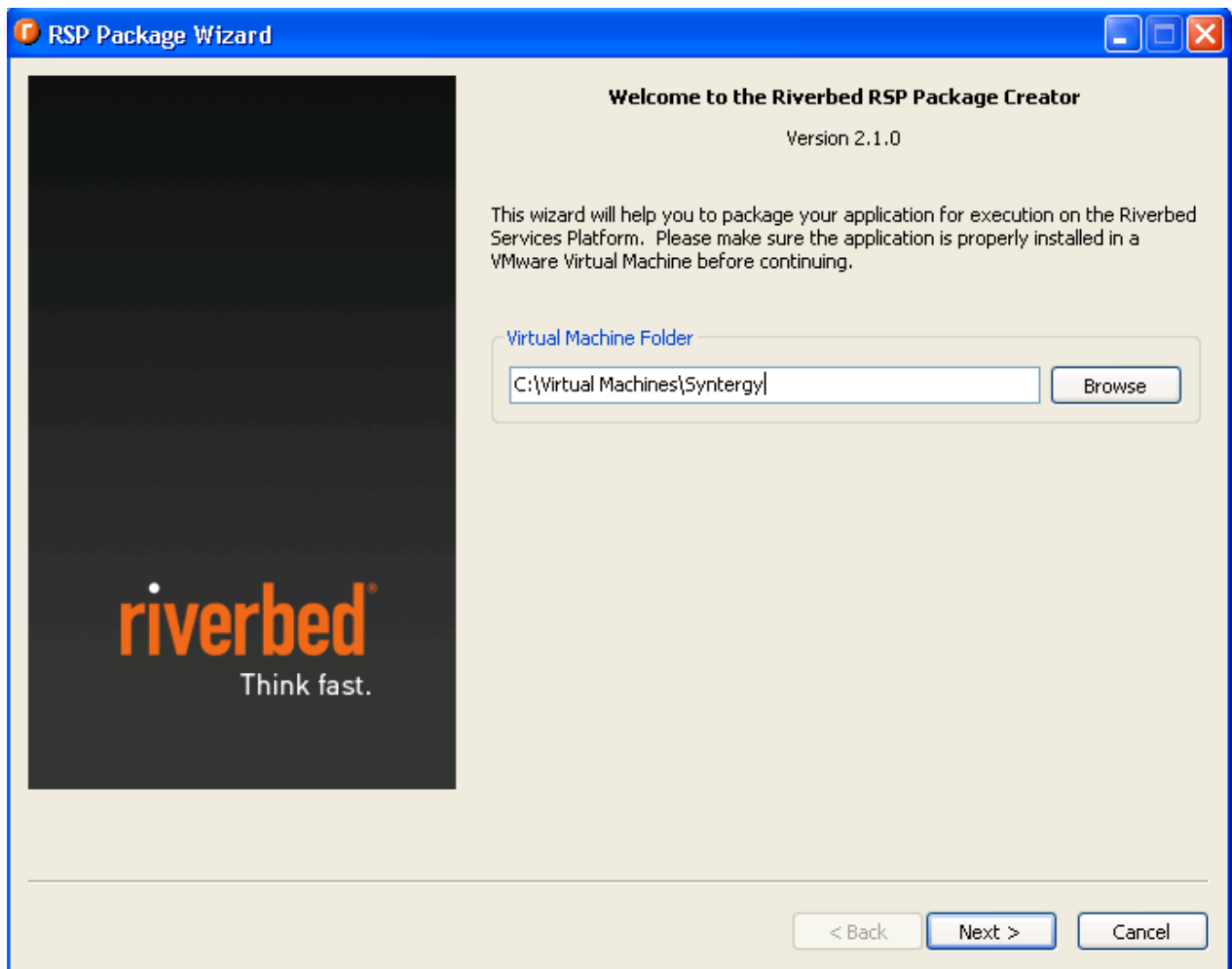


```
Administrator: Command Prompt
c:\>cd "c:\Program Files\Common Files\microsoft shared\Web Server Extensions\12\bin"
c:\Program Files\Common Files\microsoft shared\Web Server Extensions\12\BIN>stsadm -o updatefarmcredentials -userlogin Synergy-RSP\Administrator -password password
To ensure that all credential caches in IIS have updated, you must run the command "IISRESET /NOFORCE" on all servers in the farm. This should be done after all credential updates have been completed.
Operation completed successfully.
c:\Program Files\Common Files\microsoft shared\Web Server Extensions\12\BIN>iisreset /noforce
Attempting stop...
Internet services successfully stopped
Attempting start...
Internet services successfully restarted
c:\Program Files\Common Files\microsoft shared\Web Server Extensions\12\BIN>_
```

