Security Configuration Management

Setup Guide

July, 2010

All inquiries regarding the foregoing should be addressed to:

BigFix, Inc.
1480 64th Street, Suite 200
Emeryville, California 94608

Contents

Part 1

Overview

Introduction

BigFix Security Configuration Management (SCM) combines automation in the form of easily distributed compliance libraries with the flexibility of customized parameterization. For the administrator, it provides instant visibility into the configurations of systems within a globally distributed infrastructure. With analysis performed locally on the endpoints and an intelligent relay system to collect the data, BigFix SCM is a fast and highly scalable solution for enterprises with hundreds to hundreds of thousands of clients. BigFix SCM includes a comprehensive Dashboard to summarize and analyze this huge data stream providing real-time visualization of the health of your IT assets.

This guide will take you through the SCM installation and setup process. For a detailed methodology of how to use SCM, see the SCM *User's Guide.* For Security Content Automation Protocol (SCAP) guidance, see the BigFix SCAP *Setup Guide* and *User's Guide*, available on the BigFix support site.

System Requirements

Your BigFix SCM deployment must be configured according to the following requirements.

Minimum supported browser versions:

- IE 6.0

Minimum Adobe Flash player version:

- Flash Player 9.0

Minimum BigFix component versions:

- Console 7.2.5.21
- Web Reports 7.2.5.21
- Windows Client 7.2.5.21
- UNIX Client 7.2.5.21

Part 2

Setup

Installing SCM

Each SCM benchmark (also referred to as ‘checklists’ or ‘baselines’) will be provided as a single site and will represent a single standard and platform. Once added to a BigFix deployment, the content is continuously updated and automatically delivered.

The SCM site masthead contains information about BigFix content that performs certain tasks and analyses within your deployment. You must be subscribed to the SCM site in order to collect data from the BigFix Clients. This data will be utilized for reporting and analysis.

The process for site subscription depends on the version of the BigFix Console that you have. Click **here** to get specific site subscription directions from the BigFix Knowledge Base.

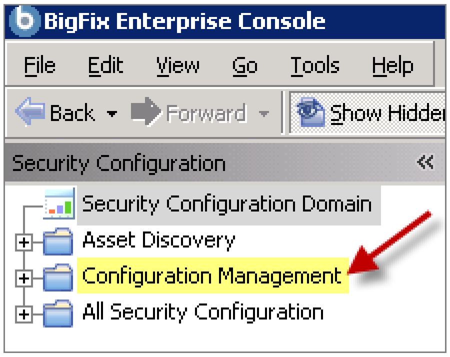
Alternatively, an ‘air-gap’ can be used to physically separate the BigFix Server from the Internet Fixlet Server. For more information, visit http://support.bigfix.com/bes/install/airgapnetwork.html.

The Fixlet messages in this site can be implemented as-is or customized to meet your own security policies. Because the relevance is evaluated locally on each endpoint, the SCM solution scales gracefully and can accommodate up to hundreds of thousands of clients.

Navigating SCM in the BigFix Console

BigFix SCM encompasses a host of new and upgraded features that provide enhanced functionality related to compliance checklists and benchmarks. In addition, the BigFix Console changed after version 7.2, which resulted in several new navigation updates for accessing your data. This section will address how to get around in the new Console.

The Navigation Tree in the BigFix Console, which is available for all BigFix products, will serve as your central command for all SCM functionality. The navigation tree gives you easy access to all reports, wizards, Fixlet messages, analyses and tasks related to SCM tools.



Components

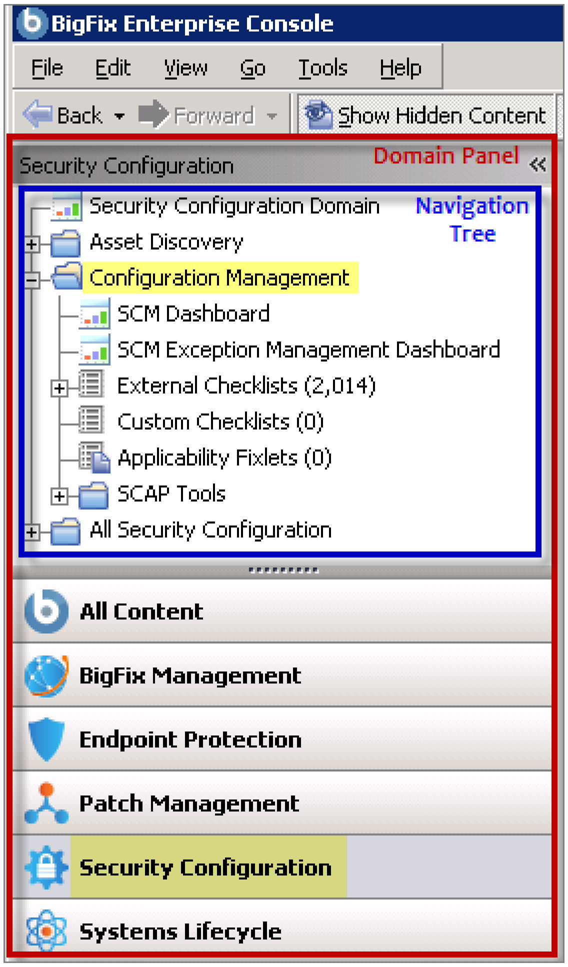
The BigFix Console organizes content into four parts:

- *Domain Panel – Includes navigation tree and list of all domains*
- *Navigation Tree – Includes list of nodes and sub-nodes containing site content*
- *List Panel – Contains listing of tasks and Fixlets*
- *Work Area – Work window where Fixlet and dialogs display*

In the context of the BigFix Console, products or *sites* are grouped by categories or *domains*. For example, Configuration Management is one of the sites contained within the *Security Configuration* domain, along with Asset Discovery, among others.

The Domain Panel is the area on the left side of the Console that includes a Navigation Tree and a list of all domains. The Navigation Tree includes a list of nodes and sub-nodes containing site content.

In the image below, you will see a navigation "tree" at the top with expandable and collapsible nodes, and a list of domains at the bottom. By clicking the *Security Configuration* domain at the bottom of the domain panel, a list of sites associated with that particular domain will display in the navigation tree at the top.

