

# VMware AirWatch Reports Guide

AirWatch v9.3

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# Chapter 1: Overview

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## Introduction to Reports

AirWatch Reports provide access to reports on various sections of your AirWatch solution. Use these reports to analyze patterns from the AirWatch Console.

### Custom Reports

Custom reports has moved locations. Navigate to **Hub > Intelligence**.

For more information, see [Custom Reports Overview on page 6](#).

### AirWatch Reports

The reports functionality allows you to access detailed information about the devices, users, and applications in your AirWatch solution. The exports of these reports are in CSV format. Recently, 40+ SSRS reports were combined into 11 new reports. The data within the deprecated reports is consolidated to improve performance and increase scalability. These new reports are labeled in the AirWatch Console as **New**.

Consider moving all your reports to New reports as support for SSRS reports will soon be deprecated.

For more information, see [Reports Overview on page 15](#).

### Reports Storage

Optimize the storage of your AirWatch Reports through reports storage. This storage feature increases the performance of AirWatch Reports. Consider enabling reports storage if you see a performance impact on your AirWatch database when using reports.

For more information, see [Reports Storage Overview on page 40](#).

# Chapter 2:

## Custom Reports

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## Custom Reports Overview

Custom reports allow you to create reports on your AirWatch deployment based on your business needs. Intelligence custom reporting uses a cloud-based report storage system to gather data and create the reports.

### Custom Reports Background

The custom reports feature provides faster, easier access to critical business intelligence data than normal AirWatch reports. Custom reports allows you to build reports using starter templates or directly from scratch. You can choose from a wide range of data fields including Apps, Devices, and OS Updates. These custom reports provide the latest data extracts on your AirWatch environment.

Custom reports uses a separate service to push data to a custom reports cloud service. This service captures data useful to administrators when trying to answer critical questions. Custom reports gathers an initial snapshot of your deployment and continue to capture ongoing changes.

The data collection focuses on three categories: Apps, Devices, and OS Updates. Only the most important data in each category is captured and pushed to the cloud for reporting.

### Installing the Custom Reports Service

Before using the custom reports feature, you must install the Workspace ONE Intelligence Connector service (also known as ETL installer) onto a separate server in your AirWatch environment.

Custom reports use the Workspace ONE Intelligence Connector service installed from the Workspace ONE Intelligence Connector Installer. The Workspace ONE Intelligence Connector service gathers the data from your AirWatch console server and pushes it to the reports cloud service.

For more information, see [Custom Reports Requirements on page 6](#) and [Install the Workspace ONE Intelligence Connector Service on page 7](#).

### Custom Reports Wizard

The Custom Reports wizard allows you to create a customized report using a starter template or a new report from scratch. The wizard guides you through each step.

The custom reports use filters you can customize to gather data from apps and devices based on key attributes. You may include as many filters as necessary to narrow the results of the report. Each filter added uses the AND operator. You then select the value for the value and the operator for each attribute.

For more information, see [Run the Custom Reports Wizard on page 10](#).

### Manage Custom Reports

After creating a custom report, manage your reports from the Custom Reports List View. From this screen, you can run reports, schedule reports to run automatically, copy, and delete reports.

For more information, see [Custom Reports Management on page 11](#)

## Custom Reports Requirements

Before you can use Custom Reports, you must install the Workspace ONE Intelligence Connector service (also known as ETL installer) on a server and complete the Getting Started Wizard.

## Workspace ONE Intelligence Connector Server Requirements

You must install the Workspace ONE Intelligence Connector service on its own server before you can use Custom Reports.

Requirement	Description
<b>Hardware Requirements</b>	
CPU	1 CPU
RAM	8 GB
Storage	50 GB
<b>Software Requirements</b>	
OS	Windows Server 2012 R2 or later
Java	Java 8
<b>Network Requirements</b>	
Outbound traffic from the Workspace ONE Intelligence Connector service	Port 443
Internal network access to the AirWatch Database	The port used is based on your AirWatch deployment.

### Getting Started

You must enter your credentials and Opt-In to the service before you can begin using Custom Reports.

Access the Custom Reports by navigating to **Hub > Intelligence**, select **Opt-in**, and choose **Launch** after installing the Workspace ONE Intelligence Connector service.

## Install the Workspace ONE Intelligence Connector Service

Before using Custom Reports, you must install the Workspace ONE Intelligence Connector service (also known as ETL installer) onto a server. The Workspace ONE Intelligence Connector service collects data from your AirWatch database and pushes it to the cloud-based report service.

SaaS customers do not need to install their own Workspace ONE Intelligence Connector server. On-premises customers must install their own Workspace ONE Intelligence Connector server.

You must install the Workspace ONE Intelligence Connector service on its own server. For additional information about the installation process of other AirWatch application servers, refer to the **VMware AirWatch Installation Guide**.

**Important:** If you upgrade the AirWatch database as part of the upgrade process, you must stop the Workspace ONE Intelligence Connector service during the AirWatch Database upgrade and restart the service after completing the upgrade process.

**Important:** If you need to change the setting for **Deployment Region**, do not run the installer again.

To install the Workspace ONE Intelligence Connector service, take the following steps.

1. Download the Workspace ONE Intelligence Connector installer on to the server you configured for the service.
2. Run the installer. Select **Next**.
3. Accept the Terms of Use and select **Next**.
4. Ensure the Workspace ONE Intelligence Connector Service is selected as a feature to install. Select **Next**.
5. The installer detects the version of Java installed on the application server. If the installer does not detect the required version, the required version installs. Select **Next**.
6. Enter the Database server settings.

Setting	Description
<b>AirWatch Database server</b>	<p>Select <b>Browse</b> next to the <b>Database server</b> text box and select your AirWatch database from the list of options. If you are using a custom port, do not select Browse. Instead, use the following syntax: <b>DBHostName,&lt;customPortNumber&gt;</b>, then select <b>Browse</b> to select the database server.</p> <ul style="list-style-type: none"> <li>• For example: db.acme.com, 8043</li> </ul>
<b>Application Authentication</b>	<p>Select one of the following authentication methods.</p> <ul style="list-style-type: none"> <li>• <b>Windows Authentication</b> uses a service account on the Windows server to authenticate. You are prompted to enter the service account that you want to use. This service account is used to run all the application pools and AirWatch related services and therefore must have AirWatch Database access.</li> <li>• <b>SQL Server Authentication</b> uses the SQL server authentication method. You are prompted to enter the user name and password.</li> </ul>
<b>AirWatch Database Name</b>	Enter the name of the AirWatch database or browse the SQL server and select it from a list.