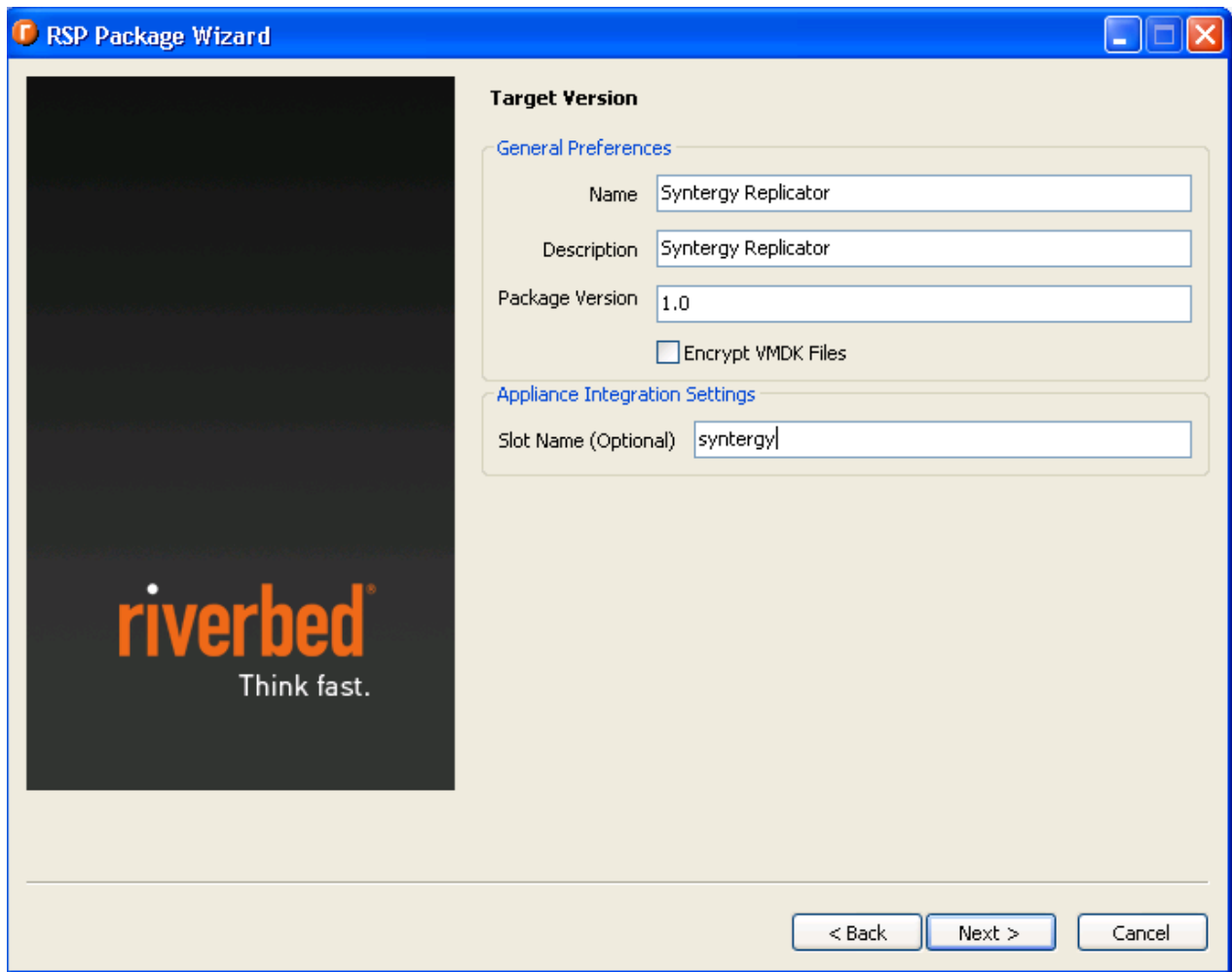
1. Setting of the SharePoint Central Administration Application Pool user is done in the command prompt. Navigate to `c:\Program Files\Common Files\microsoft shared\Web Server Extensions\12\BIN` and execute `stsadm -o updatefarmcredentials -userlogin <Domain>\<User> -password <password>`. An `iisreset /noforce` is required upon successful completion of the command.
2. The Synergy Replicator software can be installed now that the SharePoint Central Administration Application Pool user has been set. Follow the instructions in the *Replicator Install Guide* accompanying the Replicator software to complete the installation.

