



## Make ITIL actionable with Tivoli software.



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## Introduction

In recent years, competitive pressures, the growing burden of compliance activities, soaring operational costs and the ongoing need to innovate have combined to make service management a business-critical part of any organization. As a result, IT operations should constantly strive to manage key IT projects more cost-effectively and bridge the gaps among business, development and daily operations.

In addition, the technological solutions and services available to large businesses today are themselves far more comprehensive and feature-rich than ever before. Integrating them on an enterprise-wide scale in the pursuit of improved service management – essentially aligning IT processes and resources with business goals to achieve desired results for customers – is no simple undertaking. It typically requires significant expertise in many disciplines to provide the collaboration required to truly add value to customers.

Because of the increasing complexity and dependence on information technology, the concept of IT best practices has become more and more important. Various frameworks have been created to help today's IT professionals optimize their use of technology to better manage IT processes. Of these, IT Infrastructure Library® (ITIL®) can provide a set of IT best practices to help organizations deliver high-quality, business-aligned IT services.

This paper discusses ITIL as a framework and describes how IBM Service Management solutions and IBM Tivoli® software can help organizations make service management and ITIL processes actionable. The result is a proven approach that can help drive service excellence through improved visibility, control and automation.

**ITIL: best practices for best results**

First released in 1988, ITIL is a library of books that documents best practices to help organizations better manage their IT services. Now in its third release, ITIL comprises five books, each detailing one of the five phases of the service life cycle. They are:

- **Service Strategy** — determining the overall strategy for how IT services will be provided.
- **Service Design** — designing IT services to meet service level targets.
- **Service Transition** — moving IT services from development to operational status.
- **Service Operation** — executing and supporting IT services.
- **Continual Service Improvement** — enhancing IT services based on past performance.

<b>A quick synopsis of ITIL v3</b>	
<b>Service Strategy</b>	Focuses on the identification of new business offerings and supporting IT services, including design, implementation and continual improvement. Aligns the organization and processes across all stages of the service life cycle.
<b>Service Design</b>	Focuses on the activities required to develop the new services, outlining the requirements, processes and specifications into a single plan.
<b>Service Transition</b>	Focuses on implementation and quality with key production control processes as the service moves into the production environment.
<b>Service Operation</b>	Focuses on the processes needed to operate and control the services, targeting continuous service management.
<b>Continual Service Improvement</b>	Focuses on the activities and processes required to ensure the continual improvement of the services, highlighting service quality tracking and reporting.

## Highlights

IBM Service Management solutions are designed to make service management and ITIL processes actionable, while helping organizations increase efficiencies, reduce risk, enhance value and contain operational costs

Version 3 of ITIL is a significant update that reflects leading practices as described by the 10 authors and the ITIL Advisory Group of 23 industry experts. An important element of service management, the increased scope of the industry best practices in ITIL v3 is a reflection of the growing value of life-cycle integration and business integration to service management. Traditionally the IT industry has made a distinction between IT development and IT operations. However, many organizations have now found that operations and development should be integrated and focused on business value, service management quality and costs.

### **Support ITIL best practices with comprehensive IBM Service Management solutions**

While ITIL provides a set of best practices to help guide organizations, these practices must be made actionable for organizations to reap the full extent of their value. IBM is a long-time supporter of ITIL and a member of the ITIL Advisory Group for Version 3. IBM Service Management solutions are designed to make service management and ITIL processes actionable, while helping organizations increase efficiencies, reduce risk, enhance value and contain operational costs.

These solutions support the service management life cycle, providing many products and services that incorporate ITIL v3 best-practice processes. IBM Service Management can help organizations:

- Understand and track the full scope of IT assets and configurations.
- Significantly reduce change-related problems and incidents.
- Implement greater levels of automation and closed-loop processes.
- Avert potential service quality issues before and after deployment.
- Rapidly diagnose and resolve unanticipated service problems after deployment.
- Pinpoint root causes of problems and prioritize response according to business impact.
- Link IT metrics to key performance indicators (KPIs) for proper management of service level agreements (SLAs).
- Free valuable staff from manual tasks so they can support more strategic initiatives.

The next few sections offer a sample of service management solutions from Tivoli software, demonstrating how they can help organizations integrate people, processes, information and technologies to minimize operational disconnect, facilitate greater automation and efficiency, and establish a foundation for rapid time to market and high service quality.

