NetWitness® Platform

Version 12.4.1.0

Workbench Configuration Guide



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June, 2024

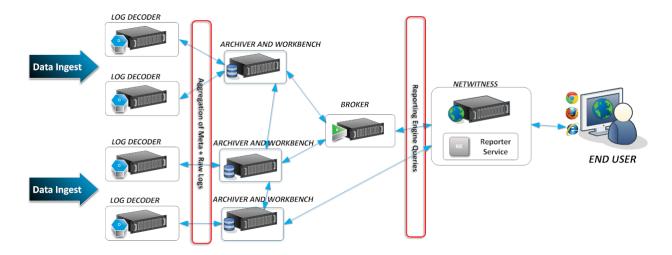
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Workbench Overview

NetWitness Workbench service allows collections to be created with restored data that was saved offline from an Archiver. Once the data is copied and saved into a collection, it can be analyzed from Investigation and Reporting.

The following diagram depicts the architecture of a NetWitness network that implements the Workbench.



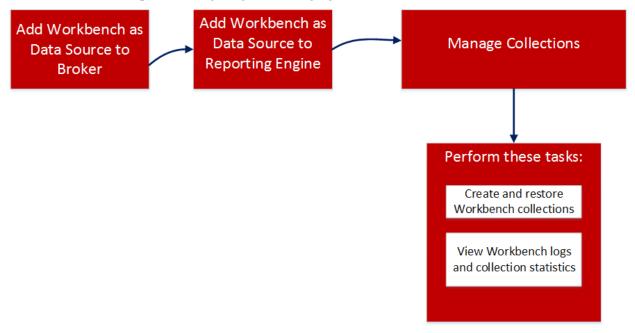
Workbench Overview 4

Workbench Configuration Procedures

Note: While NetWitness 11.0 and later continues to support the Workbench, and some customers may have configured Workbench to handle restoring of data. The best practice for restoring data is to use the Archiver to configure archival and restoring of data. For more information, see *Archiver Configuration Guide*.

Workflow

These are the basic steps for configuring and managing a Workbench service.



- 1. Add a Workbench service as a data source to Broker (see <u>Adding Workbench Service as a Data Source to Broker</u>).
- 2. Add a Workbench service as a data source to Reporting Engine (see <u>Adding Workbench as a Data</u> Source to Reporting Engine
- 3. Manage collections on a Workbench service (see Managing Collections).
- 4. Investigate a Workbench (see Managing Collections).

Prerequisites

Before configuring the Workbench service, you must:

• Add the NetWitness workbench service to the host in your network environment. For more information, see Workbench Overview.

• Install the NetWitness Workbench host in your network environment. For more information, see *Host and Services Getting Started Guide*.

The steps to configure the Workbench service are:

- 1. Adding Workbench Service as a Data Source to Broker
- 2. Adding Workbench as a Data Source to Reporting Engine

After configuration is complete, you can create and manage collections as described in <u>Managing</u> Collections.

Adding Workbench Service as a Data Source to Broker

Prerequisites

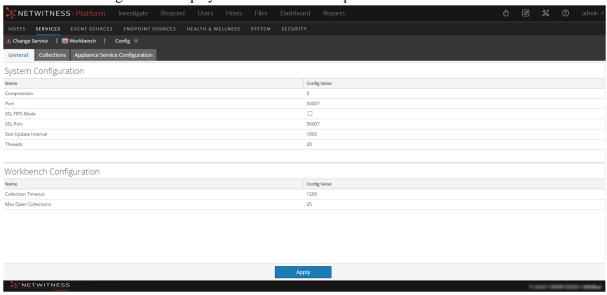
Before adding the Workbench service, you must:

- Install the Workbench service on the Archiver appliance.
- Add a collection on the workbench service.

