

Point of View

Importance of CMDB in IT Operations Management

Authors

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Organizations at large entail a complex array of assets such as hardware, software, networking, cloud devices, and vendors. All these assets accompany complicated configurations and relationships amongst each other. While tracking the configurations and relationships between assets, it becomes difficult for the IT Operations team to respond to incidents efficiently. As a result, the team struggles to ensure that its core services are up and running. A proper Configuration Management Database (CMDB) helps an organization make informed business decisions related to IT components and upgrades.

With data being the most valuable business asset, CMDB is more than a warehouse for organizations. It enables organizations to recover from the complexities as and when it ramps up. It improves outages, and time to resolution, whereas helps the organizations maintain and control their IT environment.

Let's dive deeper to understand what business challenges CMDB can solve.

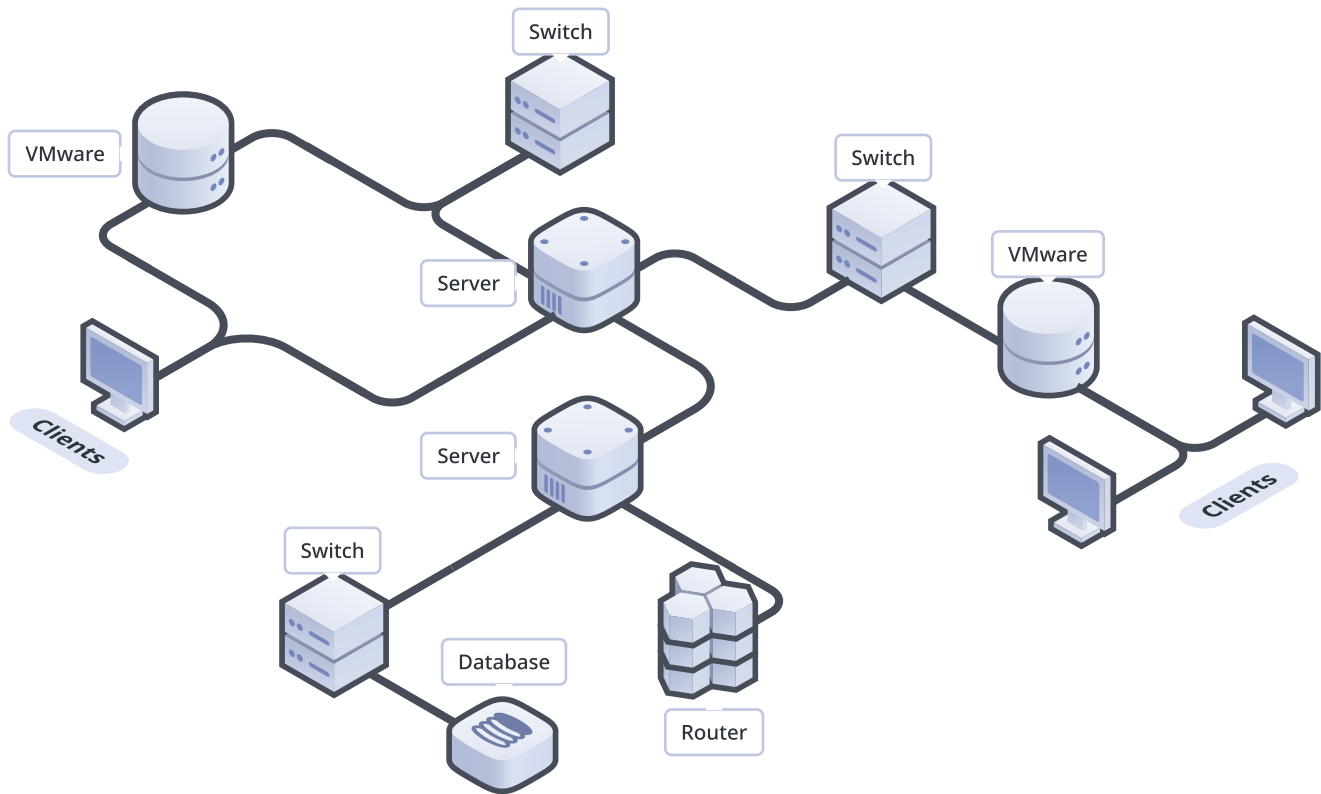
What is CMDB?

