3 SpectrumSCM Server and UI Configuration

Chapter 3

In this, chapter you will learn when and how to use the SpectrumSCM Server Configuration Wizard and the SpectrumSCM UI Configuration Wizard, and you will become familiar with various parameters in the scm.properties file.

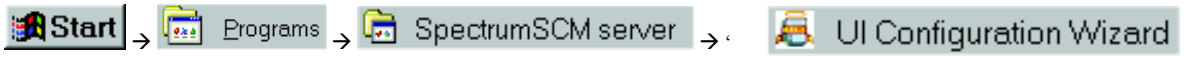
- UI Configuration Wizard
- Server Configuration Wizard
- scm.properties file

3.1 UI Configuration Wizard

The UI configuration Wizard is used if you are accessing your SpectrumSCM system via a client in a client-server mode through a LAN or WAN. The UI Configuration Wizard is designed to aid in configuring the SpectrumSCM User Interface client. Specifically, it manages the list of servers to which your organization allows access and on which SpectrumSCM server has been installed.

To start the SCM UI configuration wizard

In a windows environment

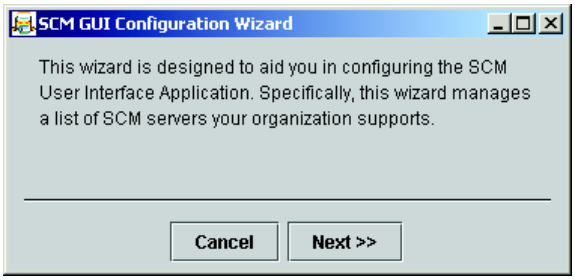


or

In a UNIX or LINUX environment the UI configuration wizard is started from the command line, nohup'ed, assuming you are running an X-server on the UNIX/Linux system.

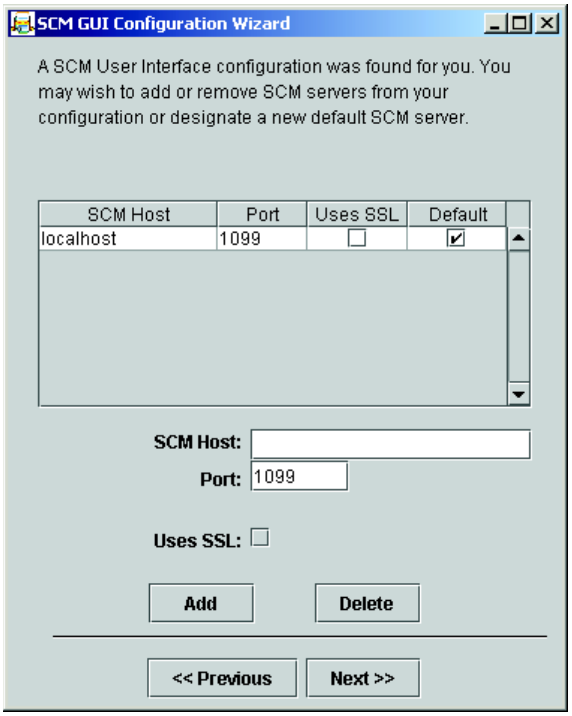
- change directory to the SpectrumSCM **install bin directory**
- execute the command ***uiConfWiz***

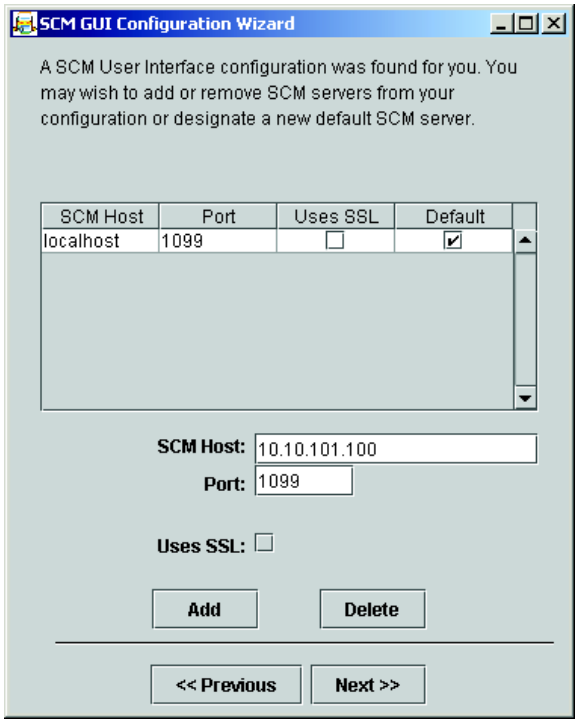
The UI Configuration Wizard will walk you through all the steps to access a SpectrumSCM Server. The server(s) do not need to reside on the same network as the local workstation; the GUI simply needs remote access to the network for the Server(s).