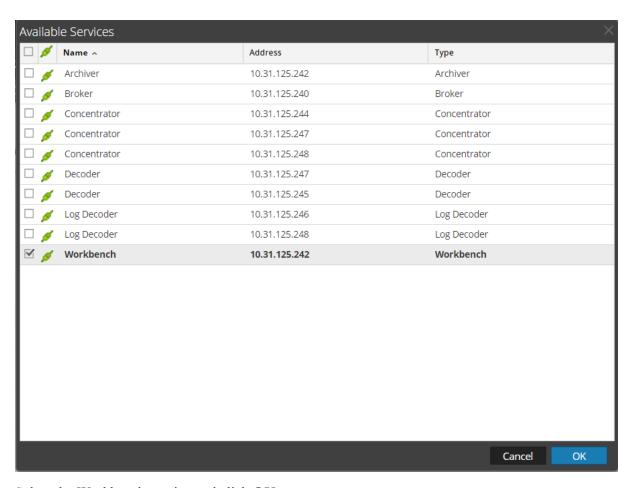
To add the Workbench service as a data source on the Broker:

- 1. Go to (Admin) > Services.
- 2. Select a **Broker** service, and select > View > Config.

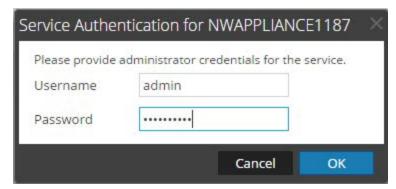
 The Service Config view is displayed with General tab open.



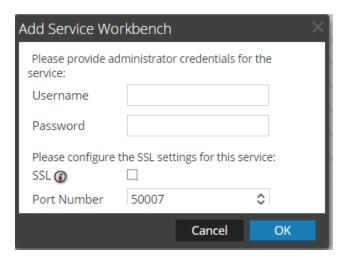
3. In the Aggregate Services section, Click .
The Available Services dialog is displayed.



- 4. Select the Workbench service and click **OK**.
- 5. If the Workbench service is using a Trust Model, a Service Authentication dialog for the selected service is displayed.



6. Type the username and password for admin credentials for the service and click **OK**. The Add Service Workbench dialog is displayed.



7. Type the username and password for admin credentials for the service and click \mathbf{OK} .

The workbench service is now added as a data source to the Broker and is listed in the NWDATA Sources list.

Note: You must perform this procedure for each collection.

Adding Workbench as a Data Source to Reporting Engine

Prerequisites

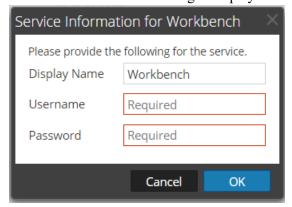
These are the tasks required before adding the Workbench as a data source to Reporting:

- 1. Add the Reporting Engine as a service to your NetWitness deployment.
- 2. Add the Workbench as a service to your NetWitness Archiver host (if not already installed).

Note: Adding Workbench collections as a data source to Reporting Engine depends on a trusted connection. If the Workbench is established with a trusted connection, you must manually add Workbenchcollections as a source to the Reporting Engine.

To associate the Workbench data source with the Reporting Engine:

- 1. Go to (Admin) > Services.
- 2. Select a **Reporting Engine** in the Services panel. Select **View > Config.** The Services Config view is displayed with General tab Open.
- 3. Click the **Sources** tab, click in the toolbar and select **Available Services**. The Available Services dialog is displayed.
- 4. Select a Workbench service and Click **OK**. The Service Information dialog is displayed.



- 5. Enter User Name and Password.
 - Required if the Workbench service is Trusted.
 - Optional if the Workbench service is not trusted (added manually).
- 6. Click OK.

- 7. Select Collection in Add a Collection from Workbench dialog.
- 8. Click OK.

Result

You can now create reports on the data collected by the Workbench.

Managing Collections

An Administrator can create and delete Workbench collections and view Workbench statistics and logs. This topic provides all of these procedures and an example procedure for restoring a collection for Reporting and Investigation.

- Mount Archiver Directories
- Create a Collection
- Delete a Collection
- Investigate a Collection
- View Workbench Collection Statistics
- View Workbench Logs

Mount Archiver Directories

If data is in offline storage or cold-tier storage, you need to mount the Archiver directories in order to restore the data for reporting and investigation purposes:

- 1. Go to (Admin) > Services.
- 2. Select an **Archiver** from the Services panel and select > **View** > **Explore**. The Explorer view for the Archiver is displayed
- 3. Right-click on the Database node in left-hand tree and select **properties** to open them in the right-hand panel.
- 4. Run the **manifest** command for a time range, for example, 2017-April-01 to 2017-April-10. The search returns all files that need to be restored for the selected query.

