itSM Solutions® DITY™ Newsletter Reprint

This is a reprint of an itSM Solutions® DITY™ Newsletter. Our members receive our weekly DITY Newsletter, and have access to practical and often entertaining articles in our archives. DITY is the newsletter for IT professionals who want a workable, practical guide to implementing ITIL best practices -- without the hype.

become a member

(It's Free. Visit http://www.itsmsolutions.com/newsletters/DITY.htm)

Publisher
itSM Solutions™ LLC
31 South Talbert Blvd #295
Lexington, NC 27292
Phone (336) 510-2885
Fax (336) 798-6296

Find us on the web at: http://www.itsmsolutions.com.
To report errors please send a note to the editor, Hank Marquis at hank.marquis@itsmsolutions.com
For information on obtaining copies of this guide contact: sales@itsmsolutions.com

Subscribe PDF Download Back Issues

Vol. 2.27 JULY 12, 2006

"Configuration Management for the Rest of Us"

DITY Weekly Reader

The workable, practical guide to Do IT Yourself

Configuration Management is probably the least understood and most important service management process. Yet most have no idea how to start and many think it requires huge investments. But you don't need to spend big bucks to get real benefits. It all starts with a single word...

hank MARQUIS

Articles
E-mail
Bio

By Hank Marquis

The IT Infrastructure Library® (ITIL®) describes Configuration Management (CM) as a method for controlling infrastructure and services.

The ITIL goes into detail describing the goals and activities relating to CM. Given these descriptions CM, it can appear that ITIL implementation is not possible without a mature CM process.

This is not true, but the use of over-generalizations like “account for all the IT assets and configurations within the organization and its services” can cause new practitioners to become confused and overwhelmed.

Coupled with vendor hype and management misunderstanding, practitioners quickly lose sight of the single reason for CM — controlling changes.

Losing focus on the purpose of CM makes it more difficult than it would be otherwise. A clear understanding of the real purpose of CM can make it easier to achieve, help explain its benefits, and provide a roadmap for its justification and implementation.

There are three basic approaches available to the practitioner regarding CM: Purchase or build a comprehensive system, or codify and enhance existing systems.

Purchasing or building a CM product is expensive. But there is an alternate approach — using the CM systems virtually ever organization already has in place.

Following I explain the real purpose of CM, show you how to uncover your current CM systems, and provide a plan to implement CM with real benefits for little or no additional cost.

The Real Purpose of Configuration Management

Regardless of what you heard, read, or seen, the purpose of CM is to control changes through creation and maintenance of documentation. This is not the same as Change Management, which is a process for evaluating and handling change requests in the pursuit of quality of service improvement.

CM is a process to identify, record, maintain, report on, and verify documentation. Change Management and other ITIL processes use this documentation to make better decisions. Creating and maintaining records of Configuration Items (CI) such as hardware, software, and the documentation related to these CIs is all CM describes, nothing more and nothing less.

The activities of CM all relate to the simple idea of creating and maintaining a database of information regarding CIs, and then inserting the usage of this database into the decision making process. This simple understanding is the path to success regarding CM, and the establishment of that almost mythical of things, the Configuration Management Database, or CMDB.

The Truth about the CMDB

Many think the CMDB is a single, all-powerful database. They attribute amazing abilities to the CMDB. They grant it capabilities never intended and often not required. Many vendors inadvertently contribute to this confusion with extended claims of functionality based on their unique capabilities.

If I could rename the CMDB, I would call it the Configuration Management *Databank*. This sounds simple, but a large part of the problem practitioners have with CM stems from the use of the word database and what people think the word database means. The practitioner reading the ITIL see's database and immediately starts thinking of SQL, server's, administration, and new software licenses.

Many have forgotten (or never knew) that databases consist of one or more banks of data. Webster defines "Database" as "a usually large collection of data organized especially for rapid search and retrieval." Webster also defines "Databank" as an alternate term for "Database." Such databanks are often independent, and often geographically distributed among several repositories.

Many think a database is a single thing. The result is confusion, and the mistaken belief by practitioners that CM and the CMDB are more than they really are. In truth, there is no such thing as a single CMDB. If I were to call the CMDB anything, I would call it a type of hypertext engine.

In a Hypertext system, any object, whether it describes a piece of data (e.g., text, video, or audio) or a physical thing (e.g., hardware, software, person, building, document) can link to any other object. It does not matter where, physically, the object resides. Hypertext systems are particularly useful for organizing large amounts of disparate information. The World Wide Web (WWW) is a hypertext system that is clearly not a single database. The CMDB, like the WWW, is a logical construct that references many sources of information and physical objects.

Forget the idea of the single, all-encompassing, database. Start thinking about linking together all the collections of information you already have and use in your day to day activities. This is what a CMDB really is.

I hope that you now understand that there is no such a thing as a single CMDB, and have an idea of how to start creating your own Configuration Management *Databank*!

Uncovering Your Own CMDB

Know that you understand what a CMDB actually is; you can start to think about uncovering your own. I say uncovering because virtually every single IT organization already has many repositories of data and information.

