



ExpressCluster X SingleServerSafe for Windows

Quick Start Guide for Microsoft SQL Server

(Installation & Configuration Guide)



NEC ExpressCluster X SingleServerSafe (SSS) for Windows
Quick Start Guide to install and configure SSS with Microsoft SQL Server

Version 2.1, December 2009

NEC Corporation

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Installing ExpressCluster X SSS on Windows Server 2003

1. Install the ExpressCluster X SSS software

- Insert ExpressCluster X SSS CD in CD-Drive. “NEC ExpressCluster Setup Menu” screen will be shown. In case it is not shown, open the ExpressCluster X SSS CD and click on “menu.exe”
- Click “NEC ExpressCluster SingleServerSafe for Windows” option
- Click “NEC ExpressCluster X SingleServerSafe for Windows” option
- Click “Next”
- Click “Next”
- Click “Install”
- Keep the default WebManager HTTP Port to 29003 and click “Next”
- Click “Register”
- Click “Register with License Information” if you have license key. You can also click “Register with License File” if you have softcopy file of license. For now we are assuming softcopy of license key, so will click “Register with License File”.
- Browse to the folder where license file is kept. Select the license file and click “Open”.
- On successful registration of license, a window with message “The license was registered.” will be shown.
- Click “OK”
- Click “Finish”
- Restart the server.

2. Install the JRE (Java runtime)

- Get the JRE and install it.

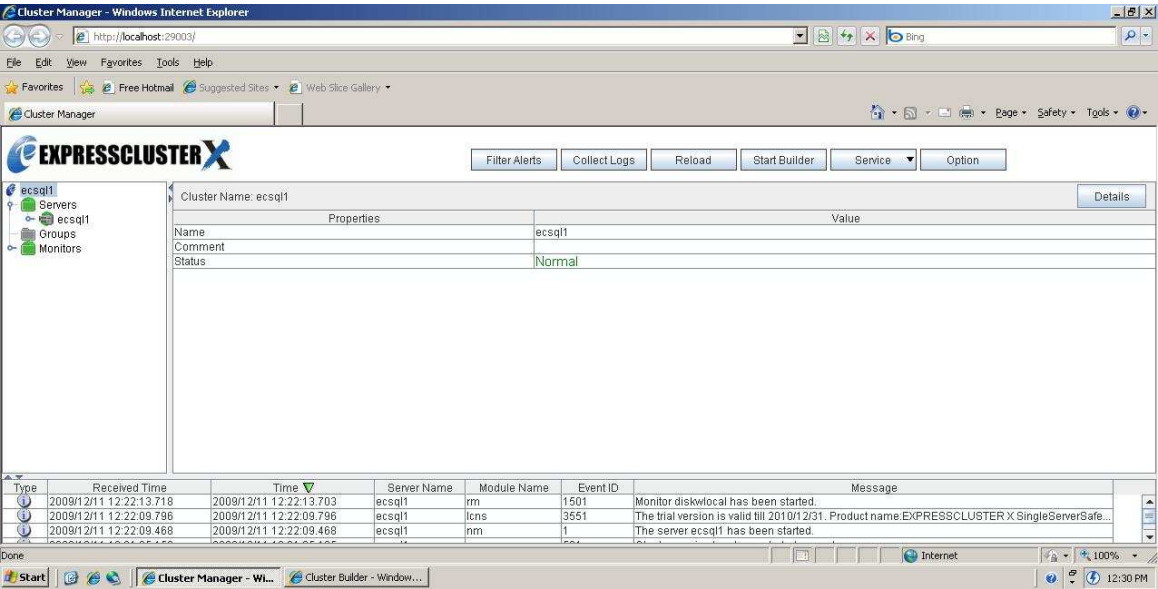
Configuring ExpressCluster X SSS for MS SQL Server

Prerequisite – Before configuring ExpressCluster X SSS, MS SQL Server must be installed on server on which SSS is installed.