CMDB is a configuration management database, where configuration records for configuration items (CIs) are stored. These CIs can be any IT operational infrastructure or applications such as servers, routers, or VM servers. The information includes relationships and interdependencies between the CIs along with their type, owner, and importance (business criticality).

IT managers, system administrators, and application managers can utilize this information in multiple ways. This includes detecting critical issues, planning business strategies, responding to security incidents, deploying network components, and making budget-related decisions.

CMDB aims to provide an organization with the information required to make better business decisions and run ITSM processes efficiently, for example, if network interruption is affecting workstations. In an organization having information related to servers and routers with which the systems are connected, the troubleshooting process becomes more efficient and smoother. A potential malware occurrence can also be prevented if the versions of each machine's operating system are tracked properly. Accordingly, identifying the machines for which the patching is needed.

By centralizing the configuration information, leaders can better understand business-critical CIs and their relationships. Using CMDB, organizations can also ensure that their asset information is most accurate and up to date. It can comply with any legislative mandates.



Functional Characteristics of CMDB

CI metrics and analytics:

CMDB offers a seamless and efficient dashboard to track all the information related to CIs. This includes the health of CIs, their relationships, patterns, changes that cause incidents or problems, cost, and resource utilization in creating and maintaining each service within the organization.

Detailed compliance features:

It provides detailed records of all CIs. These records not only offer visibility to auditors about the current state of CIs, but also their historical changes, checks, balances, incidents, and so on.

Support for federated data sets:

It supports federated data sets that allow standardization of all CI types including normalization and reconciliation of CIs and their data.

Creation of CIs and timely population of their data:

It supports two ways to populate data i.e., manually and API driver integration. It also effectively gathers inventory of each physical and virtual device in the company.

IT service mapping:

CMDB offers a graphical representation of relationships and dependencies.

How does CMDB work?

Contrary to a traditional database, the CMDB collects data from various sources in such a manner that the primary sources retain control of alleged data. It helps to understand the data in a systematic way by exploring it from various standpoints.

According to Information Technology Infrastructure Library (ITIL), configuration management involves four major tasks, which are as follows:

- **Detect the CIs and populate them in the CMDB**
- **Control the data by allowing only authorized users to make the changes**
- **Make sure that the incoming CI is getting logged and updated continually**
- **Maintain the accuracy, reliability, and completeness of data by conducting audit and review cycles done by the owners of CIs**

Benefits of CMDB in IT Operations Management

- ✓ **Aligns IT with business:** Every organization's IT team has started to align its technology operations with the business. However, failed to align with the IT infrastructure components due to the absence of CMDB consequently impacting the business productivity. Thus, CMDB helps in creating an accurate, up-to-date view of CIs, which aligns IT with critical business services.
- ✓ **Accelerates resolution of incidents:** IT operation teams spend a lot of time identifying the right alerts from monitoring tools. Most of the monitoring tools give an isolated view of infrastructure and application. Therefore, it becomes difficult for the support groups to figure out the impacted business services, prioritize them, and resolve the issue. With CMDB, whenever an incident is created in ITSM, the organization's business criticality and support groups are maintained effectively. This assists in routing the priority tickets to the tagged support team and identifying which business service is largely impacted.
- ✓ **Scales the business:** It is a difficult task for organizations to add additional services to a website or application with inadequate information about the components including their dependency, performance, and resource utilization. With healthy CMDB, organizations can have a bird's eye view of components and their optimization. This helps in scaling the business without facing any complexities.

