

ExpressCluster® X SingleServerSafe 2.1

Linux version

**Quick Reference Guide for SSS installation &
configuration of a sample application-Calculator**

Installing SSS

1. Install the SSS server rpm package

- `rpm -ivh expressclssss-2.1.0-1.i686.rpm`

The rpm package is different for 64 bit machine. Choose the one that matches CPU configuration.

2. After the installation is successful, register the license

- `clplcncs -i ECX2.1_trial_lin_SSS1.key -p XSS21`

Here ECX2.1_trial_lin_SSS1.key is the license key name & XSS21 is the product id.

Similarly install other license applicable. If the license is installed properly then following message will displayed in the command terminal:

“Command Succeeded”

Using SSS to configure application (kcalc)

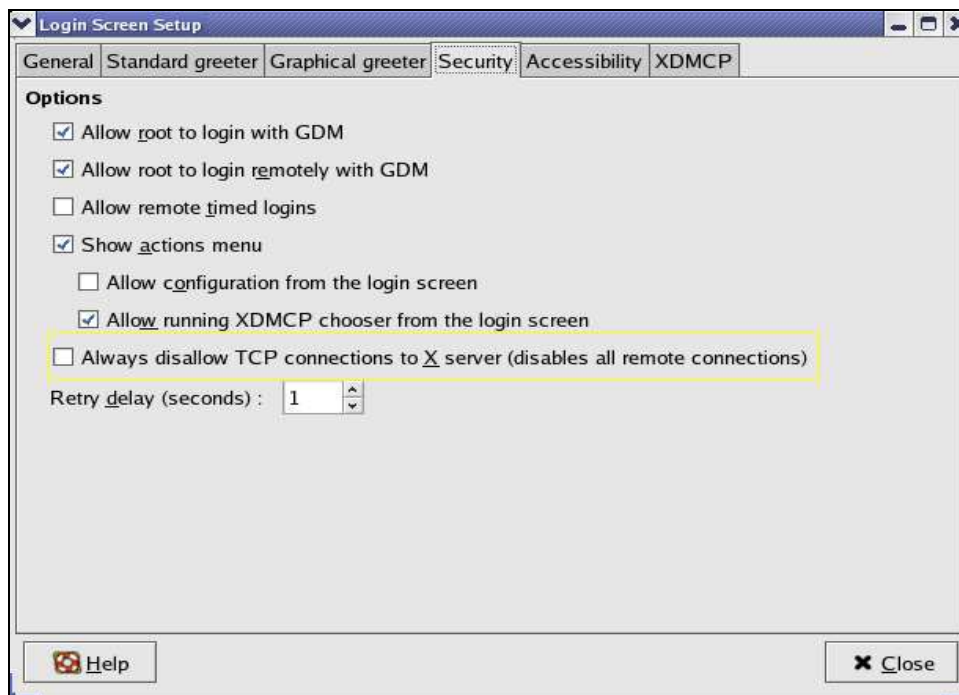
For GUI based application like calculator (kcalc), the display need to be exported via X server (X Window System Display server). The following steps is being done to allow localhost machine (in which SSS is installed & configured) to connect to X server.

(The settings below is with respect to RHEL 4 Linux 2.6.9-5.EL)