Create a Collection

Administrators can create collections of restored data from a backup or from an existing set of data.

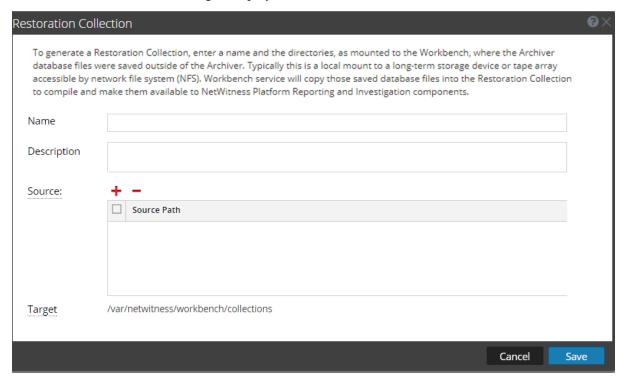
Note: You can point the source path to the location of the database files and the restore command copies them to the workbench. You need to mount those directories to the Archiver (where the Workbench is installed) before a restoration collection can be created.

To create a collection using data restored from the backed up data or existing subset of data:

- 1. Go to (Admin) > Services.
- 2. In the **Services** view, select a **Workbench**, then select **View > Config**. The Services Config view is displayed with the General tab open.

- 3. Click the **Collections** tab.
 - The Collections panel is displayed.
- 4. Click † in the toolbar.

The Restoration Collection dialog is displayed.



- 5. Provide the following information:
 - Name: Name of the Workbench collection that you want to restore.
 - Source: Location where the Archiver database files have been moved from cold storage.

Note: Target is the location where the collection is created.

6. Click **Save** to restore the collection.

Note: If the source path provided to create the restoration collection does not exist, the following error message is displayed:

The source path does not exist '/xxx/xxx/'.

If there is insufficient storage to restore your collection, the following error is displayed:

Error during disk space checking. Insufficient disk space in location
'/xxx/xxx'.

The Schedule Job dialog is displayed with the following message:

Restoring data into a new collection. Check the jobs page for progress.

7. Click the **Jobs** icon in the NetWitness toolbar to expand the list of restoration collection jobs with their current status.

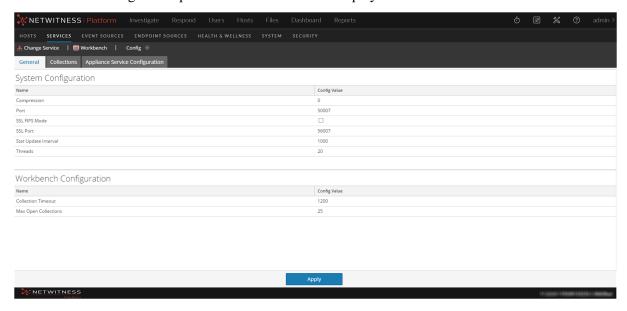
Note: Restoring a collection that is larger than 550 GB may take several hours to process.

Delete a Collection

Administrators can delete collections from the Workbench service.

Perform the following steps to delete a collection:

- 1. Go to (Admin) > Services.
- 2. From the **Services** view, select a **Workbench** and click **View > Config**. The Services Config view opens with the General tab displayed.

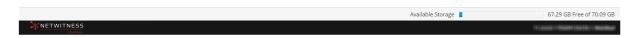


3. Select the Collections tab.

The Collections panel is displayed.



No collections to display



- 4. In the Collections panel, select the collection that you want to delete.
- 5. Click from the toolbar.

A warning dialog requests confirmation.

6. If you want to delete the collection, click Yes.

The collection is removed from the Workbench service.

Example Procedure: How to Restore a Collection for Reporting and Investigation

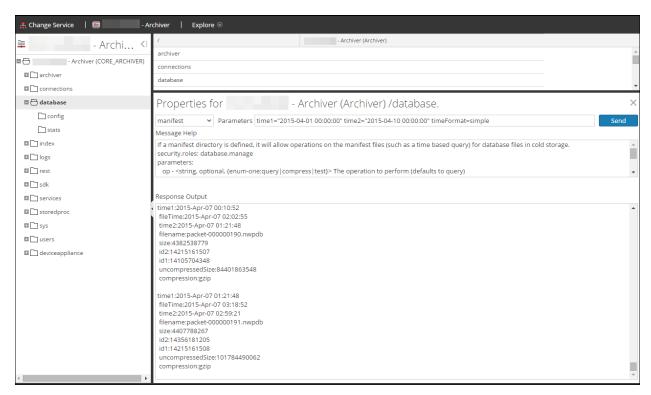
The following steps illustrate how to restore data for reporting and investigation purposes that is in offline storage or cold-tier storage. In the following example, data is restored for the time range beginning on 2015-April-01 through 2015-April-10.

