

Replicate Data Between Servers

July 18, 2012

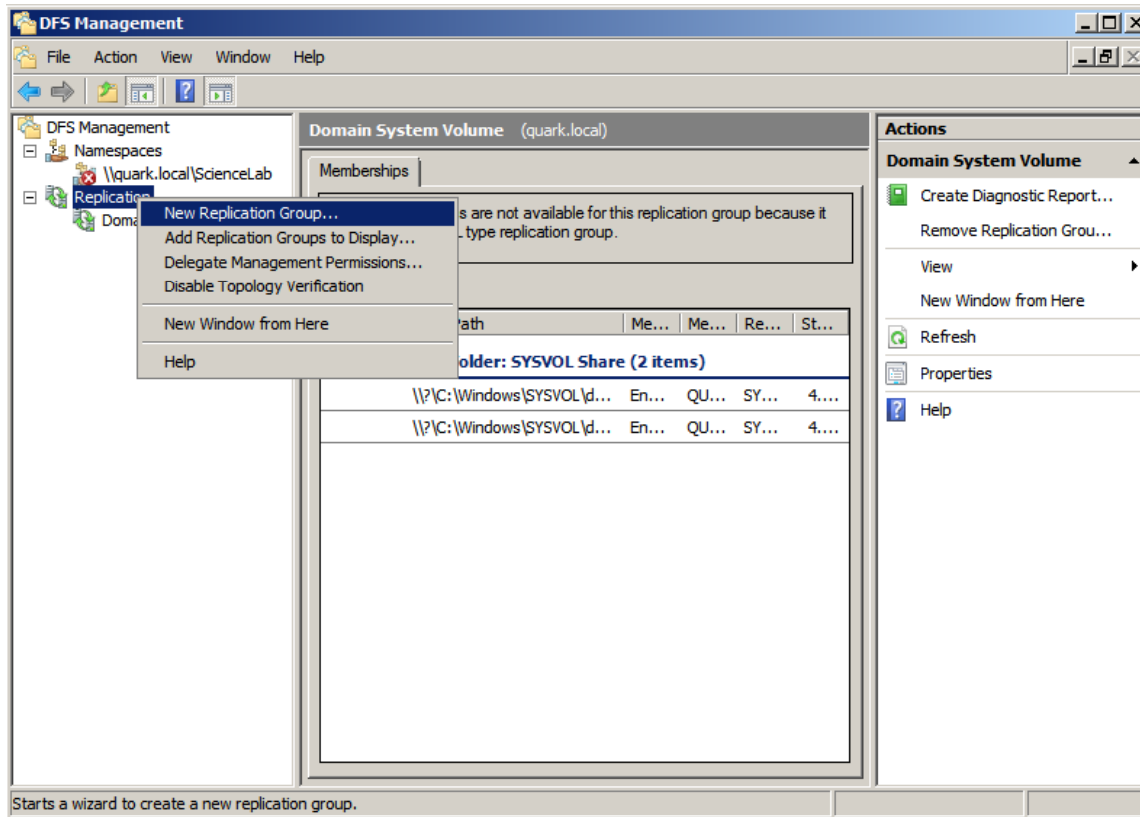
Backing Up a Primary Domain Controller (DC)

It is very necessary to backup data on a Primary Domain Controller (DC), so in this exercise we will use the Distributive File System to replicate a data folder from the Primary DC to the Secondary DC.



