

IBM Endpoint Manager
Version 9.1

*Security and Compliance Analytics
User's Guide*



IBM Endpoint Manager
Version 9.1

*Security and Compliance Analytics
User's Guide*



Note

Before using this information and the product it supports, read the information in "Notices" on page 35.

This edition applies to version 9, release 1, modification level 0 of IBM Endpoint Manager and to all subsequent releases and modifications until otherwise indicated in new editions.

© **Copyright IBM Corporation 2012, 2014.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Chapter 1. Introduction	1
System Requirements	1
General Usage Concepts	2
Navigation	2
Graphical Report View	5
Managing exceptions	5
Exporting	5
Chapter 2. Viewing deployment compliance status reports	7
Overview Reports	7
List Reports	8
Check Results Reports	9
Exceptions Reports	10
Saved Reports	11
Chart Types	11
Chapter 3. Management Tasks	13
Computer Groups	13
Computer Properties	14
Data Sources	15
Adding a data source	15
Deleting a data source	18
Imports	18
Roles	18
Server Settings	19
Session Settings	20
Users	20
User Provisioning	20

Exceptions	20
Account Preferences	21

Chapter 4. Disaster Recovery for Security and Compliance Analytics . . . 23

Creating a backup of the application server	23
Recovering the backup application server	23
Verifying the success of the recovery procedure	24

Appendix A. Example Reports. 25

Checklist List Report	26
Checklist Overview Report	26
Checks List Report	27
Check Overview Report	27
Computers List Report	28
Computer Overview Report	28
Computer Groups List Report	29
Computer Group Overview Report	29
Check Results List Report	30
Vulnerabilities Report	30

Appendix B. Support. 33

Notices 35

Programming interface information	37
Trademarks	37
Terms and conditions for product documentation.	38

Chapter 1. Introduction

IBM® Endpoint Manager for Security and Compliance Analytics (SCA) is a component of IBM Endpoint Manager for Security and Compliance, which includes vulnerability detection libraries and technical controls and tools that are based on industry practices and standards for endpoint and server security configuration (SCM checklists). The vulnerability detection libraries and the technical controls enable continuous, automated detection and remediation of security configuration issues.

SCA provides report views and tools for managing the vulnerability of SCM checks.

SCA generates the following reports, which can be filtered, sorted, grouped, customized, or exported with the use of any set of Endpoint Manager properties:

- Overviews of Compliance Status, Vulnerabilities, and History
- Checklists: Compliance Status and History
- Checks: Compliance Status, Values, and History
- Vulnerabilities: Rollup Status and History
- Vulnerability Results: Detailed Status
- Computers: Compliance Status, Values, Vulnerabilities, and History
- Computer Groups: Compliance Status, Vulnerabilities, and History
- Exceptions: Management, Status, and History

New features

IBM Endpoint Manager for Security and Compliance Analytics version 1.4 includes the following enhancements:

Support for Endpoint Manager data sources on DB2

You can now connect to the DB2 database that is installed either on a Windows or Linux computer to download raw data that is uploaded by the Endpoint Manager agents.

Lightweight Directory Access Protocol (LDAP) and User auto-provisioning

You can add, edit, and remove LDAP servers. You can also authenticate users within LDAP groups with the user auto-provisioning feature.

Multiple datasource support

Gather and present analytics data on more than one data source.

Session timeout

Administrators can set a time limit for a logged in user who is inactive for some time and edit the login page.

System Requirements

Set up your deployment according to the system requirements to successfully deploy Security and Compliance Analysis.

Configure your Security and Compliance Analysis deployment according to the following requirements:

Table 1. Supported components and system requirements to deploy Security and Compliance Analysis

Components	Requirements
Supported browser versions	<ul style="list-style-type: none"> • Internet Explorer versions 8.0, 9.0, or 10.0 • Firefox 3 or later versions, including Extended Support Release version 17 • Google Chrome 10+
Supported IBM Endpoint Manager component versions	<ul style="list-style-type: none"> • Console versions 8.0, 8.1, 8.2, or 9.0 • Web Reports versions 8.0, 8.1, 8.2, or 9.0 • Windows Client versions 8.0, 8.1, 8.2, or 9.0 • UNIX Client versions 8.0, 8.1, 8.2, or 9.0
SCA server operating system requirements	<ul style="list-style-type: none"> • Microsoft Windows Server 2003 • Microsoft Windows Server 2008 • Microsoft Windows Server 2008 R2 • Microsoft Windows Server 2008 R2 Service Pack 1 • Microsoft Windows Server 2012
SCA database server requirements	<ul style="list-style-type: none"> • Microsoft SQL Server 2005 Service Pack 2 • Microsoft SQL Server 2012
SCA server	You must have Administrator privileges on the target SCA server.
SCA database	You must have dbcreator permissions on the target SCA database server.
IBM Endpoint Manager database user permissions	IBM Endpoint Manager database user permissions
SCM mastheads and Fixlet sites	<ul style="list-style-type: none"> • You might have earlier BigFix Fixlets, IBM Endpoint Manager Fixlets, and custom Fixlets for security compliance in your deployment. These Fixlets continue to function correctly, but only certain Fixlets display within the SCA reports. • To view the current list of SCM content sites that are supported with SCA, see the technote What SCM content is available for TEM?.
TEM DB2 permissions	<p>You must have data administration authority (DATAACCESS) to do the following tasks:</p> <ul style="list-style-type: none"> • Access to create objects • Access to data within a TEM DB2 database

General Usage Concepts

Navigation

Using SCA, you can navigate and explore security configuration check results. Each computer in your deployment evaluates the appropriate SCM checks that you have activated using the IBM Endpoint Manager console, and each computer

reports a *pass*, *fail*, or *not applicable* status for each check. Each computer also reports computer properties and analysis values, such as SCM check measured values that are active in your deployment.

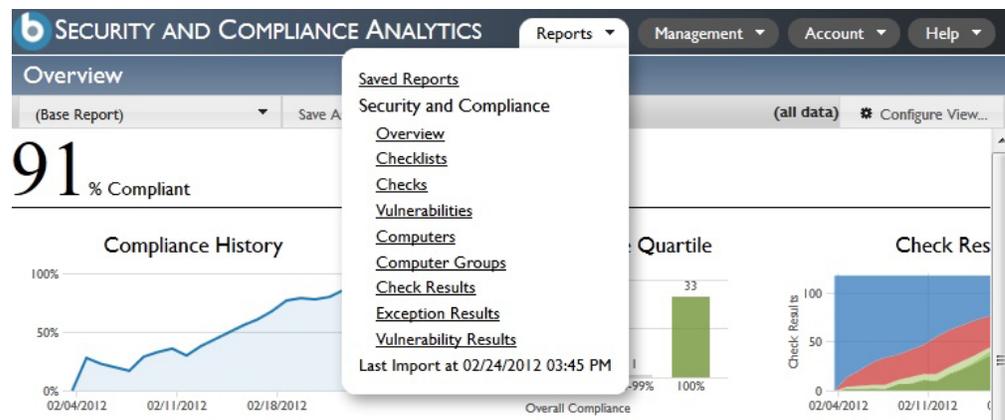
SCM check results are aggregated by the SCA server and augmented by computer properties and analysis values to provide compliance overviews and detailed lists of results.

There are four primary navigation mechanisms in SCA:

- Global navigation
- Linked navigation
- Sub-navigation (or scoped navigation)
- Saved Reports navigation

Global Navigation

Global Navigation refers to the primary dropdown menus at the top of the SCA primary dashboard. Click the *Reports* dropdown menu to navigate through the different report types. Users with appropriate permissions also see a *Management* drop-down menu to view and manage the deployment configuration.



Linked Navigation

You can use linked text to navigate through report types. For example, click *5 Computer Groups* on the Overview report to display the related Computer Groups report.