Creating the RSP Package

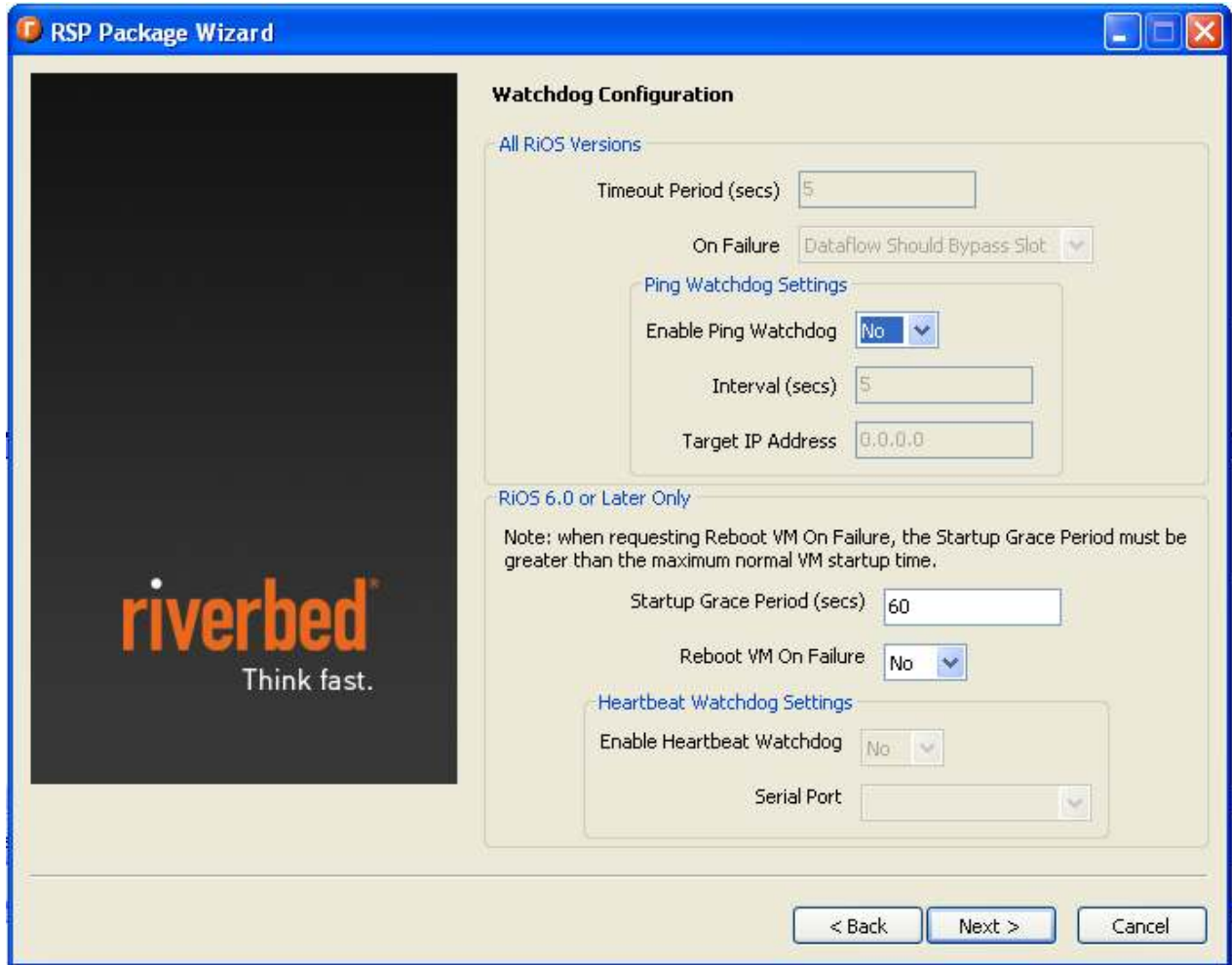
Now that we've complete installation of the Synergy Replicator, we can create the RSP Package. The steps to create the RSP Package are detailed in the [RSP Package Creation Guide](#) but are reproduced here for clarity.



