IBM Security Identity Manager
Version 7.0.2

Troubleshooting Guide

Contents

Tables

Chapter 1. Troubleshooting and support for IBM Security Identity Manager

To isolate and resolve problems with your IBM products, you can use the troubleshooting and support information. This information contains instructions for using the problem-determination resources that are provided with your IBM products.

This section includes the following topics.

- How to identify the source of a problem.
- How to gather diagnostic information.
- Where to get fixes.
- Which knowledge bases to search, so you can resolve problems.
- What diagnostic information the service technicians need to address a problem when you contact IBM Support.

Techniques for troubleshooting problems

Troubleshooting is a systematic approach to solving a problem. The goal of troubleshooting is to determine why something does not work as expected and how to resolve the problem. Certain common techniques can help with the task of troubleshooting.

The first step in the troubleshooting process is to describe the problem completely. Problem descriptions help you and the IBM technical-support representative know where to start to find the cause of the problem. This step includes asking yourself basic questions:

- What are the symptoms of the problem?
- Where does the problem occur?
- When does the problem occur?
- Under which conditions does the problem occur?
- Can the problem be reproduced?

The answers to these questions typically lead to a good description of the problem, which can then lead you to a problem resolution.

What are the symptoms of the problem?

When starting to describe a problem, the most obvious question is "What is the problem?" This question might seem straightforward; however, you can break it down into several more-focused questions that create a more descriptive picture of the problem. These questions can include:

- Who, or what, is reporting the problem?
- What are the error codes and messages?
- How does the system fail? For example, is it a loop, hang, crash, performance degradation, or incorrect result?

Where does the problem occur?

Determining where the problem originates is not always easy, but it is one of the most important steps in resolving a problem. Many layers of technology can exist between the reporting and failing components. Networks, disks, and drivers are only a few of the components to consider when you are investigating problems.

The following questions help you to focus on where the problem occurs to isolate the problem layer:

- Is the problem specific to one platform or operating system, or is it common across multiple platforms or operating systems?
- Is the current environment and configuration supported?
- Do all users have the problem?
- (For multisite installations.) Do all sites have the problem?

If one layer reports the problem, the problem does not necessarily originate in that layer. Part of identifying where a problem originates is understanding the environment in which it exists. Take some time to completely describe the problem environment, including the operating system and version, all corresponding software and versions, and hardware information. Confirm that you are running in an environment that is a supported configuration; many problems can be traced back to incompatible levels of software that are not intended to run together or have not been fully tested together.

When does the problem occur?

Develop a detailed timeline of events leading up to a failure, especially for those cases that are one-time occurrences. You can most easily develop a timeline by working backward: Start at the time an error was reported (as precisely as possible, even down to the millisecond), and work backward through the available logs and information. Typically, you need to look only as far as the first suspicious event that you find in a diagnostic log.

To develop a detailed timeline of events, answer these questions:

- Does the problem happen only at a certain time of day or night?
- How often does the problem happen?
- What sequence of events leads up to the time that the problem is reported?
- Does the problem happen after an environment change, such as upgrading or installing software or hardware?

Responding to these types of questions can give you a frame of reference in which to investigate the problem.

Under which conditions does the problem occur?

Knowing which systems and applications are running at the time that a problem occurs is an important part of troubleshooting. These questions about your environment can help you to identify the root cause of the problem:

- Does the problem always occur when the same task is being performed?
- Does a certain sequence of events need to happen for the problem to occur?
- Do any other applications fail at the same time?

Answering these types of questions can help you explain the environment in which the problem occurs and correlate any dependencies. Remember that just because multiple problems might have occurred around the same time, the problems are not necessarily related.

Can the problem be reproduced?

From a troubleshooting standpoint, the ideal problem is one that can be reproduced. Typically, when a problem can be reproduced you have a larger set of tools or procedures at your disposal to help you investigate. Consequently, problems that you can reproduce are often easier to debug and solve.

However, problems that you can reproduce can have a disadvantage: If the problem is of significant business impact, you do not want it to recur. If possible, re-create the problem in a test or development environment, which typically offers you more flexibility and control during your investigation.

- Can the problem be re-created on a test system?
- Are multiple users or applications encountering the same type of problem?

- Can the problem be re-created by running a single command, a set of commands, or a particular application?

Searching knowledge bases

You can often find solutions to problems by searching IBM knowledge bases. You can optimize your results by using available resources, support tools, and search methods.

About this task

You can find useful information by searching the IBM Security Identity Manager documentation. However, sometimes you need to look beyond the documentation to answer your questions or resolve problems.

Procedure

To search knowledge bases for information that you need, use one or more of the following approaches:

- Search for content by using the IBM Support Assistant (ISA).

  ISA is a no-charge software serviceability workbench that helps you answer questions and resolve problems with IBM software products. You can find instructions for downloading and installing ISA on the ISA website.
- Find the content that you need by using the IBM Support Portal.

  The IBM Support Portal is a unified, centralized view of all technical support tools and information for all IBM systems, software, and services. The IBM Support Portal lets you access the IBM electronic support portfolio from one place. You can tailor the pages to focus on the information and resources that you need for problem prevention and faster problem resolution. Familiarize yourself with the IBM Support Portal by viewing the demo videos about this tool. These videos introduce you to the IBM Support Portal, explore troubleshooting and other resources, and demonstrate how you can tailor the page by moving, adding, and deleting portlets.
- Search for content about IBM Security Identity Manager by using one of the following additional technical resources:
  - IBM Security Identity Manager Support website.
  - IBM support communities (forums and newsgroups).
- Search for content by using the IBM masthead search.

  You can use the IBM masthead search by typing your search string into the **Search** field at the top of any ibm.com® page.
- Search for content by using any external search engine, such as Google, Yahoo, or Bing.

  If you use an external search engine, your results are more likely to include information that is outside the ibm.com domain. However, sometimes you can find useful problem-solving information about IBM products in newsgroups, forums, and blogs that are not on ibm.com.

  Tip: Include "IBM" and the name of the product in your search if you are looking for information about an IBM product.

Getting fixes

A product fix might be available to resolve your problem.

About this task

Procedure

To find and install fixes:

1. Obtain the tools required to get the fix.
2. Determine which fix you need.

3. Download the fix. Open the download document and follow the link in the "Download package" section.
4. Apply the fix. Follow the instructions in the "Installation Instructions" section of the download document.
5. Subscribe to receive weekly email notifications about fixes and other IBM Support information.

Getting fixes from Fix Central

You can use Fix Central to find the fixes that are provided by IBM Support for various products, including IBM Security Identity Manager. With Fix Central, you can search, select, order, and download fixes for your system with a choice of delivery options. A IBM Security Identity Manager product fix might be available to resolve your problem.

About this task

Procedure

To find and install fixes:

1. Obtain the tools that are required to get the fix. Download them from Fix Central.

   This site provides download, installation, and configuration instructions.
2. Select IBM Security Identity Manager as the product, and select one or more check boxes that are relevant to the problem that you want to resolve.

   For details, see: http://www.ibm.com/systems/support/fixes/en/fixcentral/help/faq_sw.html.
3. Identify and select the fix that is required.
4. Download the fix.
   a) Open the download document and follow the link in the "Download Package" section.
   b) When you download the file, ensure that the name of the maintenance file is not changed.

      This change might be intentional, or it might be an inadvertent change that is caused by certain web browsers or download utilities.
5. Apply the fix.

   Follow the instructions in the "Installation Instructions" section of the download document.
6. Optional: Subscribe to receive weekly email notifications about fixes and other IBM Support updates. See “Subscribing to Support updates” on page 6.

Contacting IBM Support

IBM Support provides assistance with product defects, answers FAQs, and helps users resolve problems with the product.

Before you begin

After trying to find your answer or solution by using other self-help options such as technotes, you can contact IBM Support. Before contacting IBM Support, your company or organization must have an active IBM *maintenance contract name*, and you must be authorized to submit problems to IBM. For information about the types of available support, see the Support portfolio topic in the "*Software Support Handbook*".

For information about the types of available support, see the Support portfolio topic in the *Software Support Handbook*.

Procedure

To contact IBM Support about a problem:

1. Define the problem, gather background information, and determine the severity of the problem.

   See the Contacting IBM Support topic in the *Software Support Handbook*. For more information, see the Getting IBM support topic in the *Software Support Handbook*.

2. Gather diagnostic information.
3. Submit the problem to IBM Support in one of the following ways:
   - Using IBM Support Assistant (ISA):
     a. Download and install the ISA tool from the ISA website. See www.ibm.com/software/support/isa/.
     b. Open ISA.
     c. Click **Collection and Send Data**.
     d. Click the **Service Requests** tab.
     e. Click **Open a New Service Request**.

     Using ISA in this way can expedite the analysis and reduce the time to resolution.
   - Online through the IBM Support Portal: You can open, update, and view all of your service requests from the **Service Request** portlet on the **Service Request** page.
   - By telephone for critical, system down, or severity 1 issues: For the telephone number to call in your region, see the Directory of worldwide contacts web page. You can also see the Contacts page in the *Software Support Handbook*.

Results

If the problem that you submit is for a software defect or for missing or inaccurate documentation, IBM Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Support provides a workaround that you can implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the IBM Support website daily, so that other users who experience the same problem can benefit from the same resolution. See "Exchanging information with IBM" on page 5.

Exchanging information with IBM

To diagnose or identify a problem, you might need to provide IBM Support with data and information from your system. In other cases, IBM Support might provide you with tools or utilities to use for problem determination.

Sending information to IBM Support

To reduce the time that is required to resolve your problem, you can send trace and diagnostic information to IBM Support.

Procedure

To submit diagnostic information to IBM Support:

1. Open a problem management record (PMR).
2. Collect the diagnostic data that you need. Diagnostic data helps reduce the time that it takes to resolve your PMR. You can collect the diagnostic data manually or automatically:
   - Collect the data manually.
   - Collect the data automatically.
3. Compress the files by using the `.zip` or `.tar` file format.
4. Transfer the files to IBM.

   You can use one of the following methods to transfer the files to IBM:
   - IBM Support Assistant
   - The Service Request tool
   - Standard data upload methods: FTP, HTTP
   - Secure data upload methods: FTPS, SFTP, HTTPS
   - Email

All of these data exchange methods are explained on the IBM Support website.

Receiving information from IBM Support

Occasionally an IBM technical-support representative might ask you to download diagnostic tools or other files. You can use FTP to download these files.

Before you begin

Ensure that your IBM technical-support representative provided you with the preferred server to use for downloading the files and the exact directory and file names to access.

Procedure

To download files from IBM Support:

1. Use FTP to connect to the site that your IBM technical-support representative provided and log in as `anonymous`. Use your email address as the password.
2. Change to the appropriate directory:
   a) Change to the `/fromibm` directory.

   ```
   cd fromibm
   ```

   b) Change to the directory that your IBM technical-support representative provided.

   ```
   cd nameofdirectory
   ```

3. Enable binary mode for your session.

   ```
   binary
   ```

4. Use the **`get`** command to download the file that your IBM technical-support representative specified.

   ```
   get filename.extension
   ```

5. End your FTP session.

   ```
   quit
   ```

Subscribing to Support updates

To stay informed of important information about the IBM products that you use, you can subscribe to updates.

About this task

By subscribing to receive updates about IBM Security Identity Manager, you can receive important technical information and updates for specific IBM Support tools and resources. You can subscribe to updates by using one of two approaches:

RSS feeds

For information about RSS, including steps for getting started and a list of RSS-enabled IBM web pages, visit the IBM Software Support RSS feeds site.

My Notifications

With **My Notifications**, you can subscribe to Support updates for any IBM product. **My Notifications** replaces **My Support**, which is a similar tool that you might have used in the past. With **My Notifications**, you can specify that you want to receive daily or weekly email announcements. You can specify what type of information you want to receive (such as publications, hints and tips, product flashes (also known as alerts), downloads, and drivers). **My Notifications** enables you to customize and categorize the products about which you want to be informed and the delivery methods that best suit your needs.

Procedure

To subscribe to Support updates:

1. Subscribe to My Notifications by going to the IBM Support Portal and click **My Notifications** in the **Notifications** portlet.
2. Sign in using your IBM ID and password, and click **Submit**.
3. Identify what and how you want to receive updates.
   a) Click the **Subscribe** tab.
   b) Select the appropriate software brand or type of hardware.
   c) Select one or more products by name and click **Continue**.
   d) Select your preferences for how to receive updates, whether by email, online in a designated folder, or as an RSS or Atom feed.
   e) Select the types of documentation updates that you want to receive, for example, new information about product downloads and discussion group comments.
   f) Click **Submit**.

Results

Until you modify your **RSS feeds** and **My Notifications** preferences, you receive notifications of updates that you have requested. You can modify your preferences when needed (for example, if you stop using one product and begin using another product).

Related information

IBM Software Support RSS feeds

Subscribe to My Notifications support content updates

My Notifications for IBM technical support

My Notifications for IBM technical support overview

Chapter 2. Introduction to troubleshooting

Troubleshooting is a systematic approach to solving a problem. The goal of troubleshooting is to determine why something does not work as expected and explain how to resolve the problem. Problem determination is the process of determining why a product does not function as it is designed to function.

The following information is an introduction to the general troubleshooting process. It provides troubleshooting guidelines for the problems that you might experience with IBM Security Identity Manager:

- Resources and techniques for identifying and resolving problems with IBM Security Identity Manager deployments.
- Information about how to resolve errors that are caused by improper setup, installation, configuration, and operation procedures.
- Steps and tools for gathering detailed trace information for determining the source of problems that cannot be resolved through routine investigation.

To resolve a problem with IBM Security Identity Manager, distinguish between the expected product response and the actual response.

Most problems are preceded by symptoms, such as:

- An error message that is logged during installation
- An unanticipated error message that is displayed in the console
- Slow response intervals during normal processing

When you see a symptom, you might take one or both of the following actions to isolate the symptom and resolve the problem:

- Interpret a message about the symptom and make a minor adjustment
- Use special tools to isolate the symptom

Minimizing error conditions

There can be some conditions that can cause errors and unanticipated results.

The following conditions can cause errors and unanticipated results:

- Product prerequisites that are not installed or used
- Installation and configuration steps that are not followed
- Product usage guidelines and procedures that are not followed

These errors and unanticipated results occur primarily when the product is installed, configured, and used for the first time. As you become familiar with the features and behavior of the product, such errors can be reduced. The following sections make reference to information in the product library that help minimize errors and ensure successful installation, configuration, and operation of the software.

Minimizing installation and configuration errors

This section summarizes steps you can take before installing the product that minimize errors.

Checking product requirements

Ensure that you meet hardware and software requirements before you begin the installation prevents many errors. The *IBM Security Identity Manager documentation* lists the requirements.

Confirm the following information before you begin the installation:

- Ensure that the system meets the minimum hardware requirements.

- Consider a system that meets the higher hardware requirements when using the product to manage thousands of users. See the *Performance Tuning Guide*.
- Review the **Before you begin** section in the *Installation and Configuration Guide*. The guide provides tips that can help you avoid problems during the installation and configuration process.
- Minimize product operation errors. For more information, see "Minimizing product operation errors" on page 10.

Checking requirements when installing IBM Security Identity Manager Server and one or more middleware products

You must meet hardware and software requirements for IBM Security Identity Manager Server and associated middleware products to prevent errors. The *Security Identity Manager documentation* lists the requirements.

Before you install IBM Security Identity Manager Server and one or more required middleware products:

- Find the following information in the product documentation:
  - Product and prerequisite software requirements. Some required fix packs are in the IBM Security Identity Manager Server installation package.
  - Product limitations and workarounds.
  - Latest information about known problems.
  - Changes to information in the product library.
- Review the *Installation and Configuration Guide*. The guide provides tips that can help you avoid problems during the installation and configuration process.

Errors can occur for the following reasons:

- User error in specifying values during the installation and configuration process.
- Preinstalled middleware might not be configured for IBM Security Identity Manager Server.
- Existing settings might conflict with Security Identity Manager requirements. Settings include items such as administrator IDs and port values.

Minimizing product operation errors

Preventing product operation errors contributes to a successful and more efficient installation.

To prevent product operation errors, use the following resources:

- Review the *IBM Security Identity Manager documentation* that lists the supported components.
- Review the "Troubleshooting" topics that describe the known problems for these components:
  - Application server, such as the WebSphere® Application Server
  - IBM Security Identity Manager Server
  - Database server
  - Directory server and directory integrator, such as the IBM Security Directory Integrator server
  - Adapters
- See the online user assistance for field descriptions, concepts, and task-related questions about user interface.

  The documentation provides helpful information about the following tasks:
  - Activity administration
  - Login administration
  - Organization administration
  - Password administration
  - Policy administration
  - Report administration

- Request administration
- Role administration
- Security administration
- Services administration
- User administration
- Workflow management

Troubleshooting installation problems

This section describes basic steps for troubleshooting the various stages of installation and configuration.

Installation errors

Use the installation package to selectively install the IBM Security Identity Manager Server and the required middleware. You also can use it to install the fix packs, which upgrade the associated product to the required software level.

To install one or more products selectively, you must run the installation program for each product you are installing.

IBM Security Identity Manager documentation provides websites for accessing the libraries of associated products. For more information about any failures with those products, see the installation, configuration, and troubleshooting guides that are associated with them.

Deployment and configuration errors

This section describes how to respond to errors that occur during installation.

Do the following actions to respond to errors that occur during installation.

- Read the message text to determine the source of the problem. Depending on the type of error, the error message might be posted in the installation program window or in a command window. If the error is severe, detailed information is entered in a log file. See Logs for information about the logs created during installation.
- Correct the cause of any errors described in the error message information and try the installation again. Installation errors are also described in the *IBM Security Identity Manager Server Installation and Configuration Guide*.
- If you cannot resolve all the errors, see Chapter 1, “Troubleshooting and support for IBM Security Identity Manager,” on page 1 for instructions on obtaining help.

Database errors

You must create a database, such as example, DB2®, before you start the Security Identity Manager installation program.

Database installation and configuration processing messages are logged in the database log file that is listed in Table 1 on page 13.

For more information, see *IBM Security Identity Manager Server Installation Guide*.

Directory server errors

A directory server, for example, IBM Security Directory Server, stores current information that is used by IBM Security Identity Manager to manage identities. IBM Security Directory Server must be installed and operational before the Security Identity Manager schema can be set up.

Directory server installation and configuration processing information is logged in the directory server log file that is listed in Table 1 on page 13.

For more information, see Installing.

Troubleshooting operational problems

Information about the various components that process requests and operations is in the log files for the IBM Security Identity Manager Server.

You can use the information in the various logs to determine how a request was handled. In addition, if backend processing occurs in the database or directory server that is related to the problem, the logs associated with these servers can also contain important diagnostic information. Messages are logged by the IBM Security Identity Manager Server components while handling a task. The Security Identity Manager messages include the **CTGIM** prefix. For more information about messages, see the *IBM Security Identity Manager Messages Guide*.

For information about the various log files and available tools for diagnosing Security Identity Manager problems, see Chapter 3, “Diagnostic tools,” on page 13.

Chapter 3. Diagnostic tools

This chapter describes the diagnostic tools that capture and record details about how the program operates. The records help locate the product or component from which an error originates.

Logs

IBM Security Identity Manager logs system events during specific transactions. Log files contain levels of information about the product processes. Log files also include information about other software that is used to complete a task. Use the information in log files to facilitate isolating and debugging system problems.

Security Identity Manager uses the IBM Logging Toolkit for Java™ or `JLog` libraries for message logging and trace facilities. `JLog` is a set of Java packages for incorporating message logging in Java applications. `JLog` can extend the logging functions to suit your needs. You can also use `JLog` to set logging configuration by using the `enRoleLogging.properties` file instead of programming it. You can change the logging configuration without stopping Security Identity Manager.

Installation and initial configuration logs

This section describes IBM Security Identity Manager Server installation and initial configuration logs.

Table 1 on page 13 contains a list of the log files that are created during the installation and configuration of the IBM Security Identity Manager Server and the prerequisite products.

Log files are created for the following tasks:

- Running the product installation program.
- Installing the Security Identity Manager uninstallation program.
- Installing required middleware products:
  - A directory server, such as IBM Security Directory Server
  - A database, such as DB2 Universal Database
- Running the middleware configuration utility.
- Installing Security Identity Manager, which also includes:
  - IBM Security Identity Manager Server
  - Security Identity Manager IBM Security Directory Server-based *posix* adapter profiles
  - Database configuration
  - Directory server configuration

Installation Log files are available under **Manage >** > **System Settings** > **Log Retrieval and Configuration** or under Manage > System Settings > Support Files. For more information, see the following topics:

- Managing the support files
- Configuring logs

Table 1. Installation log file names and directories

File names	Description and location
`log.txt`	Installation log file for IBM Security Identity Manager.

Table 1. Installation log file names and directories (continued)	
File names	**Description and location**
• `dbConfig.stdout` • `ldapConfig.stdout` • `runConfig.stdout`	Install log files for Security Identity Manager.
• `trace.log` • `msg.log`	The Tivoli® Common Directory is the central location for all serviceability-related files, such as log files and first-failure capture data. Trace or message log files for Security Identity Manager.

IBM Security Identity Manager operational logs

Operational log files contain information about processing activities. These activities are associated with the communication between the IBM Security Identity Manager Server and other applications.

The following section describes:

- Message, security, and trace logs. Use these logs to troubleshoot errors that occur during Security Identity Manager operations.
- Logging options. You can set logging options for all Security Identity Manager logs. You can also set options for each type of logging activity.

You can configure different options to manage the quantity and size of the log files. See Configuring logs.

Log format

The message, security, and trace logs are formatted in XML. Security Identity Manager provides a viewer for viewing the log contents. You can view them as plain text. See Retrieving logs.

Application message log (msg.log)

The message log contains IBM Security Identity Manager messages. The product generates messages during processing. Messages are presented when you log on to the IBM Security Identity Manager Server and perform operations. Security Identity Manager messages are identified by the **CTGIM** prefix.

The message log is turned on by default. You can configure:

- When message collection starts and stops.
- The level of data that is collected
- The log file size.

After the message log file reaches its capacity, data is overwritten. The newest data replaces the oldest log data. To maintain a longer history of messages, you can create multiple message log files. When the `msg.log` file is full, data is moved to another file.

For information about message descriptions and configuring the message log, see the *Messages Guide*.

You can view the application message log file in the IBM Security Identity Manager virtual appliance to troubleshoot any virtual appliance related issues better. See Managing the log configuration.

Security log (access.log)

The security log contains information about authentication requests, also called attempts.

The security log is turned on by default.

You can configure:

- When to start and stop collecting security data.

- The level of data that is collected.
- The log file size.

To configure the security log, do these steps:

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, select **Manage** > **Maintenance** > **Log Retrieval and Configuration**.
3. On the **Log Retrieval and Configuration** page, select the **Identity** tab.
4. Select **Application access**.
5. Click **Configure**. For more information, see Managing the log configuration.

For information about configuring the size and contents of the security log, see "IBM Security Identity Manager logging properties" on page 15.

Application trace log (trace.log)
Trace logs capture information about the operating environment when the software fails to operate as intended.

For more information about capturing trace data, see "Traces" on page 19.

For information about configuring the size and contents of the trace log, see "Configuring the server trace log" on page 20.

Adapter logs
Adapters provide an interface between a managed resource and the IBM Security Identity Manager Server.

The adapter logs and log locations depend on the type of adapter. IBM Security Identity Manager has the following types of adapters:

Adapter Development Kit (ADK)-based adapters

Each ADK adapter has its own log file. The log file is in the adapter `log` directory. The log file name is *`adaptername`*`Agent.log`. For example, the Microsoft Windows Local adapter is `WinLocalAgent.log`.

IBM Security Directory Integrator server-based adapters

There is a log file for all adapters that are installed on one instance. The log file is in the `log` directory of the adapters `solution` directory. The log file name is `ibmdi.log`.

For more information about adapters and adapter log configuration and settings, see the "Installation Guide" and the "Configuration Guide" on the *IBM Security Identity Manager documentation*.

IBM Security Identity Manager logging properties
Use the **Appliance Dashboard** from the IBM Security Identity Manager virtual appliance console to set logging properties in the `enRoleLogging.properties` file.

Log on to the IBM Security Identity Manager virtual appliance console. From the **Appliance Dashboard**, use the **Update Property** page to work with the `enRoleLogging.properties`. See Managing the server properties.

Global logging properties
The global logging properties apply to all IBM Security Identity Manager logs.

The following values are the default property values:

Table 2. Default property values	
Property value	**Description**
`logger.refreshInterval=300000`	Specifies the number of milliseconds between checking for updates to `enRoleLogging.properties`. The default value is 5 minutes (300,000 milliseconds).
`handler.file.fileDir=`	Specifies the location of the log files. Do not change the default path value for the `handler.file.fileDir` property in the IBM Security Identity Manager virtual appliance.
`handler.file.maxFileSize=1024`	Specifies the maximum size for each log file in KB.
`formatter.dateFormat="yyyy.MM.dd"` `formatter.timeFormat="HH:mm:ss:SSS"`	Specifies the date and time formats for the timestamps in the log records.

Use the ASCII letters described in Table 3 on page 16 to specify a different date and time format.

Table 3. Pattern letters for the formatter.dateFormat and formatter.timeFormat log properties			
Symbol	**Description**	**Presentation type***	**Example**
G (uppercase)	Era designator	Text	AD
y (lowercase)	Year	Number	1996
M	Month in the year	Text and number	July and 07
d	Day in the month	Number	10
E	Day of the week	Text	Tuesday
D	Day in the year	Number	189
F	Day of the week in the month	Number	2 (second Wednesday in July)
w	Week in the year	Number	27
W	Week in the month	Number	2
h	Hour in AM or PM	Number (1-12)	12
H	Hour in the day	Number (0-23)	0
m	Minute in the hour	Number	30
s	Second of the minute	Number	55
S	millisecond	Number	987
a	AM or PM marker	Text	PM
k	Hour in the day	Number (1-24)	24
K	Hour in AM or PM	Number (0-11)	0
z	Time zone	Text	Pacific Standard Time
' (single quotation mark)	Escape for text	Delimiter	

Table 3. Pattern letters for the formatter.dateFormat and formatter.timeFormat log properties (continued)			
Symbol	**Description**	**Presentation type***	**Example**
" (2 single quotation marks)	Single quotation mark	Literal	
* The number of pattern letters that are specified determines whether a short form or long form is used in the timestamp.			