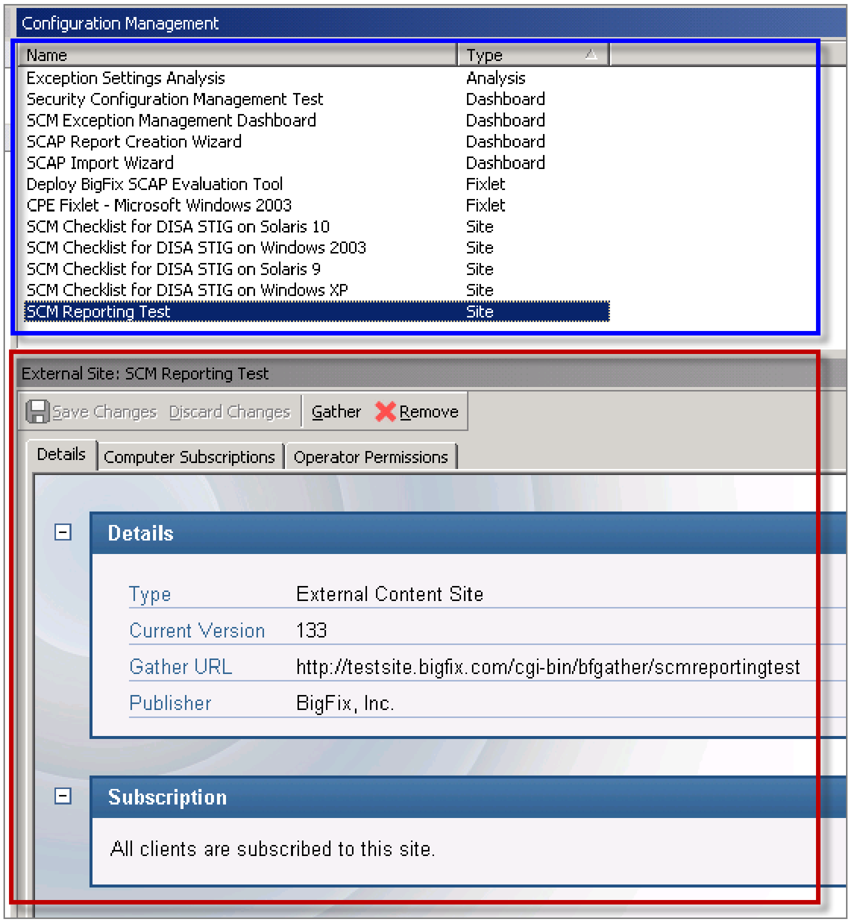


The red-outlined area represents the entire Domain Panel (including the navigation tree and list of domains), and the blue box contains just the Navigation Tree for the *Security Configuration* domain.

SCM tasks are sorted through upper and lower task windows, which are located on the right side of the Console.

The upper panel, called the *List Panel* (blue), contains columns that sort data according to type, such as Status, Name, Site, Applicable Computer Count, etc.

The lower panel or *Work Area* (red) presents the Fixlet, task screen or Wizard from which you will be directed to take specific actions to customize the content in your deployment.



Name	Type
Exception Settings Analysis	Analysis
Security Configuration Management Test	Dashboard
SCM Exception Management Dashboard	Dashboard
SCAP Report Creation Wizard	Dashboard
SCAP Import Wizard	Dashboard
Deploy BigFix SCAP Evaluation Tool	Fixlet
CPE Fixlet - Microsoft Windows 2003	Fixlet
SCM Checklist for DISA STIG on Solaris 10	Site
SCM Checklist for DISA STIG on Windows 2003	Site
SCM Checklist for DISA STIG on Solaris 9	Site
SCM Checklist for DISA STIG on Windows XP	Site
SCM Reporting Test	Site

Details

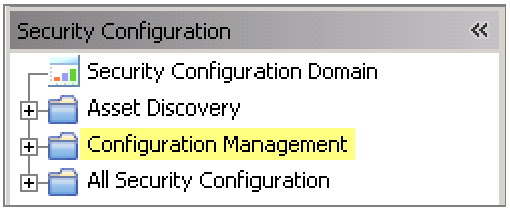
Type	External Content Site
Current Version	133
Gather URL	http://testsite.bigfix.com/cgi-bin/bfgather/scmreportingtest
Publisher	BigFix, Inc.

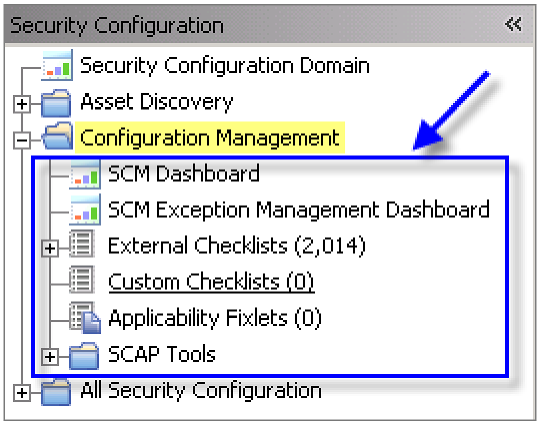
Subscription

All clients are subscribed to this site.

Working with Content

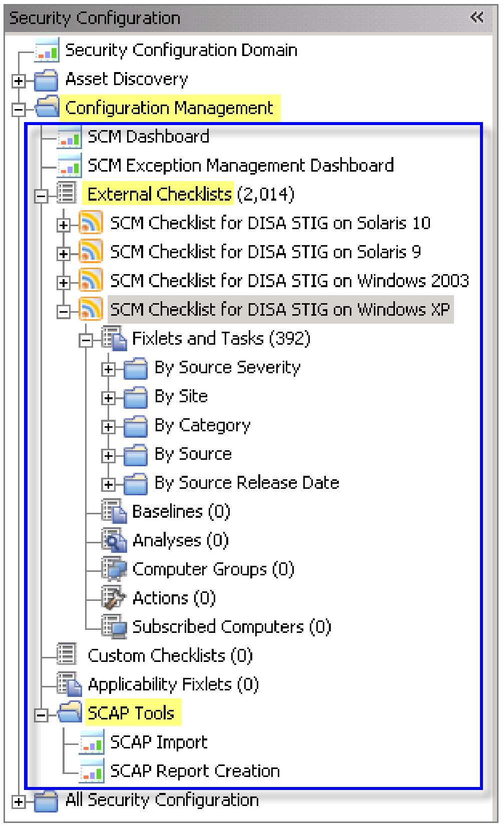
The “nodes” in the Configuration Management navigation tree expand and collapse to enable you to easily navigate and manage relevant components in your deployment.




Security Configuration
Security Configuration Domain
Asset Discovery
Configuration Management
SCM Dashboard
SCM Exception Management Dashboard
External Checklists (2,014)
Custom Checklists (0)
Applicability Fixlets (0)
SCAP Tools
All Security Configuration

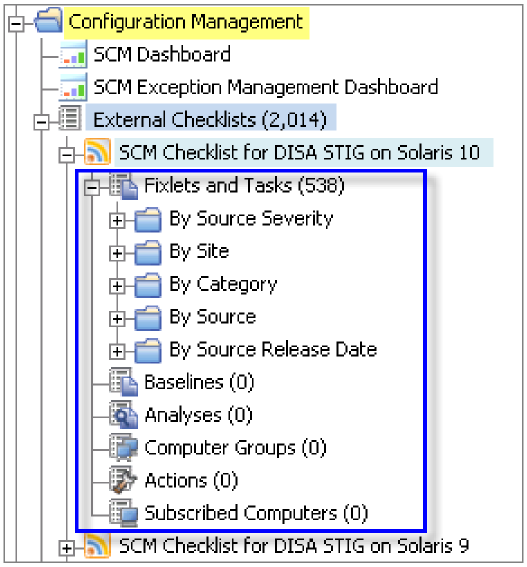
Note: Depending on your operating system, your system may display the “+” and “-“ icons in the navigation tree as triangles. Specifically, the “+” and “-“ icons will display on Windows XP/2003/2008/2008R2 machines, and triangles will display on Windows Vista/7. This feature was designed so that the Console matches the standards and conventions of your specific operating system. Regardless of the particular icon, the functionality of these buttons works the same way to either expand or collapse content.