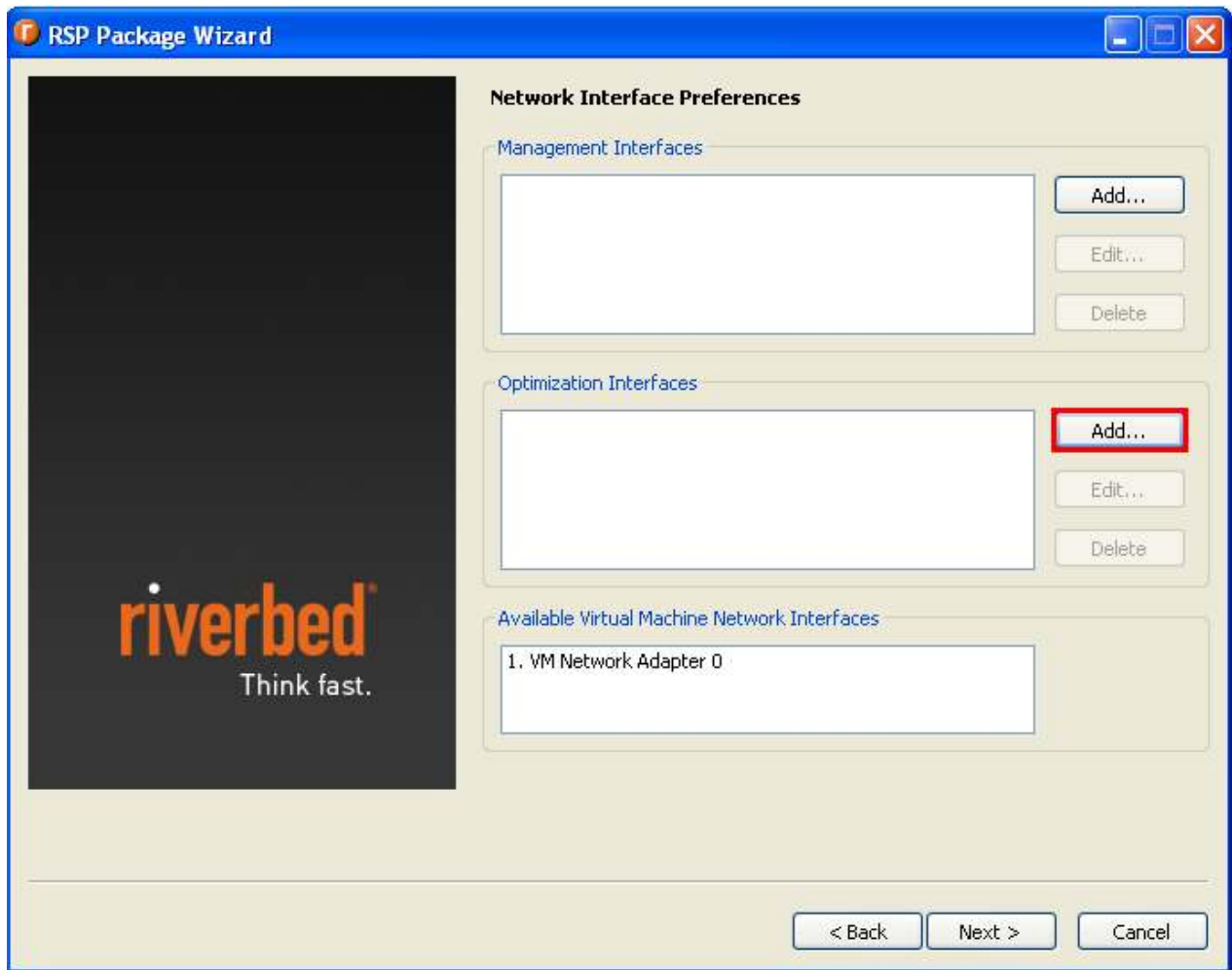
1. After opening the RSP Package Creator select the appropriate folder housing the Virtual Machine created earlier.



2. Appropriately fill in the *Name*, *Description*, *Package Version*, and *Slot Name*.



3. Optionally enable watchdog functionality.



4. In *Network Interface Preferences* page click *Add...* under *Optimization Interfaces*.

Add Optimization Interface

Interface Configuration

Interface Name:

Interface Type:

Virtual Interface:

Packet Policies

Policy for IP Traffic That Doesn't Match Any User Defined Rules (Optional):

Policy for Non-IP Traffic (Optional):