DFS Management Window

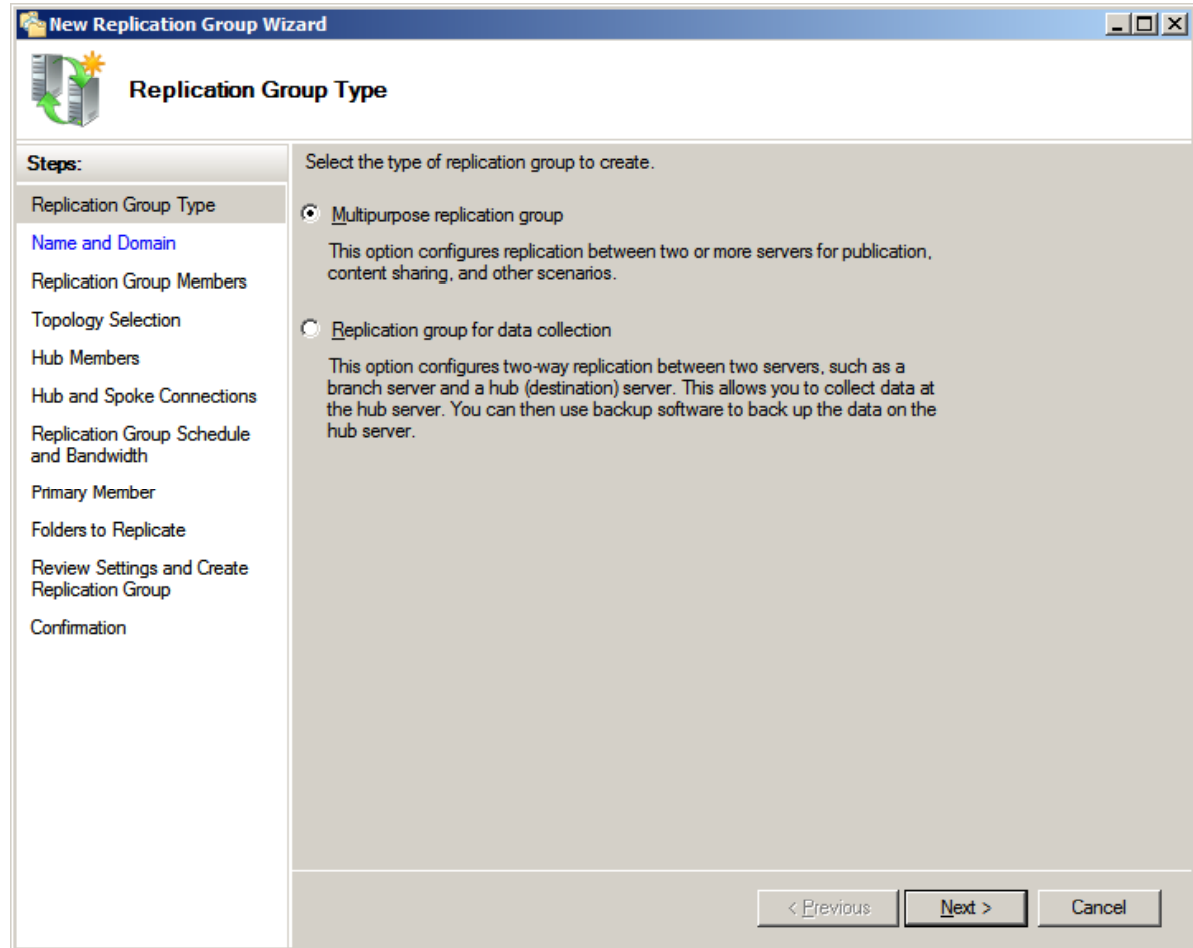
On the Start menu, we pick Administrative Tools and we choose DFS Management to open the Distributed File System Management console. On the left pane, we expand the folder and right click on Replication. We choose New Replication Group from the popup menu.



Replication Group Type

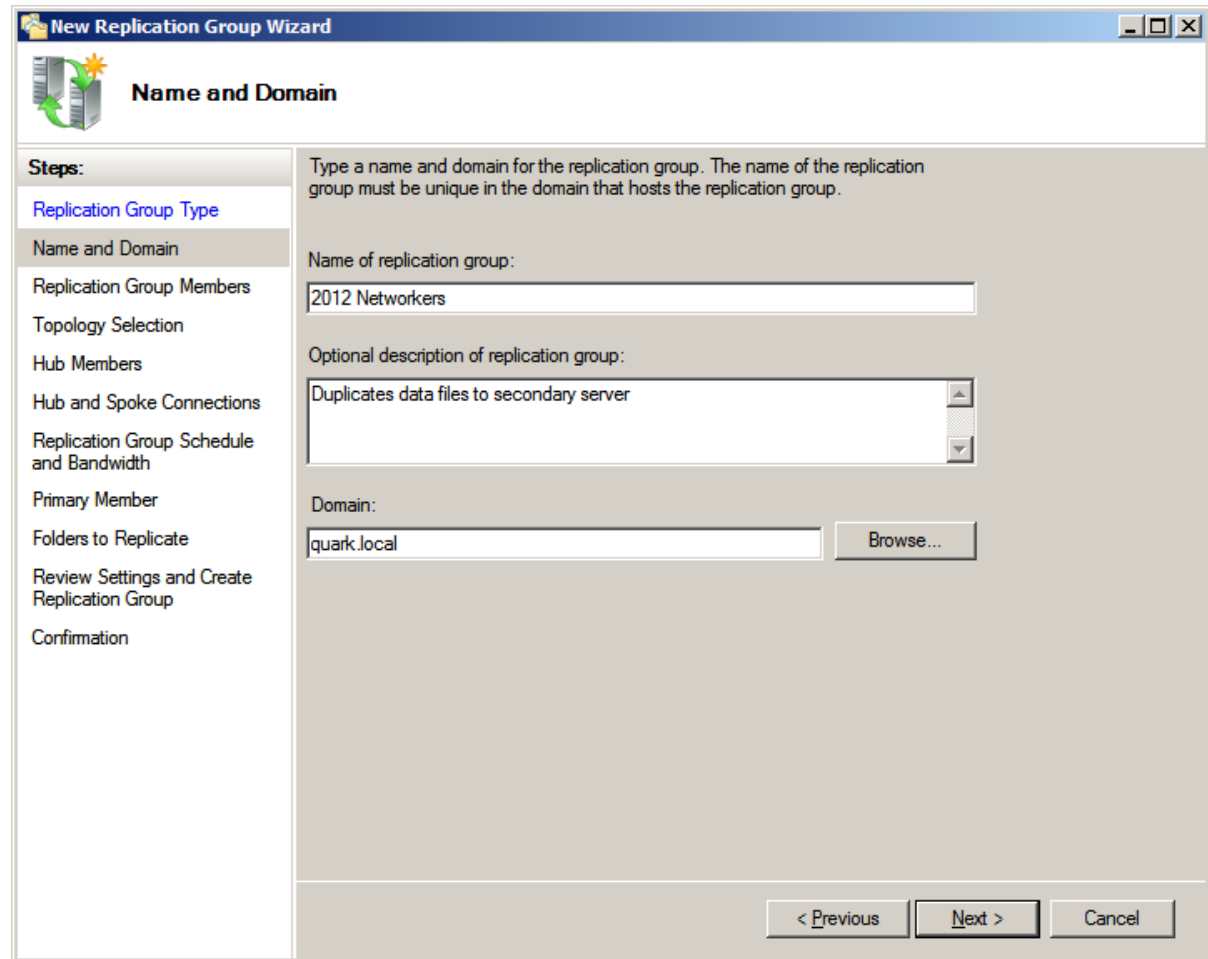
The Replication Group Type window will open and we opt for the Multipurpose replication group.