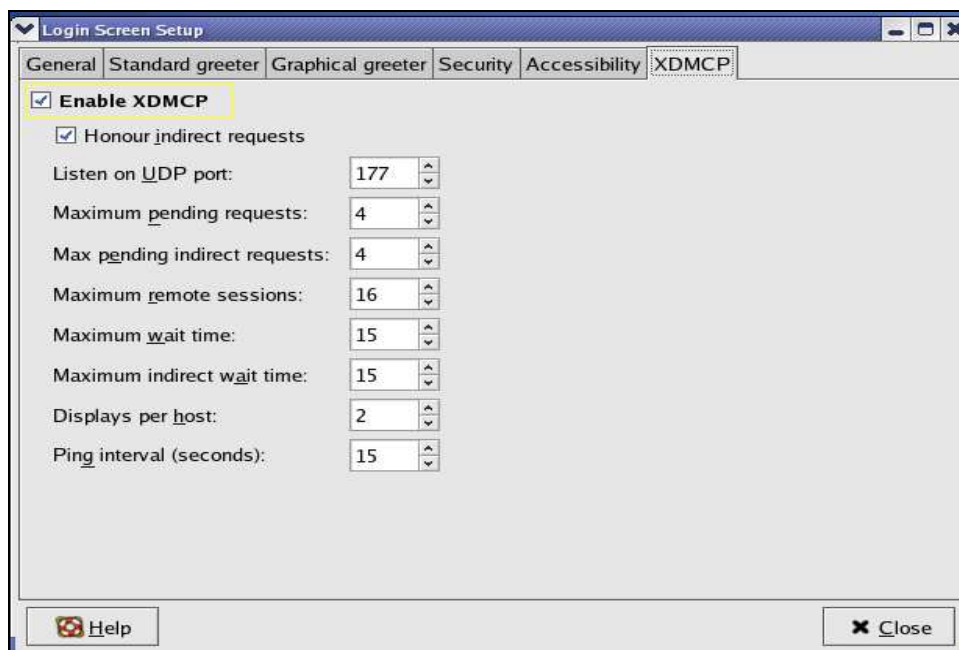
1. From the program start window, select Login screen as given below:



2. In the window of “Login Screen” select “Security” tab & **uncheck** “Always disallow TCP connections to X server”. Refer highlighted (in yellow) option in snapshot below



Now click on the XDMCP tab of the same “Login Screen Setup” & **select** option “Enable XDMCP” . Refer snapshot – option highlighted in yellow.



This completes the X server display settings. To make this change effective, logout from current session & then login again.

After logging again we need to configure “kcalc” application with SSS using Web Manager. For details on how to start the web manger & definitions of features available, refer the SSS manuals. Given below is a brief demonstration on how to configure SSS using sample GUI application.

Sample application being used is calculator.

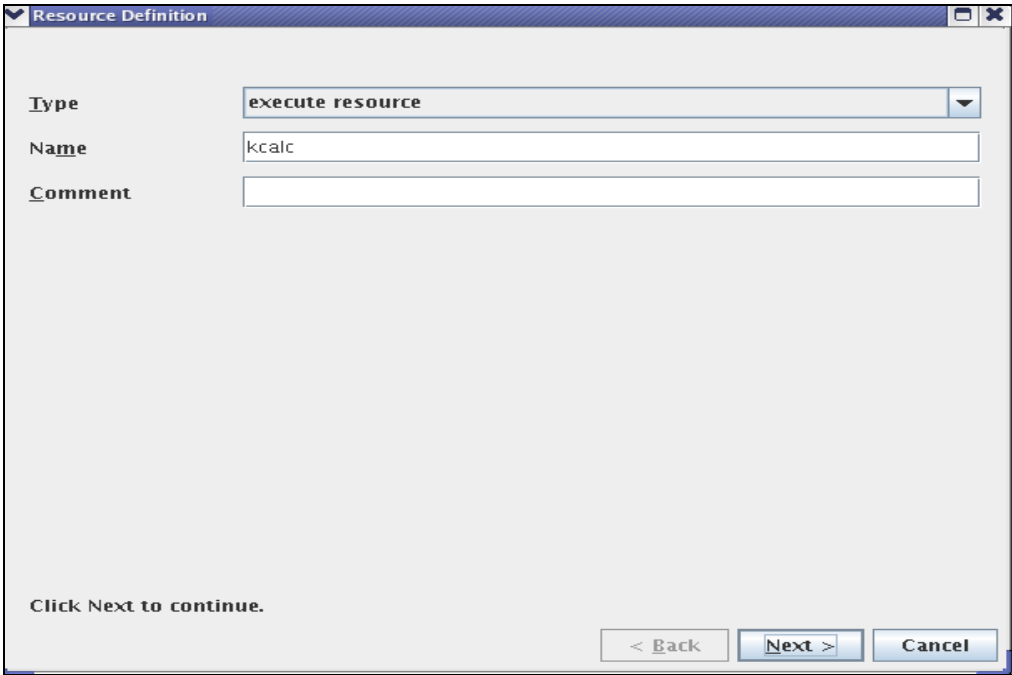
Step 1: Using the cluster generation wizard, create new cluster using the server name of the server where SSS is installed. In this demo let’s assume it to be “SSS”