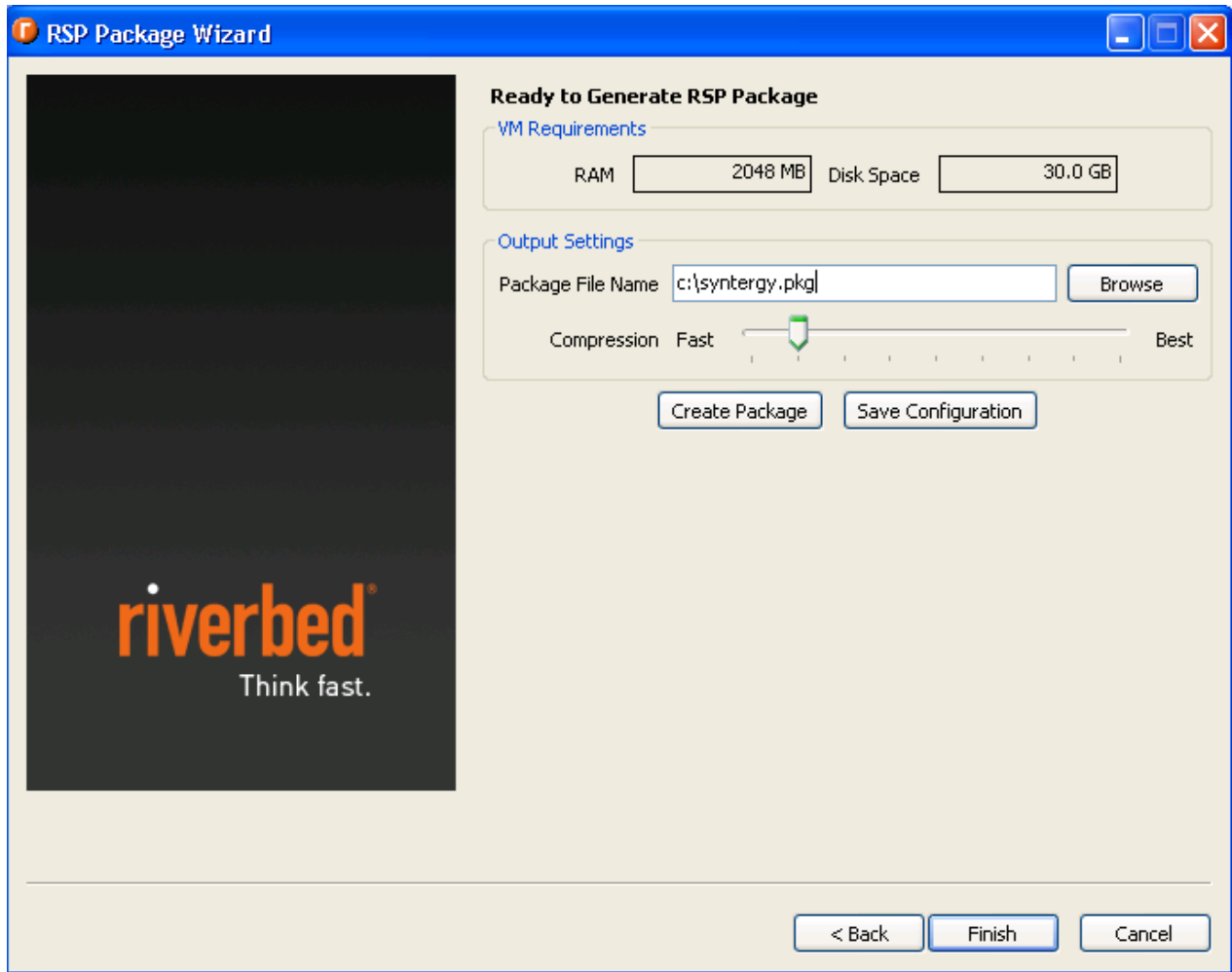
VLAN Settings

None

Trunk

VLAN ID:

5. Select *Virtual In-Path* as the *Interface Type* and *L2 Switch* under *Packet Policies*.



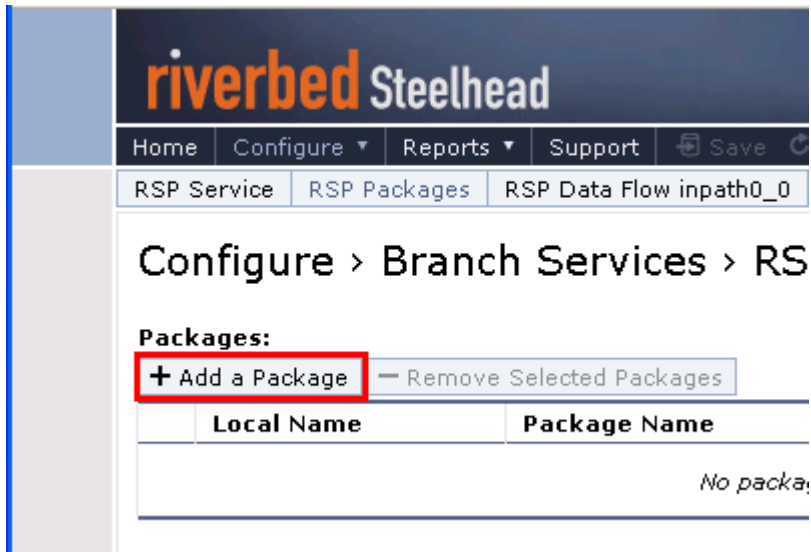
6. Name the package and click *Create Package* to create the package.

Installing the RSP Package

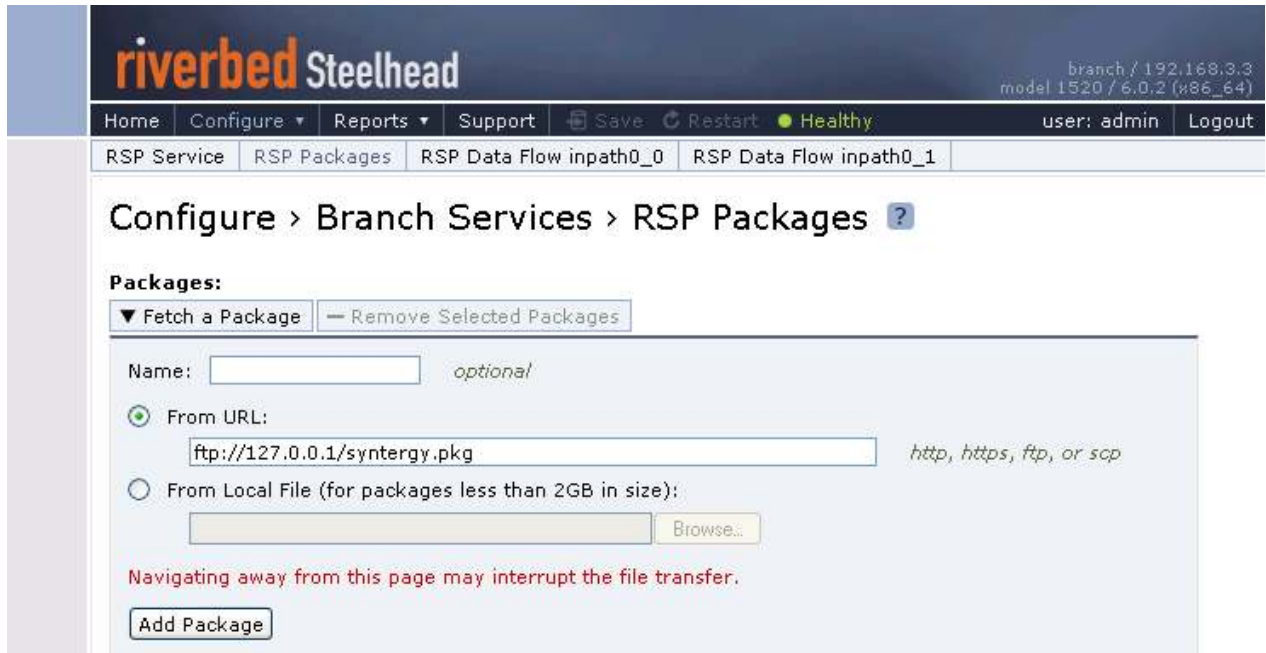
Now that we have a Synergy Replicator RSP Package, we can install and enable it on a Steelhead.