We choose the Next button to continue.



Name and Domain

Next, the Name and Domain window will give us the chance to name the replication group, add a description, and to pick the domain. We will be replicating data from the Primary DC to the Secondary DC, so we will stay in the current domain.



The screenshot shows the 'New Replication Group Wizard' window, specifically the 'Name and Domain' step. The window title is 'New Replication Group Wizard' and the current step is 'Name and Domain'. The left sidebar lists the steps: 'Replication Group Type', 'Name and Domain', 'Replication Group Members', 'Topology Selection', 'Hub Members', 'Hub and Spoke Connections', 'Replication Group Schedule and Bandwidth', 'Primary Member', 'Folders to Replicate', 'Review Settings and Create Replication Group', and 'Confirmation'. The main area contains the following fields and instructions:

- Instruction: 'Type a name and domain for the replication group. The name of the replication group must be unique in the domain that hosts the replication group.'
- Field: 'Name of replication group:' with the value '2012 Networkers'.
- Field: 'Optional description of replication group:' with the value 'Duplicates data files to secondary server'.
- Field: 'Domain:' with the value 'quark.local' and a 'Browse...' button.

At the bottom right, there are three buttons: '< Previous', 'Next >', and 'Cancel'.

Replication Group Members

– First Server

We choose the Add button and on the select Computers window, and we type the name of the Primary DC. We select the name of the Primary DC from the list and push the OK button.

The screenshot shows the 'New Replication Group Wizard' window. The 'Replication Group Members' step is active, with instructions to click 'Add' and select servers. A 'Select Computers' dialog box is open, showing the following fields:

- Select this object type: Computers
- From this location: quark.local
- Enter the object names to select (examples): quantum

The 'Multiple Names Found' dialog box is also visible, showing a table of matching names:

Name (RDN)	Description	In Folder
QUANTUM		quark.local/Domain Controllers
QUANTUM2		quark.local/Domain Controllers

Replication Group Members – Second Server

Again we choose the Add button and this time we select the name of the Secondary DC for our forest.

The screenshot shows the 'New Replication Group Wizard' window with the 'Replication Group Members' step selected. The 'Members' table lists two servers: QUANTUM and QUANTUM2, both in the quark.local domain. An 'Add...' button is visible at the bottom of the wizard. Overlaid on this is a 'Multiple Names Found' dialog box, which displays a table of matching names for the search term 'quantum'.

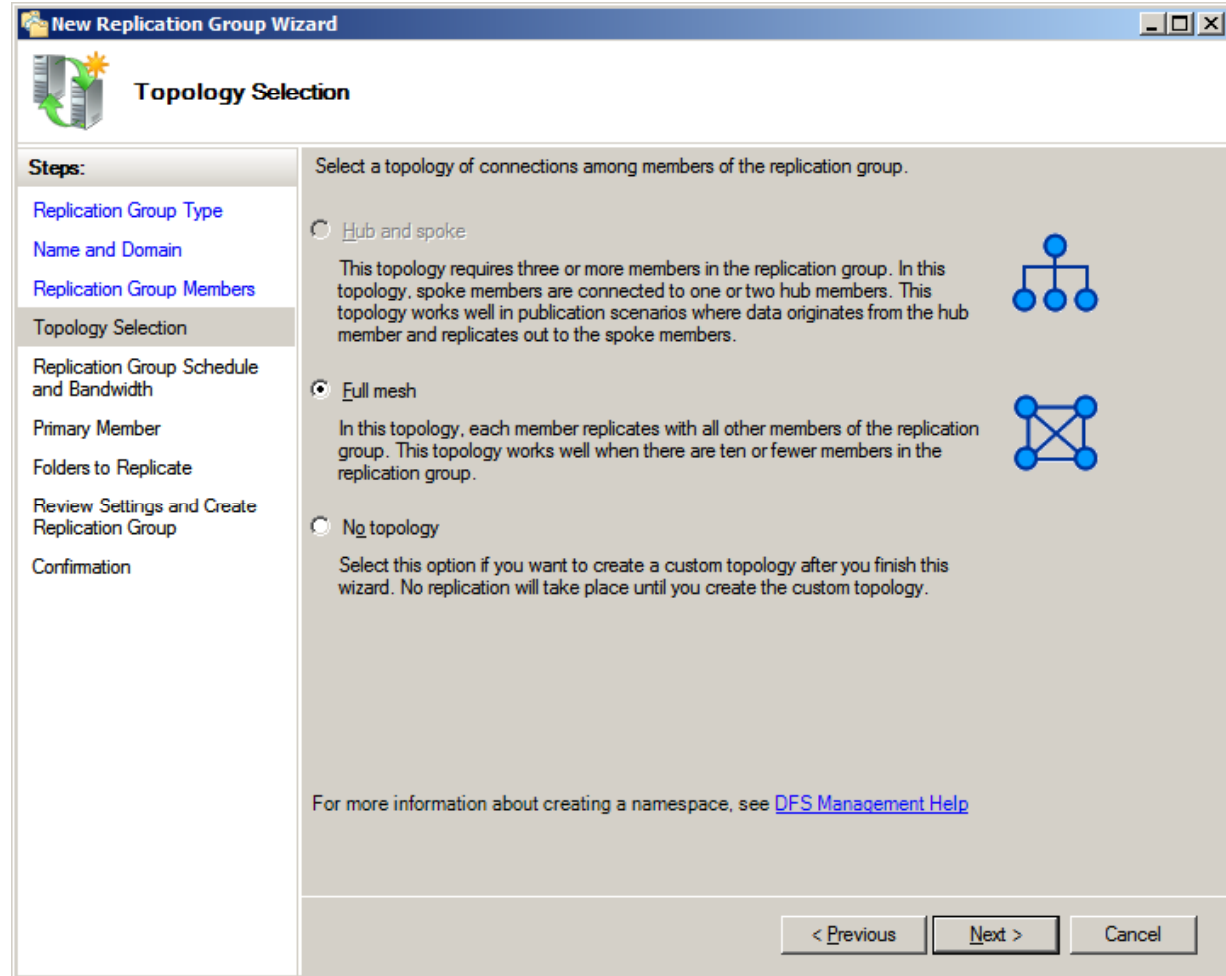
Name (RDN)	Description	In Folder
QUANTUM		quark.local/Domain Controllers
QUANTUM2		quark.local/Domain Controllers