The number of pattern letters determines the format.

Text
Specifies whether to use full or short form. If four or more pattern letters are specified, the full form is used. If less than four letters are specified, the short form is used if a short form exists.

Number
Specifies the minimum number of digits to be included. Shorter numbers are padded with zeros to the specified number of digits. Year (y) is handled differently; if 2 y's are specified, the year is shortened to two digits.

Text and number
Specifies whether to use text or a number. If 3 or more pattern letters are specified, text is used, otherwise a number is used. Any characters in the pattern that are not in the ranges of a through z and A through Z are treated as quoted text. For example, characters such as the semicolon (:), period (.), blank space, number sign (#), and at sign (@) are included in the output text even though they are not delimited with single quotation marks.

A pattern that contains an invalid pattern letter generates an error during formatting or parsing.

Table 4 on page 17 provides examples of user-defined date and time patterns.

Table 4. Sample patterns for timestamps by using the US locale	
Sample pattern	**Result**
`formatter.dateFormat="yyyy.MM.dd G" formatter.timeFormat=" 'at' hh:mm:ss z"`	1996.07.10 AD at 15:08:56 PDT
`formatter.dateFormat="EEE, MMM d, ''yy"`	Wed, July 10, '96
`formatter.timeFormat="h:mm a"`	12:08 PM
`formatter.timeFormat="hh 'o''clock' a, zzzz"`	12 o'clock PM, Pacific Daylight Time
`formatter.timeFormat="K:mm a, z"`	0:00 PM, PST
`formatter.dateFormat="yyyyy.MMMMM.dd GGG" formatter.timeFormat="hh:mm aaa"`	1996.July.10 AD 12:08 PM

Message logging options

The properties in this section apply to IBM Security Identity Manager messages.

The property values are the defaults:

logger.msg.logging=true
Turns message logging on or off.

true
Turns on message logging.

false
Turns off message logging.

handler.file.msg.fileName=msg.log
Specifies the name of the message log file.

logger.msg.level=INFO
Specifies the message logging level.

INFO
Captures all message types such as informational, warning, and error messages.

WARN
Captures warning and error messages.

ERROR
Captures only error messages.

handler.file.msg.maxFiles=5
Specifies the maximum number of message log files to keep before log records start to be discarded.

Security logging options

The properties in this section apply to attempts to authenticate with IBM Security Identity Manager Server.

The property values are the defaults:

logger.msg.com.ibm.itim.security.logging=true
Turns security logging on or off.

true
Turns on security logging.

false
Turns off security logging.

handler.file.security.fileName=access.log
Specifies the name of the security log file.

Do not change the default path value for the `handler.file.security.fileDir` property in the IBM Security Identity Manager virtual appliance.

logger.msg.com.ibm.itim.security.logChoice=failure
Specifies the types of attempts that are logged.

failure
Log only failed attempts.

success
Log only successful attempts.

both
Log both failed and successful attempts.

handler.file.security.maxFiles=10
Specifies the maximum number of security log files to keep before log records are discarded.

Prerequisite product logs

This section describes logging for the middleware products. It also provides links to websites for more information about logging.

IBM Security Directory Server logs

These logs provide information about the installation and communications between the IBM Security Identity Manager Server and the IBM Security Directory Server.

Note: If you use a directory server other than IBM Security Directory Server, see its product documentation for logging information.

The IBM Security Directory Server documentation provides more information about IBM Security Directory Server logs.

The default directory location of the installation logs depends on the operating system.

Microsoft Windows systems

ITDS_HOME\var

For example: C:\Program Files\IBM\LDAP\V6.3\var

UNIX and Linux® systems

ITDS_HOME/var

For example: /opt/ibm/ldap/V6.3

The default directory location of the operational logs depends on the operating system.

Microsoft Windows systems

ITDS_instance_HOME\logs

For example: C:\idsslapd-ldapdb2\logs

UNIX and Linux systems

ITDS_instance_HOME/logs

For example: /home/ldapdb2/idsslapd-ldapdb2/logs

IBM Security Directory Integrator log

The ibmdi.log file reports information about the communications between the IBM Security Identity Manager Server and the agentless adapters. The IBM Security Identity Manager Server UNIX and Linux adapter and the IBM Security Identity Manager Server LDAP adapter are agentless adapters.

IBM Security Directory Integrator logs are available in the support file. Do these steps:

1. From the top-level menu of the **Appliance Dashboard**, click **Manage** > **System Settings** > **Support Files**. The **Support Files** page is displayed.
2. On the **Support Files** page, work with the support files. For more information, see Managing the support files.

You can specify logging properties for IBM Security Directory Integrator.

For more information about the agentless adapters and about setting logging properties, see the Installation and Configuration Guides on the *IBM Security Identity Manager documentation*.

Database server logs

DB2 Universal Database records database requests in its own log files.

Note: If you use a database server other than DB2 Universal Database, see its product documentation for logging information.

You specify the location of these files when you install the database server.

By default, the DB2 Universal Database log files are in the *DB_INSTANCE_HOME* directory.

Microsoft Windows systems

C:\Program Files\IBM\SQLLIB\DB2

UNIX and Linux systems

/home/db2inst1

Traces

Trace data provides in-depth processing information to help you focus on a particular area that you suspect is causing a problem. Trace data is more complex and detailed than message data.

By default, the trace log is set on to collect the minimum amount of information. The minimum level reduces the impact of capturing and recording data on the overall performance of IBM Security Identity Manager. The higher the level of tracing, the greater the potential impact on server performance.

IBM Security Identity Manager Server provides both Server trace and Applet trace.

You can configure the following items:

- When to start and stop collecting data

- The level of detailed data that is collected
- The log file size

Server tracing

The trace facility provides methods to capture information about the IBM Security Identity Manager Server internal operations. The trace log information is designed so support personnel can trace a problem to its source and determine why an error occurred.

Configuring the server trace log

Configuration properties for the server trace log are stored in the `enRoleLogging.properties` file.

Log on to the IBM Security Identity Manager virtual appliance console. From the **Appliance Dashboard**, use the **Manage** > **System Settings** > **Log Retrieval and Configuration** page to work with `enRoleLogging.properties`. See Configuring logs.

Changes take effect when the IBM Security Identity Manager Server checks for updates. You can specify the update interval in the properties file. The following properties values are the defaults:

`logger.trace.logging=true`
Turns trace logging on or off.

`true`
Turns on trace logging.

`false`
Turns off trace logging.

`logger.trace.level=DEBUG_MIN`
Specifies the trace logging level.

`DEBUG_MIN`
Records the least amount of information. (Default)

`DEBUG_MID`
Records a greater amount of trace information for debugging.

`DEBUG_MAX`
Records the maximum amount of trace information. This level has the greatest impact on server performance. Use this level only to narrow down a problem to a specific component. Then reset this parameter back to `DEBUG_MIN` or `DEBUG_MID`.

`handler.file.trace.maxFiles=10`
Specifies the maximum number of trace log files to keep before log records are discarded.

`logger.trace.com.ibm.itim.component_name`
Defines the Security Identity Manager component you want to trace. For information about this property, see "Specifying trace contents" on page 20.

Specifying trace contents

You can specify the level of trace data that is collected either during installation or at a later time. The `enRoleLogging.properties` file contains properties that are related to what data to collect and the level of collection.

About this task

From the **Appliance Dashboard**, use the **Manage** > **System Settings** > **Log Retrieval and Configuration** page to work with `enRoleLogging.properties`. See Configuring logs.

The setting of these values is suggested by support personnel when debugging a problem. Under normal operating conditions, the default settings are appropriate. The more data that is collected, the greater the impact is to system performance.

Table 5 on page 21 shows logging components and descriptions.

Table 5. Logging components	
Component	**To troubleshoot problems related to:**
`logger.trace.com.ibm.itim.adhocreport.level`	Running operations under the **Report** tab. For example, synchronizing data or designing and running reports.
`logger.trace.com.ibm.itim.adhocreport.changelog.level`	Synchronizing data incrementally.
`logger.trace.com.ibm.itim.apps.level`	Validating business logic. For example, password synchronization and account compliance about provisioning policy.
`logger.trace.com.ibm.itim.apps.ejb.adhocreport.level`	Synchronizing data. For example, retrieving data from Security Identity Manager LDAP and storing it in a database.
`logger.trace.com.ibm.itim.authentication.level`	Logging on to or authenticating with Security Identity Manager.
`logger.trace.com.ibm.itim.authorization.level`	Validating and checking of ACIs for a logged-in user.
`logger.trace.com.ibm.itim.common.level`	Validating input per defined FORM constraints or schema.
`logger.com.ibm.itim.script.level`	Evaluating the `scriptframework`, which replaces FESI. For example, the workflow engine script node and service selection policy script.
`logger.trace.com.ibm.itim.fesiextensions.level`	Evaluating a FESI script. For example, the workflow engine script node and service selection policy script.
`logger.trace.com.ibm.itim.mail.level`	Sending mail from Security Identity Manager. For example, notifications.
`logger.trace.com.ibm.itim.messaging.level`	Sending messages to queues.
`logger.trace.com.ibm.itim.dataservices.model.level`	Performing LDAP Directory server operations. For example, updating a person.
`logger.trace.com.ibm.itim.passworddelivery.level`	Clearing expired password transactions.
`logger.trace.com.ibm.itim.policy.level`	Running and validating policies. For example, password and provisioning policies.

Table 5. Logging components (continued)	
Component	**To troubleshoot problems related to:**
`logger.trace.com.ibm.itim.remoteservices.level`	Running operations for remote resources and interpreting the response. For example, HR feed, reconciliation and account operations.
`logger.trace.com.ibm.itim.report.level`	Not used.
`logger.trace.com.ibm.itim.security.level`	Not used.
`logger.trace.com.ibm.itim.scheduling.level`	Running scheduled operations such as those that the user scheduled to run at a later date.
`logger.trace.com.ibm.itim.systemConfig.level`	Running `LDAP\DB upgrade \config` utilities.
`logger.trace.com.ibm.itim.util.level`	Sharing utility classes across various components. For example, acquiring and releasing database connections from the WebSphere Application Server Java Database Connectivity (JDBC) connection pool.
`logger.trace.com.ibm.itim.webclient.level`	Navigating from one page to another, input validation, or display problems.
`logger.trace.com.ibm.itim.workflow.level`	Running workflows. This operation includes providing information about running a specific node in the workflow definition. For example, the input and output of a node and the transition from one node to the other.
`logger.trace.com.ibm.daml.level`	Communication between IBM Security Identity Manager Server and remote agent.
`logger.trace.com.ibm.erma.level`	Communication between IBM Security Identity Manager Server and remote agent by using an FTP protocol like RACF®.

`JLog` supports a hierarchical set of named objects that inherit properties from their ancestors. A period (.) separates each level of the hierarchy. The highest level of the hierarchy is shown first. For example, the `logger.trace.com.ibm.itim.workflow` object in the workflow inherits properties that are not explicitly defined at the workflow level from `logger.trace.com.ibm.itim`, `logger.trace.com.ibm`, `logger.trace.com`, and `logger.trace`. Because of the inheritance characteristic, the default tracing level can be defined at the top of the hierarchy, which is `logger.trace`.

The following definition sets a specific level of tracing for a component:

```
logger.trace.com.ibm.itim.component_name.level=tracing_level
```

where *component_name* is the name of the component and *tracing_level* is the level of tracing to use for that component.

Setting a tracing level for a component overrides the inherited level of tracing. For example, `logger.trace.com.ibm.tim.workflow.level=DEBUG_MAX` traces the workflow component at the maximum level of detail, that is, `DEBUG_MAX`. This setting continues tracing all other levels at the minimum level, that is, `DEBUG_MIN`.

Applet tracing

The applet tracing is separate from IBM Security Identity Manager Server tracing. All applet tracing information goes to the applet console window on the client.

Viewing applet tracing

You can view the applet trace data on the IBM Security Identity Manager Console.

Two properties in the `enRoleLogging.properties` file control applet tracing.

logger.trace.com.ibm.itim.applet.logging
Starts and stops applet tracing.

true
Turns on trace logging.

false
Turns off trace logging.

logger.trace.com.ibm.itim.applet.level=DEBUG_MIN
Specifies the trace logging level.

DEBUG_MIN
Records the least amount of information. (Default)

DEBUG_MID
Records a greater amount of trace information for debugging.

DEBUG_MAX
Records the maximum amount of trace information. This level has the greatest impact on server performance. Use this level only to narrow down a problem to a specific component. Then reset this parameter back to `DEBUG_MIN` or `DEBUG_MID`.

Procedure

1. Open the Java plug-in control panel while the applet is being loaded on the client browser.
2. Click **Show Console**.

Identity Service Center tracing

The Identity Service Center tracing is separate from other IBM Security Identity Manager tracing. All Identity Service Center tracing goes to a separate browser window on the client.

Starting the Identity Service Center tracing

Identity Service Center tracing can be started for individual users, with little or no impact to other users of the Identity Service Center. You can view the Identity Service Center trace data in a separate browser window.

Procedure

- Log in to the Identity Service Center by using a modified URL, as shown here:

```
http://[host]:[port]/itim/ui?isimPath=debug&isimTrace=[logger]:[level]<,...>
```

Where:

[host]
Is the host name of the IBM Security Identity Manager server.

[port]
Is the port number of the IBM Security Identity Manager server application.

[logger]
Is the name of a specific Identity Service Center logger to start, or all to specify the logging level for all other loggers.

[level]
Is the logging level to be activated for the [logger]

<,...>
Indicates you can define multiple [logger]:[level] combinations, to start different levels of logging for different loggers.

The following Identity Service Center logger names are supported:

- `com.ibm.security.ui.util.store`
- `com.ibm.isim.ui.control.nav`
- `com.ibm.isim.ui.util.api`
- `com.ibm.isim.ui.util.factory`
- `all`

The following Identity Service Center logging levels are support, in ascending order, which is based on importance or severity:

- `all`
- `trace`
- `debug`
- `info`
- `warn`
- `error`
- `fatal`
- `none`

Starting logging at a specific level causes trace records for that level and all higher levels to be collected.

For example, starting logging at the debug level collects trace data for `debug`, `info`, `warn`, `error`, and `fatal` trace records. If no level is specified for a logger, all is assumed.

The following URLs are equivalent and start all levels of logging for all loggers:

```
http://[host]:[port]/itim/ui?isimPath=debug&isimTrace=all
```

```
http://[host]:[port]/itim/ui?isimPath=debug&isimTrace=all:all
```

The following URLs are equivalent and start all logging for one logger and warn logging for all other loggers:

```
http://[host]:[port]/itim/ui?isimPath=debug&
isimTrace=com.ibm.isim.ui.util.api:all,all:warn
```

```
http://[host]:[port]/itim/ui?isimPath=debug&
all:warn,com.ibm.security.ui.util.store:all
```

Stopping the Identity Service Center tracing

You can stop the Identity Service Center trace process when you are done collecting the information that you need to investigate an issue.

Procedure

- Stop the trace process by reloading the Identity Service Center using this URL:

  ```
  http://[host]:[port]/itim/ui?isimPath=dist&isimTrace=all:none.
  ```

  Alternatively, you can log off from Identity Service Center. Then, close all browser windows to clear all the Identity Service Center trace settings.

Viewing the Identity Service Center trace data

The Identity Service Center trace data is viewed in a separate browser window.

Procedure

- Start the Identity Service Center tracing for one or more loggers, as described earlier.

  As trace data is collected, a new browser window automatically opens to display the trace data.

  The new browser window has a control panel where you can search, filter, and navigate the collected trace data.

What to do next

1. Send the trace data to IBM support. Highlight the relevant trace records in the trace browser window and copy or paste the trace records to a separate file.
2. Stop the trace process.
3. Reload the Identity Service Center using the URL to stop tracing, as described earlier, and close the browser window that contains the collected trace data.

Performance and availability

The *Performance Tuning Guide* provides information about setting the parameters used to tune IBM Security Identity Manager, IBM Security Directory Server, and database servers. These parameters can improve the performance of your environment.

Chapter 4. Troubleshooting installation and configuration problems

This section describes solutions for installation and configuration problems.

Before you install IBM Security Identity Manager Server:

- Read the troubleshooting tips in the "Installing" and the "Configuring" sections.
- Review the known problems and solutions in the *IBM Security Identity Manager Knowledge Center*. Some of the topics in the "Installing" and the "Configuring" sections are repeated in this section.

Firewalls can block the IBM Security Identity Manager Server installation

Stop all firewalls before you initiate the product installation and configuration to prevent problems.

A firewall on the computer where IBM Security Identity Manager Server is being installed might cause the installation to fail. For example, the middleware configuration component initiates LDAP commands. The firewall blocks the LDAP port, that is, port 389, which blocks LDAP commands from running. LDAP commands include **ldapsearch** and **ldapadd**.

User IDs must be in the administrator group to start an installation

The DB2 Universal Database configuration can fail due to restrictions on the privileges of and the characters in the user ID.

The installation can fail under the following conditions:

- You install and configure DB2 Universal Database separately. The user ID is not in the administrator group.
- You use an ID containing reserved characters.

Install Security Identity Manager and prerequisite products with a user ID in the administrator group. You cannot use any of these administrator user IDs:

- `USERS`
- `ADMINS`
- `GUESTS`
- `PUBLIC`
- `LOCAL`

The user ID cannot begin with any of the following letters, either lowercase or uppercase:

- `IBM`
- `SQL`
- `SYS`

Entries in the services file prevent reinstalling the DB2 Universal Database

When you uninstall DB2 Universal Database, some port entries are not deleted. If you attempt to reinstall the database, the installation fails.

This situation and the solution apply in all the following situations:

- To all supported versions of DB2 Universal Database
- To manual installation and configuration of DB2 Universal Database
- To the IBM Security Identity Manager installation program

The DB2 Universal Database uninstallation does not delete corresponding DB2 port entries from the system services file. The default location of the file depends on the operating system.

Microsoft Windows systems
`%SystemRoot%\System32\drivers\etc\services`

For example: `C:\WINDOWS\system32\driver\etc`

UNIX and Linux systems
`/etc/services`

The following example shows the default service name entries and corresponding port values that remain in the file:

```
db2cdb2admin               50000/tcp
db2cdb2admini               50002/tcp
```

Note: If you specify a different DB2 administrator user ID during installation, the service uses the specified names. For example:

Microsoft Windows systems
db2*cinstanceowner* and db2*cinstanceowner*

UNIX and Linux, and DB2
instanceowner and DB2_*instanceowner*

When you try to reinstall, the services file is searched to determine whether DB2 port entries are present. If DB2 finds the port entries in the services file, the installation fails and returns the following message:

`SQL5043N Support for one or more communications protocols failed to start successfully.`

The core database manager functionality started successfully. This message is generated when the middleware configuration utility issues a **db2start** command to start the database.

Because the uninstall operation did not remove the entries, you must manually edit the services file and remove them before installing again.

LDAP port value is already in use for an initial installation of IBM Security Identity Manager

IBM Security Directory Server uses the default port value 389.

Other directory servers and applications, such as Microsoft Windows Active Directory, also use this value.

If another directory server or directory application is installed on the same system as Security Identity Manager, specify a different port value for IBM Security Directory Server.

Messaging engines do not start after installation

On systems that run DB2 Universal Database, the IBM Security Identity Manager messaging engines might not start.

The `SystemOut.logs` file contains a message like the following one:

```
4/19/07 9:06:03:421 IST] 00000014 SibMessage    E
[itim_bus:64ibm2Node01.server1-itim_bus]
CWSIS0002E: The messaging engine encountered an exception while starting.
Exception: com.ibm.ws.sib.msgstore.PersistenceException:
CWSIS1501E: The data source has produced an unexpected exception:
com.ibm.db2.jcc.b.SqlException:
DB2 SQL error: SQLCODE: -443, SQLSTATE: 38553,
SQLERRMC: SYSIBM.SQLTABLES;TABLES;SYSIBM:CLI:-80
```

To view the message, do these steps:

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, select **Manage** > **Maintenance** > **Log Retrieval and Configuration**

3. From the **Log Retrieval and Configuration** table of the **Appliance** tab, select a log file.
4. Click **View** to display the contents of the selected log file in the **Log file** field of the **Log Content** window.

   For more information, see Managing the log configuration.

A DB2 Universal Database fix pack installation is incomplete. Complete these steps:

1. From the **Server Control** widget on the **Appliance Dashboard**, select **Identity Manager Server** and click **Stop**.
2. Review the DB2 Universal Database fix pack installation instructions in the DB2 Universal Database product documentation at http://www-01.ibm.com/support/docview.wss?uid=swg27023554.
3. Follow the required procedure for your platform in the post-installation instructions.
4. From the **Server Control** widget on the **Appliance Dashboard**, select **Identity Manager Server** and click **Start**.

The temp directory is not deleted after installation (Microsoft Windows only)

The `temp` directory is not deleted after the installation. You must manually delete it.

The installation process might create a `temp` directory at the root of the disk if:

- You installed the product on the Microsoft Windows operating system.
- You installed on a disk drive other than the `C:\` drive.
- The `temp` directory does not exist.

Cannot uninstall interim fixes or fix packs

IBM Security Identity Manager cannot uninstall interim fixes or fix packs.

Cannot log on to the IBM Security Identity Manager Console

You cannot log on to the IBM Security Identity Manager Console.

To fix the problem, complete these steps:

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, click **Configure** > **Manage External Entities** > **Directory Server Configuration**.
3. On the **Directory Server Configuration** page, select **IBM Security Identity Manager User Registry**.
4. Click **Reconfigure**.
5. In the **Edit directory server configuration details** window, edit the configuration variables.

   For more information, see Managing the directory server configuration.
6. Click **Save Configuration**.

Chapter 5. Troubleshooting IBM Security Identity Manager Server problems

This section describes solutions for IBM Security Identity Manager Server problems.

Dynamic role membership is not evaluated while suspending or restoring a person

The default person suspend and restore operation workflow does not invoke policy evaluation after the person is suspended or restored.

To recreate this problem, create a dynamic role containing `erpersonstatus` in the filter (example, (`erpersonstatus=0`) as filter), then all the applicable persons become member of this dynamic role. Now suspend or restore any user who is a member of the dynamic role such that after suspend or restore operation the user does not satisfy the filter. Ideally the person must be removed from dynamic role membership after suspend or restore operation. However, the person still remains as the member of dynamic role even though the person's status gets updated.

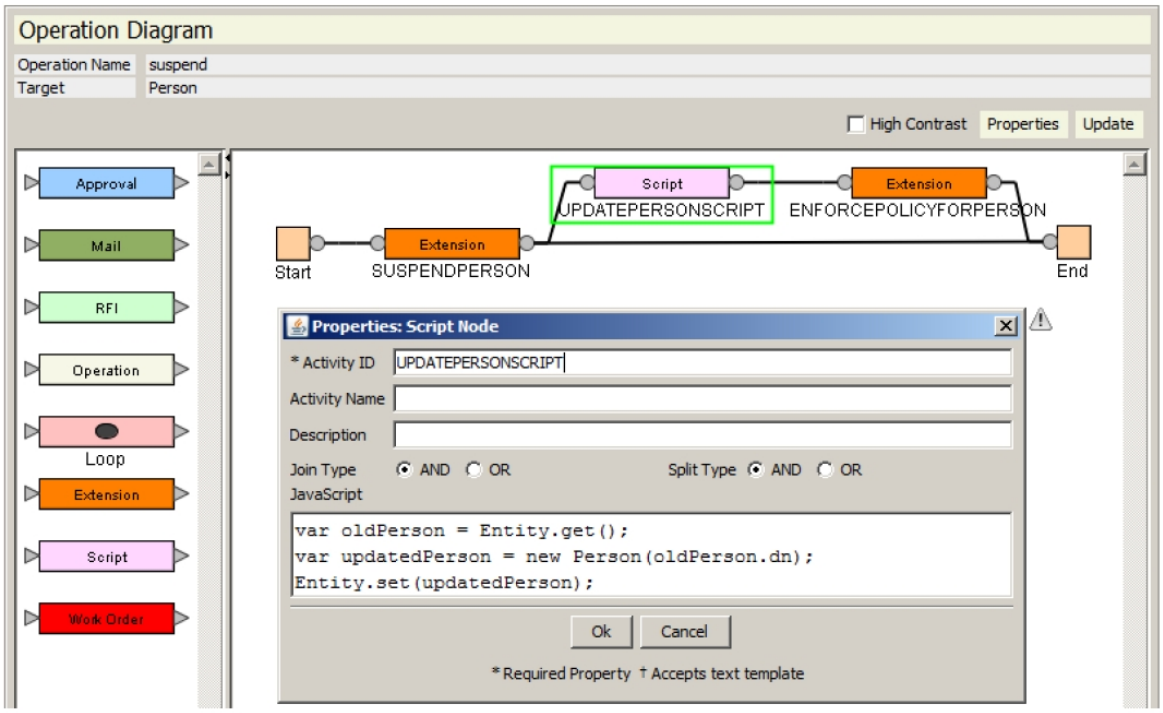
After fixing the described issue, the person entity is updated and role membership is added or removed from it, if the person being suspended or restored satisfies a dynamic role filter. In this scenario, if the added or removed dynamic role is a member of any provisioning policy then the said policies must be enforced after the person is suspended or restored.

Unfortunately, the default person suspend and restore operation workflow does not invoke policy evaluation after the person is suspended or restored.