1. Navigate to *Configure* | *Branch Services* | *RSP Packages*.




2. Click *Add a Package*.



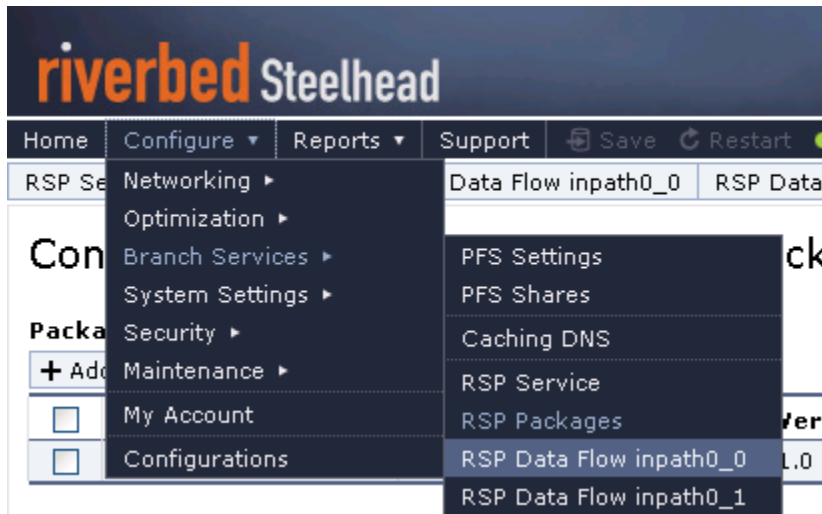
3. As the package will be too big to be loaded from a local file, it will have to be loaded from an URL.

Slot	Power	Status	Name	Description
⊗ 2	--	--	--	--
<p>Slot Name: <input type="text" value="synergy"/></p> <p>Package: <input type="text" value="synergy.pkg"/></p> <p>Operation may take five minutes or more to complete. Please do not navigate away from this page until the operation completes.</p> <p><input type="button" value="Install"/></p>				

4. Install the package into an empty slot.

	Off	N/A (Slot Disabled)	Synergy Replicator	Synergy Replicator								
Number of CPUs:		2										
VMware Tools:		N/A										
Priority:		Normal <input type="button" value="v"/>										
Memory Footprint:		<input type="text" value="2048"/>	MB									
Ping Watchdog:		not watching <input type="button" value="v"/>										
Ping Watchdog IP:		<input type="text"/>	<i>empty for no ping watchdog IP</i>									
Ping Watchdog Interval:		<input type="text" value="5"/>	<i>second(s)</i>									
Watchdog Timeout:		<input type="text" value="5"/>	<i>second(s)</i>									
Optimization Virtual Network Interfaces:												
<table border="1"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Vlan</th> <th>MAC</th> </tr> </thead> <tbody> <tr> <td><input type="text" value="synergy:VIP"/></td> <td>V-Inpath</td> <td>none</td> <td></td> </tr> </tbody> </table>					Name	Type	Vlan	MAC	<input type="text" value="synergy:VIP"/>	V-Inpath	none	
Name	Type	Vlan	MAC									
<input type="text" value="synergy:VIP"/>	V-Inpath	none										
Management Virtual Network Interfaces:												
<table border="1"> <thead> <tr> <th>Name</th> <th>Physical Interface</th> <th>MAC</th> </tr> </thead> <tbody> <tr> <td>synergy:MGMT</td> <td><input checked="" type="radio"/> primary <input type="radio"/> aux</td> <td></td> </tr> </tbody> </table>					Name	Physical Interface	MAC	synergy:MGMT	<input checked="" type="radio"/> primary <input type="radio"/> aux			
Name	Physical Interface	MAC										
synergy:MGMT	<input checked="" type="radio"/> primary <input type="radio"/> aux											
<input type="button" value="Update Slot"/> <input checked="" type="button" value="Enable Slot"/> <input type="button" value="Uninstall"/>												

