knowledge17

http://clabs.link/lab131987

WORK at LIGHTSPEED

CMDB Health Dashboard, Reporting, and Reconciliation

Romit Banerjee
CMDB R&D
ServiceNow

Richard Brounstein
Solution Consultant
ServiceNow

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servicenow

Agenda

- CMDB Overview and the Jakarta CMDB Health Dashboard
- CMDB Completeness Measurements
- CMDB Compliance and Audit Measurements
- CMDB Correctness Measurements
- CMDB CI Remediation Workflows

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Speaker Introduction



Name: Romit Banerjee

Title: CMDB R&D

Function: Software Development

Company: ServiceNow

Experience: 1.5 years with ServiceNow, 7+ years experience in software engineering

Expertise: CMDB Health Dashboard

Achievements: Made significant performance improvements to CMDB Health Dashboard

Current Projects: Enhancements to the health dashboard and making it more scalable for large CMDB customers.

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Speaker Introduction



Name: Richard Brounstein

Title: Solution Architect

Function: Sales

Company: ServiceNow

Experience: 2 Years with ServiceNow, 25 Years working in the Software Industry

Expertise: ServiceNow IT Operations Management

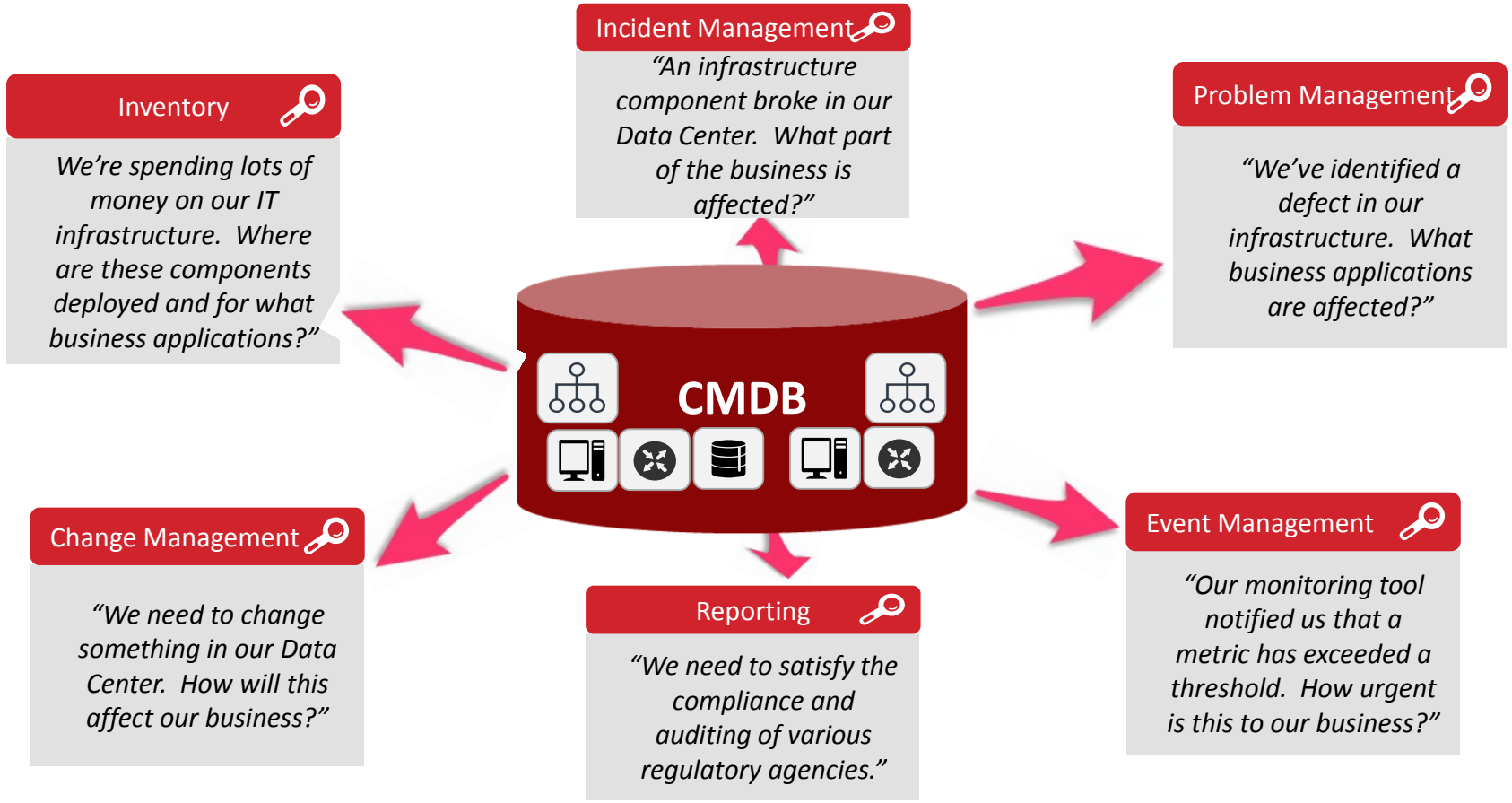
Achievements: Assisted customers with deployments of Discovery, Service Mapping, CMDB Workshops

Current Projects: Support of ServiceNow Customers in CMDB, Discovery, Service Mapping, Event Management, Orchestration, and Cloud Automation

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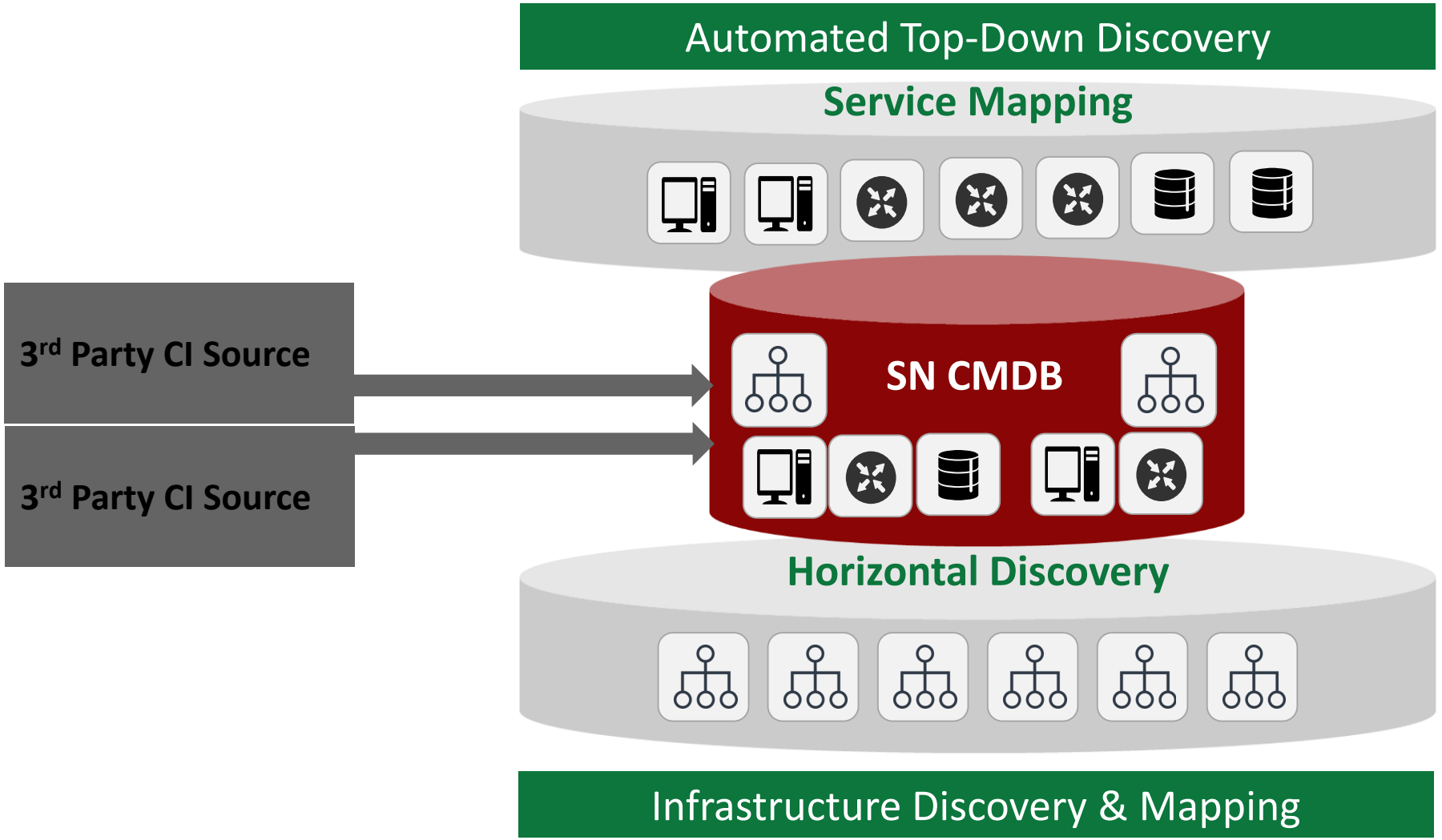
CMDB Overview: Why You Need a CMDB

A Configuration Management Database is a powerful single system of record of configuration items. When properly deployed, it provides an essential component for IT services.



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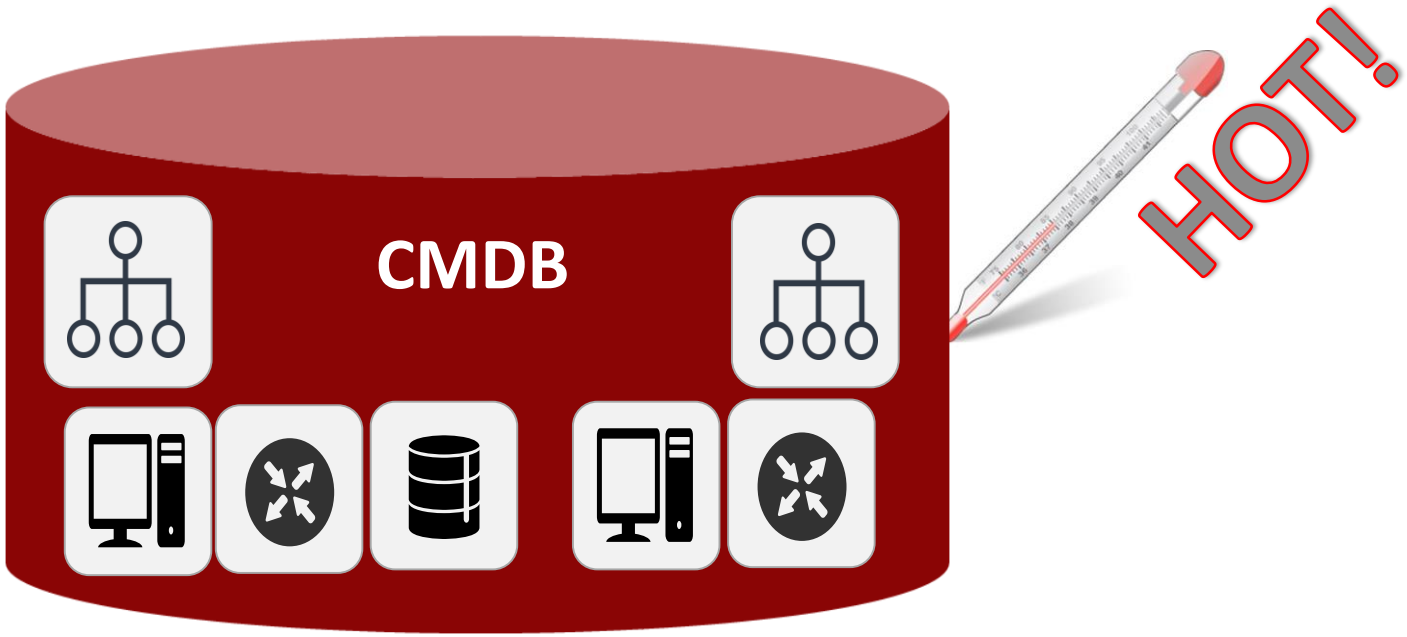
CMDB Overview: Populating the CMDB



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CMDB Overview: Issues with CI Data

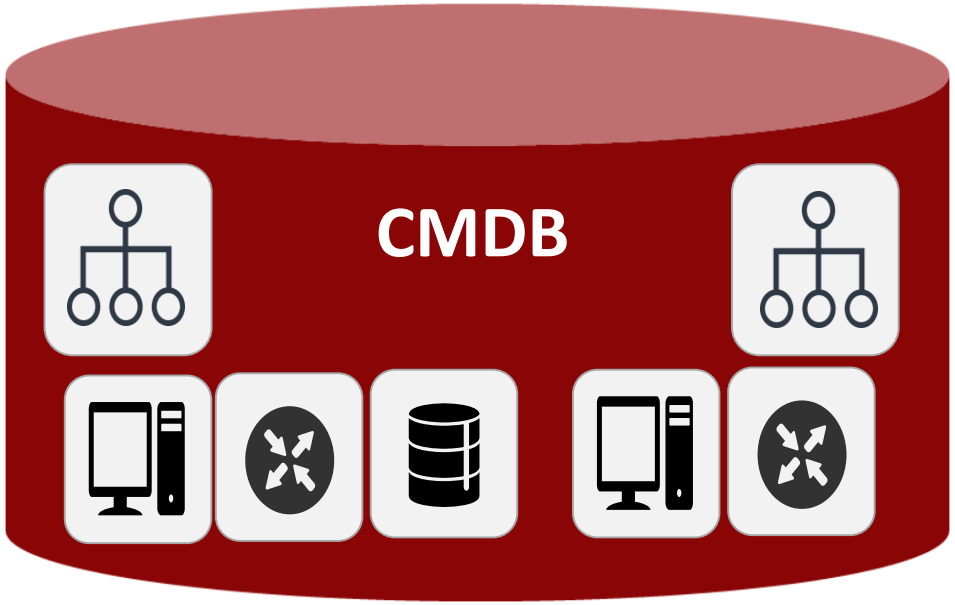
Your CMDB Can Become Unhealthy with Bad CIs



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CMDB Overview: Issues with CI Data