Select **Next**.

7. Select the Destination Folder in which to install the Workspace ONE Intelligence Connector service. Select **Next**.
8. Configure the Workspace ONE Intelligence Connector Service settings.

Setting	Description
<b>Deployment Region</b>	<p>Select the region for your cloud service.</p> <p>Whitelist the <b>api.ci.dpa0.org</b> URL for all regions. The installer calls this endpoint for a list of all supported regions.</p> <p>Each option represents a region of the cloud service, selected based on the location of your enterprise data. United States (Sandbox) is for UAT environments.</p> <p>Ensure the right region is selected. Do not run the installer again if you need to change this region in the future.</p> <p>If you upgrade your Workspace ONE Intelligence Connector service from a previous version, this screen does not display because you cannot change your region during an upgrade.</p> <p>Supported regions and URLs you may want to whitelist:</p> <ul style="list-style-type: none"> <li>• United States (UAT environment) <ul style="list-style-type: none"> <li>◦ sandbox.data.vmwareservices.com</li> <li>◦ api.sandbox.data.vmwservices.com</li> <li>◦ eventproxy.sandbox.data.vmwservices.com</li> </ul> </li> <li>• United States (Production) <ul style="list-style-type: none"> <li>◦ na1.data.vmwservices.com</li> <li>◦ api.na1.data.vmwservices.com</li> <li>◦ eventproxy.na1.data.vmwservices.com</li> </ul> </li> <li>• Frankfurt <ul style="list-style-type: none"> <li>◦ eu1.data.vmwservices.com</li> <li>◦ api.eu1.data.vmwservices.com</li> <li>◦ eventproxy.eu1.data.vmwservices.com</li> </ul> </li> <li>• Ireland <ul style="list-style-type: none"> <li>◦ eu2.data.vmwservices.com</li> <li>◦ api.eu2.data.vmwservices.com</li> <li>◦ eventproxy.eu2.data.vmwservices.com</li> </ul> </li> <li>• Tokyo <ul style="list-style-type: none"> <li>◦ ap1.data.vmwservices.com</li> <li>◦ api.ap1.data.vmwservices.com</li> <li>◦ eventproxy.ap1.data.vmwservices.com</li> </ul> </li> </ul>
<b>Installation Token</b>	<p>Enter your AirWatch Installation Token.</p> <p>This token is created as part of the AirWatch Installation process. For more information, see the VMware AirWatch Installation Guide (VMware provides this document to you as part of the on-premises installation process).</p>

Select **Next**.

9. Select **Install** to install the Workspace ONE Intelligence Connector service. Once installation completes, select **Finish**.

## Run the Custom Reports Wizard

The Custom Reports wizard guides you through creating a customized report on your AirWatch environment. The wizard uses starter templates or enables you to create a report from scratch.

To run the Custom Reports wizard, take the following steps.

1. Ensure you are in a Customer type organization group.
2. Navigate to **Hub > Intelligence**, select **Opt-in**, and choose **Launch**. The user interface (UI) changes to the Intelligence UI.
3. Go to **Reporting > Reports** and then select **Add Report**.
4. Select the report category: **Apps, Devices**, or **OS Updates**.
5. Select a template and choose **Next**.

Setting	Description
<b>Apps Templates</b>	
<b>Blank Report</b>	Select to create a custom report from a blank template.
<b>Managed Apps</b>	Select to create a report that shows a list of all managed apps on your devices.
<b>All Apps</b>	Select to create a report that lists all apps, managed or unmanaged, on your devices.
<b>AirWatch iOS and Android Agents</b>	Select to create a report that lists all AirWatch Agent app details on your iOS and Android devices.
<b>Device Templates</b>	
<b>Blank Report</b>	Select to create a custom report from a blank template.
<b>Enrolled devices</b>	Select to create a report that lists all enrolled devices and their details.
<b>Non-Compliant Devices</b>	Select to create a report that lists all devices that violate your compliance policies.
<b>OS Updates Templates</b>	
<b>Blank Report</b>	Select to create a custom report based on a blank template.
<b>All Windows OS Updates</b>	Create a custom report on all (or filtered) updates to the Windows OS.
<b>Critical Update Status</b>	Create a custom report containing all (or filtered) critical updates to the OS.
<b>Security Update Status</b>	Create a custom report focused on security updates to the OS.
<b>Service Pack Update Status</b>	Create a custom report about service pack updates to the OS.

6. On the Customize screen, select **Add Filter** to add filters to your blank template or customize a starter template further. Each filter requires the following settings.

Setting	Description
<b>Filter</b>	Select an attribute that corresponds to the data you are trying to gather. For example, the Enrolled Devices start template uses <b>Device Enrollment Status</b> and <b>Device Location Group Name</b> attributes to narrow results.
<b>Selectors</b>	Select an operator to apply to the value of the attribute. For example, if you are using the <b>Device Organization Group Name</b> attribute, select the <b>Include</b> selector to include all devices in the OG that match the value.
<b>Value</b>	Enter a value you want to receive data on. Some selectors let you select the value from a drop-down menu while others require an explicit entry. For example, if you are using the <b>Device Enrollment Status</b> attribute and the <b>Include</b> selector, select <b>Enrolled</b> to receive a report on all enrolled devices. Conversely, if you are filtering devices by the <b>Country</b> attribute and the <b>Include</b> selector, you must type in the name of the country you wish to include in the report. You must <b>Add Filter</b> for each country you wish to filter.

- Under **Report Preview**, select **Edit Columns**. The **Edit Columns** screen displays.
- Find the column that corresponds to the filter you have chosen to see a preview of the report.
- Select **Save** to return to the **Add Report** screen.
- Select **Next** to proceed to Step 3.
- Enter in a **Report Name** and **Report Description**.
- Select **Run your report now** if you want to run the report after saving the customized report.
- Select **Save** to save the report.

## Return to the AirWatch Console

To return to the AirWatch Console, follow these steps.

- Select the square menu for VMware Services in the top right corner of the UI.
- Select **AirWatch Console** from the VMware Services menu.

## Custom Reports Management

After creating a custom report, you can manage your reports from the Custom Reports List View. You can run reports, schedule reports to run automatically, copy, and delete reports.

### Run Reports

Select a report and select **Run** to run the report immediately. Once the report finishes, you receive an email with a link directing you to your report.

