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Select the right configuration management database to establish a platform for effective service management.

All business activities rely on information technology in some way today. Traditionally manual tasks are now automated, and a part of interacting business processes. The result is growing complexity and reliance on technology, which requires organizations to find more effective ways to manage their infrastructure, processes and data. That means having the capability to anticipate changes to determine potential disruptions and resulting business impact, prove compliance to internal and regulatory environments in an on demand way and ensure the right people have the right information at the right time.

Ultimately, efficiency improvements are a result of integrating new technology or improving the method or process used to deliver IT services. The IT environment must be managed as a business to evolve and become more effective.

Based on proven best practices such as the IT Infrastructure Library® (ITIL®) and advanced technology integration, IBM Service Management can help you manage the relationships between people, processes, technology and information to achieve the optimal intersection of IT and business.

The first step: a platform for federating data, workflow and policy

Leveraging the benefits of service management starts with a configuration management database (CMDB) platform for integrating data, workflow and business policies across IT management processes. A true CMDB enables you to focus more on optimizing the services IT delivers to your business and less on operational issues.
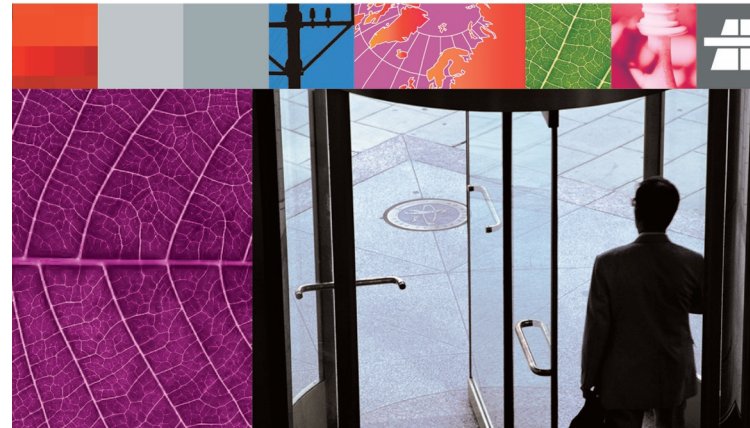
Implementing a CMDB is an important step, but a step that must be understood in the context of its purpose: visibility into key configuration items (CIs), their attributes and the relationships between those CIs. It is equally important that a CMDB help IT operations get a firm grasp on change management in the organization. The data becomes valuable only when the people in the organization can use it and act on it. In other words, a CMDB can't merely be a retooled configuration database — it needs to offer something more.

The key is to implement a true *change* and configuration management database — to give you the tools and information you need to fully understand the business impact of a change, help manage the change to reduce calls to the service desk and minimize downtime.

There are five key areas to evaluate when selecting a CMDB:

- *CMDB core capabilities*
- *Ability to leverage existing investments*
- *Integrated workflows*
- *Audit and compliance capabilities*
- *Vendor criteria*

This buyer's guide can help you evaluate and select the best CMDB for your needs. It discusses the key capabilities of an optimal solution and the benefits of each, and provides checklists that you can use when evaluating vendors and their products.

Assess CMDB core capabilities

A strategic element of implementing a CMDB solution is establishing a unified view of all the application elements that support your applications and services. Having visibility into the relationships and interdependencies between components and their environments helps evaluate the potential disruption of a change and assess the business impact of an incident or a problem.