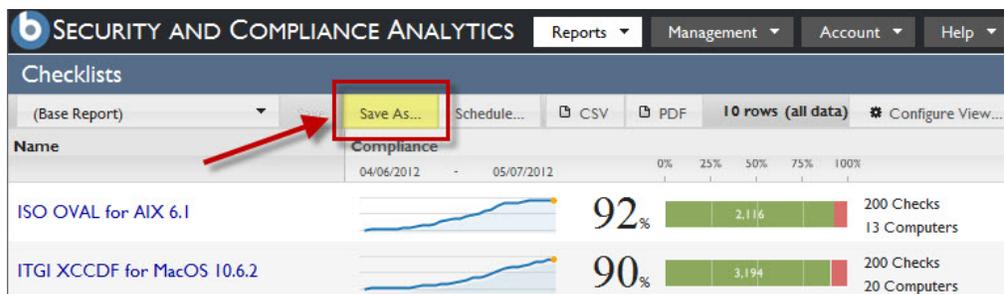
Sub-navigation

You can also explore reports within a given scope from the sub-navigation menu. To view all checks, all computers, or all exceptions appropriate for a given checklist, click the *Overview* dropdown menu that is located on the upper-right side of any overview report. The *List View* of reports will not show the *Overview* dropdown.



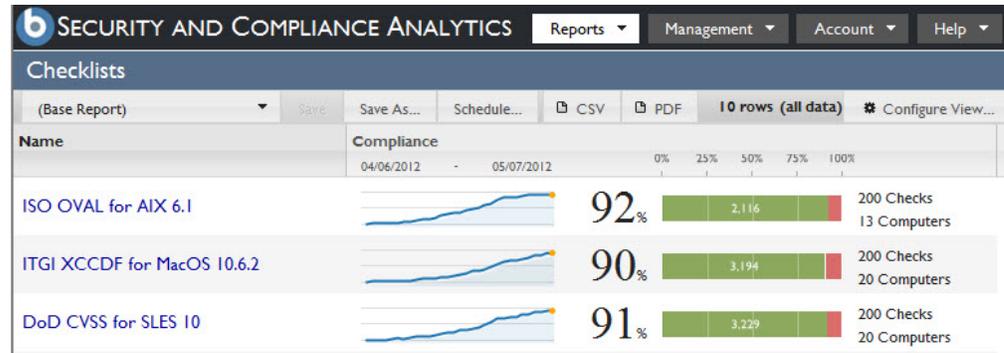
Saved Reports navigation

When you save a report view, it is available as a link on the Saved Reports list as well as from the Saved Reports menu on the left side of the report. Selecting a saved report from the menu regenerates the report view using the settings originally saved with the report. Click *Saved Reports* from the Reports dropdown menu, or click *Save As* from within any report to save the current view preferences.



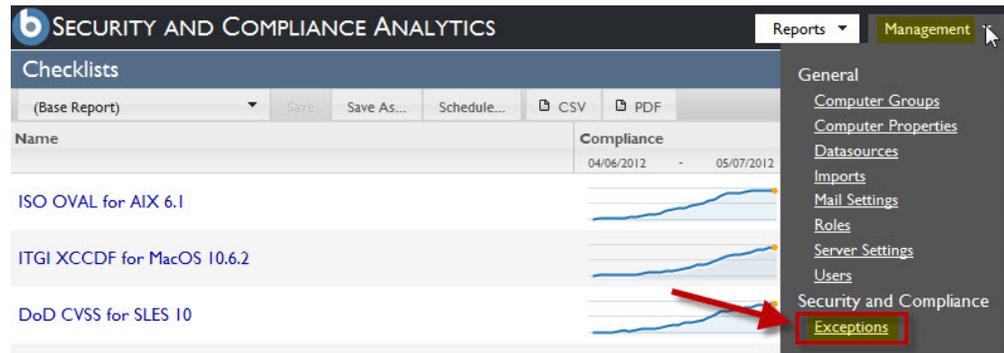
Graphical Report View

You can view a variety of graphical charts that display different aspects of the security data in your deployment. You can select the columns to be displayed, change column arrangement, and filter data.



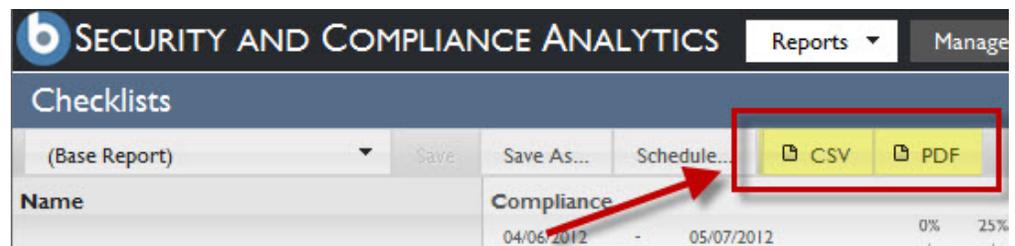
Managing exceptions

You can set exceptions to exclude data from your compliance reports. From the Management dropdown menu, click *Exceptions*.



Exporting

You can export the data view of most report views to a .CSV or .PDF formatted file on your local computer. Click the .CSV or .PDF links on the top bar of the console.



Chapter 2. Viewing deployment compliance status reports

You can view the compliance status in your deployment from any of the four report types.

SCA reports display graphical and tabular views of different aspects of your deployment compliance status.

There are four main report types available, each of which displays a different, configurable view of the current and historical compliance status of the deployment. All users with accounts on the system can see all report types, but the data visible to each user depends on the computers to which they have been granted visibility.

For a graphical representation of each report type, see Example Reports in the Appendix.

Overview Reports

The following graphical reports are available from the primary Overview window in the SCM dashboard:

Deployment Overview

Shows deployment information (such as quantity of computers and quantity of checks) and overall, historical aggregate compliance for all checks on all computers visible to logged-in users.

Checklist Overview

Shows information about a single checklist (such as quantity of checks in the checklist) and overall, historical aggregate compliance for the checklist as applied to all computers visible to logged in users.

Computer Overview

Shows information about a single computer (such as number of checks evaluated on the computer) and overall, historical aggregate compliance of all checks evaluated by the computer.

Computer Group Overview

Shows information about a computer group (such as number of children/sub-groups and number of member computers) and overall, historical aggregate compliance of the group.

Check Overview

Shows information about a single check (such as check source and check description) and overall, historical aggregate compliance of the check as evaluated by all computers visible to logged in users.

Vulnerability Overview

Shows information about a single vulnerability check (such as vulnerability properties, CVSS score metrics, and vulnerability description) and overall, historical aggregate compliance for the vulnerability evaluated by all computers visible to logged in users.

List Reports

Click **Reports** to find the following reports:

Checklist List

Shows the list of checklists in the deployment together with attributes of each checklist and the overall, historical aggregate compliance results of all checks on all visible computers for each checklist.

Checks List

Shows the list of checks in the given scope together with attributes of each check and the overall, historical aggregate compliance results (the aggregate of all visible computer's pass and fail score) of each check.

Computers List

Shows the list of all computers in the given scope visible to the logged-in user together with attributes of each computer and the overall, historical aggregate compliance results of all checks evaluated on the computer.

Computer Groups List

Shows the list of all computer groups in the given scope visible to the logged-in user together with attributes of each group and the overall, historical aggregate compliance results of all checks on all computers in each group.

Vulnerabilities List

Shows the list of vulnerability checks in the given scope visible to the logged-in user together with attributes of each computer and the overall, historical aggregate vulnerability results of all vulnerability checks evaluated on the computer.

The following annotated screen captures provide a summary of the functions of each report type.

Overview Reports



Compliance History: represents aggregate check results (pass/fail) across all computers within current scope. Excepted computers are counted as passing.

Computers by Compliance Quartile: represents computers grouped by computer compliance.

Deployment information: represents quantities of key components in the system.

Check Results History: represents aggregate check results (pass/fail) across all computers within current scope, grouped by check result status.

Overview Report types: Deployment Overview, Checklist Overview, Computer Overview, Computer Group Overview, Check Overview

List Reports

The screenshot shows a 'Checklists' list report with the following columns:

- Name:** Lists each item represented for the list type.
- Compliance:** Shows the history of aggregate results (pass/fail) across all computers within current scope. Excepted computers are counted as passing.
- Results:** Represents aggregate check results (pass/fail) across all appropriate computers within current scope, grouped by check result status.

Name	Compliance	Results
ISO OVAL for AIX 6.1	87%	4 Checks 2 Computers
ITGI XCCDF for MacOS 10.6.2	100%	4 Checks 6 Computers
Dod CVSS for SLES 10	100%	4 Checks 1 Computers
ITGI FDISC for Windows Server 2008	100%	4 Checks 3 Computers
NIST SCAP for HP-UX 11.23	100%	4 Checks 3 Computers
ISO SOX for Ubuntu 8.04	100%	4 Checks 4 Computers
CIS OVAL for Ubuntu 6.06	0%	<none applicable> 4 Checks 0 Computers
Dod CVSS for Solaris 9	100%	4 Checks 1 Computers
ISAP PCI for Windows Server 2008 R2	100%	4 Checks 3 Computers
ISO SCAP for Windows Server 2003	100%	4 Checks 2 Computers

Name: lists each item represented for the list type.

