Avalanche

Avalanche 5.3 Custom Reporting

Reference Guide

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Table of Contents

Chapter 1:   Avalanche Reports

Avalanche reports can help you organize information about the activity or status of devices or software on your network. These reports are generated from the information Avalanche stores in its databases. You can create reports with an Avalanche template or you can create a custom report to display the desired information.

When you create a report, you must first configure the name, scope, output, and the time period to be included in the report. Then you can either generate the report immediately or schedule a time for the report to be generated. When a report is scheduled, it can be set to run once or on a recurring basis.

This section provides information about using Avalanche reports, including:

- Accessing Avalanche Reports

- Creating Custom Reports

- Generating Reports

Accessing Avalanche Reports

You can access Avalanche reporting through the Avalanche Web Console. The main page has three panels:

- **Completed Reports**. This panel displays the names of reports that have been completed.

- **Scheduled Reports**. This panel displays the names of reports that have been configured and scheduled.

- **Configured Reports**. This panel displays the names of reports that have been configured.

The columns displayed in these panels are as follows:

Name	Displays the name of the report.
Template	Displays the template used for the report.
Location	Indicates the location(s) involved in the report.

Result	Displays if the report was successful or if there were errors with the report, such as insufficient data.
Completed	Displays when the report was completed.
Frequency	Displays how frequently the scheduled report will be run.
Start Time	Displays the start time for the scheduled report.
Category	Displays the category to which the report belongs.

To access Avalanche reporting:

1 Log in to the Web Console.

2 Click **Tools > Reports**.

The Avalanche Reports main page appears.

Creating Custom Reports

Avalanche reporting allows you to create custom reports using information from your databases. In order to utilize custom reports, you must be familiar with SQL query statements.

NOTE A custom report can include information from either one database or the other. You cannot create a custom report using tables from both the stats database and the enterprise database.

This section gives basic instructions on creating a custom report. For details about the database tables, see *Database Tables* on page 6.

When you create a custom report, you can design a report that gathers and displays the information you need from a database.

To create a custom report:

1 From the Web Console, click **Tools > Reports**.

2 From the Configured Reports panel, click **New**.

The Create a New Report panel appears.

3   Click **Create a Custom Report**.

The Create Reports panel appears.

4   Select the database from which you would like information reported and click **Next**.

5   Click the **Add Table** button to add a table on which you would like to report. From the dialog box, select the table from the drop-down list and then enable the checkboxes for the columns you want to include. Click **Update**.

6   If you want to include information from a different table, click **Add Table**. If you want to edit the query statement, change the information in the text boxes. To test the results of the report, click **Test**. When you are finished adding tables and editing the query, click **Next**.

7   Type a **Report Name** in the text box and select the **Output Format** for the report. If you want the report to be e-mailed to a specific e-mail address, type the address in the **Email Report** text box. Click **Next**.

8   A summary of the report appears. Click **Done** to return to main Reports page.

From the Reports page, you can run or schedule the report and then view the report results.

Generating Reports

After a report has been configured, it can be generated immediately or scheduled for a specific time. When a report is scheduled, it can be set to run once or on a recurring basis.

This section includes instructions for the following:

• Running a Report

• Scheduling a Report

Running a Report

After a report has been configured, you can generate it at any time. The configuration persists after the report has been run, so you can generate a report with the same name and configuration as often as desired.

To run a configured report:

1 From the Web Console, click **Tools > Reports**.

2 From the Configured Reports panel, enable the checkbox next to the report that you want to generate.

3 Click **Run Now**.

   The report appears in the **Completed Reports** panel.

Scheduling a Report

After a report has been configured, you can schedule it to run at a specific time.

To schedule a report:

1 From the Web Console, click **Tools > Reports**.

2 From the Configured Reports panel, enable the checkbox next to the report that you want to generate.

3 Click **Schedule**.

   The Schedule Reports page appears.

4 From the drop-down list, select how frequently you want the report to run.

5 Type the date and time you want the report to run in the text boxes. For the date, use a mm/dd/yyyy format.

6 Click **Next**.

7 A summary of report appears. Click **Done** to return to the main Reports page.

Chapter 2: Database Tables

Avalanche works with two databases: the enterprise database and the statistics database. The enterprise database handles device configuration information. The stats database manages statistical information regarding the state of devices on your network.