Buttons: OK, Cancel, Add..., Remove, < Previous, Next >, Cancel

Topology Selection

On the Topology Selection window, we will choose the Full mesh option, so we can write the files from our Primary DC to the Secondary DC.

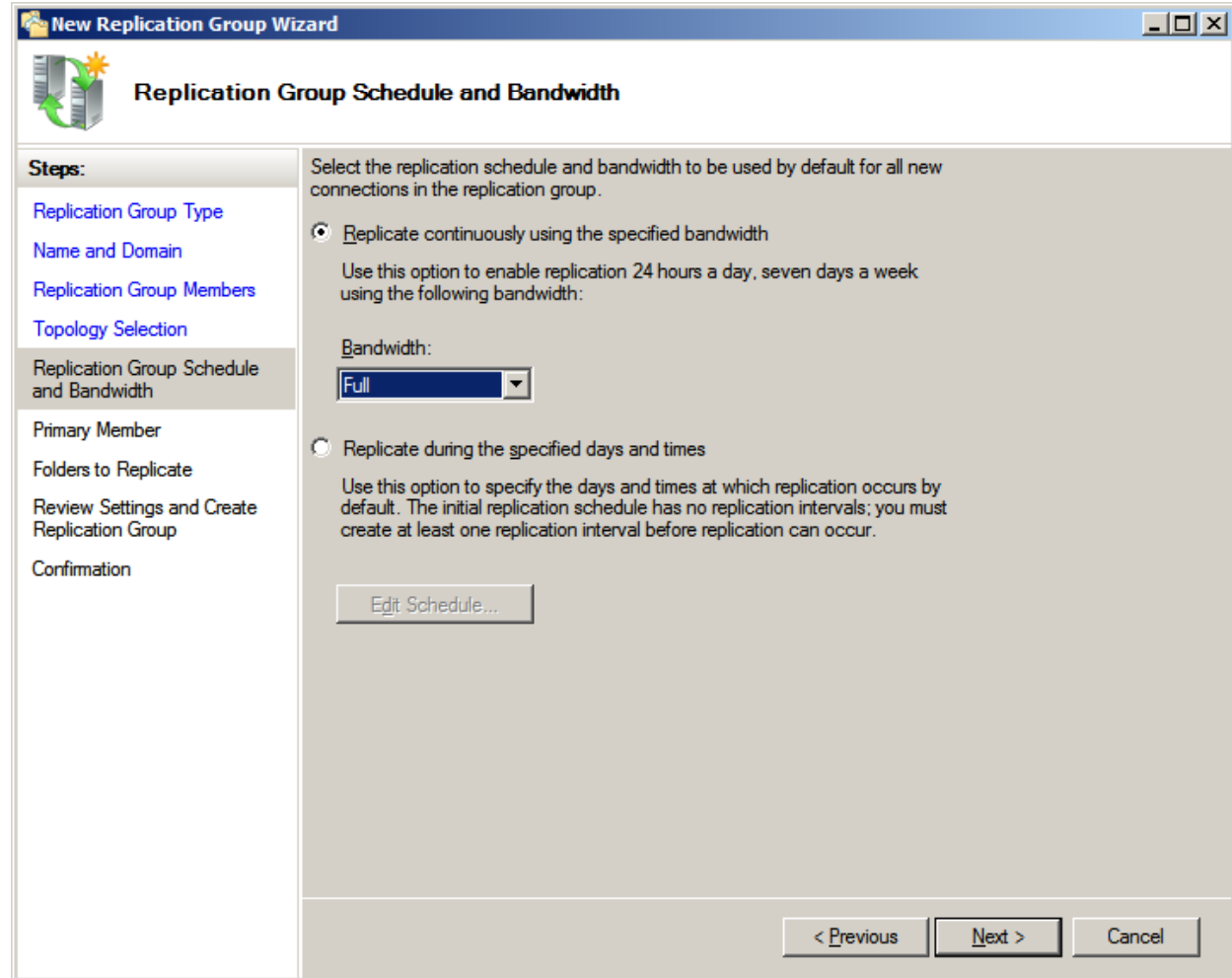
We push the Next button to continue.