Step 2: Add a failover group by right clicking the “Groups” icon.

Step 3: Once group is added the resources required to create the configuration is to be added.

Right click on failover & select “Add Resource”.

Step 4: A Resource definition window will pop up, select exec resource & type name you want to give to the resource (here its kcalc). Type comments if required. Click next



Resource Definition

Type: execute resource

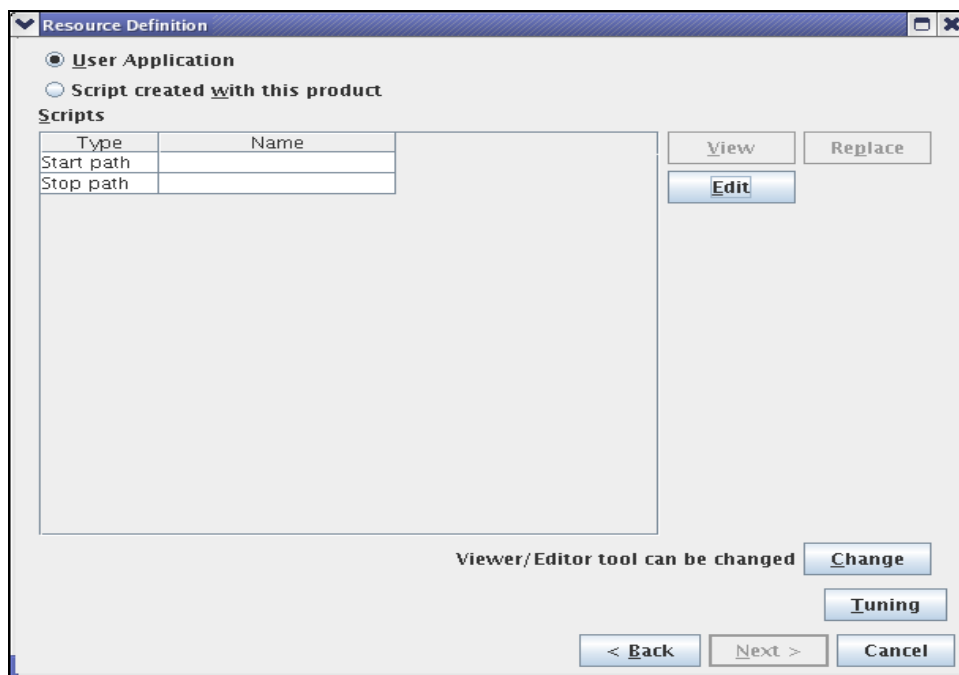
Name: kcalc

Comment:

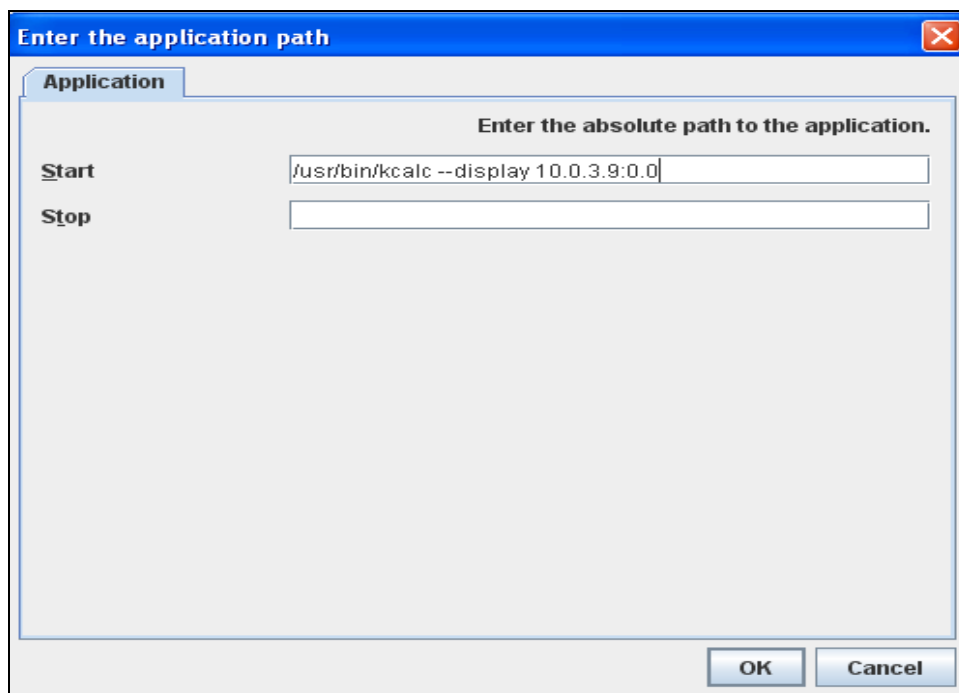
Click Next to continue.

< Back Next > Cancel

Step 5: Since calculator is a simple application program we can invoke it by providing its resident path. So we choose the option “User Application” in the radio button. Start path for the calc need to be specified now.



Select Edit button here to give the absolute paths for the application being configured. Then click OK



In above snapshot absolute path for kcalc is specified along with display option to allow SSS to connect with X server. Here 10.0.3.9 is IP of the Linux machine & 0.0 is the co ordinates.

Step 6: After editing the start & stop path, click on “Tuning” button to modify resource settings.

In the Parameter tab select radio button “Asynchronous” for Start Script & keep the Stop script to “Synchronous” only.

In the Maintenance tab select log output path if you need to generate log messages.

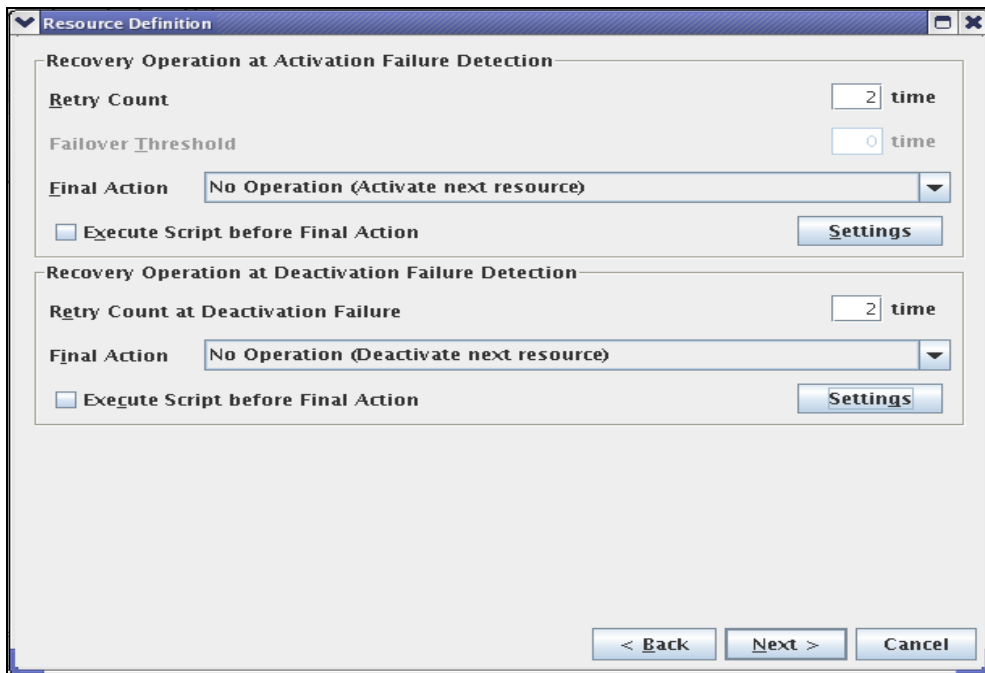
Then choose OK & click Next.