In order to create a custom report, you select one of the two databases and then choose which information you want to include in the report. This chapter presents descriptions of the tables in the databases to help you as you create a custom report.

NOTE You cannot include information from both databases in one report. You must select either the Enterprise Server database or the Statistics Server database.

- Enterprise Database

- Statistics Database

Enterprise Database

The Enterprise Server database contains information about Avalanche users, regions and locations, alerts, profiles, and devices.

The enterprise database contains the following tables:

- MobileDevice Table

- InfrastructureDevice Table

- DeviceProperty Table

- DeviceServer Table

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- DistributedServerLocation Table

- Alert Table

- SoftwarePackage Table

- SoftwareProfile Table

- NetworkProfile Table

- ScanToConfigureProfile Table

- InfrastructureProfile Table

- Users Table

MobileDevice Table

This table contains the following columns:

Column	Type	Description
AgentId	Integer	The server to which the device last connected.
AssignedIPAddress	String	The IP Address assigned to the device by a configuration setting.
AssignedNetworkProfileId	Integer	The ID of the network profile applied to the device.
DeviceStatus	String	The current status of the device.
GUID	String	The unique identifier of the device.
ID	Integer	The database ID of the device.
IPAddress	String	The IP address of the device.
LastContact	Timestamp	The last time the device was in contact with the server.
Licensed	String	Device license status. True if the device is licensed.
MacAddress	String	The MAC address of the device.
Manufacturer	String	The manufacturer of the device.
Model	String	The model of the device.
TerminalId	String	The terminal ID of the device.

InfrastructureDevice Table

This table is only available in Avalanche MC. It contains the following columns:

Column	Type	Description
AssociatedMUCount	Integer	The number of mobile devices associated with the access point.
DeviceId	Integer	The ID of the device.

Column	Type	Description
ExtraInfo	String	Extra information provided to the server.
FirmwareVersion	String	The version of the firmware running on the device.
GUID	String	The unique identifier of the device.
IPAddress	String	The IP address of the device.
MacAddress	String	The MAC address of the device.
Manufacturer	String	The manufacturer of the device.
Model	String	The model of the device.
Name	String	The name of the infrastructure device.
AgentId	Integer	The server with which the device is associated.
SubnetMask	String	The subnet mask of the device.

DeviceProperty Table

This table contains the following columns:

Column	Type	Description
DeviceId	Integer	The ID of the device property.
PendingValue	String	The value the property will be changed to.
PropertyName	String	The name of the property.
PropertyValue	String	The value of the property.

DeviceServer Table

This table is only available in Avalanche MC. It contains the following columns:

Column	Type	Description
DeploymentState	String	The deployment state of the server.
ID	Integer	The ID of the server.
LicensedDeviceCount	Integer	The number of associated licensed devices.
ServerLocationType	String	The type of server. 0 for mobile and 1 for infrastructure.
Status	String	The error state of the server.
UnlicensedDeviceCount	Integer	The number of associated unlicensed devices.
Version	String	The version of the server.

GroupLocation Table

This table contains the following columns:

Column	Type	Description
Id	Integer	The ID of the group location.
InfrastructureCriteria	String	The criteria associated with the infrastructure devices included in the group location.
MobileCriteria	String	The criteria associated with the mobile devices included in the group location.
Name	String	The name of the group location.
Priority	String	Priority of the group location. This affects how profiles are applied.

DistributedServerLocation Table

This table is only available in Avalanche MC. It contains the following columns:

Column	Type	Description
City	String	The city where the distributed server is located.
Country	String	The country where the distributed server is located.
Created	Timestamp	The date and time the record for the server was created.
DServerId	Integer	The ID of the distributed server.
IPAddress	String	The IP address of the distributed server.
LastDeployment	Timestamp	The time of the last deployment to the server.
LocationName	String	The name of the server location.
OSVersion	String	The version of the operating system where the distributed server is running.
RegionId	String	The ID of the parent region.
State	String	The state where the distributed server is located.
TimeZone	String	The time zone of the distributed server.