## Send Reports

Select a report and select **Send** to send the report to another AirWatch administrator. They can then access the report through the link sent.

## Schedule Reports

Select a report and select **Schedule** to schedule a report to run automatically and send an email containing a link to the report once finished.

The email contains a download link to the report. To access the report, users must have an admin account on the AirWatch Console to login and authenticate before downloading.

In the **Schedule Report** screen, configure the following settings to schedule a report.

Setting	Description
<b>From</b>	Enter the sender email address that sends the email containing the report link.
<b>To</b>	Enter each recipient email address.
<b>Recurrence</b>	Select from the drop-down menu the frequency the report runs. <ul style="list-style-type: none"> <li>• Hourly</li> <li>• Daily</li> <li>• Weekly</li> <li>• Monthly</li> </ul>
<b>Date/Time</b>	Enter the date (in the M/D/YYYY format) and the time of day you want the report to run. This setting displays when <b>Recurrence</b> is set to <b>Once</b> .
<b>Time of the day</b>	Select the number of hours that must pass before the report runs again. Also select the time of day you want the first report to start. This setting displays when <b>Recurrence</b> is set to <b>Hourly</b> .
<b>Time of Day</b>	Select the time of day the report runs. This setting displays when <b>Recurrence</b> is set to <b>Daily</b> .
<b>Day of the Week</b>	Select the days of the week and the time of day you want the report to run. This setting displays when <b>Recurrence</b> is set to <b>Weekly</b> .
<b>Day of Month</b>	Set the day of the month and the time of day you want the report to run. This setting displays when <b>Recurrence</b> is set to <b>Monthly</b> .
<b>End Recurrence</b>	If you want to stop the recurrence of a report, set the end date. This setting displays when <b>Recurrence</b> is set to <b>Hourly, Daily, Weekly, or Monthly</b> .
<b>Subject</b>	Enter a subject for the email sent once the report finishes. The email contains the link to access the report.
<b>Message</b>	Enter a message for the email sent once the report finishes.

You can view scheduled reports and their recurrence from the Scheduled Reports screen by navigating to **Hub > Intelligence > Launch > Reports & Analytics > Scheduled Reports**.

## Copy Reports

Select a report and select **Copy** to create a copy of the report. Use this action when you want different schedules for the same custom report. Copy also helps when you want to create a new report that is based on an existing report without starting from scratch.

## Delete Reports

Select a report and select Delete to delete a report. Deleting a report removes the report and any associated subscriptions permanently.

## Edit Reports

To edit the filters of a report, select a report and select **Edit**.

# Chapter 3:

## AirWatch Reports

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## Reports Overview

The reports functionality allows you to access detailed information about the devices, users, and applications in your AirWatch solution. The exports of these reports are in comma separated values (CSV) format.

AirWatch Reports allow you to review the state of your AirWatch deployment. The reports gather information on your devices, applications, users, and console actions. Use this information to troubleshoot your deployment and make informed decisions on what actions to take.

In AirWatch v9.0.2, AirWatch added three new reports that appear the same as existing reports but use a revamped back-end framework. This new framework generates reports with improved features.

- More intuitive interface
- Improved report generation reliability
- Easier filter selection
- Faster download times
- Enhanced export status tracing capability
- Streamlined reports subscription functionality

The storage of your reports depends on the storage solution you use. By default, AirWatch stores the reports in the AirWatch database. The reports remain in the database until they expire. Once expired, the reports are automatically deleted. Depending on the size of your deployment, consider using a storage solution as an extension to your database to improve performance.

Extend your data base with File Storage and Reports Storage. File Storage stores reports, content, and application in a separate file storage server. Reports Storage stores AirWatch Reports in a dedicated file store separate from all other content.

To improve performance, consider enabling the reports storage. This storage uses a dedicated server to store all AirWatch Reports and increase performance. For more information, see [Reports Storage Overview on page 40](#).

**Important:** If you are using AirWatch v9.0.2 or v9.0.3, you must enable File Storage to use AirWatch Reports. For more information, see [Introduction to File Storage on page 36](#)

## New Reports

The **New** tag in front of the report name in the AirWatch Console identifies new reports. These reports combine multiple deprecated reports.

To see the new reports, navigate to **Hub > Reports & Analytics > Reports > List View**. To see the exported new reports, navigate to **Hub > Reports & Analytics > Exports**.

AirWatch offers 20 new reports. The following table shows the available columns for each of these new reports.

New Reports	
Admin Login History	
Name	Browser

New Reports	
Core User	Platform
Login Date	Failure Reason
Source IP	Status
Admin User Roles	
Organization Group ID	Role
Organization Group Name	Role Description
Username	Last Login Date
Email	User Type
First Name	Primary
Last Name	
Application Details By Device	
Organization Group ID	Installed Version
Organization Group Name	Bundle Size (KB)
Friendly Name	Dynamic Size (KB)
Serial Number	Total Size
App Name	Install Status
App Identifier	Install Status Reason
Deployed By AirWatch	App First Seen
Managed App	App Updated Date
Assigned Version	Device ID
Device Type	Device Model
OS Version	Ownership Type
Device Last Seen	User name
Email address	
Blacklist or Non-Whitelist Application Details By Device	
Organization Group ID	Device Model
Organization Group Name	OS Version
Device ID	Ownership
Username	Phone Number
Email Address	App Name
Serial Number	App Identifier
IMEI	App Version

New Reports	
Device Platform	App First Seen
Certificate Near Expiration	
Certificate Name	Profile Name
Issued To	Friendly Name
Issued By	Organization Group Name
CA Name	Effective Date
Status	Days until Expires
Content Details by Device	
Organization Group ID	Content Type
Organization Group Name	Content Installed
Device ID	Content Priority
Friendly Name	Content Importance
Username	Content Category
Email Address	Status
Serial Number	Content Version
IMEI	Content Size in KB
Device Platform	Effective Date
Device Model	Expiration Date
OS Version	Last Modified Date
Ownership	Last Seen
Content Name	Days Offline
Count of Active Devices	
Organization Group Name	Total Number of Inactive Devices
Total Number of Active Devices	Total Number of Devices
Count of Active Devices by Users	
Organization Group ID	Total Number of Inactive Devices
Username	Total Number of Devices
Total Number of Active Devices	
Device Battery Log	
Device ID	Battery Flag
Friendly Name	Battery Life Percent
Organization Group ID	Battery Voltage

