

On demand automation solutions  
To support your business objectives

IBM

Tivoli software



**Automate infrastructure management  
to enable on demand business.**

## **Tivoli software vision**

To maximize the economic performance and business alignment of your IT investments by fundamentally optimizing the way you manage your IT infrastructure with intelligent management software to achieve on demand business value.

## **Tivoli software mission**

To deliver intelligent management software solutions that enable you to manage IT complexity in a dynamic, on demand environment—optimizing return on technology investments and creating a resilient infrastructure.

## **Tivoli software value**

Tivoli® intelligent management solutions from IBM help you understand and proactively manage the business value of your IT systems in an on demand world. They can go beyond individual components—giving you an integrated view from which to manage and optimize the IT systems that keep your business processes operating efficiently.

Tivoli intelligent management solutions use autonomic technology to proactively diagnose your systems from end to end and heal problems—helping to make your IT environment reliable and saving you valuable time.

The Tivoli software team and IBM Business Partners leverage standards-based technologies and the IBM middleware software portfolio to help deliver high-quality, scalable and automated systems management solutions.

Tivoli software lets you spend less time deploying solutions and diagnosing problems, giving you more time to effectively and efficiently manage your business.



*“Automation means lower risk, less human error and greater reliability for the IT infrastructure, thus improving the quality of service. Given the inextricable dependence business processes have on IT infrastructures, the increased quality of service will result in significant cost savings in the business.”*

**Donna Scott,  
Vice President and Distinguished Analyst,  
Gartner**

### **On demand automation provides a powerful differentiator to your business**

In an on demand world, *automation* means managing and optimizing operational processes and IT services based on business policies by automatically sensing and responding to changes. On demand automation facilitates your journey toward becoming an on demand business by transforming the way you manage IT resources. It helps you create a highly secure, available and resilient infrastructure that meets your increasing service-level requirements and changing business priorities.

IBM provides Tivoli on demand automation solutions that deliver three critical benefits to help you make IT a valuable driver of business growth.

- **Minimize costs and maximize productivity:** *An on demand business must minimize costs. Efficiently using resources and simplifying the complexity of IT management contributes to cost control. A company must also maximize the security, availability and resiliency of its infrastructure to avoid costly downtime that can hamper both business performance and the bottom line.*
- **Deliver enhanced service levels:** *Continuity of business operations is a must for an on demand business. IT must not only fix problems when disruptions occur, but also proactively address potential threats before they impact the business. Users and partners must be able to access the right systems, when they need to, securely.*

- **Enable business flexibility to support change and innovation:** *An on demand enterprise must be flexible. It must rapidly deliver new revenue-generating business initiatives and dynamically respond to market changes. It must free valuable IT staff and business resources from inefficient usage and repetitive data center maintenance activities, then redirect those staff and resources to address market changes and new business opportunities.*

Tivoli on demand automation solutions offer a foundation for responding flexibly to internal and external changes. The solutions streamline business operations and dynamically align your IT resources with your business priorities.

### **Modular capabilities deliver on demand automation benefits**

IBM has developed guidelines and best practices for on demand automation that help businesses implement it in ways that best suit their existing resources and short- and long-term goals. IBM identifies six modular on demand automation capabilities. Depending on your pressing IT and business needs, you can choose to begin with one or more of these capabilities.

The following sections describe these capabilities and indicate how they help you minimize costs, maximize productivity and deliver enhanced service levels to enable business flexibility that supports change and innovation. They also highlight new and updated Tivoli on demand automation offerings from IBM that support your company's transformation into an on demand business.

### **Availability management automates monitoring and facilitates problem resolution**

Tivoli performance and availability management solutions enable you to cost-effectively monitor the performance of individual resources, plus the functions and availability of resources across your heterogeneous operating environment. Tivoli solutions monitor your e-business at the component, business system and enterprise levels and constantly gather information on your hardware, software and network devices.

After using correlation analysis to isolate unrelated symptoms from critical problems, the solutions can notify support staff with the appropriate response, or automatically cure the problem. By minimizing the time spent diagnosing problems and fixing them, Tivoli performance and availability solutions help you minimize operating costs and maximize staff efficiency.