Alert Table

This table contains the following columns:

Column	Type	Description
Created	Timestamp	The time the event was created.
Details	String	Description of the event.
Id	Integer	The ID of the event.
Source	Integer	The code for the type of component that generated the event.
SourceId	Integer	The database ID for the component that generated the event.
Updated	Timestamp	The time the event was last updated.

SoftwarePackage Table

This table contains the following columns:

Column	Type	Description
PackageId	Integer	The ID of the software package in the table.
PackageName	String	The name of the software package.
PackageTitle	String	The title of the software package.
PackageType	String	The software package type.
Revision	String	The revision of the software package.
SelectionCriteria	String	The selection criteria associated with the package.
Status	String	The enabled/disabled status of the package.
Updated	Timestamp	Date and Time the profile was last updated.
Vendor	String	The name of the vendor that created the package.

SoftwareProfile Table

This table contains the following columns:

Column	Type	Description
Created	Timestamp	The date and time the profile was created.
ProfileBaseId	Integer	The ID of the profile in the ProfileBase table.
ProfileName	String	The software profile name.

Column	Type	Description
Removed	String	Indicates the profile has been deleted, but a universal deployment has not yet been performed.
Revision	String	The revision number of the software profile.
SelectionCriteria	String	The selection criteria associated with the profile.
Status	String	The enabled/disabled status of the profile.
Updated	Timestamp	The date and time the profile was last updated.

NetworkProfile Table

This table contains the following columns:

Column	Type	Description
Created	Timestamp	The date and time the profile was created.
Enabled	String	The enabled/disabled status of the profile. True if enabled.
ProfileBaseId	Integer	The ID of the ProfileBase record.
ProfileId	Integer	The ID of the profile in the Profile table.
ProfileName	String	The network profile name.
SelectionCriteria	String	The selection criteria associated with the profile.
Updated	Timestamp	The date and time the profile was last updated.

ScanToConfigureProfile Table

This table contains the following columns:

Column	Type	Description
AssignStaticIP	String	True if the scan to config profile is assigning a static IP address.
Gateway	String	The gateway that will be assigned to the device.
IPAddress	String	The IP address that will be set if AssignStaticIP is true.
MaxBarcodeLength	Integer	The maximum length of the generated barcodes.
NetworkProfileId	Integer	The Id of the network profile the scan to config profile is assigned to inherit settings from.
ProfileBaseId	Integer	The ID of the ProfileBase record.
ProfileName	String	The scan to config profile name.

Column	Type	Description
Removed	String	Indicates the profile has been deleted, but a universal deployment has not yet been performed.
SubnetMask	String	The subnet mask that will be assigned to the device.
UseNetworkProfile	String	True if the scan to config profile is set to use a network profile's settings.

InfrastructureProfile Table

This table is only available with Avalanche MC. It contains the following columns:

Column	Type	Description
Created	Timestamp	The date and time the profile was created.
DefaultVLANId	Integer	The ID of the default VLAN set in the profile.
Enabled	String	The enabled/disabled status of the profile. True if enabled.
ProfileBaseId	Integer	The ID of the ProfileBase record.
ProfileId	Integer	The ID of the profile in the Profile table.
ProfileName	String	The infrastructure profile name.
SelectionCriteria	String	The selection criteria associated with the profile.
Updated	Timestamp	The date and time the profile was last updated.
UseSSH	String	True if the profile is set to use SSH.

Users Table

This table contains the following columns:

Column	Type	Description
email	String	The e-mail address of the user.
FirstName	String	The first name of the user.
LastName	String	The last name of the user.
Login	String	The user login.
PhoneNumber	String	The phone number for the user.
UserDescription	String	A description of the user.
UserLastLogin	Timestamp	The last time the user logged in.
UserType	String	The type of user.

Statistics Database

The Statistics Server database contains statistics and properties for infrastructure and mobile devices.