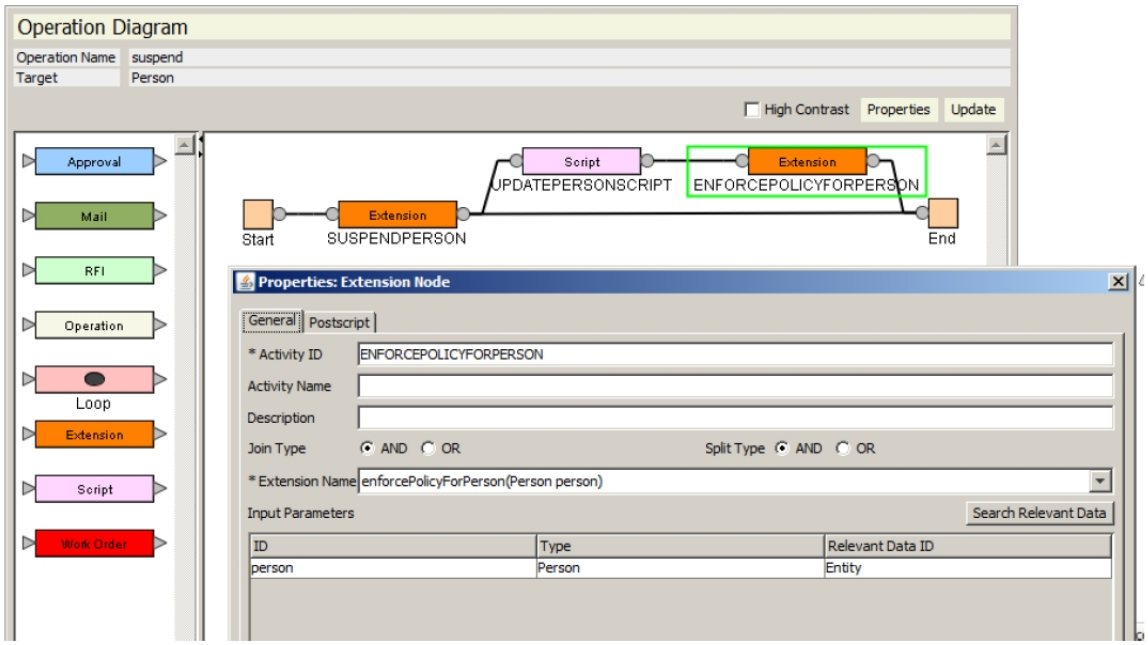
To resolve the problem, make the following changes in suspend and restore person workflows (if not already present). Make the changes to suspend and restore operation for "Person" entity type and also for individual person entities for suspend or restore workflows that are customized.

1. **Update Suspend Person workflow.**
   a. Open "suspend" person workflow in workflow designer.
   b. Add a new script node after "SUSPENDPERSON" extension. Add the following script in new script node to refresh the "Entity" relevant data as shown in the following screenshot.

```
<scrript>
  var oldPerson = Entity.get();
  var updatedPerson = new Person(oldPerson.dn);
  Entity.set(updatedPerson);
</script>
```



c. Add a new extension node after UPDATEPERSONSCRIPT script node to enforce the policy.



d. Save the workflow.

See the following tables for node properties and link properties of the suspend person workflow.

Table 6. Node properties: Suspend Person workflow

Node	Feature	Value
Start	Activity ID	START
	Join Type	AND
	Split Type	AND

Table 6. Node properties: Suspend Person workflow (continued)		
Node	**Feature**	**Value**
Extension	Activity ID	SUSPENDPERSON
	Join Type	AND
	Split Type	AND
	Extension Name	`suspendPerson (Person person, String accountSuspend)`
	Postscript	`WorkflowRuntimeContext.setProcessResult(WorkflowRuntimeContext.getActivityResult());` `WorkflowRuntimeContext.setProcessResultDetail(WorkflowRuntimeContext.getActivityResultDetail());`
Script	Activity ID	UPDATEPERSONSCRIPT
	Join Type	AND
	Split Type	AND

	JavaScript	`var oldPerson = Entity.get();`
		`var updatedPerson = new Person(oldPerson.dn);`
		`Entity.set(updatedPerson);`

Extension	Activity ID	ENFORCEPOLICYFORPERSON
	Join Type	AND
	Split Type	AND
	Extension Name	`enforcePolicyForPerson(Person person)`
	Postscript	`WorkflowRuntimeContext.setProcessResult(WorkflowRuntimeContext.getActivityResult());` `WorkflowRuntimeContext.setProcessResultDetail(WorkflowRuntimeContext.getActivityResultDetail());`
End	Activity ID	END
	Join Type	AND
	Split Type	AND

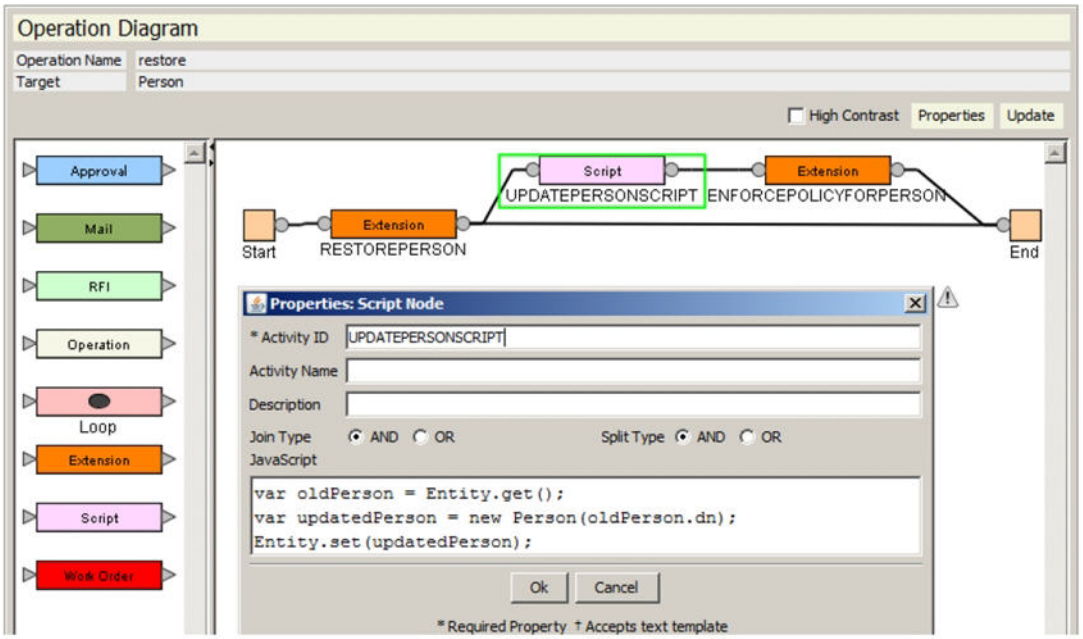
Table 7. Link properties: Suspend Person workflow			
From	**To**	**Feature**	**Value**
Start START	Extension SUSPENDPERSON	Custom Condition	true
Extension SUSPENDPERSON	Script UPDATEPERSONSCRIPT	Custom Condition	`activity.resultSummary != activity.FAILED`
Script UPDATEPERSONSCRIPT	Extension ENFORCEPOLICYFORPERSON	Custom Condition	true
Extension ENFORCEPOLICYFORPERSON	End END	Custom Condition	true
Extension SUSPENDPERSON	End END	Custom Condition	`activity.resultSummary == activity.FAILED`

2. **Update Restore Person workflow.**

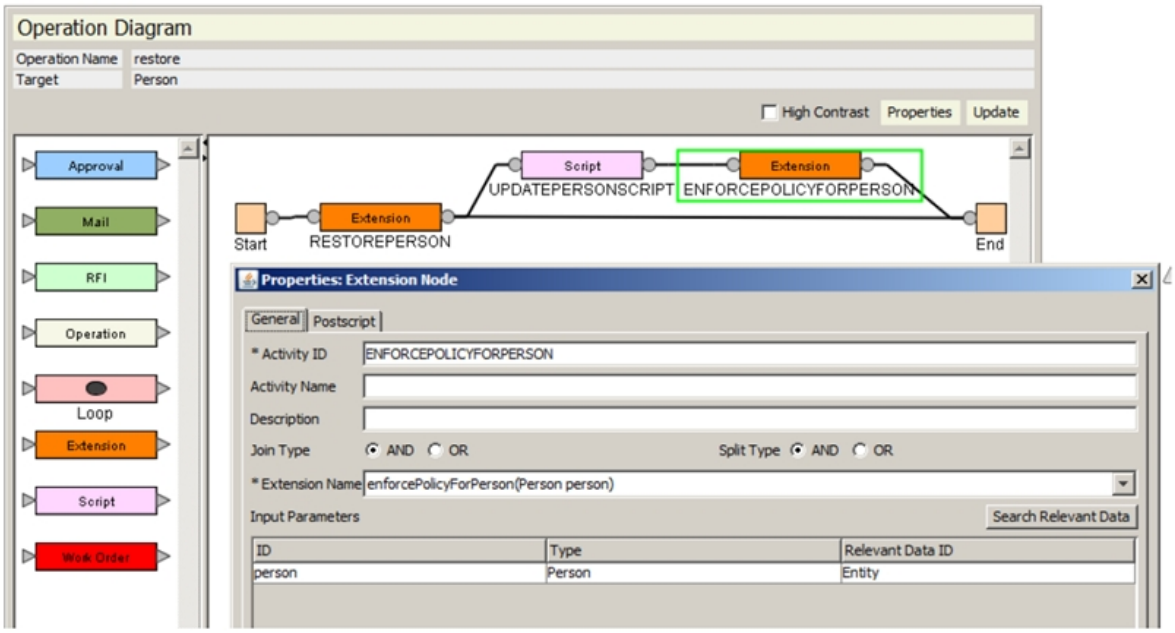
   a. Open "restore" person workflow in workflow designer.

   b. Add a new script node after RESTOREPERSON extension. Add the following script in new script node to refresh the "Entity" relevant data.

```
<script>
  var oldPerson = Entity.get();
  var updatedPerson = new Person(oldPerson.dn);
  Entity.set(updatedPerson);
</script>
```



c. Add a new extension node after UPDATEPERSONSCRIPT script node to enforce the policy.



d. Save the workflow.

See the following tables for node and link properties of the Restore Person workflow:

Table 8. Node properties: Restore Person workflow		
Node	**Feature**	**Value**
Start	Activity ID	START
	Join Type	AND
	Split Type	AND
Extension	Activity ID	RESTOREPERSON
	Join Type	AND
	Split Type	AND
	Extension Name	`restorePerson(Person person, String accountRestore)`
	Postscript	`WorkflowRuntimeContext.setProcessResult(WorkflowRuntimeContext.getActivityResult());` `WorkflowRuntimeContext.setProcessResultDetail(WorkflowRuntimeContext.getActivityResultDetail());`
Script	Activity ID	UPDATEPERSONSCRIPT
	Join Type	AND
	Split Type	AND

	JavaScript	`var oldPerson = Entity.get();`
		`var updatedPerson = new Person(oldPerson.dn);`
		`Entity.set(updatedPerson);`

Extension	Activity ID	ENFORECPOLICYFORPERSON
	Join Type	AND
	Split Type	AND
	Extension Name	`enforcePolicyForPerson(Person person)`
	Postscript	`WorkflowRuntimeContext.setProcessResult(WorkflowRuntimeContext.getActivityResult());` `WorkflowRuntimeContext.setProcessResultDetail(WorkflowRuntimeContext.getActivityResultDetail());`
End	Activity ID	END
	Join Type	AND
	Split Type	AND

Table 9. Link properties: Restore Person workflow			
From	**To**	**Feature**	**Value**
Start START	Extension RESTOREPERSON	Custom Condition	true
Extension RESTOREPERSON	Script UPDATEPERSONSCRIPT	Custom Condition	`activity.resultSummary != activity.FAILED`
Script UPDATEPERSONSCRIPT	Extension ENFORCEPOLICYFORPERSON	Custom Condition	true
Extension ENFORCEPOLICYFORPERSON	End END	Custom Condition	true
Extension RESTOREPERSON	End END	Custom Condition	`activity.resultSummary == activity.FAILED`

In SUSE Linux, the design forms applet fails to load, or takes a long time to load

When you run the IBM Security Identity Manager on SUSE Linux kernel-smp-2.6.16.6.0-0.85.1, and use the Java plug-in version 1.7.0_55, the design forms applet fails to load. When you use Java plug-in version 1.7.0_51, the design forms applet takes up to 10 minutes to load.

The failure to load or delay is caused by the specific releases of Java plug-in 1.7.0_55 or 1.7.0_51.

To resolve the problem, upgrade or downgrade the Java plug-in release. The problem is not experienced with the higher or lower Java levels. For example, 1.7.0_60 or 1.7.0_45.

A blank page is displayed when a customized person profile user logs in to Identity Service Center

In the Identity Service Center, a person profile that is created by using a customized schema can have either of the following problems.

- User cannot log in to Identity Service Center.
- User can log in to Identity Service Center, but a blank page is displayed.

The cause of the problem is that the Access Control Items (ACIs) are not defined for a customized person profile.

To resolve the problem, write a new ACI that grants appropriate privileges to the customized person profile.

Identity Service Center view options are displayed even though it is not installed with the fix pack

Install the Security Identity Manager fix packs 6.0.0.x without installing the Identity Service Center. The Identity Service Center view options are displayed when an administrator configures a view definition on the server.

It is a known limitation. No action is necessary. If the Identity Service Center is not installed, the Identity Service Center view definitions do not take effect.

Date format does not display correctly in the Self-Service User Interface

Some of the pages display incorrect date formats in the Self-Service User Interface.

In the Self-Service User Interface, some of the pages display the date in the international date format. For example, 2014 05 06 17:01:15. The international date format does not match with the regional date format that corresponds to the locale in which the user interface is started.

It is a known limitation.

Text search does not consider the language sensitivity in the user interfaces

In IBM Security Identity Manager user interfaces, text search does consider the language sensitivity.

In IBM Security Identity Manager user interfaces, text search does not return any results when the search string contains:

- Umlaut characters. For example, the search strings **Muller** and **Mueller** do not return any results.
- Dotted or dotless **ll**. For example, **ıi** or **Iİ**.

It is a known limitation.

Forgotten password problems in Turkish

The forgotten password challenge response might not work with the Turkish language because of case sensitivity issues.

Because of the language sensitivity of the Turkish language, the forgotten password challenge response information must be case-sensitive. Turkish usesr must remember the case that was used for any challenge response information that they entered.

Ensure that the `enrole.properties` file has the following setting.

```
##############################################################################
## Challenge Response Encoding Information
##############################################################################
# Controls how CR responses are encoded before being stored
# in the directory.
# Values are:
#  lower (DEFAULT)
#  upper
#  none (Case-sensitive responses)
enrole.challengeresponse.responseConvertCase=none
```

Identity Service Center search control and sub form limitations

IBM Security Identity Manager supports various controls to customize the account form and other forms. The `Search control`, `Search match control`, and the `Sub Form` in a customized account form can have certain limitations when you use the Identity Service Center to request an account in a service that contains these controls.

By using the `search control` or `search match control` options, you cannot do a compliance check on attributes until the request is submitted. For non-compliance in account forms that are caused by the selections in `search control` or `search match control`, the submit request results in an error.

The Identity Service Center does not display any attributes if you configure them to use sub forms in the Form designer. Therefore, you cannot select any value for the attributes that are configured as a sub form. If the attribute is mandatory, then the submit request results in an error.

IBM Cognos drill-through behavior report problems in the Japanese and Turkish languages

A `NullPointerException` occurs when you run IBM Security Identity Manager Cognos reports in the Japanese and Turkish languages and they have a drill-through behavior. A drill-through behavior provides a link inside the main report that opens a subreport. The exception occurs when the subreport starts.

The problem occurs if you have an Oracle database. It is a known limitation.

Errors occur when you submit the account forms in the Identity Service Center

In the Identity Service Center, the group attributes on the account form are hidden. When you submit the account form through the Identity Service Center, errors are displayed in the Identity Service Center user interface.

In the Identity Service Center, one of the following errors might occur while you submit the account forms.

- In the Security Identity Manager administrative console, when a group attribute is set as a required attribute, you cannot submit the access request through the Identity Service Center. The validation icon remains deactivated on the **Provide Required Information** page in the Identity Service Center. The following error message is displayed in the Identity Service Center user interface. `Provide all the required information to proceed with your request`.
- In the Security Identity Manager administrative console, when a group attribute is set as a required attribute in the form designer, you cannot submit the access request through the Identity Service

Center. The following error message is displayed in the Identity Service Center user interface. The `new account information on service name contains validation errors. You must correct these errors before you can submit your request`.

- When a group attribute is set as the default value in the provisioning policy and access is requested through the Identity Service Center, a group access is granted to a user although no group details are displayed on the account form. It is a known limitation.

To fix these errors, complete the following steps.

1. Log on to Security Identity Manager administrative console.
2. From the navigation tree, select **Configure System** > **Design Forms**. The form designer applet is displayed.
3. In the left pane, double-click the entity type.
4. From the middle pane, select the group attribute. For example, `ergroup`.
5. From the **Properties** > **Constraint** section in the right pane, clear the **Required** check box.
6. Click **Form** > **Save Form Template** and **OK** when a message indicates that the form template is saved successfully.

Business Partner Organization entity does not display when configured in a search control or a search match control

When you configure the search control or search match control for the person or account form to search based on the Business Partner Organization, the search operation does not return the Business Partner Organization in the Identity Service Center.

It is a known limitation.

The upgrade process does not preserve modified attribute values

After you upgrade to IBM Security Identity Manager version 6.0.0.10 from previous fix packs, attribute values that are modified by users in the `workflowextensions.xml` and `workflowDataSyntax.xml` files in the previous fix pack, are not preserved in the fix pack 6.0.0.10.

To resolve the problem, manually merge the attribute values from the original files that are saved in the backup directory.

Modified values section in the view request details might contain unedited attributes

Changes made to attributes from the administrative console display extra attributes in the modified values section of the view request details. These extra attributes are the default values that usually correspond to the check boxes or drop-down boxes and displayed in the modified values table even no changes are made to them. The view request details of the administrative console as well as Identity Service Center are affected.

This is a known limitation.

Non-profile attribute specific search might return unexpected results

IBM Security Identity Manager REST API and Identity Service Center user interface might return unexpected results for a non- profile attribute specific search.

The cause of the problem is that a search operation returns expected results for attributes that are available in an entity profile. Entity attributes that are not searchable are not available in an entity profile. When a search is performed on entity attributes that are not in an entity profile, then such attributes are ignored and the search result returns more records than expected.

This is a known limitation.

Incorrect fix pack version is displayed in the installation summary during upgrade

When you upgrade from the IBM Security Identity Manager fix pack version 6.0.0.6 to the fix pack version 6.0.0.10, an incorrect version is displayed in the installation summary message for the base product. The installation summary displays that an upgrade is done on the IBM Security Identity Manager fix pack version 6.0.0.4, which is incorrect.

Ignore the installation summary message. It does not affect any of the product functions.

Inconsistent non-compliant access view in the Identity Service Center

In the Identity Service Center, an incorrect non-compliance status is displayed for a role or group that is defined as access.

The cause of the problem is that in the Identity Service Center, the scope of a non-compliant access view is limited to an account on the service that is defined as access. Identity Service Center does not support a non-compliant state for a role or group that is defined as access.

To resolve the problem, view the correct non-compliant access status for a role or group through the administrative console.

Customized labels in the design forms display inconsistently

If you edit a control label in the design form of the Identity Service Center, the view of the customized label is not displayed consistently in the View Requests section of the View and Edit Profile and Edit and Delete Access wizards.

The following Identity Service Center user interface panels are affected.

- View and Edit Profile -> View Requests -> View Changes
- Edit and Delete Access -> View Requests -> View Changes

To resolve the problem, you must add a prefix **$** for the label and map the label in the `CustomLabels.properties` file, if you edit the control label in the design form.

An error icon might display when the forgotten password questions and answers are set

In the Identity Service Center, after the subset of the forgotten password questions and answers are set and when a user returns to the justification page, the justification page displays the success icon. However, when a user returns to the forgotten password questions and answers page again, the question text boxes might display an error icon.

You can ignore this error icon. It does not affect any of the Identity Service Center forgotten password functions or operation.

Custom password rule implementation errors

The `cumulate()` method, a Password Rules API enhancement to the IBM Security Identity Manager, might cause errors when you implement the existing custom rules. To resolve the problem, add the `cumulate()` method to the custom rule, recompile, and replace the updated custom rule in the IBM Security Identity Manager class path. This topic also explains how to use the `cumulate()` method.

The Rule API provides a customized logic for the password rules. For more information about customization of rules, see Customized password rules.

Custom rules that implement the Rule API are expected to provide logic in the `cumulate()` method. The `cumulate()` method logic combines parameters of two rules of the same type that is defined for two or more accounts of different service types with different password policies. The `cumulate()` method returns true if the parameters of the same rule in different password policies are combined successfully

and false otherwise. If the rule cannot be logically combined, then each instance of the rule is considered separately, and it does not affect the rule evaluation.

The difference between the existing `join()` method and the new `cumulate()` method is that the `join()` method considers incompatibility of rules in the same password policy as well as different password policies. The `cumulate()` method considers only parameters of the same rule in different password policies. If for a specific type of rule, when there is no scope for an interaction with other types of rules, then the return response of the `join()` method can suffice.

Errors

One of the following errors might occur when you implement the custom password rules.

- An existing custom rules implementation generates a `Java Unimplemented method` exception.
- The following error might be logged in the Websphere Application Server log file. `java.lang.AbstractMethodError: com/ibm/passwordrules/Rule.cumulate(Lcom/ibm/passwordrules/Rule;)`
- Identity Service Center user interface might display the following error when you use the change password function: `CTGIMZ002E An error occurred while connecting to the remote server`.

How to implement the `cumulate()` method

The following two password rules explain this scenario and how to implement the `cumulate()` method.

NotUserID

The rule cannot have conflicts with any of the other standard password rules in the IBM Security Identity Manager.

```
public boolean join(Rule rule) throws IncompatibleRulesException {
if (rule instanceof NotUserID) {
......
}

return false;
}
```

Implementation of `cumulate()` method:

```
public boolean cumulate(Rule rule) throws IncompatibleRulesException {
return join(rule);
}
```

MayNotContain

The `join()` method considers conflicts with other password rules in the same password policy.

```
public boolean join(Rule rule) throws IncompatibleRulesException {
if (rule instanceof MayNotContain) {
...
}
else if(rule instanceof MustContain) {
....
}
else if(rule instanceof RestrictedTo) {
.....
}
else if(rule instanceof StartsWithChar) {
.....
}
return false;
}
```

Implementation of `cumulate()` method:

```
public boolean cumulate(Rule rule) throws IncompatibleRulesException {
if (rule instanceof MayNotContain) {
...........
}
```

```
return false;
}
```

ACI filter not working correctly when an account is created

Access control item (ACI) object filters for the Add Entity operation are ignored.

If an ACI contains a filter that defines the scope of its target entities, the filter in the ACI is ignored when an add operation performed. Instead, the filter is considered a wildcard filter while displaying the form for that particular entity, and the target filter is evaluated only when the request is submitted.

User accounts are included when performing a suspend, restore, or delete task

User accounts are included for suspend, restore, or delete tasks.

Problem

The current default value includes user accounts when suspending, restoring, or deleting users.

Solution

When you use the **Manage Users** window in the IBM Security Identity Manager Console to suspend, restore, or delete user accounts, clear the **Include accounts when suspending, restoring, or deleting users** check box.

When you suspend users during an identity feed, edit the `enRole.properties` file. The default value of this property is `true`. Set the `enrole.suspend.accounts.identity.feed` property to `false`. For example:

```
enrole.suspend.accounts.identity.feed=false
```

Warning messages not displayed during identity feed or reconciliation

The identity feed or a reconciliation operation does not display warning messages if account or user attributes are not successfully updated.

Problem

The operation displays a warning message only if a user or an account update fails. Reconciliation can return a successful status under the following conditions:

- All users or accounts are updated.
- One or more attributes associated with the users or accounts are not successfully updated.

Solution

Review the IBM Security Identity Manager log files. The logs record updates and changes to account and user attributes. See “Logs” on page 13 for more information.

Changing the service name prevents viewing and performing actions on service requests

Changing the name of a service prevents you from viewing and performing actions on service requests that applied to the service before the name change.

Keep in mind the following considerations:

- Carefully consider the name of a new service before you name it.
- Do not change the name of the service after requests are made to create accounts on the service.

Follow this process if the software prevents you from acting on a service request after changing a service name:

1. Change the name back to the original name.
2. View and perform actions on requests that occurred *before* the service was renamed.
3. Change the name of the service to the new name.
4. View and perform actions on requests that occurred after the service was renamed.

Identity feed operation fails and returns an LDAP error

The installation program sets a maximum of 500 search operations per application task. If you set up an identity feed for more than 500 to populate the IBM Security Identity Manager Server, the operation fails. You must configure the LDAP server that is supplying the user data for the number of users in the feed.

Setting the maximum number of search entries

If the IBM Security Directory Server is the source of user data:

1. Use the IBM Security Directory Server Administration Console.
2. Edit the `ibm-slapdSizeLimit` variable in the `ibmslapd.conf` configuration file.

The default directory of `ibmslapd.conf` depends on the operating system.

Microsoft Windows systems
`C:\idssldap-ldapdb2\etc`

UNIX and Linux systems
`/home/ldapdb2/idsslapd-ldapdb2/etc`

Increasing the number of results in the user interface

1. Edit the `enrole.ui.maxSearchResults` property in the `ui.properties` file.
2. Increase the limit on the number of results that are displayed for a search.

To access the `enRoleLogging.properties` file, do these steps:

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the **Appliance Dashboard**, use the **Manage** > **System Settings** > **Log Retrieval and Configuration** page to work with `enRoleLogging.properties`. See Configuring logs.

A request fails because one or more values cannot be changed

If you submit a request to change a user, account, or service, the entire request fails if any single value cannot be changed.

A potential scenario that causes a failure includes two users using separate browsers, concurrently attempting to add or remove the same value.

- You submit a request to change the given name and family name of a user.
- The family name cannot be changed.
- Neither change is made.
- The entire request fails.

A request can also fail when an inconsistent value that is not part of the current change task is already populated for one of the attributes in LDAP. For example, set the manager attribute of a person to a value similar to `erglobalid:76542121221212,ou=users...` in IBM Security Directory Integrator. Because all IBM Security Directory Integrator-based changes are submitted to IBM Security Identity Manager with `System` as the requester, the change is accepted. However, if an administrator makes a change to the email address or any other field for the same person, the change user task fails until you manually correct the manager attribute in LDAP to a value such as `erglobalid=765421221212, ou=users...`.

Concurrent usage of IBM Security Identity Manager Server can affect changes to data

Certain conditions apply to how changes are made to data as a result of concurrency. An example of concurrency is when two or more users access the same data through the user interface using separate sessions on separate computers.

Single-value attributes

- When you run the **ADD** operation to change an attribute from null to a value, only the first request succeeds. All other concurrent requests fail because multiple values cannot be added to a single-value attribute.
- When you run the **REMOVE** operation to change an attribute from a value to null, only the first request succeeds. All other concurrent requests fail because there is only one value to remove.
- When you change an attribute from one value to another, the last value submitted overrides any other changes.