**ITIL v3 emphasizes the service life cycle and sheds light on additional management practices.  
Service management is more than 10+1 and is not processed as silos.**

Strategy	Design	Transition	Operations	Continual improvement
Service Strategy	Service Portfolio Management	Change Management	Monitoring and Event Management	Measurement and Control
Market Intelligence	Service Catalog Management	Service Asset and Configuration Management	Incident Management	Service Measurement
IT Financial Management	Service Level Management	Knowledge Management and a Service Knowledge System	Request Fulfillment (Standard Changes)	Service Assessment and Analysis
Service Portfolio Management	Capacity Management	Service Release and Deployment Planning	Problem Management	Process Assessment and Analysis
Demand Management	Availability Management	Performance and Risk Evaluation	Access Management	Service Level Management
Risk Management	Service Continuity Management	Testing		Improvement Planning
Processes	Information Security Management (ISO 27K, ISO 20K)	Acquire, Build, Test and Release		
	Supplier and Contract Management	Service Release, Acceptance, Test and Pilot		
	Organizational Change and Communications	Deployment, Decommission and Transfer		

## Highlights

Tivoli software helps organizations standardize and drive repeatability into IT service delivery with an IT service catalog that fully integrates with Tivoli Service Request Manager

### **Service Strategy**

#### ***Financial Management***

- IBM Tivoli License Compliance Manager identifies software inventory and links complex license entitlements to help manage software costs and license compliance in distributed environments. IBM Tivoli Asset Management for IT and Tivoli License Compliance Manager work together to help identify software inventory, measure use activity and automatically link license entitlements to installed inventory and use activity.
- IBM Tivoli Usage and Accounting Manager Enterprise Edition is a flexible, end-to-end tool that helps improve IT cost management through the ability to aggregate and report on the use of applications, servers and other IT resources — along with their complex interactions — across distributed and mainframe platforms.

#### ***Risk Management***

- IBM Tivoli Risk Manager correlates security information and risk alerts from firewalls, routers, networks, host- and application-based intrusion detection systems, desktops and vulnerability-scanning tools from a single Web-based security console to help detect and assess threats.
- IBM Tivoli Compliance Insight Manager offers an overview of security compliance posture, monitors users to acceptable-use frameworks and security policy, and can provide automated user activity monitoring across heterogeneous systems.

### **Service Design**

#### ***Service Catalog Management***

- IBM Tivoli Service Request Manager helps you create a service catalog, support online ordering and automated order fulfillment, and streamline the service request process through a customized, structured and searchable database.

#### ***Availability Management***

- IBM Tivoli Business Service Manager offers real-time service visibility and intelligence to help maximize service performance; manage the ongoing health of services, processes, transactions, missions and business activity; and help speed problem resolution with automated service impact and root-cause analysis. (Note that this offering also supports both the event management and monitoring and control processes of ITIL v3.)

### Highlights

Tivoli software helps you understand resource consumption trends, proactively identify problems and resolve problems before IT services are affected

#### ***Capacity Management***

- IBM Tivoli Performance Analyzer adds a predictive capability to IBM Tivoli Monitoring, enabling operations and IT staff to understand resource consumption trends, identify problems, resolve problems more quickly, and predict and avoid future problems.

#### ***IT Service Continuity Management***

- IBM Geographically Dispersed Parallel Sysplex™ (GDPS®) provides the resource sharing, workload balancing and continuous availability benefits of a multisite, IBM Parallel Sysplex® System z™ environment to help significantly enhance the capability of an enterprise to recover from disasters and other failures.
- IBM Tivoli System Automation software offers high availability and automation to help manage mainframe and distributed systems from any location and to automate system console events and actions.
  - IBM Tivoli System Automation for Multiplatforms provides high availability for IBM AIX®, Linux® (including Linux on System z) and Microsoft® Windows®.
  - IBM Tivoli System Automation Application Manager enables advanced automation for leading clustering solutions on AIX, Linux, Windows, Sun Solaris and IBM z/OS®.
  - IBM Tivoli System Automation for z/OS is designed to provide high availability for critical business applications through policy-based self-healing, as well as automation for the z/OS system's input/output, processor and systems operations.
- IBM Tivoli Business Continuity Process Manager helps automate disaster recovery and improve speed and reliability of recovery tasks by leveraging data provided through automated discovery of IT infrastructure such as z/OS sysplexes, logical partitions (LPARs), z/OS subsystems and GDPS K-systems.