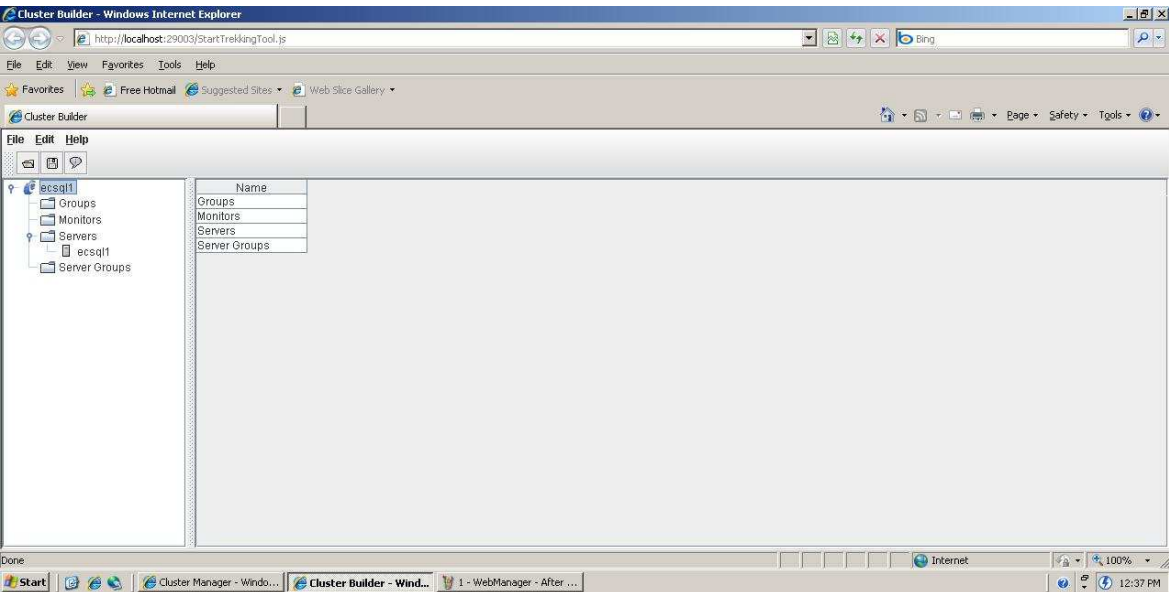
For details on how to start the web manager & definitions of features available in SSS, refer the ExpressCluster X SSS manuals. Given below is a brief demonstration on how to configure SSS using sample service application. Application being used for preparation of this document is MS SQL Server 2005

Step 1: Open SSS WebManager by opening link “http://localhost:29003” in browser of server on

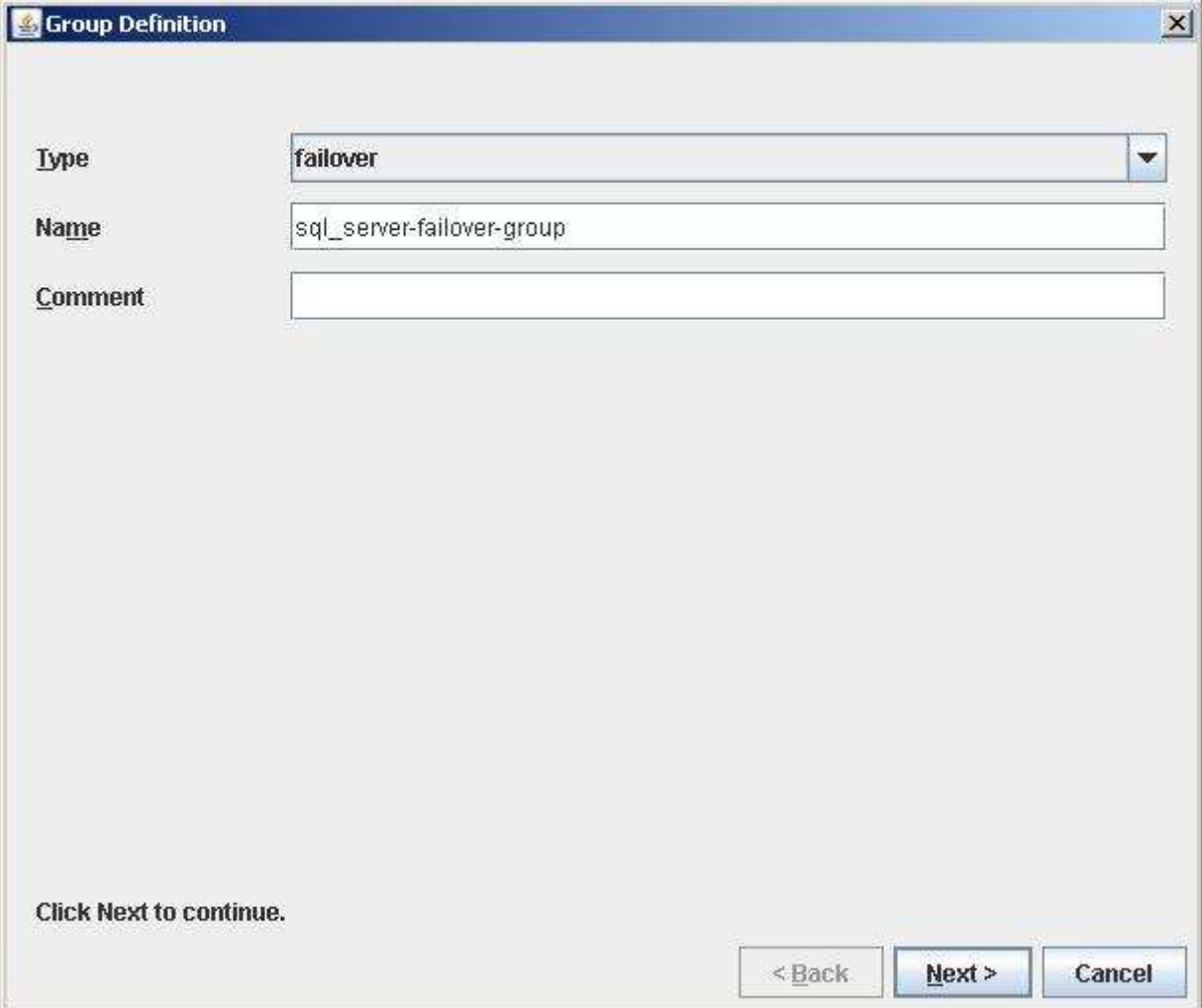
which SSS is installed. You will see the default cluster already created as shown in below image. In below image “ecsql1” is the hostname of server. You will see the hostname of your SSS server here.