Multi-value attributes

The last values submitted override all existing values.

All results from a large search operation are not displayed

By default, the user interface can display a maximum of 1000 search entries. If your search returns more than 1000 entries, you can change the maximum amount.

Typically, you perform a search operation to locate and select specific users. For operations such as reconciliations, you might want to view all entries associated with the operation. This type of search operation might return more than 1000 entries. You can change the default maximum number with the `enrole.ui.maxSearchResults` property in the `ui.properties` file.

To access the `ui.properties` file, do these steps:

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Advanced Configuration** > **Update Property** to display the **Update Property** page.
3. In the **Update Property** page, do these steps.
   a. In the **All properties** tab, click **Identity server property files**.
   b. Select `ui.properties` and view the property names and their value in the right pane.

      For more information, see Managing the server properties.

Setting this value higher consumes more physical memory. Dedicating a large amount of memory to a single operation can deteriorate the overall performance of the IBM Security Identity Manager Server. Do not change the amount for systems configured with the minimum amount of physical memory (2 GB).

Users are deleted from default groups in identity feeds

During an identity feed, users can be inadvertently deleted from the default groups that are associated with the customized groups.

When performing an identity feed, always specify that a user has membership in both a customized group and the default group of the same category. For example, a user who is a member of a customized group must also be a member of the default group of the same category or processing results are unpredictable. If the incoming identity record for a user initially indicates membership in a customized group, the product includes the user as a member of both the customized group and the default group of the same category. Security Identity Manager interprets a subsequent identity feed that includes the same user as a modification of the existing user. If the subsequent identity feed specifies the user has membership in

the customized group, but not in the default group of the same category, the software removes the user from membership in the default group.

Restoring the system administrator account

Incorrectly modifying a provisioning policy can deprovision all accounts except the built-in system administrator account. If you suspend or deprovision all IBM Security Identity Manager accounts, including the system administrator account, you can restore the system administrator account through the IBM Security Directory Server.

The following process restores the `itim manager` account. You can then restore other accounts using the manager account.

1. Access the IBM Security Directory Server Administration Console.
2. Navigate to `ou=SystemUser,ou=itim,ou=tim,dc=com`.

   The `dc=com` value was specified for the **Identity Manager DN Location** field in the **Directory Configuration** during installation.
3. Change the `eraccountstatus` value from `1` to `0`.

Do not change the date and time while users are logged in to IBM Security Identity Manager

If you change the date and time while users are logged on, unpredictable behavior might occur.

If you change the date and time on the operating system from the IBM Security Identity Manager virtual appliance console, make sure that no users are logged on.

Presentation problems

This section describes solutions to information presentation problems.

Identity Service Center page size is not configurable

On different pages that return search results, the maximum number of results displayed on a page is fixed to a value of 45. The page size in Identity Service Center is 45 and this value is currently not configurable.

Incorrect displays after running DBConfig

After you run the DBConfig command in either a single-server or a clustered environment, the following problems occur:

- During service creation, the account form labels are displayed incorrectly in the administrative console and Identity Service Center user interfaces. The ldapAttributes are displayed instead of the actual account form labels.
- In the administrative console, the service type descriptions do not display in the Configure System > Manage Service Types.

To resolve the problem, reimport the Security Directory Integrator profile JAR files from *ITIM_HOME*`/config/adapters`.

Search returns no results in Identity Service Center

When a search string is added on the Search User page, no results are returned, even though the list of users was shown before.

Resolution: check permissions. The search operation returns the results only if a user is granted read permissions on all of the default search attributes in the search filter: Full Name, Title, Image Uniform Resource Identifier, and Email address.

Validation error icons do not display in form view when reviewing edited changes in Identity Service Center

Modification details in the form view display only the noncompliant error icons. Validation error icons do not display in the form view for any fields except for the field User ID.

Workaround: Use the table view to review the changes.

This is a known limitation.

Headers in the Identity Service Center do not disappear upon log out from Self-Service user interface

This problem occurs when tasks in the Identity Service Center user interface start in the Self-Service user interface.

After you complete the activity and log out of the Self-Service user interface, though you can see the Identity Service Center login window, the headers do not disappear.

This is a known limitation.

Incorrect display of multiple tasks in the administration console

If you rapidly open multiple tasks in the administration console, sometimes the tasks open in the same tab rather than in separate tabs. To prevent this problem, wait until one task is loaded by the browser before you start the next task.

If multiple tasks get loaded on the same tab, you can correct the problem by refreshing the page. To refresh the page, press **F5** on your keyboard or click the refresh button on your web browser.

Blank spaces do not differentiate user-defined identifiers

Do not use blank spaces to differentiate user-defined identifiers such as the names of users or other objects. The user interface contracts two or more consecutive blank spaces into a single blank space. Example:

- You create two users: `j  doe` and `j  doe`.
- The first `j  doe` has one space between the given and family names.
- The second `j  doe` has three spaces between the given and family names.
- The user interface displays both names as `j  doe`.

Attribute deleted from service profile is still displayed in the form designer

You delete an attribute from a service profile. The form designer continues to display the attribute, even though the attribute no longer exists in the LDAP directory.

You must delete the same attribute in the form designer. If you close and open the form designer after deleting the attribute, it is no longer included in the list of attributes for the service.

Creating or modifying a form, a workflow design, or a policy might be hindered by timeout

Creating or modifying a form, a workflow design, or configuring policy join behaviors might take longer than the session timeout interval. To avoid interruption, the session never times out while the Form Designer, Workflow Designer, or Policy join applet is running.

Exit the task if you want the session timeout interval to take effect.

Browser limitation when displaying home page

The home page might require too much time to display with the Mozilla Firefox web browser. The home page might be displayed without GUI labels.

If the `network.http.pipelining` property is set to `true`, the home page might load slowly. This enablement multiplies the number of HTTP requests that are sent to the server and might overload it and the Mozilla Firefox web browser.

Browser limitation when setting row or column restraints

If you specify row or column constraints for a text area with the Form Designer applet, Mozilla Firefox web browser might not recognize them. The browser might display more rows or columns than you specified.

Example: You change the number of rows in the **Properties** pane to 2. You expect that only two visible lines are displayed. Mozilla Firefox web browser displays more than two rows.

Microsoft Internet Explorer web browser adheres to the column and row attributes on a text area.

Browser limitation when selecting multiple image controls with the Shift key

You cannot select multiple image controls in the Mozilla Firefox web browser by pressing **Shift** and **Click** simultaneously. If you try to select multiple image controls, another browser opens. Radio buttons are an example of multiple image controls.

JAWS reader interprets symbol as *greater than*

The JAWS reader interprets the **>** symbol as *greater than*. The *greater than* phrase might confuse a visually impaired user, because one piece of text cannot be greater or less than another piece of text.

The JAWS reader also reads the > symbol as *greater than* for all pages in the console application that contain the symbol. For example: breadcrumbs, **Next**, and **Back**.

For Arabic locales, English numbers are displayed for calendar and date widgets

To change the numbers to Arabic in the regional setting of the operating system, change the **Digit substitution** field from **Context** to **National**.

Twistie next to node names with special characters in a tree widget might not display correctly in bidirectional mode

You might encounter a display problem when you work in bidirectional mode.

In the IBM Security Identity Manager Console, the position of the twistie (►) next to a node or nodes in the tree widget might not display correctly. The display problem can occur when you do the following actions:

1. You create and name the node in a tree widget with a combination of text, numbers, and special characters. For example, "abc %*##abc".
2. You view the IBM Security Identity Manager Console in bidirectional mode.

The cause of this problem is that the special characters are misinterpreted as Arabic characters. Therefore, the web browser renders a mix of English and Arabic characters. However, this problem does not affect the strings of text and are considered for all other processing actions.

This problem is only related to the display of the nodes and does not affect any operation.

Data problems

This section describes solutions to problems with data.

If Security Identity Manager data is transferred from one location to another location and the root suffix or tenant value case sensitivity is not maintained it causes problems

Cause: Any time the Security Identity Manager data is transferred from one place to another location a possibility exists that the root suffix or the tenant values are defined in a different case. When this

situation occurs, the result is strange, extraordinarily undesirable behavior. Unfortunately, the behavior is not consistent. The effects of this problem produce different results that depend on the situation.

Data confusion begins with inconsistent case. It usually happens when a different case is used when you define the root suffix or tenant settings. This causes a data integrity issue.

For example, some records might specify the root suffix as `dc=customer,dc=com` and as `dc=Customer,dc=com`.

```
erglobalid=4428535020820737843,ou=0,ou=accounts,erglobalid=0000000000000000000,
ou=customer,dc=customer,dc=com
erService=erglobalid=916002417090758505,ou=services,erglobalid=0000000000000000000,
ou=customer,dc=Customer,dc=com
```

Unfortunately, this same problem appears to produce different symptoms.

In one case, accounts were incorrectly deprovisioned, and removed when they must not. The root cause of this problem, is that the cases of some service dn's that are stored in accounts' `erService` attributes are not the same dn's that are stored in provisioning policy `erTarget` or `erEntitlement` attributes. During policy enforcement, you get the service dn's of a user's accounts and do case-sensitive compares with the services that were targets of policies that are applied to the user. The case-sensitive compare does not see a match, so you delete the account.

In another case, some user's services or accounts are not displayed in Security Identity Manager even though they have valid, active accounts on those platforms.

It is not possible to determine how many different symptoms can appear because of this type of problem. There are many different places in the Security Identity Manager data where a DN is stored. In every situation that might compare that stored DN with an object's actual DN, there is potential for trouble.

Solution: Apply the same case to the root suffix and tenant values when you transfer data from one location (IBM Security Directory Server) to another.

If this problem has already happened, where the data is in mixed case, it can be corrected, but some effort is required. This task is best accomplished by using a tool that is created by a member of the IBM consulting team. Contact Second-Level Support for further assistance.

Error message: An integer field contains a non-integer value

You cannot enter a value greater than 2147483647 in the UID number field of the **Account information** window. This problem is a Java limitation. The following message is displayed:

```
CTGIMU656E: An integer field contains a non-integer value.
```

The message can be misleading when you enter an integer greater than 2147483647.

Cannot read library files

If the IBM Security Identity Manager Server does not have permission to read library files, verify that the files have the correct permission. If necessary, make the appropriate changes to the file permission.

Data input problems

Data input problems typically occur when users define custom data structures, such as new service types, in the directory structure, or when users install new adapters. If you cannot enter data for a custom class such as a service type, check the IBM Security Identity Manager Server and the IBM Security Directory Server logs. LDAP messages such as `object error 32` are typical. They indicate missing data for required fields or problems interpreting the schema.

Passwords cannot contain leading or trailing spaces

Security Identity Manager trims leading and trailing spaces for passwords. If the root user password for a managed resource includes a leading or trailing space, Security Identity Manager cannot connect to it.

The root password to access the associated managed resource must not have any leading or trailing spaces. The password cannot be a single blank space.

Cannot delete an organizational unit (OU)

When deleting an organizational unit (any unit in the organization), you must delete all dependent units before deleting the OU. Sometimes, dependent units might exist even though they are not displayed in the organizational tree. If you do not delete the dependent units, the system displays the following message:

```
Dependent Unit(s) exists. Remove all dependent Unit(s) first, then Delete.
```

Complete these steps:

1. Search the IBM Security Directory Server for dependencies by using the following command:

   ```
   erparent=OU-DN
   ```

   where *OU-DN* is the distinguished name (DN) of the OU.
2. Remove any discovered dependencies.
3. Delete the OU using the user interface.

Users cannot obtain their new passwords

If the following settings and conditions apply, the affected users cannot receive passwords reset by an administrator in the user interface:

- Some users and their supervisors do not have email addresses.
- Users cannot change their passwords.
- Challenge-response authentication is enabled.

If these conditions apply and a user clicks the **Forgot your password?** link to reset a password:

- The user cannot obtain the password through email or from the help desk assistant.
- The help desk assistant can reset the password, but the password cannot be delivered to the recipient.
- The user must contact the help desk to obtain the new password.

To avoid this problem, ensure that the email notification function is working and that all affected users and their supervisors have email addresses. As an alternative, users can change their passwords according to the applicable password policy.

User cannot change a password and the TRANSACTION_ROLLEDBACK error is displayed

If a user receives the TRANSACTION_ROLLEDBACK error when changing a reset password, stop and start the IBM Security Identity Manager. If it does not correct the problem, ensure that both IBM Security Identity Manager and the DB2 Universal Database servers are running. To stop and start the IBM Security Identity Manager, do these steps:

1. Log on to th IBM Security Identity Manager virtual appliance console.
2. From the **Server Control** widget on the **Appliance Dashboard**, do these steps:
   a. Select **Security Identity Manager server** and click **Stop**.
   b. Select **Security Identity Manager server** and click **Start**.

Cannot determine if data synchronization is running or the status of the last synchronization

You cannot determine if data synchronization is running or determine the status of the last synchronization.

When you select a report type in the administrative console, the status is displayed as the **Data Validity** field in the **Options** window. The following possible values determine the state of the data synchronization:

- No Data synchronized
- In progress
- Invalid
- Date and time when last synchronization completed

Importing backup directory information with LDIF fails

Using *LDAP Data Interchange Format* (LDIF) files to import backup directory information can experience problems if the system is not stopped or workflows are incomplete.

When you use LDIF files to import backup directory information, stop the application servers. If the LDIF import modifies workflows or operations, complete all workflows *before* you perform an LDIF import.

For more information about LDIF files, see the IBM Security Directory Server documentation.

Multiple access control items are ignored if the first 255 characters are the same

If you define more than one access control item (ACI) on the same target and at the same organizational level and the first 255 characters of every ACI name are identical, only one ACI is staged into the ACI table.

Reporting ignores the remainder of the ACIs. An ACI report shows only one ACI . The `trace.log` file displays the following error message:

```
com.ibm.websphere.ce.cm.DuplicateKeyException: ORA-00001: unique constraint
(ENROLE.SYS_C003110) violated
```

Do not define multiple ACIs with the same first 255 characters on the same target and at the same organizational level.

The Requestee column displays an unexpected value of the common name in a person during self registration

During self registration, the Requestee column of the common name in a person does not display an expected value.

To correct this problem, complete these steps:

Note: The value of **Name Attribute** in **Configuration** > **Entities** > **Person** must be set to `sn`. If the value of **Name Attribute** is changed back to `cn`, remove the script node.

1. Log on as `itim manager`.
2. Click **Configuration**.
3. Click **Entity Type**.
4. Select **Person** in the menu.
5. Click **selfRegister** as the operation.
6. On the **selfRegister** workflow, insert a uniquely named script node between the **Start** and the **selfRegister** Approval nodes.
7. Double-click the new script node to display **Properties: Script Node** window.
8. Enter the following Java script:

```
var personData = person.get();
var snValue = personData.getProperty("sn")[0];
process.setRequesteeData(snValue);
```

9. Click **OK**.

Workflow problems

This section describes problems with workflow processes.

Activities might be delayed when submitted in a batch through Identity Service Center
The Identity Service Center workflows process requests serially. After you submit a batch request, a particular request might not be displayed because it must wait until another request in the batch is completed. For example, a high priority role request might be delayed by a low priority account or group approval.

This condition is a known limitation.

Creating nine or more service instances for a password policy causes an error condition

An error occurs after nine or more service instances are associated with a password policy. Tune the DB2 `stmtheap` attribute for the maximum number of service instances. This table provides guidelines:

Table 10. Tuning the DB2 statement heap attribute

Maximum service instances	Statement heap size attribute value
12	4096
17	8192
24	16384

Change the statement heap size with the DB2 **update** command.

1. Set `db2instance` to one of these instances:
   - `db2admin`
   - IBM Security Directory Server instance
2. Run db2 from a command line to start the DB2 command-line interface.
3. Run an update command and specify the appropriate value as the *size* variable:

   ```
   update db cfg for db_name using STMTHEAP size
   ```

4. Stop and start IBM Security Directory Server.

Requests timeout before reaching the escalation period

One or more pending requests timeout before completion. The timeout stamp indicates that the escalation period was not reached. Modify the `LIMIT` values for requests in the IBM Security Directory Server operation objects. Specify a value of `-1` to set the operation to unlimited.

Set the LIMIT value for operation objects corresponding to operations, such as adding an account

1. Ensure that the user ID for connecting to the directory server has the necessary permissions to modify LDAP entries.
2. Using an LDAP client, connect to the directory server with the IBM Security Identity Manager data.
3. Browse to the appropriate operation definition. The operation definitions are located under this Distinguished Name:

   ```
   DN:ou=operations,ou=itim,tenant,root suffix
   ```

   Example: The tenant is `ou=org`. The root suffix is `dc=com`. The operations are in `ou=operations,ou=itim,ou=org,dc=com`.
4. Edit and set `LIMIT` to the appropriate value in the tag of the `erXml` attribute of the process definition entry. For example:

- To set the timeout of the account add operation to four days, edit the erXml attribute on erglobalid=00000000000000000022,ou=operations,ou=itim, ou=tenant,root suffix.
- Change LIMIT="43200000" to LIMIT="345600000" in the <PROCESSDEFINITION...> tag.
- To set LIMIT to unlimited, specify LIMIT="-1".

Set the LIMIT value for operation objects for workflows

1. Browse to the appropriate workflow definition. All the operation definitions for workflows are under this DN:

   ```
   DN:ou=workflow, erglobalid=00000000000000000000, tenant,root suffix
   ```

   Example: The tenant is ou=org. The root suffix is dc=com. The workflow definitions are in:

   ```
   DN:ou=workflow,erglobalid=00000000000000000000,ou=org,dc=com
   ```

2. Select the workflow entry under the Distinguished Name that you want to change.
3. Set the LIMIT value for changing the LIMIT value for operations. See Set the LIMIT value for operation objects corresponding to operations, such as adding an account.

Creating or modifying a workflow design, a form, or a policy takes longer than the timeout interval

Creating or modifying a workflow design, a form, or a policy might take longer than the session timeout interval. To avoid interruption, the timeout value in the web.xml file is ignored. The session never times out while the Workflow Designer, Form Designer, or Policy applet is running.

Ensure that you complete each activity to create or modify a workflow design, a form, or a policy.

A workflow UNTIL loop behaves like a DO...WHILE loop

A workflow UNTIL loop behaves like a DO...WHILE loop. Instead of ending when a specified loop condition is met, the loop continues until a specified condition fails. You must restate the condition as the negative of the specified loop condition.

For example, this condition requires restating as follows:

a<b
Needs to be restated as:
a>=b

Approval workflow not initiating

You defined an access with an approval workflow for a group. The workflow is not initiated when you add members to the group with the group management function.

Therefore, it is possible for unauthorized users to gain access to groups.

Workflow or operation cannot be created or updated

You created or updated a workflow or operation, but the changes did not take effect. The administration console indicates a successful operation, but the changes were not saved when the workflow designer exited.

This problem occurs only when you are running the administration console on localhost. For example:

```
http://localhost:9080/isim/console
```

When the problem occurs, check to see whether this exception is shown in the Java console window:

```
java.security.AccessControlException: access denied
   (java.net.SocketPermission 127.0.0.1:9080 connect,resolve)
```

Note: If you do not see the Java console window on your desktop when the browser loads the workflow designer applet, configure it from the Java control panel.

Workaround:

Select one of these workarounds:

- Do not use `localhost`. Instead, use the actual IP address or the host name to access the console. When you use an IP address or host name, the problem does not occur. For example:

```
http://testserver.subnet.example.com:9080/isim/console
http://1.1.1.1:9080/isim/console
```

- Modify a policy file to enable `localhost`. You can successfully use `localhost` by specifying a grant statement in a `.java.policy` file in your home directory. If you do not have an existing `.java.policy` file, create a text file. Add this statement:

```
grant {
  permission java.net.SocketPermission
  "127.0.0.1:9080", "connect,resolve";
};
```

Note: You must restart your browser after you create or modify the `.java.policy` file.

Usage problems

Search limit exceeded

The `ui.properties` file limits the number of results for accounts with default group attribute widget of the type **search filter list box**. The limit is 1000. The search returns only the first 1000 entries.

To access the remaining entries you must modify the account form to include a filter field so that you can narrow the search.

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the **Quick Links** widget on the **Appliance Dashboard**, click **Identity Administration Console**.
3. Log on to the IBM Security Identity Manager Console.
4. Click **Configure System** > **Design Forms**.
5. Click **Accounts**.
6. Double-click the account you want to modify.
7. Double-click the attribute on which you are searching on. It is identified as `[ListBox]`.
8. Specify the object class.
9. Select the **Show Query UI** check box and click **OK**.
10. Click **Save**.
11. Click **OK**.

Information is garbled in a CSV-formatted report

If you save or view a report in CSV format, UTF-8 encoding is used to format the output file. This format is supported by most CSV-compatible applications for viewing or manipulating CSV information. Some viewers might not support UTF-8 encoding or might not be set to open UTF-8 formatted files.

If the information in a CSV report does not render successfully, ensure that the application supports UTF-8 encoding and is set to use UTF-8 encoding.

Generating a PDF report with an active report file open fails

You generated a report output file as a Portable Document Format (PDF) file and either minimized the displayed information or left the file open.

You cannot generate another report until you close the active report file.

Report has Deprecated label Access Control Information

The report feature uses a deprecated label called Access Control Information. The new label is **Access Control Item** (ACI).

You might see the deprecated label if you:

- View the **Access Control Information {ACIs}** report builder.
- Click **Run report** > **Access Reports** > **Access Control Information {ACIs}** on the **Reports** tab.

Edit the `reportingLabels.properties` file and manually change the value for `accessControlInformation`. For example, the deprecated value is `accessControlInformation=Access Control Information {ACIs}`, and the correct value is `accessControlInformation=Access Control Item {ACIs}`.

To update the `reportingLabels.properties` file, do these steps:

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Advanced Configuration** > **Update Property** to display the **Update Property** page.
3. In the **Update Property** page, do these steps.
   a. In the **All properties** tab, click **Identity server property files**.
   b. Select `reportingLabels.properties`.
   c. Select `accessControlInformation` in the right pane and click **Edit**.

   For more information, see Managing the server properties.

The font in a report is too small

If the font in the report is too small to read, save the report in PDF format or in CSV format and print the report.

To save the report, complete these steps:

1. Select **File** > **Save As** from the report output window.
2. Browse to the directory where you want to save the file.
3. Enter a valid file name.
4. Save the document.

You can print both PDF and CSV format reports. You can print PDF reports in portrait or landscape modes. CSV can print reports that do not fit on a single page horizontally.

To print a CSV report, complete these steps:

1. Select the **CSV** report format when generating the report.
2. Select the **Save As** option in the dialog box.
3. Provide a valid location and file name for saving the report.
4. Use Microsoft Excel or any other CSV file reader to open the report.
5. Use the print option to print the document.

Adding the owner attribute causes an UnsupportedOperationException error

Adding the owner attribute on an account form might cause a `java.lang.UnsupportedOperationException` error.

The message is:

```
CTGIMO002E. An unhandled exception occurred.
Error: java.lang.UnsupportedOperationException: the owner and (or) service
or an account cannot be changed.
```

Do not use the Form Designer to add the owner attribute to an account form.

Use the Security Identity Manager account adoption and orphan operations to set or clear the owner of an account.

An organizational unit name with more than 128 characters is not created

If the organizational unit name exceeds 128 characters, the name is not created. Do not enter a value greater than 128 characters for the organizational unit name.

Note: A long name within the 128-character limit does not wrap when displayed.

The authenticated token can call only the SelfPasswordManager.resetPassword() API after authentication by using the challenge-response authentication system

If the system configuration property `Lost password question behavior` is set to `Reset Password`, the authenticated token can call only the **`SelfPasswordManager.resetPassword()`** API after the challenge-response authentication system authenticates a user.

Set the system configuration property `Lost password question behavior` to `Direct Entry`, so that the authenticated token can be used to call any API.

Forms generate an authorization exception

A user without attribute-level permission to read or write for a field tries to set a value for a drop-down list or plain list box. The form designer generates an authorization exception. When the field value is not set, the form viewer sets the value to the first item in the list.

Take one of the following actions:

- Designate a user with the appropriate attribute-level permission to set the value of the problem field. After the field is set to any value, the user without read and write permissions can modify the entity without authorization violations.
- Add a blank value to the top of the list. If the form viewer selects the blank value, no authorization violation occurs because a blank value and no selection are treated as the same condition.
- Check the **Use Blank Row** check box on all drop-down lists that use Form Customization.
- If the data is not sensitive, grant both read and write permissions for this attribute to the user.

Making multiple modifications to a Security Identity Manager object gives an unexpected outcome or failure with warning messages

A concurrent operation on the same object causes a trace condition that makes the outcome unpredictable. This problem occurs when using the APIs, such as submitting multiple requests to modify the same object in a while-for loop.

To ensure that all pending actions complete successfully, pause for an interval, such as a minute, before making a second modification to the same object. Alternatively, collect all the attribute changes on the same object and submit the changes as a single modify request. When you use Security Identity Manager APIs, consider collecting all your attribute changes to the object in the while-for loop. Then submit the changes as a single modify request.

LDAP version 3 filters cause adapter problems

Using LDAP Version 3 filters causes inconsistent results from an adapter, or might not be accepted by the adapter as input. Using more than two arguments in a reconciliation filter might cause an error unless multiple operators are used.

For example, the following filter causes a `FilterException` error:

```
(&(eruid=a*)(ersql2000defdatabase=i*)(ersql2000deflanguage=E*))
```

Use filters that are compliant with LDAP Version 2.

```
(&(&(eruid=a*)(ersql2000defdatabase=i*))(ersql2000deflanguage=E*))
```

Cleaning up the database with the DBPurge utility

It is a good maintenance practice to keep the IBM Security Identity Manager Server database to a manageable size.

You can use the **DBPurge** utility to clean up the audit trail in the database by removing records that are related to completed workflow processes. The utility is useful for deleting historical workflow audit data, non-workflow audit events, and reconciliation reporting entries from the database. It handles only removal, not archiving, of these records. Use the utility sparingly to avoid any unforeseen problems.

Utility usage

The IBM Security Identity Manager virtual appliance command line interface version of **db_purge** is interactive. After you log in to the CLI, navigate to the **isim > utilities > db_purge** prompt, type **execute** and press Enter. You are prompted for more parameters.