Tivoli performance and availability solutions include:

- IBM Tivoli Monitoring for Transaction Performance *performs real-time transaction decomposition from end to end across your Web and enterprise infrastructure. Integration with IBM Rational® Robot enables you to simulate and measure applications in development and deployment stages. Together, these products help customers create a test-floor automation solution that encompasses the entire process: provisioning, installing test software, measuring functionality and*

*performance, and putting the application into production. In addition, Tivoli Monitoring for Transaction Performance provides critical data about transaction flow and response times. The updated functions of Tivoli Monitoring for Transaction Performance include support for IBM WebSphere® transaction decomposition on IBM z/OS® and reuse of Rational testing scripts in production deployments to drive rapid rollout, enhance flexibility and minimize training costs.*

- IBM Tivoli Monitoring for Web Infrastructure *helps optimize the performance and availability of both application servers and their associated Web servers. It provides a single point of control to enable your IT organization to quickly understand the health of your Web-based environment and efficiently or automatically address problems.*
- IBM Tivoli Monitoring for Business Integration *monitors and manages key IBM WebSphere Business Integration components, such as queue managers, queues, channels and message flows. The software incorporates IBM best practices for problem identification, analysis and correction. You can use Tivoli Monitoring for Business Integration to analyze performance and trends and address issues before they affect end users.*

### **Security solutions automate user provisioning**

An on demand business requires providing secure access to business resources by more and more users — employees, customers, partners and more. The complexity and expense of provisioning these users—and providing them with access



*Tivoli on demand automation solutions help you leverage IT as a strategic driver of business to minimize costs, maximize productivity, optimize service levels and enable business flexibility.*

by passwords only when it is appropriate—continue to grow. Tivoli security solutions optimize your security data resources to help you manage user provisioning to verify that the right users have the right access to the right resources when they need it.

Because Tivoli security solutions automate common support tasks—ranging from password management to tracking auditing data—and because they protect you from costly downtime, these solutions also provide an effective way to manage IT costs.

Tivoli security solutions include:

- Tivoli integrated identity management portfolio *that creates an authoritative, trustworthy and highly available store for user data; manages user identities across their life cycles; automates user support to increase security and lower costs; leverages identity roles and policies to administer access to resources; and enforces privacy and regulatory compliance across transactions. The Tivoli integrated identity management portfolio has been extended into interenterprise federated transactions. The integration of IBM Tivoli Identity Manager and Cisco Access Control Server delivers integrated user provisioning across enterprise software and network resources.*
- IBM Tivoli Security Compliance Manager, *a new product that automates in-depth assessments of systems and applications to pinpoint vulnerabilities and identify security policy violations. You can use IBM-developed best practices to immediately address vulnerabilities and to help comply with complex regulations.*
- IBM Tivoli Directory Integrator *synchronizes identity data in real time among a wide range of directories, databases and other user data stores across the enterprise. The software enables important security data to be up to date and ready to go when automated transactions require it.*

### Optimization automates storage and workload management

With storage growth far outpacing staffing rates, organizations seek to leverage existing storage resources and the knowledge of their staffs. And as customers deploy virtualization and grid technologies to help maximize their IT investments, they also need workload scheduling solutions that enable them to centrally manage and automate application workloads across heterogeneous environments.

To help optimize storage environments and workload distribution, Tivoli software delivers integrated and modular solutions that help simplify and automate management. Now, Tivoli optimization solutions are available with workflows, which document and automate best practices to help avoid costly human errors and minimize the time and expense of managing complex environments.



IBM identifies six modular on demand automation capabilities. Each capability can serve as a starting point, depending on your pressing IT needs.

*“Automation is an area in which organizations that are seeking to be adaptive should invest now, so that substantial cost savings can be realized by automating complex manual tasks. Automation does not require broad deployment or even a complex function, but a simple function that consumes excessive manual time.”*

**Corey Ferengul,  
Senior Vice President and  
Director of Operations Strategies,  
META Group**

New Tivoli optimization solutions include:

- IBM TotalStorage® Productivity Center with Advanced Provisioning, powered by IBM Tivoli Provisioning Manager, an integrated storage capacity provisioning suite that simplifies and automates storage provisioning. Building on the capacities of TotalStorage Productivity Center to help manage and optimize heterogeneous storage resources, this new offering includes workflows that automate the complex tasks associated with capacity provisioning. With this advanced automation solution, you can leverage existing IT investments to help minimize management costs, increase administrator efficiency and optimize availability.
- IBM Tivoli Workload Scheduler for Virtualized Data Centers, an enterprise-level scheduling solution that enables IBM customers to automate cross-platform, cross-silo, cross-enterprise workload scheduling. Tivoli Workload Scheduler for Virtualized Data Centers manages business applications across mainframe distributed, high-performance clusters and grid-enabled environments, while providing fault tolerance and scalable workload performance.

#### **Provisioning solutions automate resource allocation and configuration**

Many organizations find it challenging to quickly respond to changing IT requirements due to manual server provisioning processes and an inability to leverage the expert knowledge of senior IT staff.