5. Enable the slot.



6. Navigate to *Configure | Branch Services | RSP Data Flow inpath0_0*. Or *RSP Data Flow inpath0_1* if that's what will be used.

riverbed Steelhead branch / 192.168.3.3
model 1520 / 6.0.2 (x86_64)

Home | Configure ▾ | Reports ▾ | Support | Save | Restart | ● Healthy | user: admin | Logout

RSP Service | RSP Packages | RSP Data Flow inpath0_0 | RSP Data Flow inpath0_1

Configure > Branch Services > RSP Data Flow inpath0_0 ?

Data Flow for inpath0_0:

▼ Add a VNI

Interface: synergy:VIP ▾
Data Flow Position: Start ▾

Add

Position	Type	VNI Name	Slot	Package
--		LAN0_0	--	--
1		❏ RiOS0_0	--	--
--		WAN0_0	--	--

- Click *Add a VNI* and select the Virtual In-Path interface corresponding to the IBM Fastback. Leave the *Data Flow Position* as *Start* to ensure that the Interface is on the LAN side of RiOS. Click *Add* to add the VNI to the data flow.

Configuring Replicator

Now that we have the Replicator RSP package installed in our environment the next step is to configure it. Follow the instructions in the Replicator *Quick Start Guide* accompanying the Replicator software to enable Replicator, add Replication Servers, and configure Web Applications for replication. When adding the Replication Servers, make sure to use the *Host Name* of the servers and not the IP Address.

The steps below describe how to disable compression. This is a necessary step as the compression will interfere with the Steelhead's SDR functionality.

Synergy Replicator

- ▣ Local Server Settings
- ▣ **Configure Replication Servers**
- ▣ Site Collection Settings
- ▣ Web Application Replication Settings
- ▣ Manage Replication Maps
- ▣ Monitor Replication
- ▣ Monitor Conflicts
- ▣ Replicator Status
- ▣ Event Transaction Log
- ▣ About Replicator

- In SharePoint Central Administration navigate to *Application Management*. Locate the list of options for Synergy Replicator and click on *Configure Replication Servers*.

Central Administration > Application Management > Replication Servers

Replication Servers

Use this page to add, modify and delete Replication servers.

Web Application: **http://synergy-rsp/**

Replication Servers

Add a new Replication server, or click a server name to change its properties.

[Add a Replication Server](#) [Back to Application Management](#)

Name	Address	Compression	Outbound Enabled	Inbound Enabled	Conflict Processing
Synergy	HTTP://Synergy:80	Zip	True	True	SkipEvent

- The remote SharePoint server configured using the *Replicator Quick Start Guide* should be listed. Click on the *Name* of the Replication Server.

Central Administration > Application Management > Replication Servers > Configure Replication Server

Configure Replication Server

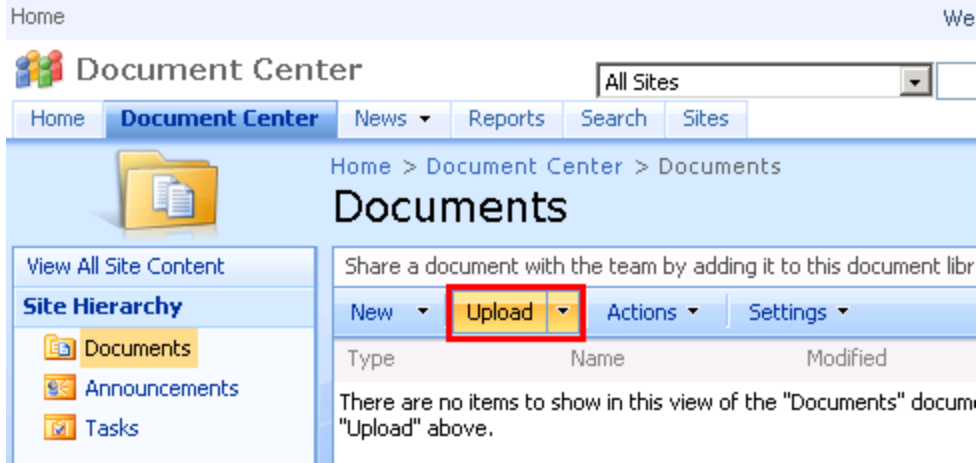
Use this page to configure a Replication server.