The UI Configuration Wizard displays the configured servers available for use by the Spectrum UI client. If a SpectrumSCM server has been installed on the same machine, it will appear as "local host".

In order to use the UI with a SpectrumSCM server via a LAN or WAN, SpectrumSCM needs to know the address for the server. You can enter either the IP address or the domain name assigned to the server. Contact your SCM administrator to get the host name / IP address and port number that is to be used.

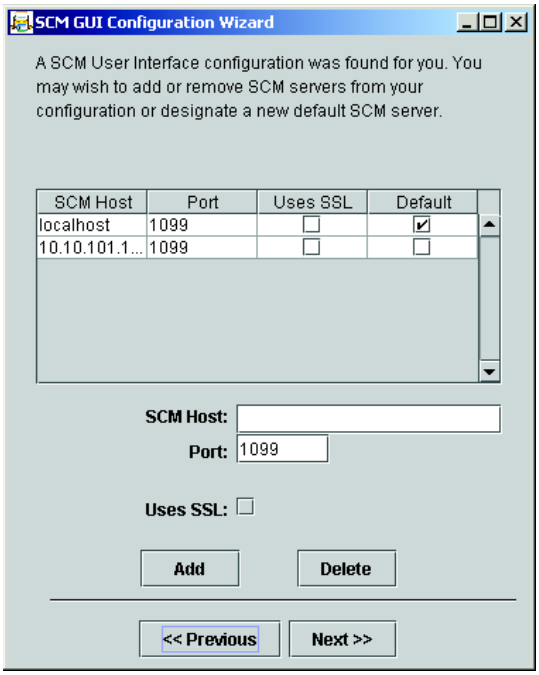




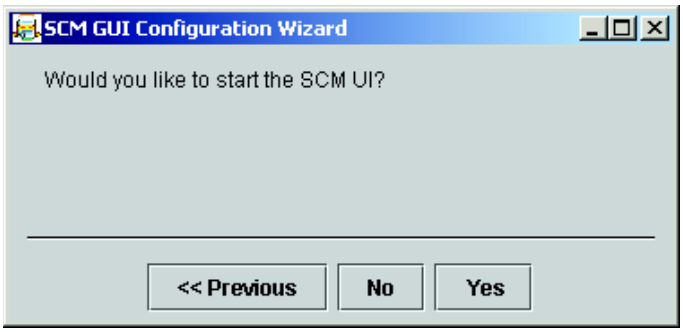
Click the **Add** button to save the new SCM host settings.

Review the settings. If an entry is incorrect, or if you need to remove a server from your list, highlight that server and click **Delete** to remove it from your list.

NOTE: If you have multiple servers listed, select a default server. This is the server that the SpectrumSCM UI will connect to when it is started. If you need to work on another server, you have to run the UI Configuration Wizard again, reset the default to the desired server and restart the UI client.



Verify that all settings are correct and click **Next.**
Now you may start the UI and connect to server by clicking the **Yes** button. If multiple servers are listed, you will be connected to the default server.



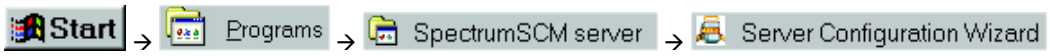
3.2 Server Configuration Wizard

The server is installed with default properties. It can be configured using the Server Configuration Wizard or by editing, the scm.properties file directly.

NOTES:

- **Only users with administrator authority can start, stop or reconfigure the server.**
- **Stop the server before changing its configuration and restart when done.**

To start the **Server Configuration Wizard**
In a WINDOWS environment click



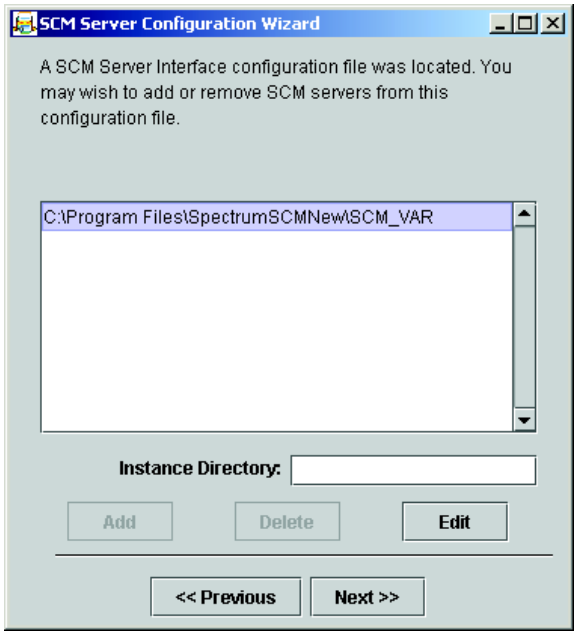
In a UNIX or LINUX environment the server configuration wizard is started from the command line, nohup'ed, assuming you are running an X-server on the UNIX/Linux system:

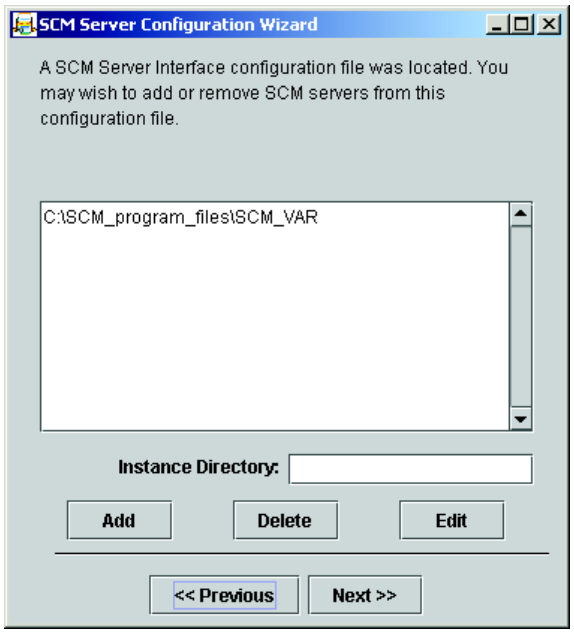
- Change directory to the SpectrumSCM install bin directory
- Execute the command **svrConfWiz**

The SCM Server Configuration Wizard will walk you through all the steps to set up or modify a SpectrumSCM Server accessible through your local network.

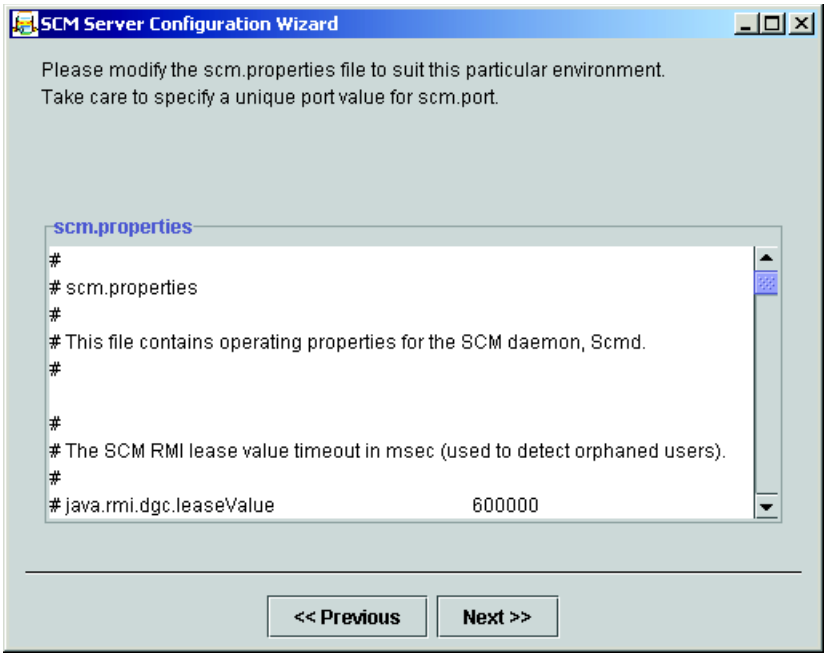
Click **NEXT** to proceed.

On this screen, you can select an instance of the SCM Server and edit a server's properties.





To edit an existing server's properties, select the instance of the server whose properties you wish to edit. Click **EDIT** to proceed. The selected server's **scm.properties** file is loaded into an edit screen.



Any content of the *scm.properties* file may be changed using the Wizard.