Your CIs Need Attention to Remain Healthy





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The CMDB Health Dashboard

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The CMDB Health Dashboard

Completeness — Last updated: 2016-03-21 00:00:01

71%

Recommended	2014 / 2785	72%
Required	0 / 2785	0%

Compliance — Last updated: 2016-03

1%

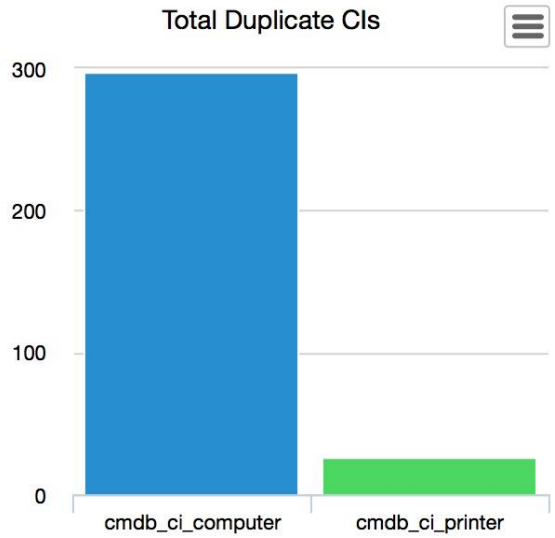
Audit	440 / 445	98%

Correctness — Last updated: 2016-03-23 23:09:11

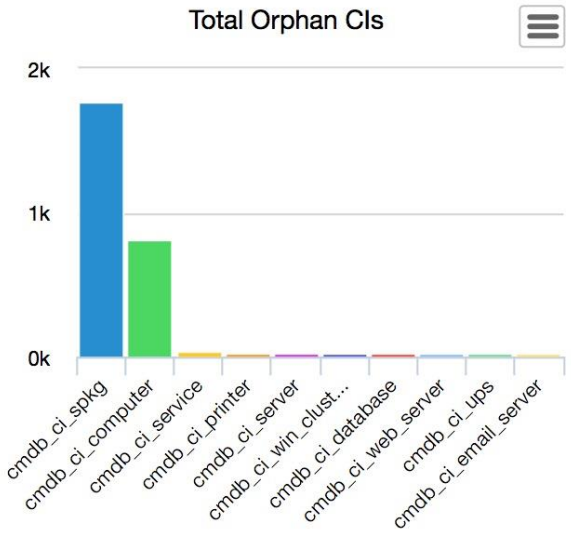
63%

Duplicate	315 / 2785	11%
Orphan	2760 / 2785	99%
Staleness	117 / 2785	4%

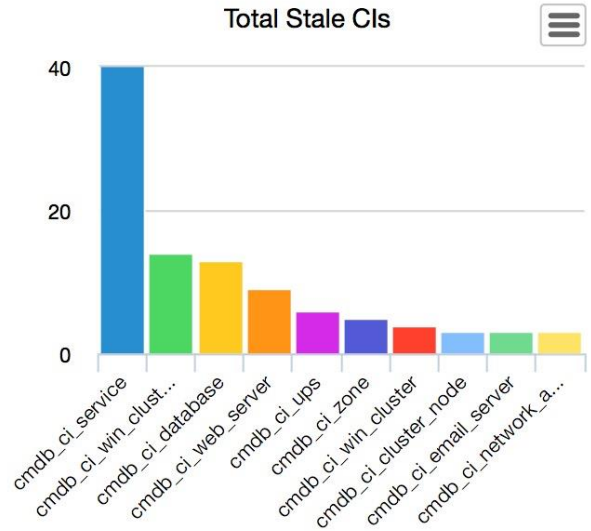
Duplicate CIs



Orphan CIs

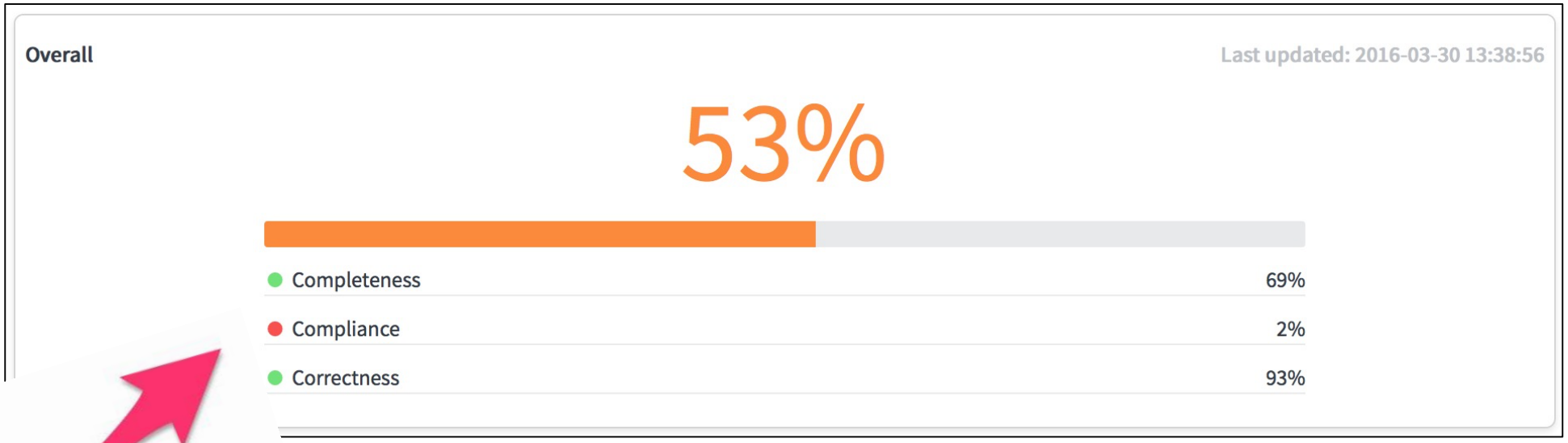


Stale CIs

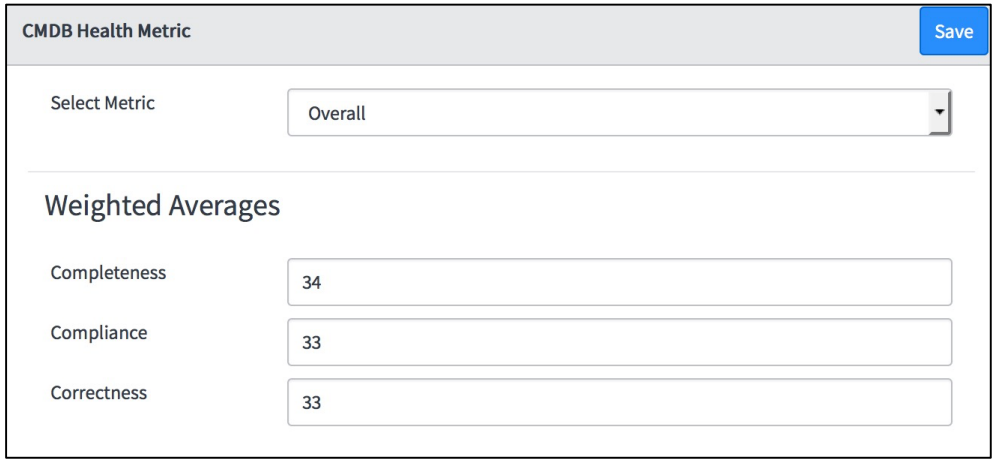


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CMDB Health Dashboard Overview: Overall Dashboard Score



Overall Measurements are weighted averages

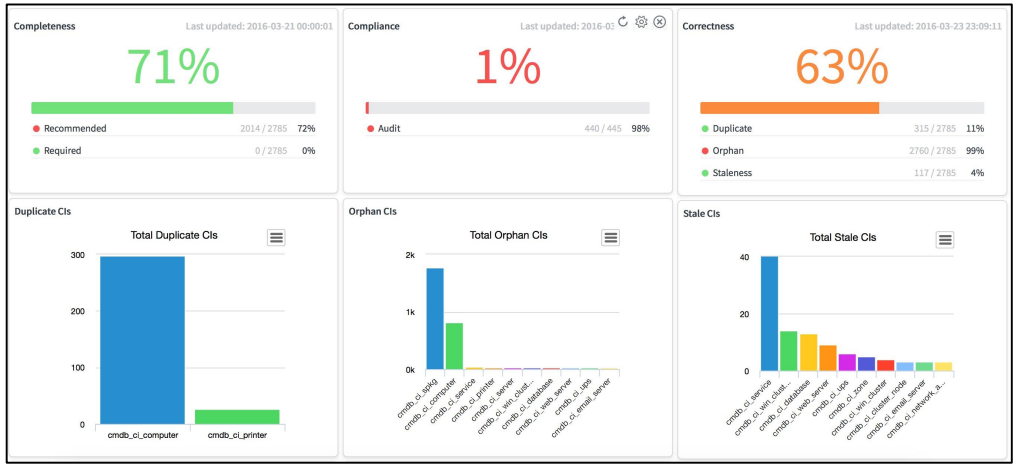


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Objectives of the CMDB Dashboard

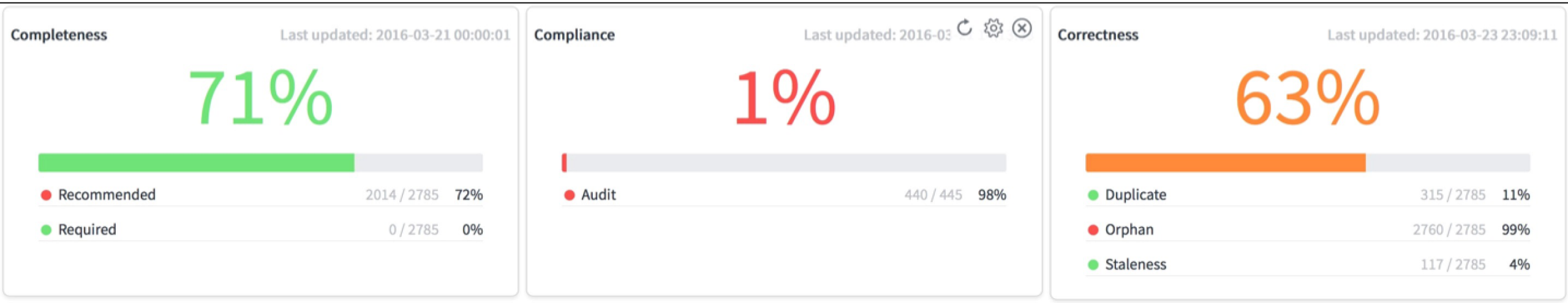
The CDMB Dashboard helps the CMDB Manager improve the health of data in the CMDB. In short, it ensures that the data will support IT Processes.

- Configuration Items (CIs) in the CMDB must be complete
- CIs must be confirmed as Up-To-Date
- Problem CIs must be immediately known
- Organizational compliance needs must be measured
- Detected Issues need to be remediated



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CMDB Dashboard Process



Display a CI Health Measurement in the CMDB → **Drill Down to the Individual CIs Responsible for the Problem** → **Remediate the Problem with the CIs**

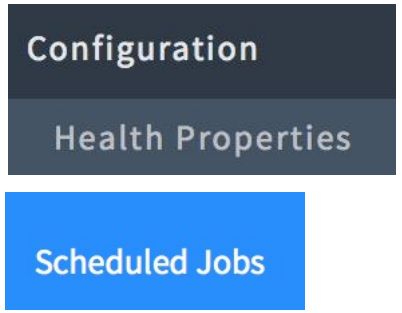
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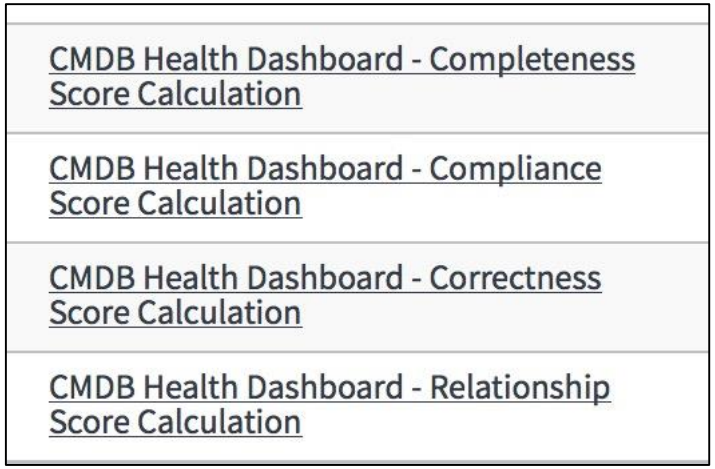
CMDB Completeness Measurements
CMDB Compliance and Audit Measurements
CMDB Correctness Measurements

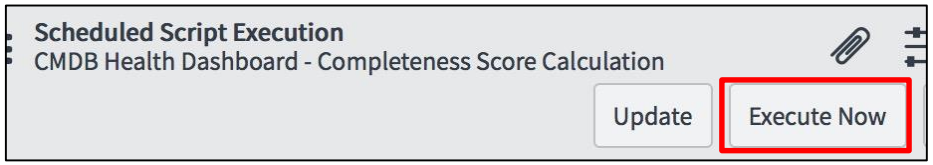
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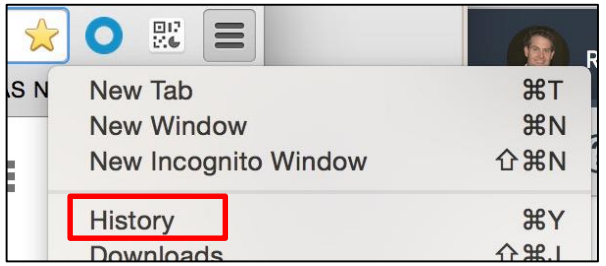
Manually Refreshing the Data on the Dashboard

Go into Health Properties; Scheduled Jobs → **Execute the Health Dashboard Job** → **Clear Your Browser Cache**







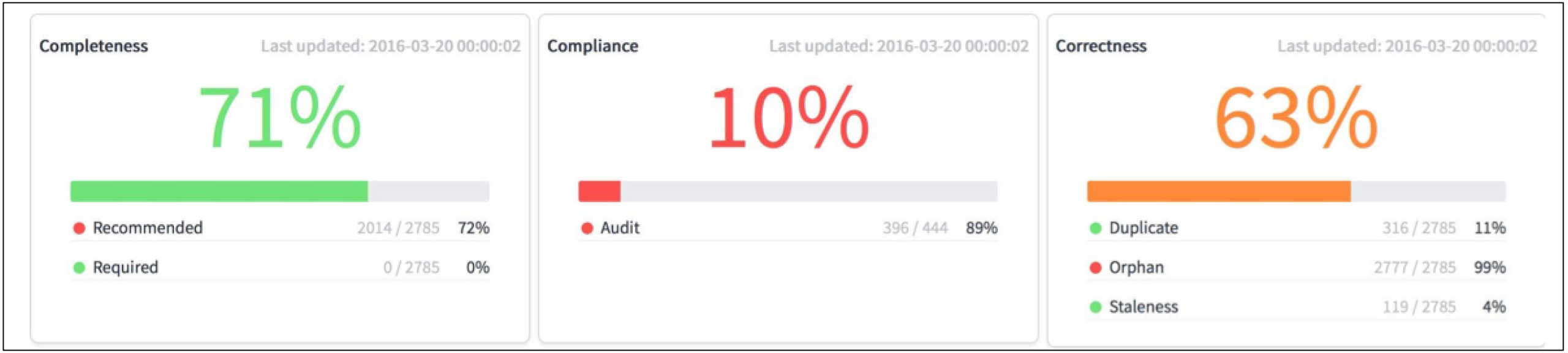




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CI Completeness, Compliance, and Correctness

Make sure CMDB CI data is accurate

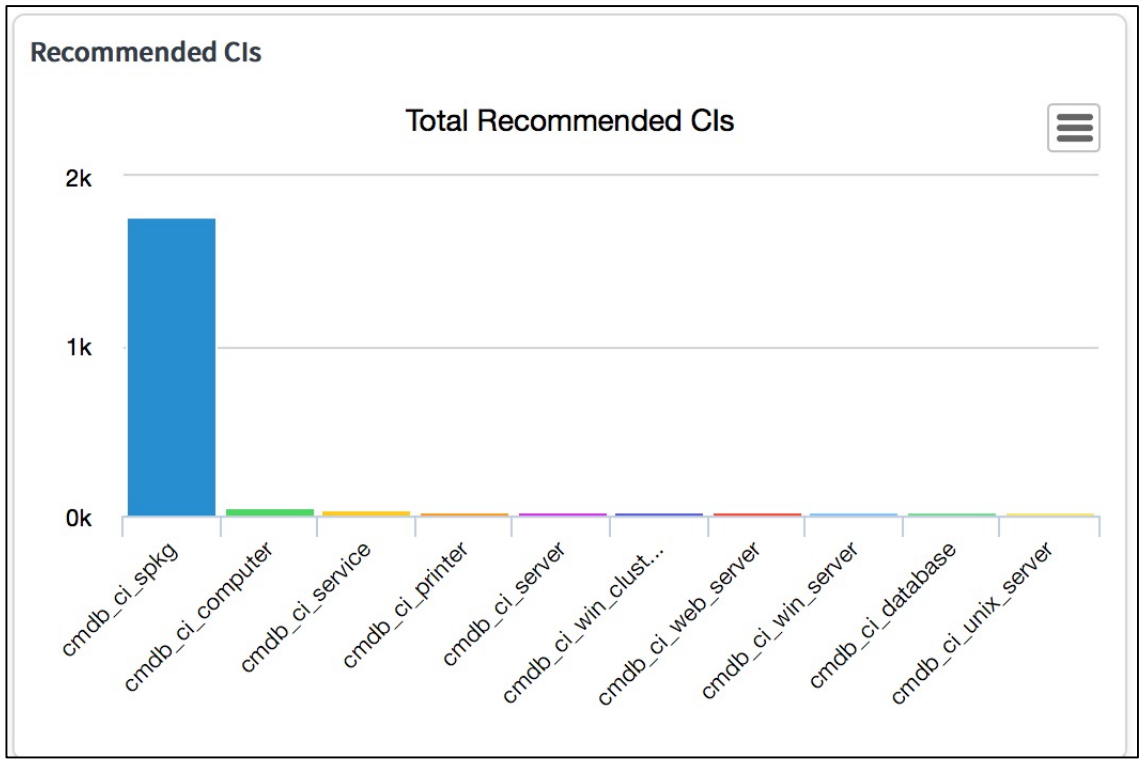


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CI Completeness

Complete CI

A CI is complete only if the **Required** and **Recommended** fields are entered for that CI.



