



HP Universal CMDB and HP UCMDB Configuration Manager

The HP Universal CMDB (UCMDB) automatically collects and manages accurate and current business service definitions, associated infrastructure relationships and detailed information on the assets, and is a central component in many of the key processes in your IT organization, such as change management, asset management, service management, and business service management. The UCMDB ensures that these processes can rely on comprehensive and true data for all business services. Together with HP UCMDB Configuration Manager (UCMDB-CM) you can standardize your IT environments, and make sure they comply with clear policies, and defined authorization process.

Many IT organizations turn to a CMDB and configuration management processes to create a shared single version of truth to support business service management, IT service management, change management, and asset management initiatives. These initiatives help align IT efforts with business requirements and run IT operations more efficiently and effectively.

The initiatives' success depends on the CMDB providing a complete view into the configuration items (CIs) and assets as well as how various IT elements relate together to deliver the business service.

How it works

HP Configuration Management System (CMS) comprises three components: UCMDB, Discovery, and Configuration Manager.

The UCMDB reconciles data from multiple discovered and federated sources into one data set, models your business services, calculates the potential impact of changes within these services, tracks changes for any configuration item, and contains reporting capabilities to transform CMDB data into comprehensible, actionable information that helps answer critical questions and solve business problems.

HP Universal Discovery (UD) software, with rich and constantly updated content, is UCMDB's preferred method to acquire and maintain application and IT infrastructure data.

HP UCMDB Configuration Management makes it possible to analyze IT environments in order to best standardize configurations and improve associated IT management processes. This helps you improve data quality in your configuration management system (CMS), avoid single points of failure, achieve geographic redundancy of applications and drive changes based on standardized configurations. The solution also helps improve the stability of your environment, deliver standardized services and improve the resiliency of your architecture.

With its components, the HP UCMDB logically stands as a central element of the HP Configuration Management System (CMS) as defined in Information Technology Infrastructure Library (ITIL). The HP UCMDB provides service context and CI-level information to both HP Software and third-party IT solutions.

Multi tenancy

The UCMDB can manage more than one tenant within a single UCMDB, allowing service providers, and large or distributed organizations to manage several tenants in one UCMDB. The multi tenancy is flexible yet manageable way to manage the data and the security for both shared and non-shared data. This authorization module delivers management of data and provides controlled automation rules to distribute to data to the right ownership.

User permissions

The UCMD gives you powerful and easy use tools to manage user permissions for different resources in the UCMD. The concept of "Resource Groups" bundle resources such as views, reports and correlation rules together enabling to manage permissions for them as a single group. User permissions can also be implied to folders and not just for specific resources, making it much easier to secure the UCMD. UCMD and Configuration Manager combine user management processes to enable you to define your users and roles one time and leverage them across the solution.

UCMD browser

The UCMD browser allows easy access to data for non administration users and is bundled within the UCMD and Configuration Manager. In addition to powerful search for configuration items and services, for viewing properties and related configuration items, the browser now contains many new widgets including: security widget, automation widget (integration with HP Operations Orchestration), defects widgets (integration with HP ALM), incidents and change requests widget (integration with HP Service Manager and HP Service Anywhere), monitoring widget (integration with HP BSM), policies widget (integration with Configuration Manager) and more, providing a comprehensive view of any service and configuration item. The browser also allows updating data on specific and configurable CIs and attributes.

With a powerful search embedded in the UCMD, users can search and find configuration items using intuitive natural language queries. The search works on internal and federated data and can span from one configuration item to a complex topology of related configuration items giving users a simple way to search and understand the data within their IT organization. The search results are presented in the UCMD Browser, thus giving a rich and comprehensive view for the results.

UCMD-CM delivers easier information retrieval, topological navigation, viewing, and analysis from one user interface. UCMD Browser capabilities are available directly from Configuration Manager to enable seamless viewing and analysis of the data residing in the configuration management system.

Impact analysis

A CMDB is useful only if it can help customers take action based on the information it contains or federates. The UCMD provides impact analysis capabilities to help customers understand the business impact of IT actions such as configuration changes or routine maintenance.

Building impact analysis into the CMDB offers a streamlined approach to managing impact policies (compared to managing those in separate Management Data Repositories or MDRs). Because impact analysis natively leverages the CMDB's data model, it can automatically create impact rules based on model information to reduce effort and overhead.