Compliance: represents history of aggregate results (pass/fail) across all computers within current scope. Excepted computers are counted as passing.

Results: represents aggregate check results (pass/fail) across all appropriate computers within current scope, grouped by check result status.

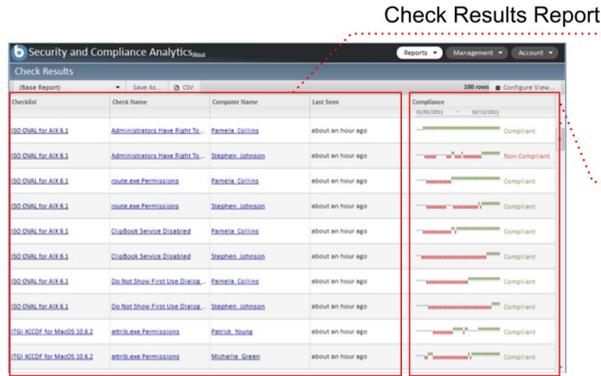
List Report types: Checklists list, Checks list, Computers list, Computer Groups list

Check Results Reports

This report shows the list of all checks and computers, attributes of each computer and check, and the historical compliance result for each check on each computer.

Exceptions Reports

The Exceptions Report shows the list and status of exceptions in the given scope applied to each computer visible to the logged-in user, together with attributes of each check, each computer, and each exception.



Descriptive columns: Each row represents a single check on a single computer. Columns show information about each computer-check pair. Columns are managed using the "Configure View..." option.

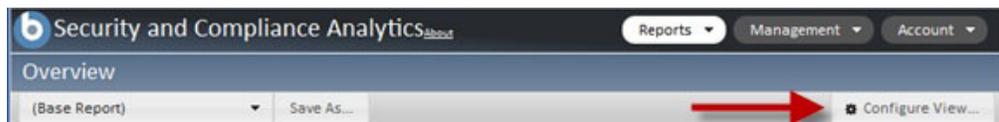
Compliance: pass/fail status for each computer-check pair. Hash marks are scaled within the displayed time range.



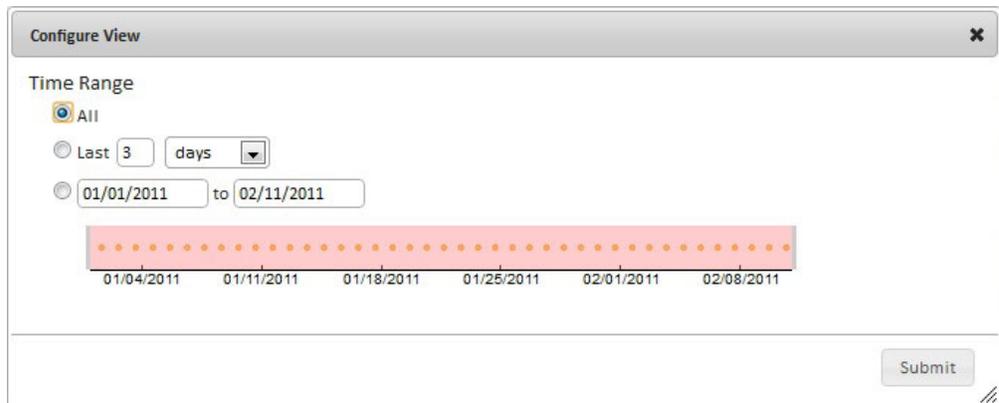
Descriptive columns: Each row represents a single check on a single computer as specified by an exception. Columns show information about each computer-check pair. Columns are managed using the "Configure View..." option.

Exception information: detailed information about the exception.

To customize the settings of each report, such as filtering the view or adding additional columns, click *Configure View* to create custom settings.



You can set parameters for how your data is displayed in reports in *Configure View*.



Saved Reports

The Saved Reports feature retains a specific report format (including the displayed columns and filters you used to customize the view) for future use, without creating the same settings each time. When you save a report, it becomes available in the Saved Reports list report and visible in the drop-down box on the left side of the sub-navigation area when viewing that report type.

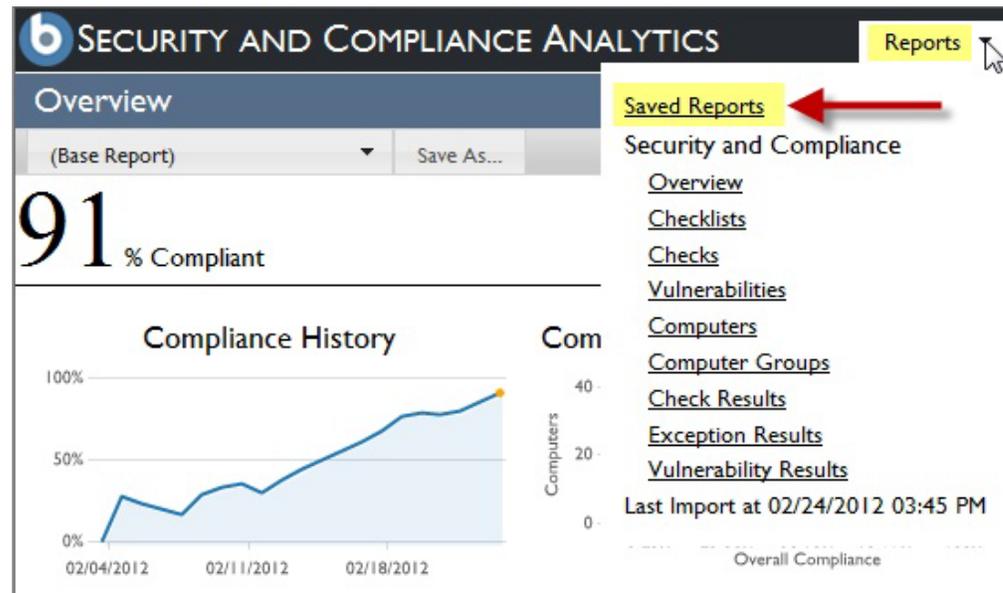


Chart Types

SCA displays summaries of compliance data through the following chart types:

Compliance Overview

Displays compliance history over time as an overall percentage.

Computers by Compliance Quartile

Bar chart that provides compliance data by quartile.

Compliance History Detail Chart

Win loss chart that displays compliance history over time.

Check Results History

Total number of check results over time.

Not applicable

A check that does not apply to a given computer.

Noncompliant

A check that is noncompliant on a given computer.

Excepted – (NC)

A check that is noncompliant on a given computer, but that has been excepted through a manually-created exception.

Excepted – (C)

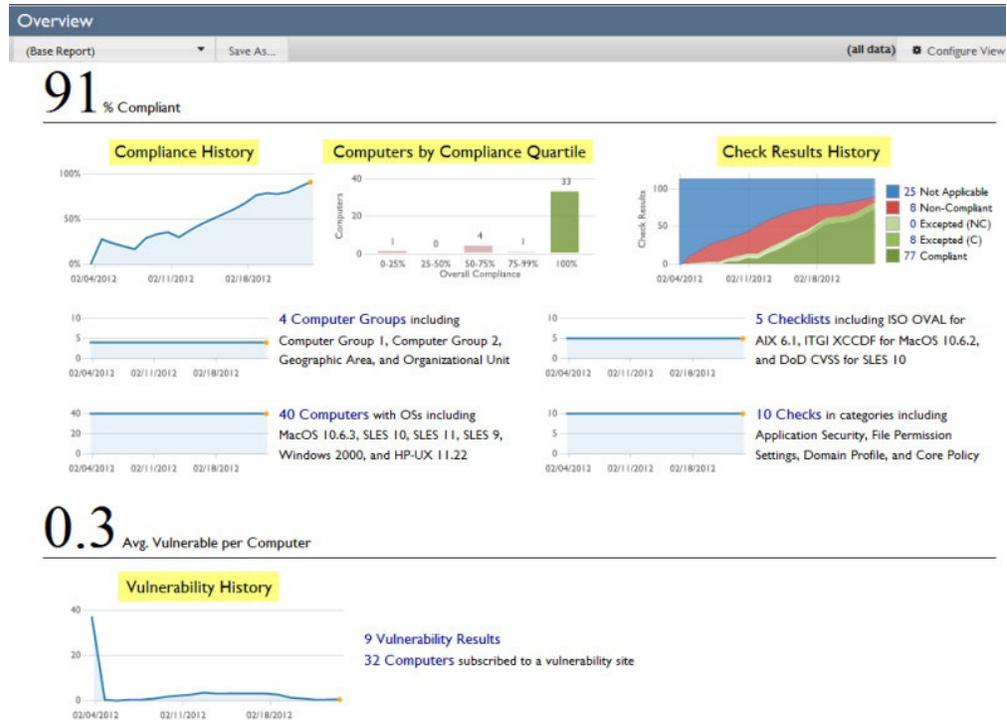
A check that is compliant on a given computer, but that has been excepted through a manually-created exception.