Tivoli provisioning solutions automate manual data center processes and the deployment and configuration of server and storage capacity, software and network resources. These solutions use best-practice policies and IT service management workflows to facilitate your company's transition to an on demand business. By implementing an infrastructure that can provision resources to quickly respond to changing market dynamics, you can maximize the return on your existing IT investments.





*“Our staff couldn’t do it all – cost-effectively deliver reliable services to both customers and internal staff – without leveraging the predictive and automated capabilities of Tivoli software. Without Tivoli solutions, we would have had to substantially increase our staff if we were to meet our business goals.”*

**René Schon,**  
Tivoli Senior Administrator,  
NÜRNBERGER Lebensversicherung AG (NLV)

Tivoli provisioning solutions include:

- IBM Tivoli Provisioning Manager automatically executes supplied and customizable workflows for provisioning and configuring servers, operating systems, middleware, applications, power supplies, storage and network devices such as firewalls, routers, switches and load balancers. Tivoli Provisioning Manager helps optimize IT staff efficiency and your ability to quickly respond to changing IT requirements. It also enables you to start small and automate provisioning at your own pace. A new one-button provisioning capability automates deployment of IBM xSeries® servers with a single push of a button, helping to minimize deployment time and human error.
- IBM Tivoli Configuration Manager enables you to rapidly and efficiently deploy complex mission-critical applications to multiple locations from a central point. It helps create a secure, reliable IT infrastructure by managing security patch deployment from packaging, planning and administration to delivery, installation and reporting. It also verifies ongoing conformance through reference models.
- IBM Tivoli System Automation for Multiplatform provides automated operations and high-availability management capabilities for Linux and IBM AIX®. It uses a goal-driven or desired state-driven policy to enable flexible automation of availability tasks including automated failover within a cluster. Additionally, Tivoli System Automation for Multiplatform can stop, move and restart applications or application components. It can understand complex application dependencies and start and shut down sequences so critical tasks can be accomplished rapidly and without errors.
- IBM Tivoli License Manager automates the manual process of software inventory, usage data collection and entitlement management. It manages the complexity of maintaining software licenses in organizations with multiple software vendors, products and contractual requirements. The result is end-to-end license management, exemplary audit performance and a great deal of flexibility to changing organizational requirements. Leveraging Isogon’s SoftAudit for z/OS, IBM provides this same level of functionality for IBM zSeries® systems.

**Orchestration automatically senses and dynamically responds to changing resource needs and efficiently coordinates IT operations**

Many companies have very low rates of server usage. Tivoli orchestration solutions dynamically deploy IT resources when and where they are needed, according to your business priorities.

Tivoli orchestration solutions leverage your best-practice IT service management workflows to trigger actions for deploying IT resources where they are needed.

Tivoli orchestration solutions include:

- IBM Tivoli Intelligent ThinkDynamic Orchestrator *continually senses real-time IT resource status and dynamically responds to changes in user demands and workload. By helping optimize IT resource usage and aligning those resources with business priorities, Tivoli Intelligent ThinkDynamic Orchestrator can help minimize hardware, software and IT staff costs.*

**Business service management automatically links IT and business processes to increase flexibility**

To truly maximize the business value of your IT investments, you must also see how each resource across your heterogeneous

IT environment affects applications and business processes it supports. Without understanding these links, a company cannot know how an individual resource or group of resources impacts a given business process.

Tivoli business service management solutions help you leverage links between IT and business processes to drive flexibility. These solutions help you prioritize your IT systems around processes that carry the highest business value. In the event of a problem or outage, resources are allocated first to revenue-generating activities rather than internal processes.

Tivoli business service management solutions include:

- IBM Tivoli Business Systems Manager *helps simplify management of your mission-critical e-business systems by providing the ability to manage real-time problems—across the breadth of your business systems and in the context of your business priorities. Tivoli Business Systems Manager helps you understand and manage the dependencies between your business systems components and their underlying infrastructure.*
- IBM Tivoli Web Access for Information Management *offers in-depth and detailed access to service management data.*





*Its Web browser-based interface to IBM Tivoli Information Management for z/OS provides a powerful, easy-to-use facility for managing daily service management activity. New features include out-of-the-box business logic and data views for Information Technology Infrastructure Library (ITIL)-based processes that speed deployment and HTML generation capabilities.*

- *IBM Tivoli Monitoring for Network Performance enables you to easily understand how TCP/IP protocol behavior on your monitored IBM z/OS systems affects application performance. The solution distributes network monitors to your z/OS images and consolidates information into a single database, giving you a single location for information about the entire environment—plus the capacity to integrate with other IBM solutions to track historical trends and generate integrated reports.*

#### **Rapidly implement Tivoli solutions**

*IBM Tivoli Quick Start Services offerings help you realize rapid time to value by optimizing the implementation of Tivoli on demand automation solutions. An IBM Software Services for Tivoli consultant works onsite with your team to install and configure the product in a test environment. This step-by-step process of planning, training and implementation gives you hands-on experience you can then use to prepare for production deployment.*



#### **Customer success story**

### *UPS*

#### **Business challenge**

Design, build and implement a framework that leverages automated identity management and access control across the UPS portal and mainframe systems.