## Highlights

Tivoli software provides a federated platform for storing standardized data on all resources, configurations and change histories

Tivoli IT financial management software lets you easily associate cost to your IT service offerings to effectively manage resource consumption

### **Service Transition and Operations**

#### ***Information Security Management***

- IBM Tivoli Security Operations Manager is a security information and event management (SIEM) platform designed to improve the effectiveness, efficiency and visibility of security operations and information risk management through the ability to centralize and store security data from throughout the technology infrastructure.
- IBM Tivoli Security Compliance Manager acts as an early warning system by identifying security vulnerabilities and security policy violations and automating scans of servers and desktop systems, which can help reduce the cost and time associated with manual security checks.

#### ***Change Management***

- IBM Tivoli Change and Configuration Management Database (CCMDB) provides an enterprise-ready platform for storing deep, standardized data on configurations and change histories to help integrate people, processes, information and technology. It also provides forward schedule of change and what configuration items (CIs) support which business services to simplify change scheduling.
- IBM Tivoli Application Dependency Discovery Manager provides an in-context view of change histories, including updates of all devices, to help determine whether or not a particular device received a patch and whether the patch was accurately applied. It also provides relationship mapping to understand change impact to critical business services.

#### ***Service Asset and Configuration Management***

- Tivoli Asset Management for IT combines inventory, financial, maintenance, procurement and contract management for IT assets into one easy-to-use Web interface to help automatically track and manage the complete life cycle of both hardware and software assets, from the planning and acquiring phases to deployment, maintenance and retirement.
- IBM Tivoli Maximo® solutions provide asset life-cycle and maintenance management for virtually all asset types on a single unified platform to help promote better planning and control.
- Tivoli CCMDB provides an enterprise-ready platform for storing deep, standardized data on configurations and change histories, configuration drift histories and configuration management process flow.



### Highlights

ITCAM helps proactively manage transactions and services at optimal performance by offering real-time monitoring and integrated, role-based views

Tivoli software allows you to move from incident to problem to change and release management in an integrated fashion — all on the Tivoli Process Automation Platform

### ***Monitoring and Control***

- IBM Tivoli Composite Application Manager (ITCAM) offers real-time monitoring and integrated, role-based views for administrators of applications, servers and middleware to help proactively manage transactions and services at optimal performance. In addition, IBM Tivoli Monitoring for Microsoft Applications helps monitor and manage all Microsoft-based systems, including the operating system, Active Directory®, SQL Server®, Exchange, .NET and Cluster Server.
- IBM Tivoli Network Manager provides automatic network discovery and topology-based management software designed to help organizations improve network visibility and drive reliability and performance through real-time network discovery, topology visualization and root-cause analysis for Layer 1, 2 and 3 networks.
- IBM Tivoli NetView® for z/OS helps maintain a high degree of availability of System z networks through an extensive set of tools for managing and maintaining complex, multivendor, multiplatform networks and systems from a single point of control.
- The IBM Tivoli OMEGAMON® family of products provides a comprehensive performance and availability solution to proactively analyze and manage operating systems, databases and other environments for optimal performances, through the ability to detect bottlenecks and other potential performance problems from multiple vantage points and quickly isolate and take action automatically to resolve these issues.

### ***Event Management***

- IBM Tivoli Netcool®/OMNIBus™ helps users manage data related to infrastructure elements such as networks, systems, security devices, storage components and applications. Tivoli Netcool/OMNIBus delivers real-time, centralized monitoring of up to millions of events per day across complex networks and IT domains, while IBM Tivoli Netcool/Impact provides a common platform for ubiquitous data access that can circumvent traditional organizational boundaries.

### ***Incident and Problem Management***

- IBM Tivoli Service Request Manager draws on accessible business reports and “on demand” views of KPIs to help monitor and escalate incidents based on designated service levels. Built on the ITIL framework, Tivoli Service Request Manager allows you to move from incident management to problem management to change and release management — all on the Tivoli Process Automation Platform.

## Highlights

The Tivoli provisioning portfolio manages the complete life cycle of your data center and resources — from initial provisioning to patching and configuration maintenance to resource repurposing

### ***Request Fulfillment***

- IBM Tivoli Service Request Manager provides advanced and flexible service desk and catalog capabilities to help improve problem resolution time, while automating customer interaction with a built-in service catalog that provides online order fulfillment to expedite new service requests.

