



White Paper

CMDB -- If I Only Had a Nickel...

Practical advice on implementing your Configuration Management Database

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Executive Summary

High performing IT organizations recognize the need to control and account for the IT assets that provide support for their IT infrastructure and service level agreements. A solid Configuration Management process, supported by an easy-to-use and information rich Configuration Management Database (CMDB) provides the basis for accurate recording and tracking of an IT asset throughout its lifecycle. Beyond just the asset accounting and tracking benefits of a CMDB, the information and relationships contained therein can be leveraged to provide significant benefit in support of other IT processes.

Introduction

“We tried implementing a Configuration Management Database before, several times in fact, and we failed.” “Implementing a CMDB is too difficult.” “I don’t know where to start.”

You know, if I only had a nickel for every time I heard these statements expressed by IT organizations, I’d be able to buy that 1967 Mustang GT Fastback I have always wanted. It’s true, implementing a CMDB can be challenging. But companies have been successful and the payoff is huge. So how did they do it? What made them successful where others have failed?

CMDB – The Heart

It is often said that the CMDB is at the heart and center of any successful ITIL or IT Service Management program implementation. When implemented correctly, the CMDB can be used as a source of critical information for:

- **Change Management** – to provide relationship information to determine the risks and impacts of a change to the IT infrastructure
- **Incident Management** – for providing the Service Desk immediate information on CIs to determine which Configuration Items (CIs) are affected by a specific incident
- **Problem Management** – to discover which CIs may be the root cause of a particular problem or group of problems
- **Service Level Management** – uses baseline CI and relationship information to help develop and assess service level agreements with IT customers and to visualize the relationships between IT services and Business processes
- **Service Continuity Management** – uses information about each CI and their relationships to build a blueprint of the IT support structure that will be used to reconstruct the IT environment in case of an extended outage
- **Availability Management** – uses information to identify all CIs that have relationships to a specific CI that has a planned outage and to provide business impact analysis of an IT component failure
- **Financial Management** – uses information to ensure the cost of the IT infrastructure is well understood and to help determine appropriate charge backs for IT services

- **Capacity Management** – uses information to facilitate effective capacity planning and performance management activities

You may be saying, “OK, I understand. But how do I successfully implement a CMDB?”

CMDB Implementation Strategy

My first advice is to “Keep It Simple”! Too many failures at implementing a CMDB have been due to poor planning and having too big of a scope. There are two things to carefully consider and agree on before starting to implement a CMDB:

1. **Scope:** What information do you want to capture in the CMDB? In other words, what IT components (CIs) come under the control of Configuration Management. This decision represents the breadth of what is controlled. Typical CI categories include hardware, software, and network components.
2. **CI Level:** What level of detail for a CI do you want to capture, i.e. – the depth of what is controlled. This detail is referred to as “attributes”. So, what attributes of a CI do you want to capture?

To assist in determining what to capture in the CMDB with Scope and CI Level in mind, consider these two guiding principles:

- Capture only those CIs that you need to control within your organization
- Store only enough information about those CIs that you are able to manage consistently

You may be asking, “How do I determine what I need to control?” Here’s one approach to making this determination:

- Establish Service Level Agreements (SLAs) with your customers for the IT services you provide
- Identify the IT components (CIs) within your organization that support or provide those services, but only those that if they were unavailable or degraded, would impact your SLAs
- Load data for those CIs into the CMDB and create the relationships between them

In addition to the above, and in keeping with the KISS principle, I recommend the following approach for loading information into the CMDB. This is what I call my “crawl before you walk, and walk before you run” approach:

- Load application data first into the CMDB. This includes creating a CI for each application type and instance. Load all applications within your portfolio or only those that have SLAs associated with them. I recommend the latter.
- Next load server data for those applications. There should be a CI for every server and a CI for every server operating system. Create relationships between all of these CIs. Having application and server data is a powerful tool for analyzing change impacts.
- Finally, load Network data for these servers and applications and create relationships between them. Create a CI for every IP subnet that holds a server and every static network address that relates to a server or application.

And voila! You have the start of a CMDB! Additional CIs can be added as you grow in your experience and ability to control and manage what is currently under the control of Configuration Management.

Final Words of Advice

You should not attempt to implement a CMDB without first having an effective Change Management process in place. Once you begin loading CI data into the CMDB, you will immediately want to start controlling access to, and the quality of, that information. Therefore, these CIs should come under the immediate control of Change Management. In fact, I recommend implementing Change and Configuration Management together.

Finally, without going into a lot of detail, I recommend you use tools to assist you in loading, storing, and managing your configuration management data. There are several tools on the market that can do “auto-discovery” of CIs and automatically load your CMDB with that data and there are several ITIL compliant tools that have CMDBs embedded within them. When selecting a tool, careful consideration should be given to your needs based on the size and complexity of your organization, along with ease of use, access, relationship building, and reporting capabilities of the tool.

Now, if I only had a nickel...

About Propoint Solutions

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