Recommended

Examples of Recommended Fields:

- Owner of a CI (Assigned TO)
- Cost Center

Required

How can Required fields be empty?

- Updates to the table
- Inserts from Script Includes

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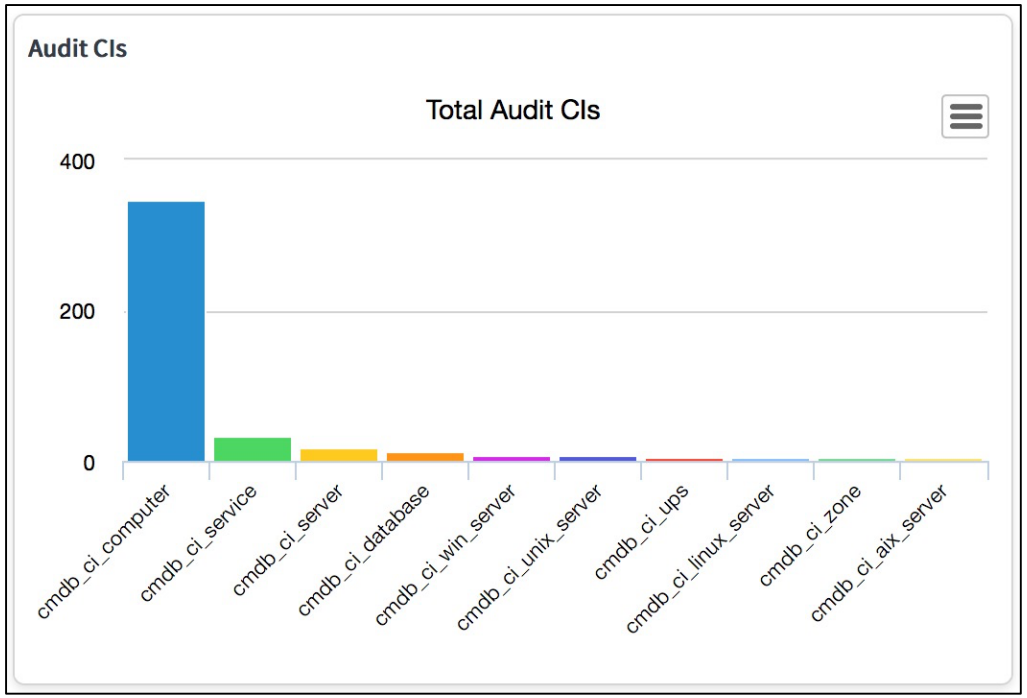
CI Compliance

Compliant CI

A CI is compliant only if the rules of compliancy are met from Audits. This now includes scripted audits as of the Jakarta release.

Examples of Compliance Rules

- All Workstations must have Anti-Virus installed on them
- All Linux Servers must be on the latest patch
- All Servers running in production must have QA Server



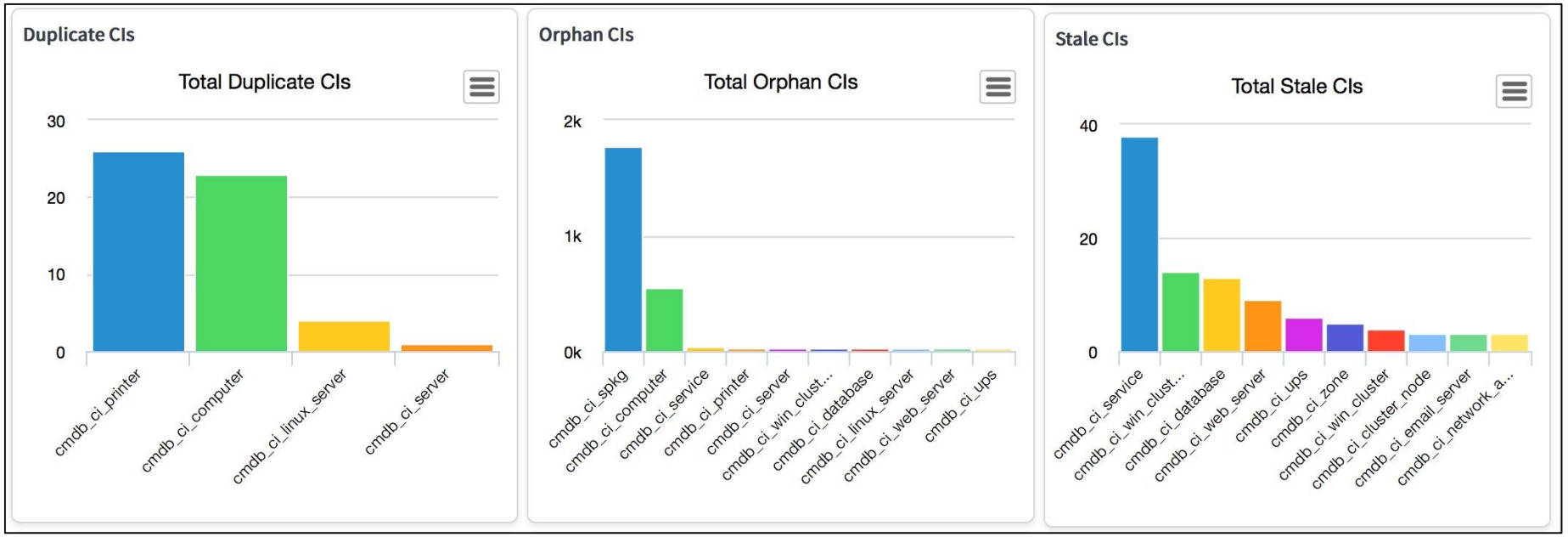
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CI Correctness

Correct CIs

This is a measurement of the percentage of CIs that are:

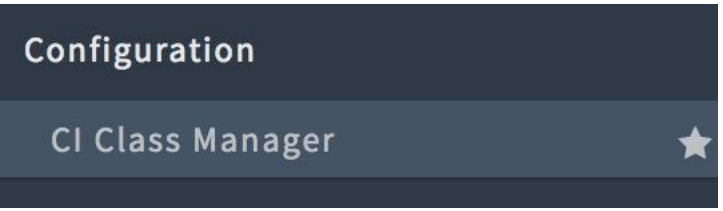
- **Duplicates** – More than one entry in the CMDB when only one exists in the Data Center
- **Orphans** – (conditional) Example: Server CIs not related to a Business Service
- **Stale** – CIs that exist in the CMDB but cannot be found on the network

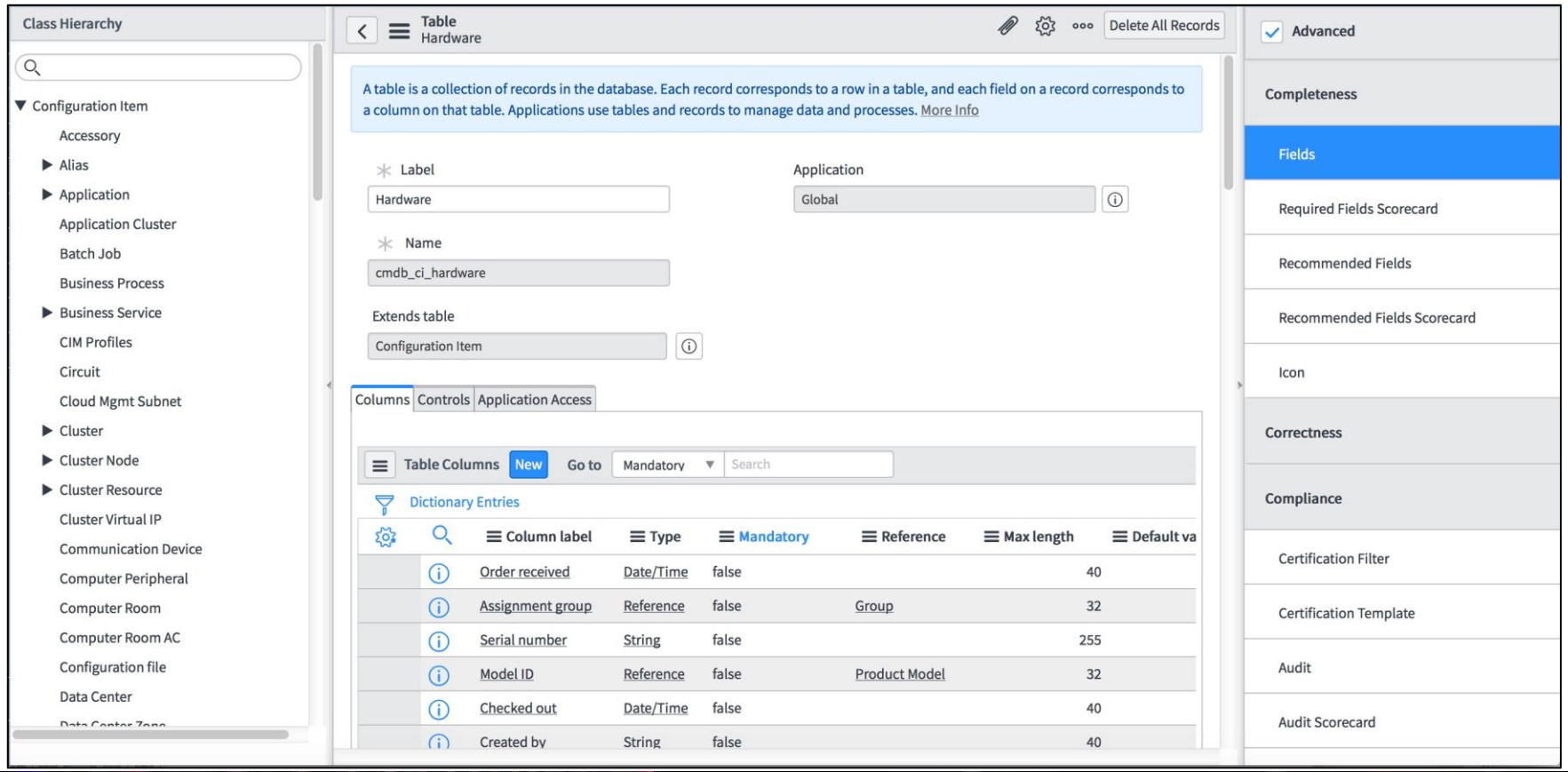


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Configuring the CMDB Dashboard: CI Class Manager

The CI Class Manager is used to configure the dashboard for CI Completeness, Correctness, and Compliance according to CI Types.





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CI Completeness

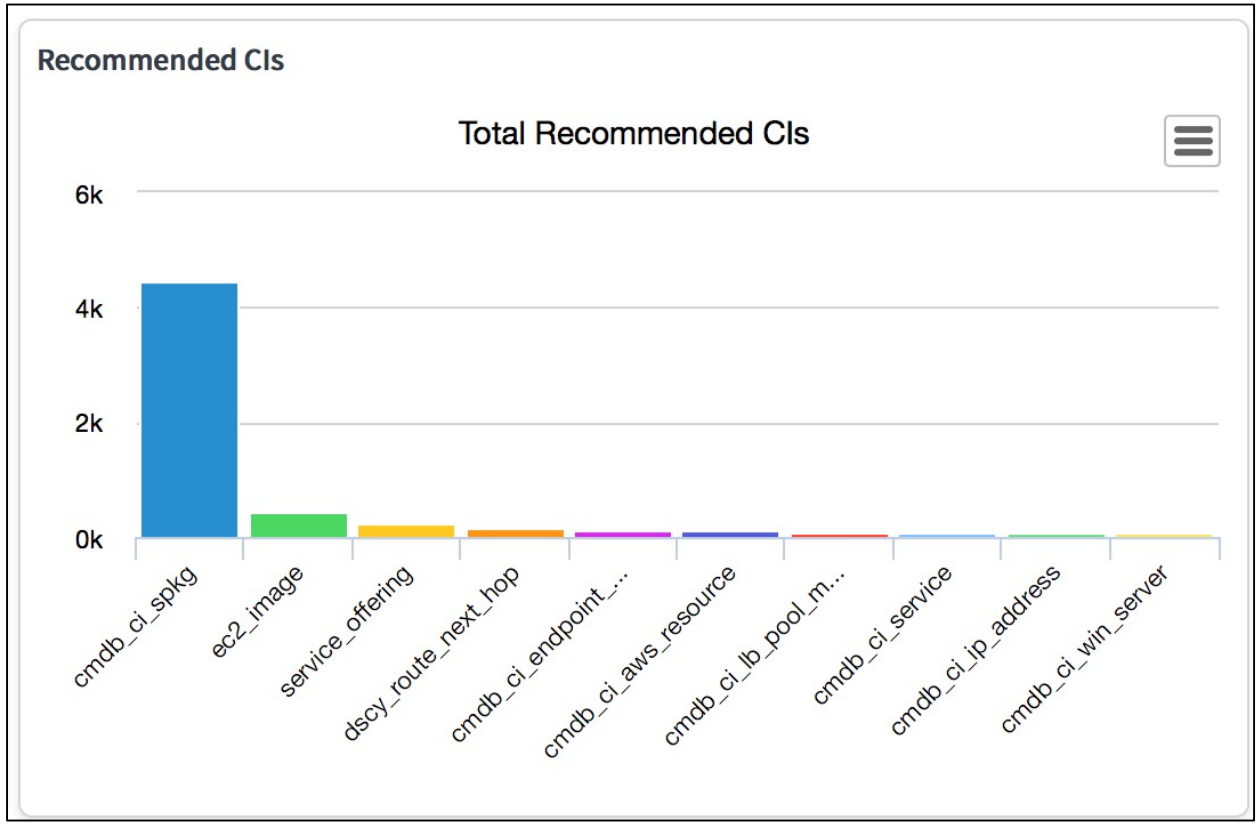


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CI Completeness

Complete CI

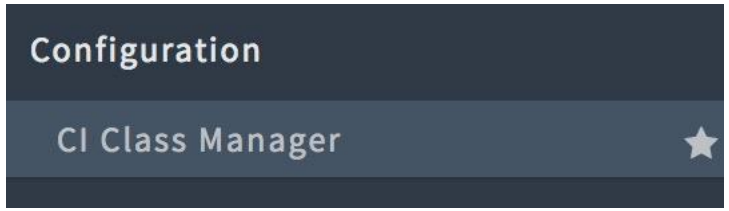
A CI is complete only if the **required** and **recommended** fields are entered for that CI.

