IBM Service Management solutions and the service desk
White paper

Tivoli software

Extend the value of your service desk and integrate ITIL processes with IBM Tivoli Change and Configuration Management Database.

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Overview

Today's service desk is an essential part of IT. However, most service desks utilize data repositories, which were designed to primarily support two IT Infrastructure Library® (ITIL®) processes: incident management and problem management. Because of this, service desk data repositories are limited in their effectiveness to extend and support other IT processes due to a lack of visibility across the infrastructure, no support for process integration and fragmented data systems.

To expand on these capabilities and include other ITIL processes, database products called configuration management databases (CMDBs) have been developed. The value delivered by a CMDB is directly related to the processes and applications it supports, making it much more than simply a database containing IT information. To maximize the effectiveness of a CMDB, organizations should verify that a CMDB provides support for change and configuration management, as well as other ITIL processes – and automated support for process integration, discovery and enterprise-wide data federation and data management.

The CMDB should also be based on an underlying data model that not only captures the configuration objects and dependencies of the current infrastructure, but also is easily extensible to accommodate new objects in the future. This white paper discusses the limitations of service desk data repositories compared to capabilities of CMDBs, as well as the robust capabilities of IBM Tivoli® Change and Configuration Management Database (CCMDB). Additionally, the paper addresses how Tivoli CCMDB extends the value of the service desk and integrates other essential ITIL processes in support of IBM Service Management.

Highlights

Understand the limitations of service desks with data repositories

In today's organizations, the service desk is an essential part of delivering IT services, by helping to manage trouble tickets through their life cycle until final closing. However, service desks with traditional data repositories are limited in providing automated, enterprise-level IT service management.

The typical service desk is built around two ITIL processes: incident management and problem management. A service desk system functions as a forms-based mechanism and messaging engine that receives, stores and sends messages around incidents and problems.

Trying to extend a service desk–based data model can be costly, time-consuming and ultimately unsuccessful

Accordingly, a traditional service desk is supported only by a data repository populated with basic routing and status information for trouble tickets. These data repositories are sometimes supplemented with other data stores and functions, in hopes of supporting a broader range of capabilities and processes. However, trying to extend a service desk–based data model can be costly, time-consuming and ultimately unsuccessful.

As a result, service desks with data repositories are frequently limited in their ability to deliver IT services, due to:

- *Lack of visibility across the infrastructure.* Service desk repositories often cannot provide a comprehensive, single view of assets, relationships and change. This view should span the infrastructure from the service and application layers to the network layer.
- *Only partial support for ITIL processes.* With process support often limited to incident and problem management, service desks cannot address other critical processes for release, change, configuration, capacity and service level management.
- *No support for process integration.* Integration is lacking even for ITIL processes that are closely linked, such as release management and change management.
- *Fragmented data systems.* The many pieces of data required to support the full range of ITIL processes are available across the IT organization, but cannot be easily leveraged because they are locked in data or organizational silos.

Recognize the key elements of a CMDB

Today, database products with much greater capabilities than those of a service desk – called CMDBs – have been developed. Yet some products called CMDBs are actually configuration databases, or retooled data repositories, with a small measure of added functionality. A successful CMDB should provide fully automated support for each of the following:

- *Discovery* of configuration items (CIs), run-time configurations and application dependencies.
- *The complete set of ITIL processes*, with the ability to add new ones in a controlled, consistent manner.
- *Integrated processes* to increase efficiencies and improve change management. Discrete processes often are combined to perform an action and as a result, processes need to be integrated.
- *Federation* with the ability to use other data sources without first having to consolidate that data into a single database.
- *Reconciliation* across multiple data sources to ensure nonredundant data.
- *Synchronization* to manage and monitor configuration drift.

In addition, the CMDB should be based on:

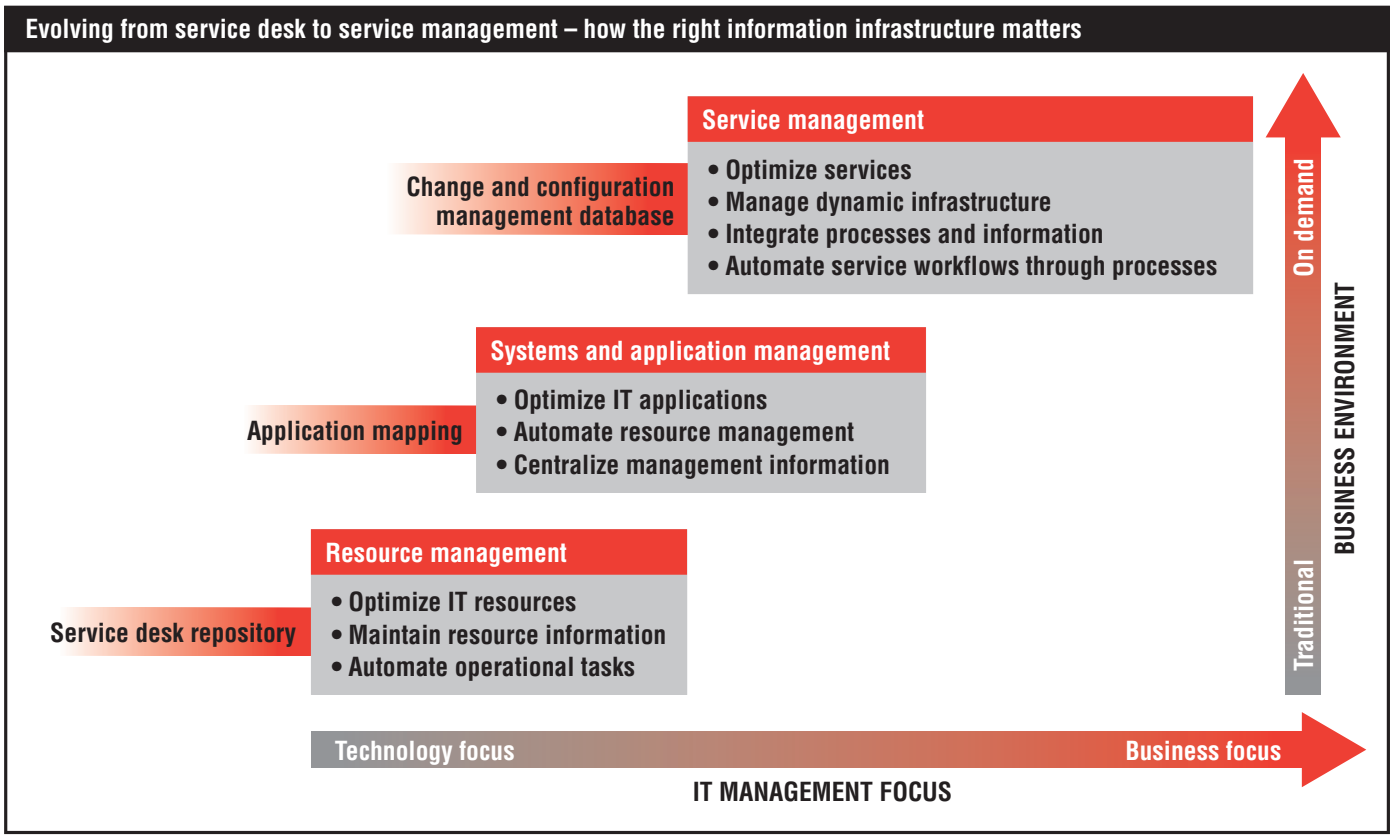
- *A robust and extensible data model* designed specifically for change and configuration management.
- *A scalable, open architecture* that integrates easily with existing service desk solutions, data stores, operational management products (OMPs), service applications and other components.

In comparing service desk functions to that of a CMDB, customers should carefully examine how well it supports the criteria outlined above. With some CMDBs, for example, discovery, federation and integration are dependent on manual efforts versus automation via software.

Extend service desk capabilities and support ITIL processes with IBM solutions

Tivoli CCMDB satisfies these requirements for a successful CMDB solution. At the same time, prebuilt integration packages with popular service desk products and an open, scalable design help leverage existing investments in data and processes.

Tivoli CCMDB is at the core of IBM Service Management, an open standards–based approach for data, workflow and policy integration across IT management processes that helps align IT functions with overall business objectives. Tivoli CCMDB is the database and platform for business and IT service management that enables today's IT organizations to optimize the efficiency and effectiveness of IT.



In contrast to standard CMDB solutions, Tivoli CCMDB provides management for both change and configuration, as well as process integration, automated discovery and enterprise-wide data federation and management – all backed by a rich, extensible data model built from the ground up for service delivery.

With Tivoli CCMDB, service desks have the database solution they need to automate change and configuration management, help ensure service levels and develop a strategic foundation for future service delivery solutions. This can expedite resolution of incidents and problems and diminish the negative impact of change of service availability.

Highlights

Provide visibility into the relationships and interdependencies among the components of IT environments

Gain control over change

Up to 85 percent of service problems are caused by changes to the application infrastructure – not by hardware or application failures.* IT changes are frequent, and the interdependencies between the components of an IT environment are often complex. This means that without a holistic view of the IT infrastructure, it is nearly impossible for most organizations to manually detect – and understand – all the implications of a change.