Required parameters

Specify one of the following parameters:

1:age
Specify the age of the records to be removed, which must not be a negative number. **0** removes all data, including the data for the current day.

2:date
Specify the deletion date and optional time. For example, **'2010-08-15-22:00'**. All records that are created on this date or earlier are deleted, based on the server time zone.

Enter **1** or **2** depending on your requirements. Next, choose from the following optional parameters to customize the selection.

Optional parameters

1: grouping
Specify the number of deleted entries in a single commit. The group size must be `1 - 100`, where `50` is the default value.

2: workflow
Determines whether workflow data is removed. The flag is Boolean, and its default setting is true.

3: process_type
Specifies a two-character parameter, which restricts the deletion of processes to the specified type.

For example, **'AP'** removes only processes of type `Account Password Change`. This parameter is relevant only when workflow data is removed. If you do not specify this parameter, then processes of any type are removed if they match the other parameters. For more information about the valid values, see the TYPE column description in the "Database and Directory > Server Schema Reference > Database tables reference > Workflow tables > PROCESS table" section in the *IBM Security Identity Manager documentation*.

4: audit
Determines whether non-workflow auditing related data is removed. The flag is Boolean, and its default setting is true.

5: recon
Determines whether historical reconciliation report data is removed. The flag is Boolean, and its default setting is true. This option does not remove the recon process-related data. To remove the

recon's processes-related data (that is, the data that appears in **View requests**), **-workflow 'true'** and **'-process_type 'RC'** must be used with the **-recon** option. See –**workflow** and **–process_type** parameters for more information.

6: threads
Specifies the number of threads to be created by the **DBPurge** process for the DB2 database. Allowed values are **1 - 8**. The default value is 4.

7: continue
Runs the utility with the passed options.

If you continue, by entering **7**, the message, **Running DBPurge clean utility** and the options that were passed are displayed. After you run the utility, it reports the number of records that are removed by the utility. It also reports success or failure of utility.

```
DBPurge required parameters < age or date >:
1: age - Specify the age of the records to be removed, which must be non-negative, where
a value of 0 will remove all data, including today's
2: date - Specify the deletion date and optional time. For example, '2010-08-15- 22:00'.

All records created on this date or earlier are deleted, based on the server timezone.

Select option: 1
Enter age: 10

DBPurge optional parameters:
1: grouping - Specify the number of deleted entries in a single commit. The group size
must be between 1 - 100 inclusive, where 50 is the default value.
2: workflow - Determines whether workflow data is removed. The flag is Boolean, and its
default setting is true.
3: process_type - Specifies a two-character parameter, which restricts the deletion of
processes to the specified type.
4: audit - Determines whether non-workflow data is removed. The flag is Boolean, and its
default setting is true.
5: recon - Determines whether historical reconciliation data is removed. The flag is
Boolean, and its default setting is true.
6: threads - Specifies the threads count for DB2 database. Allowed values are between 1 and
8 including these values, and its default value is 4
7: continue

Select option: 7

Running DBPurge clean utility.
Options passed: [ -age '10' -grouping '50' -workflow 'true' -audit 'true' -recon 'true'
-threads '4']
Database clean up is successful.
```

Scheduled execution

set_schedule
Log in to the CLI and navigate to **isim > utilities > db_purge > schedule**.

Type **set_schedule** to set the **DBPurge** schedule and press Enter.

You are then prompted for the **DBPurge** schedule name. After you provide the **DBPurge** schedule name, provide any required or optional parameters as described in “Utility usage” on page 55. After you enter **7** to continue, you are prompted for scheduling parameters.

```
Enter schedule information.
1: minute
2: hour
3: day of month
4: month
5: day of week
6: continue
```

After you enter **6** to continue, the message `Setting DBPurge schedule` is displayed. After the schedule is created, `DBPurge schedule set` is displayed.

The possible values for the day of the week is a number, between 0 to 6. For example: 0 represents Sunday. The following possible values are defined :

Value	Day of the week
0	Sunday
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday

In the event of a failure, the `DBPurge schedule could not be set` message is displayed.

```
Enter schedule name: Schedule1

DBPurge required parameters < age or date >:
1: age - Specify the age of the records to be removed, which must be non-negative,
where a value of 0 will remove all data, including today's
2: date - Specify the deletion date and optional time. For example,
'2010-08-15- 22:00'. All records created on this date or earlier are deleted, based
on the server timezone.

Select option: 1
Enter age: 0

DBPurge optional parameters:
1: grouping - Specify the number of deleted entries in a single commit. The group size
must be between 1 - 100 inclusive, where 50 is the default value.
2: workflow - Determines whether workflow data is removed. The flag is Boolean, and
its default setting is true.
3: process_type - Specifies a two-character parameter, which restricts the deletion
of processes to the specified type.
4: audit - Determines whether non-workflow data is removed. The flag is Boolean, and
its default setting is true.
5: recon - Determines whether historical reconciliation data is removed. The flag is
Boolean, and its default setting is true.
6: threads - Specifies the threads count for DB2 database. Allowed values are between
1 and 8 including these values, and its default value is 4
7: continue

Select option: 7
Enter schedule information.
1: minute
2: hour
3: day of month
4: month
5: day of week
6: continue
Select option: 1
Enter minute <0 to 59>: 10
Enter schedule information.
1: minute
2: hour
3: day of month
4: month
5: day of week
6: continue

Select option: 6

Setting DBPurge schedule.
DBPurge schedule set.
```

delete_schedule

Log in to the CLI and navigate to **isim > utilities > db_purge > schedule**. You must type **delete_schedule** to delete a schedule and press Enter. You are then prompted for **DBPurge** schedule name.

```
Enter schedule name: Schedule1
DBPurge schedule deleted.
```

view_schedule

Log in to the CLI and navigate to **isim > utilities > db_purge > schedule**. You must type **view_schedule** to view existing schedules and press Enter.

For execution logs, see the `dbpurge.log` file in the virtual appliance generated support file. In the support file, the `dbpurge.log` file is located in `/opt/ibm/identity/logs/`. For more information, see "Managing support files" in the *IBM Security Identity Manager Administrator Guide*.

```
Blank value in double quotes represent that no value has been set for that
option.
Schedules List:
1: scheduleName="Schedule1" age="0" date="" grouping="50" workflow="true" processType=""
audit="true" recon="true" threads="4" min="10" hour="*" dom="*" mon="*" dow="*"
```

Note: Cron tab fields can be set to an asterisk (*), which is the default value.

Processing description

The following description illustrates the cleanup processing that occurs when you run **DBPurge**. Additional archive utilities can be built and run before running **DBPurge**. The exact implementation might vary.

DBPurge runs the following queries to locate the primary records to remove:

```
1. SELECT ID FROM PROCESS WHERE COMPLETED <= timestamp
2. SELECT ID FROM AUDIT_EVENT WHERE TIMESTAMP <= timestamp AND WORKFLOW_PROCESS_ID IS NULL
3. SELECT RECONID, ACCOUNTID FROM RECONCILIATION_INFO WHERE RECONID IN (SELECT RECONID FROM
RECONCILIATION WHERE COMPLETED <= timestamp)
4. SELECT RECONID FROM RECONCILIATION WHERE COMPLETED <= timestamp
```

The value of *timestamp* is based on the specified **-age** parameter and uses the Security Identity Manager date format `yyyy-MM-dd HH:mm:ss:SSS GMT`. As the primary records are selected, the data is removed along with data from the secondary, dependent tables that reference these identifiers. The deletion is done in groups.

An `adjusted age specification` supports consistency so that the record age accurately reflects the time zone of the record time stamps. This strategy supports consistent handling of record time zones. The following values are valid:

0

Deletes any records that completed before the current time.

1

Deletes any records completed before exactly 24 hours ago.

This utility includes `multi-threaded deletion`. For all databases, separate threads and database connections to read record identifiers and to carry out deletions. For DB2 databases, multiple threads carries out the deletion and improve performance. Each thread requires its own database connection. The utility fails if the appropriate number of database connections is not available. For DB2 databases, **DBPurge** requires five connections; for other databases, it requires only two.

The following example is a high-level version of the statements for each table, and it illustrates the rows that are removed from each table.

Example

The following delete statements remove rows that reference identifiers from `query (1)` and from the PROCESS table:

```
DELETE FROM WORKITEM WHERE PROCESS_ID = ?
DELETE FROM ACTIVITY_LOCK WHERE PROCESS_ID = ?
DELETE FROM PROCESSLOG WHERE PROCESS_ID = ?
DELETE FROM PROCESSDATA WHERE PROCESS_ID = ?
```

```
DELETE FROM PENDING WHERE PROCESS_ID = ?
DELETE FROM PASSWORD_TRANSACTION WHERE PROCESS_ID = ?
DELETE FROM ACTIVITY WHERE PROCESS_ID = ?
DELETE FROM WORKFLOW_CALLBACK WHERE PROCESS_ID = ?
DELETE FROM SYNCH_POINT WHERE PROCESS_ID = ?
DELETE FROM AUDIT_MGMT_PROVISIONING WHERE EVENT_ID IN
   (SELECT ID FROM AUDIT_EVENT WHERE WORKFLOW_PROCESS_ID = ?)
DELETE FROM AUDIT_MGMT_TARGET WHERE EVENT_ID IN
   (SELECT ID FROM AUDIT_EVENT WHERE WORKFLOW_PROCESS_ID = ?)
DELETE FROM AUDIT_MGMT_DELEGATE WHERE EVENT_ID IN
   (SELECT ID FROM AUDIT_EVENT WHERE WORKFLOW_PROCESS_ID = ?)
DELETE FROM AUDIT_EVENT WHERE WORKFLOW_PROCESS_ID = ?
DELETE FROM SCHEDULED_MESSAGE WHERE REFERENCE_ID = ?
DELETE FROM LCR_INPROGRESS_TABLE WHERE CHILD_ID = ?
DELETE FROM PROCESS WHERE ID = ?
```

The following delete statements remove rows that reference identifiers from `query (2)` and from the `AUDIT_EVENT` table:

```
DELETE FROM AUDIT_MGMT_PROVISIONING WHERE EVENT_ID = ?
DELETE FROM AUDIT_MGMT_TARGET WHERE EVENT_ID = ?
DELETE FROM AUDIT_MGMT_DELEGATE WHERE EVENT_ID = ?
DELETE FROM AUDIT_EVENT WHERE ID = ?
```

The following delete statements remove rows that reference identifiers from `query (3)` and from the `RECONCILIATION_INFO` table:

```
DELETE FROM RECONCILIATION_INFO WHERE RECONID = ? AND ACCOUNTID = ?
```

The following delete statements remove rows that reference identifiers from `query (4)` and from the `RECONCILIATION` table:

```
DELETE FROM RECONCILIATION WHERE RECONID = ?
```

Customization problems

This section describes solutions for problems with customization.

Do not use the er prefix in label names

If you create a schema attribute label in the `CustomLabels.properties` file when you create a manual service definition, do not begin the name of the label with the characters *er*. This prefix is reserved by IBM Security Identity Manager.

To access the `CustomLabels.properties` file, do these steps:

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Advanced Configuration** > **Update Property** to display the **Update Property** page.
3. In the **Update Property** page, do these steps.
   a. In the **All properties** tab, click **Identity server property files**.
   b. Select `CustomLabels.properties` to view the property names and its values.

Security Identity Manager does not provide a method to create an outer join in the custom report designer

Create an outer join in the custom report designer by designing a hooked report that is a custom servlet. Put logic for an outer join of database tables in the custom servlet itself. The custom servlet, registered with the `report.xml` file, is run like a typical report from the Security Identity Manager reporting engine.

Adapter request fails on an orphan account

You might need to bypass the password validation on an orphan account when a request is submitted from an adapter. The `enRole.properties` file contains the following property to bypass the password validation on an orphan account when a request is submitted from an adapter.

```
reversePasswordSynch.bypassPwdValidationOnOrphanAccount
```

Set this value to `true` to bypass the password validation.

Manager group is not updated when using custom person entity

If you use a custom person entity and want the accounts automatically added to the service manager group, the schema must be mapped correctly.

The automatic population of managers into the manager group uses the `ersupervisor` attribute in the user profile schema. The `ersupervisor` attribute is a Security Identity Manager attribute and must be mapped to the attribute in the schema that stores the manager relationship. For the ready-to-use Person profile, `ersupervisor` is mapped to the `manager` attribute in the `inetOrgPerson` objectclass. The mapping of `ersupervisor` to `manager` is appropriate for a custom user profile based on an objectclass that extends `inetOrgPerson`.

Mapping the ersupervisor attribute

1. Select **Configure System** > **Manage Entities**.
2. Click the name of the custom user profile.
3. Click the **Attribute Mapping** tab.
4. Select `ersupervisor` as the Security Identity Manager attribute.
5. Select the appropriate Custom LDAP attribute, such as `manager`.
6. Click **Map** to map the attribute.
7. Click **OK** to save your changes.

IBM Security Identity Manager applets do not work

WebSEAL file and WebSphere Application Server configuration causes function problems with the applets in Security Identity Manager.

Problem

A Security Identity Manager applet, such as the workflow designer, does not work. It does not provide support when you do the following changes:

- Set as `pass-http-only-cookie-attr=yes` in the WebSEAL configuration file.
- Set the `HttpOnly` attribute to `JESSIONID` in WebSphere Application Server.
- Set the `HttpOnly` attribute to `PD-S-SESSION-ID` cookie in WebSphere Application Server.

An error can occur with these settings.

The cookie does not supply information to the applet with these settings. As a result, you cannot use the Security Identity Manager applet through WebSEAL.

Solution

The WebSEAL does not pass the `HttpOnly` attribute in the cookie. You can access the cookie information from the applet with the following setting in the WebSEAL configuration file:

```
pass-http-only-cookie-attr=no
```

Limitation in access catalog search when `intersection` or `custom` join enabled

Initially, the access catalog search in IBM Security Identity Manager does not support `intersection` and `custom` join for group access. There is a limitation in the search when the `intersection` or `custom` join is enabled. To make the search work correctly, you must change properties in the `enRole.properties` file.

If you have groups that are defined as `access` and the join directive is `intersection` or `custom`, these groups are not found in an access catalog search. To enable them, use the `com.ibm.itim.accesscatalog.groupIntersectionJoin.enabled` and `com.ibm.itim.accesscatalog.groupCustomJoin.enabled` properties that are defined in the `enRole.properties` file. Set these properties to `false`.

```
##############################################################################
## Access Catalog Properties
# com.ibm.itim.accesscatalog.groupIntersectionJoin.enabled -- This will enable
#    support to search group access when requesting access in Service Center in case that
#    Intersection Join director is used for the group attribute. Default = false
# com.ibm.itim.accesscatalog.customJoin.enabled -- This will enable support to
#    search group access when requesting access in Service Center in case that
#    Custom Join director is used for the group attribute.  Default = false
##############################################################################
com.ibm.itim.accesscatalog.groupIntersectionJoin.enabled=false
com.ibm.itim.accesscatalog.groupCustomJoin.enabled=false
```

See "Access catalog properties" in the *Reference Guide* in the IBM Security Identity Manager product documentation website at http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/index.jsp?topic=/com.ibm.isim.doc_6.0.0.2/kc-homepage.htm.

Ignorable warnings occur for new access types

After you specify a new access type, ignorable warnings can occur because an icon file is not found, but is associated with the access type.

There are also cases in which real errors occur for a request for a custom file that does not exist. You must determine which requests for nonexistent files are harmless and which require correction.

A harmless error can occur when you define new access types, but do not explicitly define a URL to an existing icon file name. The result is that a new access is implicitly associated with an icon file name pattern for a file that does not exist. Subsequently, when entitled users request access, ignorable warning messages are written to the log. For example:

```
[3/11/14 9:12:16:788 EDT] 0000022b SystemOut     O CTGIMW001W
File not found: /ui/images/access/iconAccessRoleApplicationAccess.gif
```

A screen reader such as JAWS does not read edited fields

In the Identity Service Center, edits made to the field shows an error icon but it does not read edited fields in the **View and Edit Profile** > **Review Changes** panel.

The Identity Service Center widgets are enabled with `WAI-ARIA` properties. The browsers Mozilla Firefox 3.5, Microsoft Internet Explorer 8, and screen readers such as JAWS 11 do not fully support all of those properties. Therefore, the screen reader does not read edited fields.

It is a known limitation.

State of RSA token is not updated

The state of the RSA token is not updated when the operation to create, modify, or delete RSA account fails or goes into wait or pending state.

To work around this limitation, you can do a reconciliation on the RSA service to synchronize the state of the RSA token in IBM Security Identity Manager. See Reconciling accounts immediately on a service.

Modify operation ACI limitation for organization movement

Even if the `Modify` operation ACI is denied on a target container, the organization movement activity is successful.

This is a known limitation.

To restrict organization movement activity, the `Modify` operation ACI must be denied on both, the source and the target container.

Advanced search option might not display role name and description

While you edit a profile through the Identity Service Center, an advanced search option might not display the role name and description.

The cause of the problem is that the Access Control Items (ACIs) are not defined.

To resolve the problem, write a new ACI that grants appropriate privileges to a user to display the role name and description.

Limitation for batch requests in Manage Activities wizard

For a group or role batch request, the activities page displays only the first group or role name in the Manage Activities wizard of the Identity Service Center.

This is a known limitation.

To view details of other groups or roles in a batch request, go to the activity details page.

Cannot proceed to request access for RSA service

In the Identity Service Center, when you request access for RSA service, you cannot proceed until you specify the value of security domain attribute. By default, the security domain attribute is mandatory.

To resolve the problem, change the default mandatory behavior of the attribute by using design forms.

Chapter 6. Troubleshooting database problems

This section describes solutions for potential database problems.

Passwords are changed or expired

The product installation creates three system users to enable communication between the database and IBM Security Directory Server. The default users are `itimuser`, `db2admin`, and `ldapdb2`.

The `db2admin` user is created with a password that never expires.

Passwords for `ldapdb2` and `itimuser` expire based on the password policy of your system. If these passwords expire or are changed, reconfigure IBM Security Identity Manager and its associated middleware to use the new passwords. For example, if the `itimuser` user password expires, database access fails unexpectedly. For more information, see the *Installation and Configuration Guide*.

Database update fails with an SQL error

The following example shows an error that can occur during database update operations. You might receive similar errors.

```
com.ibm.db2.jcc.a.SqlException: DB2 SQL error:
                        SQLCODE: -964, SQLSTATE: 57011, SQLERRMC: null
    at com.ibm.db2.jcc.a.hd.d(hd.java(Compiled Code))
    at com.ibm.db2.jcc.c.jb.l(jb.java(Compiled Code))
    at com.ibm.db2.jcc.c.jb.a(jb.java(Compiled Code))
    at com.ibm.db2.jcc.c.w.a(w.java(Inlined Compiled Code))
    at com.ibm.db2.jcc.c.dc.c(dc.java(Compiled Code))
    at com.ibm.db2.jcc.a.id.cb(id.java(Inlined Compiled Code))
    at com.ibm.db2.jcc.a.id.d(id.java(Compiled Code))
    at com.ibm.db2.jcc.a.id.Y(id.java(Compiled Code))
    at com.ibm.db2.jcc.a.id.executeUpdate(id.java(Compiled Code))
    at com.ibm.ws.rsadapter.jdbc.WSJdbcPreparedStatement.
      pmiExecuteUpdate(WSJdbcPreparedStatement.java(Compiled Code))
    at com.ibm.ws.rsadapter.jdbc.WSJdbcPreparedStatement.
      executeUpdate(WSJdbcPreparedStatement.java(Compiled Code))
```

The `SQLCODE: -964, SQLSTATE: 57011` error occurs when the transaction log space is depleted. This problem can occur because of a temporary increase in the number of active transactions.

1. Open a DB2 command window.
2. Run the following command:

   ```
   db2 get snapshot for all on itimdb
   ```

3. Examine the values of the following entries to determine if the database is running low on available log space:
   - `Log space available to the database`
   - `Log space used by the database`
   - `Secondary logs allocated currently`
4. Increase the number of secondary log files available to the database by 12 to provide additional log file space:
   a. From the DB2 command window, run the following command:

      ```
      db2 update db cfg for itimdb using logsecond
      ```

   b. Specify a value of `logsecond` plus 12 for *x*.

If the problem reoccurs, DB2 UDB `in-doubt` transactions might be the cause. `In-doubt` transactions result in transaction log space shortage. Previous server failures or crashes cause the transaction log to become full when transactions are performed. To correct this problem, complete these steps:

CAUTION: If IBM Security Identity Manager Server is running, changing transactions with timestamps close to the current time can cause server failures.

1. From a DB2 command window, connect to the Security Identity Manager database.
2. Run the following command:

```
db2 list indoubt transactions with prompting
```

3. Roll back any transactions with a timestamp near the time of the server crash.

Error occurs during recovery of Oracle database transactions

The `WTRN0037: The transaction service encountered an error on an xa_recover operation` error occurs during automatic generation of IBM Security Identity Manager accounts.

Application server attempted to recover Oracle database transactions. Oracle requires special permissions for recovery. You can correct this problem by running the following command to grant permissions:

1. Log in as the user **SYS**.
2. Run the following commands:

```
grant select on pending_trans$ to public;
grant select on dba_2pc_pending to public;
grant select on dba_pending_transactions to public;
grant execute on dbms_system to <user>;
```

The default Security Identity Manager database user is `itimuser`.

System failure causes data synchronization problem

If a system fails during data synchronization, you might not be able to run data synchronization after a system restore. Application server and database failures can cause this problem.

When data synchronization starts, IBM Security Identity Manager sets the **STATUS** column to `Started` in the **ITIMDB.SYNCHRONIZATION_HISTORY** table. When the system fails, the status is not updated to `Failure`. You must set data synchronization status correctly in the **SYNCHRONIZATION_HISTORY** table. Complete these steps:

1. Connect to the Security Identity Manager database.
2. Open the **SYNCHRONIZATION_HISTORY** table.
3. Locate the entry for data synchronization that reads `Started` in the **STATUS** column.

   Note: Only one `Started` entry is displayed.
4. Change the value of `Started` to `Failure`.
5. Commit the change to the database.
6. Run data synchronization.

Default multi-threaded DBPURGE operation on IBM DB2 database might not always work in a large environment

Multi-threaded **DBPurge** operation might fail with deadlock in database systems even though all optimization steps are followed.

Note: This scenario and the workaround apply to IBM Tivoli Identity Manager, version 5.1 and later versions of IBM Security Identity Manager.

The IBM Security Identity Manager **DBPurge** operation, by default, uses four threads for the IBM DB2 database. You can run the **DBPurge** operation with one thread by specifying the `-threads 1` argument in the **DBPurge** command.

If you run the **DBPurge** operation without the `-threads 1` option, the operation might fail with errors similar to the following one:

```
DB2 SQL Error: SQLCODE=-1476, SQLSTATE=40506,SQLERRMC=-911
```

The error indicates that either a database timeout or deadlock occurred.

The issue resulted from a deadlock condition between the multiple threads of the **DBPurge** operation. Tables that have defined foreign key constraint and have no defined index on the foreign key column might cause a deadlock or a lock timeout in the database system.

See the IBM DB2 documentation (http://pic.dhe.ibm.com/infocenter/db2luw/v9r7/topic/com.ibm.db2.luw.admin.perf.doc/doc/c0004121.html) for this scenario.

Example:

The **ACTIVITY_LOCK** table has a foreign key constraint that is defined with the **PROCESS_ID** and **ACTIVITY_ID** fields of the **PROCESS** and **ACTIVITY** tables. The **ACTIVITY_LOCK** table does not have an index for a foreign key **ACTIVITY_ID** column.

The **DBPurge** utility refers to the following tables which have no index entries that are defined in foreign key column:

- The **ACTIVITY_LOCK** table does not have an index entry for the foreign key **ACTIVITY_ID** column.
- The **PENDING** and **PENDING_REQUESTS** tables do not have index entries that are defined on the foreign key column. However, this table has the foreign key and primary key that is defined on the same column, **PROCESS_ID**. The database creates the index internally for the **PROCESS_ID** column.
- The **PROCESSDATA** and **RECONCILIATION_INFO** tables have index entries that include the foreign key column. However, the tables do not have index that contains only the foreign key columns. The DB2 documentation specifies that you must create an index that contains only the foreign key columns, to resolve the deadlock issue.

You can resolve this problem by creating the following extra index entries in the IBM Security Identity Manager database:

- `CREATE INDEX ENROLE.ACTIVITY_LOCK_AIDX ON ENROLE.ACTIVITY_LOCK (ACTIVITY_ID ASC) MINPCTUSED 10 ALLOW REVERSE SCANS;`
- `CREATE INDEX ENROLE.PROCESSDATA_PIDX ON ENROLE.PROCESSDATA (PROCESS_ID ASC) MINPCTUSED 10 ALLOW REVERSE SCANS;`
- `CREATE INDEX ENROLE.RECONCILIATION_INFO_RIDX ON ENROLE.RECONCILIATION_INFO (RECONID ASC) MINPCTUSED 10 ALLOW REVERSE SCANS;`

Creating the additional index entries ensures that **DBPurge** operation completes without a deadlock on a DB2 database when multiple threads of **DBPurge** operation run simultaneously.

Error message CTGIMI094E when searching for access in Identity Service Center

When a regular expression is used in the provisioning policy to grant group entitlement, you must be sure that the Java class to support regular expressions is loaded on the database server correctly.

If the Java class for regular expression support is not configured, you receive an internal server error when you search for access for a user during Request Access in the Identity Service Center. The error message with ID=CTGIMI094E is logged in the message log.

Chapter 7. Troubleshooting IBM Security Directory Server problems

This section describes solutions for potential problems using IBM Security Directory Server.

User modifications fail with ObjectClassViolation errors in IBM Security Directory Server

The requests to create or modify a user fail when using the default Person user profile. Length restrictions for certain user attributes cause this failure.

Problem

The IBM Security Directory Server schema imposes length restrictions on several attributes in the `inetOrgPerson` object class such as *initials*, *employeeNumber*, and *telephoneNumber*.

The following errors can help you determine if a user-related request fails due to a length restriction:

- The audit trail request for IBM Security Identity Manager displays the following error in the process result:

  ```
  CTGIMO017E: The following directory server schema violation occurred.
  Error: [LDAP: error code 65 - Object Class Violation]
  ```

  You can observe this error message by viewing the failed request in the **View Requests** console.
- The IBM Security Directory Server `ibmslapd.log` file contains an error similar to the following:

  ```
  GLPRDB069E: Attribute EMPLOYEENUMBER has a maximum value length of 20.
  Current attribute value is of length 27.
  ```

  The `ibmslapd.log` log file is produced by IBM Security Directory Server.