You will use this same expand/collapse method to move through the entire navigation tree. Click each “+” to display each piece of related SCM content.


Security Configuration
Security Configuration Domain
Asset Discovery
Configuration Management
SCM Dashboard
SCM Exception Management Dashboard
External Checklists (2,014)
SCM Checklist for DISA STIG on Solaris 10
SCM Checklist for DISA STIG on Solaris 9
SCM Checklist for DISA STIG on Windows 2003
SCM Checklist for DISA STIG on Windows XP
Fixlets and Tasks (392)
By Source Severity
By Site
By Category
By Source
By Source Release Date
Baselines (0)
Analyses (0)
Computer Groups (0)
Actions (0)
Subscribed Computers (0)
Custom Checklists (0)
Applicability Fixlets (0)
SCAP Tools
SCAP Import
SCAP Report Creation
All Security Configuration

You can see from the image above that Configuration Management content is organized into 2 primary nodes – *External Checklists* and *SCAP Tools*, along with two dashboards located at the top of the navigation tree.

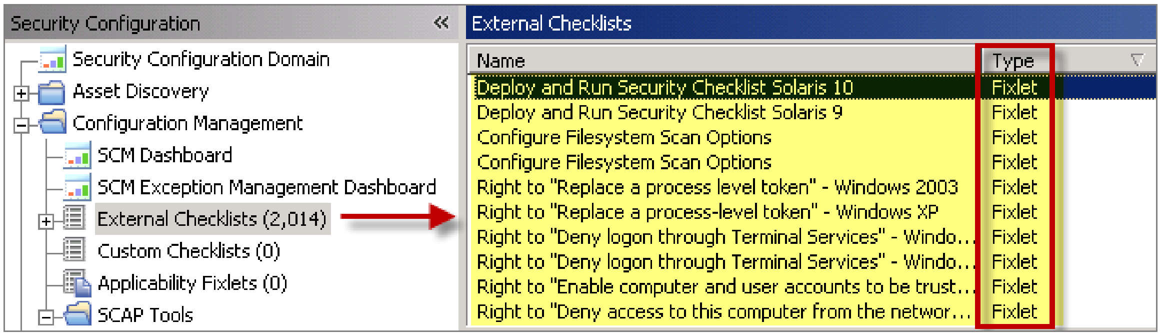
Each node expands into sub-nodes that contain additional content. In the image below, you can see how each sub-node under External Checklists expands to display additional tasks and content:



Use the same approach of clicking the "+" and "-" to open and close each node and sub-node.

Composite View

For an overall view of the “type” of SCM content, click on the External Checklists node and review the List Panel on the right. This will display a list of all of the Fixlets related to each particular SCM checklist.



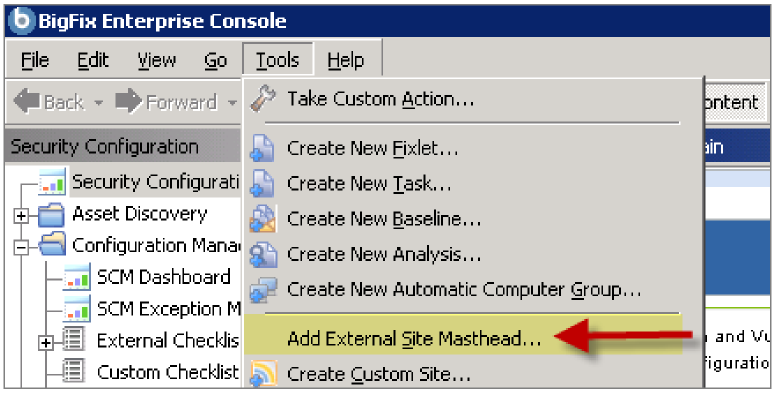
Name	Type
Deploy and Run Security Checklist Solaris 10	Fixlet
Deploy and Run Security Checklist Solaris 9	Fixlet
Configure Filesystem Scan Options	Fixlet
Configure Filesystem Scan Options	Fixlet
Right to "Replace a process level token" - Windows 2003	Fixlet
Right to "Replace a process-level token" - Windows XP	Fixlet
Right to "Deny logon through Terminal Services" - Windo...	Fixlet
Right to "Deny logon through Terminal Services" - Windo...	Fixlet
Right to "Enable computer and user accounts to be trust...	Fixlet
Right to "Deny access to this computer from the networ...	Fixlet

Modifying External Site Subscription

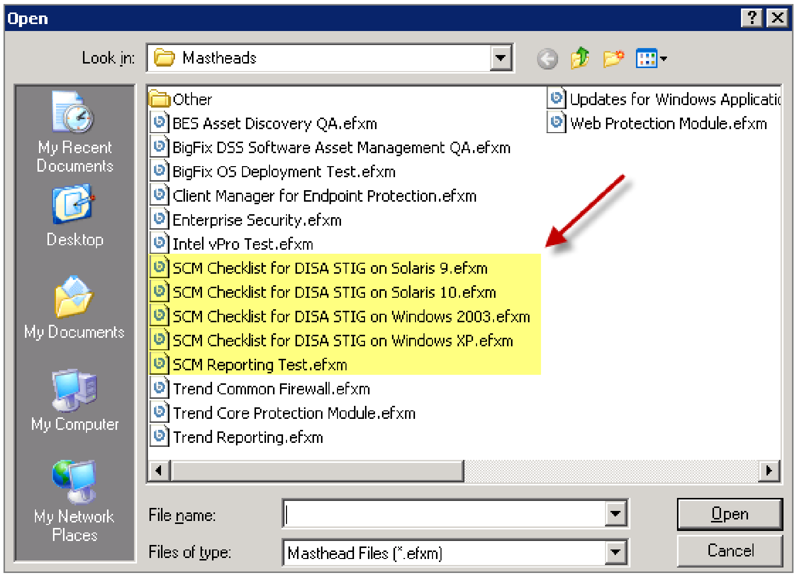
When deploying an SCM checklist or benchmark, special consideration should be given to the selection of configuration settings implemented on a given system. In many cases, organizations define a single benchmark for a single class of systems or type of systems, and apply that benchmark for both assessment and remediation when needed. The SCM checklists should be carefully subscribed to only the systems that should be evaluating the configuration settings defined within the site. This will ensure that the Reporting Dashboard only reports on the configuration settings you want to be evaluated on the systems. Without properly subscribing the sites, the Dashboard may not report correctly. Generally, when you subscribe a BigFix-provided SCM checklist, the BigFix Console distributes the sites to all BigFix Clients by default.

To properly target your Clients, follow the steps below:

1. From the BigFix Console, click the *Tools* pull-down menu and select *Add External Site Masthead*.



2. Browse to locate the desired masthead file, then click *Open.* Select a security site from the list that is targeted to a specific OS, such as the *SCM Checklist for DISA STIG on Windows 2003*.