Compliant

A check that complies with the checklist desired values.

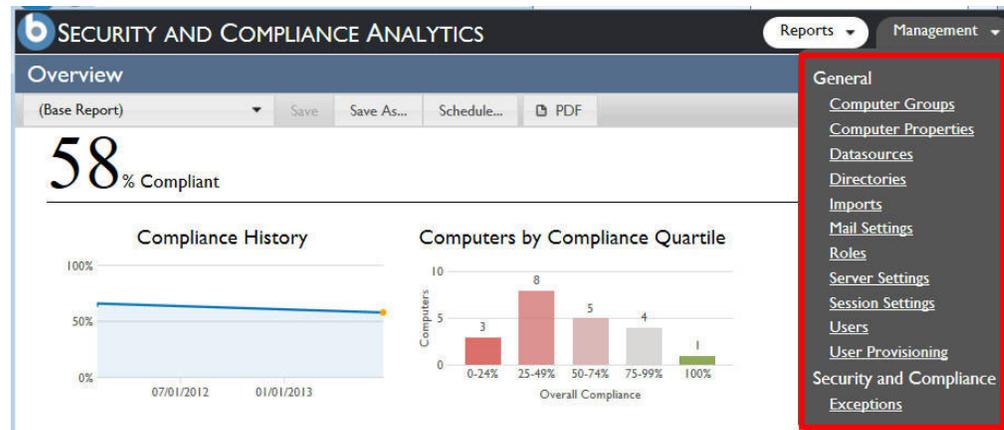
Vulnerability History Detail Chart

Win loss chart that displays vulnerability history over time.



Chapter 3. Management Tasks

The Management Tasks function within SCA gives you control over various aspects of your compliance deployment. From the Management drop-down list, users with appropriate permissions can manage computer groups, computer properties, datasources, directories, imports, mail settings, roles, server settings, session settings, users, user provisioning, and exceptions.



Click **Management** to select any of the following tasks

- General
 - Computer Groups
 - Computer Properties
 - Datasources
 - Directories
 - Imports
 - Mail Settings
 - Roles
 - Server Settings
 - Session Settings
 - Users
 - User Provisioning
- Security and Compliance
 - Exceptions

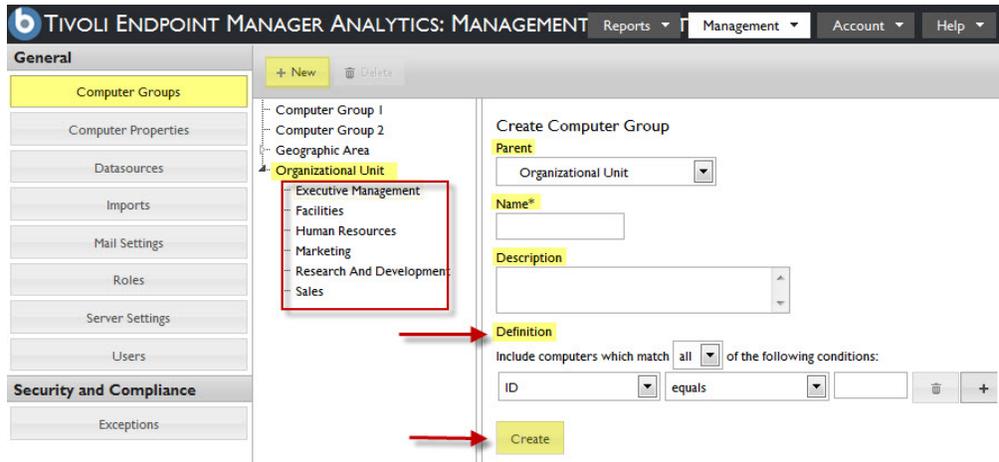
Computer Groups

SCA computer groups help you organize the compliance data that displays in your reports. Specifically, you can filter data to limit what you want to see displayed in your overviews and lists.

All users need to be assigned to a computer group in order to log in to SCA. Logged-in users can see compliance data based on their associated computer group.

To create a computer group, click the **Management** drop-down menu at the top of the console and select **Computer Groups**. Click **New**. Use the dropdown menu to assign your group to a parent. Use the **Definition** field to assign parameters to your group.

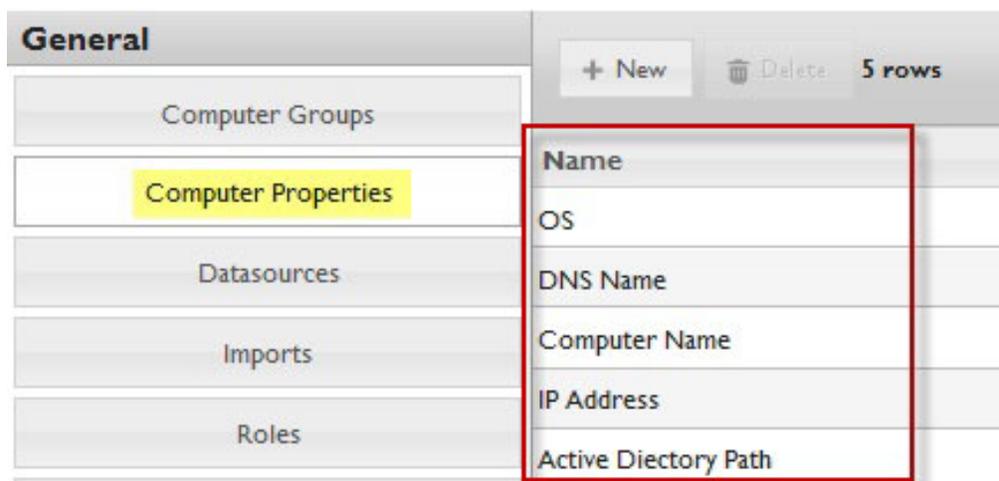
When finished, click *Create*.



Note: You must perform an import after saving your changes.

Computer Properties

You can create computer properties from the Endpoint Manager datasources available for reporting and filtering within the Analytics interface. You can use the default properties in your console, or click *New* to create new properties. These computer properties become the display columns in the computers and results list view for your reports.



Note: You must perform an import after saving your changes.

Data Sources

Using datasources, you can view information about the IBM Endpoint Manager database on which your SCA compliance data is based. You can also view information about the Web Reports database that is the source of some or all of your SCA users. The Web Reports connection provides a single-sign-on capability for users between Web Reports and SCA. You cannot edit these settings after the initial setup, but you can add the Web Reports database information if you originally skipped this step.

General		
1 row		
Host	Database Name	Username
192.168.106.12	fake_bes_mac	sa

Edit Datasource

Primary Database

Host*
192.168.106.12

Database Name*
fake_bes_mac

Authentication
 Windows Authentication
 SQL Server

Authentication
Username
sa

Password
●●●●●●●●

Web Reports Database (optional)

Host*
192.168.106.12

Database Name*
fake_wr_mac

Authentication
 Windows Authentication
 SQL Server

Authentication
Username
sa

Password
●●●●●●●●

Save

Adding a data source

Add a data source to view information about the database on which your compliance data is based.

When you are adding a data source:

- Do not add a datasource that is a DSA copy of an existing datasource to avoid the display of duplicate data.
- If you restrict user access based on computer groups, you might have to create new computer groups or modify existing ones to ensure correct access restrictions for the new datasource.
- If you added new computer properties, ensure that you provide mappings to those properties in the new datasource.
- In SCA, if you have exceptions that are based on computer groups, ensure that those exceptions and groups are set up correctly for the new datasource.
- In Software Usage Analysis (SUA), if you have contracts that are based on computer groups, ensure that those contracts and groups are set up correctly for the new datasource.
- You must run an import after you add a datasource before computers from that datasource are available in reports.