Replication Group Schedule and Bandwidth

On the Replication Group Schedule and Bandwidth window, we will opt for using the full bandwidth and continuous replication.

We press the Next button to go on.

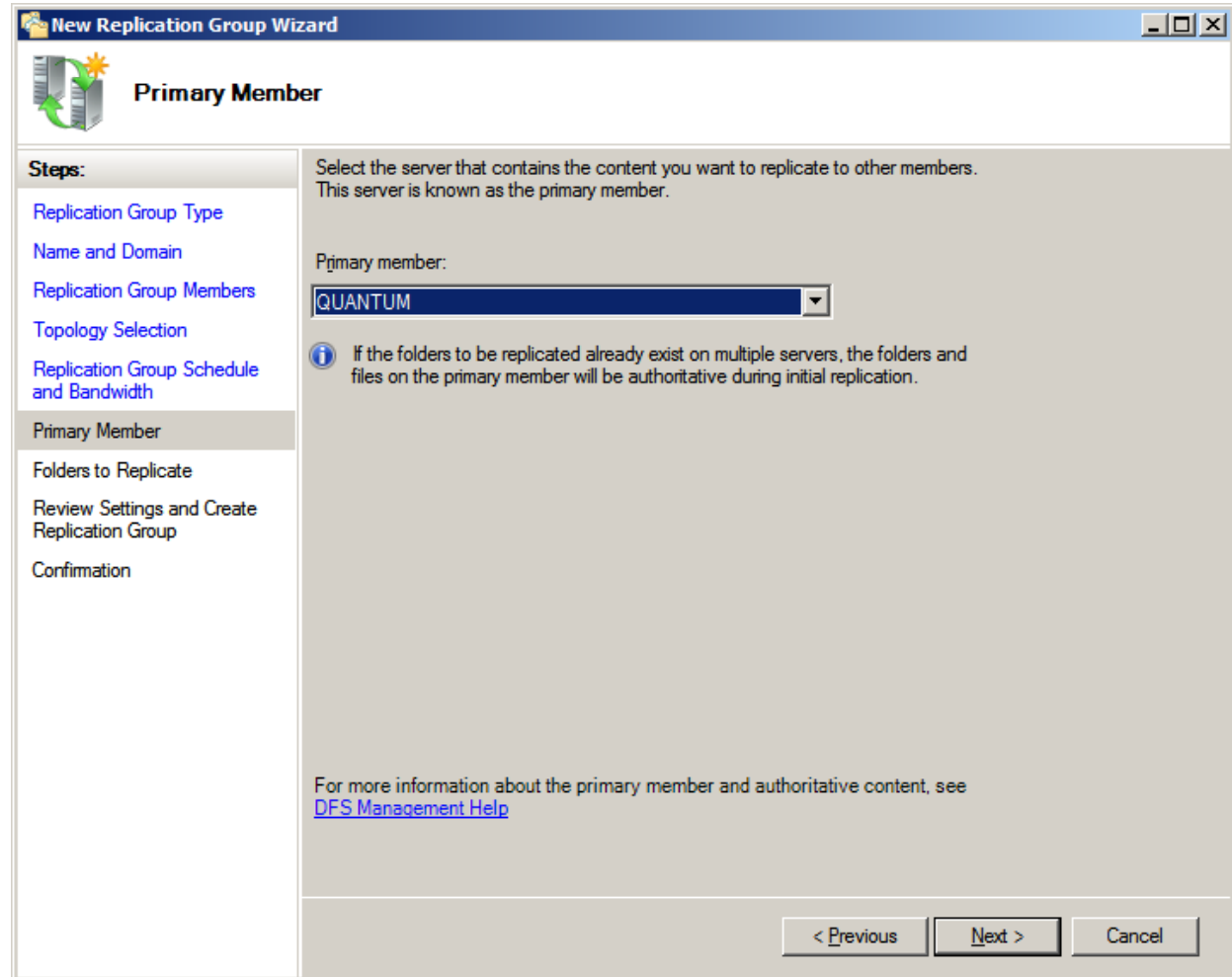


The screenshot shows the 'New Replication Group Wizard' window with the title 'Replication Group Schedule and Bandwidth'. The window is divided into two main sections. On the left is a 'Steps' pane with a list of steps: 'Replication Group Type', 'Name and Domain', 'Replication Group Members', 'Topology Selection', 'Replication Group Schedule and Bandwidth' (which is highlighted), 'Primary Member', 'Folders to Replicate', 'Review Settings and Create Replication Group', and 'Confirmation'. The main area on the right contains the following text: 'Select the replication schedule and bandwidth to be used by default for all new connections in the replication group.' Below this text are two radio button options. The first option, 'Replicate continuously using the specified bandwidth', is selected. It includes the instruction: 'Use this option to enable replication 24 hours a day, seven days a week using the following bandwidth:'. Below this is a 'Bandwidth:' label and a dropdown menu currently set to 'Full'. The second option, 'Replicate during the specified days and times', is unselected and includes the instruction: 'Use this option to specify the days and times at which replication occurs by default. The initial replication schedule has no replication intervals; you must create at least one replication interval before replication can occur.' Below the second option is an 'Edit Schedule...' button. At the bottom right of the window are three buttons: '< Previous', 'Next >', and 'Cancel'.