To restore data for reporting and investigation purposes:

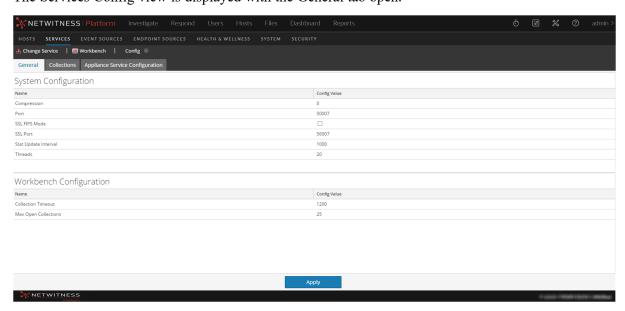
- 1. Go to (Admin) > Services.
- 2. Select the **Archiver** from the **Services** panel and Click **Services** > **View** > **Explore**. The Explorer view for Archiver is displayed
- 3. Right click on Database node in left-hand tree and select **properties** to open them in the right-hand panel.
- 4. Run the **manifest** command for the selected time range 2015-April-01 to 2015-April-10. The search returns all files that need to be restored for your selected query.

Example Search:

time1="2015-04-01 00:00:00" time2="2015-04-10 00:00:00" timeFormat=simple



- 6. Go to (Admin) > Services.
- 7. In the **Services** view, select a **Workbench**, then select **View > Config**. The Services Config view is displayed with the General tab open.



- 8. Select the Collections tab.
- 9. Create a restoration collection with the source path pointing to files listed in the manifest command output.

10. Save the collection.

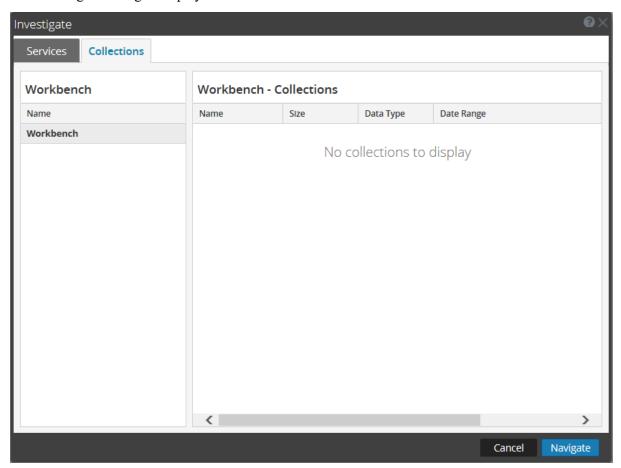
After successfully creating a collection, you can use this collection for reporting and investigation purposes.

Investigate a Collection

To perform an investigation on a workbench collection:

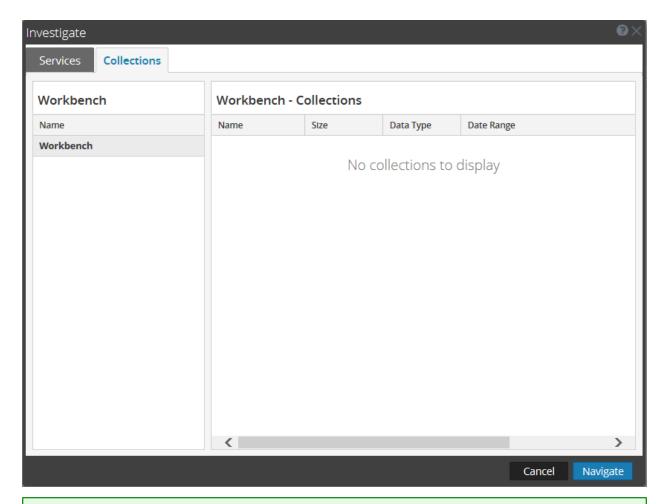
1. Select Investigate.