The screenshot shows a Windows-style dialog box titled "Exec Resource Tuning Properties". It has two tabs: "Parameter" (selected) and "Maintenance". The "Parameter" tab contains the following settings:

- Start Script:** Two radio buttons are present. "Synchronous" is unselected, and "Asynchronous" is selected.
- Timeout:** A text box containing "1800" followed by "sec".
- Stop Script:** Two radio buttons are present. "Synchronous" is selected, and "Asynchronous" is unselected.
- Timeout:** A text box containing "1800" followed by "sec".

At the bottom of the dialog box, there are three buttons: "OK", "Cancel", and "Apply".

Step 7 Choose “Retry count” value & the “Final Action” value. Please refer SSS guide to decide what values to fill in these parameters.



Resource Definition

Recovery Operation at Activation Failure Detection

Retry Count: 2 time

Failover Threshold: 0 time

Final Action: No Operation (Activate next resource)

☐ Execute Script before Final Action

Settings

Recovery Operation at Deactivation Failure Detection

Retry Count at Deactivation Failure: 2 time

Final Action: No Operation (Deactivate next resource)

☐ Execute Script before Final Action

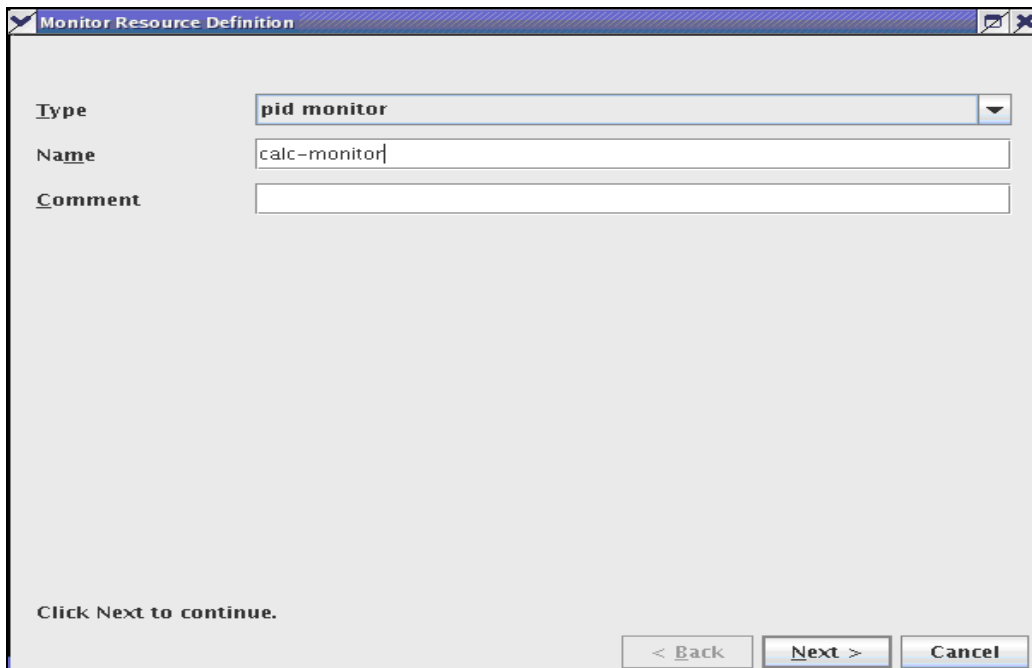
Settings

< Back Next > Cancel

Click Next & then Finish.