- ✓ **Reduces IT infrastructure cost:** Monitoring each infrastructure component at its application level helps in understanding daily resource utilization. It also aids in upscaling or downscaling of infrastructure as per requirement without causing any problem to the business.
- ✓ **Improves maintenance activities:** As CMDB maintains the CI relationships, organizations can track their affected applications in advance and take appropriate actions. Additionally, they can keep track of the change management and maintenance history of CI, which helps to identify problematic CIs.
- ✓ **Improves information security:** With time, threat attacks have increased around the globe and have impacted many organizations. CMDB data helps in understanding which CIs store the critical information and data like customer personal information, payment details, company details, and research data. And, adds advanced customizable monitoring and security on them. This helps in keeping IT operations safe from external threats to the organization. Without a proper CMDB, it becomes a tedious and time-consuming job.
- ✓ **Shifts and reconciles the data center:** Many organizations with projects like data centers, fail to perform change management and face service outages due to the lack of appropriate CI knowledge and absence of good configuration management. A healthy CMDB ensures the smooth execution of change management.
- ✓ **Implements cloud-first strategy:** When it comes to cloud migration, many organizations find it a challenge as all the information and details of components lie in silos. As a result, the implementation of a cloud-first strategy becomes a deadlock. CMDB helps in migrating the inventory control system to the cloud by creating a service map of all CIs as it has details of all components and their dependencies.

A well-planned CMDB serves as a basis for enterprise IT organizations to gain accountability, visibility, and control over the infrastructure. It offers a holistic platform to automate the configuration management of services. Additionally, ensures compliance with all the policies and regulations, and industry best practices.

Difference Between CMDB and Asset Management

Asset management tracks lifetime asset cycles and provides information related to operations, procurement, maintenance, and disposal. Meanwhile, CMDB includes information related to configuration and provides evidence of operational costs such as support, licensing, and so on.

Asset management aims to efficiently utilize all the existing assets and decommission obsolete assets, whereas CMDB is IT-oriented. It explains the relationships between assets, helps to outline dependencies, and manages to keep IT services up and running.

However, both the processes can be centralized and integrated closely. A CMDB can support asset management in collecting the CI data, managing incidents related to CIs, and reducing the risk. CMDB is only valuable when the IT asset management processes can retrieve the configuration data conveniently when required.

CMDB and LTI Mosaic AIOps

LTI Mosaic AIOps is a next-gen IT Operations Management strategy, which uses AI and real-time processing of IT events to enable pro-active operational intelligence. It enables Enterprise IT transformation through the adoption of AI-driven IT Operations. This helps organizations to establish ITOPS by bringing together a wide coverage to tap into IT telemetry information. Also, contextual AI interventions for highlighting just-in-time interventions and an integrated IT process automation suite to ensure last-mile corrective action.

LTI Mosaic AIOps enable organizations to create their own CMDB, get insights related to CIs in a unified view, and maintain CIs in an ideal manner. If a new CI is commissioned in the organization but not recorded in the CMDB, LTI Mosaic AIOps provides an optimal way to add, enrich, and maintain CMDB. It auto identifies any newly added CIs in the system and gives a unified view to enrich (CI properties) and maintain them. To conclude, it is a robust tool that transforms and grows with the organization, showcasing its best practices for IT service delivery.

Learn more about [LTI Mosaic AIOps](#) now & centralize your configuration information.

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About the Author



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Manisha Ojha is a seasoned technical communicator and web content writer with over 9+ years of experience in the IT and Publishing industry. She is a keen follower of structured writing, data-driven, and spatial approach. She is currently responsible for developing a robust documentation repository for LTI Mosaic AIOps including online help, technical documents, release notes, case studies, and how to videos.



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Vaibhav is an AI enthusiast with over 8 years of experience in Retail, Automobile, and IT industries. He is passionate about solving complex problems and delivering suitable solutions. He is currently responsible for designing & developing cutting-edge solutions for LTI Mosaic AIOps.

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