The Investigate dialog is displayed.



- 2. Click the **Collections** tab in the Investigate dialog.
- 3. Select a Workbench service in the left panel.
- 4. Select the collection you want to investigate in the right panel.
- 5. Click Navigate.

The Navigate view is displayed showing data pertaining to the Workbench collection that you selected.



Note: For detailed information about using Investigation, see *Investigation and Malware Analysis Guide*.

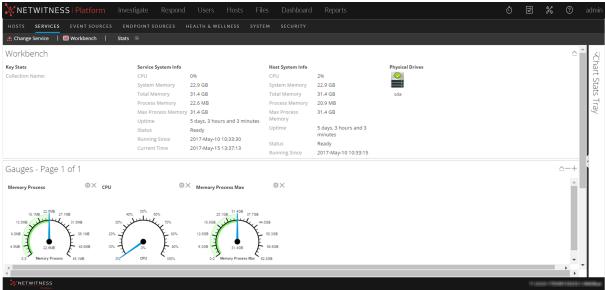
View Workbench Collection Statistics

The same statistics available for other services are provided for the Workbench service. The Services Stats view displays key statistics and system information that pertain to your selected Workbench service. The information is displayed in several different sections within the Stats view: Workbench, Gauges, Timeline Charts and Chart Stats Tray. The Chart Stats Tray lists all available statistics for the Workbench. Any statistic in the Chart Stats Tray can be displayed in a gouge or a timeline chart.

Perform the following steps to view workbench statistics:

- 1. Go to (Admin) > Services.
- 2. In the Services view, select a Workbench, then select > View > Stats.





Note: For more information about Workbench statistics, see the *Host and Services Getting Started Guide*.

View Workbench Logs

Perform the following steps to view logs on a Workbench service:

- 1. Go to (Admin) > Services.
- 2. In the **Services** view, select a **Workbench**, then select **View > Logs**. The Services Logs panel is displayed.

Note: For information about viewing and configuring audit logs, see the topic "Configure Global Audit Logging" in the *System Configuration Guide* .

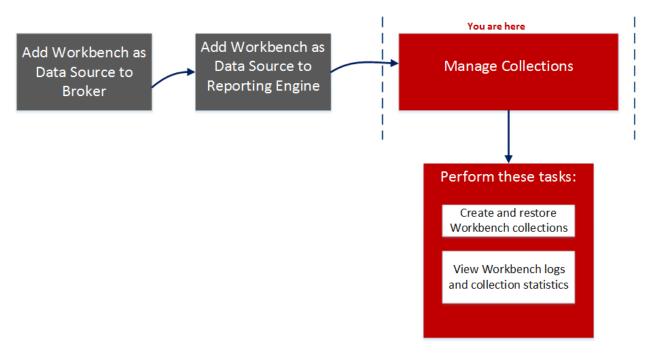
Services Config View - Workbench

In the Services Config view for workbench, some of the parameters are the same as other NetWitness services, while others are specific to the Workbench service.

The Services Config view - Workbench ((Admin) > Services >, select a Workbench service and select View > Config) provides a way to configure a Workbench service.

Workflow

These are the basic steps for configuring and managing a Workbench service.



What do you want to do?

Role	I want to	Show me how
Administrator	Add Workbench as data source to Broker	Adding Workbench Service as a Data Source to Broker
Administrator	Add Workbench as a Data Source to Reporting Engine	Adding Workbench as a Data Source to Reporting Engine
Administrator	*Create or delete a collection	Managing Collections
Administrator	*View Workbench statistics and logs	Managing Collections

Role	I want to	Show me how
Administrator	View configuration information about appliances that are connected to the Workbench service.	Select the Appliance Service Configuration tab. The Appliance Service Configuration tab is the same for all NetWitness services. It provides configuration information about appliances that are connected to the Workbench service.
		For information on the Appliance
		Service Configuration tab, see Appliance Service Configuration Tab in the Host and Services Getting Started Guide.

^{*}You can perform this task here.