Primary Member

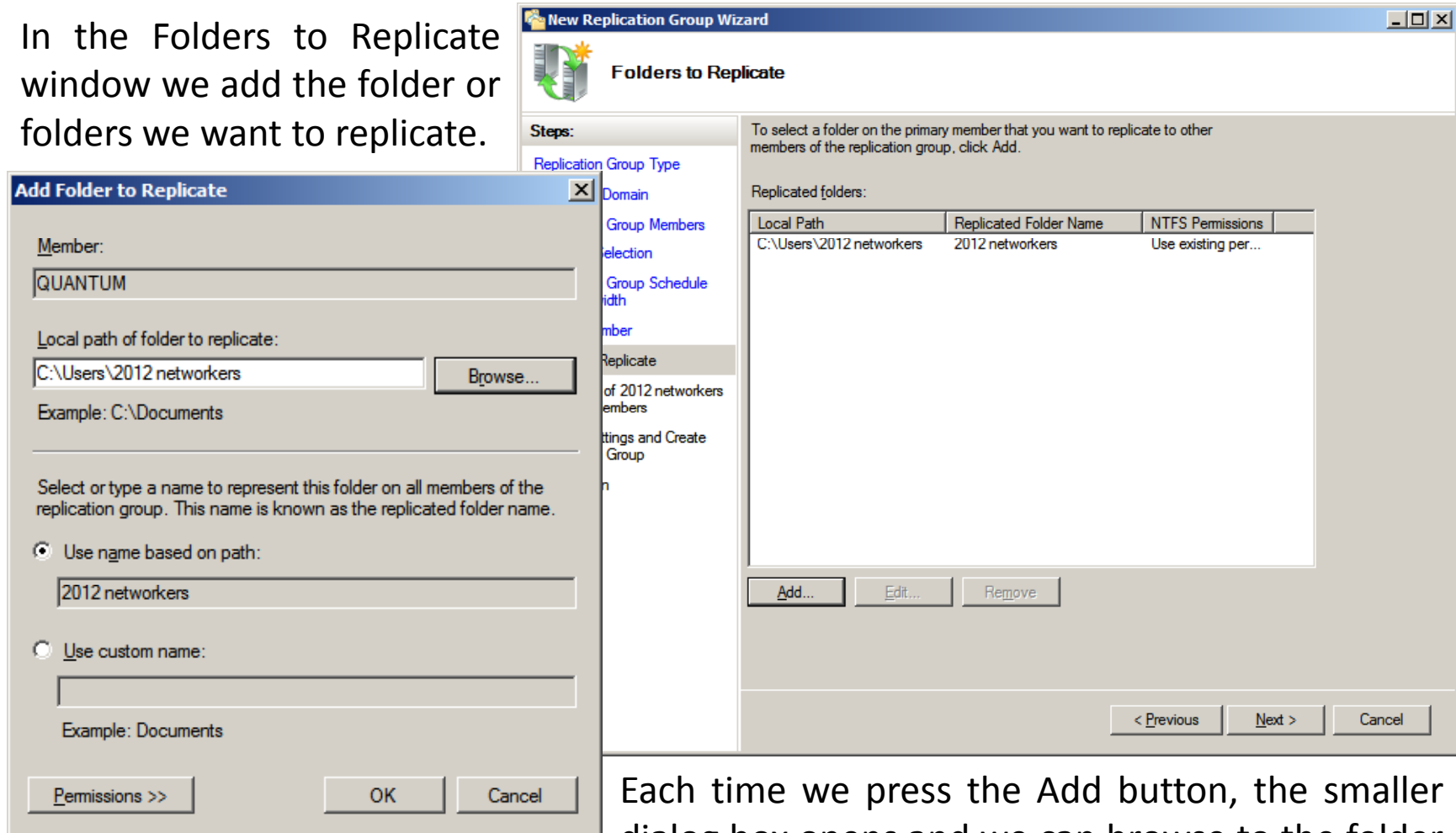
On the Primary Member window, we will choose the name of the Primary DC.

We indicate the Next button to advance.



Folders to Replicate

In the Folders to Replicate window we add the folder or folders we want to replicate.



Each time we press the Add button, the smaller dialog box opens and we can browse to the folder we want to replicate.

Secondary Member

On this window, we will see the name of the Secondary DC. We select the Edit button.

The image shows two overlapping windows from Windows Server 2012. The background window is the 'New Replication Group Wizard' at the 'Local Path of 2012 networkers on Other Members' step. It shows the primary member 'QUANTUM' with a local path of 'C:\Users\2012 networkers'. A table below lists member details, with 'QUANTUM2' and '<Disabled>' highlighted. The foreground window is the 'Edit' dialog box for the secondary member 'QUANTUM2'. It shows the membership status set to 'Enabled' and the local path of the folder set to 'C:\Users\2012 networkers'.