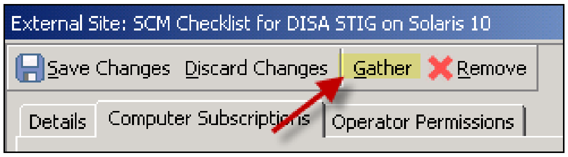
Look in: Mastheads

Other
BES Asset Discovery QA.efxm
BigFix DSS Software Asset Management QA.efxm
BigFix OS Deployment Test.efxm
Client Manager for Endpoint Protection.efxm
Enterprise Security.efxm
Intel vPro Test.efxm
SCM Checklist for DISA STIG on Solaris 9.efxm
SCM Checklist for DISA STIG on Solaris 10.efxm
SCM Checklist for DISA STIG on Windows 2003.efxm
SCM Checklist for DISA STIG on Windows XP.efxm
SCM Reporting Test.efxm
Trend Common Firewall.efxm
Trend Core Protection Module.efxm
Trend Reporting.efxm
Updates for Windows Applicatic
Web Protection Module.efxm

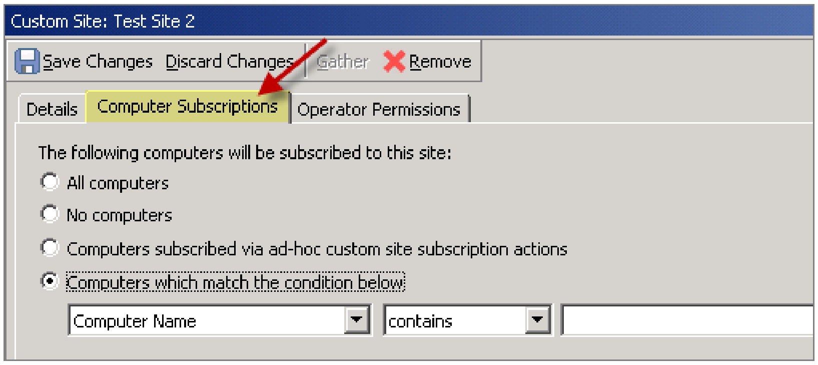
File name:
Files of type: Masthead Files (*.efxm)

3. Click *Yes* to add the site, enter your Private Key Password, then click *OK.*.

4. At the *External Site* dialog that displays, click *Gather* to gather the site. This will send the Gather request to the BES server. The BigFix Server will begin the gathering process, during which time tasks and analyses will be gathered from the central BigFix Hosted Content Server.


External Site: SCM Checklist for DISA STIG on Solaris 10

5. Click the *Computer Subscriptions* tab. This will allow you to set parameters for the computers that will be subscribed to this site.

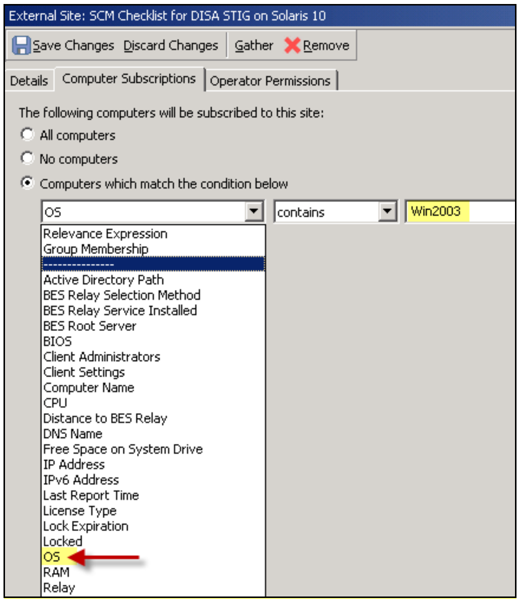

Custom Site: Test Site 2

The following computers will be subscribed to this site:

○ All computers
○ No computers
○ Computers subscribed via ad-hoc custom site subscription actions
● Computers which match the condition below

Computer Name | contains

6. Click the *Computers which match the condition below* button and review the dropdown list to select filter criteria.



External Site: SCM Checklist for DISA STIG on Solaris 10

The following computers will be subscribed to this site:

○ All computers

○ No computers

● Computers which match the condition below

OS | contains | Win2003

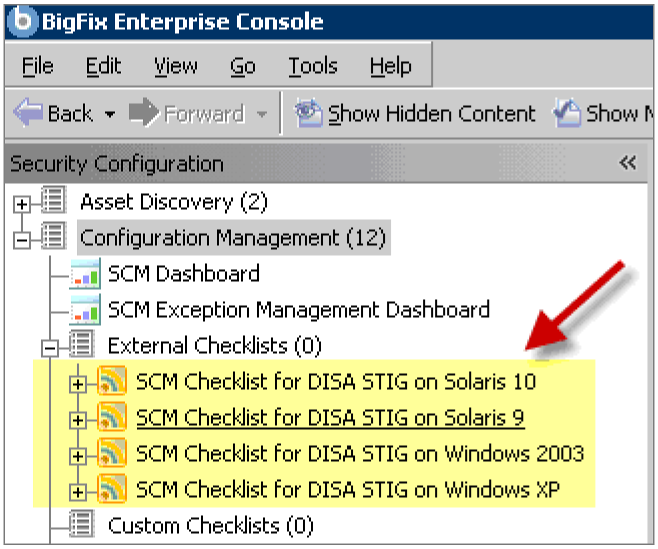
7. From this dialog, you need to distinguish the group of computers you wish to target. For this example, select *OS* from the pull-down property list, then enter *Win2003* in the property value box. This will only subscribe Win2003 OS computers to this particular site. Follow this procedure with each site to ensure that only the appropriate computers are subscribed to each out-of-the-box SCM site. Below are the group definitions for other operating systems:

Operating System	String
Windows XP	WinXP
Windows Vista	WinVista
Windows 2003	Win2003
Sun Solaris 10	SunOS 5.10
Sun Solaris 9	SunOS 5.9
Sun Solaris 8	SunOS 5.8
IBM AIX 5.1	AIX 5.1
IBM AIX 5.2	AIX 5.2
IBM AIX 5.3	AIX 5.3
HP-UX 11.0	HP-UX B.11.00
HP-UX 11.11	HP-UX B.11.11
HP-UX 11.23	HP-UX B.11.23
Red Hat Enterprise Linux 3	Linux Red Hat Enterprise AS 3
	Linux Red Hat Enterprise ES 3
	Linux Red Hat Enterprise WS 3
Red Hat Enterprise Linux 4	Linux Red Hat Enterprise AS 4
	Linux Red Hat Enterprise ES 4
	Linux Red Hat Enterprise WS 4
Red Hat Enterprise Linux 5	Linux Red Hat Enterprise AS 5
	Linux Red Hat Enterprise ES 5
	Linux Red Hat Enterprise WS 5

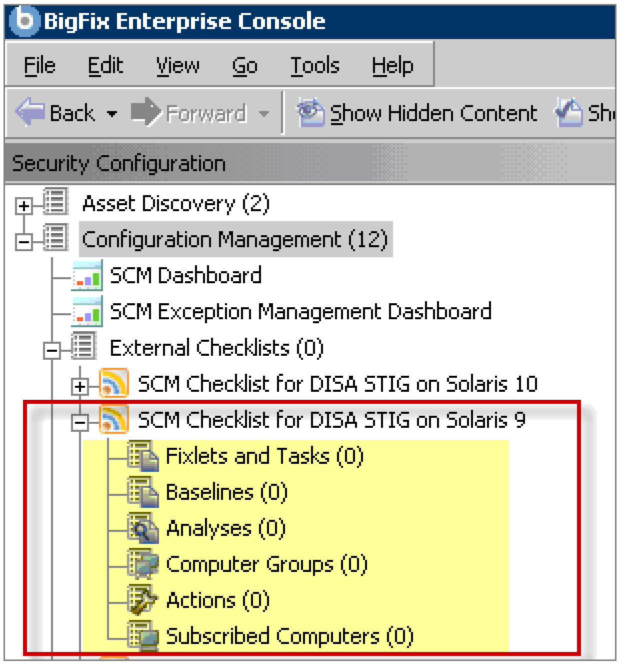
This is the basic procedure for viewing and using an SCM checklist on all supported platforms. There are differences between the Windows and UNIX platforms and how you set parameters on each. The BigFix SCM Benchmarks Guide will address this topic.