Web Application	Web Application: http://synergy-rsp/
General Settings	Remote Server Name: <input type="text" value="Synergy"/> <input checked="" type="checkbox"/> Capture Events <input checked="" type="checkbox"/> Enable Outbound <input checked="" type="checkbox"/> Enable Inbound
Transport:	Transport: <input type="text" value="BITS"/>
Communication	BITS Mode: <input type="text" value="BITS - High Priority"/> Compression: <input checked="" type="radio"/> None <input type="radio"/> Zip <input type="radio"/> RDC RDC Size Threshold (in MBs): <input type="text" value="5"/>

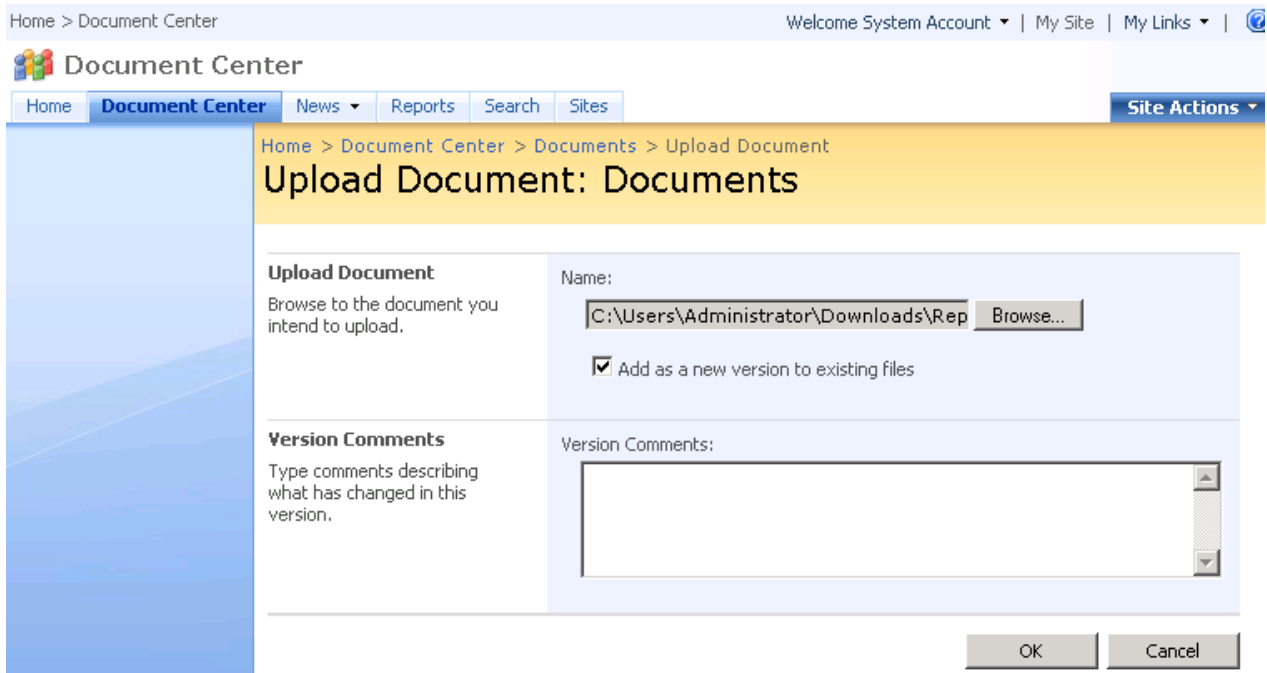
- This takes us back to the Configure Replication Server screen we used to add the Replication Server. Select *None* for *Compression* and click *OK* at the bottom of the screen to accept the changes.
- Repeat steps 1-3 for all other servers in the environment.

Verifying the Replicator Installation

The installation of Replicator can easily be verified by checking in a document on one SharePoint Server and verifying that it gets replicated to the others.



1. In the main SharePoint site, navigate to *Document Center | Documents* and click on *Upload*.



2. Select the document to be uploaded and click *OK*.

The screenshot shows the 'Edit Item' page for a document titled 'Replicator Reference Guide'. The breadcrumb trail is 'Home > Document Center > Documents > Replicator Reference Guide > Edit Item'. A yellow message box at the top states: 'The document was uploaded successfully and is checked out to you. You must fill out any required properties and check it in before other users will be able to access it.' Below this, there are 'Check In' and 'Cancel' buttons. A toolbar includes 'Delete Item' and 'Spelling...'. The 'Name' field contains 'Replicator Reference Guide.docx' and is marked with an asterisk. The 'Title' field is empty. At the bottom, it shows 'Version: 0.1', 'Created at 6/28/2010 9:16 PM by System Account', and 'Last modified at 6/28/2010 9:16 PM by System Account'. There are 'Check In' and 'Cancel' buttons at the bottom right.

3. Click *Check In* to finish checking in the new document.

The screenshot shows the 'Documents' library view in SharePoint. The breadcrumb trail is 'Home > Document Center > Documents'. The page title is 'Documents'. A message says 'Share a document with the team by adding it to this document library.' Below this are 'New', 'Upload', 'Actions', and 'Settings' buttons. A table lists the documents:

Type	Name	Modified
	Replicator Reference Guide !NEW	6/28/2010 9:18 PM

On the left, there is a 'Site Hierarchy' sidebar with 'Documents' selected. Other options include 'Announcements' and 'Tasks'.

4. The document will automatically be replicated to all other SharePoint servers in the environment.