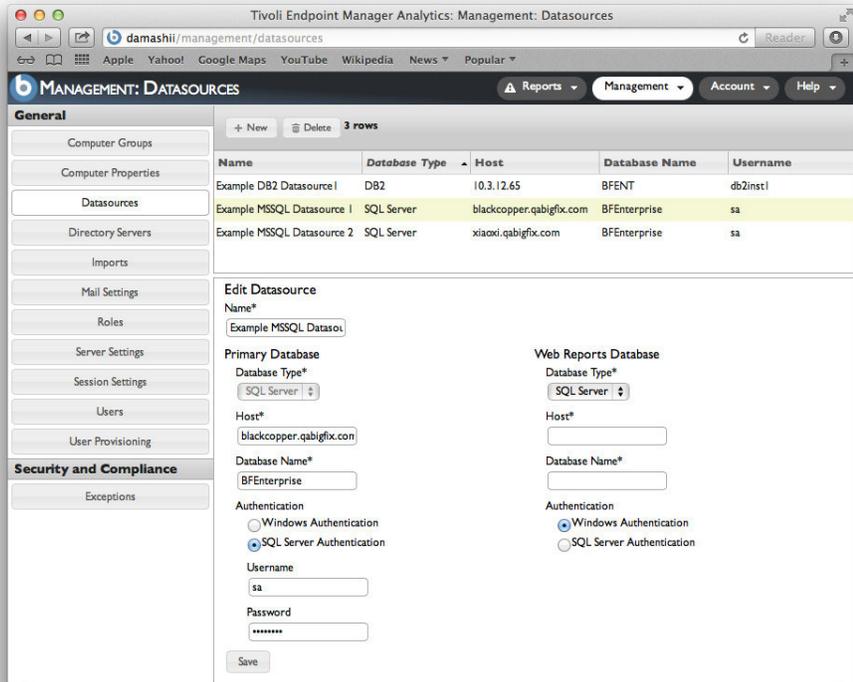
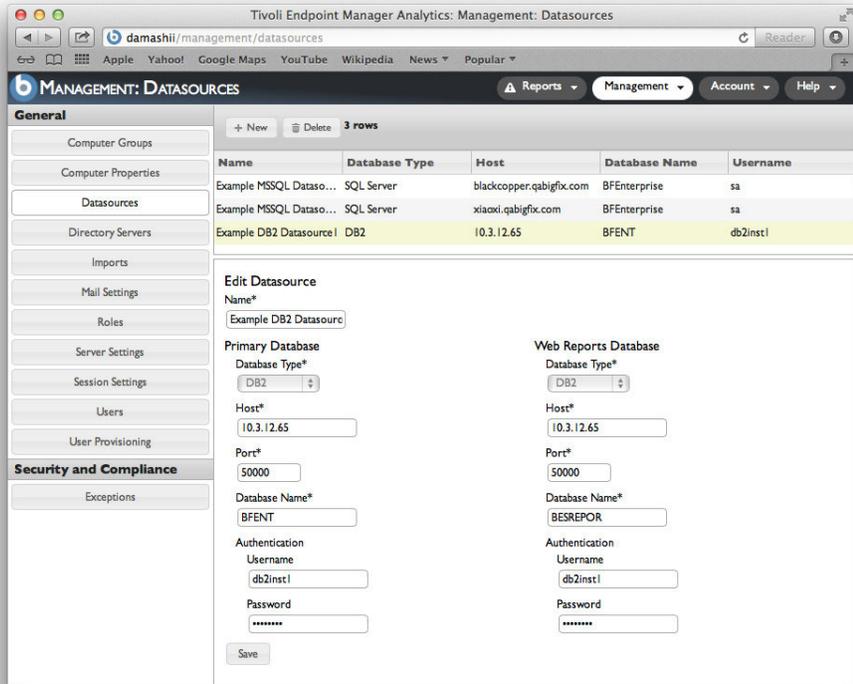
- When you are running an import, all datasources must be online and reachable or the import fails. This ensures that reports do not show incomplete data or misleading inventory or compliance aggregates.
- Regarding Report data, a user with restricted access by computer group sees only the results or computer report data for their assigned computer group. Examples of results or computer report data are Computers, Computer Groups, Check Results, Exception Results, and Vulnerability Results.

All users still see all Checklists, Checks, and Vulnerabilities from all datasources, regardless of Computer Group restrictions. Multi-tenancy supports segmentation of computer data based on computer groups and a user's computer group membership. It does not support segmentation of checklists, checks, and vulnerability checks themselves or of a SUA software catalog.

You must deploy multiple TEMA servers for the following cases:

- If you are not able to see the existence of checklists that are created for other customers
 - You have to apply different software catalogs for different customers,
1. In the upper right corner, click **Management > Data sources**.
 2. In the upper left corner of the horizontal navigation bar, click **New**. A new form opens in the lower pane.
 3. Provide the unique name for the new data source.
 4. Select the database type from the **Database Type** drop-down list.

Option	Description
Database Type	Steps
DB2	<ol style="list-style-type: none"> 1. Specify the host, port, and database name. 2. For server authentication, specify a user name and password.
SQL Server	<ol style="list-style-type: none"> 1. Specify the host and database name. 2. Select the authentication type. 3. For SQL server authentication, specify a user name and password.



5. Click **Create**.

Deleting a data source

1. In the upper right corner, click **Management > Datasources**.
2. In the upper pane, click the data source that you want to delete
3. In the upper left corner of the navigation bar, click **Delete**.

You deleted all the data for computers that belong to this data source.

Imports

Use the Imports interface to schedule a recurring import, disable recurring imports, start a manual import, view current import status, and view logs of previous imports.

Run an immediate import by clicking *Import Now*. To schedule a recurring import, first check the import box at the top of the window and set the desired daily start time. Then click Save to confirm the change.

The screenshot displays the 'Imports' configuration page. On the left is a navigation menu with 'Imports' selected. The main area is divided into three sections: 'Import Settings', 'Import History', and 'Import Log'.

Import Settings: A checkbox labeled 'Import daily at 12:00PM' is checked. A time selector shows '12:00PM' and a dropdown menu shows '(UTC -0700)'. Below are 'Save' and 'Import Now' buttons.

Import History: A table with columns 'Start Time', 'Username', and 'Duration'.

Start Time	Username	Duration
06/08/2012 12:00 PM	Scheduled	0:04:52
06/07/2012 12:00 PM	Scheduled	0:04:41
06/06/2012 12:00 PM	Scheduled	0:04:45
06/05/2012 12:00 PM	Scheduled	0:04:59
06/04/2012 12:00 PM	Scheduled	0:04:50
06/03/2012 12:00 PM	Scheduled	0:04:22
06/02/2012 12:00 PM	Scheduled	0:04:42
06/01/2012 12:00 PM	Scheduled	0:04:57
05/31/2012 12:00 PM	Scheduled	0:05:50
05/30/2012 04:01 PM	bigfix	0:05:42

Import Log: A text area showing log details for a successful import on Fri Jun 08 19:00:09 UTC 2012. The log includes information about the logfile creation, version (1.3.21), and various INFO messages regarding the import process.

Roles

Use the Roles interface to assign new roles to users or edit existing roles. In this version of SCA, the assignable permissions include Edit Computer Groups, Edit Exceptions, and Run Imports.

Use the buttons on the top bar to create new roles or delete existing roles.

TIVOLI ENDPOINT MANAGER Reports Management Account E Help

General

- Computer Groups
- Computer Properties
- Datasources
- Imports
- Mail Settings
- Roles**
- Server Settings
- Users

Security and Compliance

- Exceptions

+ New Delete 3 rows

Name	Permissions
Administrators	Edit Computer Groups, Edit Exceptions, Manage Imports, Edit...
BIGFIX	Edit Computer Groups
Test	Edit Computer Groups, Manage Imports

Edit Role

Name*
Administrators

Permissions

- Edit Computer Groups
- Edit Exceptions
- Manage Imports
- Edit Computer Properties
- Edit Datasources
- Edit Roles
- Edit Users
- Edit Server Configuration

Save

Server Settings

Use the Server Settings interface to configure the HTTP port, SSL, and enable or disable data retention. Any changes to the port or SSL settings require a service restart.