New Replication Group Wizard - Local Path of 2012 networkers on Other Members

Steps:

- Replication Group Type
- Name and Domain
- Group Members
- Selection
- Group Schedule
- Path
- Member
- Replicate
- of 2012 networkers
- Members
- Settings and Create Group

To enter the local path where the replicated folder will be stored on the other members of the replication group, click Edit.

Primary member: QUANTUM
Primary member local path: C:\Users\2012 networkers

Member details:

Member	Local Path
QUANTUM2	<Disabled>

Edit...

< Previous Next > Cancel

Edit

General

Member: QUANTUM2

Select the initial status of the replicated folder on this member.

Membership status:

Disabled
The replicated folder will not be stored on this member.

Enabled
Keep the following folder synchronized with other members.

Local path of folder: C:\Users\2012 networkers Browse...

Example: C:\Data

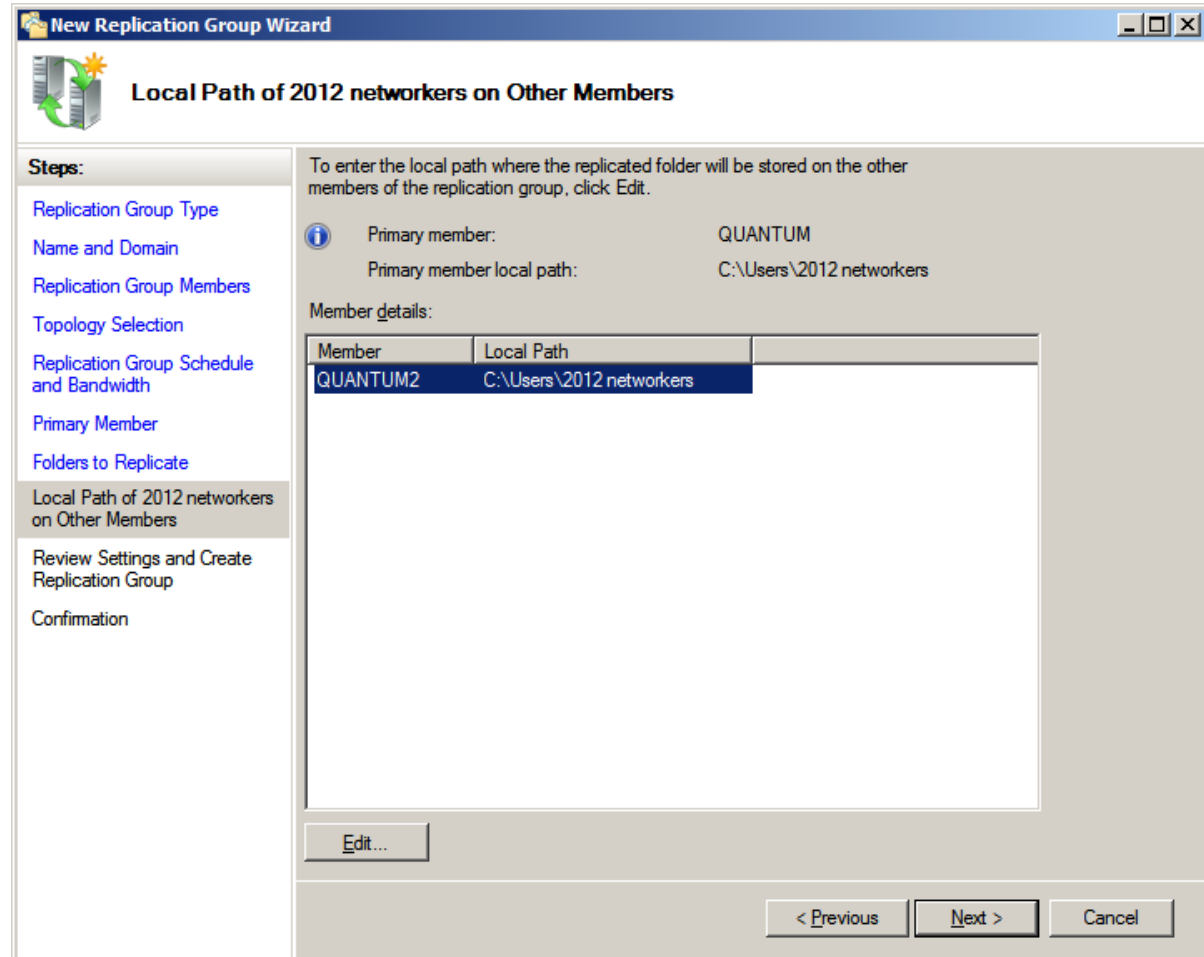
OK Cancel

We browse to the folder we want to write the data from the Primary DC.