New Reports	
Organization Name	Battery Current
Device Model	Battery Temperature
Device Platform	Battery mAh Consumed
OS Version	Battery Average Interval
Owner	Battery Average Current
AC Line Status	Backup Battery Lifetime
Sample Time	Backup Battery Full Life Time
Transmit Time	Backup Battery Life Percent
Battery Life Time	Backup Battery Flag
Battery Full Time	Backup Battery Voltage
Device Inventory	
Organization Group ID	Current Carrier
Organization Group Name	Device Roaming
Device ID	Roaming Start date
Friendly Name	Roaming End Date
User name	MAC Address
Email Address	Wi-Fi IP Address
First Name	IMEI
Last Name	Sim Card Number
Display Name	GPRS Connection
Serial Number	Device Capacity(GB)
Device Platform	Available Capacity(GB)
Device Model	Available Physical Memory (MB)
Phone Number	Total Physical Memory (MB)
Ownership	Battery Life Percent
OS Version	AC Power Sample Time
Enrollment Date	Device On AC Power
Compliance Status	Payload Removal Disallowed
Enrollment Status	Is Supervised
Unenrollment Date	EAS DeviceID
Managed By	Is Cloud Backup Enabled
Last Seen	Last iCloud Backup Date

New Reports	
Asset Number	Is Activation Lock Enabled
Is Compromised	Purchase Country
Find My iPhone	Estimated Purchase Date
Country	Warranty Status
MDM Managed	Registration Date
Device Identifier	Coverage Start Date
Home Carrier	Coverage End Date
Device Location Log	
Organization Group Name	Email Address
Organization Group ID	Sample Time
Friendly Name	Latitude
Device ID	Longitude
Username	Elevation
Device Security Posture	
Organization Group ID	IMEI
Organization Group Name	Data protection is enabled.
Device ID	Block level encryption is enabled.
Friendly Name	File level encryption is enabled.
Serial Number	Passcode is present.
Device Model	Passcode Compliant Y/N
Phone Number	Pending Installs
Ownership	All assigned profiles are installed.
OS Version	Passcode Compliant With Profiles
Last Seen	Encryption is compliant
Is Compromised	Internal storage encryption is enabled
MAC Address	SD Card encryption is enabled
Wi-Fi IP Address	Offline Days
Enrollment User Name	Device Group
Email Address	
Device Usage Details	
Organization Group ID	Roaming Data Usage
Organization Group Name	Data Usage (MB)

New Reports	
Device ID	Plan Name
Friendly Name	Cell Card Identifier
Ownership	Record Date
Device Platform	Daily Peak Voice
Device Model	Daily Off Peak Voice
OS Version	Daily Message
User name	Message Limit
Email Address	Daily Data Usage
Serial Number	Billing Cycle
IMEI	Monthly Peak Voice
Phone Number	Monthly Voice Percent Utilization
Last Seen	Monthly Off Peak Voice
Sim Card Number	Monthly message
Sample Time	Monthly Message Percent Utilization
Home Carrier	Monthly Data Usage
Current Carrier	Monthly Data Percent Utilization
Country	Call Start Date Time
Network IP Address	Call Duration Minutes
Cellular IP Address	Call Direction
Device Roaming	Call Answered State
Roaming Start date	Call End State
Roaming End Date	Call Connection State
Data Received (KB)	Call Roaming
Data Sent (KB)	Contact Name
Total KB	
Device Wipe Log	
Device ID or MAC Address	Organization Group ID
Friendly Name	Organization Group Name
Serial Number	Username
Device Type	Email Address
Device Model	Wipe Issued By
OS Version	Wipe Type

New Reports	
Ownership	Event Time
Device Platform	
Devices with Application and User Details	
Organization Group ID	App Identifier
Organization Group Name	Deployed By Air Watch
Device ID	Managed App
User name	App Type
Email Address	Installed Version
Serial Number	Bundle Size(KB)
IMEI	Dynamic Size(KB)
Sim Card Number	Install Status
Device Platform	Install Status Reason
Device Model	App First Seen
OS Version	App Last Seen
Ownership	Last Seen
Phone Number	Device Capacity
Department	Available Device Capacity
Custom Attribute 1	Enrollment Date
Custom Attribute 2	Enrollment Status
Custom Attribute 3	Console App Name
App Name	
Devices with User Details	
Organization Group ID	User Status
Organization Group Name	Platform
Friendly Name	Device Model
Device ID	OS Version
User name	Ownership Type
User Id	Serial Number
First Name	IMEI
Last Name	Enrollment Status
Email Address	Compliance Status
User Phone Number	Date Enrolled

New Reports	
Domain Type	Date Unenrolled
Profile Configuration Settings	
Organization Group	Device Model
Profile Name	Minimum Operating System Name
Profile Group Type	Maximum Operating System Name
Device Platform	Profile Setting Name
Description	Value
Assignment Type	Location Group Path
Profile Details by Device	
Organization Group ID	Model
Organization Group Name	OS Version
Friendly Name	C/E/S
Username	Profile
Email Username	Installed Version
Email Address	Latest Version
Serial Number	Installed Date
MAC Address	Installed
SDK Analytics	
Device ID	App Identifier
Friendly Name	Application Name
Organization Group ID	Application Version
Organization Group Name	Event Name
Username	Event Data
Sample Time	
Shared Device History	
Organization Group ID	Last Name
Organization Group Name	Email Address
Device ID	Check-in Date
Device Name	Checkout Date
First Name	
Terms of Use Acceptance Detail	
Organization Group Name	Phone Number

New Reports	
Organization Group ID	Terms of Use Name
Username	Version
First Name	Accepted Version
Last Name	Accepted
Email Address	Accepted On

## Subscribe to a New Report

Subscribe to a new report to receive alerts from the **Hub** page of the AirWatch Console. Subscription enables you to access important information regarding usage and other technical parameters.

For security reasons, the subscription email for new reports does not contain the report as a file attachment. The email provides a link to download the report. This link requires authentication to download. Only admins with valid credentials can access the reports.

### Procedure

1. Navigate to **Hub >Reports & Analytics > Reports > List View > All Reports**.
2. Choose a desired new report and select the **Report Subscriptions** icon.
3. On the **Parameters** tab, configure applicable settings to set criteria for the scope of the report. These settings vary depending on the report.
4. On the **Schedule** tab, configure the following settings.