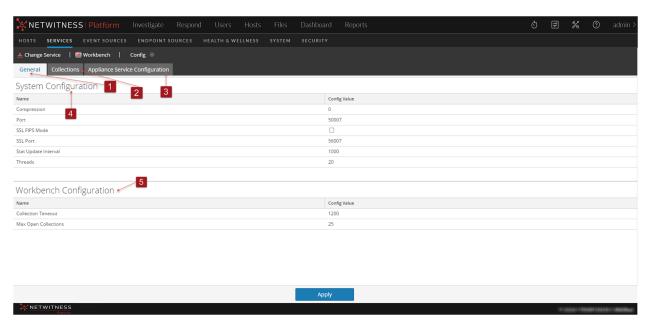
Related Topics

• Workbench Configuration Procedures

Quick Look

The Workbench service has three tabs and two panels in the Config view:

- · General tab
- · Collections tab
- Appliance Service Configuration tab
- System Configuration panel
- Workbench Configuration panel



Workbench Configuration Guide

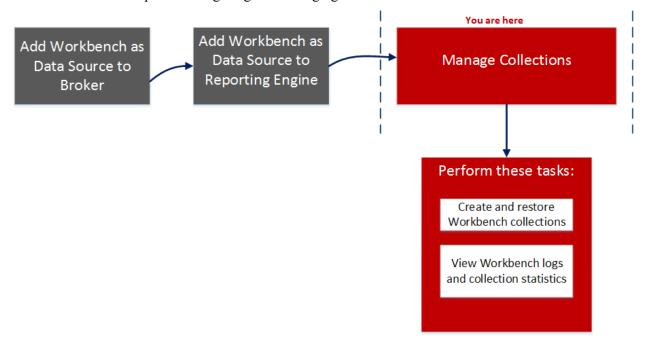
- General tab provides a way to manage basic Workbench service configuration.
- Collections tab provides a way to manage collections on a Workbench service.
- Appliance Service Configuration tab provides a way to configure a Workbench service.
- System Configuration panel provides a way to manage service configuration for a Workbench service.
- Workbench Configuration panel provides a way to start and stop a Workbench service.

Services Config View - Collections Tab

The Collections tab for the Workbench service provides a way to manage workbench collections. To access the Collections tab, go to (Admin) > Services > select a Workbench service, select View > Config and select the Collections tab.

Workflow

These are the basic steps for configuring and managing a Workbench service.



What do you want to do?

Role	I want to	Documentation
Administrator	*Create and restore Workbench collections.	Managing Collections
Administrator	*View Workbench logs and collection statistics.	Managing Collections

Role	I want to	Documentation
Administrator	View configuration information about appliances that are connected to the Workbench service.	Select the Appliance Service Configuration tab. The Appliance Service Configuration tab is the same for all NetWitness services. It provides configuration information about appliances that are connected to the Workbench service.
		For information on the Appliance
		Service Configuration tab, see Appliance Service Configuration Tab in the Host and Services Getting Started Guide.

^{*}You can perform this task here.

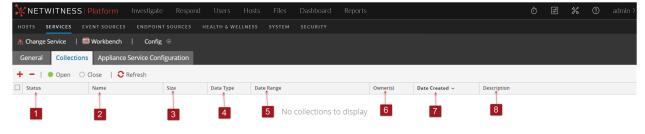
Related Topics

• Workbench Configuration Procedures

Quick Look

The Collections tab has a toolbar and a panel that lists relevant information about the Workbench collections.

The following figure is an example of the Collections panel.





- Status of the Restoration Collection:
 - Resorting Data Data restoration is in progress.
 - Closed Data is restored.

- Opening Data is being indexed.
- Ready Indexing is complete.
- Closing Collection is closing.
- 2 Name: Name of the file being restored.
- 3 **Size**: Collection size.
- 4 Data Type: Logs.
- **Date Range**: Lists the range of dates when the collection is being restored.
- 6 Owner: Lists the Collection creator.
- **7 Date Created**: Shows the date when the collection was created.
- 8 **Description**: Description of the Restoration collection.
- Available Storage Indicator: Shows the available disk space, given in gigabytes (GB). The Workbench validates to ensure there is enough available space when attempting to create a restoration collection.

Toolbar

These are the toolbar options.