Folders to Receive Replicate

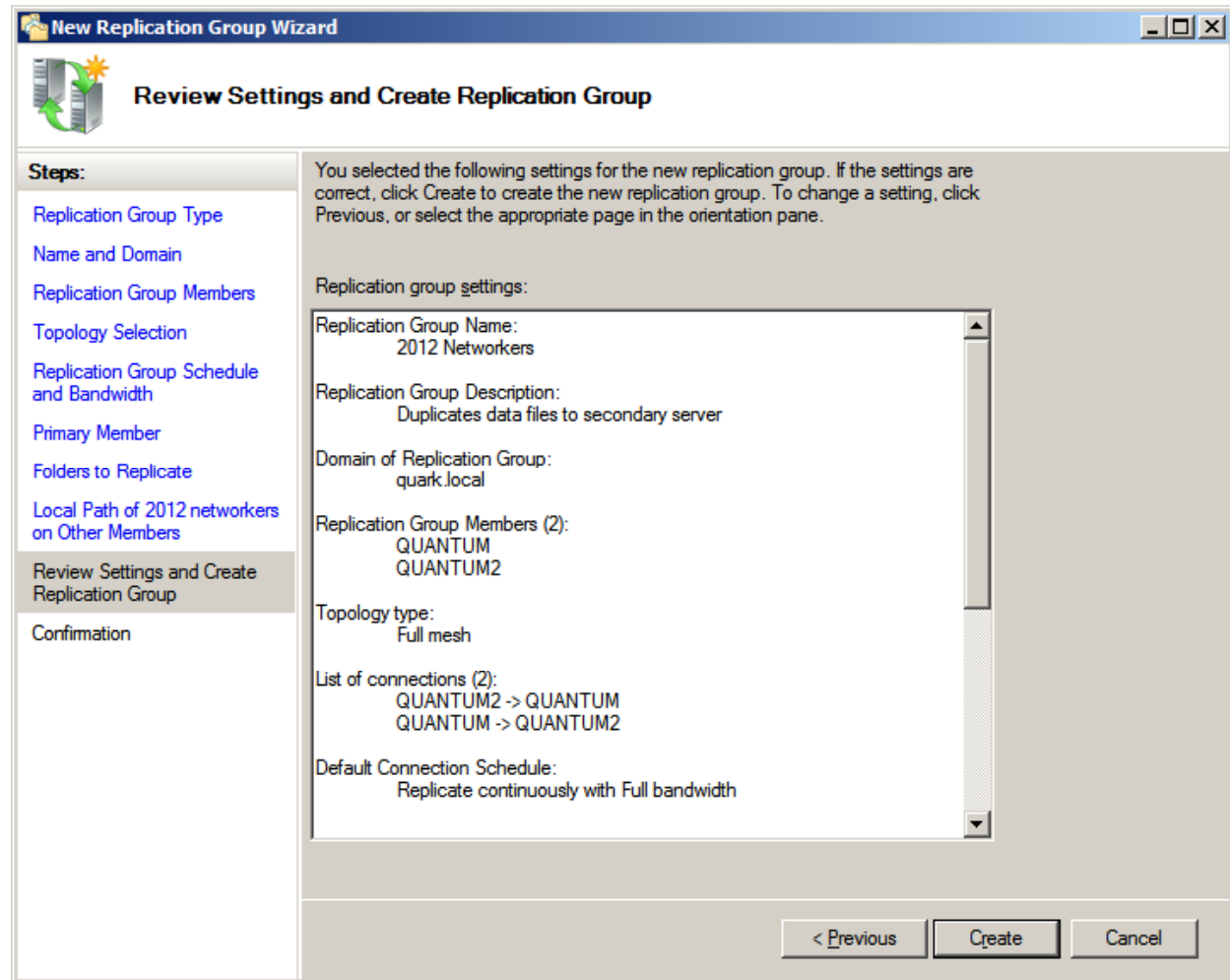
We can see the name of the Secondary DC and the local path to where the data files will be written.

We choose the Next button to continue.



Review Replication Settings

We now have the prospect to review all of the settings we made to replicate the files in the 2012 Networkers folder on the Primary DC to the Secondary DC. If we agree with the information, we should push the Create button.



Confirmation

When we setup a connection to another server, we always feel good when we see the green check marks that show a successful setup and connection with another machine. A message will appear when we close the confirmation to tell us to expect an initial replication delay.

The image shows two overlapping windows from a Windows operating system. The background window is the 'New Replication Group Wizard' in its 'Confirmation' step. The foreground window is a 'Replication Delay' information dialog box.

New Replication Group Wizard - Confirmation

Steps:

- Replication Group Type
- Name and Domain
- Replication Group Members
- Topology Selection
- Replication Group Schedule and Bandwidth
- Primary Member
- Folders to Replicate
- Local Path of 2012 networkers on Other Members
- Review Settings and Create Replication Group
- Confirmation**

Confirmation: You have successfully completed the New Replication Group Wizard.

Tasks:

Task	Status
✓ Create replication group.	Success
✓ Create members.	Success
✓ Set permissions on replicated folders.	Success
✓ Create replicated folder.	Success
✓ Create membership objects.	Success
✓ Create connections.	Success

Replication Delay

Replication will not begin until the configuration is picked up by the members of the replication group. The amount of time this takes depends on Active Directory Domain Services replication latency as well as the polling interval.

Do not show this again

OK Close

DFS Management

We can see the new replication group.

After several minutes, we can check the hard drive on the Secondary DC and we will see that the data from the Primary Dc is written to it.

We can repeat the exercise for other data folders on the primary DC if we desire.