Solution

You can prevent request failures due to length violations with one of the following actions:

- Customize the Person form with the necessary field constraints. Customizing the Person form with the necessary field constraints prevents user errors and ensures that values conform to the requirements.
- Increase the maximum length of the attributes in the directory server schema.

Note: IBM Security Directory Server specifies each schema length constraint in number of bytes. Certain character sets require multiple bytes to represent a single character. When customizing the form or changing the schema length constraints, it is important to consider whether or not attribute values are specified using a multibyte character set.

Preventing connection problems with multiple LDAP sessions

On the Microsoft Windows operating system, the IBM Security Directory Server supports a default of 64 concurrent connections.

Connection attempts beyond 64 connections from the IBM Security Identity Manager Server fail and display a `Directory Server not available` error message like this example:

```
Connection pool exceeded: directory server not available
```

To limit connection problems, define the value of SLAPD_OCHANDLERS to increase the available connections.

1. Locate the following stanza in the `ibmslapd.conf` file:

   ```
   dn: cn=Front End, cn=Configuration
   ```

The default directory of the `ibmslapd.conf` file depends on the operating system.

Microsoft Windows systems
`C:\idssldap-ldapdb2\etc`

UNIX and Linux systems
`/home/ldapdb2/idsslapd-ldapdb2/etc`

2. Add the following line to this stanza:

```
ibm-slapdsetenv: SLAPD_OCHANDLERS=number-of-threads
```

One thread supports 64 connections. If there are multiple instances of the IBM Security Identity Manager Server, increase this value. If there are two instances of the server, each requiring a minimum of 50 simultaneous LDAP connections, specify a value of 2 or larger. For example, add this line to the following stanza:

```
ibm-slapdsetenv: SLAPD_OCHANDLERS=4
```

3. Save the changes.
4. Restart the IBM Security Directory Server so that the changes take effect.

Changing from a Sun ONE Directory Server causes index loss

After an initial installation that uses the Sun ONE Directory Server, changing to another LDAP server causes the loss of certain indexes.

You must add the missing indexes manually to the new LDAP server from the `er-indexes.conf` file on the initial LDAP server.

Complete these tasks from the Sun ONE Directory Server administration console:

1. Navigate to `Data=itim_suffix`. For example, *itim_suffix* is a value such as `dc=com`.

   `dc` denotes Domain Component.
2. Click **Add attributes**.
3. Add the following attributes:

```
index erparent eq
index erroles eq
index erservice eq
index ersupervisor eq
index ersponsor eq
index erhost eq
index erauthorizationowner eq
index erprerequisite eq
index erenabled eq
index errolename pres,eq
index eraliases eq,sub
index erservicename pres,eq,sub
index erobjectprofilename pres,eq
index ercustomclass eq
index eroid eq
index erisdeleted pres
index erpolicyitemname pres,eq,sub
index erlabel eq,sub
index erkeywords eq,sub
index erpolicytarget eq,sub
index erreqpolicytarget eq,sub
index erpolicymembership eq,sub
index eroverride eq
index eruserclass eq
index erprocessname pres,eq
index eracl pres
index eruid eq,sub
index erdraft eq
index erscope pres
index ersystemrolecategory eq
index erversionid eq
index erglobalid eq
index eradministrator eq
```

```
index ercategory eq
index erformname eq
index erpersonstatus eq
index eraccessdescription eq
index eraccessname eq
index ertype eq
index erword eq
index o eq,sub
index ou eq,sub
index owner eq
index l eq,sub
index manager eq
index description eq,sub
index ergroupdescription eq
```

4. Save the attributes.
5. Add the rules that are specified next to the attribute name.
6. Navigate to `Data=`*`itim_suffix`* and right-click *itim_suffix*.
7. Select the **Re-index** option.

Chapter 8. Troubleshooting email problems

This section describes solutions for email problems.

Cannot send email from IBM Security Identity Manager Server

If you cannot send an email, check the mail server properties. For example, you might not be able to send an email notification of a password change.

The properties are in the `enRoleMail.properties` file.

Take these actions:

- Log on to the IBM Security Identity Manager virtual appliance console.
- From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Manage Server Setting** > **Mail Server Configuration**.
- Use the **Mail Server Configuration** page to check the mail server properties. For more information, see Managing the mail server configuration.
- Check the host server name. Use the **nslookup** command to list the mail server name and IP address for a specific domain.

  1. Access the command prompt.
  2. Enter the **tools** command.
  3. Enter the **nslookup** commands as follows:

     ```
     nslookup
     > set type=MX
     > domain-name
     ```

     where *domain-name* is the Internet domain name of the email addresses of your organization. For example, `us.yourcompany.com`.

Cannot send email to external mail addresses

You might not be able to send email to external email addresses.

This problem might be caused by the relay permission on your mail server.

Your mail server must be set up for relaying from the machine that runs the IBM Security Identity Manager Server.

No information provided when email notifications are not delivered

When email notifications are not delivered through the IBM Security Identity Manager Server, there is no information to determine the cause of the problem. The information provided by the user to create and send the email notifications probably contains errors that can cause delivery failures.

Enable tracing and perform a task that generates an email notification. Examine the `trace.log` file to determine what errors occur.

Note: The `trace.log` file entries are saved in English only.

To view the trace entries, do these steps:

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, select **Manage** > **Maintenance** > **Log Retrieval and Configuration**.
3. On the **Log Retrieval and Configuration** page, click the **Identity** tab.
4. Select **Application trace**.

5. Click **View**.

   For more information, see Managing the log configuration.

Email searches can slow performance when you are provisioning many accounts

When you provision accounts to users without email addresses, you might experience slow performance. For large populations, the LDAP search for system administrators can slow down provisioning. To avoid this issue, ensure that user records have email addresses if you want email notifications. If you do not want email notifications, disable them to avoid the lookup.

The product is configured to send an email for an action, such as the creation of a new account. IBM Security Identity Manager follows this process:

1. Checks if the user has an email address on the person record.
2. Checks the manager of the user if no email address is found.
3. Sends an email to the system administrators, if the manager does not have an email address or the user does not have a manager.

To disable email notifications for a specific activity, such as new account creation, complete these steps:

1. Log in as a system administrator.
2. Expand **Configure System** in the navigation pane.
3. Select **Workflow Notification Properties**.
4. In the **E-mail Notification Templates** section, locate the notification you want to disable.
5. In the **Status** column, hover over the menu and click **Disable**.
6. Click **OK**.

The change takes effect immediately.

Email notification template for canceling requests is not applied after installing Fix Pack 6.0.0.3

IBM Security Identity Manager Fix Pack 6.0.0.3 includes support for entering the reason for canceling a request. With Fix Pack 6.0.0.3, the **Process Completion Template** includes information about who canceled the request, why the request was canceled, and when the request was canceled.

You can use the **Workflow Notification Properties** page to manually add information about canceling a request to the email notification template. When you install the IBM Security Identity Manager Fix Pack 6.0.0.3, the email notification template content that includes information about canceling a request is not automatically applied. The template changes that are available with Fix Pack 6.0.0.3 are not automatically applied so that the installation process does not overwrite any custom changes that you might have made to the email templates.

1. From the navigation tree, select **Configure System** > **Workflow Notification Properties**.
2. On the **Workflow Notification Properties** page, in the **E-mail Notification Templates** table, select **Process Completion Template**. Then, click **Change**.
3. In the **Notification Template** page, modify the **Plaintext body** field by adding this code to the end of the existing code:

```
<JS> if (process.canceledBy != null) { '<RE key="CanceledBy"/>: ' + process.canceledBy; }</JS>
<JS> if (process.canceledBy != null) { '<RE key="DateCanceled"/>: '; }</JS> <RE
key="readOnlyDateFormat"><PARM>
<JS> if (process.canceledDate != null) return process.canceledDate.getTime(); else return '';</JS></
PARM></RE>
<JS> if (process.canceledBy != null) { '<RE key="CanceledReason"/>:
<JS> (process.canceledJustification == null)? '': process.canceledJustification;</JS>'; }</JS>
```

4. In the **Notification Template** page, modify the **XHTML body** field by adding this code inside the table:

```
<tr align="left" valign="middle"><td class="text-description" bgcolor="EBEDF3">
   <RE key="CanceledBy"/>:</td><td width="773" class="text-description" bgcolor="white">
   <JS>process.canceledBy;</JS></td></tr>
<tr align="left" valign="middle"><td class="text-description" bgcolor="EBEDF3">
   <RE key="DateCanceled"/>:</td><td width="773" class="text-description" bgcolor="white">
   <RE key="readOnlyDateFormat"><PARM>
   <JS>if (process.canceledDate != null) return process.canceledDate.getTime();
   else return '';</JS>
   </PARM></RE></td></tr>
<tr align="left" valign="middle"><td class="text-description" bgcolor="EBEDF3">
   <RE key="CanceledReason"/>:</td><td width="773" class="text-description" bgcolor="white">
   <JS>process.canceledJustification;</JS></td></tr>
```

   Place the new code inside the table between these two sets of existing code:

```
<pre><JS>Enrole.localize(process.resultDetail, "$LOCALE");</JS></pre></td></tr>
```

   and

```
     </table>
        </td>
                <!-- End Of Notification body -->
```

5. To save the changes, click **OK**.
6. On the **Workflow Notification Properties** page, click **OK**.On the **Success** page, click **Close**.

Related tasks

Manually applying the email notification template changes for canceling a request in the *Administration Guide*

Chapter 9. Troubleshooting browser problems

The following section describes solutions for problems that involve a web server and a web browser.

Subform does not start when the same browser instance is shared by multiple users

The problem occurs when IBM WebSphere Application Server security integration check is enabled for the Identity Service Center and multiple users open the subform using the same browser instance.

To avoid the problem, close all browser windows after you log out of the Identity Service Center. Start a new browser session when you next log in to the Identity Service Center

Page help does not display

In some browsers, the page helps for the IBM Security Identity Manager administration console might generate a Java 404 error.

The page help file is loaded after the console page load is completed. This loading might take a second or more depending on your computer. If you open the page help before it is loaded, the 404 error is generated. If you click the help icon again after the file is loaded, the help file opens.

Identity Service Center login orientation error in Internet Explorer 10.0

The Identity Service Center login information incorrectly displays on the right side of the panel when it is viewed in Internet Explorer, version 10.0.

Problem
After the IBM Security Identity Manager 6.0 was installed, the developer accessed the Identity Service Center in Microsoft Internet Explorer, version 10. The login orientation was different and the information were incorrectly flushed on the right side of the panel.

Solution

The default setting for Microsoft Internet Explorer, version 10 is **Browser mode: IE10**.

The issue occurs only if the user sets the browser to Microsoft Internet Explorer, version 10 browser to **Compatibility View**.

To fix the issue, start the Identity Service Center in the Internet Explorer browser mode or native mode.

1. To set the native mode, press **F12** to open the Microsoft Internet Explorer developer tools.

   If the Microsoft Internet Explorer is in compatibility view, which is the case for this issue, then **Browser Mode: IE 10 Compat view** displays in the developer tools.
2. Select **Browser Mode: IE 10 Compat View**.
3. From the drop-down menu, select **Internet Explorer 10**. Your screen is automatically refreshed.

Administrator Console does not display correctly on Internet Explorer 10.0 in bidirectional mode

Problem
Unable to render IBM Security Identity Manager 6.0 Administrator Console correctly on Microsoft Internet Explorer, version 10, in bidirectional mode.

Solution

To fix the issue, start the IBM Security Identity Manager 6.0 Administrator Console in the Internet Explorer, version 10, browser.

1. To set the browser to **Compatibility View**, go to the toolbar and select **Browser Mode: IE10**.
2. From the drop-down menu, select **Internet Explorer 10 Compatibility View**. Your screen is automatically refreshed.

Mozilla Firefox web browser truncates double-byte characters in text fields

The Mozilla Firefox web browser truncates double-byte text characters in an input field. This problem is a browser limitation related to the font size.

Problem

Text fields that contain double-byte characters appear to vertically truncate the text when viewed at certain font sizes. The text appears to move down in the input field. The characters at the bottom are truncated. This problem does not occur with Microsoft Internet Explorer.

Solution

You can prevent the truncation with one of the following actions:

- Use the Microsoft Internet Explorer web browser.
- Decrease the font size in the Mozilla Firefox web browser. Complete one of the following actions:
  - Simultaneously press the **Ctrl** key and the **-** key.
  - Select **View** > **Zoom** > **Zoom Out** from the browser menu bar.

Enabling Microsoft Internet Explorer active scripting

For Microsoft Internet Explorer, ensure that the **Active scripting** item is enabled in the **Scripting** section of the web browser. If you disable active scripting, some websites might not function properly, or can cause online security problems.

Complete these steps to enable active scripting:

1. Click **Tools** > **Internet Options** on the browser menu bar.
2. Click the **Security** tab.
3. Click the **Internet** icon.
4. Click **Custom Level**.
5. Click the **Scripting** > **Active Scripting** list item.
6. Click **Enable**.

Update issues in the Administrator Console on Internet Explorer, version 10.0, native mode

Problem

The following IBM Security Identity Manager 6.0 Administrator Console pages are not updated when you click the **OK**, **Apply**, or **Cancel** buttons in an Internet Explorer, version 10 native mode environment:

- Manage Account Workflows
- Manage Operations

Solution

To fix the issue:

1. Start the IBM Security Identity Manager 6.0 Administrator Console in the Internet Explorer, version 10 browser.
2. Set the browser to **Compatibility View**.

   To set the browser to **Compatibility View**, go to the Address bar and check if the **Compatibility View** button is available.

   - Click the **Compatibility View** button if it is available.
   - If you do not see the **Compatibility View** button in the Address bar, then you do not have to turn it on.

Cannot initiate a session with IBM Security Identity Manager Server

Enable cookies in the browser to establish a session with the IBM Security Identity Manager Server.

Do not start two or more separate browser sessions from the same client computer. Consider the two sessions as one session that yields unpredictable results.

Table columns truncate entries that exceed 50 characters (Mozilla Firefox only)

Mozilla Firefox truncates some table column entries that exceed 50 characters.

This browser limitation can cause a problem when two or more items have the same 50 characters at the beginning. The entry looks identical to the user.

If possible, use naming conventions that ensure uniqueness up to 50 characters. If it is not possible to ensure uniqueness in a 50-character range, use Microsoft Internet Explorer to do certain tasks.

Drop-down lists and pop-up menus do not display (Mozilla Firefox only)

Mozilla Firefox web browser might not display drop-down lists and pop-up menus.

Mozilla Firefox web browser does not display the entire list of tasks because of these reasons:

- If you select the icon next to a user name in a list
- The name is at the bottom of the window

To view a complete list of tasks, use the ↓ key to scroll through the entire list.

Mozilla Firefox does not wrap text in a table column

The text does not fit in a table column and does not wrap in a Mozilla Firefox browser.

Text that does not fit inside a table column does not wrap. For example, an email address might not fit inside the **E-Mail Address** column. Use the mouse to highlight the text and drag it toward the edge of the column. This action scrolls the text in the direction of the mouse movement.

Window does not resize properly (Mozilla Firefox only)

The Mozilla Firefox web browser window does not resize properly.

If a window does not fill the web browser space after a resizing operation, resize the window again. This error can happen the first time that you resize the window.

Inconsistent tab order between supported web browsers

For the Mozilla Firefox web browser, the tab order is inconsistent between supported web browsers.

In windows that display the **Password Rules** table, for example, if you select **Allow me to type a password** in the **Confirm Password** window, you enable the other fields. You can then use the **Tab** key to navigate to the **Password** and **Confirm Password** fields.

In the Mozilla Firefox web browser, however, the cursor moves from the **Confirm Password** field to the **Password Rule** column of the **Password Rules** table, instead of moving directly to the **Submit** button.

Use the mouse rather than the **Tab** key to select the **Submit** button.

Mozilla Firefox browser overwrites the session management behavior

Some unexpected session management behaviors occur when the **Startup** mode is set to `Show my windows and tabs from last time` in the Mozilla Firefox web browser.

With this setting, the session is not terminated. The web browser also does not clear cookies from the previous session, including the LTPA token, even after you close or reopen the web browser. This setting causes unexpected behavior in IBM Security Identity Manager because the Security Identity Manager expects the following behaviors when the web browser is closed:

- The session to be terminated
- The session cookies to be cleared.

Do not use this setting in the Mozilla Firefox web browser because it is not supported. If required, clear all cookies or use another web browser like Microsoft Internet Explorer to carry out certain tasks.

Chapter 10. Troubleshooting report problems

The following section describes solutions for the IBM Security Identity Manager Cognos® report problems.

Problems and their solutions

Viewing a report in Turkish locale shows characters that are not translated as '#'.
The PDF report by default is unable to render some Turkish characters. This issue is a known limitation.

IBM Cognos audit history report does not show the audit of an account that is provisioned on the managed resource
IBM Cognos audit history for an account does not show the audit of the account that is provisioned on the managed resource when "Default Account Request Workflow" is configured with the entitlements that are associated with the provisioning policy.

Solution
To generate the audit history reports for the accounts with the default workflow, clear the **Approval Start Date** and **Approval End Date** check boxes, and then run the report.

IBM Security Identity Manager Cognos report execution fails on Oracle data source
During the report generation on Oracle data source, if you select more than 1000 filter values on the prompt page, the report execution fails.

Solution

1. Open the report in IBM Cognos Report Studio.
2. Open the prompt page and edit the property **Rows Per Page** for all input widgets.
3. Set the value to less than or equal to 1000.

The scope for the default provisioning policy is shown as blank on Oracle database.
When you generate the customized IBM Cognos report that includes provisioning policy scope in it, the scope for the default provisioning policy is shown as blank. This issue is specific to Oracle database.

Solution
If the scope for the default provisioning policy is shown as blank on Oracle database, then, interpret the scope of a provisioning policy as `Subtree`.

No data is displayed in the IBM Security Identity Manager Cognos audit history report
Account audit is not supported for an account that is added and does not have a defined workflow. To audit the accounts for an audit history report, the default workflow or custom workflow must be attached to the provisioning policy that is created.

Long filter values are not shown completely on the prompt pages
Follow the technote link http://www.ibm.com/support/docview.wss?uid=swg21341018 to resolve this issue. The information in the technote also applies to IBM Cognos Analytics version.

Known limitations

IBM Security Identity Manager administrative console reports do not display information about accounts that are requested through the Identity Service Center

Solution
Operations that are performed in the Identity Service Center do not generate audit records. They generate access records in IBM Cognos. Use IBM Cognos audit history report to view them.

User entitlements are not displayed in Legacy Administrator console reports and in BIRT reports
Both the Legacy Administrator console reports and BIRT reports do not show the entitlements granted to an individual when the provisioning policy membership is set to "All Other Users". To resolve the problem, use Cognos-based entitlements granted to an individual report to get the entitlement details.

IBM Cognos entitlements report shows the provisioning policy data that is in the draft state
The IBM Cognos entitlements report shows the entitlements that are granted to an individual. It lists all the users and the items for which they are entitled. The report also shows the provisioning policy information that includes the policies that are saved in the draft state.

Cannot truncate the length of the text in the pie charts
An option or a property that can be set to truncate the length of the text is not available for the pie charts. You cannot truncate the length of the text in the pie charts.

Unable to interpret the date in the separation of duty policy violation report
The `date` value in the `Separation of duty policy violation` report shows the numbers only. This value is the time in the seconds since the Epoch date.

Languages that are not supported by the IBM Cognos Analytics Server
IBM Cognos Analytics Server does not support the following languages:

- `ar=Arabic`
- `iw=Hebrew`

It provides partial support for the following language:

- `el=Greek`

The IBM Cognos Analytics Server is not fully translated into the Greek language. Only components like `Cognos Viewer`, `Cognos Connection`, `Cognos Administration`, and `Cognos Workspace` support translation in the Greek language.

Note: The unsupported languages are not in the **Product Language** list, although they are displayed in the **Content Language** list in the Cognos configuration of IBM Cognos Analytics Server.

Duplicate entries of the account add operation are observed when you run the account audit report
Duplicate entries of the account add operation are observed if the provisioning policy is configured with the default workflow and an extra custom workflow is created in IBM Security Identity Manager Console under **Configure System** > **Manage Operations**.

Solution
Remove the default workflow that is defined in the provisioning policy. Therefore, only the custom workflow that is defined would be effective, which would be captured in the account audit report.

Custom workflows that are defined in IBM Security Identity Manager are not supported for the following type of actions on an account
Only the default workflows are supported for the following actions on an account.

- Restore
- Suspend

Audit of the custom access type is not supported in the access audit history report
Any custom access type that is defined as access for a role, service, or group cannot be audited in the access audit history report.

Out of memory during data sync with many administrators

You might encounter a memory issue during data synchronization when you have many administrators for one or more admin domains.

As an example, consider the following organization (container) structure:

```
Organization
    |--- Client Admin Domains -- Have 1000 Administrators
    |--- Client Admin Domain 1 -- Have 3 Administrators
    |--- Client Admin Domain 2 -- Have 3 Administrators
    |--- Client Admin Domain 3 -- Have 3 Administrators
    |--- ...................
    |--- ...................
    |--- Client Admin Domain 50000 -- Have 3 Administrators
```

Administrators of the parent container are also administrators of child containers. So each child admin domain from 1 to 50000 have 1003 administrators. This administrator detail is stored in memory in a 'HashMap' during data sync process.

The data that is stored in 'HashMap' has the following format:

(**Key** - DistinguishedName of container, **Value** – HashSet of SystemUser DNs of the administrators)

Since there are around 50000 admin domains (child containers), each having approximately 1000 administrators, the number of HashSet objects are approximately 50000 and the total number of objects that are stored in the HashSet will be 50,000,000 (50,000 containers * 1000 administrator entries for each container). Thus the amount of memory that is used is large and results in out of memory.

Each entry in HashSet takes 32 bytes of memory. So the memory occupied by 1000 SystemUser DNs is approximately 32000 bytes = 31 KB. 31 KB of memory is required to store SystemUser information of each container. Since you have 50000 containers, total memory that is required is approximately 1600000000 bytes (50000 containers * 32000 bytes used for storing administrators details of each container) = 1.49 GB.

Tune the following two properties `adminCacheSize` and `supervisorCacheSize` in `adhocreporting.properties` file to limit the size of the HashMap.

- The property, `adminCacheSize`, specifies the maximum number of admin domain containers whose administrator data is stored in the `cache(HashMap)`.
- The property, `supervisorCacheSize`, specifies the maximum number of OU/Location containers whose supervisor data is stored in the `cache(HashMap)`.

You must have an idea about the number of administrators set for any container. Administrators of a parent container are also administrators of child containers.

Remember the following considerations:

- Number of administrators of the parent container = Number of elements that are stored in the HashMap for parent container. Each element is an object of `HashMap$Entry` instance.
- Memory that is used by `HashMap$Entry` instances to store administrator information for a single container = Number of administrators of a single container * 32 bytes
- If you have *x* numbers of child containers for this particular parent container, then the number of `HashMap$Entry` instances are *x* * *number of administrators of the parent container*.
- Memory used = x containers * number of administrators of the parent container * 32 bytes

Depending on the memory usage value that is described, the number of container details that you store in memory, must be decided. You decide this value, so that the memory that is used will not be high. In an ideal scenario, you can limit the memory that is occupied by admin domain cache to 256 MB.

Use the following formula to calculate the appropriate value for the `adminCacheSize`.

```
Value of adminCacheSize property = (max memory limit * 1024 * 1024) bytes /
(average number of administrators for each container * 32 bytes)
```

For example:

If the described container structure scenario is considered, then the value of `adminCacheSize` property will be calculated as follows:

Value of `adminCacheSize` = (256*1024*1024) / (1000*32) = 8388.608 = 8000 approximately (rounded figure).

The `adminCacheSize` value can be set to 8000, so that the memory that is used is 256000000 bytes (8000 containers * 32000 bytes used to store administrators of each container) = 244 MB approximately.

This process limits the amount of memory that is used by the admin domain admin cache to 256 MB.

If you do not have such large number of administrators, the default value of -1 is appropriate. This default setting stores all the administrator details in memory. If your environment has a large number of

administrators in the parent container and also have many child containers for the parent container, then you must confirm whether you are facing memory issues during data synchronization. The next step is to analyze the heap dumps and if the leak suspect is the HashMap storing HashSet objects, then configure the values of `adminCacheSize` and `supervisorCacheSize` by performing the calculation as explained above.

Note: A similar calculation is also applicable for the property, `supervisorCacheSize`. Supervisor is applicable only for OU and locations. Admin Domains and Business Partner Organizations do not have supervisors. This should be considered while deciding the number of containers present in the Organization structure.

Configurable column sizes for report data sync tables

You can customize the column length values of the tables that are created during report data synchronization.

The default value for all the entries is 255.

All the reporting related table schemas are stored in the 'ENTITY_COLUMN' table. The data that is stored in this table is used to create tables and columns at the time of data synchronization. As part of this fix, the 'ENTITY_COLUMN' table is altered to add one more column, 'COLUMN_LENGTH' to store the length of the column.

The customized column length value can be specified for a particular column by mentioning the entity and attribute name in the `$ISIM_HOME\data\adhocreporting.properties` file. The column length value is used to create the reporting tables. The column lengths of only the specified columns are changed, while other table columns are created with a default value of 255.

Properties introduced in `adhocreporting.properties` file

- The property lets you specify the value of the column length to be set while creating reporting tables during data synchronization. These values determine the maximum amount of information that is stored in the database for the attribute and displayed in reports.
- List the entity and its attribute names with required column length values in the following format: `entity.column.<entity_name>.<attribute_name>.length=<length_of_column>`

  For example:

  `entity.column.systemrole.description.length=500`
- The unit of the value that is specified for the property is in bytes. For Oracle database the unit is as specified for the parameter **`NLS_LENGTH_SEMANTICS`**.
- The default value for the column length is 255. All the attribute values that are not specified by using this property has a default column length of 255. Permissible values for this property are in the range of 1 to 4000. The default value is used for invalid values.
- It is suggested not to set the column length value to less than the default value, 255, unless required. Setting a value that is less than the default value only for the attributes that are manually mapped by using the schema mapping and not for implicitly mapped attributes.
- The column length of the **default attributes** that are added in the parent table for each entity such as DN, CONTAINERDN, SUPERVISOR, OWNERDN, SELFDN, TARGETCLASS cannot be configured by using this property. The length can be configured for only those attributes, which can be mapped by using the report schema mapping. The ACI and AUDIT-related reporting tables' column length values cannot be configured.
- The column length value of existing tables for already mapped attributes is not changed during the incremental synchronization. Full data synch must be run to reconfigure the existing tables.
- If you are running incremental data synchronization or data synchronization utility from a separate system, the values for newly added property in the `adhocreporting.properties` present on this system must sync with the values in `adhocreporting.properties` file that is present on the system where IBM Security Identity Manager server resides.