Step 2: Click “Start Builder” to open the cluster builder window. Within this window we can alter/customize the SSS configuration. Cluster window will look like as shown in below image. In below image “ecsql1” is the hostname of server. You will see the hostname of your SSS server here.

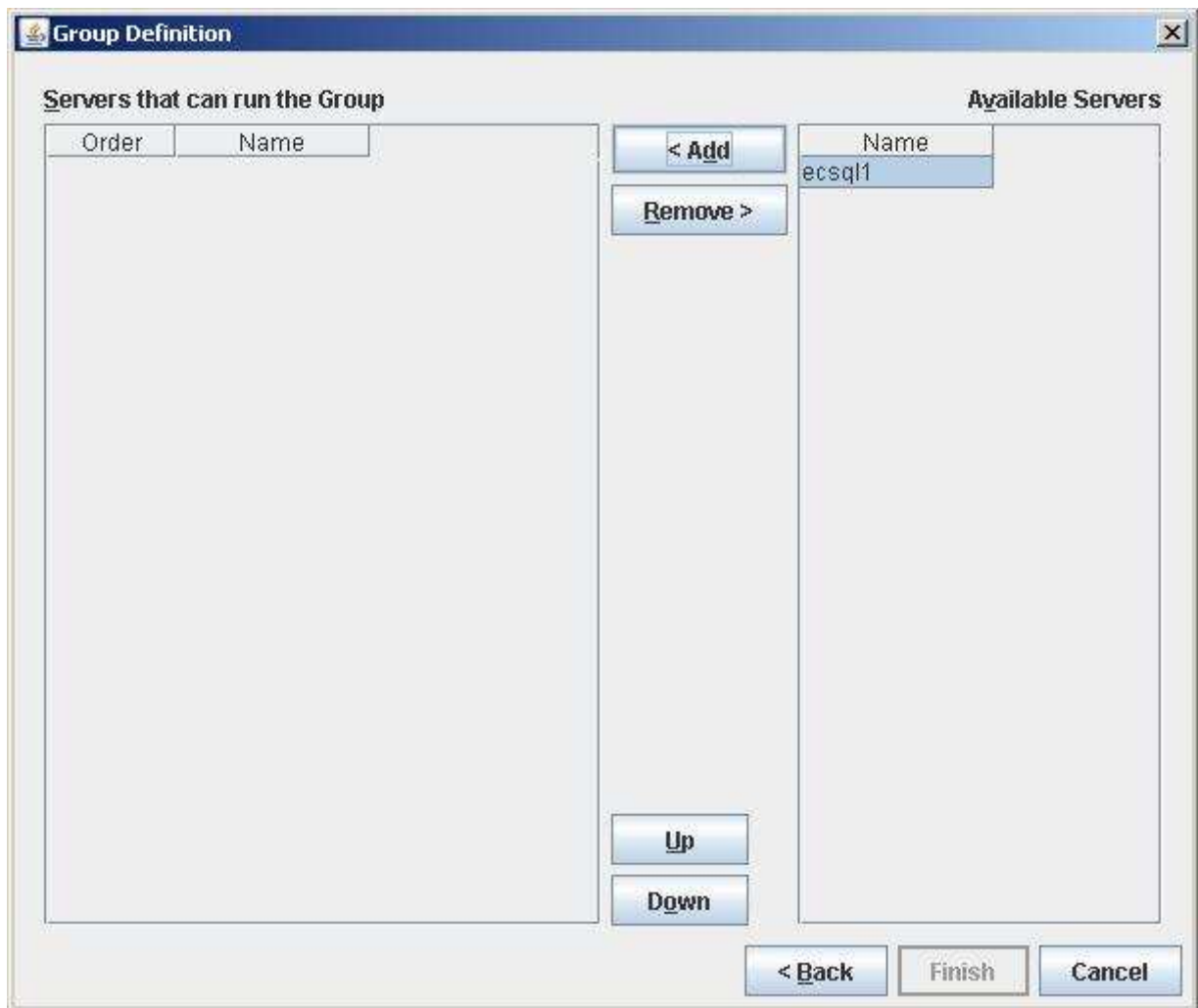


Step 3: Right click “Groups”. Click “Add Group”. A wizard will open to create a group as shown in below image. Enter the name of group. Let’s name it “sql_server-failover-group”.