Server Settings

Port* 80

Use SSL

Data Retention

Discard data older than

Days to keep 365

Save

Computer Groups

Computer Properties

Datasources

Imports

Mail Settings

Roles

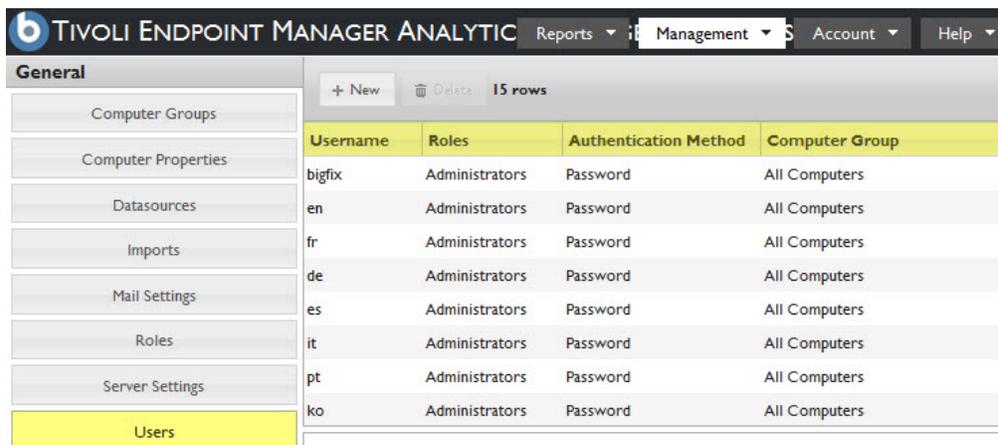
Server Settings

Session Settings

You can change your session settings to specify the session time for a logged in user who is inactive for a certain period and to custom the message on the login page using Markdown text. The default session time out is set to 1 hour. To make changes in your session setting, go to **Management > Session Settings**. Make your changes to the session time out and the message then click **Save**.

Users

From the Users interface, you can create and edit users, assign roles, and assign a set of computer groups to which a user has access. Administrators can edit user passwords, email addresses, and contact information.



Username	Roles	Authentication Method	Computer Group
bigfix	Administrators	Password	All Computers
en	Administrators	Password	All Computers
fr	Administrators	Password	All Computers
de	Administrators	Password	All Computers
es	Administrators	Password	All Computers
it	Administrators	Password	All Computers
pt	Administrators	Password	All Computers
ko	Administrators	Password	All Computers

User Provisioning

Use the User provisioning feature to authenticate users within LDAP groups without creating users individually. See the SCA Setup Guide to learn more about user provisioning and LDAP.

Exceptions

You can use the Exceptions menu to create and edit exceptions for checks, computers, computer groups, and checklists with or without an expiration date. You can also view a list of existing and active exceptions. To edit an exception, click an exception name in the list, and the Edit Exception and Exception History menus display.



Reason	Checklist / Checks	Group / Computers	Expiration Date	Last edit by	Status
DISA Stig XP	Checklist: DISA STIG on Windows...	1 computer	Never	exceptions	Active
Win 7	Checklist: DISA STIG on Windows...	1 computer	Never	bigfix	Active
No passwords needed on Vista	2 checks	1 computer	Never	bigfix	Active

Edit Exception

Reason*

Affected Checks All checks in checklist
 Selected checks

Checklist

Affected Computers All computers in group
 Selected computers

Target Group

Expires 06/11/2013
 Never

Exception History

Action	Action date	Reason	Checklist / Ch...	Group / Comp...	Expiration Date	Last edit by
Create	05/17/2012 01:47...	add exception	1 check	Group: All Com...	Never	bigfix
Edit	05/18/2012 03:46...	change to see his...	1 check	Group: All Com...	Never	tw

Account Preferences

Use the Account Preferences interface to change passwords, contact information, or API tokens. Click the *Account* drop-down menu from the top of the window.

TIVOLI ENDPOINT MANAGER ANALYTICS Reports Management Account Help

bigfix

Edit User

Username

Language

Roles

Computer Group

Password

API Token

Email Address

Contact Info

Chapter 4. Disaster Recovery for Security and Compliance Analytics

Use the standard cold standby method of creating a backup and restoring the system in your disaster recovery plan for Security and Compliance Analytics.

Similar to the IBM Endpoint Manager disaster plan, Security and Compliance Analysis uses a standard backup/restore method that is called the Cold Standby method. This method does periodic backups of the application server and database files, usually done nightly. If there is a problem, the database and application server files can be restored to the IBM Endpoint Manager Application Server computer or another computer. The system is also restored.

Table 2. Pros and cons of using the cold standby method

Pros	Cons
<ul style="list-style-type: none">• Simple and allows for multiple backups over time.• Does not require any additional hardware. Hot or cold standby computer is optional.	<ul style="list-style-type: none">• All information since the last backup is lost in the event of a failure.• Restoring the system from the backup might have significant downtime.

The disaster recovery plan covers steps for the following procedures:

1. Backup procedure
2. Recovery procedure
3. Recovery verification procedure

Creating a backup of the application server

Create backups of the files and folders that the application server uses.

Establish a maintenance plan for nightly backups for the TEM_Analytics databases using SQL Server Enterprise Manager. Multiple backup copies give greater recovery flexibility. Consider backing up to a remote system to allow for higher fault tolerance.

For recovery purposes, create backups of the following files and folders that the application server uses:

- [TEMA Application folder]\config -- Configuration (HTTPS, Port number, database connection information, and others)
- [TEMA Application folder]\log -- Archived Import, error, and access logs

Recovering the backup application server

Restore the backup of your Security and Compliance Analytics application server.

1. Install the same version of SQL Server that was previously used in either a previous application server computer or a new computer.

Note: If you used Mixed Mode Authentication on the previous application server, you must enable it for your new SQL installation.

2. Restore the TEM_Analytics databases from backup.

3. Install the application server. Use the same version of the application installation binary as was previously used.
4. At the end of installation, skip the launch web configuration step. Instead, go to NT Services Manager and stop 'Tivoli Endpoint Manager Analytics' service.
5. Restore/Replace the backed up configuration and log files and folders. Create the directory structure as needed.
6. Go to **NT Services Manager** and start the **Tivoli Endpoint Manager Analytics** service.

Ensure that the new application server computer can access the following datasources: BFEnterprise and BESReporting. For NT Auth to access the TEM_Analytics and BFEnterprise databases, ensure that the service user has the necessary DB/File access rights).

Verifying the success of the recovery procedure

Check the historical log and run an import action to verify that the TEMA Application is successfully restored.

Do the following steps to ensure that the TEMA Application Server is successfully restored.

1. Go to TEMA web interface and login with Administrator rights to verify that the login works properly.
2. Go to **Management > Import** and verify the historical log shown in the page frame.

Appendix A. Example Reports

View examples of the various SCA reports.

The following table lists examples of reports that you can generate in SCA.

Table 3. Examples of SCA reports.

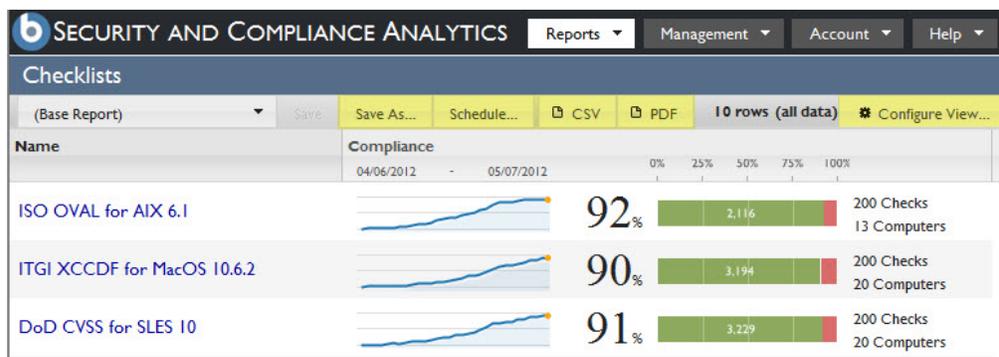
Name of Report	Location	Field or Graph Names	Other functions	Export Format
Checklist List	From the console, click Reports > Checklists	Name, Compliance	Save As and Schedule	.CSV and .PDF
Checklist Overview	From the console, click Reports > Checklists . Click any of the checklists that are displayed.	Compliance History, Computers by Compliance Quartile, Check Results History	Save As, Schedule, and Configure View.	.PDF
Checks List	From the console, click Reports > Checks	Name, Desired Values, Compliance	Save As, Schedule, and Configure View.	.CSV and .PDF,
Check Overview	From the console, click Reports > Checks	Compliance History, Check Results History, overall compliance percentage	Save As, Schedule, and Configure View.	.PDF
Computers List	From the console, click Reports > Computers	Computer Name, Last Seen, Vulnerability history, and Overall compliance	Save As, Schedule, and Configure View.	.CSV and PDF
Computer Overview	From the console, click Reports > Overview	Compliance history, Computers by Compliance Quartile, and Check results history	Save As, Schedule, and Configure View.	.PDF
Computer Groups List	From the console, click Reports > Computer Groups	Name, Children (subgroups), Vulnerability history, and Compliance in a list format	Save As, Schedule, and Configure View.	.CSV and .PDF

Table 3. Examples of SCA reports (continued).