Using the Default SCM Benchmarks

After subscribing to the SCM sites, go to the navigation tree to locate your SCM checklists.

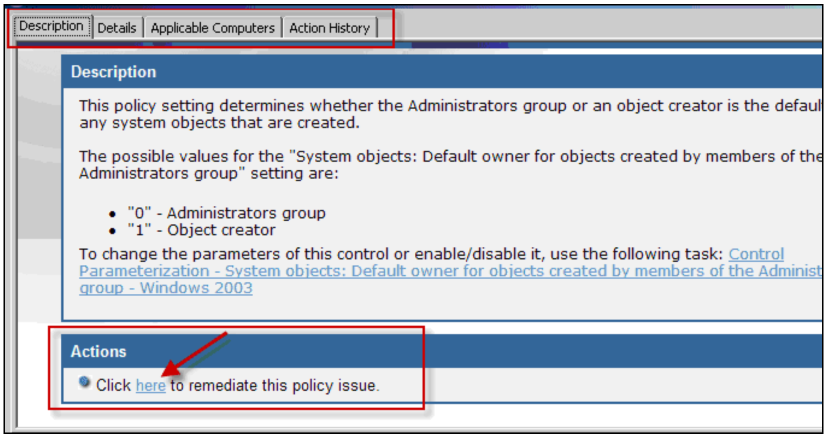

BigFix Enterprise Console
File Edit View Go Tools Help
Back Forward Show Hidden Content Show N
Security Configuration
Asset Discovery (2)
Configuration Management (12)
SCM Dashboard
SCM Exception Management Dashboard
External Checklists (0)
SCM Checklist for DISA STIG on Solaris 10
SCM Checklist for DISA STIG on Solaris 9
SCM Checklist for DISA STIG on Windows 2003
SCM Checklist for DISA STIG on Windows XP
Custom Checklists (0)

Click the "+" next to each checklist to view the available related content:


BigFix Enterprise Console
File Edit View Go Tools Help
Back Forward Show Hidden Content Sh
Security Configuration
Asset Discovery (2)
Configuration Management (12)
SCM Dashboard
SCM Exception Management Dashboard
External Checklists (0)
SCM Checklist for DISA STIG on Solaris 10
SCM Checklist for DISA STIG on Solaris 9
Fixlets and Tasks (0)
Baselines (0)
Analyses (0)
Computer Groups (0)
Actions (0)
Subscribed Computers (0)

The Fixlet messages displayed in Fixlets and Tasks represent security controls with which at least one BigFix-managed computer on your network is out of compliance. Fixlet messages use Relevance expressions to evaluate a security control locally, on each endpoint. An endpoint that is out of compliance will then report back to the BigFix Console, which will list the Fixlet message as *relevant*. All of this happens in minutes, guaranteeing that you are always viewing a real-time evaluation of your security status.

Double-click any Fixlet message from the list to view it. The Fixlet opens in the work area with the following tabs: *Description, Details, Applicable Computers* and *Action History*. Click the *Description* tab to view the text describing this Fixlet message.



Description

This policy setting determines whether the Administrators group or an object creator is the defaul any system objects that are created.

The possible values for the "System objects: Default owner for objects created by members of the Administrators group" setting are:

- "0" - Administrators group
- "1" - Object creator

To change the parameters of this control or enable/disable it, use the following task: Control Parameterization - System objects: Default owner for objects created by members of the Administ group - Windows 2003

Actions

- Click here to remediate this policy issue.

Typically, you will find a short report on the security issue, allowing you to evaluate the importance of this compliance issue before you take action. Depending on the issue, the description tab could offer a procedure for maintaining compliance or a list of active remediations found in the Actions box. Click the applicable link to deploy a remediation.

When you select a Fixlet Action, the Take Action dialog opens, allowing you to fine tune the deployment. For more information on the Take Action dialog, review the BigFix Console Operator's Guide.

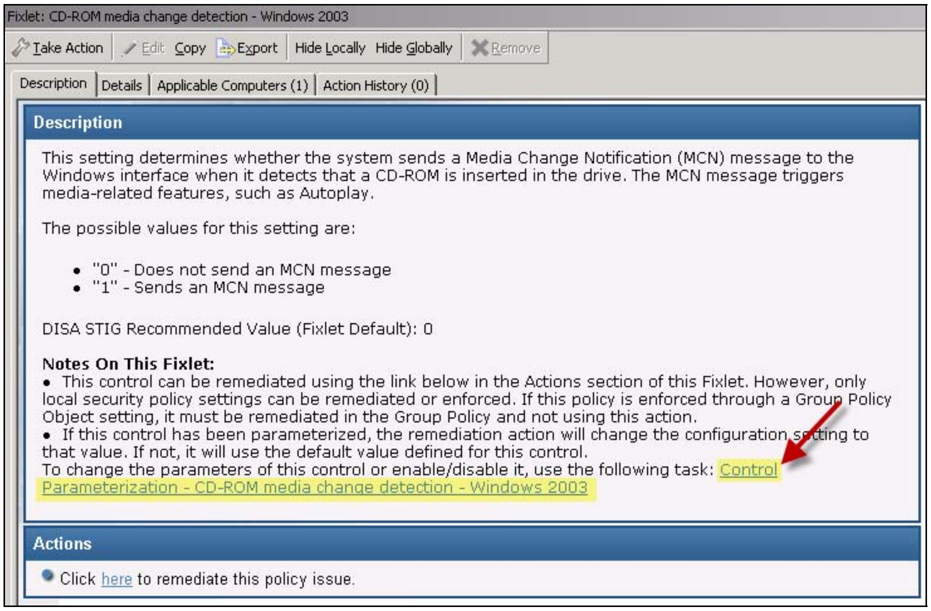
Once you have targeted your desired set, click *OK* and enter your Private Key Password. This immediately sends the Action to the appropriate endpoints. As the computers are remediated, you can watch the progress using any of the reporting tools contained in the BigFix Console, including the Fixlet list, Visualization Tools, Web Reports and Dashboards.

When every endpoint in your enterprise is remediated, this particular control will no longer be relevant and will disappear from the list of relevant Fixlet messages. Although the Fixlet messages will no longer be listed, they will always remain vigilant, constantly checking for any computer that deviates from the specified level of compliance.