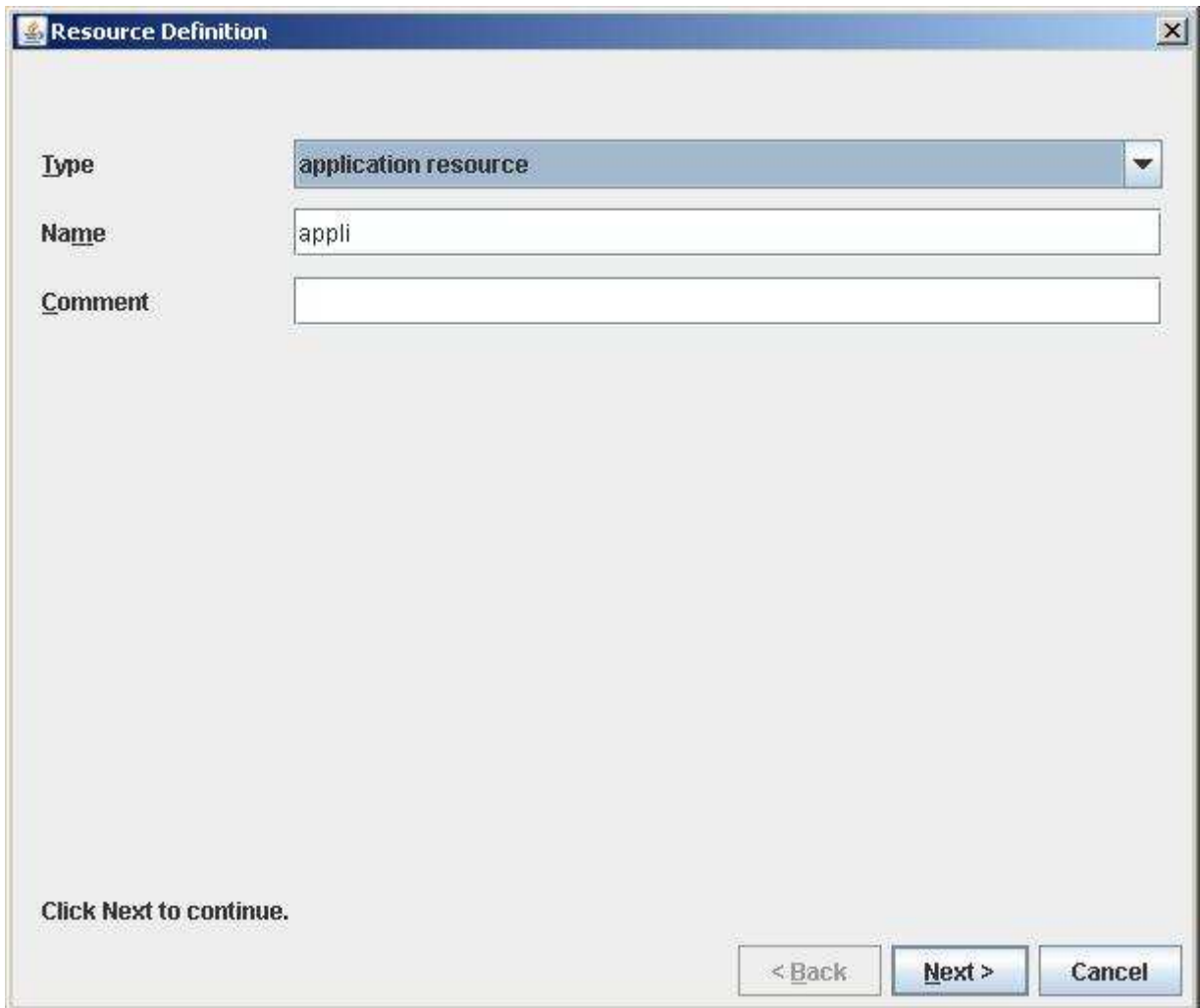


The image shows a Windows-style dialog box titled "Group Definition". It has a standard title bar with a close button (X) in the top right corner. The dialog contains three labeled input fields: "Type" with a dropdown menu showing "failover", "Name" with a text box containing "sql_server-failover-group", and "Comment" with an empty text box. At the bottom left, there is a text instruction: "Click Next to continue.". At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

Step 4: Click “Add” to add the server ecsql1 on which this failover group will run. Click “Finish”. On completion, a group “sql_server-failover-group” will be added under “failover”.



Step 5: Right click "sql_server-failover-group". Click "Add Resource". Window to add resource will be displayed as shown in below window.

A screenshot of a Windows-style dialog box titled "Resource Definition". It contains three input fields: "Type" with a dropdown menu showing "application resource", "Name" with a text box containing "appli", and "Comment" with an empty text box. At the bottom, there is a message "Click Next to continue." and three buttons: "< Back", "Next >", and "Cancel".

Type application resource

Name appli

Comment

Click Next to continue.

< Back Next > Cancel

Step 6: In "Type" field select "service resource". In "Name" field, let's name this resource as "sql_server-service". Click "Next".

Step 7: In "Service Name" field enter "MSSQLSERVER". Click "Next".