### ***Release and Deployment Management***

- IBM Tivoli Release Process Manager delivers a process-based solution to address release management as defined by ITIL and automates complex deployments in the context of the overall release management process, allowing organizations to assess the impact on the IT infrastructure and business-critical functions before release.
- IBM Tivoli Provisioning Manager can automatically provision additional resources when sudden, unexpected workloads arrive — helping to avoid disruptions that can impact service, improve resource utilization and enhance IT service delivery.

### ***Access Management***

- IBM Tivoli Access Manager software provides a full range of access management solutions:
  - IBM Tivoli Access Manager for Business Integration provides access control, end-to-end application-level data protection and centralized security policy management for the IBM WebSphere® MQ environment.
  - IBM Tivoli Access Manager for e-business acts as a hub for authentication and authorization for Web and other applications, centralizing security management and streamlining the deployment of secure applications.
  - IBM Tivoli Access Manager for Enterprise Single Sign-On delivers a simple authentication capability across all systems, services and applications.
  - IBM Tivoli Access Manager for Operating Systems helps protect individual application and operating system resources by helping address system vulnerabilities surrounding UNIX®/Linux super-user or root accounts.
- IBM Tivoli Identity Manager delivers a secure, automated and policy-based user management solution that helps effectively manage user identities across the infrastructure and enables enterprises to set up new accounts and passwords quickly and securely for employees and customers.

### ***Data and Storage Management***

- IBM Tivoli Storage Process Manager provides a set of customizable, ITIL-aligned storage management processes, helping to manage and coordinate simple and complex change, configuration and incident management processes for an IT storage environment.

## Highlights

- IBM Tivoli Storage Manager is a suite of products that delivers a broad range of storage management capabilities — including backup, archive, recovery, space management, database and application protection, enterprise resource planning (ERP) and disaster recovery planning — to help protect mission-critical data requiring 24x7 availability.

### Continual Service Improvement

#### *Service Level Management*

- IBM Tivoli Service Level Advisor is designed to provide predictive service level management capabilities, enable IT operations to proactively predict when SLA violations are likely to occur and then take corrective actions to avoid an SLA violation.

### Summary

The IBM approach to service management architecture originated from the ground up with best practices and business goals in mind. IBM Tivoli software provides a comprehensive service management portfolio coupled with consulting services featuring reusable reference architectures and consistent, repeatable methods to help organizations improve service delivery, accelerate return on investment (ROI) and run IT more like a business.

Our integrated software and services solutions leverage best practices — including the ITIL approach and IBM Process Reference Model for IT — to plan, design, implement and run solutions that help clients achieve greater integration across their management environment.

IBM offers a breadth of capabilities along with best practices for aligning people, processes and technology to more effectively deliver service management. Along with Tivoli software, IBM offers a broad range of services offerings, including:

Leveraging industry best practices, IBM integrated software and services help clients plan, design, implement and run solutions that achieve greater integration across their management environment



- **IBM Business of IT Executive Workshop** — a practical and rapid approach to IT improvement planning and aligning IT with business objectives.
- **IBM service management adoption model** — a strategic planning tool that guides the adoption of service management best practices.
- **IBM Tivoli Unified Process** — a complimentary, downloadable version of the IBM Process Reference Model for IT, which shows how to bring together best-practice controls and standards to help clients implement service management. Tivoli Unified Process includes the process reference model used in ITIL implementations, mappings to other models and additional information regarding the roles, information and tools required for each process.
- **IBM Tivoli Unified Process Composer** — process design, documentation and publishing tools with best-practice process libraries to promote rapid deployment of unified processes across IT operations and development.
- **IBM Service Management Flash Assessment** — a complimentary, Web-based assessment tool that enables an organization to rapidly prioritize service management improvement opportunities.

#### For more information

To learn more about IBM Service Management solutions, contact your IBM representative or IBM Business Partner, or visit [ibm.com/itsolutions/servicemanagement](http://ibm.com/itsolutions/servicemanagement)

#### About IBM Service Management

IBM Service Management helps organizations deliver quality service that is effectively managed, continuous and secure for users, customers and partners. Organizations of every size can leverage IBM services, software and hardware to plan, execute and manage initiatives for service and asset management, security and business resilience. Flexible, modular offerings span business management, IT development and IT operations and draw on extensive customer experience, best practices and open standards-based technology. IBM acts as a strategic partner to help customers implement the right solutions to achieve rapid business results and accelerate business growth.

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