Setting	Description
<b>From</b>	Specifies from whom the subscription is sent.
<b>To</b>	Specifies who receives the subscription.
<b>Recurrence</b>	Defines when the AirWatch Console sends the subscription. Available options are once, daily, weekly, and monthly. You can also set the time of day for the report and the end of recurrence.  If the recurrence is set to specific days of the month such as the 31st day of a month when the month only has 30 days, you will not receive a report for that month.
<b>Date/Time</b>	Specifies when to start sending subscriptions.
<b>Subject</b>	Specifies a subject to help identify the subscription when the AirWatch Console delivers it.
<b>Message</b>	Defines the message to explain the subscription when the AirWatch Console delivers it.

**Important:** Administrators with the appropriate role permissions and organization group access can view and edit other administrator's subscriptions.

## Deprecated Reports

The reports whose data columns are now part of the new reports are indicated with a 'Deprecated' tag on the AirWatch Console. Consider using the new reports as all the data columns are same.

The deprecated reports include the following.

- Active Inactive Users by Location
- Admin Account Login History
- Admin User Roles
- Apple MDM
- Application Analytics By Date
- Application Compliance
- Application Cost By User
- Application Deployment Status
- Blacklisted Applications
- Call Log Verbose History
- Call Usage
- Certification Near Expiration
- Content Compliance
- Content Compliance Overview
- Content Near Expiration
- Customer Billing
- Data Usage
- Device Activity Summary
- Device Application Detail
- Device Application Summary
- Device Battery Log
- Device Check Outs
- Device Compliance
- Device Compromised
- Device Content Summary
- Device Count

- Device Data Roaming Detail
- Device Details by Location
- Device Down
- Device Down – WLAN
- Device Down – WWAN
- Device Duplicates
- Device Enrollment User Summary
- Device Group Summary
- Device Inventory Detail
- Device Inventory Detail – WLAN
- Device Inventory Detail – WWAN
- Device Inventory Detail by Organization Group
- Device Inventory Detail with Applications
- Device Inventory Detail with User Information
- Device Inventory OS Summary
- Device Inventory Summary
- Device Inventory Summary By Device Type
- Device Inventory Summary by Location
- Device Last Seen - WWAN by Location
- Device Location Log
- Device MDM Agent Details
- Device MDM Detail
- Device MDM Version Summary with Device Inventory
- Device Memory Log with Device Inventory
- Device Not on AC power
- Device On AC Power
- Device Profile Detail
- Device Roaming
- Device Roaming Detail
- Device Storage Detail

- Device Wipe Log
- Devices Currently Checked Out
- Devices Enrolled
- Devices Last Seen - WLAN
- Devices Last Seen - WWAN
- Devices Last Seen - WWAN By Location
- Devices Not Deployed
- Devices Offline X Days
- Devices Unenrolled
- Devices with Unassigned Locations
- Document Analytics by Date
- Encryption Compliance
- Encryption Compliance Summary
- Enrollment User Summary
- Equipment and Device Assets
- Exchange ActiveSync
- iOS 7 Compatibility
- MDM Agency Charge Back
- Non-Whitelisted Applications
- License Usage Summary
- Location Address
- Location Installation Status
- Passcode Compliance
- Product Compliance
- Product Deployment Summary
- Profile Compliance
- Profile Configuration Settings
- Provisioning Detail
- Provisioning detail currently assigned
- Provisioning Error Detail

- Provisioning Error Summary
- Provisioning Product Assigned
- Provisioning Summary
- Provisioning Summary Currently Assigned
- SaaS Billing
- SaaS Billing by Organization Group
- SaaS Device Billing
- SDK Analytics
- Security Compliance Detail
- Security Compliance Summary
- Shared Device History
- SIM Card Change
- SIM Daily WWAN Data Usage
- SIM Inactive Detail
- SIM Inactive Summary
- SIM Usage Detail
- SMS Log History
- SMS Usage
- Telecom Daily Usage
- Telecom Monthly Usage
- Total Console Logins by Organization Group
- Windows Mobile Agent Migration
- WLAN Data
- WWAN Data

**Note:** Future releases will not include bug fixes or new features for these deprecated reports.

## Generate Reports

The AirWatch reports and analytics solution includes the ability to export data from many sections in the AirWatch Console. From the **Exports** page on the AirWatch Console, you can download the generated reports – once reports are successfully generated, links to download are available in the **Export** grid.

To generate, view, and export a report, take the following steps.

1. Navigate to **Hub > Reports & Analytics > Reports > List View** and select the desired report.
2. On the report screen, complete the applicable settings. These settings vary depending on the report.
3. Click **Download** to export the report to the **Exports** page.
4. Navigate to **Hub > Reports & Analytics > Exports** and select the desired report. Click **Complete** available under **Status** column against the selected report to download it.

**Note:** The exported new reports are mentioned as **New Reports** and the existing reports are mentioned as **Reports** under **Export Type** column.

Hub > Reports & Analytics >

## Exports

Filters >   Search List

Export Page	Organization Group	Time Exported	Expiration Date	Status	Export Type
Application Compliance	Global	1/23/2017 2:20 PM	1/28/2017 2:20 PM	Complete 	Reports
Application Compliance	Global	1/23/2017 2:18 PM	1/28/2017 2:18 PM	Complete 	Reports
Application Details By Device	Global	1/19/2017 3:35 PM	1/24/2017 3:35 PM	Complete 	New Reports

**Note:** From v9.0, the reports (in a comma separated values (CSV) structure) are available for download in zipped format.

## Subscribe to an Old Report

Subscribe to a report to receive alerts from the **Hub** page of the AirWatch Console. Subscription enables you to access important information regarding usage and other technical parameters.

**Important:** Any subscriptions associated with a deprecated report should function as it is. Instead, they are marked as deprecated. Consider using new reports and creating new subscriptions to use them.

### Procedure

1. Navigate to **Hub > Reports & Analytics > Reports > List View > All Reports**.
2. Choose a desired report and select the **Report Subscriptions** icon.
3. On the **General** tab, configure the following settings.

Setting	Description
<b>Description</b>	Defines a descriptive name for the subscription.
<b>Render Format</b>	Defines the format for the report. The default file format is comma separated values (CSV).
<b>Reply To</b>	Specifies who receives the subscription.
<b>Subject</b>	Specifies a subject to help identify the subscription when the AirWatch Console delivers it.
<b>Message Body</b>	Defines the message to explain the subscription when the AirWatch Console delivers it.

4. On the **Parameters** tab, configure applicable settings to set criteria for the scope of the report. These settings vary depending on the report.
5. On the **Execution** tab, configure the following settings.

