Tivoli® software

IBM Tivoli Change and Configuration Management Database

Highlights

- Delivers a scalable platform for the implementation of successful IT service management initiatives

- Provides automated discovery, mapping and visualization capabilities to facilitate a comprehensive view of the attributes and interrelationships between configuration items

- Integrates IT service management processes and federates data from existing repositories

- Includes change and configuration process management and provides record of change as a checkpoint for compliance and audit purposes

- Helps facilitate efforts to comply with internal and regulatory requirements by enforcing policies and tracking changes across your organization

Efficient and effective IT management requires an IT service management platform

As technology becomes more closely intertwined with day-to-day business functions, technology-centric IT management practices are slowly evolving to a more business-focused management of IT services. The IBM IT Service Management strategy enables you to align business insight and innovative technology by finding ways to optimize the intersection of four key areas:

- *People* spread across organizational and technology silos, who need to collaborate effectively.
- *Processes*, which can be automated using IBM Tivoli process managers based on proven best practices.
- *Information* throughout the enterprise that is frequently underutilized but can be made actionable when integrated.
- *Technology* from IBM and other vendors that is used for executing, automating and monitoring process tasks.

At the core of the IBM IT Service Management strategy, IBM Tivoli® Change and Configuration Management Database (CCMDB) provides an enterprise-ready configuration management database and platform upon which you can standardize and share information that helps you integrate people, processes, information and technology. Tivoli CCMDB helps you automatically discover and federate IT information spread across the enterprise, including details about servers, storage devices, networks, middleware, applications and data.

One of the challenges of managing your IT infrastructure like a business is the common inability to effectively administer processes for both change and configuration within an IT environment. Tivoli CCMDB addresses this inability with automated, preconfigured and customizable process workflows

Middleware is Everywhere | **Can you see it?**

for change and configuration management processes. You can leverage the federated information in Tivoli CCMDB to easily assess key information about configuration items and their relationships, anticipate the business impact and see all pending change and release schedules. As a result, you help minimize the business disruption when you implement upgrades and other changes.

By integrating, automating and optimizing data, workflows and policies, Tivoli Change and Configuration Management Database helps you align the ongoing management of your IT infrastructure with your business priorities — while helping to reduce the impacts of organizational complexity as well as incident and problem management costs.

Gain control of your IT environment and manage IT as a business

With infrastructures reaching new levels of complexity, common IT changes — such as updating patch levels on a dozen different servers — may create high numbers of incidents. The situation is even worse because it is often end users and customers who discover the problems. If not managed properly, growing complexity can quickly disrupt business effectiveness and also jeopardize compliance measures.

Operating IT processes in an IT service management paradigm enables organizations to better manage the complexity that characterizes most IT infrastructures today.

The first step toward a cost-effective, successful IT service management implementation is consolidating information within a robust configuration management database (CMDB). An efficient CMDB enables you to bring together information from multiple data sources to help you better understand the configuration items in your environment, their current attributes and the relationships between them. This information is scattered across the enterprise in multiple repositories: operational management products (OMPs) used by network, security and server silos; applications and databases; and departmental repositories like worksheets and documents.

Typical CMDBs act as repositories for configuration item (CI) information that needs to be controlled by change management processes. But most traditional CMDBs aren't built to integrate workflows, policies and data. Without these capabilities, it can be difficult to:

- Properly assess change impacts.
- Verify change history for audit purposes.

- Manage data currency and accuracy to support IT teams.
- Consolidate and share data scattered across complex organizational silos.
- Verify compliance with desired CI configurations.
- Automate process workflows to enforce business-critical policies.

Tivoli Change and Configuration Management Database was designed from the ground up and built on the industry's leading middleware to deliver all of these capabilities. Tivoli Change and Configuration Management Database provides:

- An open, federated CMDB that serves as a highly scalable platform to integrate data from virtually any source, including OMPs and all IT processes.
- Agentless, automated discovery and mapping that help you identify CIs, their attributes and application dependencies.
- Access through an application programming interface (API) and GUI reporting.
- Automated, configurable best-practice workflows for the change and configuration management processes.
- Audit and control of CIs through workflows, configuration comparisons and detailed change history reports.
- An IBM WebSphere®–based workflow engine that facilitates automated execution and real-time configuration of processes that integrate management applications.

Enhance productivity through advanced mapping capabilities

As the burden of managing upgrades, patches and emergency remediation continues to rise, it is critical for your organization to have a detailed, unified view of all the IT infrastructure application elements that support your business applications and services. When you do, you can quickly and accurately assess the business impact and implement changes to help minimize outages and time to resolution when problems do occur.