Step 8: In this window, do the setting as shown in below image. Set "Retry Count" to "3". Set "Final Action" for "Recovery Operation at activity failure detection" to "Stop Group". Set the "Final Action" for "Recovery Operation at Deactivity Failure Detection" to "No Operation (Deactivate Next Resource)". Click "Next" and then click "Finish" in next window. On completion, a service resource will be added with name "sql_server-service".

Resource Definition

Recovery operation at activity failure detection

Retry Count: 3 time

Failover Target Server:

☐ Stable Server ☒ Maximum Priority Server

Failover Threshold:

☐ Set as much as the number of the servers ☒ Set Number: 0 time

Final Action: Stop Group

☐ Execute Script before Final Action **Settings**

Recovery Operation at Deactivity Failure Detection

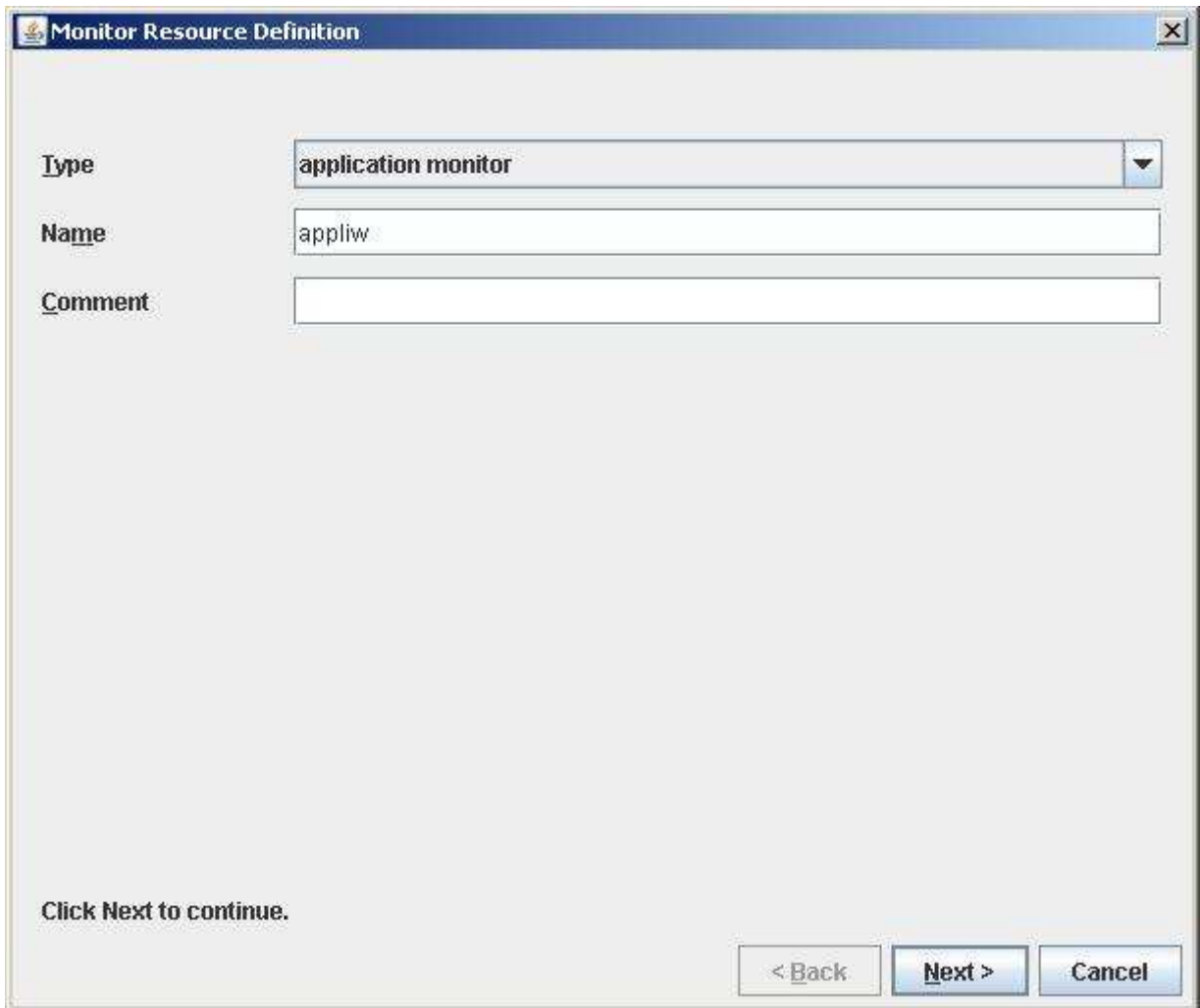
Retry Count at Deactivation Failure: 0 time

Final Action: No Operation (Deactivate next resource)

☐ Execute Script before Final Action **Settings**

< Back Next > Cancel

Step 9: Now let's add monitor which can detect MS SQL Server failure or hung-up situation. Right click "Monitors". Click "Add Monitor Resource". Window to add monitor resource will be displayed as shown below.