Setting	Description
<b>Recurrence</b>	
<b>Once</b>	Select this option to subscribe to this report a single time
<b>Daily</b>	Select this option to receive the report every time a set number of days pass.
<b>Weekly</b>	Select this option to receive the report on specific days of the week.
<b>Monthly</b>	Select this option to receive the report on a specific day of the month. You can also set the schedule to First, Second, Third, Fourth, or Last week day of the month.  If the recurrence is set to a day that does not occur in the month, you will not receive a report. For example, if you set recurrence to the Fourth Friday of a month, and the month only has 3 Fridays, you will not receive a report for that month. This also applies to specific days of the month such as the 31st day of a month when the month only has 30 days.

Setting	Description
<b>Range</b>	
<b>Date/Time</b>	Set the specific day and time to receive the report.
<b>Range</b>	Set the end date for the subscription to the report.

6. On the **Distribution List** tab, use one or all the parameters to make a distribution list to receive the subscription.

Setting	Description
<b>Choose Role</b>	Select a role from the menu and click <b>Add to List</b> to add it to the distribution list.
<b>Choose User</b>	Select individual users and click <b>Add to List</b> to add them to the distribution list.
<b>Enter Email Address</b>	Enter the addresses of subscription recipients manually, if you know the address and click <b>Add to List</b> to add them to the distribution list.
<b>Search List</b>	Enter text to search the distribution list to find individual entries and to delete entries from the distribution list.
<b>Distribution List</b>	Define to whom AirWatch sends the subscription. Create this list using the role, user, and email address entries.

**Note:** Admins can edit failed or inactive subscriptions and can save them again to fix the error.

## Manage Reports

You can navigate to **Hub > Reports & Analytics > Reports > List View** page to view reports in the AirWatch Console. You can export data in various formats and perform the following actions.

	<b>Report Subscriptions</b> – Configure a report to run on a specified interval with defined parameters.
	<b>Add to My Reports</b> – Add reports to the <b>My Reports</b> tab for quick access.

Hub > Reports & Analytics > Reports >

### List View

All Reports | My Reports | Recent Reports

Filters >  Search List

 Report Subscriptions  Add to My Reports

Name	Category	Description
<input type="radio"/> <b>New</b> Application Details By Device	Applications	Displays devices with application details
<input type="radio"/> <b>New</b> Device Inventory	Device Inventory	Displays device inventory details
<input checked="" type="radio"/> <b>New</b> Devices With User Details	Device Inventory	Displays device and user details.
<input type="radio"/> Active Inactive Users By Location	Devices	Summary of active/inactive users at a selected point in time
<input type="radio"/> Admin Account Login History	User Management	Login history for selected admin accounts
<input type="radio"/> Admin User Roles	User Management	Lists all Admin users with their roles by Organization Group
<input type="radio"/> Apple MDM	Devices	Apple MDM
<input type="radio"/> Application Analytics By Date	Devices	Application Analytics By Date

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## Troubleshooting Reports

If the background processing service is not enabled, what steps do I take? – see [Enable Background Processing Service on page 33](#) for more information.

### Where can I reference logs in case an error occurs in report processing?

You can refer to the following logs.

- Web Console Logs – For troubleshooting purpose, refer to these logs when any console error occurs. These logs can be referred for both new and existing reports. Logs can be found here:

```
\AirWatch\Logs\WebConsole\WebConsoleLog.txt
```

- Detailed error logs about new reports – Refer to logs found here:

```
\AirWatch\Logs\Services\BackgroundProcessorServiceLogFile.txt
```

- Detailed error logs about old reports – Refer to the reports server logs found here:

```
\Microsoft SQL Server\MSRS12.ABC\Reporting Services\LogFiles
```

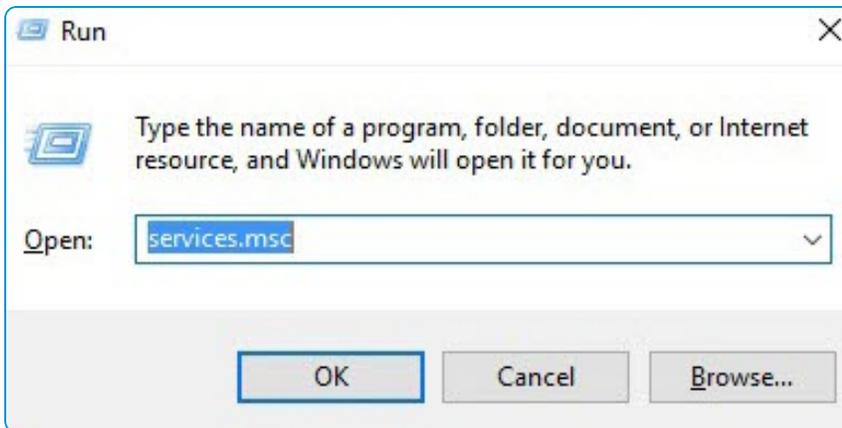
## Enable Background Processing Service

AirWatch Reports requires the background processing service running on the AirWatch Console server. The installation process automatically enables this process but if it is not running, you must enable it to use AirWatch Reports.

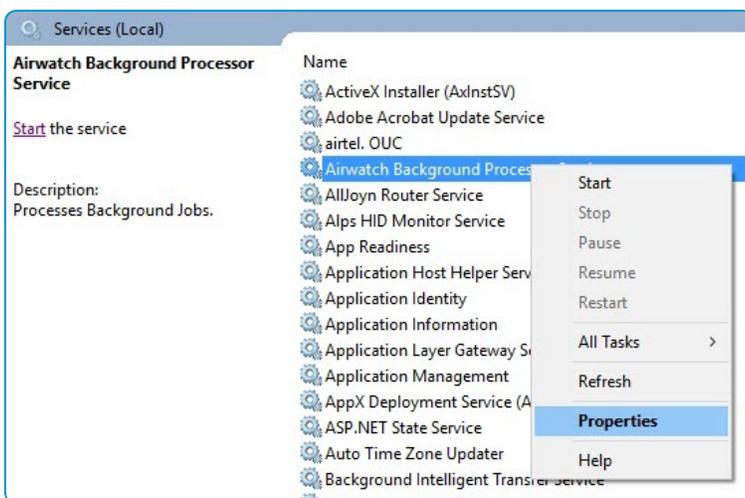
Each AirWatch Console server requires the background processing service. Each server processes reports and writes them to their respective queue before sending them to the database, file storage, or reports storage.