How this fix works

- Full data synchronization
  - The value of the particular entry in the ENTITY_COLUMN table is updated by reading the $ISIM_HOME/data/adhocreporting.properties file during the initial step of full data synchronization process.
  - The value of the column length in the ENTITY_COLUMN table is used to create the reporting tables and the data is truncated while inserting the data into these tables.
- Incremental data synchronization
  - The column length value in the ENTITY_COLUMN table is used to truncate the data while inserting the data into these tables.
  - Incremental synchronization does not alter the schema of the existing tables that are already created for already mapped attributes. If the schema enforcement property is set to false, it neither creates or alters the table for newly mapped attributes nor updates the ENTITY_COLUMN table.
  - If the schema enforcement property is set to true, the tables/columns are created/added to the existing reporting tables for newly mapped attributes with column length values that are specified in the property file and ENTITY_COLUMN table is updated with new column length value. The same column length value is used to truncate the data values while loading the data in the tables.
  - If you want customized values for existing attributes, which are already mapped, they must run full data synchronization. The subsequent execution of the incremental synchronization truncates the data while populating the table.

Data validity attributes are not synchronized

The **Data validity** time that is displayed in the report does not match the **Data validity** time that is displayed in the request.

When a report is requested from the IBM Security Identity Manager administration console, the request shows the **Data validity** attribute with the time that the report was generated. However, the actual report shows the **Data validity** attribute as occurring 12 hours earlier.

For example, a report that is requested on the console with a **Data validity** of September 23, 2015 9:20:21 AM generates a report with a **Data validity** of September 22, 2015 9:20:21 PM.

This condition is a known limitation.

Data synchronization mismatch in the ercustomdisplay attribute mapping

In a **Person** profile type, the value for the mapped attribute **sn** is fetched from LDAP whereas the raw attribute **ERCUSTOMDISPLAY** is used to read the value from the obtained directory object. As a result, the **ercustomdisplay** attribute is empty in the Person table for inserted custom person.

Solution

In the ReportDataSynchronization.properties file, change the following attributes from =old to =new.

accountSynchronizationStrategy
groupSynchronizationStrategy
organizationalContainerSynchronizationStrategy
personSynchronizationStrategy
roleSynchronizationStrategy
serviceSynchronizationStrategy

Example
In the `ReportDataSynchronization.properties` file, set

```
accountSynchronizationStrategy=old
groupSynchronizationStrategy=old
organizationalContainerSynchronizationStrategy=old
personSynchronizationStrategy=old
roleSynchronizationStrategy=old
serviceSynchronizationStrategy=old
```

to

```
accountSynchronizationStrategy=new
groupSynchronizationStrategy=new
organizationalContainerSynchronizationStrategy=new
personSynchronizationStrategy=new
roleSynchronizationStrategy=new
serviceSynchronizationStrategy=new
```

Orphan accounts are not displayed on the dashboard report

When an initial account status view is displayed for the orphan accounts on the IBM Security Identity Manager Cognos dashboard report, orphan accounts are not found.

Orphan accounts are not displayed during the initial account status view and the following message is displayed. `No orphan account found on managed resource`.

To resolve the problem, reselect the filters that are displayed in the left pane of the dashboard, and then click OK.

Filters on each individual chart do not refresh in the dashboard report

In the IBM Security Identity Manager Cognos dashboard report, filters that are applied on each individual chart do not refresh based on the global filter value that is provided in the dashboard.

To resolve the problem, refresh the workspace. Click **Refresh Workspace** in the workspace toolbar.

Dashboard report fails to show the aggregate values or measures on the chart

When the IBM Security Identity Manager entities such as business unit, provisioning policy, or service are duplicate, the IBM Security Identity Manager Cognos dashboard report does not display the aggregate values on the chart.

To resolve the problem, ensure that the entity names that are defined in the IBM Security Identity Manager are prefixed to make them unique.

Provisioning policy membership chart takes a long time to load in the dashboard report

In a large deployment scenario, the query takes a long time to render the data on the IBM Security Identity Manager Cognos dashboard report for the provisioning policy membership chart.

To resolve the problem:

- Hide the Provisioning Policy Membership chart.
  1. Right-click the Provisioning Policy Membership chart.
  2. Select **Remove from Workspace**.
- Display the reports.
  1. Click **My preferences**.
  2. Select the **Show hidden entries** check box in the IBM Cognos Connection.

- If the data is not displayed in the provisioning policy membership chart, edit the query that is associated with the chart to provide the required filters. Then, start the dashboard report.

Note: The required chart and its query are available in the report name **Workspace Tab Report** that is hidden under the package **ISIMReportingModel_6.0.0.3** in the IBM Cognos Connection portal.

Best practices to run the Cognos reports in a large data deployment scenario

Follow the best practices when you run IBM Security Identity Manager or IBM Security Privileged Identity Manager Cognos reports in a large data deployment scenario.

Use parameters or filters when you run PDF report
When you run the reports with the default report parameters, all the records rendered. Use the reporting parameters or filters to scope down the records.

Prefer HTML format
IBM Security Identity Manager Cognos reports in the HTML format support pagination. When you run the report in HTML format, it renders one page at a time. Click the page down link on the report to display the next page.

Tune the database
See the *Performance* section at http://www.ibm.com/support/knowledgecenter/SSRMWJ/welcome.

Web session does not time out when the provisioning policy change preview is in progress

If the provisioning policy preview is in progress, the web session does not time out.

The provisioning policy change preview automatically refreshes the IBM Security Identity Manager user interface every 10 seconds to update the preview status. It does not acknowledge the default web session idle timeout (10 minutes).

It is a known limitation.

Report data synchronization fails intermittently

When you run the report data synchronization, it might fail with an exception `com.sun.jndi.ldap.Ber$DecodeException`.

One of the causes of the problem might be the absence of database tuning.

To resolve the problem, set the value of the property `accountSynchronizationStrategy` to `new`. Complete the following steps:

1. Open the *ITIM_HOME*`/data/ReportDataSynchronization.properties` property file.
2. Set the value of the property `accountSynchronizationStrategy=new`.
3. Try the data synchronization operation again.

The new synchronization strategy is also designed to improve the performance of the data synchronization.

Chapter 11. Troubleshooting virtual appliance problems

The following topics describe solutions for problems that involve the virtual appliance.

Login fails after you apply an SSO configuration snapshot

After you unconfigured single sign-on (SSO) and applied an SSO configuration snapshot, the SSO login fails.

Problem

1. You configured and verified SSO for all the nodes in your cluster.
2. You created a snapshot of the SSO configuration on all the nodes.
3. You unconfigured SSO and synchronized the member nodes.
4. You applied the SSO configuration snapshot to all the nodes.
5. After all the nodes are running and synchronized, you log in.
6. Instead of logging directly in to the Security Identity Manager console, you are shown the **Security Identity Manager login** page for each of the consoles.

Solution

When you take an SSO configuration snapshot, you must also take a snapshot of the SSO provider. When you apply the SSO configuration, you must also apply the SSO provider snapshot that was taken with the configuration snapshot.

If you did not create the SSO provider snapshot, do the following steps.

1. Apply the SSO configuration snapshot.
2. Log in to the virtual appliance.
3. Click **Configure** > **Single Sign-On Configuration**.
4. Select the **SSO configuration**.
5. Click **Reconfigure**.

Browser does not update the application certificate

The application certificate that is displayed by the browser on the IBM Security Identity Manager login page is not updated after the **`Application Interface IP`** and **`FQDN`** are updated on the virtual appliance.

Problem

1. Modify the application interface IP and FQDN on the IBM Security Identity Manager virtual appliance console.
2. Restart IBM Security Identity Manager server.
3. Verify that new application server certificate is generated from **Configure** > **Application Server Certificate Management**.

The browser shows the older certificate on the IBM Security Identity Manager login page.

Solution

Restart IBM Security Identity Manager server.

SNMP server search on the SNMP monitoring page is not successful

When you log on to the IBM Security Identity Manager virtual appliance console, the SNMP search on the **SNMP Monitoring** page is not successful.

Problem

The following steps result in a problem:

1. Log on to the IBM Security Identity Manager virtual appliance console
2. From the top-level menu of the **Appliance Dashboard**, click **Monitor** > **Monitoring** > **SNMP Monitoring**.
3. On the **SNMP Monitoring** page, click **Configure**.
4. In the **Configure SNMP** window, select **SNMPv1** as the **SNMP Protocol** version that the agent must use.
5. In the **Community** field, provide a valid community name that the SNMP manager must use to authenticate with the SNMP agent.
6. On the SNMP client, search for the SNMP server.

The SNMP server search does not yield any results.

Solution

Restart the IBM Security Identity Manager virtual appliance to overcome the SNMP server search problems.

When you search the SNMP server from the **SNMP Monitoring** page after you restart the virtual appliance, the client configuration to search the configured SNMP agent is successful.

Microsoft Internet Explorer 11.0 does not display updated tabular data on the IBM Security Identity Manager virtual appliance console

When you use the Microsoft Internet Explorer 11.0 web browser to work with the virtual appliance, the updated tabular data is not displayed on the IBM Security Identity Manager virtual appliance console.

Problem

Updated tabular data is not displayed on the IBM Security Identity Manager virtual appliance console when you use Microsoft Internet Explorer 11.0.

Diagnosing the problem

The following steps result in a problem.

1. Log on to the IBM Security Identity Manager virtual appliance by using the Microsoft Internet Explorer 11.0 web browser.
2. From the top-level menu of the **Appliance Dashboard**, work with the following pages:

   Workflow Extension

   - After you create a workflow extension successfully, it is listed in a table on the **Workflow Extension** page. However, when you click **Refresh**, the workflow extension disappears from the table on the **Workflow Extension** page.
   - A message indicates that the workflow extension was not deleted successfully when you delete an existing workflow extension on the **Workflow Extension** page.

Update Property

- The **Modified properties** tab does not display any property names when you update any property in the **Identity server** tab, the **Application server** tab, or the **Custom** tab on the **Update Property** page.

Custom File Management

The **Modified Files** tab does not display any file names when you add a file from the **Custom File Management** page.

Solution

Change the compatibility settings of the Microsoft Internet Explorer Version 11.0 web browser to view the tabular data correctly on the IBM Security Identity Manager virtual appliance console.

IBM Security Identity Manager application trace logs display SQL exceptions on the member node of the virtual appliance

When you reconnect a removed member node on the virtual appliance, SQL exceptions are displayed in the application trace log.

Problem

A typical SQL exception in the application trace log is as follows:

```
Caused by: java.sql.SQLException: [jcc][t4][2043][11550][3.64.82]
Exception java.net.NoRouteToHostException:
Error opening socket to server /9.113.51.83 on port 50,002 with message:
No route to host. ERRORCODE=-4499, SQLSTATE=08001
```

Solution

When such a problem occurs, restart the IBM Security Identity Manager Server on member node to clear the exception in the application trace logs. Do these steps:

1. On the **Appliance Dashboard**, locate the **Server Control** widget.
2. Select **Security Identity Manager server**.
3. Click **Restart** to restart the selected server.

IBM Cognos Intelligence Server 10.2.2 reports can be displayed on Microsoft Internet Explorer 11.0 only in compatibility mode

IBM Security Identity Manager, Version 7.0.0.2 supports IBM Cognos Business Intelligence Server, Versions 10.2.1 and 10.2.2.

Problem

However, Cognos reports and the date widget in the IBM Cognos Business Intelligence Server 10.2.2 do not display when you use Microsoft Internet Explorer 11.0 in native mode.

Solution

Ensure that you set Microsoft Internet Explorer Version 11.0 to compatibility mode to support IBM Cognos Business Intelligence Server, Version 10.2.2. This problem is a known limitation.

To set Microsoft Internet Explorer Version 11.0 to compatibility mode, do these steps:

1. On the web browser, click **Tools** > **Compatibility View Settings** to open the **Compatibility View Settings** window.
2. In **Add this website**, type the URL of the site that you want to add to the list.

3. Click **Add**.

   Note: Microsoft Internet Explorer 11.0 automatically displays that site in Compatibility View each time you visit.

REST API limitations for IBM Security Identity Manager

Some information about the IBM Security Identity Manager REST APIs might not be available in the IBM Security Identity Manager Knowledge Center for Version 7.0.0.2.

Use the information about the REST APIs as an addendum to the information that is available in the IBM Security Identity Manager Knowledge Center.

- IBM Security Identity Manager REST API documentation can be best viewed in the supported versions of the Mozilla Firefox and Microsoft Internet Explorer browsers.
- You can configure cross-origin resource sharing (CORS) to control which origins can work with the IBM Security Identity Manager REST APIs. For more information about CORS configuration, see Starting REST APIs in a domain different from the originating web page.

To support CORS in the virtual appliance, do these steps.

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Advanced Configuration** > **Update Property** to display the **Update Property** page.
3. In the **Update Property** page, select **All properties**.
4. Select **Identity server property files**.
5. Select `rest.properties`.
6. Click **New** to open the **Add Property** window.
7. Provide the value in the **Property name** field as `ui.CORSOrigin`.
8. Provide the value in the **Property value** field to one of the following values.
   - `*`
   - For example, `http://www.ibm.com`

     Note: You can also add a port number with the domain name when you provide a property value. Use white spaces to separate multiple property values.
9. Click **Save Configuration**.

After you edit the `ui.CORSOrigin` property, restart the IBM Security Identity Manager Server to reflect the changes. Do these steps.

1. From the **Appliance Dashboard**, go to the **Server Control** widget.
2. Select **Security Identity Manager server**.
3. Click **Restart**.

If you do not want to allow cross domain request to access Identity Service Center REST APIs, do not configure the `ui.CORSOrigin` property in the virtual appliance.

If you already configured `rest.properties` with the `ui.CORSOrigin` property, delete the `ui.CORSOrigin` property. Do these steps.

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Advanced Configuration** > **Update Property** to display the **Update Property** page.
3. In the **Update Property** page, select **Modified properties**.
4. Select **Identity server**.
5. Select `rest.properties`.
6. Click **Delete**.

7. Click **Yes** to confirm.

- REST APIs are one of the new functions in the IBM Security Identity Manager 7.0.0.2 release. The *What's new in this release* section of the IBM Security Identity Manager Knowledge Center for Version 7.0.0.2 does not contain information about REST APIs. However, the REST API information is available at REST APIs.
- The path that is described for the REST API code samples in the IBM Security Identity Manager Knowledge Center for Version 7.0.0.2 requires a change. The REST API code samples are available at `extensions/7.0/examples/restapi`.

  On the **Custom File Management** page of the **Appliance Dashboard**, go to `directories/utilities` and download the `extensions.zip` file.
- As described in the previous bullet, the REST API code samples are available at `extensions/7.0/examples/restapi`. To know more about how to authenticate to the IBM Security Identity Manager Server and then start a specific REST API, see `extensions/7.0/examples/restapi/examples/api/SearchPeople.java`.
- Filter configuration for REST services is possible by using the supported operators. For more information, see Filter configuration for REST search services. However, the definitions of the supported operators are not described in the IBM Security Identity Manager Knowledge Center topic for Version 7.0.0.2. You can use the following definitions for the supported operators to configure the filter expressions for the REST services.

Table 11. Supported operators

Logical operators	**Comparison operators**
and - **&**	Equal - **=**
or - **|**	Not equal - **!=**
	Approximately equal - **~=**
	Greater than or equal - **>=**
	Less than or equal - **<=**
	Greater than - **>**
	Less than - **<**

- IBM Security Identity Manager virtual appliance contains an `OAuth` provider. Therefore, you need not configure `OAuth` separately for the virtual appliance.

Middleware configuration utility might not recognize or support your version of the IBM Security Directory Server

The middleware configuration utility might not recognize or support your version of the IBM Security Directory Server, which generates error messages.

Problem

If you continue to use the middleware configuration utility to configure with any missing or unsupported version of the IBM Security Directory Server, you might encounter configuration problems.

The middleware configuration utility does not support the use of IBM Security Identity Manager with any missing or incorrect versions of the IBM Security Directory Server.

Solution

For UNIX

When you start the middleware configuration utility, use the following command line argument:

```
-W ITIMRSP.idsInstalledDir=sds_install_location
```

`sds_install_location` is the IBM Security Directory Server installation directory.

For Windows

To manually configure the IBM Security Directory Server, see more information at Configuring IBM Security Directory Server manually.

Important: When you want to manage the virtual appliance for networking, use only a static IP address to map with a valid host name.

Provisioning policy entitlement displays error due to character limit on the JavaScript parameter

An error is displayed on the provisioning policy entitlement due to character limitations on the JavaScript parameter.

Problem

When you use the IBM Security Identity Manager virtual appliance, the provisioning policy entitlement displays an error due to a character limit on the JavaScript parameter.

Solution

Modify the `ProvisioningPolicyEntitlement.scriptParams.maxLength` property to set the character limit to the expected value. Do these steps:

1. Log on to the IBM Security Identity Manager virtual appliance.
2. From the top-level menu of the **Appliance Dashboard**, click **Configure** > **Advanced Configuration** > **Update Property** to display the **Update Property** page.
3. In the **All properties** tab, click **Identity server property files**.
4. Select `ui.properties`.
5. Select the `ProvisioningPolicyEntitlement.scriptParams.maxLength` property name.
6. Click **Edit**.
7. Set the **Property Value** according to your requirement.

   Note: The default value is set to 5000.
8. Click **Save Configuration**.

IBM Security Identity Manager upgrade to Version 7.0.0.2 wipes off any custom changes in the Change Password Workflow operation

When you upgrade IBM Security Identity Manager to Version 7.0.0.2, it wipes off any custom changes in the Change Password Workflow operation of the Identity Administration Console.

Problem

When you run a previous version of IBM Security Identity Manager to upgrade to Version 7.0.0.2, the custom changes that you did in the **Change Password** operation are lost.

The following steps result in losing the custom changes that you made in the default workflow for the **Change Password** operation:

1. Do the initial steps to upgrade to IBM Security Identity Manager Version 7.0.0.2 from a previous version.
2. Log on to the IBM Security Identity Manager virtual appliance.
3. From the **Appliance Dashboard** of the virtual appliance console, go to the **Quick Links** widget.

4. Click **Identity Administration Console**.
5. Log on to the IBM Security Identity Manager Console.
6. Go to **Configure System** > **Manage Operations**.
7. Select **Entity type level** as the **Operation Level**.
8. Select **Account** as the **Entity type**.
9. Select the **changePassword** operation.
10. Make some custom changes in the default workflow that is associated with the **Change Password** operation.
11. Upgrade to Version 7.0.0.2.

Solution

Any custom changes that you do in the **Change Password** workflow operation must be merged manually after you upgrade IBM Security Identity Manager to Version 7.0.0.2.

Application interface configuration issues after virtual appliance upgrade

When you configure the application interfaces after you upgrade the virtual appliance in a cluster, an error might occur with an exception.

About this task

The error exception can be displayed as follows.

```
<Trace Level="MIN">
 <Time Millis="1432096507108"] 2015.05.20 10:05:07.108+05:30</Time>
 <Server Format="IP">localhost</Server>
 <ProductId>CTGIM</ProductId>
 <Component>com.ibm.itim.startup</Component>
 <ProductInstance]ISIMVa_APP_MEMBER[/ProductInstance]
 <LogText><![CDATA[Exception during background service start.]]></LogText>
 <Source FileName="com.ibm.itim.startup.ServiceManager" Method="startServices"/>
 <Thread>Thread-86</Thread>
 <Exception><![CDATA[com.ibm.itim.startup.ServiceException: Failed to start service:
ReconcilerCleanup
 at com.ibm.itim.startup.ServiceManager.startServices(ServiceManager.java:458)
 at com.ibm.itim.startup.ServiceManager.run(ServiceManager.java:218)
 at java.lang.Thread.run(Thread.java:784)
 Caused by: com.ibm.itim.startup.ServiceException: CORBA NO_PERMISSION 0x0 No; nested exception
is:
 org.omg.CORBA.NO_PERMISSION: java.rmi.AccessException:  ; nested exception is:
 com.ibm.websphere.csi.CSIAccessException: SECJ0053E: Authorization failed for
 <realmname>/<system user> while invoking
(Home)ITIM#wf_ejb.jar#wf_ejb.enroleejb.MessageSenderHome create::2
 is not granted any of the required roles: ITIM_SYSTEM   vmcid: 0x0  minor code: 0  completed:
No
 at com.ibm.itim.startup.RemoteServicesTerminator.start(RemoteServicesTerminator.java:58)
 at com.ibm.itim.startup.ServiceManager.startServices(ServiceManager.java:434)
```

Procedure

1. Log on to the primary node virtual appliance.
2. From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Advanced Configuration** > **Update Property**.
3. On the **Update Property** page, select the **All Properties** tab.
4. In the left pane, select the **Identity server property files** tab.
5. Select the `enRole.properties` file.
6. In the right pane, select the `enRole.appServer.url` property name.
7. Click **Edit** to open the **Update property** window.
8. In the **Property value** field, replace the occurrence of every host name IP with the application interface of the corresponding node.

9. Click **Save Configuration**.
10. Synchronize the nodes in the cluster. For more information, see Synchronizing a member node with a primary node.

Clearing the transaction logs

A transactional log is simply a binary file where transactions are written. Transaction logging keeps a sequential record of every operation that occurs to your data. If a database becomes corrupted, you can "roll back" the database to a point before it was corrupted and replay the changes from the transaction log.

About this task

Do not to delete these files as this action might cause application server function failure.

Procedure

1. From the top-level menu of the **Appliance Dashboard**, locate the **Server Control** widget.
2. From the **Server Control** widget, select **Application server**.
3. Click **Stop**.
4. Access the command-line interface (CLI) of the virtual appliance by using either an `ssh` session or the console.
5. From the command-line interface, log on to the IBM Security Identity Manager virtual appliance. The following message is displayed:

```
Welcome to the IBM Security Identity Manager appliance
Enter "help" for a list of available commands
```

6. Enter the `help` command at the `isimvasrv` prompt for a list of available commands. The following result is displayed:

```
Current mode commands:
fips                    View FIPS 140-2 state and events.
firmware                Work with firmware images.
fixpacks                Work with fix packs.
isim                    Work with the IBM Security Identity Manager settings.
license                 Work with licenses.
lmi                     Work with the local management interface.
management              Work with management settings.
snapshots               Work with policy snapshot files.
support                 Work with support information files.
tools                   Work with network diagnostic tools.
Global commands:
back                    Return to the previous command mode.
exit                    Log off from the appliance.
help                    Display information for using the specified command.
reboot                  Reboot the appliance.
shutdown                End system operation and turn off the power.
top                     Return to the top level.
```

7. Enter the `isim` command at the `isimvasrv` prompt.
8. Enter the `help` command at the `isimvasrv:isim` prompt for a list of available commands. The following result is displayed:

```
Current mode commands:
jvm_property             Work with the Application Server JVM properties.
keystore_password        Work with the ISIM keystore.
langpack                 Work with the ISIM Server language packs.
logs                     Work with the IBM Security Identity Manager log files.
nodes_administration     Work with ISIM application server nodes in the cluster.
single_sign_on_settings  Work with single sign-on.
upgrade                  Work with the IBM Security Identity Manager upgrade.
utilities                Work with the IBM Security Identity Manager utilities.
Global commands:
back                     Return to the previous command mode.
exit                     Log off from the appliance.
help                     Display information for using the specified command.
reboot                   Reboot the appliance.
shutdown                 End system operation and turn off the power.
top                      Return to the top level.
```

9. Enter the `logs` command at the `isimvasrv:isim` prompt.
10. Enter the `help` command at the `isimvasrv:isim:logs` prompt for a list of available commands. The following result is displayed:

```
Current mode commands:
clear                     Clear log files on the system.
clear_ffdc                Clear all FFDC log files on the system.
clear_tranlog             Clear all transactions logs on the system.
monitor                   Monitor log files on the system.
Global commands:
back                      Return to the previous command mode.
exit                      Log off from the appliance.
help                      Display information for using the specified command.
reboot                    Reboot the appliance.
shutdown                  End system operation and turn off the power.
top                       Return to the top level.
```

11. Enter the `clear_tranlog` command at the `isimvasrv:isim:logs` prompt.

Results
This command clears transaction logs for the Application server.

Handling local management interface restart issues

Sometimes the **Appliance Dashboard** widgets on the IBM Security Identity Manager virtual appliance continue to show progress endlessly.

About this task
To overcome such situations, run the **`lmi restart`** CLI command.

Procedure

1. Access the command-line interface (CLI) of the virtual appliance by using either an `ssh` session or the console.
2. From the command-line interface, log on to the IBM Security Identity Manager virtual appliance. The following message is displayed:

```
Welcome to the IBM Security Identity Manager appliance
Enter "help" for a list of available commands
```

3. Enter the `help` command at the `isimvasrv` prompt for a list of available commands. The following result is displayed.

```
Current mode commands:
firmware         Work with firmware images.
fixpacks         Work with fix packs.
isim             Work with the ISIM settings.
license          Work with licenses.
lmi              Work with the local management interface.
management       Work with management settings.
snapshots        Work with policy snapshot files.
```

```
support          Work with support information files.
tools            Work with network diagnostic tools.
updates          Work with firmware and security updates.
Global commands:
back             Return to the previous command mode.
exit             Log off from the appliance.
help             Display information for using the specified command.
reboot           Reboot the appliance.
shutdown         End system operation and turn off the power.
top              Return to the top level.
```

4. Enter the `lmi` command at the `isimvasrv` prompt.
5. Enter the `help` command at the `isimvasrv:lmi` prompt for a list of available commands.
   The following result is displayed:

```
Current mode commands:
reset_lmi_cert   Reset the server certificate for the local management interface to a self-
signed certificate.
restart          Restart the local management interface.
Global commands:
back             Return to the previous command mode.
exit             Log off from the appliance.
help             Display information for using the specified command.
reboot           Reboot the appliance.
shutdown         End system operation and turn off the power.
top              Return to the top level.
```

6. Enter the `restart` command at the `isimvasrv:lmi` prompt.
   This action restarts the local management interface.
7. Log on to the IBM Security Identity Manager virtual appliance to view the **Appliance Dashboard**.