The image shows a Windows-style dialog box titled "Monitor Resource Definition". It contains three input fields: "Type" with a dropdown menu showing "application monitor", "Name" with a text box containing "appliw", and "Comment" with an empty text box. At the bottom, there is a message "Click Next to continue." and three buttons: "< Back", "Next >", and "Cancel".

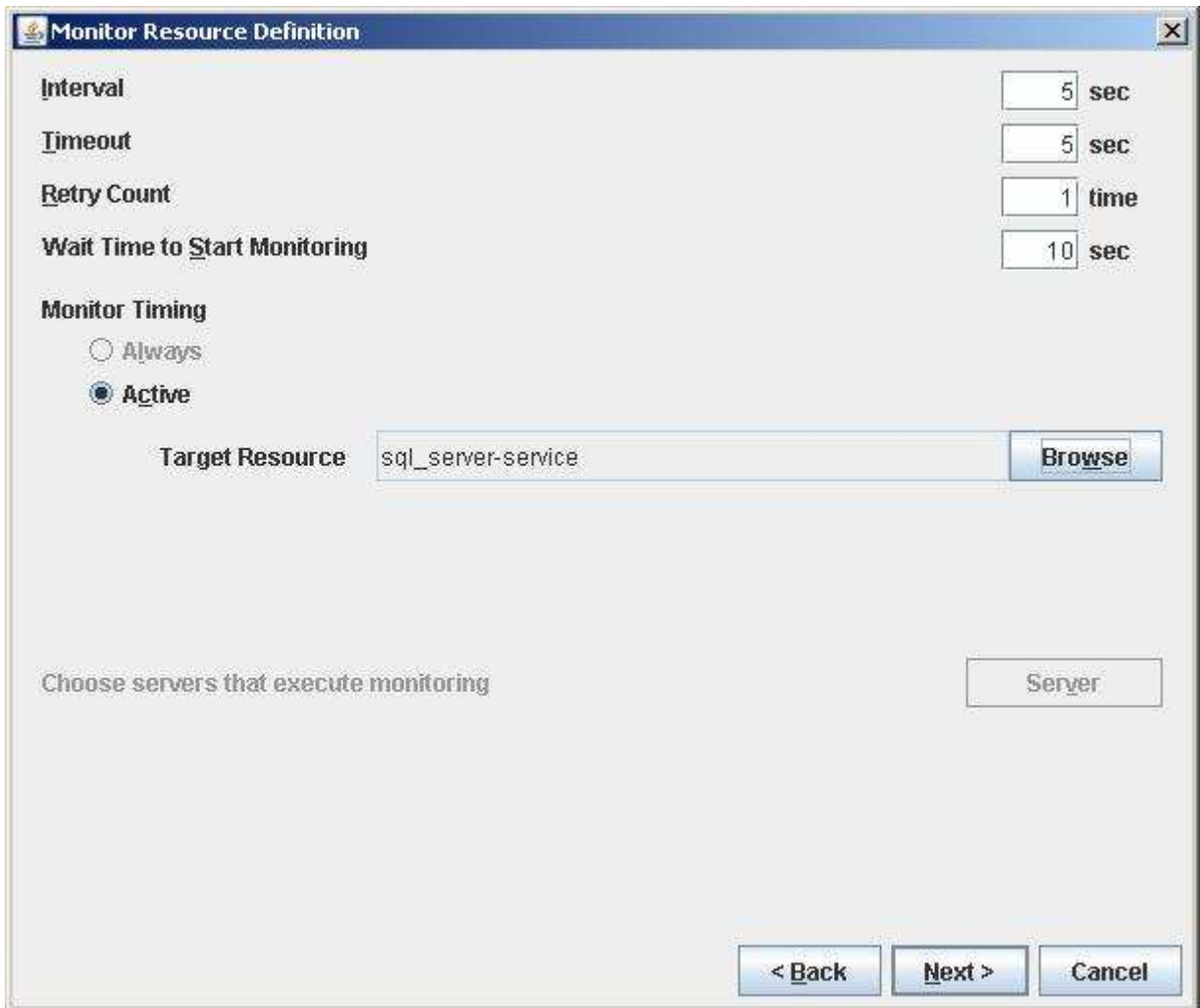
Type	application monitor
Name	appliw
Comment	

Click Next to continue.

< Back Next > Cancel

Step 10: In "Type" field, select "service monitor". In "Name" field, let's enter "sql_server-monitor" as name of monitor. Click "Next".

Step 11: In this window, set the parameters as shown in below image. Click "Next".



The image shows a Windows-style dialog box titled "Monitor Resource Definition". It contains several configuration options for monitoring a resource. The "Interval" is set to 5 seconds, "Timeout" to 5 seconds, "Retry Count" to 1 time, and "Wait Time to Start Monitoring" to 10 seconds. Under "Monitor Timing", the "Active" radio button is selected. The "Target Resource" field contains the text "sql_server-service", with a "Browse" button to its right. At the bottom, there is a section labeled "Choose servers that execute monitoring" with a "Server" button. Navigation buttons at the bottom right include "< Back", "Next >", and "Cancel".