To enable the background processing service, perform the following steps.

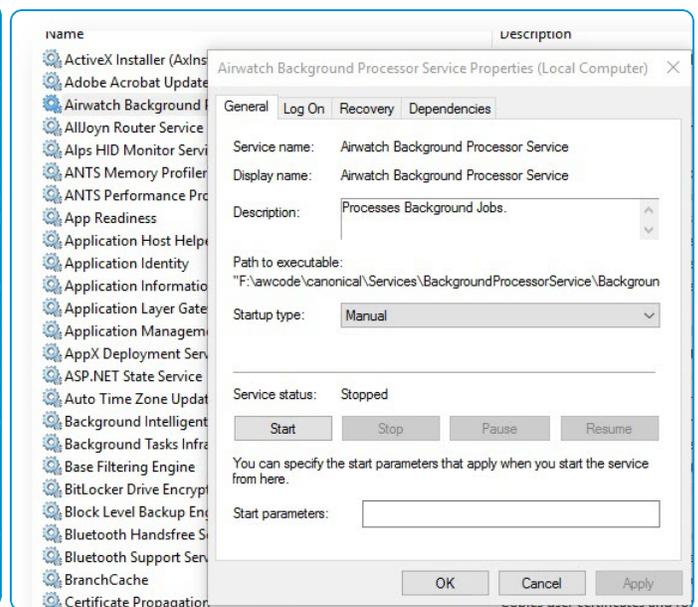
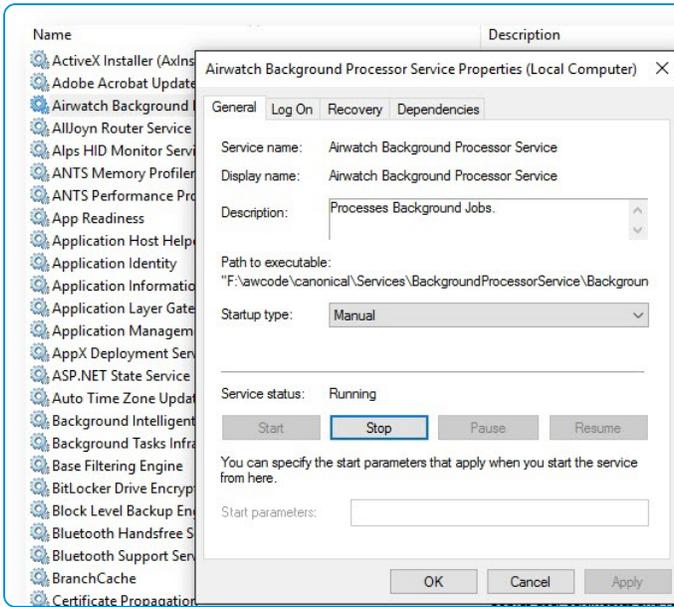
1. Press **Windows key + R** on the console server box.
2. Run the command "services.msc".



3. A screen appears listing all services running on the Console Server box. Locate **Airwatch Background Processor Service** and select **Properties**.



4. A screen appears showing if the service status. Make sure status of this service is **Running**. If status is **Stopped**, ensure to **Start** the service.



# Chapter 4:

## File Storage

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- File Storage Requirements .....36
- Enable File Storage for Reports .....37

## Introduction to File Storage

Certain AirWatch functionality uses a dedicated file storage service to handle processing and downloads, which reduces the overall burden on your AirWatch database and increases its performance. It also includes certain AirWatch reports, internal application deployment, and AirWatch managed content. When you enable file storage for any of these functionalities, it is applied to the others automatically. Setting up file storage causes all reports, all internal applications, and all AirWatch managed content to be stored there.

**Configuring file storage manually is only applicable to on-premises customers.** It is automatically configured for SaaS customers.

### AirWatch Reports

In v9.0.2, AirWatch added three new reports that appear the same as existing reports but use a revamped back end framework. This new framework generates reports with greater reliability and faster download times. To take advantage of these benefits, you must set up file storage.



For more information about these reporting updates, see the following Knowledge Base article: <https://support.air-watch.com/articles/115002346928>.

### Internal Applications

When file storage is enabled, all internal application packages (.ipa, .pak, .appx, .msi., .exe, and so on) that you upload through the AirWatch Console are stored in a file storage location. File storage is required to deploy Win32 applications from the Apps & Books area of the AirWatch Console. This feature is called software distribution.

### AirWatch Managed Content

You can separate the AirWatch managed content from the AirWatch database by storing it in a dedicated file storage location. Uploading large amounts of AirWatch managed content might cause issues with database performance. In this case, on-premises customers can free up space in the database by moving AirWatch Managed Content to an integrated local file storage solution.

AirWatch personal content also moves to the file storage solution is enabled. By default, personal content is stored in the SQL database. If you have a Remote File Storage enabled, personal content is stored in the RFS and not in the file storage or SQL database.

## File Storage Requirements

To set up local file storage, you must meet the following requirements.

**Important:** File Storage is required for Windows 10 Software Distribution.

### Create the Shared Folder on a Server in your Internal Network

- File storage can reside on a separate server or the same server as one of the other AirWatch application servers in your internal network. It is only accessible to components that require access to it, such as the Console and Device

Services servers.

- If the Device Services server, Console server, and the server hosting the shared folder are not in the same domain, then establish Domain Trust between the domains to avoid the authentication failure. If the Device Services server or Console server is not joined to any domain, then supplying the domain during service account configuration is sufficient.

## Configure the Network Requirements

- **If using Samba/SMB** – TCP: 445, 137, 139. UDP: 137, 138
- **If using NFS** – TCP and UDP: 111 and 2049

## Allocate Sufficient Hard Disk Capacity

Your specific storage requirements may vary depending on how you plan to use file storage. The file storage location should have enough space to accommodate the internal apps, managed content, or reports you intend to use. Take into the account the following considerations.

- If you enable caching for internal apps or content, then a best practice is to size the Device Services server for 120 percent of the cumulative size of all the apps/content you need to publish.
- For storing reports, your storage requirements depend on the number of devices, the daily amount of reports, and the frequency with which you purge them. As a starting point, you should plan to allocate at least 50 GB for deployment sizes up to 250,000 devices running about 200 daily reports. Adjust these numbers based on the actual amount you observe in your deployment. Apply this sizing to your Console server as well if you enable caching.