For example, to change the server's scm port, locate the following:

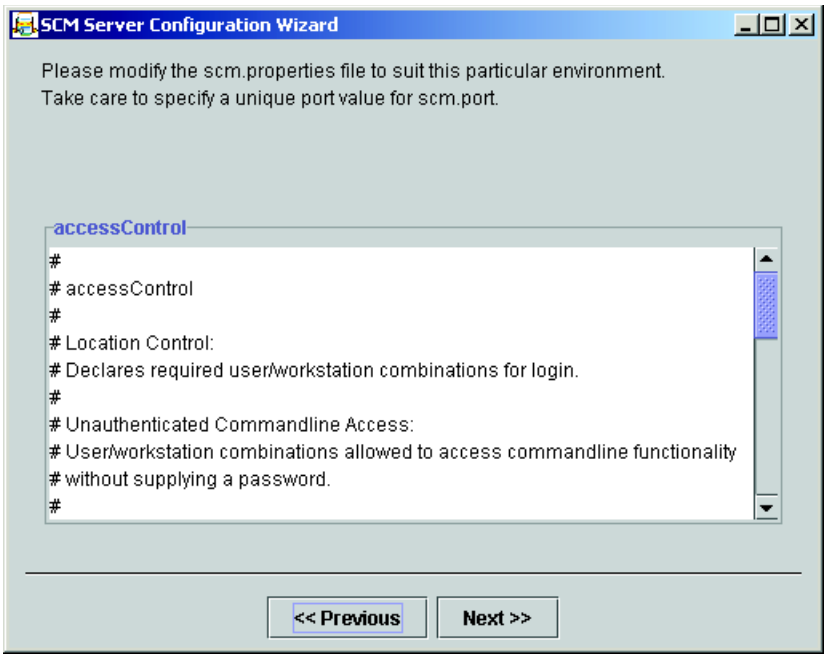
```
#
# The SCM network port.
# Defaults to 1099.
#
# scm.port                      12345
```

Remove the comment indicator # before SCM port and change 12345 to the desired port number.

```
#
# The SCM network port.
# Defaults to 1099.
#
scm.port                        1080
```

After making desired change(s), click **NEXT.** The access control window will appear, presenting the various security / access control options that can be modified.

See Chapter 2 for details about Access Control and Security features.



Click NEXT. A prompt will appear asking whether to start the server.

Click YES to restart the SpectrumSCM Server.

3.3 Start Server and UI

To use the SpectrumSCM UI, the server must be up and the SpectrumSCM UI client on your machine must be started.

To check to see if the server is up:

In a WINDOWS environment

Start-> programs -> SpectrumSCM UI ->CheckServer

In a UNIX or LINUX environment

- change directory to the SpectrumSCM install bin directory
- execute the command **checkServer**

If the Server is running, you can start the SpectrumSCM UI

In a WINDOWS environment

Start-> programs -> SpectrumSCM UI ->StartUI.

In a UNIX or LINUX environment

The UI can be started from the command line, nohup'ed, assuming you are running an X-server on the UNIX/Linux system. It can also be started from an xterm window.

- change directory to the SpectrumSCM install bin directory
- execute the command **startUI**

3.4 The scm.properties file

The scm.properties file contains operating properties for the SCM daemon, Scmd. It can be edited through the Server Configuration Wizard. Alternatively, since the properties are stored in the file system under <install directory>\SCM_VAR\etc. The **scm.properties** file can be edited directly with your favorite text editor.

The SpectrumSCM system is designed to run with preset defaults unless they are changed by modifications to the scm.properties file. The file itself is well documented with descriptions of the parameters that can be changed as well as those that are optional and can be enabled (for example, SCMlite and SSL).

When changing a value or enabling an option, be sure to remove the comment indicator (#) from the beginning of the line. It is recommended that you copy the commented line and edit this line to set the appropriate value or option. This way, in case you need to undo and redo the entry, you can always edit this line again.

For example, commented, the interface is not enabled.

```
#
# Indicates whether SCM should provide SCMlite (the HTTP interface).
#
#  scm.http.inUse                                true
```

Removing the comment indicator enables the SCMlite http interface.

```
#
# Indicates whether SCM should provide SCMlite (the HTTP interface).
#
scm.http.inUse                               true
```