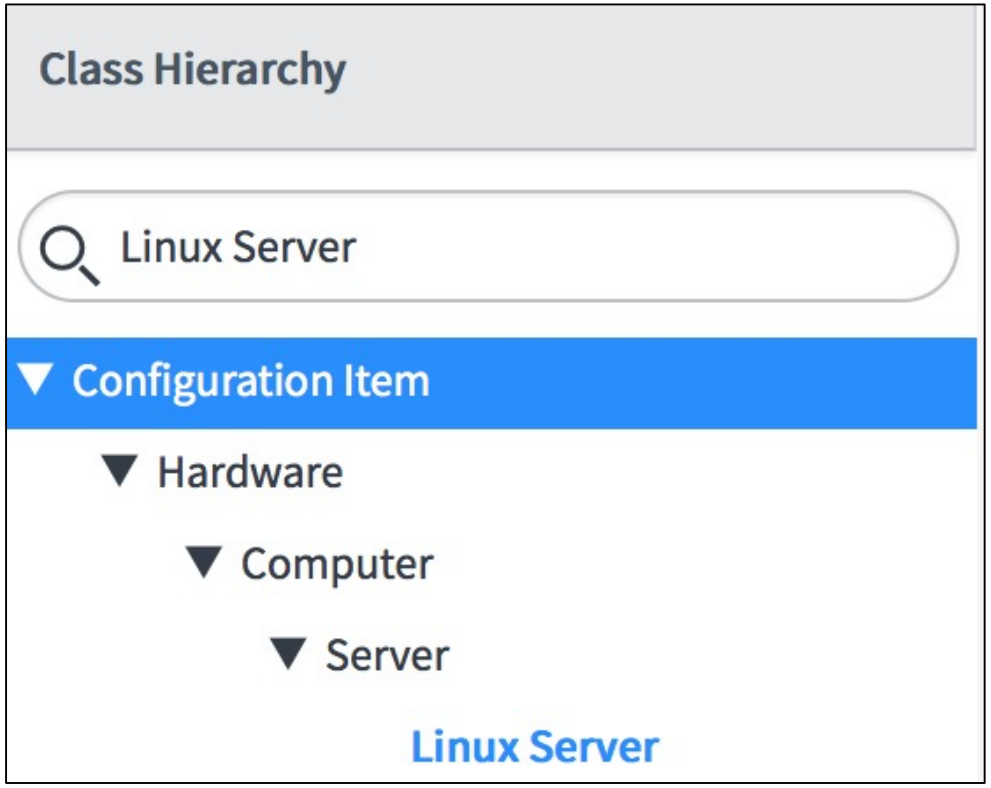


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Configuring CI Completeness

Enter the CI Class Manager





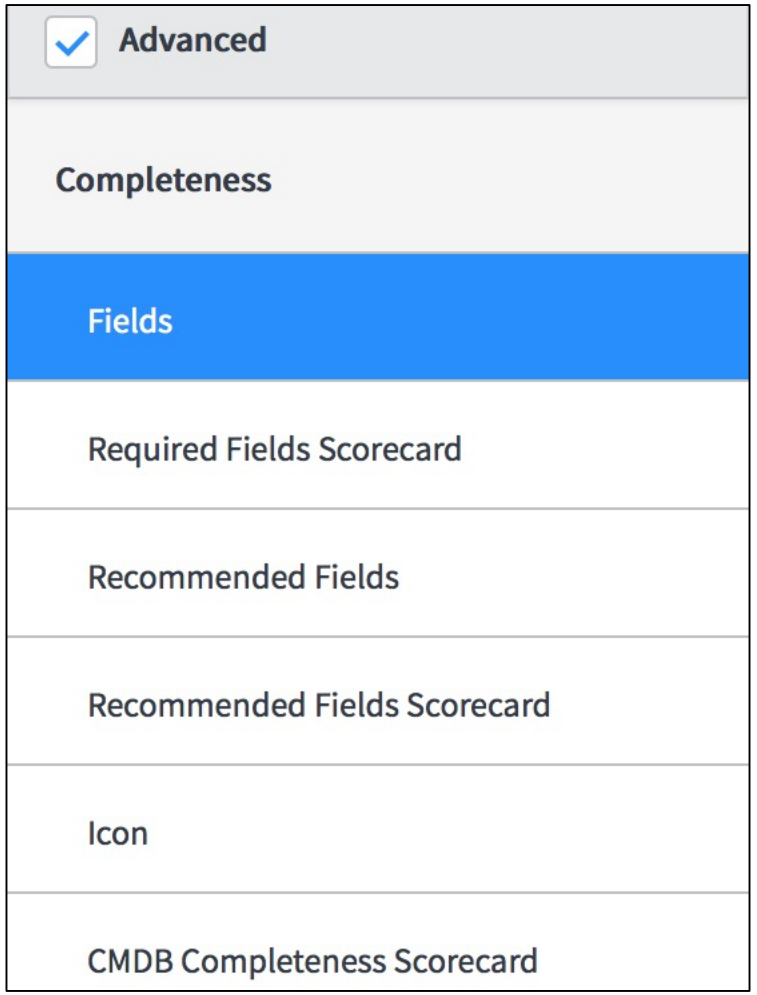
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Configuring CI Completeness

Turn on Advanced Settings

Allows you to select the recommended fields and the thresholds for the dashboard.

Setup for Recommended Fields

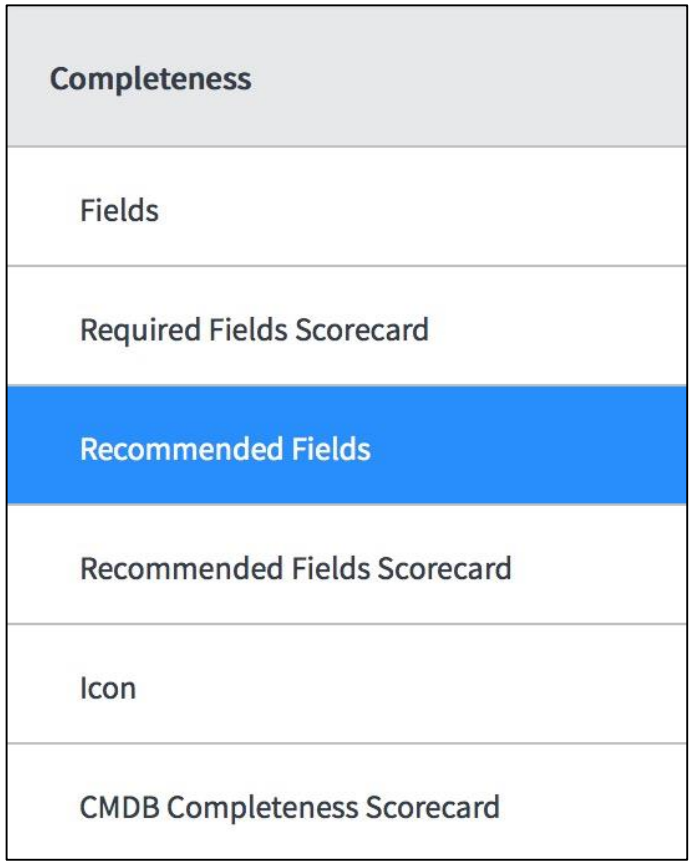


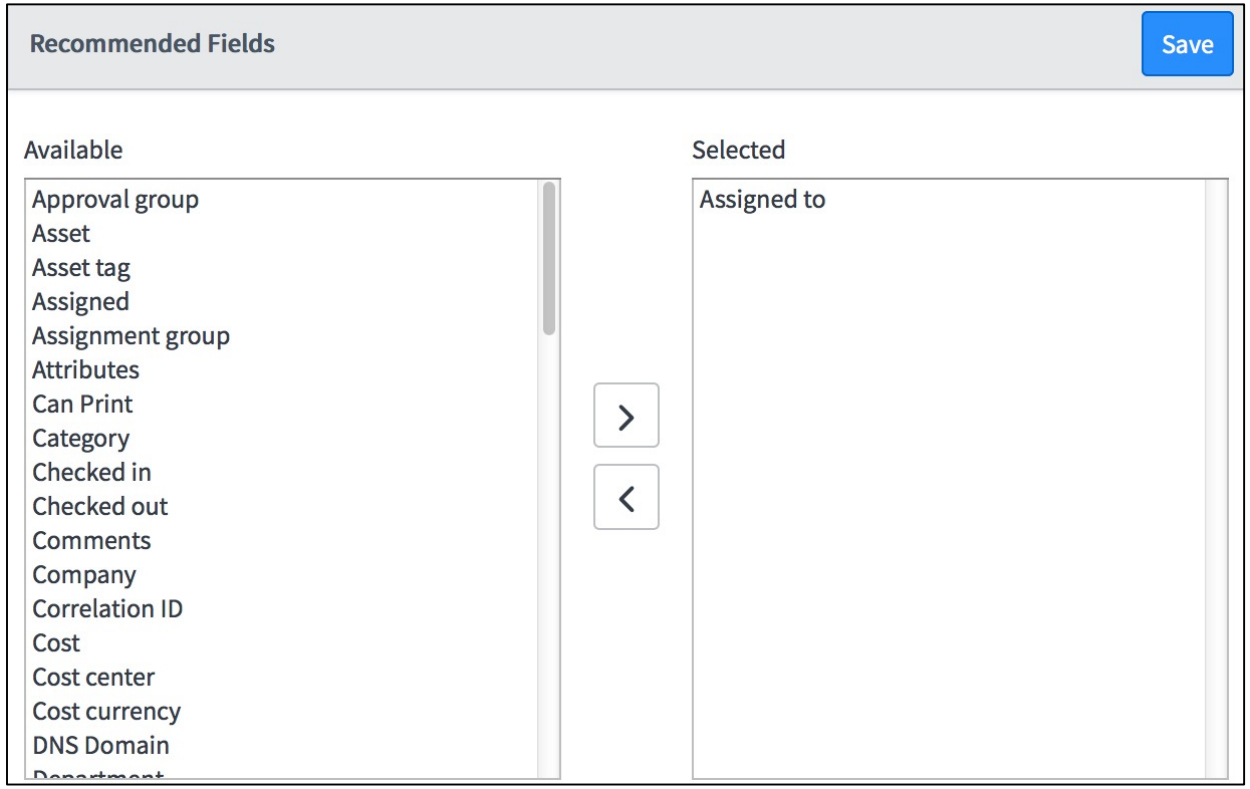
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CI Completeness

Recommended Fields

Setting the Recommended Fields for CI Completeness

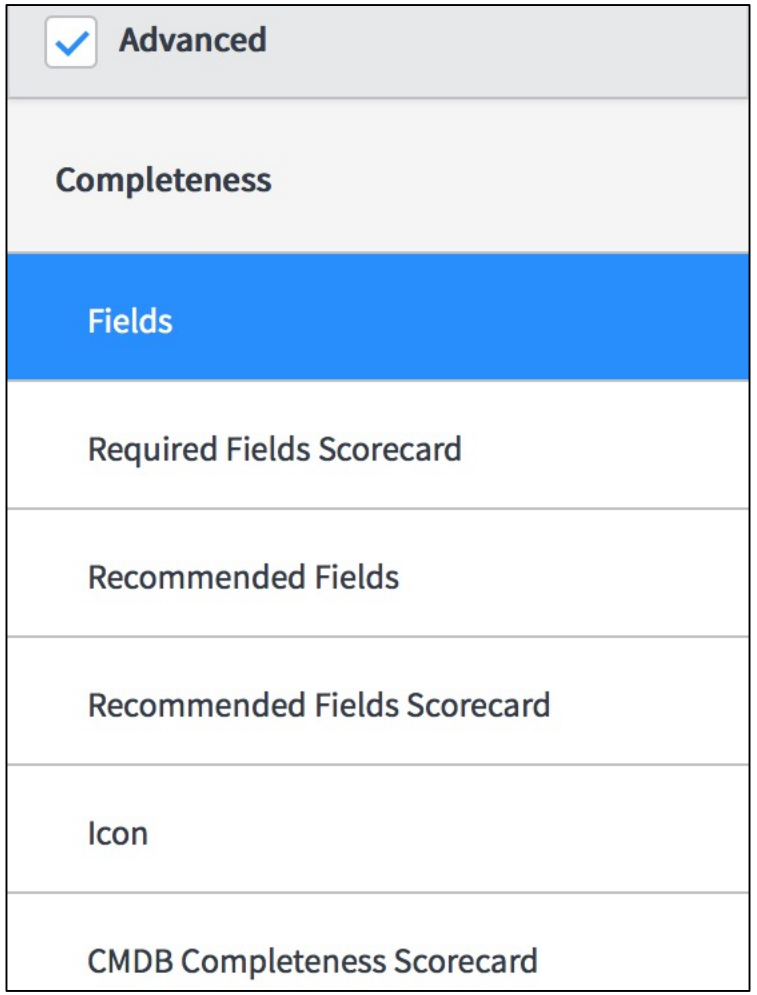




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Configuring CI Completeness

Where is the Setup for Required Fields?



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Configuring CI Completeness

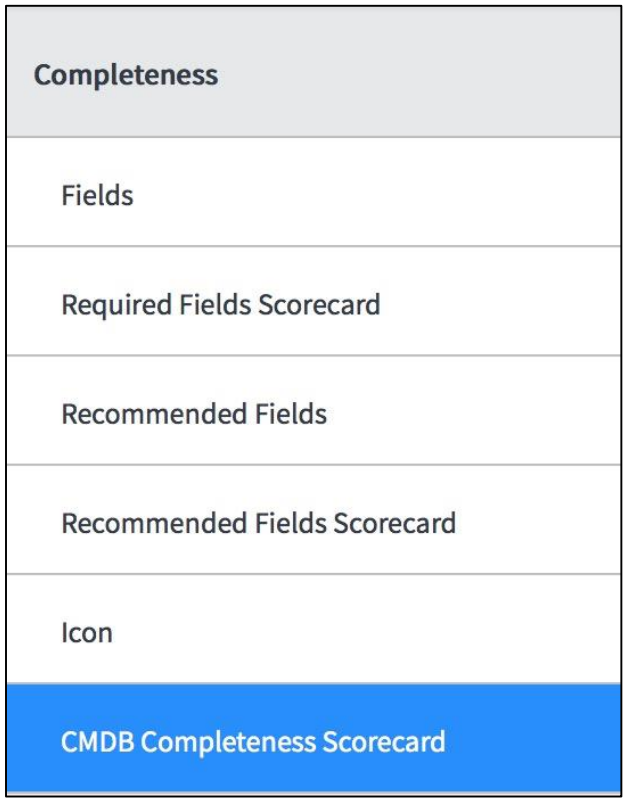
Table Definition:
Mandatory Fields set to "True" are Required Fields

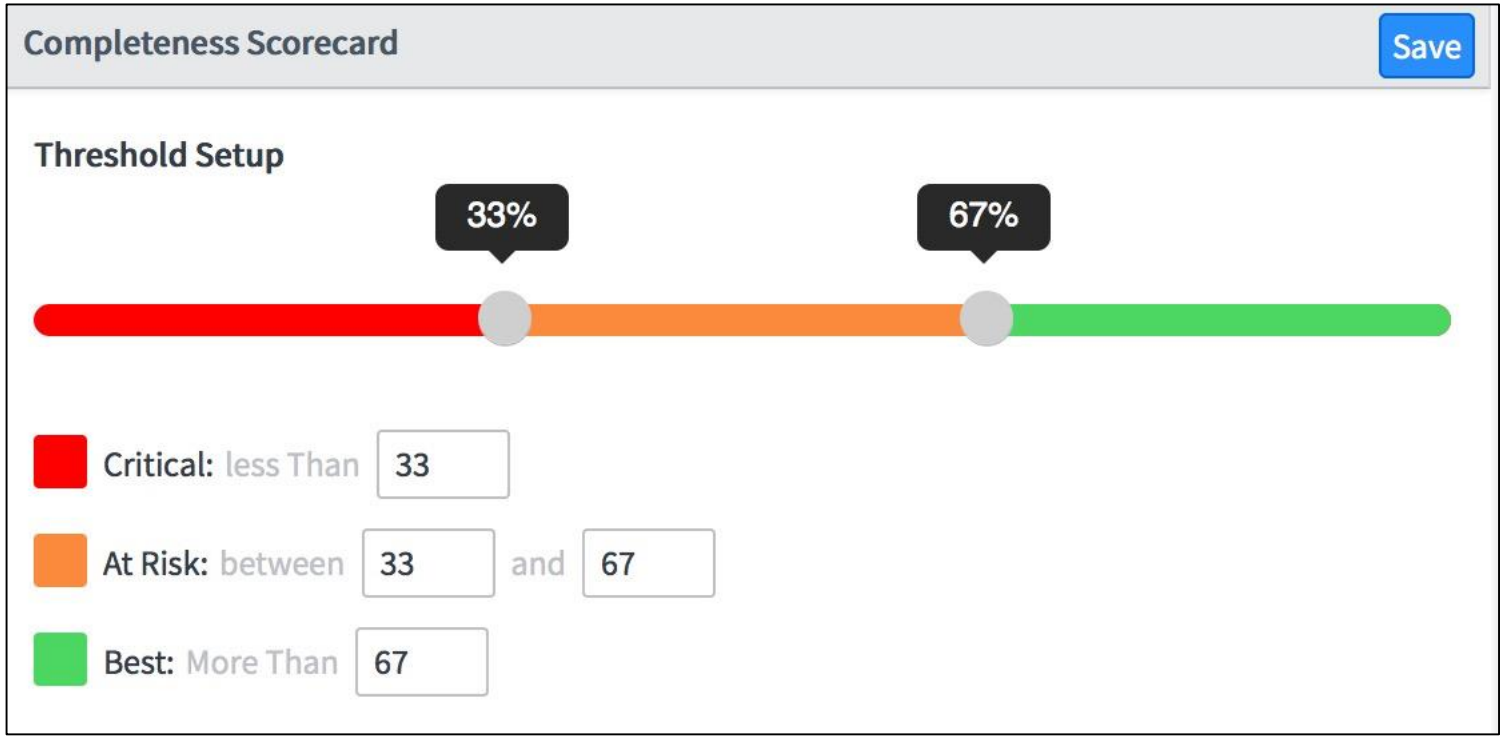
Column label	Type	Mandatory
Model category	Reference	true
Quantity	Integer	true
Model	Reference	true
Location	Reference	false
Display name	String	false

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CI Completeness Thresholds

CMDB Completeness Scorecard
Set the thresholds for which CI completeness is represented on the dashboard.