## Create a Service Account with Correct Permissions

- Create an account with read and write permissions to the shared storage directory.
- Create the same local user and password on the Console, Device Services, and the server that is being used for File Storage.
- Give the local user read/write/modify permissions to the file share that is being used for the File Storage Path.
- Configure the File Storage Impersonation User in AirWatch with the local user.

You can also use a domain service account instead of a local user account.

## Configure File Storage at the Global Organization Group

Configure file storage settings at the Global organization group level in the AirWatch Console.

## Enable File Storage for Reports

Configure file storage for reports using the procedure below.

Reports Storage is a storage designed and optimized for storing reports.

1. At the Global organization group level, navigate to **Groups & Settings > All Settings > Installation > File Path** and scroll to the bottom of the page.

2. Select **File Storage Enabled** and configure the settings.

Setting	Description
<b>File Storage Path</b>	Enter your path in the following format: \\{Server Name}\{Folder Name}, where Folder Name is the name of the shared folder you created on the server.
<b>File Storage Caching Enabled</b>	<p>When enabled, a local copy of the files requested for download is stored on the Console server as a cache copy. Subsequent downloads of the same file retrieve it from the Console server as opposed to file storage.</p> <p>If you enable caching, accommodate for the amount of space needed on the server where these files cache. For more information, see <a href="#">File Storage Requirements on page 36</a>.</p>
<b>File Storage Impersonation Enabled</b>	Select to add a service account with the correct permissions.
<b>File Storage Impersonation Username</b>	Provide a valid service account username to obtain both read and write permissions to the shared storage directory.
<b>Password</b>	Provide a valid service account password to obtain both read and write permissions to the shared storage directory.

3. Select the **Test Connection** button to test the configuration.

# Chapter 5: Report Storage

- Reports Storage Overview ..... 40
- Reports Storage Requirements .....40
- Enable Reports Storage .....41

## Reports Storage Overview

Optimize the storage of your AirWatch Reports through reports storage. This storage feature increases the performance of AirWatch Reports.

This storage is different than file storage used by reports, internal applications, and content. If you already use file storage, you do not need to enable reports storage. Consider enabling reports storage if you see a performance impact on your AirWatch database when using reports. Reports storage applies to reports only, helping increase overall reports performance, and reducing the burden on your AirWatch database.

If you enable both file storage and reports storage, reports storage overrides file storage when storing reports.

Report storage requires a dedicated server to host the service and storage of the reports.

## Reports Storage Requirements

To deploy the reports storage solution, ensure that your server meets the requirements.

**Note:** If you are already using File Storage, then Report Storage is available, but not required to run your deployment. If you configure Reports Storage alongside File Storage, the report files will prioritize report storage over file storage.

### Create the Shared Folder on a Server in your Internal Network

- Report storage can reside on a separate server or the same server as one of the other AirWatch application servers in your internal network. Ensure only the components that require access to the server can access the report storage server, such as the Console and Device Services servers.
- If the Device Services server, Console server, and the server hosting the shared folder are not in the same domain, then establish Domain Trust between the domains to avoid an authentication failure. If the Device Services or Console servers are not joined to any domain, then supplying the domain during service account configuration is sufficient.

### Configure Reports Storage at the Global Organization Group

Configure reports storage settings at the Global organization group level in the AirWatch Console.

### Create a Service Account with Correct Permissions

- Create an account with read and write permissions to the shared storage directory.
- Create the same local user and password on the Console, Device Services, and the server that is being used for report storage.
- Give the local user read/write/modify permissions to the file share that is being used for the Report Storage Path. If you give the user modify permission, AirWatch automatically deletes old reports from the storage. If you do not give the user modify permissions, consider monitoring report storage to prevent running out of space.
- Configure the Report Storage Impersonation User in AirWatch with the local user.

You can also use a domain service account instead of a local user account.

## Allocate Sufficient Hard Disk Capacity

Your specific storage requirements may vary depending on how you plan to use reports storage. Ensure that the reports storage location has enough space to accommodate the reports you intend to use.

For storing reports, your storage requirements depend on the number of devices, the daily number of reports, and the frequency with which you purge them. As a starting point, plan to allocate at least 50 GB for deployment sizes up to 250,000 devices running about 200 daily reports. Adjust these numbers based on the actual amount you observe in your deployment. Also apply this sizing to your Console server if you enable caching.

## Enable Reports Storage

Enable reports storage to store your reports on a dedicated server and increase performance.

To enable reports storage, take the following steps.

1. Navigate to **Groups & Settings > All Settings > Installation > Reports**.
2. Set **Report Storage Enabled** to **Enabled**.
3. Configure the report storage settings.

Settings	Description
<b>Report Storage File Path</b>	Enter your path in the following format: \\{Server Name}\{Folder Name}, where Folder Name is the name of the shared folder you created on the server.
<b>Report Storage Caching Enabled</b>	When enabled, a local copy of the files requested for download is stored on the Console server as a cache copy. Subsequent downloads of the same file retrieve it from the Console server as opposed to file storage.  If you enable caching, accommodate for the amount of space needed on the server where these files cache. For more information, see <a href="#">Reports Storage Requirements on page 40</a> .
<b>Report Storage Impersonation Enabled</b>	Enable to add a service account with the correct permissions.
<b>Report Storage Impersonation Username</b>	Enter the username of a valid service account with both read, write and modify permissions to the shared storage directory.  Displays when <b>Report Storage Impersonation Enabled</b> is enabled.
<b>Report Storage Impersonation Password</b>	Enter the password of a valid service account with both read, write, and modify permissions to the shared storage directory.  Displays when <b>Report Storage Impersonation Enabled</b> is enabled.

4. Select the **Test Connection** button to test the configuration.

# Accessing Other Documents

While reading this documentation you may encounter references to documents that are not included here.

The quickest and easiest way to find a particular document is to navigate to [https://my.air-watch.com/help/9.2/en/Content/Release\\_Notes/Doc\\_List\\_PDFs.htm](https://my.air-watch.com/help/9.2/en/Content/Release_Notes/Doc_List_PDFs.htm) and search for the document you need. Each release-specific document has a link to its PDF copy on AirWatch Resources.

Alternatively, you can navigate to AirWatch Resources on myAirWatch ([resources.air-watch.com](https://resources.air-watch.com)) and search. When searching for documentation on Resources, be sure to select your AirWatch version. You can use the filters to sort by PDF file type and AirWatch v9.3.