Step 8 Resource has been added successfully. Let's add the monitor for the resource now. Right click on "Monitor" & choose Add Monitor Resource

Step 9 Choose the type as "pid monitor" & assign any name in the Monitor name field. Click Next. (Here we chose pid monitor option because calculator is a simple application which can be monitored by its process id)



Monitor Resource Definition

Type: pid monitor

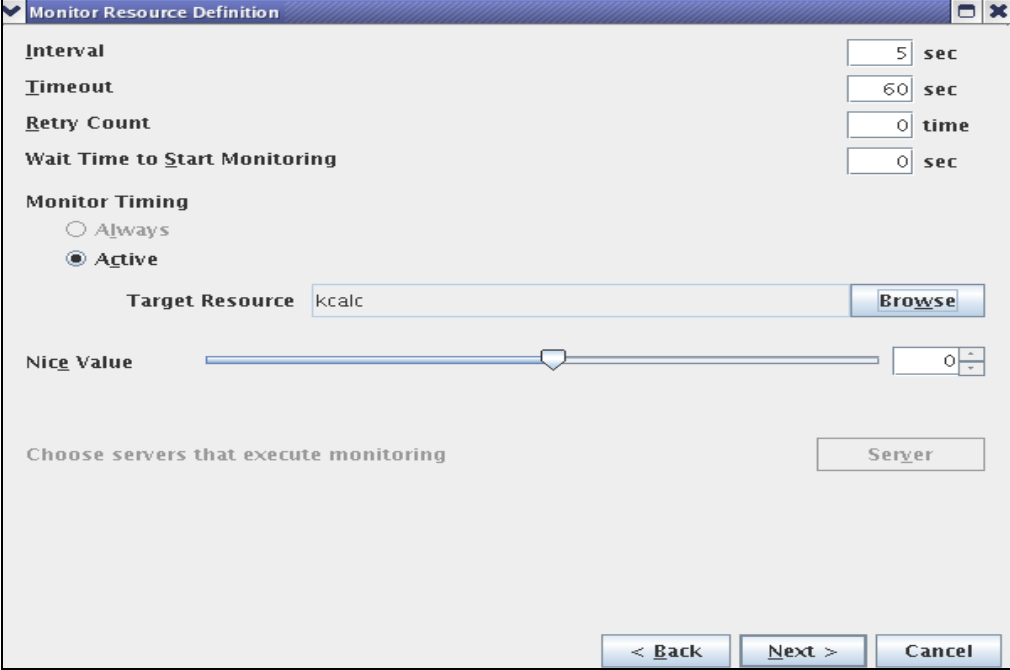
Name: calc-monitor

Comment:

Click Next to continue.