The statistics database contains the following tables:

- MobileDeviceStats Table

- ApDeviceForMu Table

- AssociatedMobileUnit Table

- AssociatedMobileUnitProperty Table

- InfraDeviceStats Table

- InfraStatsProcessed Table

- InfraStatsDevice Table

- InfraStatsDeviceProperties Table

- MobileUnitEventStats Table

- MuStatsDeviceProperties Table

- FieldName Table

MobileDeviceStats Table

This table contains the following columns:

Column	Type	Description
AckFailureCount	Integer	The number of ACK failures.
AvailVirtualMemory	Integer	Available virtual memory.
BackupBatteryCharge	Integer	The backup battery charge level.
BackupBatteryMask	Integer	The backup battery mask.
BatteryCharge	Integer	The battery charge level.
BatteryMask	Integer	The battery mask.
BroadcastBytesRcvdOK	Integer	The number of broadcast bytes received.

Column	Type	Description
BroadcastBytesXmtdOK	Integer	The number of broadcast bytes transmitted.
BroadcastFramesRcvdOK	Integer	The number of broadcast frames received.
BroadcastFramesXmtdOK	Integer	The number of broadcast frames transmitted.
DataRate	Integer	The data rate.
DeviceId	Integer	The ID of the device.
DirectedBytesRcvdOK	Integer	The number of received bytes.
DirectedBytesXmtdOK	Integer	The number of directed bytes.
DirectedFramesRcvdOK	Integer	The number of frames received.
DirectedFramesXmtdOK	Integer	The number of directed frames transmitted.
FailedCount	Integer	Failed frame count.
FcsErrorCount	Integer	The FCS error count.
FrameDuplicateCount	Integer	The number of duplicate frames.
FramesMissedNoBuffers Available	Integer	The number of frames dropped because there was no buffer available.
FramesRcvdOK	Integer	The number of frames received.
FramesXmtdOK	Integer	The number of frames transmitted.
GUID	Integer	The unique identifier of the mobile device.
Mode	Integer	The mode of the device (adhoc or infrastructure).
MountedStorage1Folder Name	Integer	The first mounted storage folder name.
MountedStorage1Free	Integer	The first mounted storage free.
MountedStorage1Size	Integer	The first mounted storage size.
MountedStorage2Folder Name	Integer	The second mounted storage folder name.
MountedStorage2Free	Integer	The second mounted storage free.
MountedStorage2Size	Integer	The second mounted storage size.
MulticastBytesRcvdOK	Integer	The number of multicast bytes received.
MulticastBytesXmtdOK	Integer	The number of multicast bytes transmitted.
MulticastFramesRcvdOK	Integer	The number of multicast frames received.
MulticastFramesXmtdOK	Integer	The number of multicast frames transmitted.
MulticastRcvdFrameCount	Integer	The multicast received frame count.
MulticastXmtdFrameCount	Integer	Multicast transmitted frame count.
MultipleRetryCount	Integer	The number of multiple retries.

Column	Type	Description
PowerSource	Integer	The power source.
ProgramFreeMemory	Integer	The available amount of program memory.
ProgramMemory	Integer	The total program memory.
RcvCRCErrors	Integer	The number of CRC errors.
RcvdFragmentCount	Integer	The received fragment count.
RcvErrors	Integer	The number of receive errors.
RetryCount	Integer	The number of retries.
RootFilesystemFree	Integer	The file system free.
RootFileSystemSize	Integer	The size of the root file system.
SignalStrength	Integer	The signal strength.
StoreFreeMemory	Integer	The available amount of storage memory.
StoreMemory	Integer	The amount of storage memory.
Timestamp	Integer	Time of the reported statistic.
TotalMemory	Integer	The total available memory.
TotalVirtualMemory	Integer	Total virtual memory.
TransmitErrors	Integer	The number of transmit errors.
XmtdFragmentCount	Integer	Transmitted fragment count.

ApDeviceForMu Table

This table is only available with Avalanche MC. It contains the following columns:

Column	Type	Description
AgentId	Integer	The ID of the server.
CRCValue	Integer	The CRC value.
GroupId	Integer	The ID of the group.
Id	Integer	The ID of the device.
MacAddress	String	The MAC address of the device.

AssociatedMobileUnit Table

This table is only available with Avalanche MC. It contains the following columns:

Column	Type	Description
APID	Integer	The ID of the access point the device is associated with.
Id	Integer	The ID of the Device in the Associated MU Table
MacAddress	String	The MAC address of the device.
Timestamp	Timestamp	The time the record was created.