Start by ensuring the CMDB you choose includes all of the following core capabilities:

- *Robust discovery and application mapping – to find resources, applications and hardware in your IT environment that can be used to understand impacts due to change, as well as understanding critical configurations and deployments. Discovery capabilities should allow for easy loading of intelligence from numerous repositories throughout the pillars of expertise within an organization.*
- *Reconcile automatically – to help eliminate duplicate records in the CMDB from multiple sources. This maintains the source integrity of each CI instance in the CMDB. Ideally, the reconciliation logic should be built into the CMDB so you don't have to manually create, maintain and enforce reconciliation across your CIs.*
- *Federation – to leverage information from other data sources and create a single master view of all relevant information about CIs. Federation can also access the source of record, for attributes not contained in the CMDB.*
- *Synchronization – to ensure information in the CMDB reflects updates in federated sources. It helps quickly identify what level of unauthorized change is occurring and pinpoints any discrepancies between configurations. Synchronization can be scheduled based on the update frequency of federated sources, or on demand synchronization of a CI can enable a quick comparison of changes that may have occurred.*

An effective solution should provide you with CMDB core capabilities:	IBM	Other vendor
Discovery of CIs, attributes and dependencies		
Support multiple methods for finding resources, applications and hardware in your IT environment, such as automated agentless discovery, existing data repositories and tools, and manual entry.	✓	
Use agentless, automated discovery of CIs and application dependencies to eliminate the need for heavy infrastructure and additional overhead.	✓	
Utilize discovery capabilities to obtain a complete, detailed understanding of your supporting infrastructure, including: • Layer-2 network devices. • Storage devices. • Cross-tier dependencies. • Run-time configuration values. • Complete change history.	✓	
Collect information from multiple operational management products (OMPs) and homegrown repositories of CI information.	✓	
Deliver user-friendly maps of business applications and relationships, potential change impacts and critical configurations; understand dependencies between applications and their components.	✓	
Understand impact of changes and help diagnose problems.	✓	
Reconcile CIs		
Use built-in, automated reconciliation logic to correct duplicate CIs.	✓	
Eliminate manual, time-consuming reconciliation tasks.	✓	
Federate data from multiple sources		
Provide views of business objects from disparate sources.	✓	
Gather information directly from the source tool or repository.	✓	
Synchronize data		
Ability to apply policy to ensure accuracy of data when several sources of data for a resource exist.	✓	
Deliver reporting capabilities to identify discrepancies from the master and monitor configuration drift.	✓	

Leverage existing investments

It is equally important when selecting a CMDB to be able to leverage the valuable data about your enterprise that is available through your existing system management tools. Your CMDB should be able to leverage that data, regardless of the source.

An effective solution should let you leverage existing investments and provide:	IBM	Other vendor
Ability to load data from other vendor's management tools.	✓	
Ability to load data from customer-specific or homegrown databases.	✓	
Ability to load data from spreadsheets, text files or XML files.	✓	

Leverage integrated workflows

Process workflows create a framework that controls the interaction between information and the people and tools that access that information. A workflow is a series of activities and tasks, taken in a prescribed sequence, which allows a team to consistently accomplish similar activities. Process workflows can dramatically increase efficiency and effectiveness and improve collaboration among the responsible parties.

The integration of workflows is a distinguishing feature of a true CMDB. It enables you to:

* *Define the interaction of the CMDB with discovery tools.*
* *Define interaction with OMPs such as provisioning applications.*
* *Identify roles.*
* *Set policies around information contained in the CMDB.*

But while the processes and workflows involved in running your IT organization are critical, you should not have to implement processes and workflows that require you to replace your existing system management tools. Look for a CMDB that provides you with a dynamic configuration of workflows based on categorization of the activity and the ability to implement workflows aligned with out-of-the-box best practices, such as those based on ITIL or Control Objectives for Information and related Technology (COBIT).

An effective solution should include integrated workflows:	IBM	Other vendor
Use integrated and automated workflows for the change and configuration management processes.	✓	
Continually monitor the process flow.	✓	
Create, accept and categorize requests for change (RFCs).	✓	
Create and perform configurations through formal process workflows.	✓	
Assess the impacts of RFCs on the infrastructure.	✓	
Approve, schedule and coordinate implementation of RFCs — in parallel or serially to enforce prerequisite steps.	✓	
Provide administrators with a portal interface for real-time information on completed activities and the schedule for remaining activities.	✓	
Enable each individual responsible for a task within a process to see information captured from prior tasks and subject-matter experts.	✓	

Audit and compliance capabilities are essential

Failure to demonstrate compliance in response to audits can be deadly for a business and pose significant personal consequences for its officers.