The scm.properties file:

```
#
# scm.properties
#
# This file contains operating properties for the SCM daemon, Scmd.
#

#
# The SCM RMI lease value timeout in msec (used to detect orphaned users).
#
# java.rmi.dgc.leaseValue     600000


#
# Properties to control the behaviour of the SCCI interface.
#
# constrainGetToIDEProj applies to the Visual Studio OpenFrom functionality
# and specifically constrains the 'get' call to return only those projects
# or solutions that match the open IDE project name. If this is not set (the
# default) all projects/solutions in the SpectrumSCM project are returned.
# scm.scci.constrainGetToIDEProj    true


#
# The SCM runtime Directory
#
# scm.root  /scm/runtime


#
# The SCM network port.
# Defaults to 1099.
#
# scm.port  1099


#
#
# What character set should the system use as its default.
# Note that while human beings treat character sets as "isn't it obvious",
# unfortunately in the world of bits and bytes (computers) it is not.
# Specifically the issue becomes more complicated when sharing assets across
# multiple computing platforms/operating systems, which might have a
different
# interpretation of those bytes. The prime example of this is Microsoft
Windows,
# which in the default (Western European) settings uses a character set of
# Cp1252 or windows-1252. This is not an international standard but rather a
# variable proprietary extension of the ISO-8859-1 standard.
#
# Using non-standard characters in a platform portable environment will
possibly
# cause those characters to change, or even be deemed invalid on the second
```

```
# computing platform. In SpectrumSCM, invalid characters are sometimes seen
as
# character sized empty vertical rectangles.
#
# Note: From SpectrumSCM's perspective, "computing platforms" include all
# clients (particularly those doing file edits), and the server (particularly
# if the keyword expansion feature is enabled (see below)).
#
# WARNING: Changing this value on a system that already has assets stored
should
# be performed with great care. Changing the character-set can change the way
# that the system interprets the textual asset files. Contact SpectrumSCM
# if you have any questions.
#
# scm.charset     iso-8859-1

#
# The frequency (in hours) at which the reservations cleanup thread wakes
# up (Defaults to 24 hours)
#
# scm.reservations.cleanup_interval 24


# | SESSIONS SESSIONS SESSIONS SESSIONS SESSIONS SESSIONS
# V
# The concurrent_sessions attribute controls the number of concurrent read
# transactions that can be running against a "project" at any given time.
#
# Adjusting the value to a higher number will allow more read transactions to
# execute simulataneously but will also allow the server to consume more
# memory.
#
# Setting the value to a lower number will constrain the number of concurrent
# read transaction but will reduce the amount of server memory utilized.
#
# This attribute does not control the number of users that can be logged in
# at the same time.
#

concurrent_sessions      5

#
# The max_session_reuse parameter can be tuned in the cases where an
# application has a large amount of data that is accessed infrequently, or is
# more than can be held comfortably in memory. When a database session is
# completed, its database references are held via weak-references for future
# use. Setting the max_session_reuse parameter will dispose of that session
# after the specified number of times, thus allowing the garbage collector to
# free up the associated memory.

# max_session_reuse     200

# ^
# | SESSIONS SESSIONS SESSIONS SESSIONS SESSIONS SESSIONS
```

```
# | COMPRESSION COMPRESSION COMPRESSION COMPRESSION COMPRESSION
# V
# The compress_threshold indicates that high water mark for binary files
# where GZIP compression will be used to reduce the size of the file
# before transmission to the server
#

compress_threshold      10000

# ^
# | COMPRESSION COMPRESSION COMPRESSION COMPRESSION COMPRESSION


# | KEYWORD EXPANSION KEYWORD EXPANSION KEYWORD EXPANSION KEYWORD EXPANSION
# V
#
# SpectrumSCM supports the following keywords:
#
#     Keyword           Expands To
#    -------------    ----------------------------------------------------
#     $Author$    Authors login id
#     $Date$            Date of last modification
#     $Revision$  Version number of this file
#     $Source$    File name
#     $Path$            Directory path
#     $CR$        Change Request used for this modification
#     $State$           Change Request state at time of change
#     $Project$   Project name
#     $Generic$   List of generics that this file is common with
#     $Header$    Group containing $Path$ $Source$ $Revision$ $Date$ $Author$
$CR$ $State$