Tivoli CCMDB helps organizations address these challenges by providing visibility into the relationships and interdependencies among the components of their IT environments. When the IT staff makes a change, they can see in advance what impact it should have – and then verify that the expected results actually occurred. When problems do arise, the staff knows what recent changes have been made and can quickly hone in on the source of the problem.

Support integrated ITIL processes

Process integration is especially important for today's complex infrastructures. Making a single change on a single server, for example, can create a cascading effect across other assets, resulting in a high number of incidents.

Highlights

Implement an ideal platform for supporting ITIL process integration

Tivoli CCMDB provides an ideal platform for supporting ITIL process integration. A common process engine provides a scalable, consistent platform. The process engine also supports the coordinated execution and real-time configuration of processes that integrate management applications.

Fully automate discovery

Tivoli CCMDB automates the discovery process from the network layer to the service and application layers, capturing detailed configurations that would be almost impossible to collect and maintain manually. Then Tivoli CCMDB automatically builds the dependencies – ordinarily a lengthy and labor-intensive process – and captures change over time.

These capabilities help IT organizations evaluate and understand interrelationships between what is installed and how it supports application services. This, in turn, helps IT professionals more easily discover potential opportunities and quickly resolve issues before they become problems.

Federate and manage data across the enterprise

Customers can take data from virtually any source and bring it into Tivoli CCMDB. The connectivity to that data is maintained through federation. With federation, data from disparate sources can be easily leveraged without having to create one large data store. Federation also supports a comprehensive view of the relationships and contexts among data sources.

Highlights

By helping to ensure the accuracy and usefulness of configuration and change data, Tivoli CCMDB also provides:

- *Reconciliation* to avoid duplicate entries of the same configuration items, minimizing the risk of inconsistencies and errors. This logic is written into Tivoli CCMDB so that your IT organization does not need to manually create, maintain and enforce reconciliation rules across CIs.
- *Synchronization* that compares an approved "master view" reflecting known changes with other views, to help identify discrepancies and control configuration drift.

Extend the value of existing service desk products while protecting current investments

Leverage existing investments

Designed to work alongside existing service desk products, Tivoli CCMDB can extend their value while protecting current investments.

Prebuilt data and process integrations, as well as prebuilt service packages, are available for popular third-party service desk solutions. Data federation with Tivoli CCMDB supports the full use of data in existing service desk repositories. In addition, open application programming interfaces (APIs) enable integration with existing operational management products, such as network monitoring. Tivoli CCMDB works with existing products to provide context within the infrastructure for applications and associates them with specific events.

With IBM, customers can develop an automated, end-to-end service desk solution in a controlled, strategic manner that supports the full range of ITIL processes and respects the service needs, business requirements and budgetary goals of the organization.

Conclusion

Tivoli CCMDB provides a scalable platform for the implementation of successful business and IT service management initiatives, helping to integrate data, workflow and policies across management processes. With Tivoli CCMDB, organizations can take advantage of:

- Fully automated change and configuration management.
- Open sharing of all CIs, regardless of location.
- Automated application discovery and mapping for a unified view of CIs and how they combine to deliver service.
- A rich and extensible data model that supports and integrates the entire ITIL process map to help ensure long-term success in automating IT workflows.
- Open APIs for data, process and event integration to leverage investments in existing service desk and operational management applications.
- Support for and acceleration of IBM Service Management, to help efficiently and effectively align IT performance with business goals.

For more information

To learn more about how Tivoli CCMDB can help extend service desk capabilities, integrate ITIL processes and accelerate IBM Service Management, contact your IBM representative or IBM Business Partner, or visit **ibm.com**/tivoli

About Tivoli software from IBM

Tivoli software provides a comprehensive set of offerings and capabilities in support of IBM Service Management, a scalable, modular approach used to deliver more efficient and effective services to your business. Meeting the needs of any size business, Tivoli software enables you to deliver service excellence in support of your business objectives through integration and automation of processes, workflows and tasks. The security-rich, open standards–based Tivoli service management platform is complemented by proactive operational management solutions that provide end-to-end visibility and control. It is also backed by world-class IBM Services, IBM Support and an active ecosystem of IBM Business Partners. Tivoli customers and partners can also leverage each other's best practices by participating in independently run IBM Tivoli User Groups around the world – visit www.tivoli-ug.org

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*IBM Tivoli primary research, 2005.

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