The CMDB you choose should enable you to quickly and easily view how CIs have changed over time against predefined, authorized baselines and integrate policies in accordance with compliance measures. By quickly assessing changes, you can increase your ability to verify compliance and speed time to resolution.

An effective solution should provide audit and compliance capabilities:	IBM	Other vendor
Assess security privileges of configuration files for systems that can only be accessed by authorized users.	✓	
Understand in detail what assets you have and what they do for your organization.	✓	
Quickly view how CIs have changed over time and what changes have been processed under an approved RFC.	✓	
Create change history reports/audit trails to support compliance, identify which CIs have changed in an application and drill down to view changed attributes.	✓	

You should be able to monitor processes and conduct audits to understand how to eliminate bottlenecks, measure against goals and assess whether the process is effective or where it can be improved by:

- *Automating processes associated with tasks.*
- *Automating those tasks through the system management tools already in use in the IT department.*
- *Making changes auditable and traceable.*
- *Creating an audit trail to support internal and regulatory compliance.*

Assess vendor qualities carefully

Selecting the ideal vendor for your CMDB can be just as important as selecting the right products. The vendor you choose should have global resources to support your operations worldwide and the breadth of solutions and services that you need to target your needs now and in the future.

Include the following vendor criteria in your CMDB selection:	IBM	Other vendor
Offers solutions that work throughout heterogeneous environments.	✓	
Delivers support for a successful CMDB implementation — from product installation to business process integration, by providing a comprehensive portfolio of services to accelerate deployment and automate business processes.	✓	
Offers modular solutions to maximize use of your existing IT infrastructure and add new capabilities as needed.	✓	
Has truly global reach, with customized local language versions of its products supporting the geographic locations where you do business.	✓	
Includes out-of-the-box best practices that help you quickly implement and realize the benefits of IT service management.	✓	

Make the best choice: IBM

Effective change and configuration management can help you avoid the trap of completing critical tasks without understanding their impact or compromising audits and schedules. At the core of the IBM Service Management strategy, IBM Tivoli® Change and Configuration Management Database (CCMDB) provides an enterprise-ready change and configuration management database and platform to integrate people, processes, information and technology.

Tivoli CCMDB is designed to help make ITIL actionable and truly deliver on service management. It integrates with your current process solutions and interacts with existing system management tools, to gain a fast return on investment.

Unlike service desk or configuration databases that provide only a limited portion of CMDB capabilities, Tivoli CCMDB provides a comprehensive solution, including:

All CMDB core capabilities, such as:
- *Discovery and application mapping*
- *Reconciliation*
- *Federation*
- *Synchronization*

Integrated workflows
- *Configuration management of the CIs*
- *Customizable change management process workflows based on ITIL*
- *Integration capabilities between the process steps and OMPs*
- *Auditing and compliance capabilities*

IBM also provides additional workflows (process managers) that integrate with Tivoli CCMDB, including:

- *IBM Tivoli Release Process Manager.*
- *IBM Tivoli Availability Process Manager.*
- *IBM Tivoli Storage Process Manager.*

What's more, IBM has the consulting and support services necessary to customize Tivoli CCMDB to your environment so that you can derive the maximum business benefit.

About Tivoli software from IBM

Tivoli software from IBM helps organizations efficiently and effectively manage IT resources, tasks and processes in order to meet ever-shifting business requirements and deliver flexible and responsive IT service management, while helping to reduce costs. The Tivoli portfolio spans software for security, compliance, storage, performance, availability, configuration, operations and IT lifecycle management, and is backed by world-class IBM services, support and research.

For more information

To learn more about how you can use Tivoli Change and Configuration Management Database as the foundation of your IBM Service Management initiative, contact your IBM representative or IBM Business Partner, or visit **ibm.com**/itsm

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