Somewhere in your organization there are records regarding hardware and software models, versions, etc. Without a doubt you have their manuals and software CD-ROMs nearby. Right now, someone has an Excel spreadsheet with records of office system configurations. Finance has an asset register tracking hardware and software purchased. Someone else is using Access to track software licenses. Over there is a shelf holding user manuals, next to that is a closet with spare hardware. Elsewhere there are diagrams of services, circuits, and systems in Visio or maybe PowerPoint.

My first point is that CM is the process of managing the information relating to your infrastructure. My second point is that you most likely have a huge amount of CM data and information already in place — you probably just never thought of it this way before. Commonly, IT organizations have much of the data but lack a single process for managing and using the data. Without such management control the data is not available to other processes or kept up to date.

The first step is to locate all of the sources of information relating to your hardware and software. Don't worry about a single repository for Incident, Problem, Known Error, or Change records for now. (You probably already have a system that tracks Incidents, Problems, and Known Errors or their equivalent right now — your ticketing system.)

Focus instead on the CIs relevant to delivering your vital services. Locate the existing information repositories, but leave them in their current form for now. Your goal is not to impose major new projects on existing teams, but rather to locate sources of data and formalize their maintenance and control. Create a spreadsheet of where your configuration information resides.

With this simple step of locating the sources of data and taking them under management control, you now have a CMDB and can begin to realize the benefits of CM!

Getting Started

Now that you know you can have a CMDB and a CM process that delivers real value relatively quickly and inexpensively, you need a plan. Here is a plan to get you going.

Planning — A CM process begins with a plan. Your CM plan needs to include:

- purpose and scope of CM
- a description of the CIs and services to which the CM plan applies
- a time line showing important CM activities completion
- a description of current and expected CM tools (e.g. what you have and expect to find)
- related documentation such as existing CM plans or plans from suppliers
- a listing of relevant documents and their interrelationships
- policies describing CM management activities
- the organization, responsibilities and authorities of relevant interested parties
- qualifications and training of staff to support CM
- criteria for the selection of CIs
- frequency, distribution, and control of reports

The CM plan must explain and describe how you plan to achieve each of the following CM process activities. The ITIL provides great detail on these, so the following are highlights only.

Identification — the selection and identification of CIs and their relationships. Identification includes assigning unique identifiers and version numbers to CIs, applying labels to CIs as appropriate, and entering the CI into the appropriate databank. For service-level CIs, the selection of resource-level CIs and the descriptions of their interrelationships should describe the services' structure. Good selection and identification criteria include:

- regulatory requirements

- criticality in terms of risks and safety
- new or modified technology
- interfaces with other CIs
- procurement conditions
- support and service considerations

Control — procedures that ensure no change to any CI without controlling documentation such as an updated service or product specification, or a RFC. In your CM plan, define how you will accurately update CMDB records. Include:

- management authorizations and relationships of those in authority
- procedures for control of changes to CI records within the CMDB
- methods to communicate changes from physical CIs to their CMDB records

Status Accounting — reporting on changes to CIs throughout their lifecycle. Include methods to track CIs from ordering to depreciation. Unlike *Control*, *Status Accounting* seeks to maintain a historical record for the CI. This includes baselines, linked Incident, Problems, Known Errors, etc.

- methods for collecting, recording, processing and maintaining status accounting records
- definition of the content and format for all configuration status accounting reports

Verification and audit — a series of reviews to verify the presence and configuration of CIs with their respective records within the CMDB. Include in the plan:

- a list of audits planned
- procedures to be used
- authorizations required (within and without IT)
- description of report and expected contents
- Configuration Care and Feeding

Summary

Remember, the real purpose of CM and the CMDB is to control CIs. Initially, use the CMDB to enhance maintenance decisions, expand into using the CMDB to evaluate Requests for Change (RFCs) in support of Change and Release Management.

To support Change Management, identify critical components (CIs) that underpin key systems or applications. Some common examples of these types of CIs include:

- power supplies
- shared servers
- central routers and switches
- high worth users
- shared applications
- high speed network connections
- vital audit, security, and production systems

With the sources of configuration information located, your next step is to combine CI information into services. This requires more work, so start small. Focus on new services, or "problem" services in need of improvement. Start by defining service CIs – composed of these critical infrastructure CIs. This will help stabilize your infrastructure by reducing unexpected consequences of changes.

Following the rest of the CM process defined in the ITIL allows you to maintain the integrity of the CMDB as

you expand it. Establish management objectives to bring other services or locations under CM control. Perform audits to ensure integrity and find new CIs. Begin to use the CMDB for impact analysis for Changes. Relate Incidents, Problems, and Known Errors to services and specific CIs in the CMDB.

Over time, you can migrate to new systems if required. You will know what you need, and how to achieve it. You might even find it worthwhile to purchase a system — and you will have established the value proposition to justify them.

With your new understanding, and your plan in hand, you are ready to realize the benefits of Configuration Management!

--

Where to go from here:

- Subscribe to our newsletter and get new skills delivered right to your Inbox, click here.
- Download this article in PDF format for use at your own convenience, click here.
- Browse back-issues of the DITY Newsletter, click here.