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CI Compliance

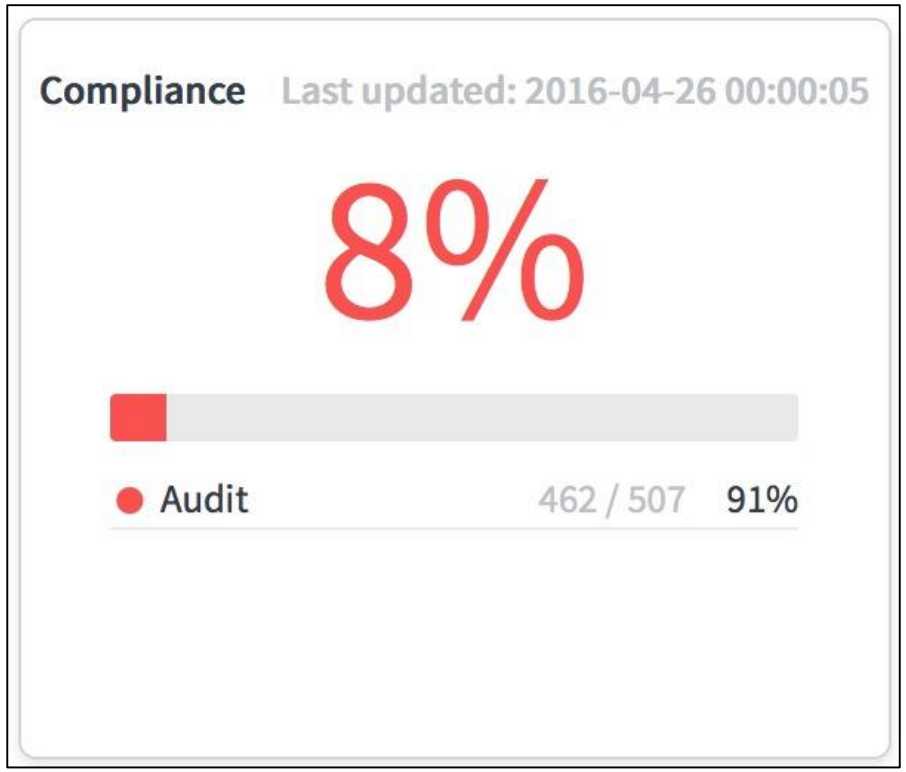


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CI Compliance

What makes a CI Compliant?

A CI is compliant if it does NOT violate the rules defined in CI Compliance.



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CI Compliance

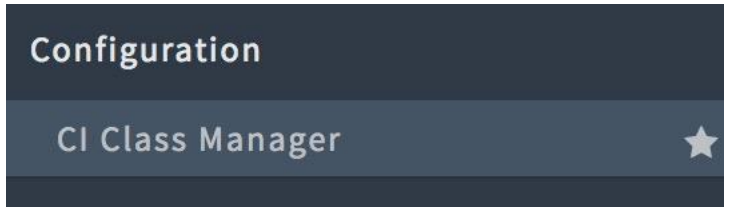
Defining the CI Compliance Dashboard

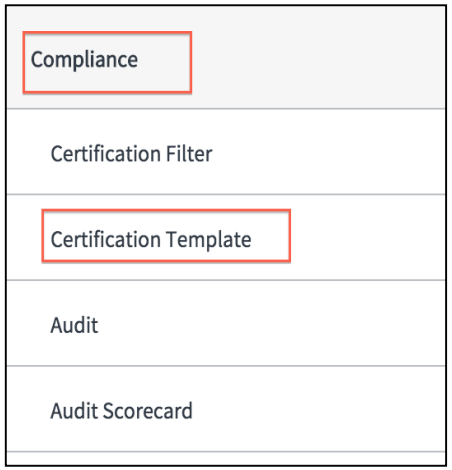


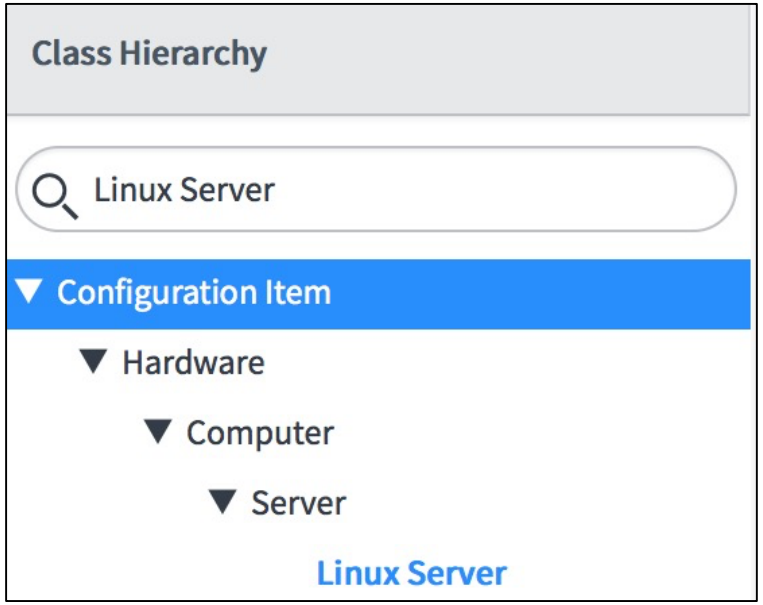
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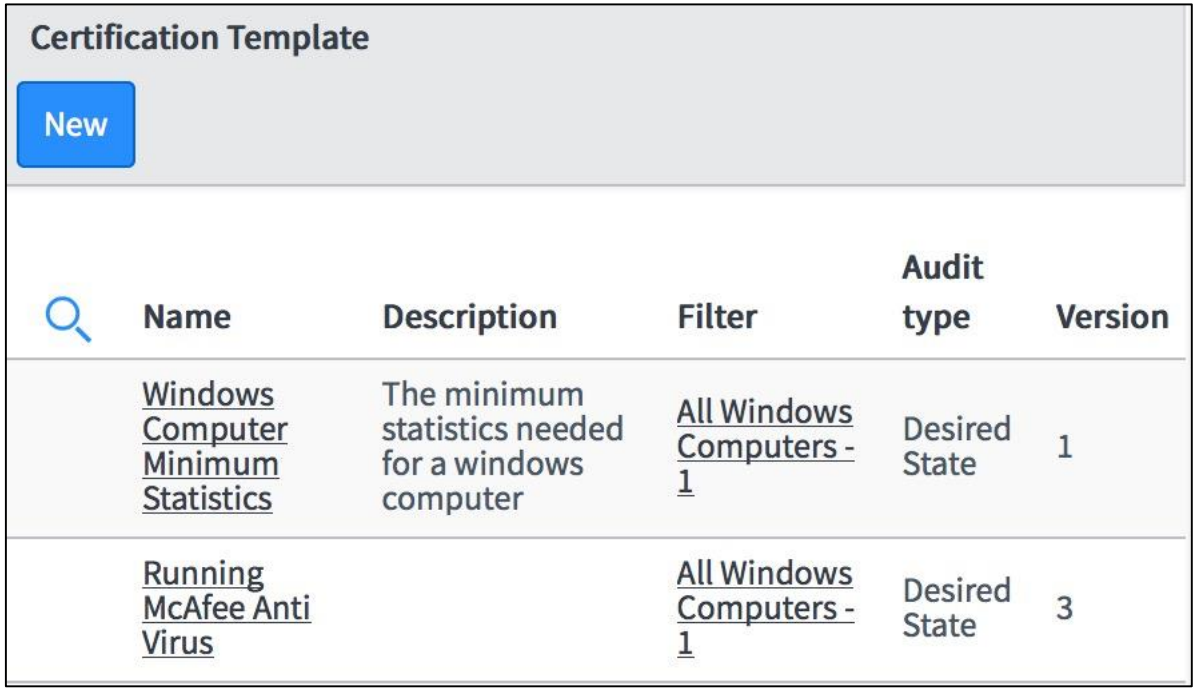
Defining CI Compliance