Interval	5	sec
Timeout	5	sec
Retry Count	1	time
Wait Time to Start Monitoring	10	sec

Monitor Timing

☐ Always

☒ Active

Target Resource: sql_server-service Browse

Choose servers that execute monitoring Server

< Back Next > Cancel

Step 12: In this window, set the parameters as shown in below image. Click "Finish".

Monitor Resource Definition

Recovery Target: sql_server-failover-group Browse

Reactivation Threshold: 3 time

Failover Target Server

☒ Stable Server ☐ Maximum Priority Server

Failover Threshold

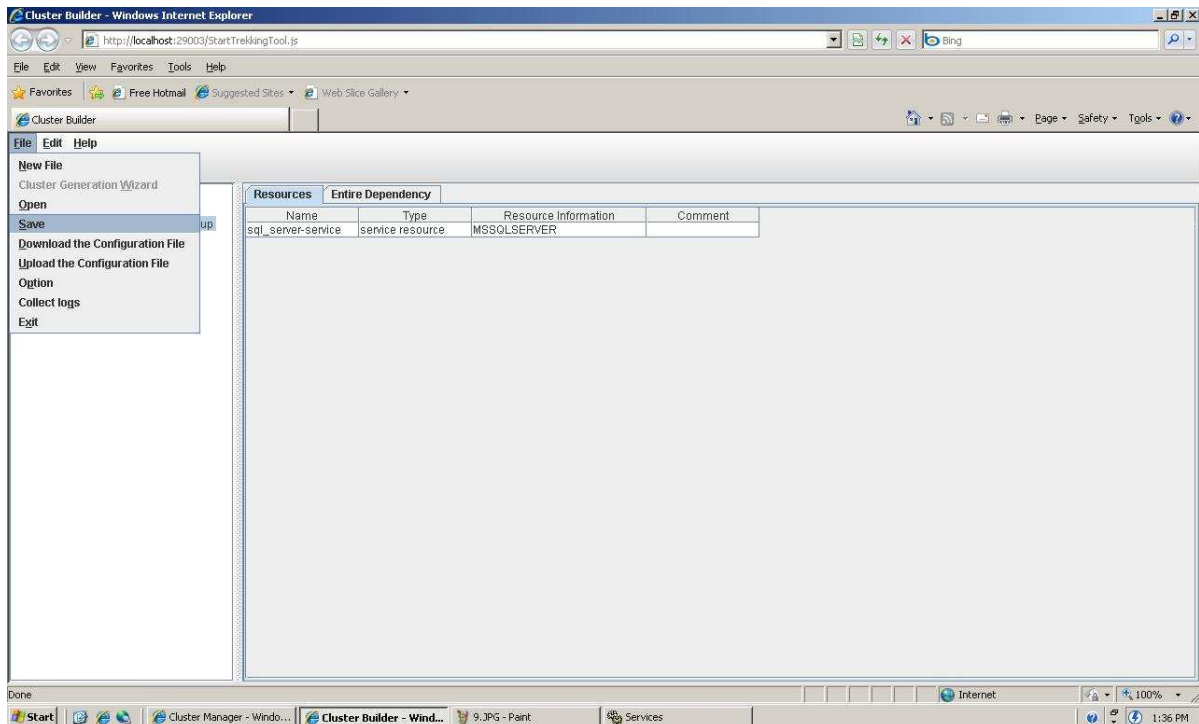
☐ Set as much as the number of the servers ☒ Set Number 0 time