AssociatedMobileUnitProperty Table

This table is only available with Avalanche MC. It contains the following columns:

Column	Type	Description
AssociatedMuId	String	The ID of the mobile device in the AssociatedMobileUnit Table.
Id	Integer	Associated property ID.
PropertyName	String	The name of the property.
PropertyValue	String	The value of the associated property.

InfraDeviceStats Table

This table is only available with Avalanche MC. It contains the following columns:

Column	Type	Description
AgentID	Integer	The ID of the server the device reported the stat to.
BitRate	Integer	The bit rate reported by the device.
BytesReceived	Integer	The number of bytes received by the device.
BytesSent	Integer	The number of bytes sent from the device.
CRCErrors	Integer	The number of CRC errors reported by the device.
GroupID	Integer	The ID of the group the device is reported under.
InboundErrors	Integer	The number of inbound errors reported by the device.
Interface	String	The interface the AP/switch is using to communicate.
MacAddress	String	The MAC address of the device reporting the statistics.
MobileUnitCount	Integer	The number of mobile units reported associated to the device.

Column	Type	Description
OutboundErrors	Integer	The number of outbound errors reported by the device.
PacketsReceived	Integer	The number of packets received by the device.
PacketsSent	Integer	The number of packets sent by the device.
RadioMode	String	The radio type of the interface reporting the statistic.
RecordID	Integer	The ID of the record in the database.
ReportedDate	Timestamp	The date and time the stat record was reported.
RetryCount	Integer	The count of the number of retries to the device.
WepErrors	Integer	The number of WEP errors reported by the device.

InfraStatsProcessed Table

This table is only available in Avalanche MC. It contains the following columns:

Column	Type	Description
AgentID	Integer	The ID of the server the device is reporting to.
Capacity	Integer	The capacity as a percentage.
CRCError	Integer	The CRC errors as a percentage.
GroupID	Integer	The ID of the group of the device.
ID	Integer	The ID of the record in the database.
InboundError	Integer	The inbound errors as a percentage.
Interface	Integer	The interface used by the device.
MacAddress	String	The MAC address of the device.
MobileCount	Integer	The count of the mobile units associated with the device.
OutboundError	Integer	The outbound errors as a percentage.
PacketError	Integer	The packet errors as a percentage.
Retry	Integer	The retries as a percentage.
Timestamp	Timestamp	The date and time of the record creation.
Utilization	Integer	The utilization as a percentage.
WepError	Integer	The number of WEP errors that occurred on the device.

InfraStatsDevice Table

This table is only available with Avalanche MC. It contains the following columns:

Column	Type	Description
AgentID	Integer	The ID of the server for the device.
GroupID	Integer	The ID of the group for the device.
ID	Integer	The ID of the device in the current table.
MacAddress	String	The MAC address of the device.
ParentAPMac	String	The MAC address of the AP for Associated MUs only.
PropertyName	String	The name of the property for the device.
PropertyValue	String	The value for the property.
Timestamp	Timestamp	The timestamp for the record.

InfraStatsDeviceProperties Table

This table is only available with Avalanche MC. It contains the following columns:

Column	Type	Description
DeviceId	Integer	The ID of the device in the InfraStatsDeviceTable.
ID	Integer	The ID of the record in the current table.
PropertyName	String	The name of the property.
PropertyValue	String	The value of the property.

MobileUnitEventStats Table

This table contains the following columns:

Column	Type	Description
AgentID	Integer	The ID for the server.
EventId	String	Event description.
GUID	String	The unique identifier for the device.
MuStatId	Integer	The ID of the record in the current database.
PropertyValue	String	The property value.
Status	String	The event status.
TimeStamp	Timestamp	The date the record was created.

MuStatsDeviceProperties Table

This table contains the following columns:

Column	Type	Description
MUStatId	Integer	The ID of the device in the MobileUnitEventStats Table.
StatPropId	Integer	The ID of the record in the MuStatsDeviceProperties Table.
Operation	String	The description of the operation.
PropertyName	String	The name of the property for the device.
PropertyValue	String	The value of the property for the device.

FieldName Table

This table contains the following columns:

Column	Type	Description
EventDescription	String	The description of the event.
EventId	Integer	The event ID number that corresponds to the EventId in the MobileUnitEventStats table.