Configuration analysis

Configuration managers know that CIs that serve the same purpose should have similar configurations in order to reduce maintenance costs and improve predictability. UCMD-CM provides insight into the different configuration patterns that exist in the environment for a better understanding of how aligned or different they are. Identifying configuration differences quickly means reductions in maintenance costs and management overhead, and improved predictability and reliability of the IT environment.

Policy management

Policy management enables configuration managers to create rules that define standards to continuously and proactively monitor compliance. The UCMD-CM supports baseline policies (saved models that act as baseline definitions of a policy) and topology policies (which define the desired topology configuration) as part of Advanced Configuration Manager. When policies are breached, configuration managers can be notified of the breaches in order to take action.

Change tracking and control

The UCMD provides the ability to maintain a continuous history of CI changes. Change tracking allows you to quickly triage change-induced outages and audit the change management process.

Even after a CI is deleted from the UCMD, users are able to see how it looked when deleted, for audits and other purposes.

The UCMD-CM introduces an authorized state to the HP Universal CMDB to provide controls over how configuration changes are managed and communicated to the configuration management system consumers. With integration to HP Service Manager, users can validate changes against Requests for Changes, monitor undesired changes, drive changes based on configuration standards, and report on configuration drift and policy breaches.

Out-of-the-box cluster resiliency and data quality policies

Improve business continuity and protect your ability to deliver services with UCMD-CM's clustering analysis and policy enforcement. Leverage cluster resiliency policies upon installation to identify single points of failure within your environment and ensure that all clusters are symmetrical. In addition, improve the quality of data you rely on with out-of-the-box data quality policies to ensure important CI attributes are not missing in the Universal CMDB. These policies are provided as part of the advanced Configuration Manager module.

Similarity policies and policy categorization

Ensure configurations are alike among clusters or groups of CIs. Save tremendous time by defining a similarity policy to ensure servers, for example, are similar to each other, without having to define the specific attribute values. This is especially important in highly dynamic environments. In addition, leverage similarity policies in clusters to ensure the CIs within those clusters are similar. Note that a single policy can be defined and leveraged across many clusters, and every CI will be compared only with other CIs of the same cluster. These policies are provided as part of the new Advanced Configuration Manager module.

To gain focused insight into policy breaches, policies can be categorized in order to focus on a subset of policies within UCMD-CM. For example, view all the policies related to ensuring geographic redundancy, or related to improving data quality. In addition, the categorized policy statuses can be consumed using the UCMD API and populated into any reporting system.

Data model

At the core of the HP Universal CMDB is the Universal Data Model (UDM) a rich data model that is progressively becoming the common configuration language of all HP management products. The UDM supports the physical elements (such as servers, network, storage, and software), the logical elements (such as business services, virtual private networks, end users, and service-level agreements), and the complex relationships between these elements that together make it possible to fully map the business service infrastructure. The UDM is natively supported by the UCMD, UD, and the UCMD-CM. The data model can be extended to support new data types and attributes.

Data flow management

Because valuable data resides in multiple data stores, the UCMDB Foundation has integration capabilities that enable businesses to leverage existing management data repositories (MDRs). With the UCMDB Integration Studio, UCMDB administrators can manage replication and federation data flows from these MDRs into the CMDB and configure the reconciliation rules. These capabilities allow users to search and utilize data without needing to understand exactly where it resides or the technology behind accessing it. The UCMDB provides several key integrations out of the box such as: Asset Manager, Service Manager, Service Anywhere, BSM, and other HP and non HP products.

Modeling, visualization, and reporting

The UCMDB Foundation also comes with a comprehensive Modeling Studio that administrators and power users can use to define templates, perspectives, views, and service models. These models are based on dynamic drag-and-drop graphical Topology Query Language (TQL), ensuring that your business services are always kept up to date. All these elements contribute to the rich presentation layer that is available to end users.

You can see the big picture of complex topology views within the IT universe using the ability to collapse and extend groups of CIs. Grouping CIs by type or by layer enables you to see the different layers and types of the business service or application, and side by side allowing you to dive into the details of the service, by extending the collapsed groups

Each topology view can be turned into a report that can be consumed in multiple ways (Excel, PDF, HTML and more). Out-of-the-box reports are also available.

The UCMDB-CM supports the concept of composite CIs, which provide a way to collapse or compress other CIs into the lead CI. Composite CIs simplify visualization and make reports easier to read and understand.

For reporting, Configuration Manager provides a report manager to deliver reports directly to the user's inbox on a scheduled basis. Reports include historical changes, daily changes, unplanned changes, and detailed policy statuses, allowing change managers, service owners, and subject matter experts to schedule reports that are filtered by their respective domains and interests.

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