Name of Report	Location	Field or Graph Names	Other functions	Export Format
Computer Group Overview	From the console, click Reports > Computer Groups . Click any computer group in the list.	Compliance history, computers by compliance quartile, check results history, and vulnerability history	Save As, Schedule, and Configure View.	.PDF
Check Results List	From the console, click Reports > Check Results	Checklist, check name, computer name, the date results were last seen, and level of compliance	Save As, Schedule, and Configure View.	.CSV and .PDF
Vulnerabilities	From the console, click Reports > Vulnerabilities or Reports > Vulnerability Results	CVE ID and Vulnerability History	Save As, Schedule, and Configure View.	.CSV and .PDF

Checklist List Report

To access the Checklist List Report, click the Reports drop-down menu at the top of the console and select Checklists. This report displays data through name and compliance percentage fields. Use the links across the top to Save As, Schedule, export to .csv or .pdf, and Configure View.



Checklist Overview Report

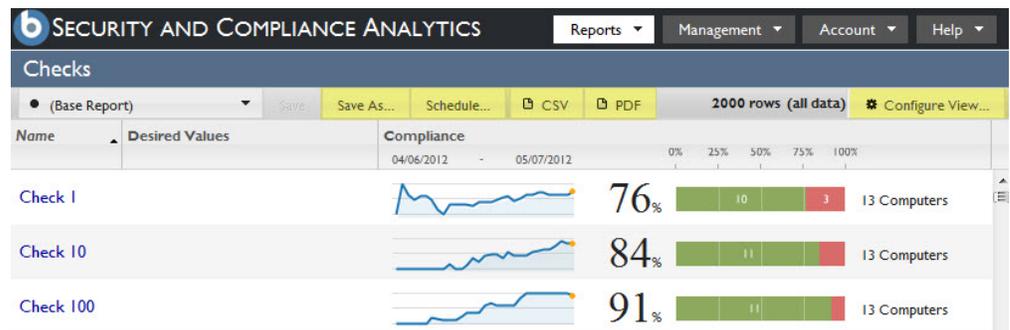
To access the Checklists Overview Report, click the Reports dropdown menu at the top of the console and select Checklists. The Checklist Overview Report is a drilldown of the Checklists List report. To access this view, click any checklist displayed. The Overview presents a graphic representation of compliance history, computers by compliance quartile, and check results history with an overall

compliance percentage shown in the top left corner of the console. Use the links across the top to Save As, Schedule, export to .pdf, and Configure View.



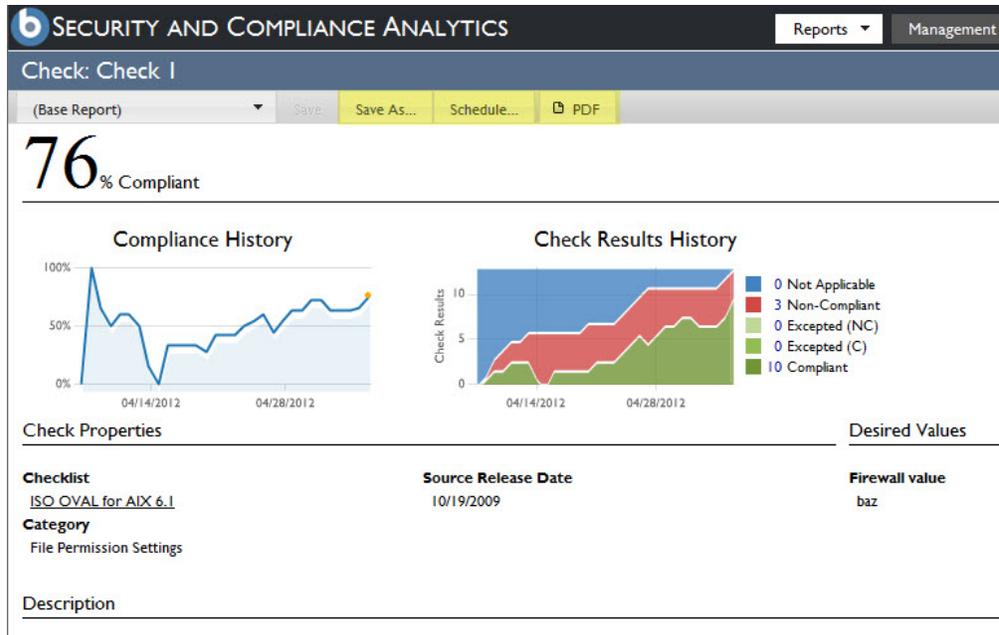
Checks List Report

To access the Checks List Report, click the Reports dropdown menu at the top of the console and select Checks. The Checks List report includes fields name, desired values, and compliance. Use the links across the top to Save As, Schedule, export to .csv and .pdf, and Configure View.



Check Overview Report

To access the Checks "Overview" Report, click the Reports dropdown menu at the top of the console and select Checks. This report is a drilldown of the Checks "List" report. To access this view, click any check in the list. The Checks Overview report presents a graphic representation of Compliance and Check Results history with an overall compliance percentage shown in the top left corner of the console. Use the links across the top to Save As, Schedule, export to .pdf, and Configure View.



Computers List Report

To access the Computers List Report, click the Reports dropdown menu at the top of the console and select Computers. This report includes fields for computer name, last seen, vulnerability history, and overall compliance. Use the links across the top to Save As, Schedule, export to .csv or .pdf, and Configure View.

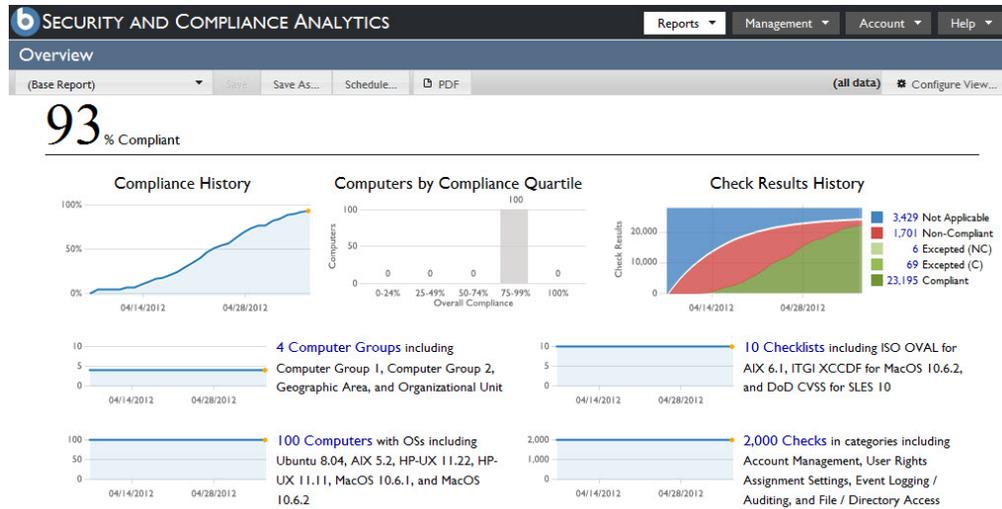
Computers

(Base Report) Save Save As... Schedule... CSV PDF 11 rows (all data) Configure View...

Computer Name	Last Seen	Vulnerability History	Compliance
		05/18/2012 - 06/13/2012	05/18/2012 - 06/13/2012
VSXPSP232-02	13 days ago		373 81% 910 17 Checklists 2,434 Checks
VS2K8STD64-02	13 days ago		38 91% 763 15 Checklists 1,967 Checks
VSXPPRO64-02	13 days ago		98 80% 406 15 Checklists 2,179 Checks

Computer Overview Report

To access the Computer Overview Report, click the Reports dropdown menu at the top of the console and select Overview. This report includes a graphic representation of your compliance history, check results history, and vulnerability. Use the links across the top to Save As, Schedule, export to .pdf, and Configure View.