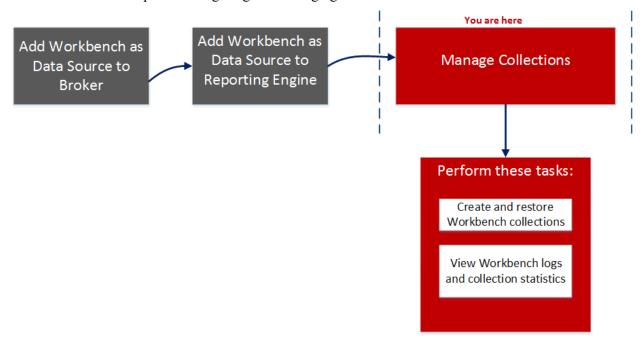
Parameter	Description
+	Creates a new restoration collection.
_	Deletes the selected Workbench collection.
Open and Close - Refers to the status of the restoration collection.	Open - Makes collection available for investigation and reporting. Close - Makes collection unavailable for investigation and reporting while preserving resources.
0	Refreshes the list of Workbench collections.

Services Config View - General Tab

The General tab for the Workbench service provides a way to manage basic service configuration. To access the General tab, go to (Admin) > Services > select a service and select > View > Config.

Workflow

These are the basic steps for configuring and managing a Workbench service.



What do you want to do?

Role	I want to	Show me how
Administrator	*Create and restore Workbench service collections.	Managing Collections
Administrator	*View Workbench logs and collection statistics.	Managing Collections
Administrator	*Process Workbench collections.	Managing Collections

^{*}You can perform this task here.

Related Topics

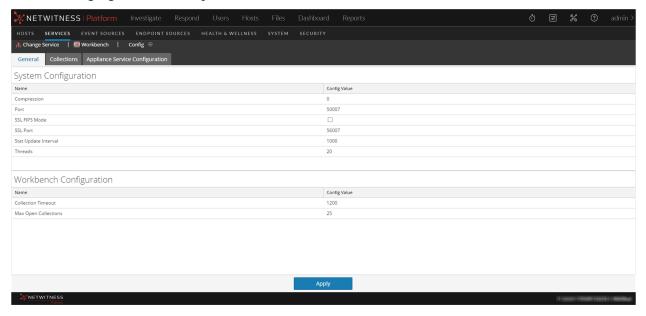
• Workbench Configuration Procedures

Quick Look

The General tab has two panels:

- System Configuration
- Workbench Configuration

The following figure is an example of the General tab.



System Configuration Panel

The System Configuration panel displays configuration parameters for the Workbench service. The following table describes the System Configuration panel features.

Parameter	Description
Compression	When set to a positive value, the minimum amount of bytes before a message is compressed. 0 means no compression for any message. Change takes effect on subsequent connections.
Port	The unencrypted port this service will listen on. 0 means disabled. Change takes effect on service restart.
SSL FIPS Mode	Determines whether the OpenSSL library will enter FIPS mode. Change takes effect on service restart.
SSL Port	The SSL port this service will listen on. 0 means disabled. Change takes effect on service restart.
Stat Update Interval	Determines how often (in milliseconds) statistic nodes are updated in the system. Change takes effect immediately.
Threads	The number of threads in the thread pool to handle incoming requests. Change takes effect immediately.

Workbench Configuration Panel

The Workbench Configuration panel displays configuration parameters for the Workbench collections. The following table describes the Workbench Configuration panel features.

Parameter	Description
Collection Timeout	The number of seconds before an idle collection is automatically closed.
Max Open Collections	The number of collections that can be open at once. A setting of 0 disables the limit.
Apply	Updates the modified configurations in the panel.

NetWitness notifies users of issues using pop-up notifications.

NetWitness Workbench returns the following types of error messages explained in the following table.

Problem	Possible Causes	Solutions
Unable to connect to workbench service from NetWitness user interface Administr ation page.	NetWitness service is not running.	Verify that your NetWitness service is running. Log in to your NetWitness Server and run the following command: status nwworkbench Firewall rules should allow connections from 50007, 50607 and 50107. Verify your connection by running the following command: service iptables status Verify that you are able to launch REST. Execute the following command for your appliance: https:// <ipaddress>:50107 service If you are able to launch REST service for your appliance, you can confirm that there is no problem with the appliance. Navigate to the NetWitness side for further investigation as follows:</ipaddress>
		 Enable debug mode and watch for sa.log errors located at: /var/lib/netwitness/uax/logs Enable developer tools using the shortcut Ctrl+Shift+I for Chrome and verify the preview and response for the request.
Not able to view Appliance service configuration tab for workbench appliance running in SSL mode.		Enable SSL for appliance service and restart the appliance service.