Final Action: Stop Group

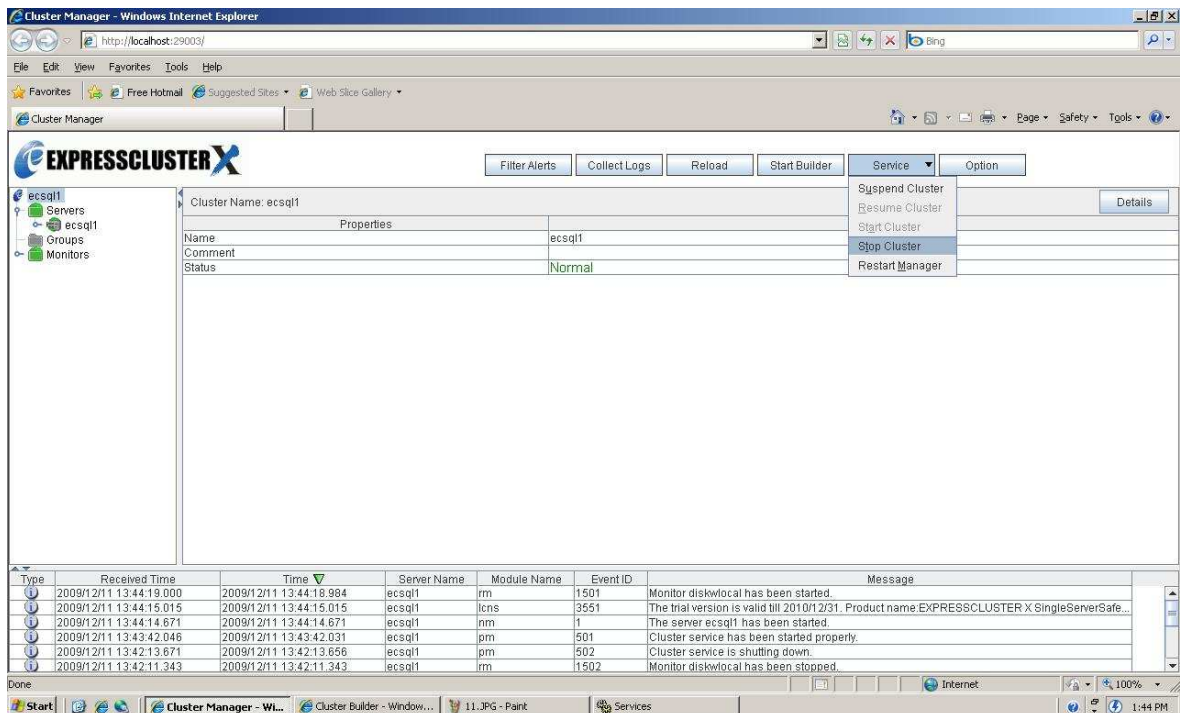
☐ Execute Script before Final Action Settings

< Back Finish Cancel

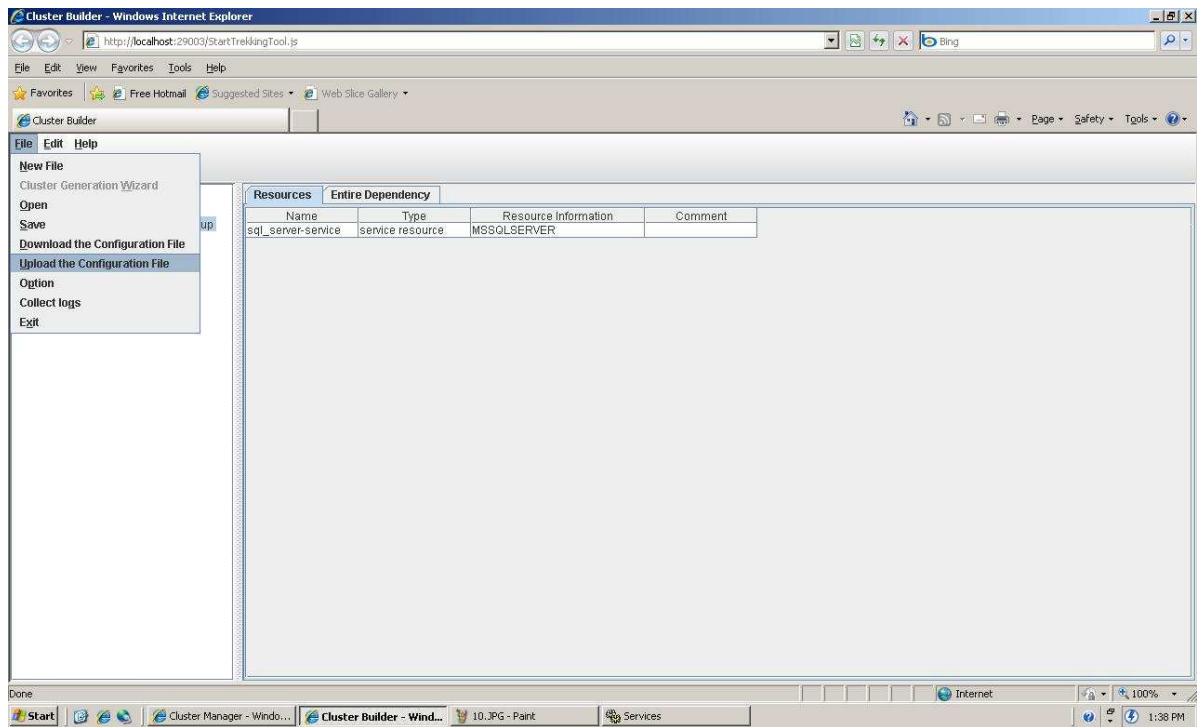
Step 13: Now cluster is built, we just need to save the configuration and then upload it. To save the configuration on disk, click “File” menu and then click “Save”, as shown in below image.



Step 14: Before uploading the configuration, stop the cluster as shown in below image. To stop the cluster, go to WebManager window. Click “Service” button and then click “Stop Cluster”. Once cluster is stopped, an information message will be displayed.



Step 15: To upload the configuration and bring the configuration to effect, click “File” menu and then click “Upload the Configuration File”, as shown in below image. On successful upload, a window with success message will be shown.



Step 16: To start the cluster, go to Cluster WebManger window. Click “Service” button and then click “Start Cluster”, as shown in below image.