Modifying Control Parameters

As well as monitoring and remediating, you can modify certain parameters to adjust the sensitivity of the controls. For example, you might want to observe a stringent policy of using 14-character passwords. You can customize the password-length parameter to match your specific policy. Although parameters can be modified on both UNIX and Windows content, there are some differences in how this is implemented. UNIX content is aimed at users who want maximum command-line control.

The SCM checklists for Windows systems use BigFix Tasks to enable alteration of the parameters for each configuration setting. For each Fixlet control parameter, there is an associated Task that sets the parameter. To invoke the Task, scroll to the bottom of the Fixlet description and click on the *Control Parameterization* link.



This setting determines whether the system sends a Media Change Notification (MCN) message to the Windows interface when it detects that a CD-ROM is inserted in the drive. The MCN message triggers media-related features, such as Autoplay.

The possible values for this setting are:

- "0" - Does not send an MCN message
- "1" - Sends an MCN message

DISA STIG Recommended Value (Fixlet Default): 0

Notes On This Fixlet:

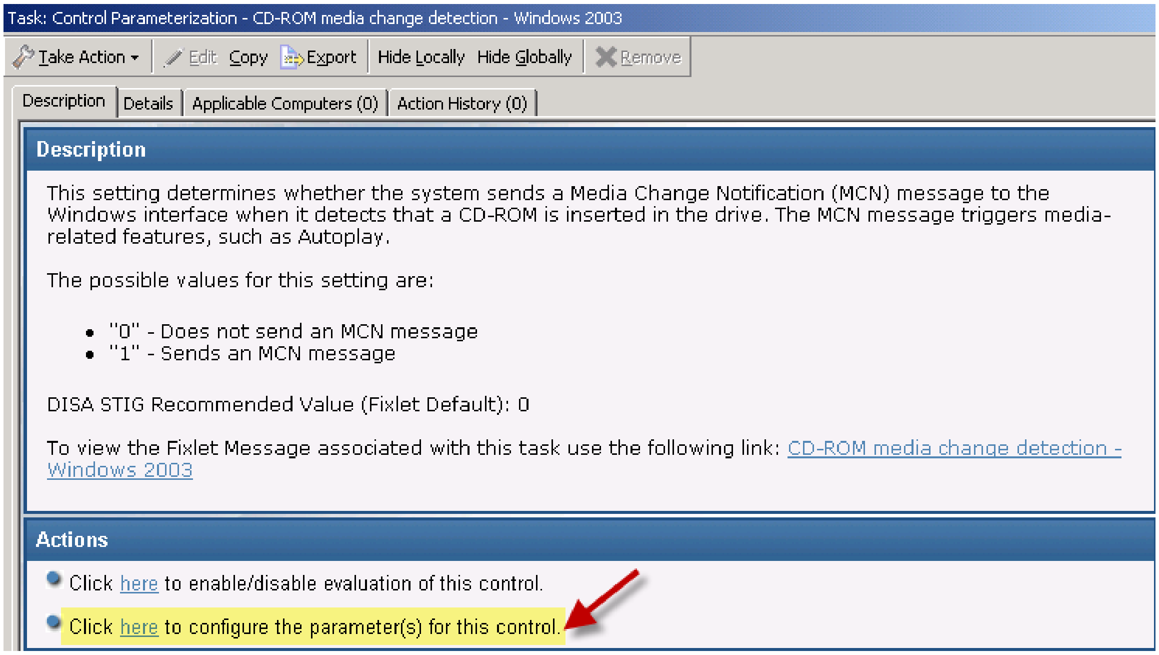
- This control can be remediated using the link below in the Actions section of this Fixlet. However, only local security policy settings can be remediated or enforced. If this policy is enforced through a Group Policy Object setting, it must be remediated in the Group Policy and not using this action.
- If this control has been parameterized, the remediation action will change the configuration setting to that value. If not, it will use the default value defined for this control.

To change the parameters of this control or enable/disable it, use the following task: Control Parameterization - CD-ROM media change detection - Windows 2003

Click here to remediate this policy issue.

The associated *Control Parameterization* Task opens with a description of the parameter function, the possible range, and the recommended values.

At the bottom of the Task window is an Actions box. You will see a link allowing you to configure the parameter(s) of this control.



This setting determines whether the system sends a Media Change Notification (MCN) message to the Windows interface when it detects that a CD-ROM is inserted in the drive. The MCN message triggers media-related features, such as Autoplay.

The possible values for this setting are:

- "0" - Does not send an MCN message
- "1" - Sends an MCN message

DISA STIG Recommended Value (Fixlet Default): 0

To view the Fixlet Message associated with this task use the following link: CD-ROM media change detection - Windows 2003

Click here to enable/disable evaluation of this control.

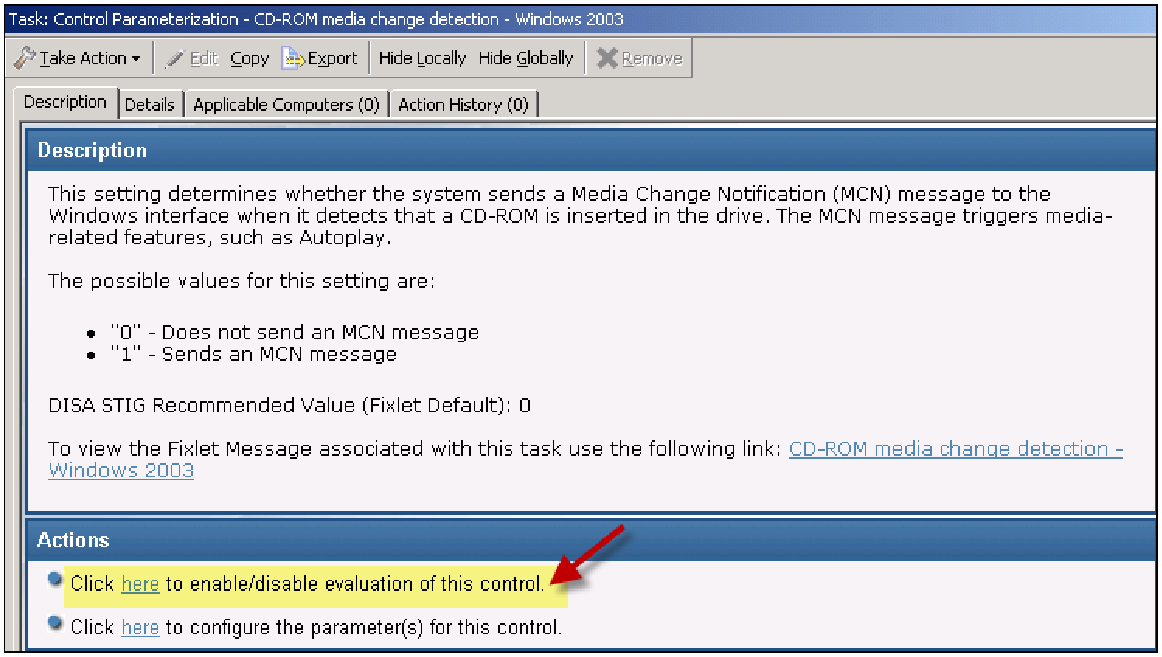
Click here to configure the parameter(s) for this control.