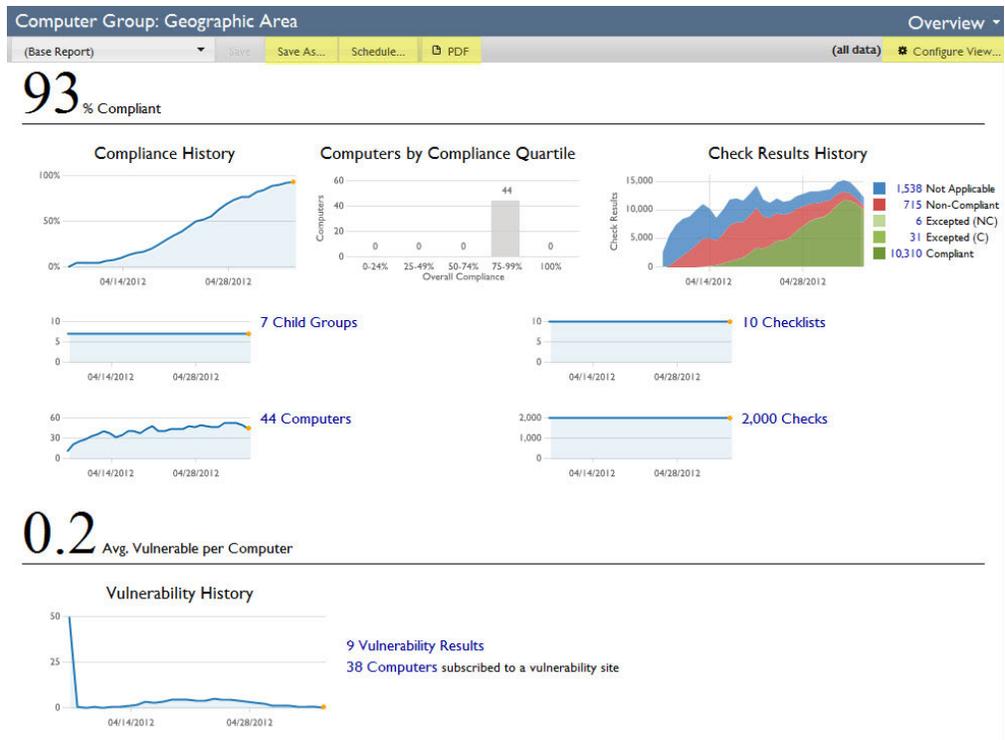
Computer Groups List Report

To access the Computer Groups List Report, click the Reports dropdown menu at the top of the console and select Computer Groups. This report includes fields for name, sub-groups (children), vulnerability history, and compliance in a list format. Use the links across the top to Save As, Schedule, Configure View, or to export the report as .csv or .pdf.

Name	Children...	Vulnerability History	Compliance
		04/06/2012 - 05/07/2012	04/06/2012 - 05/07/2012
Geographic Area	7		93% 10,310 44 Computers
Organizational Unit	6		93% 10,786 48 Computers
Computer Group 1	0		93% 23,195 100 Computers
Computer Group 2	0		93% 23,195 100 Computers

Computer Group Overview Report

To access the Computer Group Overview Report, click the Reports dropdown menu at the top of the console and select Computer Groups. This report is a drilldown of the Computer Groups List Report, and can be accessed by clicking any computer group in the list on the initial screen. This graphic representation of computer groups shows compliance history, computers by compliance quartile, check results history, and vulnerability history. Use the links across the top to Save As, Schedule, export to .pdf, or Configure View.



Check Results List Report

To access the Check Results List Report, click the Reports dropdown menu at the top of the console and select Check Results. This report includes fields for checklist, check name, computer name, the date results were last seen, and level of compliance. Use the links across the top to Save As, Schedule, Configure View, or to export the report as .csv or .pdf.

SECURITY AND COMPLIANCE ANALYTICS Reports Management Account Help

Check Results

(Base Report) Save Save As... Schedule... CSV PDF 28400 rows (all data) Configure View...

Checklist	Check Name	Computer Name	Last Seen	Compliance
ISO OVAL for AIX 6.1	Check 1	Computer 10	about a m...	Compliant
ISO OVAL for AIX 6.1	Check 1	Computer 17	about a m...	Compliant
ISO OVAL for AIX 6.1	Check 1	Computer 24	about a m...	Compliant
ISO OVAL for AIX 6.1	Check 1	Computer 35	about a m...	Compliant

Vulnerabilities Report

To access the Vulnerabilities Report, click the Reports dropdown menu at the top of the console and select either Vulnerabilities or Vulnerability Results. The Vulnerabilities Report organizes data through name, CVE ID and Vulnerability History fields.

By default, the Vulnerabilities list shows vulnerability checks on your deployment to which at least one or more computers are vulnerable. To modify how the vulnerabilities in your deployment presents, click the Configure View button at the top for the console and use the Filter submenu. Use the links across the top to Save As, Schedule, Configure View, or to export the report as .csv or .pdf.

SECURITY AND COMPLIANCE ANALYTICS							
Vulnerabilities		Reports	Management	Account	Help		
● (Base Report)		Save	Save As...	Schedule...	CSV PDF	26 rows (filtered)	Configure View...
Name	CVE ID	Vulnerability History					
Active Directory Certificate Services Vulnerability --44--	CVE-0000-0034	04/06/2012 - 05/07/2012			1		
Active Directory Certificate Services Vulnerability --59--	CVE-0000-0049				1		
Apple QuickTime FLC Encoded Movie Handling Buffer Overflow...	CVE-0000-0011				2		
COM+ Memory Structures Process Permits Remote Code Execu...	CVE-0000-0006				2		

To access the Vulnerability Overview report, click any name in the Vulnerabilities List report. This report presents a graphic representation of vulnerability history, as well as vulnerability properties, CVSS score metrics, and a description of the vulnerability.

Vulnerability: Active Directory Certificate Services Vulnerability --44--

(Base Report) Save Save As... Schedule... PDF

1

Vulnerable Computers

Vulnerability History

Vulnerability Properties

Source ID

CVE ID
CVE-0000-0034

OVAL Status
accepted

CVSS Score Metrics

Access Vector	network
Access Complexity	high
Authentication	single
Confidentiality Impact	none
Integrity Impact	none
Availability Impact	complete
CVSS Base Score	4.9

Description

Software is mildly vulnerable.

Appendix B. Support

For more information about this product, see the following resources:

- http://pic.dhe.ibm.com/infocenter/tivihelp/v26r1/topic/com.ibm.tem.doc_9.1/welcome/welcome.html
- IBM Endpoint Manager Support site
- IBM Endpoint Manager wiki
- Knowledge Base
- Forums and Communities

Notices

This information was developed for products and services that are offered in the USA.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

*IBM Director of Licensing
IBM Corporation
North Castle Drive, MD-NC119
Armonk, NY 10504-1785
United States of America*

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

*Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan*

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those

websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

*IBM Corporation
2Z4A/101
11400 Burnet Road
Austin, TX 78758 U.S.A.*

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

Portions of this code are derived from IBM Corp. Sample Programs.

© Copyright IBM Corp. _enter the year or years_. All rights reserved.

Programming interface information

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at www.ibm.com/legal/copytrade.shtml.

Adobe, Acrobat, PostScript and all Adobe-based trademarks are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, other countries, or both.

IT Infrastructure Library is a registered trademark of the Central Computer and Telecommunications Agency which is now part of the Office of Government Commerce.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

ITIL is a registered trademark, and a registered community trademark of The Minister for the Cabinet Office, and is registered in the U.S. Patent and Trademark Office.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Java™ and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.

Linear Tape-Open, LTO, the LTO Logo, Ultrium, and the Ultrium logo are trademarks of HP, IBM Corp. and Quantum in the U.S. and other countries.

Terms and conditions for product documentation

Permissions for the use of these publications are granted subject to the following terms and conditions.

Applicability

These terms and conditions are in addition to any terms of use for the IBM website.

Personal use

You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative work of these publications, or any portion thereof, without the express consent of IBM.

Commercial use

You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of IBM.

Rights

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

IBM reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by IBM, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

IBM MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.



Printed in USA