Tivoli CCMDB provides advanced, automated discovery capabilities that help you automate the creation and maintenance of comprehensive application infrastructure maps that include complete run-time dependencies, deep configuration values and accurate change history. With the capability to drill down deeply, you can better evaluate and understand interrelationships between what is installed and how it is installed — enabling rapid resolution of errors and adaptation to changing infrastructures.

The Tivoli CCMDB discovery solutions support several hundred infrastructure components out of the box, including the following:

- Systems and operating systems such as IBM AIX®, Linux®, Microsoft® Windows®, HP-UX, Sun Solaris and IBM z/OS®
- Software components such as Web servers, application servers, databases and middleware solutions
- Network elements such as routers, switches and load balancers
- Storage elements such as host bus adapters (HBAs), storage area network (SAN) switches and disk arrays
- Packaged applications such as SAP

You can leverage automated maintenance of Tivoli CCMDB application maps and easily integrate this data with other enterprise information to better evaluate the impact of a change prior to implementation. By having visibility into the relationships and interdependencies between the components of their environments, your organization can more easily discover potential opportunities — and problems. And through a unified, integrated view, users can more easily collaborate across domains to make infrastructure changes that move the business forward, not backward.

Integrate and share data across complex organizational silos

A strategic element of an effective IT organization is the ability to bring together the data collected by the many IT functional silos. Without the ability to integrate this data, each silo sees only the information that its particular management tools provide. Tivoli Change and Configuration Management Database eases the challenge of collecting data from disparate sources, enabling you to gain an accurate, comprehensive view. As a result, you can obtain a greater understanding of the implications that actions and changes may have beyond a single siloed domain.

Tivoli CCMDB includes an innovative discovery library that can translate into its common data model information from virtually any source — including existing tools and repositories of configuration information, off-the-shelf OMPs and customized applications. On an ongoing basis, Tivoli CCMDB helps preserve the accuracy and usefulness of the captured information through a number of critical capabilities:
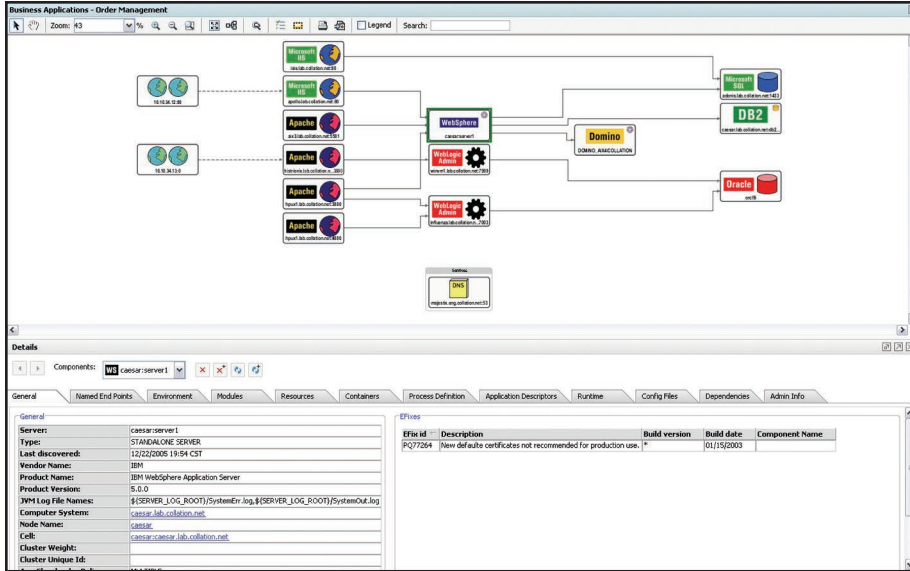
Configuration Management topology views show relationships between CIs and the attributes stored within Tivoli CCMDB about those CIs.

- *Data integration and federation*, a single master view of CIs from disparate data sources to help maintain the connectivity to and relevance of source data.
- *Reconciliation*, avoiding duplicate entries of the same configuration items to help minimize the risk of inconsistencies and errors that can result from duplication. This logic is written into Tivoli CCMDB so that you do not need to manually create, maintain and enforce reconciliation rules across CIs.
- *Synchronization*, comparing an approved master view (which reflects known changes) with other versions to help identify discrepancies.
- *Native discovery and application mapping*, helping obtain a comprehensive, detailed understanding of the supporting infrastructure and providing detailed maps of business applications and their relationships to one another.

By leveraging these capabilities, Tivoli CCMDB integrates data throughout the enterprise to help give you the visibility needed to coordinate the managed assets and processes throughout the organization.

Automate process workflows to help increase consistency and lower IT costs

Tivoli Change and Configuration Management Database provides an ideal platform for making IT Infrastructure Library® (ITIL®)–aligned best practices actionable in your environment. The database includes change and configuration management process workflows and also integrates with

innovative IBM Tivoli process management to consistently federate data across your organization.