Click *OK* and enter your password to deploy the new setting that will now guide the associated Fixlet control. Once set, the Fixlet message will only become relevant on those computers and devices that do not meet this new threshold. Thus, you can easily modify the Windows content to suit your exact needs for each detail of your security policy.

> **Note:** Not all controls can be parameterized. For more detailed information on parameterization for the UNIX platforms, see the AIX, Linux and Solaris parameterization guides available on the BigFix support site.

Disabling Controls

You can disable certain controls on a computer-by-computer basis. For instance, you may have legacy computers or development workstations that have their own custom security policies. To remove them from the security scan, you can disable the control for those specific devices. Again, this procedure is different on UNIX and Windows systems. To disable a Windows control, follow the procedure outlined in the previous section to bring up the Task associated with the Fixlet control. In the Task, you will see an action to enable/disable the control.



Description

This setting determines whether the system sends a Media Change Notification (MCN) message to the Windows interface when it detects that a CD-ROM is inserted in the drive. The MCN message triggers media-related features, such as Autoplay.

The possible values for this setting are:

- "0" - Does not send an MCN message
- "1" - Sends an MCN message

DISA STIG Recommended Value (Fixlet Default): 0

To view the Fixlet Message associated with this task use the following link: CD-ROM media change detection - Windows 2003

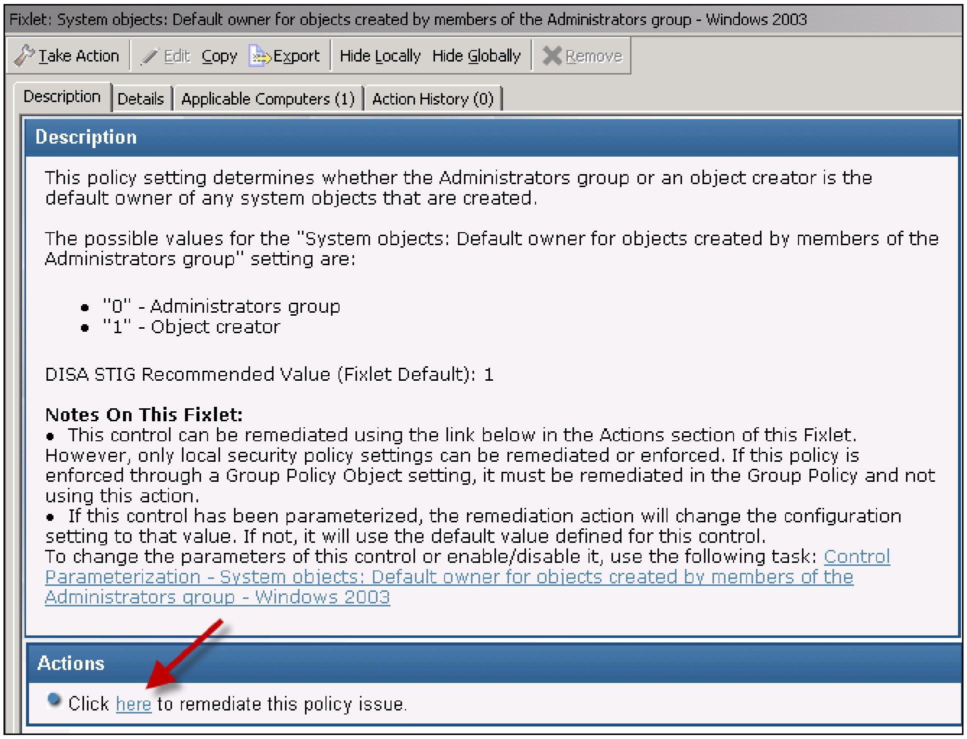
Actions

- Click here to enable/disable evaluation of this control.
- Click here to configure the parameter(s) for this control.

Click this link to bring up the Take Action dialog and target the set of computers that you want to exclude from evaluation. Click *OK* and supply your password to deploy this Action. The selected computers will then be displayed as *compliant* within the Dashboards and Reports and, therefore, will no longer evaluate the control.

Remediating Out-of-Compliance Controls

If an endpoint is out of compliance with a policy, it will appear in the BigFix Console as a relevant Fixlet message. Based on the nature of that issue, it may offer to remediate the problem, typically by modifying or updating a file or (on Windows) a registry entry. Click the Fixlet message to review the specific issue and then scroll to the bottom of the description. If the Fixlet message offers remediation, it will appear as a link in the Actions box.



Description

This policy setting determines whether the Administrators group or an object creator is the default owner of any system objects that are created.

The possible values for the "System objects: Default owner for objects created by members of the Administrators group" setting are:

- "0" - Administrators group
- "1" - Object creator

DISA STIG Recommended Value (Fixlet Default): 1

Notes On This Fixlet:

- This control can be remediated using the link below in the Actions section of this Fixlet. However, only local security policy settings can be remediated or enforced. If this policy is enforced through a Group Policy Object setting, it must be remediated in the Group Policy and not using this action.
- If this control has been parameterized, the remediation action will change the configuration setting to that value. If not, it will use the default value defined for this control.

To change the parameters of this control or enable/disable it, use the following task: Control Parameterization - System objects: Default owner for objects created by members of the Administrators group - Windows 2003

Actions

- Click here to remediate this policy issue.

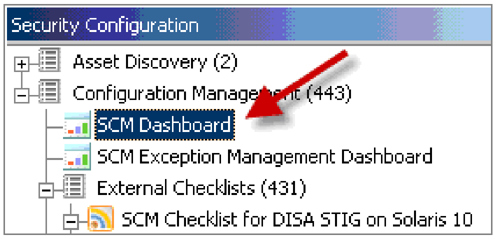
Click this link to initiate the remediation process. The Take Action dialog opens, allowing you to target the Action to just the subset of computers you desire. You can also set other parameters for the Action as described in the BigFix Console Operator's Guide.

Accessing the Control Dashboard and Reporting

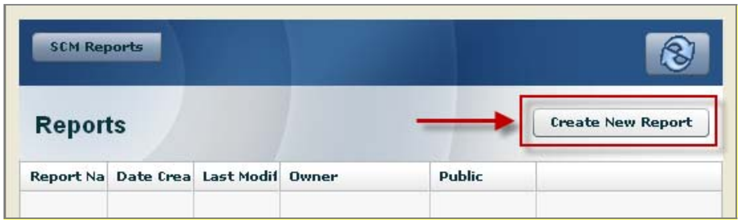
The SCM solution includes a graphical dashboard that provides an overview of your security posture and allows you to drill down into the details. The charts can be precisely tuned and customized to help you concentrate on any desired subset of your deployment that is currently of importance to you. These custom reports can be saved, so that you can quickly revisit any subset of your enterprise in minutes. Since the information for the dashboard is generated at the endpoints and sent back through an intelligent relay system, you can view it in real time.

Note: The SCM Reporting masthead needs to be loaded into the Console.