#     $Id$        Same as header less $Path$
#
# SpectrumSCM keywords are based on the RCS model. This means that keywords,
once
# expanded, can always be expanded again. For instance, the $Author$ keyword
will
# expand to the following: $Author: joe $
# The expanded version of the keyword allows for additional expansion during
future
# edits.
#
# Keywords must be enabled for them to be expanded. Also, keywords are
expanded
# during check-in and add-source activities only. Because the SpectrumSCM
server
# is character set agnostic, enabling keywords, which requires parsing text
files
# as ASCII text instead of binary data, requires that a character set
encoding
# be used. If the scm.charset option is specified above, that will be used.
Otherwise
# the platform default character set (file.encoding) will be used.
#
# The scm.keyword.expansion.maxdepth variable limits the number of lines
# searched in any given file to those found above this value. Adjusting
```

```
# the value to a lower number improves overall search times.
#
# Uncomment the following two lines to turn on keyword expansion.
# The maximum search depth for keyword searching defaults to 50 lines.
#
# scm.keyword.expansion.enable            true
# scm.keyword.expansion.maxdepth    50
#
# Note: keyword expansion will have a slight impact on check-in performance.
#       the closer the keywords are located towards the top of your source
#     files, the faster the server can locate and expand them.
#
# ^
# | KEYWORD EXPANSION KEYWORD EXPANSION KEYWORD EXPANSION KEYWORD EXPANSION


# | PASSWORD CONTROL PASSWORD CONTROL PASSWORD CONTROL PASSWORD CONTROL
# V
#
# The scm password expiry period (in number of days). This value is used
# when new users are added to the system. The expiry date is renewed
# whenever a user changes his password. Defaults to NEVER
#
# The minimum_length parameter controls the minimum length of the password
# entered by the user in the Change Password Screen. By default there is
# no minimum password length enforced.
#
# scm.passwd.expiry_period    NEVER
# scm.passwd.minimum_length   8
# scm.passwd.requires_mixed_case    true
# scm.passwd.requires_numbers true
# scm.passwd.requires_symbols true
#
# ^
# | PASSWORD CONTROL PASSWORD CONTROL PASSWORD CONTROL PASSWORD CONTROL


# | AUTO-LOGIN AUTO-LOGIN AUTO-LOGIN AUTO-LOGIN AUTO-LOGIN
# V
#
# SpectrumSCM autologins a user if:
#     1. The user name on the local machine (user.name property) matches the
#        ID of a valid SpectrumSCM user
#
#     2. The user has been granted unauth priveleges in the access control
#        file
#
# The disable_autologin parameter is used to disable auto login. Default is
YES
#
disable_autologin YES
#
# ^
# | AUTO-LOGIN AUTO-LOGIN AUTO-LOGIN AUTO-LOGIN AUTO-LOGIN
```

```
#
# | Mail Mail Mail Mail Mail Mail Mail
# V
#
# Set this next line to the SMTP mail host for your
# organization. ex: smtp.mycompany.com
#
# mail.smtp.host  mailhost
#
# Authentication ----------------------------------------
# If your smtp host requires authentication then
# you'll want to enable the following attributes:
#
# mail.smtp.auth  true
# scm.smtp.auth.login   SCM_LOGIN_ID
#
# The SpectrumSCM server will use the login and password associated
# with the supplied login as the SMTP server login and password combo.
#
# Authentication ----------------------------------------
#
# The SCM mail "from" address. This is the address that all the
# mail will appear to have come from. Make sure to use a valid
# e-mail address here.
#
# scm.from  scmAdmin@mycompany.com
#
# To control the format of the mail message sent out by the system
# Meta words are supported -
# $SHORT$       The default message 'Change Request $CR_id$ $Action$'
# $CR_id$       The Change Request Id
# $Action$      What action is causing this e-mail (create, progress, assign)
# $Assignee$    Who is the CR being assigned too ('N/A' for TBA, Completed or
Killed)
# $State$       What is the new state
# $Prev_State$  What was the previous state
# $Abstract$    The abstract/header from the CR
#
# Full example:
# scm.mail.subject_line_format      Change Request $CR_id$ was $Action$,
assignee $Assignee$, from $Prev_State$ to $State$: $Abstract$
# scm.mail.subject_line_format      $SHORT$
#
# If you would like the e-mail notifications sent as HTML
# you can enable the next line. Otherwise it will be sent as
# plain text
#
# scm.mail.content.type HTML
#
# If you want the e-mail notications to include all of the
# Change Requests previous state transitions and note, enable
# the next line
#
# scm.mail.content.allnotes   TRUE
#
# By default people assigned the Generic Engineer role will
```

```