A WebSphere-based workflow process server is responsible for putting IBM Tivoli process manager products into action. The Tivoli CCMDB process engine also enables you to create customized processes to fit your specific needs. For example, you could create a change process workflow for automatically accepting, assessing and approving security patches to an operating system on a desktop machine. And establish another change process workflow for security patches on a mission-critical server that performs the assessment and approval phases. Once the desired flows are created, they can be saved as templates for reuse.

Workflow also provides users with a clear sense of what their tasks are — as well as access to all analyses of prior activities and tasks to help them make timely, informed decisions about the current task. And after they have made a change or deployed a release, they receive confirmation when it has been done successfully.

Enforce policies for compliance with internal and regulatory requirements

The ever-increasing proliferation of compliance initiatives makes linkages between IT and the business even more important — and forces companies to have strict accountability in their change management processes. To respond to these requirements, you need to be able to assess system configuration compliance against predefined, authorized baselines, plus be able to integrate policies. Without these capabilities, each silo sets its own policy — making it difficult to understand and verify complex activities like compliance initiatives.

Tivoli Change and Configuration Management Database enables you to integrate policies in accordance with compliance measures. For example, you can better assess the security privileges of configuration files for financial and other systems that should only be accessed by authorized users. Comprehensive change history records give you a starting point for addressing compliance and audit requirements, allowing you to view a history of attribute-level changes and compare CIs. Through the ability to quickly assess
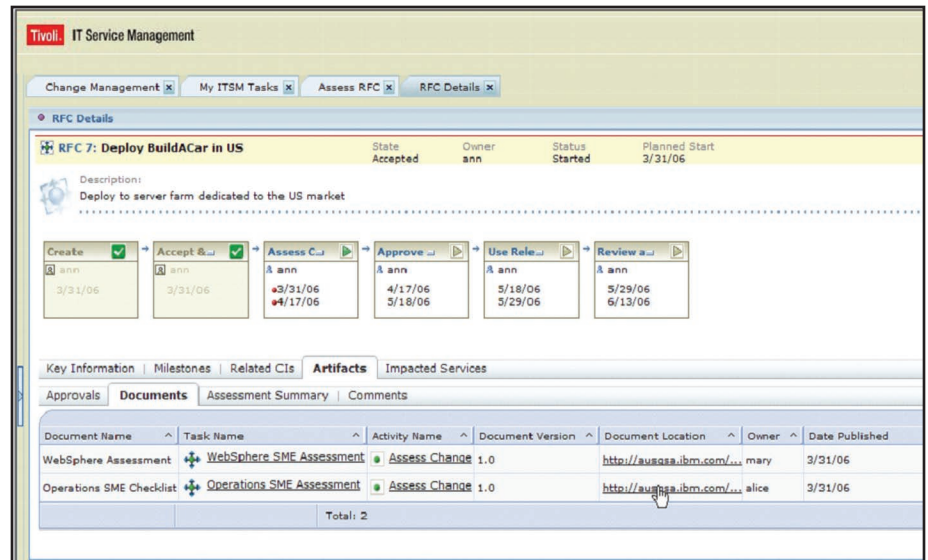
The user interface for processing changes provides an easy way to visualize all information related to a request for change (RFC).

changes, you not only help speed time to resolution in the event of an error but also help significantly increase your ability to verify compliance with government regulations and corporate audits.

About Tivoli software from IBM

Tivoli software from IBM helps organizations efficiently and effectively manage information technology (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 Tivoli Change and Configuration Management Database can help you federate management data and integrate IT service management processes, contact your IBM representative or IBM Business Partner, or visit **ibm.com**/tivoli/ solutions/it-service-management-platform

5

Tivoli Change and Configuration Management Database at a glance

Hardware minimums:
- Discovery server system:
  - 2-4 CPUs running a minimum processor speed of 2GHz
  - 2-4GB memory
  - 100GB available disk space
- Process integration platform server:
  - 2-4 CPUs running a minimum processor speed of 2GHz
  - 2-4GB memory
  - 100GB of available disk space

Supported operating systems:
- AIX 5.2 or 5.3 on IBM System i™ or IBM System p™
- Red Hat Enterprise Linux 3.0 AS/ES x86-32
- Windows 2003 Enterprise Edition x86-32

The following are included with the product, with a restricted use license:
- IBM DB2 Universal Database™ Enterprise Server Edition 8.2 + FixPack 3
- IBM DB2® Alphablox 8.3
- IBM Tivoli Directory Integrator 6.0
- IBM WebSphere Application Server 6
- IBM WebSphere Process Server 6.0.1
- IBM WebSphere Portal Enable for Multiplatforms 5.1.0.3