< Back Next > Cancel

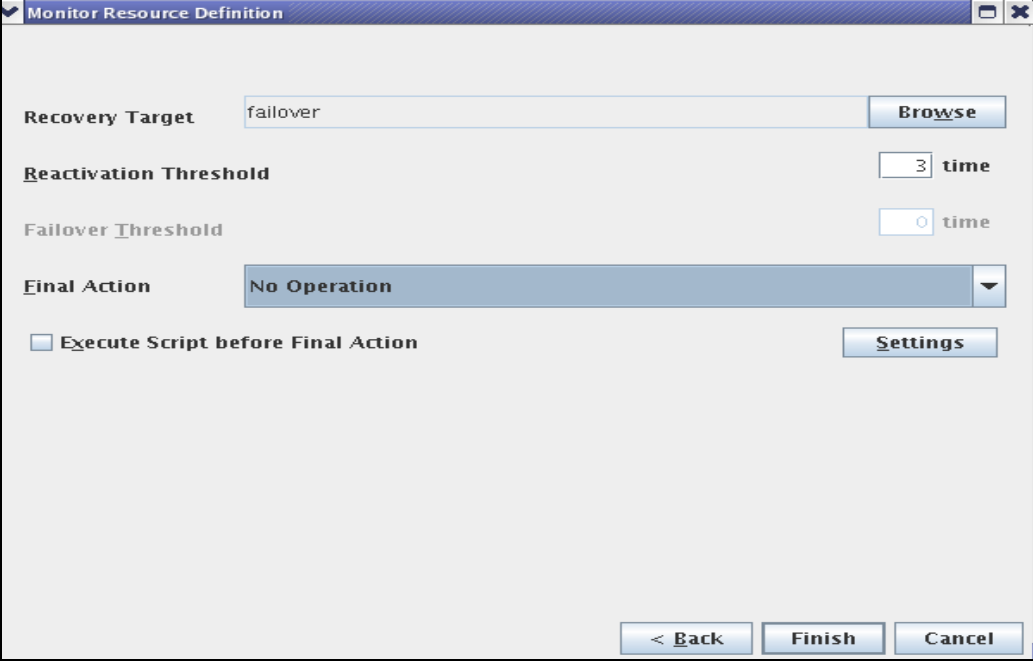
Step 10 Set Interval, Timeout & other values as per requirements. Refer SSS Manual to know what these value means. In Monitor Timing “Active” button is already selected, browse to select Target resource (in this case “kcalc” i.e name we gave to exec resource while adding resource) Click Next.



The screenshot shows the "Monitor Resource Definition" dialog box. It contains the following fields and controls:

- Interval:** A text box with the value "5" and a unit dropdown set to "sec".
- Timeout:** A text box with the value "60" and a unit dropdown set to "sec".
- Retry Count:** A text box with the value "0" and a unit dropdown set to "time".
- Wait Time to Start Monitoring:** A text box with the value "0" and a unit dropdown set to "sec".
- Monitor Timing:** Two radio buttons: "Always" (unselected) and "Active" (selected).
- Target Resource:** A text box containing "kcalc" and a "Browse" button to its right.
- Nice Value:** A horizontal slider bar with a value of "0" displayed in a text box to its right.
- Choose servers that execute monitoring:** A text box with the word "Server" inside.
- Navigation buttons:** "< Back", "Next >", and "Cancel" buttons at the bottom right.

Step 11 Browse & choose Recovery target as “failover”. Set Final action value as per requirement. For this demo “No Operation” has been selected. Finally click Finish button.



The image shows a Windows-style dialog box titled "Monitor Resource Definition". It contains several configuration fields: "Recovery Target" with a text box containing "failover" and a "Browse" button; "Reactivation Threshold" with a numeric box containing "3" and a "time" label; "Failover Threshold" with a numeric box containing "0" and a "time" label; "Final Action" with a dropdown menu showing "No Operation"; and a checkbox labeled "Execute Script before Final Action" which is currently unchecked. A "Settings" button is located to the right of the checkbox. At the bottom right, there are three buttons: "< Back", "Finish", and "Cancel".

Step 12 The SSS & calc configuration is now complete. Follow steps given in manual to save/upload config file & start the cluster. But before the cluster is started, in the command prompt execute the below command:

\$ xhost +

Message displayed: *access control disabled, clients can connect from any host*

This command is issued to allow the SSS machine to connect to the X server.

End Result: What to expect?

The calculator has been successfully configured with SSS. When “Start Cluster” command is selected from the Web manager, the resource (calculator in this case) will be invoked by SSS & calculator application will **open up automatically**. If we manually close the calculator application, SSS monitor will detect its non existence & soon as it does so; it will restart the resource (calculator) again.

The status of the resource can also be seen in the Web manager. Refer SSS manuals to know more about using Web Manager.