

Getting Started

25 Core Functions of a CMDB

Presented By:



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What is a CMDB?

CMDB, or Configuration Management Database, is a term associated, or at least has its origin, with ITIL, the set of IT Service Management best practices developed by the UK's Government. The topic can be highly complex, with a wealth of information written on ITIL and the associated guidance for CMDB implementation.

If you are new to the CMDB concept, a common term that may seem confusing is Configuration Item or CI. Don't be overwhelmed, this merely refers to one of the assets within the CMDB. We often find that organizations dedicate significant resources to tracking CIs manually through pen and paper, a spreadsheet application like Excel, or internal software. Manual methods such as these often prevent a realization of any ROI, especially of human capital.

That aside, the best way to look at a CMDB is as the central repository for information about IT infrastructure that allows an IT team to discover, track, and manage IT assets. This visibility can provide an IT team with instant assessment of potential threats to the organization operating capacity. Thus downtime that might be the result of a malicious attack, security vulnerability, or change made in error, can be prevented.

Helpful Terms / ITIL Glossary

The following section contains helpful terms that are commonly associated with a CMDB Implementation. Most definitions have been taken from the IT Process Wiki, unless otherwise noted.

ITIL – ITIL is the most widely adopted approach for IT Service Management in the world. It provides a practical,

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no-nonsense framework for identifying, planning, delivering and supporting IT services to the business. (ITIL Official Site)

ITSM

A discipline for managing information technology (IT) systems, philosophically centered on the customer's perspective of IT's contribution to the business. (Wikipedia)

CMDB

The Configuration Management System (CMS) is a coherent logical model of the IT organization's infrastructure, typically made up of several Configuration Management Databases (CMDBs) as physical sub-systems.

Configuration Item (CI)

CIs or Configuration Items are mainly hardware or software items and are characterized by their attributes (recorded in the CI's Configuration Record) and their relationships to other CIs.

Service Asset and Configuration Management (SACM)

ITIL Service Asset and Configuration Management aims to maintain information about Configuration Items required to deliver an IT service, including their relationships.

Configuration Identification

To define and maintain the underlying structure of the CMS (the Configuration Model), so that it is able to hold all information on Configuration Items (CIs).

Configuration Control

To ensure that no Configuration Items are added or modified without the required authorization, and that such modifications are adequately recorded in the CMS.

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Configuration Verification and Audit

To perform regular checks, ensuring that the information contained in the CMS is an exact representation of the Configuration Items (CIs) actually installed in the live production environment.

Change Request to CMS Structure

A request from a Service Management process to change the CMS structure. This request is sent to Configuration Management if new CIs or attributes must be recorded but the CMS's structure is not adequate for holding the new data.

CMS Change Policy

A set of rules defining who is authorized to modify the structure and contents of the CMS.

Configuration Audit Report

A report summarizing the results of a CMS audit, highlighting revealed differences between CMS records and actually installed CIs.

Change Management

In ITIL 2011 the structure of the Change Management process has been modified to highlight that significant Changes require authorization at different points in their lifecycle.

Definitive Media Library (DML)

The DML is a single logical storage area even if there are multiple locations. All software in the Definitive Media Library is under the control of Change and Release Management and is recorded in the Configuration Management System. Only software from the DML is acceptable for use in a Release.

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ChangeGear – Help Desk

(Incident and Knowledge Management)

ChangeGear – Service Desk

(Incident and Problem Management)

ChangeGear – Change

(Change and Release Management)

ChangeGear – CMDB

(Configuration Management)

ChangeGear – Service Request

(Service Request Management)

ChangeGear – Service Catalog

(Self-Service & Request Fulfillment)

How to Use This Guide

- Read through the list of twenty-five functions.
- Starting with a score of 100, subtract 4 points for each requirement you are missing.

Threat Level	Score	Description
Warning	92-99	Your solution is incomplete.
Elevated	80-91	Your solution lacks major functionality.
Imminent	< 80	Your solution prevents visibility to your IT infrastructure.

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Your CMDB Should Allow you to...

1. Integrate ITIL terms and definitions, as well as base workflows and processes on ITIL best practices.
2. Provide varying levels of security controls to limit access within the system.
3. Customize forms easily and quickly.
4. Generate and modify management reports.
5. Record an audit trail for all record changes and updates.
6. Automatically create escalations and notifications of issues and changes, based on selected criteria.
7. Delete CI records permanently.
8. Create CIs manually, via an import, and through automatic discovery.
9. Determine which attributes will be associated with each CI record.
10. Provide various formats for model, version, and copy numbers for each CI. In addition, allowing administrators to add or modify fields as necessary.
11. Prevent the duplication of duplicate CI records by using certain unique fields—such as Name, Serial Number, or MAC Address.
12. Add relationships to other CIs when creating a new CI.

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13. View the current status of a CI.
14. Modify forms and fields to refine the graphical representation of software through its lifecycle.
15. Set the configuration baseline based on the scan of a CI.
16. Import CIs, making sure to verify that only new CIs are imported, flag any CIs that have changed, and mark which version of the CIs are authorized.
17. Record a history of change requests or other service items opened against a CI.
18. View a graphical representation (dependency mapping) of the relationships between CIs.
19. Select various relationship types between CIs, including allowing further refinement of relationship types by administrators.
20. Automatically identify other CIs that are affected by an incident, problem, known error, or RFC.
21. Integrate Web services API, as well as integration and reconciliation with other data sources.
22. Link Incident Reports to CIs.
23. View CI details, including their business criticality and relationships.
24. Integrate with the other IT Service Management models, in turn allowing you to view the impact of a change based on the number of users impacted and the number of CIs impacted.

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25. Monitor changes to CI records, as well as authorize changes validated with exception reports.

Learn More

The Learn page is the official resource center for SunView Software - a leading provider of IT service management software that enables companies to better track, manage, and control IT services across the enterprise. Based on the ITIL best practices framework, ChangeGear® allows companies to gain greater visibility into their IT infrastructure, increase security, eliminate system downtime, reduce operational costs, and ensure regulatory compliance. SunView Software is a privately held company based in Tampa, Florida.