Results
All the widgets on **Appliance Dashboard** are updated.

Middleware configuration utility might not support your IBM Security Directory Server version

The middleware configuration utility might not recognize or support your version of the IBM Security Directory Server, which generates error messages.

If you continue to use the middleware configuration utility to configure with any missing or unsupported version of the IBM Security Directory Server, you might encounter configuration problems.

The middleware configuration utility does not support the use of IBM Security Identity Manager with any missing or incorrect versions of the IBM Security Directory Server.

Resolving the problem

Do these steps:

For UNIX
When you start the middleware configuration utility, use the following command-line argument:

```
-W ITIMRSP.idsInstalledDir=sds_install_location
```

sds_install_location is the IBM Security Directory Server installation directory.

For Windows
Manually configure the IBM Security Directory Server. See Configuring IBM Security Directory Server manually.

Important: When you want to manage the virtual appliance for networking, use only a static IP address to map with a valid host name.

Log messages are not displayed when the virtual appliance is restarted

Log messages are not displayed on the IBM Security Identity Manager virtual appliance console when the virtual appliance is restarted.

Problem

After you deploy the ISO and restart the virtual appliance, log messages are not displayed on the virtual appliance console.

Similarly, after you complete the first steps and when you restart the virtual appliance, log messages are not displayed on the virtual appliance console.

Diagnosing the problem

1. Map the ISO of the virtual appliance to the CD drive of the virtual machine.
2. Connect the CD drive to the virtual machine.
3. Start from the ISO and install the image.
4. After the installation is complete, restart the virtual appliance.

Resolving the problem

Wait until you see a login prompt so you can proceed with the other operations.

IBM Security Identity Manager Server does not start on the new primary or backup node

IBM Security Identity Manager Server does not start on the new primary or backup node, which was made by applying a snapshot of the primary node.

Problem

After you apply the snapshot of the primary node on the backup node, the IBM Security Identity Manager Server on the new primary node does not start.

Symptom

When you log on to the new primary or backup node, the **Server Control** widget displays the status of the IBM Security Identity Manager Server as `Stopped`.

Diagnosing the problem

1. Set up a primary node and make sure that its activation is completed.
2. Set up another node as a backup of the primary node. The backup node must be in a different subnet than the primary node.
3. After you create the snapshot of the primary node on the backup node, apply the snapshot on the new primary or backup node.
4. Restart the new primary node.
5. Observe that the IBM Security Identity Manager Server is not running on the new primary node.
6. From the **Server Control** widget on the **Appliance Dashboard**, click **Start** to start the Security Identity Manager Server on the new primary node.

The IBM Security Identity Manager Server does not start.

Resolving the problem

Make sure that the backup node is in the same subnet as the primary node. For subnet information, see Setting up the initial IBM Security Identity Manager virtual appliance.

Service type description is not displayed in the IBM Security Identity Manager Console from the virtual appliance

When you unconfigure an Identity record from the virtual appliance, it does not display the Service type description in the IBM Security Identity Manager Console.

Problem

After you unconfigure an Identity record from the **Database Server Configuration** menu on the **Appliance Dashboard** of the virtual appliance, the Service type description is not displayed on the **Configure System** > **Manage Service Types** page of the IBM Security Identity Manager Console.

Symptom

The Service type description does not display on the **Configure System** > **Manage Service Types** page of the IBM Security Identity Manager Console.

Diagnosing the problem

1. From the top-level menu of the **Appliance Dashboard**, click **Configure** > **Manage External Entities** > **Database Server Configuration** to display the **Database Server Configuration** page.
2. From the **Database Server Configuration** table, select a record. For example, **Identity data store**.
3. Click **Unconfigure**.
4. Click **Yes** to confirm.
5. On the **Appliance Dashboard**, go to the **Quick Links** widget and click the **Identity Administration console** link.
6. Log on to the IBM Security Identity Manager Console

The result is that you cannot log on to the administrative console.

Resolving the problem

1. From the top-level menu of the **Appliance Dashboard**, click **Configure** > **Manage External Entities** > **Database Server Configuration** to display the **Database Server Configuration** page.
2. Click **Configure**.
3. In the **Database Server Configuration Details** window, specify the expected variable values.
4. Click **Save Configuration** to complete this task.
5. On the **Appliance Dashboard**, go to the **Quick Links** widget and click the **Identity Administration console** link.
6. Log on to the IBM Security Identity Manager Console
7. Go to **Configure System** > **Manage Service Types**.
8. Click **Import**.
9. Select the IBM Security Directory Integrator profile JAR files from the directory where the files are placed.
10. Click **OK**.

The Service type description now displays on the **Configure System** > **Manage Service Types** page.

Find bootstrap port information in the IBM Security Identity Manager virtual appliance

You must know the bootstrap port value to access IBM Security Identity Manager.

Problem

To access IBM Security Identity Manager, the bootstrap port value is required.

Diagnosing the problem

You must find the bootstrap port value from the IBM Security Identity Manager virtual appliance.

Resolving the problem

Do these steps to identify the bootstrap port value from the IBM Security Identity Manager virtual appliance console.

1. Log on to the IBM Security Identity Manager virtual appliance console to display the **Appliance Dashboard**.
2. From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Advanced Configuration** > **Update Property** to display the **Update Property** page.
3. In the **Update Property** page, click the **All properties** tab.
4. Click **Identity server property files** to display a list of properties.
5. Select `enRole.properties`.
6. Select `enrole.appServer.url` in the property table.

   Note: To search a property name, use the search box. Type a name or a character string to help you narrow your search. For more information, see Managing the server properties.
7. View the value in the **Property value** column for the selected property name.
8. See the `host name:port` value pair to identify the bootstrap value.

Unable to access Identity administration console after Identity external user registry configuration

You might encounter problems when you access the IBM Security Identity Manager Console from the **Quick Links** widget after the Identity external user registry configuration.

Symptom

After the Identity external user registry configuration, you might not be able to access the **Identity administration console** in the IBM Security Identity Manager virtual appliance, and the following error is displayed:

```
"Error 404: javax.servlet.ServletException: java.io.FileNotFoundException: SRVE0190E: File not
found: /
console/main"
```

Resolving the problem

To open the IBM Security Identity Manager Console properly, you must restart these servers from the **Server Control** widget on the **Appliance Dashboard**:

- **Cluster Manager server**
- **Security Identity Manager server**

Do these steps.

1. On the **Appliance Dashboard**, locate the **Server Control** widget. The **Server name** column displays a list of servers.
2. Select **Cluster Manager server**.
3. Click **Restart**.
4. Select **Security Identity Manager server**.
5. Click **Restart**.

For more information, see Viewing the Server Control widget.

Common issues

You might encounter common issues during the deployment and usage of IBM Security Identity Manager in the IBM Security Identity Manager virtual appliance. For more information, see the following common issues and workaround sections.

Data store configuration fails

Check the configuration of the database system.

- On the **Log Retrieval and Configuration** page, click the **Appliance** tab and check the Identity data store configuration, server system out, and server messages.
- If your configuration is not successful, try to configure again. In case of any problems, you might want use a previously taken snapshot to restore the virtual appliance to its previous state.

In the database server configuration, the certificate information window displays repeatedly even after you accept the certificate for the first time. The reason might be due to a cipher mismatch between your database server and virtual appliance cipher configuration.

Directory server configuration fails

Check the configuration of the directory server:

- On the **Log Retrieval and Configuration** page, click the **Appliance** tab and check the directory server configuration, server system out, and server messages.
- If your configuration is not successful, try to configure again. In case of any problems, you might want use a previously taken snapshot to restore the virtual appliance to its previous state.

In the directory server configuration, the certificate information window displays repeatedly even after you accept the certificate for the first time. The reason might be due to a cipher mismatch between your directory server and virtual appliance cipher configuration.

Unable to access the IBM Security Identity Manager virtual appliance console

View to make sure that the network configuration link IP, Subnet Mask, DNS, and Gateway are correct.

High disk usage notification on the dashboard

Reduce the setting for the **Maximum size for log file rotation** and **Maximum number of historical log files**.

Reduce the trace level from the command-line interface.

Clean the log files from **Manage** > **Maintenance** > **Log Retrieval and Configuration**.

For any other unrecoverable issues

Generate a support file by using the command-line interface or the IBM Security Identity Manager virtual appliance console for the IBM Support Team.

CLI

```
isimva.example.com> support
isimva.example.com:support> create
isimva.example.com:support> download
1: isim_1.0.1.1_20130925-014609_isimva.example.com.zip
2: isim_1.0.1.1_20130925-015645_isimva.example.com.zip
Enter index: 1
Insert a USB drive into the USB port on the appliance.
Enter 'YES' to confirm: YES
```

Console

1. Log on to the IBM Security Identity Manager virtual appliance console.
2. Select **Manage** > **System Settings** > **Support Files**.
3. Click **New** to create a new file.
4. Click **download** to save a copy of the support file.

Unable to connect the IBM Security Identity Manager Server even with the correct host name

To resolve this issue, add the certificate to the client.

1. Log on with Administrator privileges on the client computer.
2. Start a web browser and go to the HTTPS URL for the IBM Security Identity Manager Server `https://hostname` where host name is the name of the computer that has the IBM Security Identity Manager virtual appliance Server.
3. In the web browser, export the security certificates to a file.
4. Complete the following instructions:
   a. On the Microsoft Internet Explorer, click **File** > **Properties**.
   b. Click **Certificates**.
   c. Click the **Certification Path** tab.
   d. Click the **Details** tab.
   e. For each certificate marked with a red X in the certificate hierarchy, do the following actions.
      1) Click **View Certificate**.
      2) Click **Details**.
      3) Click **Copy to File**.
      4) Follow the instructions in the wizard with the following considerations:
         - When the **Export format** page is displayed, select the **DER encode binary x.509 (CER) format**.
         - Save the certificates on your local computer. For example: `webhost.cer`.
5. Restart the computer.

Unable to establish connection between IBM Security Identity Manager virtual appliance cluster nodes

Symptoms

The communication between IBM Security Identity Manager virtual appliance cluster node fails when IBM Security Identity Manager virtual appliance is unable to resolve another node name. The IBM Security Identity Manager virtual appliance liberty logs (`trace*.log`) contains an error message, for example:

`getStatus Status of Node <ISIM_VA_NodeName> is unavailable`

You can view the liberty logs by using the using virtual appliance CLI :

1. Navigate to the **`monitor`** command.

```
<ISIMVA_SERVER> > isim
<ISIMVA_SERVER>: isim> logs
<ISIMVA_SERVER>: logs> monitor
<ISIMVA_SERVER>: monitor>
```

2. Select option **2**, and then option **4** to view the `trace.log` file contents.

You can also find these logs in support files at: *<SupportFile_ExtractedDirectory>*`/tmp/liberty_dump/logs/trace*.log`

Diagnosing the problem

Use the following CLI commands to verify that the network connection between the IBM Security Identity Manager virtual appliance can be established.

1. *<isimva_server>*`: tools>` **`connect`**
2. *<isimva_server>*`: tools>` **`ping`**
3. *<isimva_server>*`: tools>` **`traceroute`**

For more information on the **`connect`**, **`ping`**, and **`traceroute`** commands, see "tools command" in the *IBM Security Identity Manager Reference Guide* .

Causes

Possible reasons:

- The IBM Security Identity Manager virtual appliance has short host name.
- The short host name does not map to the same IP address as the long host name.

Resolving the problem

1. Ensure that the IBM Security Identity Manager virtual appliance cluster nodes have fully qualified domain names (FQDN) as a host name.

   To change the host name, see “Changing host name of the IBM Security Identity Manager virtual appliance” on page 106.
2. Ensure that the hosts file is correctly configured with the fully qualified domain names of IBM Security Identity Manager virtual appliance cluster nodes.

   To manage hosts file, see "Manage hosts file" in the *IBM Security Identity Manager Administrator Guide*.

Unable to establish connection between IBM Security Identity Manager virtual appliance and external systems

Symptoms

Network problems make it difficult to establish a connection between IBM Security Identity Manager virtual appliance and external systems.

Diagnosing the problem

Use the following CLI commands to verify that the network connection between the IBM Security Identity Manager virtual appliance and external systems can be established.

1. *<isimva_server>*`: tools>` **`connect`**
2. *<isimva_server>*`: tools>` **`ping`**
3. *<isimva_server>*`: tools>` **`traceroute`**

For more information on the **`connect`**, **`ping`**, and **`traceroute`** commands, see "tools command" in the *IBM Security Identity Manager Reference Guide* .

Causes

- Firewall exists between IBM Security Identity Manager virtual appliance and external system and it is blocking incoming traffic from IBM Security Identity Manager virtual appliance.
- Firewall exists on external system and it is blocking incoming traffic from IBM Security Identity Manager virtual appliance or outgoing traffic from an external system.
- Issue with the subnet and subnet mask. Should the system belong to the same subnet or different subnets?
- Another DNS entry for some other system by using the same IP address.

Resolving the problem

- Modify the firewall setting to allow the incoming and outgoing traffic between IBM Security Identity Manager virtual appliance and external systems.
- The DNS must not grant entry to another system with the same IP address.
- Ensure that the correct subnet and subnet mask details are set. If IBM Security Identity Manager virtual appliance and external systems belong to different subnets, then make sure that you have added a static route. To add a static route, see "Configuring static routes" in *IBM Security Identity Manager Administrator Guide*.

Troubleshooting IBM Security Identity Manager failures in an IBM Security Identity Manager virtual appliance cluster environment

IBM Security Identity Manager operations go into a hanging or pending state.

Diagnosing the problem

For debugging the IBM Security Identity Manager performance and hang related issues, generate a core dump. See "Managing the core and heap dump files" in the *IBM Security Identity Manager Configuration Guide* .

Symptoms

IBM Security Identity Manager issues warnings about database connection pool being used up during reconciliation or other IBM Security Identity Manager operations causes IBM Security Identity Manager to fail.

The WebSphere Application Server `SystemOut*.log` or IBM Security Identity Manager `trace*.log` files show that the database connection pool is all used up and no free connections available.

To view the log files use the "Log Retrieval and Configuration" panel. The `SystemOut*.log` of the application server can be viewed using IBM Security Identity Manager VA CLI:

1. Navigate to the **`monitor`** command.

```
<ISIMVA_SERVER> > isim
<ISIMVA_SERVER>: isim> logs
<ISIMVA_SERVER>: logs> monitor
<ISIMVA_SERVER>: monitor>
```

2. Select option **5**, and then option **2** to view the `SystemOut*.log` file contents.

   You can also find `SystemOut *.log` files in support file at:
   `<SupportFile_ExtractedDirectory>/opt/ibm/WebSphere/AppServer/profiles/<NodeName>/logs/<APP_MEMBER_NAME>/SystemOut*.log`

1. View the `trace*.log` of IBM Security Identity Manager by using ISIM VA CLI .
2. Browse for the **`monitor`** command.

```
<ISIMVA_SERVER> > isim
<ISIMVA_SERVER>: isim> logs
<ISIMVA_SERVER>: logs> monitor
<ISIMVA_SERVER>: monitor>
```

You can find `trace*.log` files in support files at:
`<SupportFile_ExtractedDirectory>/var/ibm/tivoli/common/CTGIM/logs/trace*.log`

Resolving the problem

To check the existing database connection pool setting, see "Managing database connection pool settings" in the *IBM Security Identity Manager Reference Guide* .

To calculate the maximum and minimum number of physical connections that are required in your case, see "Configuring WebSphere JDBC Connections" topic in IBM Security Identity Manager *Versions 6.0/7.0 Performance Tuning Guide*. After pool values are identified, change the database connection pool settings.

Troubleshooting messaging, transactions issues, and tables that are involved in it

Diagnosing the problem

The messaging and transactions are managed by IBM WebSphere Application Server. You must check the `SystemOut*.log` of the messaging server.

You can view the `SystemOut*.log` files by using the IBM Security Identity Manager VA CLI:

1. Navigate to the **`monitor`** command.

```
<ISIMVA_SERVER> > isim
<ISIMVA_SERVER>: isim> logs
<ISIMVA_SERVER>: logs> monitor
<ISIMVA_SERVER>: monitor>
```

2. Select option **6**, and then option **2** to view the `SystemOut*.log` file contents.

   You can also find `SystemOut *.log` files in support file at:
   `<SupportFile_ExtractedDirectory>``/opt/ibm/WebSphere/AppServer/profiles/`*`<NodeName>`*`/logs/`*`<MSG_MEMBER_NAME>`*`/SystemOut*.log`

   For more information about how messaging and transactions work, see the IBM WebSphere Application Server product documentation.

   To check the SIB tables that are involved in messaging, see "Clearing the service integration bus" in the *IBM Security Identity Manager Installation Guide*.

Limitations

Security Identity Manager limitations can affect how the IBM Security Identity Manager virtual appliance behaves or processes information that is received from Security Identity Manager. In the same way, Security Identity Manager limitations can affect how the IBM Security Identity Manager virtual appliance capabilities work.

IBM Security Identity Manager virtual appliance limitations

- Characters other than English are not supported in the **Comment** fields of the following IBM Security Identity Manager virtual appliance pages:
  - **Snapshot**
  - **Firmware Settings**
  - **Support Files**
- The following file name display issues occur in several languages when a snapshot with a long file name is uploaded in the IBM Security Identity Manager virtual appliance:
  - The text in the **Comment** field is truncated.
  - The file name gets truncated in the **Snapshot** table.

Security Identity Manager limitations

- Data Tier and Reporting components

The Data Tier and Reporting components must be installed separately or must be outside the IBM Security Identity Manager virtual appliance.

  - IBM Cognos reporting components are outside of the IBM Security Identity Manager virtual appliance.
  - Supports DB2, IBM Security Directory Server, and Oracle as the Security Identity Manager data store on the external data tier.
- Three network adapters can be used.
- Custom adapters are supported on external Security Directory Integrator.
- Security Identity Manager mobile is supported.

Restrict operations for a member node

The IBM Security Identity Manager virtual appliance cluster is composed of one primary node and other nodes that are called as member nodes. To configure the virtual appliance, you must work from the primary node.

The configuration options from the **Configure** menu and the **Manage** menu on the **Appliance Dashboard** are listed in Table 12 on page 105.

*Table 12. Configuration options from the **Configure** menu and the **Manage** menu*

Configure	**Manage**
Directory Server Configuration	Update History
Database Server Configuration	Licensing
Directory Integrator Configuration	Firmware Settings
Mail Server Configuration	Fix Packs
Upload Feed File	Log Retrieval and Configuration
Identity External User Registry Configuration	About
Single Sign-On Configuration	Memory
Custom File Management	CPU
Library and Workflow Extension	Storage
Update Property	Application
Application Server Certificate Management	Date/Time
	Administrator Settings
	Snapshots
	Support Files
	Restart or Shut down

The operations for any of the configuration options from the **Configure** menu are restricted from being done on a member node. All these options are available in read-only mode on a member node. You can work with these options only from a primary node. But you can work with the manage options from the **Manage** menu from both, primary and member node.

If you open any configuration page from the **Configure** menu on the member node to modify any configuration information, a warning message is displayed.

If you ignore the warning message and continue to modify any of the configuration information from the **Configure** menu, a warning message indicates that you cannot complete the operation.

The restriction exists because the IBM Security Identity Manager virtual appliance is a member of a cluster, which does not contain the role of a primary node.

Cluster bootstrap process

Bootstrapping refers to getting a cluster node up and running. When a cluster node recovers from failure, checks are made to keep the node state consistent with the rest of the nodes in the cluster.

When you encounter an unresponsive primary node or member node, take following actions:

- You troubleshoot or fix the errors by using the various methods that are documented in this IBM Knowledge Center.
- Restart the primary node or the member node virtual appliance.
  - Synchronize the member node with the primary node to update the node with any virtual appliance configuration changes in the cluster.
  - This node becomes stand-alone node if this node is removed from the cluster definition.

The following actions are done by the cluster bootstrap process:

- When a primary node recovers from a failure and detects that there are no changes in the cluster, the primary node does not display any notifications.
- When a member node recovers from a failure, and detects that it continues to be part of the original cluster, synchronization might be needed if the virtual appliance configuration changes were made.
- When a primary node or a member node recovers from a failure and cannot connect with any of the previously known cluster members because the virtual appliance password changed or the primary node is down, the current node is made stand-alone node. A reconnect notification is set.

Changing host name of the IBM Security Identity Manager virtual appliance

You can change the host name of the virtual appliance to meet your server requirements. Use the CLI command to change the host name, and then use the IBM Security Identity Manager virtual appliance console to update the server properties.

Procedure

1. From a command line, log in to the virtual appliance with the Administrator credentials.
   For example:
   - **User name**: admin
   - **Password**: admin
2. Type the following command in a command line to set the new host name for the virtual appliance.

   ```
   isimva> management hostname set
   ```
3. Enter the value for the new host name.
4. Restart the virtual appliance.
   See Restarting or shutting down.
5. Log on to the IBM Security Identity Manager virtual appliance console to open the **Appliance Dashboard**.
6. From the top-level menu of the **Appliance Dashboard**, select **Configure** > **Advanced Configuration** > **Update Property** to display the **Update Property** page.
7. In the **Update Property** page, edit the following property files with the new host name.
   - `enrole.appServer.url` from `enRole.properties`
   - `enrole.appServer.url` from `com_ibm_itim_isimm.properties`

See Managing the server properties.

Troubleshooting dashboard panel widget display issues on Microsoft Internet Explorer 10

The **Appliance Dashboard** might not display when you view it in the Microsoft Internet Explorer 10 web browser. The web browser shows browser not supported message for any appliance panel.

About this task

An attempt to view the IBM Security Identity Manager Console or activation wizard in a Microsoft Internet Explorer, version 10 browser shows browser not supported message.

To solve the issue, complete these steps as a workaround:

Procedure

1. Open the Microsoft Internet Explorer 10 web browser.
2. After the activation steps are completed, change the browser setting:
   a) Click **Tools**.
   b) Clear the **Compatibility View** option.
   c) Open **Compatibility View Settings**.
   d) Clear the **Download updated compatibility lists from Microsoft** option.
3. Access the IBM Security Identity Manager Console.

Startup problems with the IBM Security Identity Manager virtual appliance dashboard

You might encounter some problems when you start the IBM Security Identity Manager virtual appliance dashboard.

The possible startup problems are as follows:

- Startup or loading delays for several seconds or minutes.
- A notification prompts for a required restart.
- A component status prompts as started, but is not available.

Symptom

You might experience some delays or other startup problems with the IBM Security Identity Manager virtual appliance dashboard due to these conditions:

- The virtual appliance dashboard starts for the first time after configuration.
- All the widgets are not loaded.

Resolving the problem

Wait for some time and refresh the widget to check the most recent status of the virtual appliance.

IBM Security Identity Manager virtual appliance dashboard displays notifications about snapshots

The IBM Security Identity Manager virtual appliance dashboard displays notifications that a snapshot is being applied.

Symptom

Notifications about snapshots that are being applied are displayed by the IBM Security Identity Manager virtual appliance dashboard.

Resolving the problem

Snapshots might also change the network settings of the virtual appliance. When you apply a snapshot from the management interface of the virtual appliance, you are directed to a window. The window notifies you to go to the virtual appliance by using the IP or the host name that is specified in the snapshot.

If you log on to the virtual appliance while the snapshot process is in progress, in the **Notifications** widget, you might see a notification such as `'Snapshot is getting applied'`. Since the snapshot process takes some time, wait until the process completes. Refresh the **Notifications** widget to retrieve the recent notifications.

LDAP Server must run when IBM Security Identity Manager virtual appliance servers are restarted after LDAP configuration

The LDAP Server must be running when you restart the IBM Security Identity Manager virtual appliance servers after an LDAP configuration.

Symptom

When the IBM Security Identity Manager virtual appliance servers are restarted after an LDAP configuration, the LDAP Server must be in a running state.

Resolving the problem

Some of the post-configuration tasks start running after an LDAP configuration and when you start the IBM Security Identity Manager virtual appliance server. This task requires the LDAP Server to be in running state. Therefore, it is required that the LDAP Server is running.

Bulkload command errors

When running the bulkload command, some errors might occur. The bulkload utility fails if any of the entries in the input LDIF file exist in LDAP.

This error might occur if the suffix you defined exists as an entry in the directory server. It might be necessary to delete all entries in the suffix (but leave the suffix) from LDAP before running the command. You can use the `ldapsearch` commands to check for existence of entries, and the `ldapdelete` command to remove these entries.

Error codes:

```
GLPCRY007E The directory key stash file is inconsistent with the associated
encrypted data.
```

```
GLPBLK071E Bulkload is unable to run because of an initialization error.
```

```
GLPBLK030E Run DB2CMD.EXE first, and then run bulkload within the "DB2 CMD"
command interpreter.
```

To correct these errors, you must know the encryption seed and salt values of the target instance. The target instance is the directory server instance where you are running the bulkload.

1. To determine the salt value of target instance, run the following command from TDS_HOME/bin:

   ```
   ldapsearch -D bind DN -w password -h hostname -p port -s base -b
   cn=crypto,cn=localhost cn=*
   ```

   where:

   bind DN is the distinguished name (DN) of the directory server.

   password is the DN password.

   hostname is the name of the computer where IBM Security Directory Server is installed.

   port is the port number on which IBM Security Directory Server is listening.

2. Replace the value of ibm-slapdCryptoSync, ibm-slapdCryptoSalt with the values returned by the **ldapsearch** command in the ldap_output_file file. This file is generated as output of the **db2ldif** command, for example old_ldif_data.ldif.
3. Run the **bulkload** command again.

Note: You can use the **-W OUT_FILE_NAME** option with the **bulkload** command. This option places the output from the command into the specified file. The bulkload command runs several instances of a DB2 command to load data. Each one has its own success, error, or warning messages. Without the **-W** option to save the output, it is difficult to check the result.

Index

J

K

L

M

N

O

P

R

S

T

U

V

W