# receive e-mails whenever a CR is re-assigned, unless otherwise
# specified by workflow rules. If you want them to only receive
# e-mails for To Be Assigned tasks then uncomment the following line
#
# scm.mail.sendAssignmentsToGenericEngineers    FALSE
#
# ^
# | Mail Mail Mail Mail Mail Mail Mail


#
# | Tutorial Tutorial Tutorial Tutorial Tutorial
# v
#
# The SCM Tutorial is accessed across the web by default.
# If access to the public network is not available, the
# tutorial path can be redirected to a local resource
# like in the following example for Windows:
#
# scm.tutorial    file:/C:/SCM_INSTALL_DIR/help/Tutorial/scmstart.htm
#
# or like this for Unix platforms:
#
# scm.tutorial    file:/SCM_INSTALL_DIR/help/Tutorial/scmstart.htm
#
# You do not have to use reverse slashes on the Windows platform.
# The tutorial materials are available on the SpectrumSCM installation
CD_ROM.
# Copy the entire Tutorial directory off of the CD_ROM to some location
# on a local or shared network drive, like in the examples above.
#

scm.tutorial      http://www.spectrumscm.com/Tutorial/scmstart.htm

# ^
# | Tutorial Tutorial Tutorial Tutorial Tutorial
#


#
# | SCMlite SCMlite SCMlite SCMlite SCMlite SCMlite SCMlite
# v
#
# The following three properties control the availability
# of the SCM HTTP interface, SCMlite, which provides access to
# a subset of SCM functionality:
#     * creation of Change Requests
#     * report generation
#
# SCMlite can utilize SSL to provide secure HTTP (HTTPS). Please refer
# to the second half of SSL properties, found below.
#

#
# Indicates whether SCM should provide SCMlite (the HTTP interface).
#
```

```
# scm.http.inUse  true

#
# The SCMlite interface port.
# Defaults to 1 greater than the scm.port, 1100.
#
# scm.http.port   12346

#
# The maximum number of HTTP interface clients.
# Leave commented out to allow any number of clients may connect.
#
# scm.http.maximumConnections 1

#
# ^
# | SCMlite SCMlite SCMlite SCMlite SCMlite SCMlite SCMlite
#



#
# | FIREWALL FIREWALL FIREWALL FIREWALL FIREWALL FIREWALL
# v
#
# The following four properties may be utilized to help SCM interoperate
# with firewalls, particularly those of the transport-level bridge variety.
# If either of these properties are used, be sure internal clients can
# route to the IP address or fully qualified hostname.
#
# As an example, in order to setup SpectrumSCM to operate through a NAT
# enabled firewall such as a LinkSys BEFSR41, the following steps will
# need to be implemented.
# 1. Install the server on a machine inside the firewall
# 2. Set the java.rmi.server.hostname to the name of the machine
# 3. Set the java.rmi.server.useLocalHostname to true
# 4. Set the scm.rmi.portnumber to an unused port number.
# 5. Set the scm.transport.portnumber to an unused port number.
# 6. Open the port numbers from steps 4 and 5 in the firewall and
#    port forward those ports to the server machine
# 7. Open port number 1099 on the firewall and port forward that port
#    to the server machine.
# 8. On client machines, edit the IP hosts table (hosts file) and
#    set the servers name equal to the IP address of the firewall
#    that will be used to do the port forwarding.
#    example: server(spongebob) = 192.168.100.1  firewall = 68.134.128.169
#             set spongebob = 68.134.128.169 on all clients that need
#          to use the SpectrumSCM server.

#
# Specifies the IP address SCM should encode into its interfaces.
# In most cases, this would be the firewall's external IP address.
#
# java.rmi.server.hostname    localhost

#
# Directs SCM to encode the server's fully qualified hostname into
```

```
# its interfaces. In most cases, this would be the firewall's externally
# known hostname.
#
# java.rmi.server.useLocalHostname  true

#
# This next argument directs the RMI framework to use a particular
# port number for all RMI socket level communications. Leave the
# value of the arugment set to (0) to instruct RMI to use any valid
# random port number.
#
# scm.rmi.portnumber    0

#
# This next argument directs the transport layer to use a particular
# port number. The transport layer will default to port number 1101
# unless directed to use another port number.
#
# scm.transport.portnumber    1101

#
# ^
# | FIREWALL FIREWALL FIREWALL FIREWALL FIREWALL FIREWALL
#


#
# | SSL SSL SSL SSL SSL SSL SSL SSL SSL SSL SSL SSL SSL
# v
#
# SpectrumSCM supports SSL for secured communications between the server and
# clients. SSL in Java requires a Provider that supports the SSL protocols.
# If you plan to use SSL with SCM or SCMlite, you must uncomment the line
# below or supply your own.
#

#
# The SSL provider.
#
# scm.ssl.provider      com.sun.net.ssl.internal.ssl.Provider

#
# SSL also utilizes a certificate signed by an entity all parties
# trust. This certificate is installed in the appropriate directory and
# the following eight properties are required to utilize it.
#

#
# Indicates whether SCM should use SSL.
# If set to true, be sure to supply the following seven properties.
#
# scm.ssl.inUse   true

#
# The protocol SSL should use.
#
```