Problem	Possible Causes	Solutions
The following error message is displayed when trying to load meta in order to create a		Load meta for the appliance from the NetWitness User Interface Rule library and watch for any errors in Reporting Engine log located at: /home/rsasoc/rsa/soc/report
report on a workbench		ing- engine/logs
collection: "Unable to fetch schema from data source when trying		Launch REST for the device and watch for any error if you run the following query:
to load meta."		<pre>/sdk?msg=language&force- content- type=text/plain&expiry=600& size=10</pre>
No results are displayed after running query from NetWitness User Interface via the Reporting Engine.		Run the query on the Reporting Engine and watch for /var/log/messages on the data source. Look for an exact query that matches the data source. TIP: Search for [SDK-Query] in log file.
		Copy the exact query and run from REST SDK to see if you get any results.
		REST Query: /sdk?msg=query&force- contenttype=text/plain&expi ry= 600&query=select%20user.dst &size=10
Workbench Available storage indicator in Workb ench Collections Tab is not accurate.	Available storage indicator in the User Interface displays the default Collections directory shown below: /VAR/NETWITNESS/WORKBENCH/COL LECTIONS	None.
Unable to open new collections after opening existing collections.	There is a workbench configuration called "Max Open Collections" that is set to 25 by default. This configuration specifies the number of collections that can be open at the same time.	You can modify this number. A setting of zero disables the limit of maximum open collections.

Problem	Possible Causes	Solutions
Successfully opened a collection that got to Ready state. But after a while, the collection automatically changed to Closed state.	There is a workbench configuration called "collection.timeout" that is set to 1200 seconds by default. This configuration specifies the number of seconds before an idle collection is automatically closed. Maximum time allowed before timeout occurs is 86,400 seconds (24 hours).	A setting of zero disables the timeout.
Querying for a time range using /database manifest command returned blank output.	Blank output indicates that there are no nwdb files available for the time range.	None.
Created collection, but collection status is not available in Jobs, and collection is not displayed in workbench Collections tab.	You might be running in a mixed mode environment (for example, creating a collection on a 10.4.x version of workbench from a 10.5 NetWitness User Interface.	The collection is displayed in the workbench Collections tab after you reload the page.
Noticed blank Date Range and Date Created values for collections.	All collections display blank Date Range and blank Date Created values.	Date Range and Date Created values are displayed after upgrading to 10.5.
Discrepancy in behavior of adding workbench collections as a data source to Reporting Engine.	This behavior depends on whether you have a trusted connection or a non-trusted connection.	If your workbench service is established with a trusted connection, you should manually add workbench collections as a source to Reporting Engine. If your workbench service is not established with a trusted connection when the workbench restoration collection was created, it automatically sends a message to the Reporting Engine to add it as a source in the Reporting Engine.

Problem	Possible Causes	Solutions
Collection attributes (size, date range and date created) are not displayed.	Date range is not displayed for a collection if Jetty service is restarted while restoration is in process. Restoration collections created from an Explorer view display a blank Date Range. Any collections created on a 10.4 Workbench will display blank Date Range and blank Date Created values after upgrading to 10.5. In a mixed mode environment (10.5 NetWitness Server and 10.4.x workbench), size, date range, and date created are not displayed.	None.
Exception or blank page is displayed when drilling down on a workbench collection.	Collection closed because it exceeded the collection time out.	Investigate the collection from the beginning.
Empty collection is created.	Empty collection is displayed if restoration fails because Workbench service is restarted during collection creation.	None.
Service abruptly shuts down.		Run the service from command line and watch for any errors. For an example, run the command from the server console /usr/sbin/NwWorkbench for workbench.
REST request denied.		Verify user.agent.whitelist config located at /rest/config/. If non-blank, this should be a regex expression to match valid HTTP user agents. If the regex fails to match, all REST requests will be denied (see allow.missing.user.agent for the potential exception). If blank, all requests are allowed.
Queries with raw meta return blank values for Raw field.		Verify that you have a relevant packet db.