Creating a Certification Template Rule





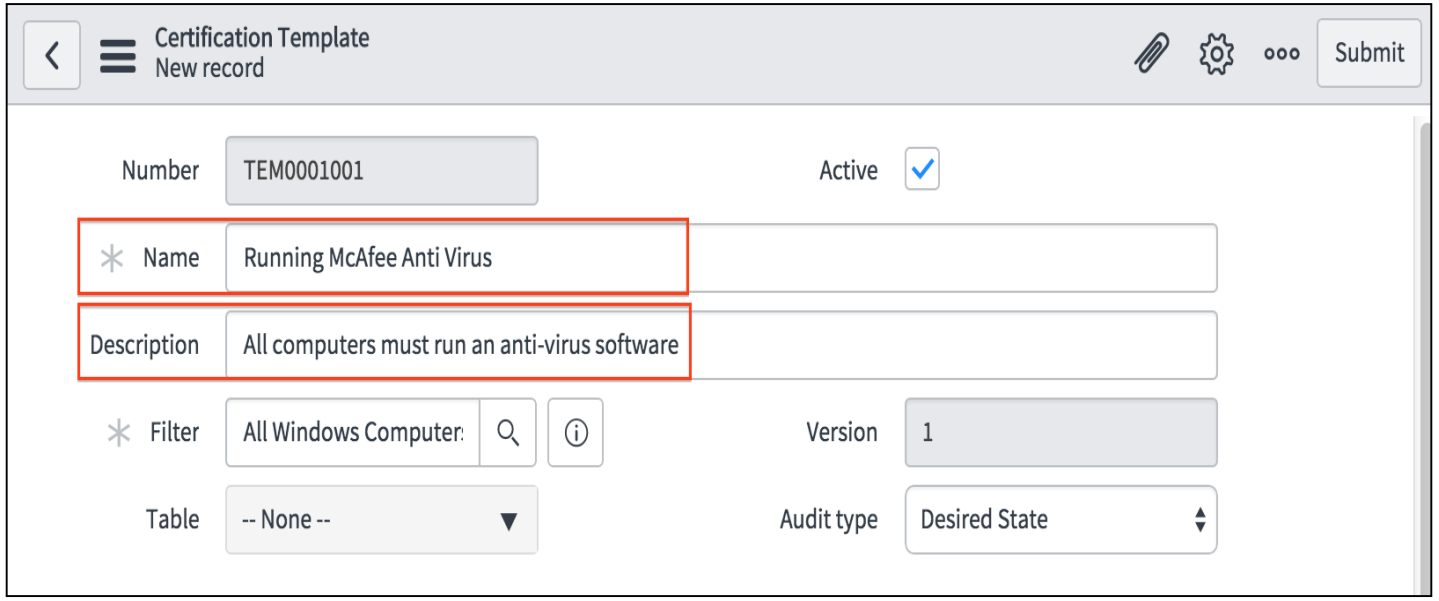


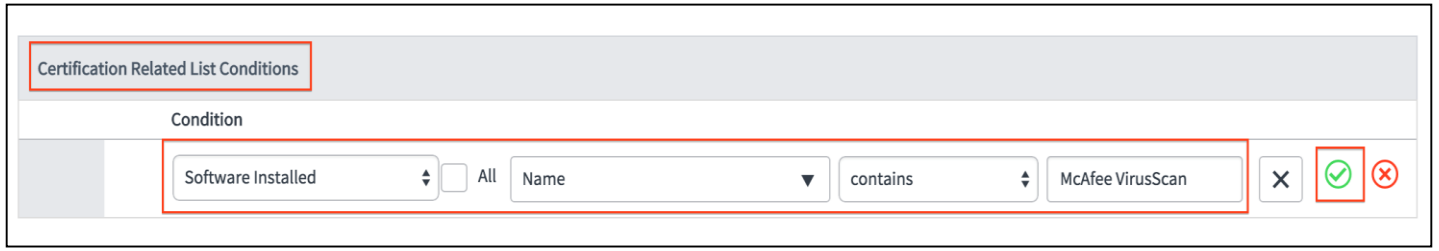


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Defining CI Compliance

Creating a Certification Template Rule

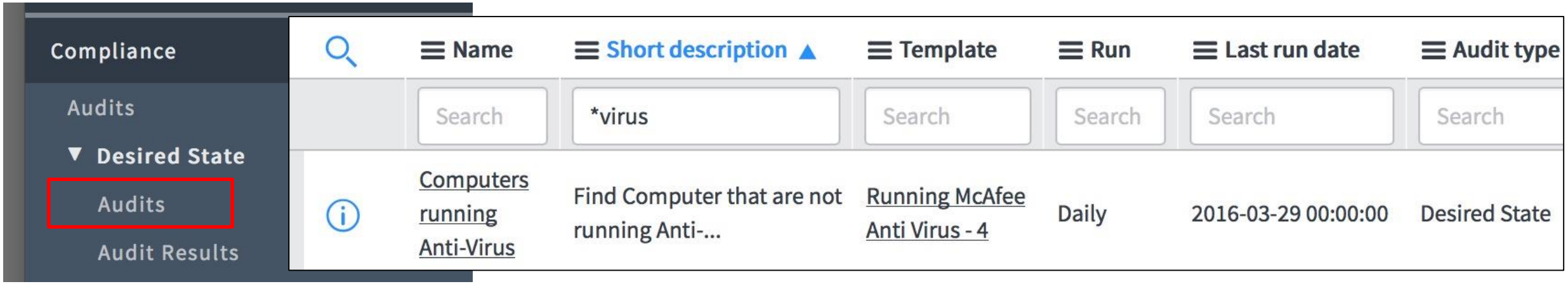




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Defining CI Compliance

Defining a Desired State Audit Rule

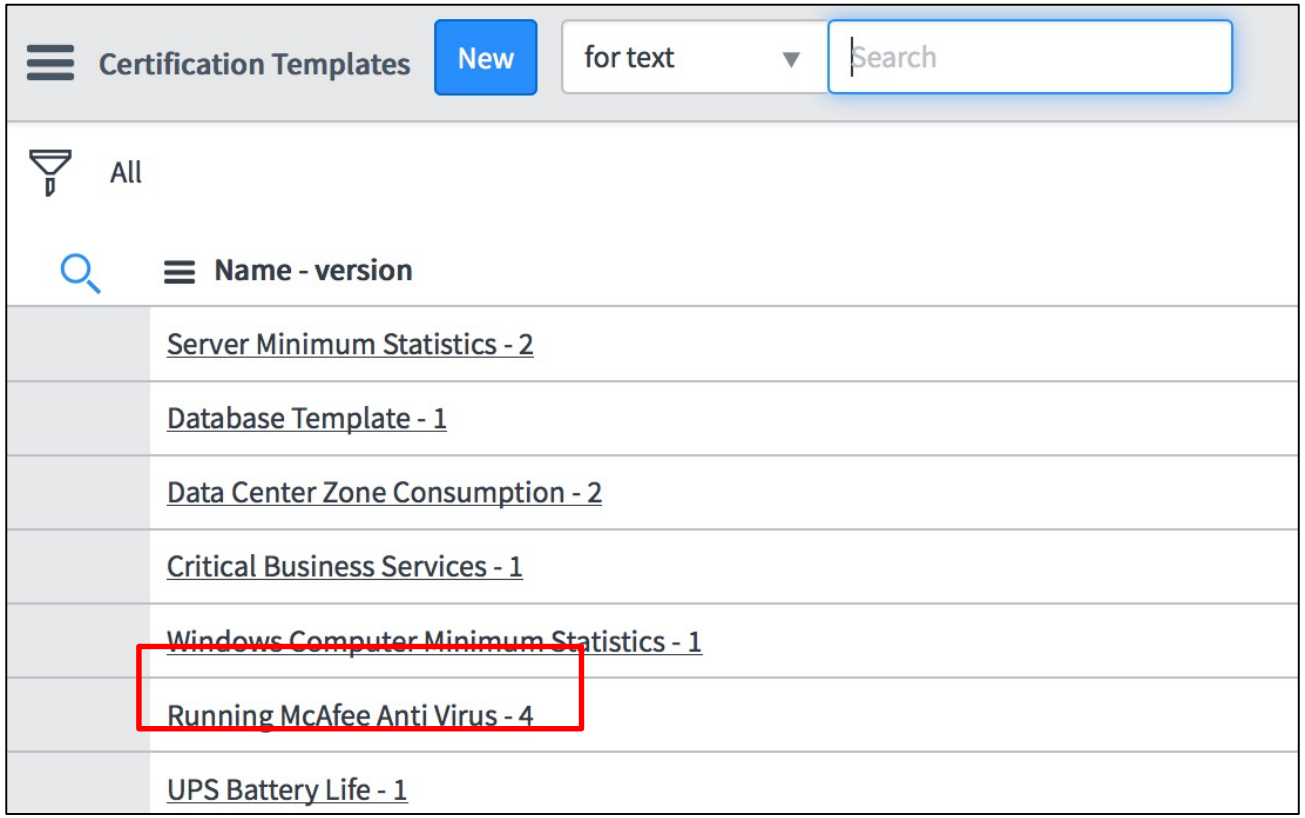


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Defining CI Compliance

Defining the CI Audit Rule

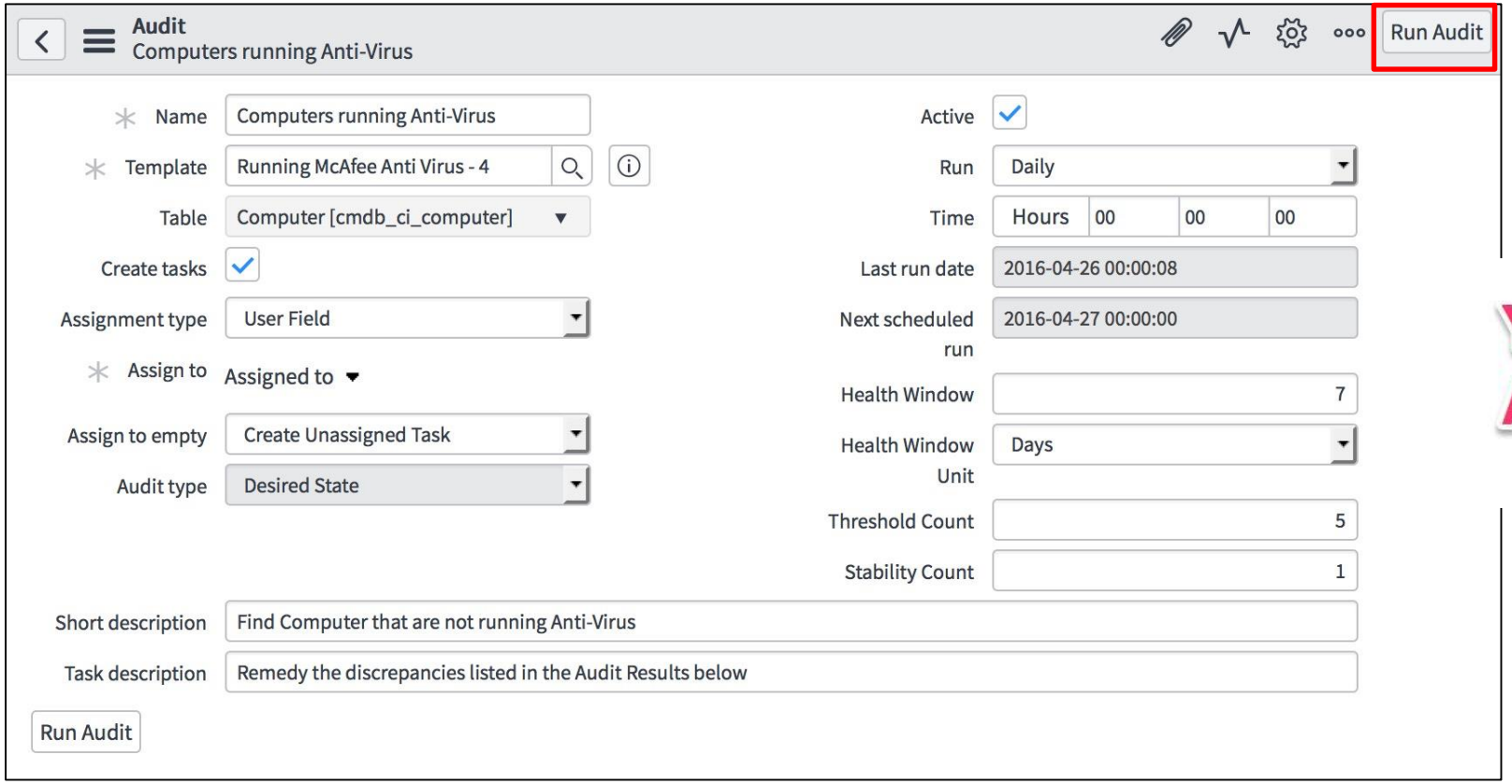
The Audit Rule references the Audit Template.



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Defining CI Compliance

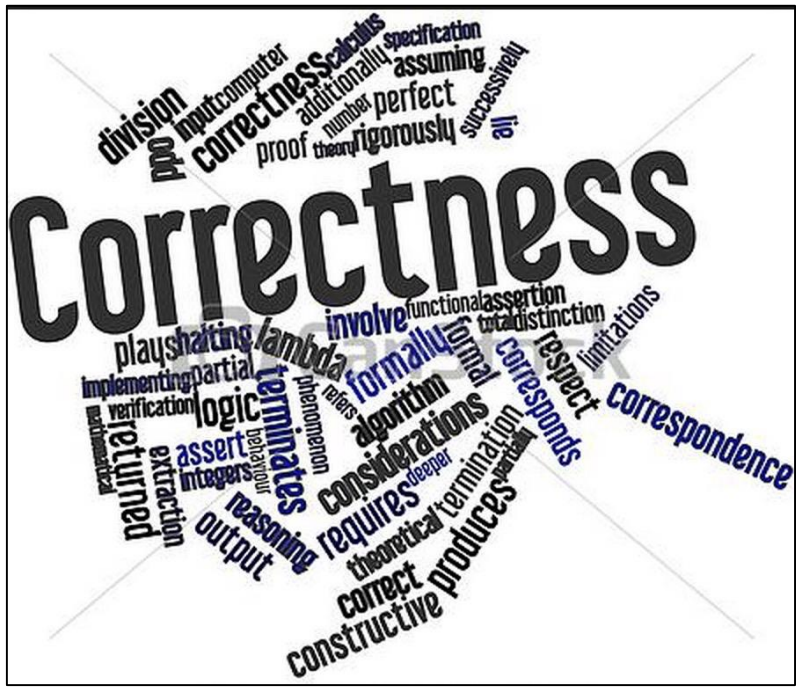
Defining the CI Audit Rule



You must run your Audit Rule!

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CI Correctness

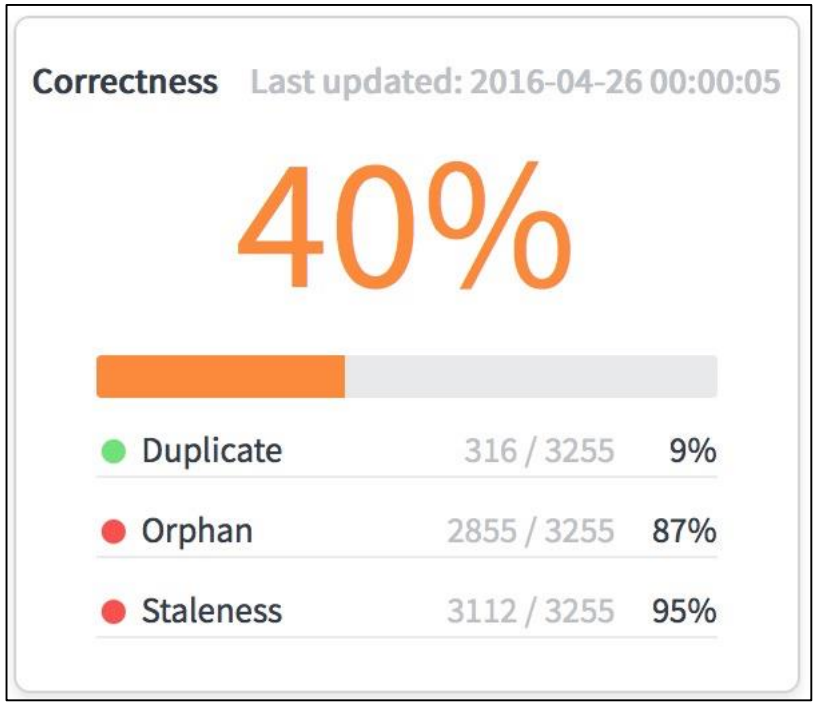


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CMDB CI Correctness

The CI Correctness measures the percentage of CIs in the CMDB need to be addressed.

- **Duplicate CIs** – One or more CIs that are represented in the CMDB but only 1 CI exists in the network.
- **Orphan CIs** – A CI that is a server but is not related to anything including a business application.
- **Stale CIs** – A CI that has not been accessed through discovery for a number of days. It may no longer exist on the network.

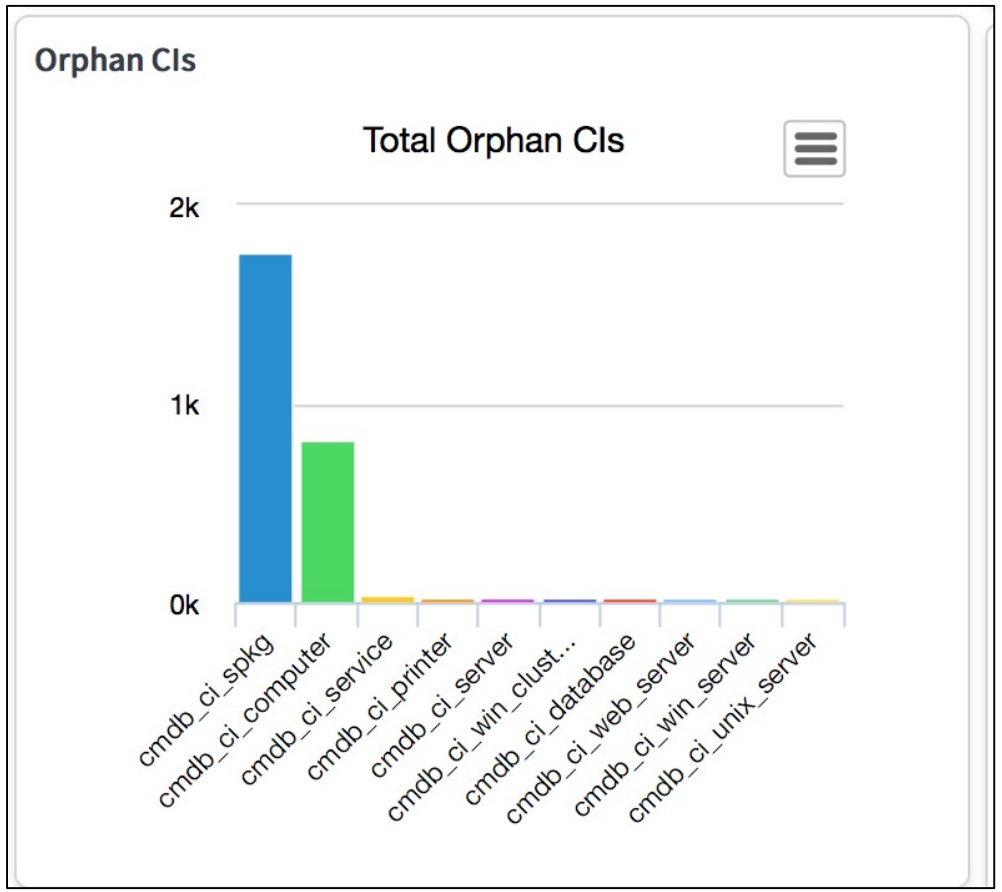


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CI Correctness - Orphans

Orphan CIs

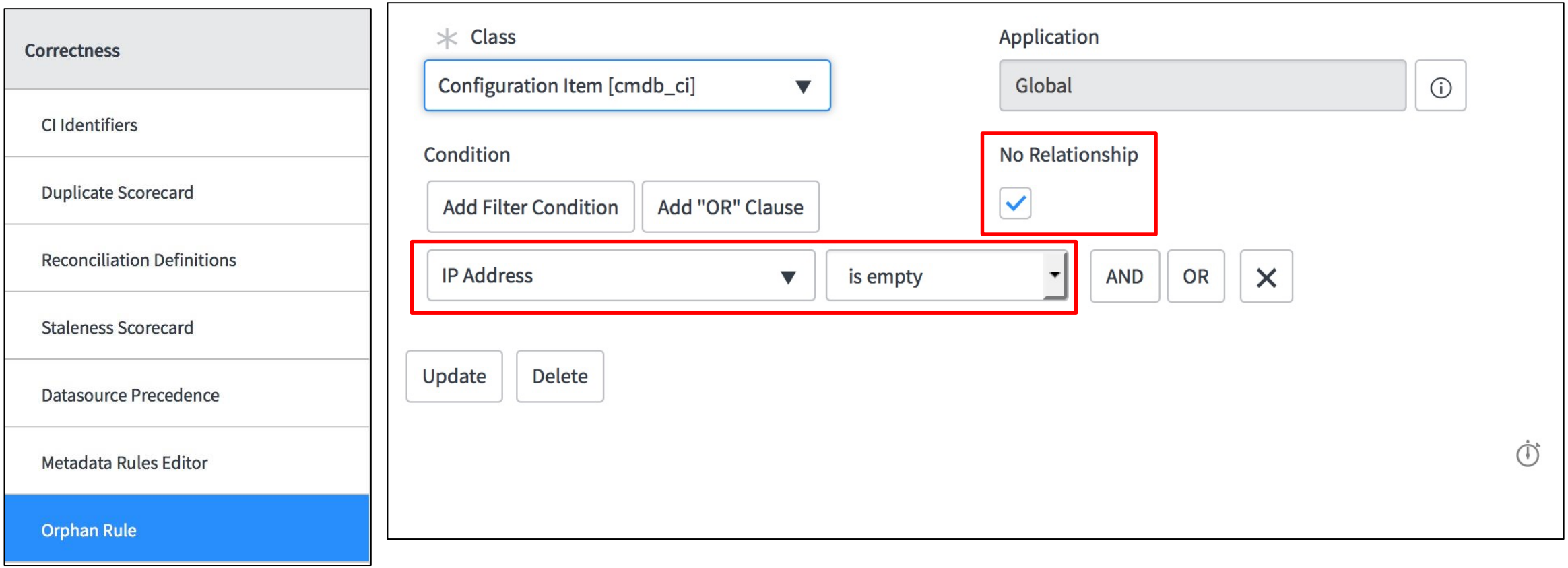
An Orphan is determined by configurable Orphan Rules (Example: CIs with no relationships).



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CI Correctness - Orphans

A CI is an orphan if it fails to meet the criteria set in the rule. In the CI Class Definition, you configure which CI Types you want measured as potential Orphans.