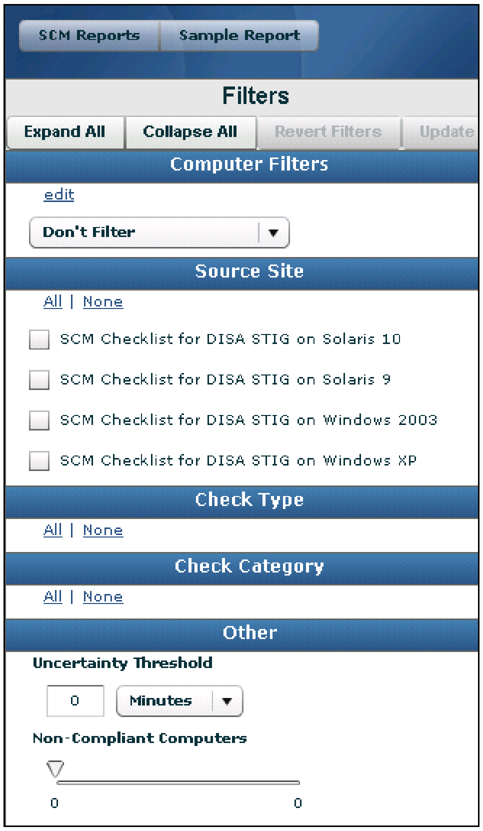
To see it in action, select *SCM Dashboard* located at the top of the navigation tree.


Security Configuration
Asset Discovery (2)
Configuration Management (443)
SCM Dashboard
SCM Exception Management Dashboard
External Checklists (431)
SCM Checklist for DISA STIG on Solaris 10

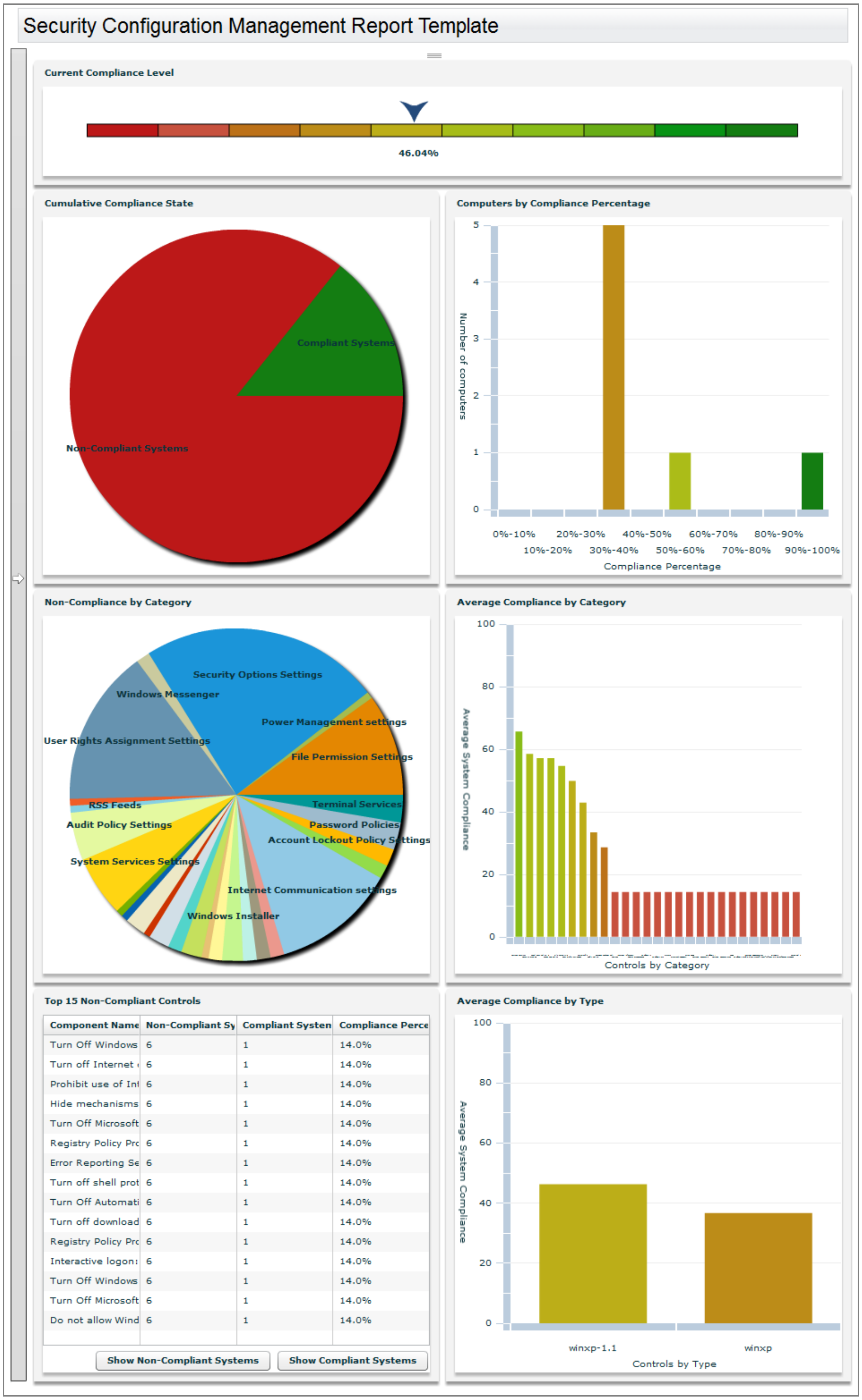
When the Dashboard opens, click the *Create New Report* button on the right side of the window and supply a name.



After information from your endpoints is gathered, the Dashboard will create its display. You will see a Filter Panel on the left side of the work area allowing you controls for how you want the data to display in the pie charts.



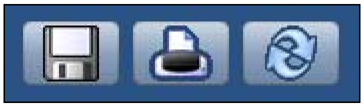
Experiment with the controls and watch how the associated graphs change. Move your mouse over the graphs to see specific information on each segment. Click on a graph to drill down into the constituent elements. To save your report, click on the disk icon in the upper right.



Security Configuration Management Report Template

Component Name	Non-Compliant Sy	Compliant Systen	Compliance Perce
Turn Off Windows	6	1	14.0%
Turn off Internet (	6	1	14.0%
Prohibit use of Int	6	1	14.0%
Hide mechanisms	6	1	14.0%
Turn Off Microsoft	6	1	14.0%
Registry Policy Prc	6	1	14.0%
Error Reporting Se	6	1	14.0%
Turn off shell prot	6	1	14.0%
Turn Off Automati	6	1	14.0%
Turn off download	6	1	14.0%
Registry Policy Prc	6	1	14.0%
Interactive logon:	6	1	14.0%
Turn Off Windows	6	1	14.0%
Turn Off Microsoft	6	1	14.0%
Do not allow Wind	6	1	14.0%

The three icons on the top right of the work area enable you to save, print, or refresh the Console.



BigFix also offers a Web Reports application that allows you to view aspects of your deployment. If you have never used the BigFix Web Reports application, start by reviewing the BigFix Web Reports Guide. Then for specific information about SCM Web Reports, see the BigFix SCM *User's Guide*.

Part 3

Support

Global Support

BigFix offers a suite of support options to help optimize your user-experience:

- First, check the BigFix website Documentation page:
- Next, search the BigFix Knowledge Base for applicable articles on your topic:
- Then check the User Forum for discussion threads and community-based support:

If you still can't find the answer you need, contact BigFix's support team for technical assistance:

Phone/US:	866 752-6208 (United States)
Phone/International:	661 367-2202 (International)
Email:	enterprisesupport@bigfix.com