```
# scm.ssl.protocol      TLS

#
# The algorithm used to encode the keystore.
#
# scm.ssl.keymanager.algorithm      SunX509

#
# The implementation of the keystore.
#
# scm.ssl.keystore.type JKS

#
# Name of the SSL keystore under etc/security/ssl.
#
# scm.ssl.keystore.filename   sslKeys

#
# Password of the SSL keystore.
#
# scm.ssl.keystore.password   passphrase

#
# Alias of the key to use for SSL.
#
# scm.ssl.key.alias     scmkey

#
# Password of the key.
#
# scm.ssl.key.password  keypass

#
# Indicates whether SCMlite should use SSL.
#
# SCMlite uses a separate certificate (usually in a separate keystore)
# installed in the appropriate directory. The following eight properties
# are required to utilize it.
#

#
# Indicates whether SCMlite should use SSL.
# If set to true, be sure to supply the following six properties.
#
# scm.http.ssl.inUse    true

#
# The protocol SSL should use.
#
# scm.http.ssl.protocol TLS

#
# The algorithm used to encode the keystore.
#
# scm.http.ssl.keymanager.algorithm SunX509
```

```
#
# The implementation of the keystore.
#
# scm.http.ssl.keystore.type  JKS

#
# Name of the SSL keystore under etc/security/ssl.
#
# scm.http.ssl.keystore.filename    httpsKeys

#
# Password of the SSL keystore.
#
# scm.http.ssl.keystore.password    passphrase

#
# Alias of the key to use for SSL.
#
# scm.http.ssl.key.alias      httpskey

#
# Password of the key.
#
# scm.http.ssl.key.password   keypass

#
# ^
# | SSL SSL SSL SSL SSL SSL SSL SSL SSL SSL SSL SSL SSL
#


#
# | LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP
# v

# Indicates whether SCM should use LDAP Authentication, that is whether
# SpectrumSCM verifies its login & password information with the LDAP
# server before allowing a user into SpectrumSCM.
#
# LDAP.useAuth    YES


# Indicates whether SCM should use LDAP Import Facility i.e. Is SpectrumSCM
# allowed to import user data from the LDAP server into the SpectrumSCM
# database. The information imported is the display name, phone number.
# e-mail address and/or location attributes as specified below.
#
# LDAP.useImport  YES


# Indicates whether SCM should use SSL support for LDAP
#
# LDAP.useSSL     YES


# The LDAP server's address
```

```
#
# LDAP.server     192.168.100.51


# The LDAP network port (defaults to 389)
#
# LDAP.port DEFAULT


# Determines how aliases are dereferenced when the LDAP server is queried.
# Possible values are:
# always    - Always dereference aliases (default)
# never     - Never dereferences aliases
# finding   - Dereferences aliases only during name resolution
# searching - Dereferences aliases only after name resolution
#
# LDAP.dereferenceAlias always


# The distinguished name (DN) used for LDAP authentication
# $UU$ is a placeholder for the User ID (uid) used during the
# authentication process. The place holder is replaced with the
# login string entered by the user when he/she attempts to login
# to SCM. If the 'useNameAsUU' option is set, then the users name
# as recorded in the SpectrumSCM database is used as UU instead of
# the user id.
#
# Also note: multiple DNs can be specified, LDAP.dn would be the
# primary, LDAP.dn2 the secondary, LDAP.dn3 the tertiary, etc
#
# LDAP.useNameAsUU      true
# LDAP.dn   uid=$UU$,dc=SpectrumSoftware,dc=net
# LDAP.dn2  uid=$UU$,ou=Development,dc=SpectrumSoftware,dc=net


# The base for LDAP search operations, i.e. the top most point of
# query into the LDAP database.
#
# LDAP.searchbase dc=SpectrumSoftware,dc=net


# The LDAP attribute used for mapping the LDAP login name to the
# Spectrum SCM user ID. The value of this attribute in the LDAP
# directory MUST match the user ID used in Spectrum SCM.
# Upon successful authentication, this value of this attribute
# will be retrieved and used as the SCM User ID.
#
# LDAP.uid.mapping      uid
#
# Additional mapping parameters useful for the import facility
#
# LDAP.name.mapping     cn
#
# LDAP.phone.mapping    telephonenumber
#
# LDAP.mail.mapping     mail
```

```
#
# The location attribute is by default a general information text
# field. If, however your organization has many disparate organizational
# units within the LDAP database this can be in-efficient to search.
# Instead, SpectrumSCM can use the location attribute/field to cache the
# users specific distinguished name (DN).
#
# LDAP.useLocationForDN true
# LDAP.location.mapping distinguishedName


# ^
# | LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP LDAP
#


# The following parameter controls whether the old linear life-cycle
# screen is still enabled.
scm.lifecycles.linear_enabled true
```