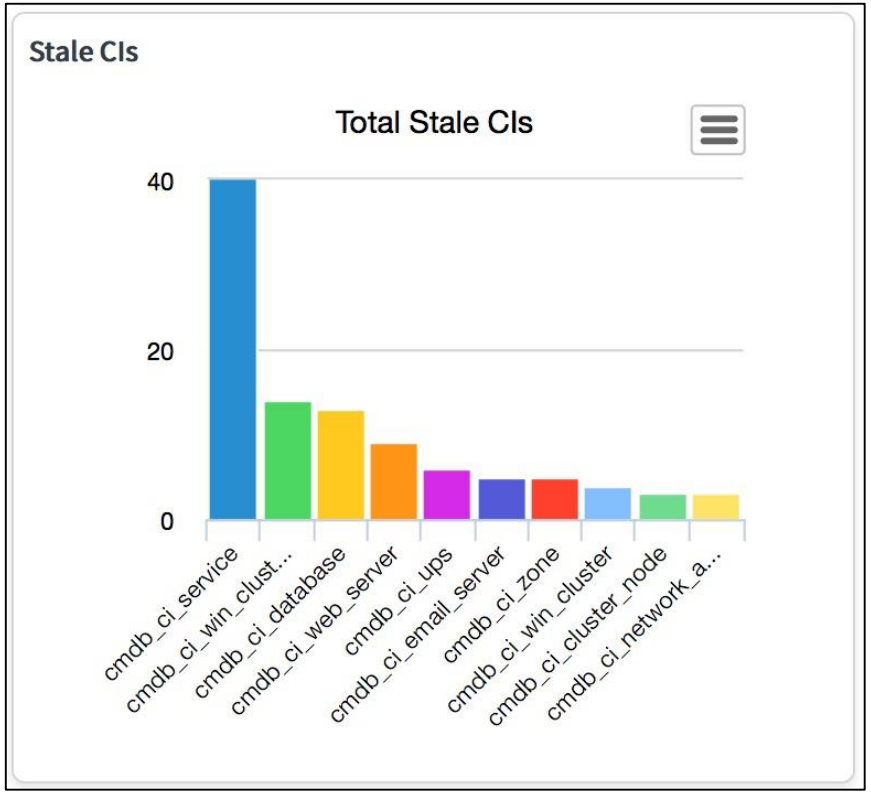


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CI Correctness – Stale CIs

Stale CIs

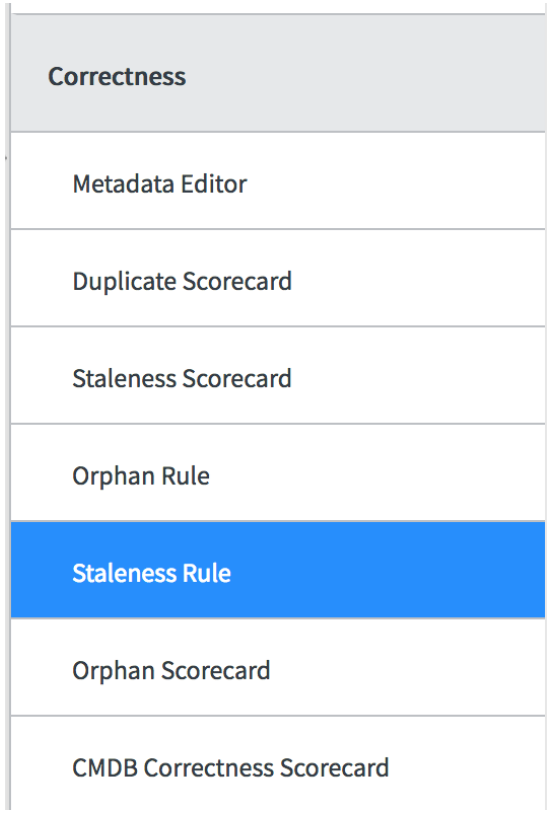
A CI is stale when it has not been accessed for a specified time (configurable). It may have been disconnected from the network and no longer exist.

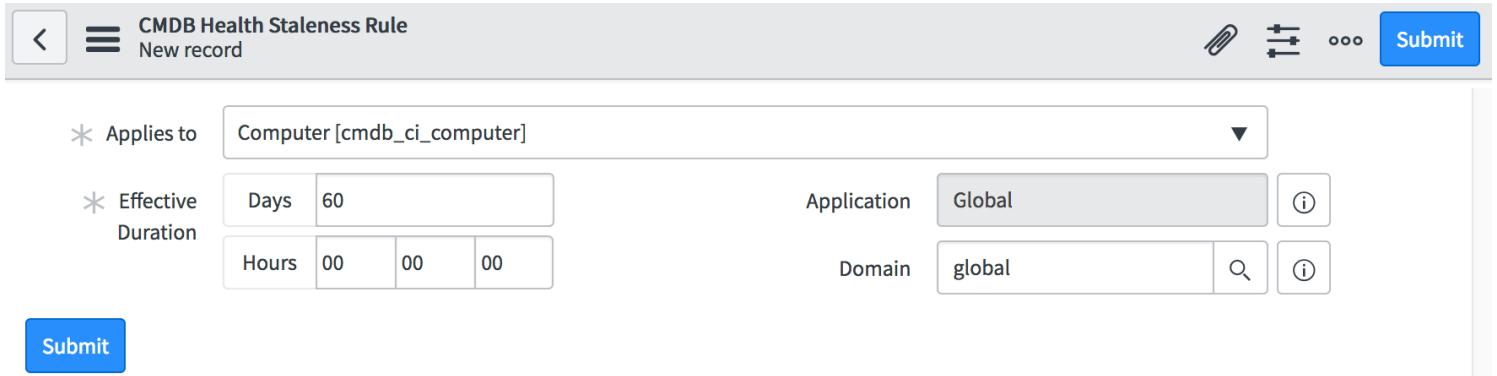


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Configure What Makes a CI Stale

Individual CI Reconciliation Staleness: In the CI Class Manager, configure how many days and hours an individual CI type must not be accessed by a particular Data Source before it is stale.



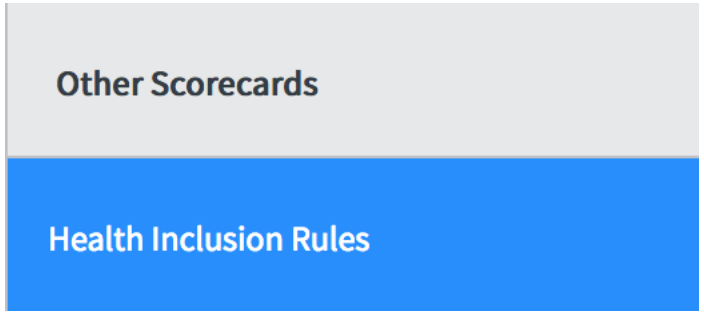


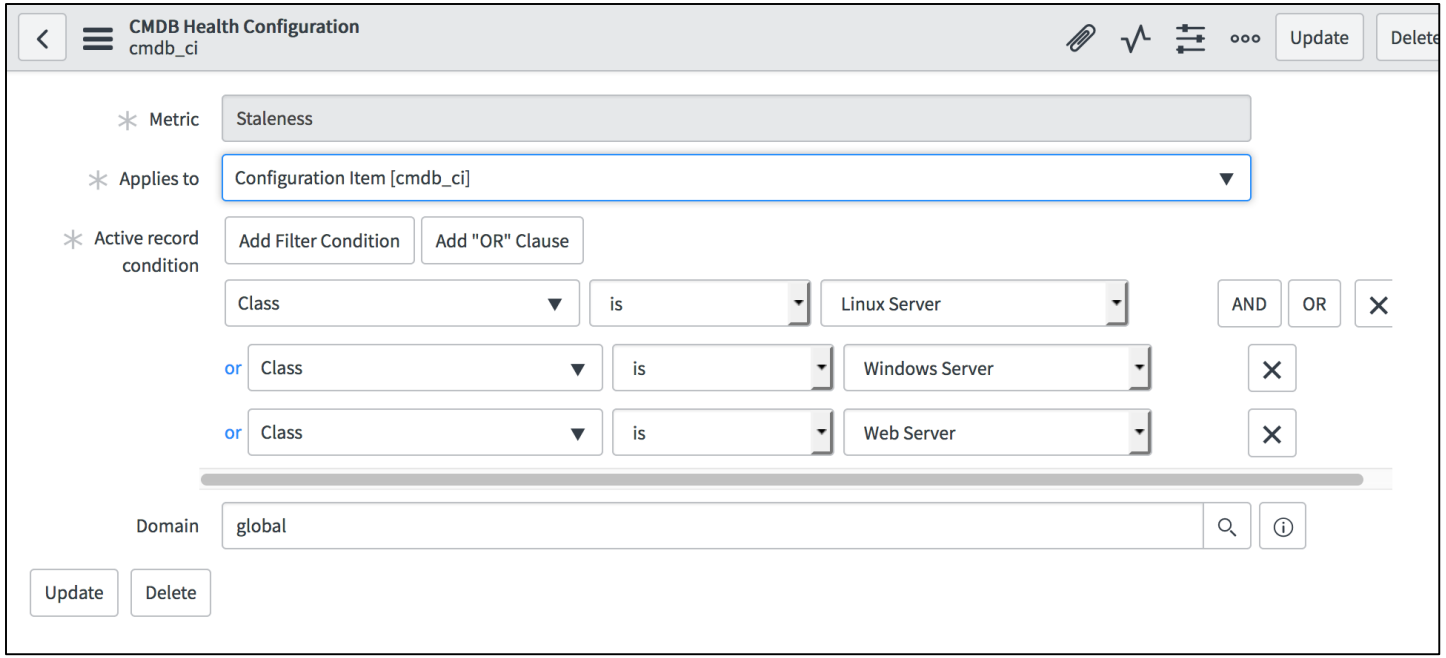
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CI Correctness – Stale CIs

Health Inclusion Rules (new in Jakarta)

You can limit the CIs being tracked for Staleness with Health Inclusion Rules with a filter.



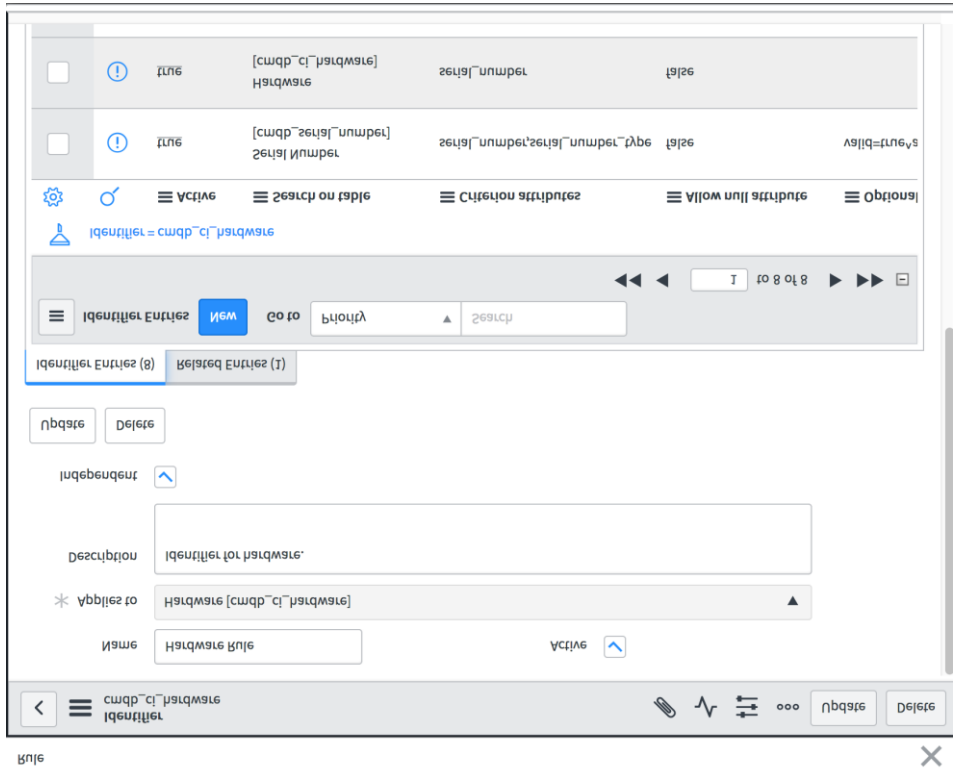


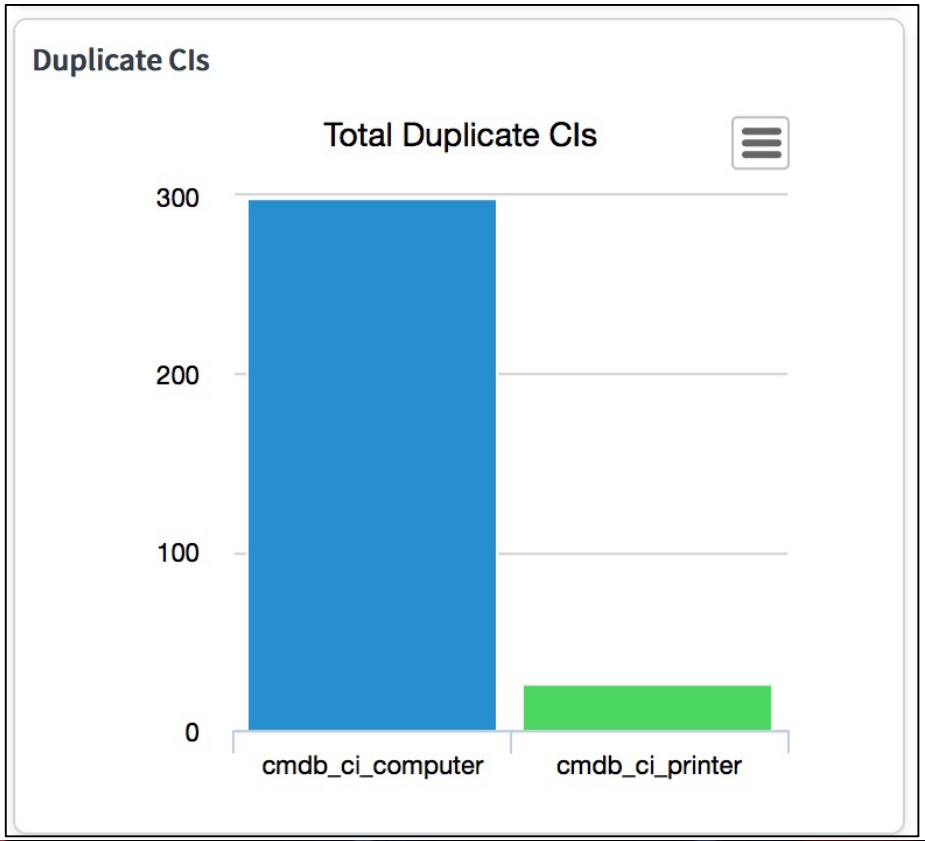
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CI Correctness - Duplicates

Duplicate CIs

Duplicates are identified based on two or more CIs with the same attributes as determined by the CI Identification rules.



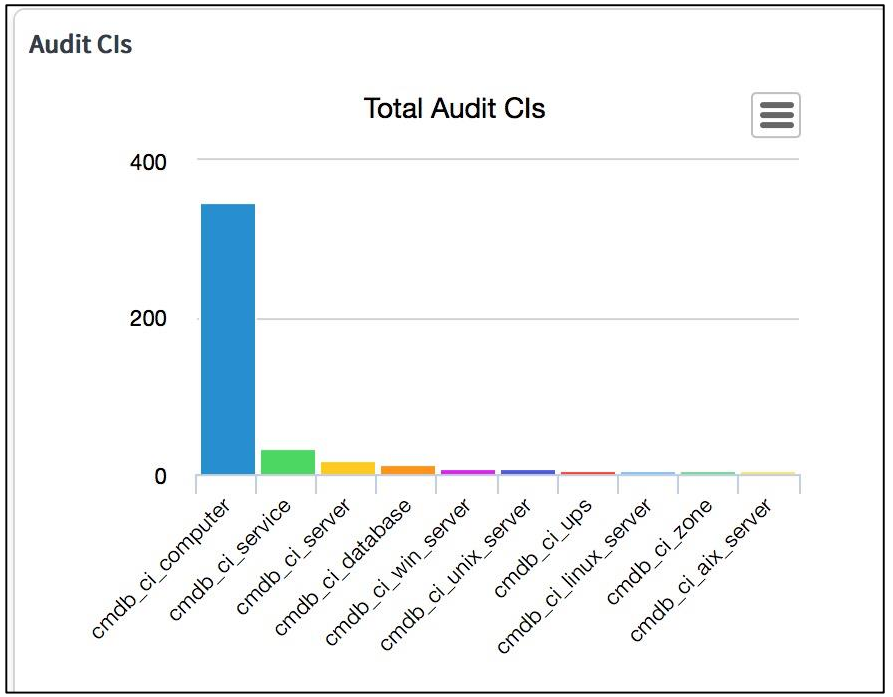


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CI Remediation

Now that we have determined which CIs are problems, we need to fix the situation.

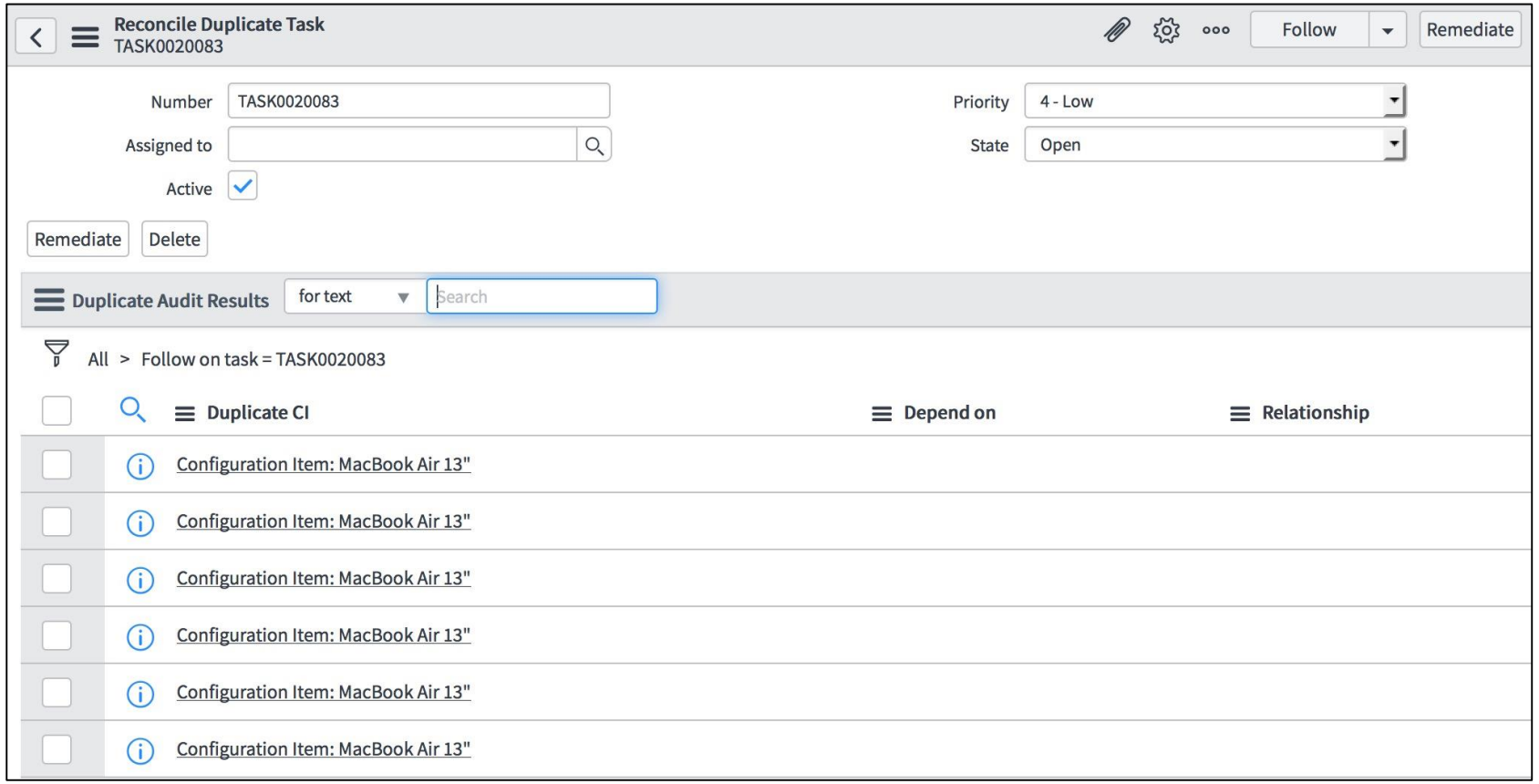




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CI Duplicates - Remediation

When Duplicates are detected, a Task is always created to remediate the duplicates.

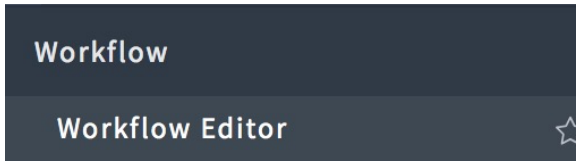


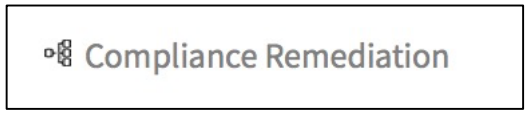
*Remediation Tasks are always created for Duplicates and are optional for all other metrics

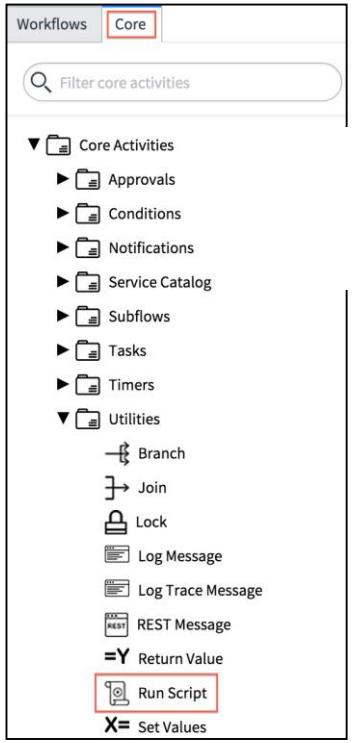
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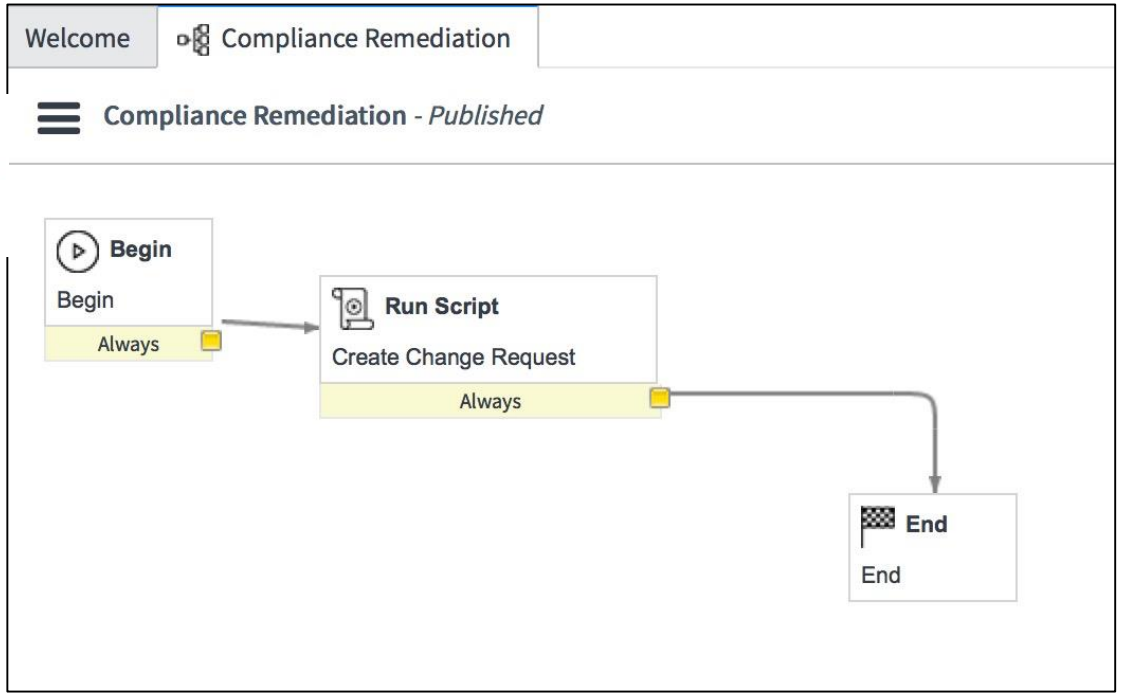
Defining CI Remediation

Defining a Remediation Rule Using Workflow





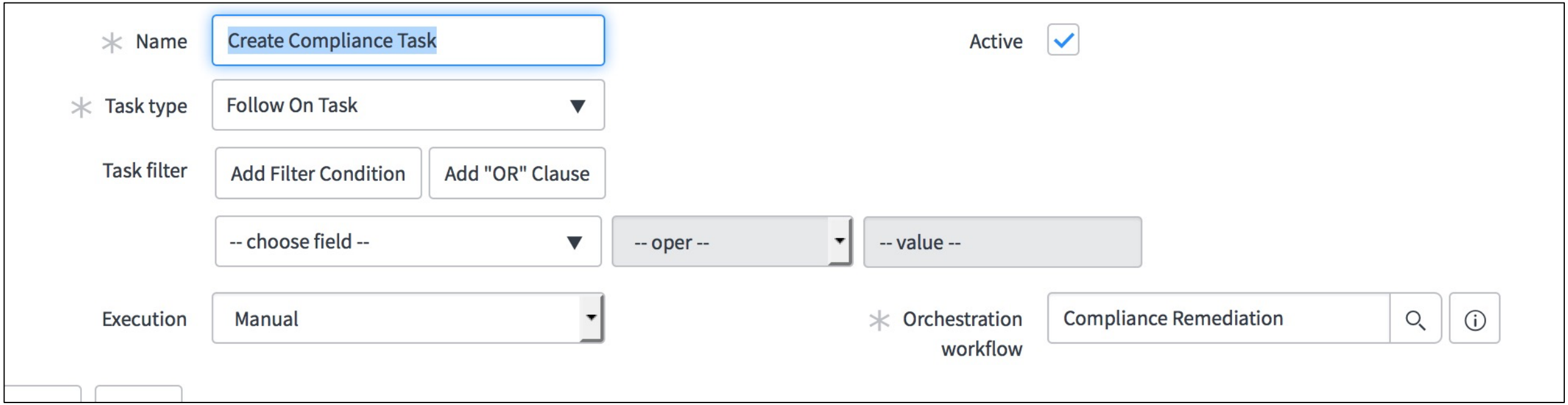




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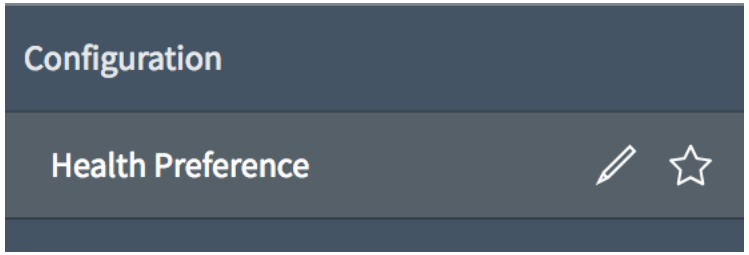
Defining CI Remediation

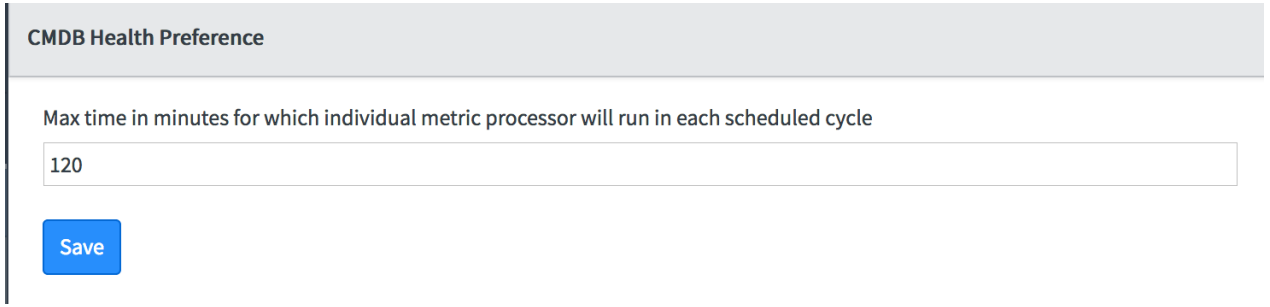
Example: Assign the Remediation Rule an Audit Task Type

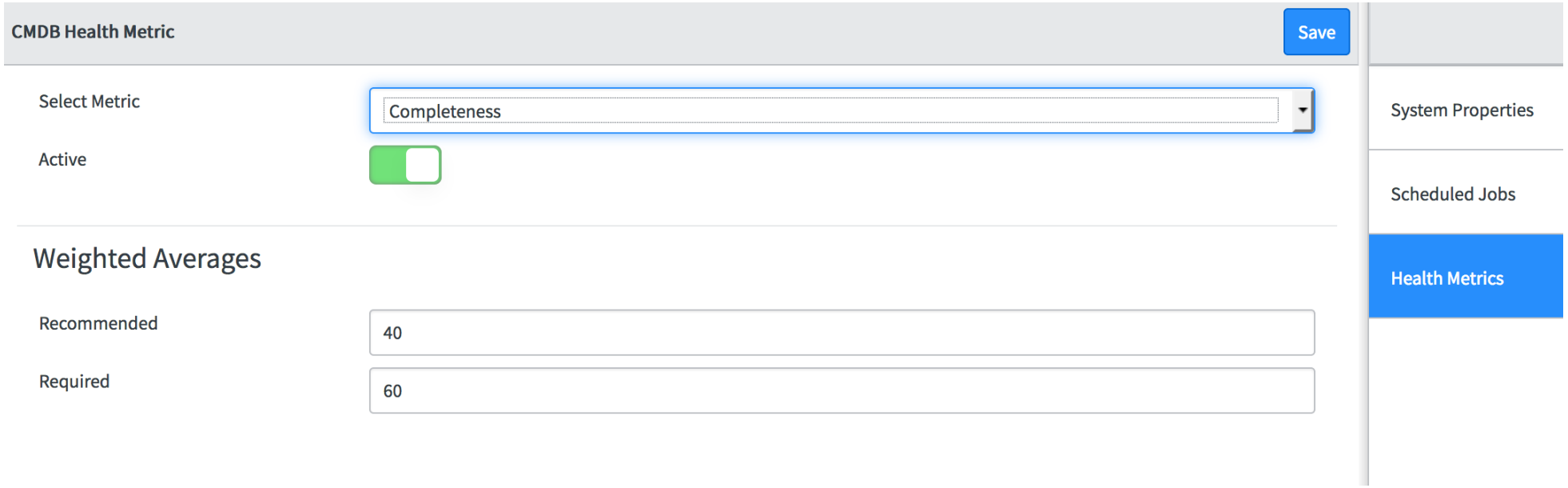


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Configuring the CMDB Dashboard: CI Health Preference and Metric







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Lab 1 Configuring the Health Dashboard

- Lab 1.1 Create and Execute Completeness Rules
  - This lab explains how to create a CMDB Completeness Rule for recommended fields and run the health audit.
- Lab 1.2 Create and Execute Compliance Rules
  - This lab explains how to create a CMDB Compliance Rule to audit records and run the health audit.
- Lab 1.3 Create and Execute Correctness Rules
  - This lab explains how to create a CMDB Correctness Rule to find Orphan records and run the health audit.

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Lab 2 Creating Remediation Workflows

- Lab 2.1 Create a Duplicate CI Remediation Workflow
  - This lab explains how to create and execute a remediation rule to resolve duplicate records.
- Lab 2.2 Create a State CI Remediation Workflow
  - This lab explains how to create and execute a remediation rule to resolve stale records.

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CMDB Health Dashboard Summary

- Measure the health of the CMDB
- Identify the problem CIs in the CMDB
- Remediate the problem CIs in the CMDB



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