#### **Solution**

- *IBM Tivoli Identity Manager*
- *IBM Tivoli Directory Integrator*
- *IBM DB2® software*
- *IBM WebSphere software*

#### **On demand business benefits**

- *Automated business processes using identity life-cycle management for more than 450,000 identities in the UPS Enterprise Portal application*
- *Managed the rapid updating of employee data—up to 30,000 per day—with automated approval process and provisioning*
- *Projected to save more than \$1.5 million during the next four years with self-service interfaces for password reset*

*“The information held within the UPS enterprise is of extraordinary value. We depend upon the IBM Tivoli Identity Manager tools to provide a secure, automated and policy-based user management solution for our Enterprise Portal.”*

**Jim Flynn,**  
Information Security Systems Manager,  
United Parcel Service

## Customer success story

# Star Technology Group

### Business challenge

Keep the cost of providing managed services to a minimum and slow data center growth.

### Solution

IBM Tivoli Intelligent ThinkDynamic Orchestrator

IBM @server™ BladeCenter™

IBM Global Services

### On demand business benefits

- *Increased utilization of computing and human resources through business policy-based automation, including existing best practices*
- *Anticipated 75 percent efficiency increase in server provisioning for more than 2,000 servers in data center*
- *Anticipated 60 percent slow down in data center density*
- *Enabled introduction of a complete range of on demand services, at an optimized value, through utility-style chargeback*
- *Enhanced responsiveness to new business opportunities*

*“Star Technology is totally committed to a total on demand strategy. Automation and virtualization in the data center are the enablers, and IBM Tivoli Intelligent ThinkDynamic Orchestrator is the tool we need to get us there.”*

**Mark Lamb,**  
Technical Director, Managed Services,  
Star Technology Group

Tivoli Quick Start Services are available for many Tivoli on demand automation solutions, including Tivoli Identity Manager and Tivoli Manager for Transaction Performance.

*IBM Tivoli Solution Readiness Offering for Orchestrator and Provisioning* evaluates your current environment based on your business objectives and provides recommendations about the design, deployment and operation of your Tivoli orchestration and provisioning solution. Finally, the offering installs the base Tivoli product and a data center model in your test environment—establishing a framework for planning the production deployment.

### IBM services further align your Tivoli solutions with your environment and needs

IBM Integrated Technology Services help maximize the value you derive from Tivoli software products. They can assess your needs, create detailed plans you can use to implement targeted solutions and work with you to implement those solutions. Examples of IBM Integrated Technology Services assessment, planning and implementation services include:

- *Evaluation of IT processes for on demand automation with workflows that Tivoli Intelligent ThinkDynamic Orchestrator and Tivoli Provisioning Manager can execute.*
- *Process design for IT processes that require manual intervention or optimization before being automated.*
- *Security and privacy services that leverage Tivoli security software to build the appropriate defenses based on your current security posture and manage security over time.*



*“The beauty of IBM Tivoli Business Systems Manager is that it shows all diagrams related to systems and applications on a monitor screen, and helps us root out problems in a way that could only previously be accomplished utilizing the knowledge of veteran engineers. Tivoli Business Systems Manager is a vital facility that will certainly elevate the company’s systems and service levels.”*

**Kazuo Matsumori,  
Manager of the Tivoli Promotion Group,  
Kobelco Systems**

Furthermore, IBM Integrated Technology Services collaborate on innovations such as the highly scalable joint Rational and Tivoli solutions for rapidly detecting, diagnosing and addressing application errors that surface after deployment.

**IBM collaborates with IBM Business Partners to extend on demand automation solutions**

IBM Business Partners have access to a variety of resources that helps them deliver on demand automation implementation and integration products and services to you.

An example of how IBM and Business Partners collaborate to offer on demand automation is the IBM Orchestration and Provisioning Automation Library (OPAL). IBM created OPAL to provide Business Partners with tools and a collaborative community for building IT service management workflows.

Leveraging OPAL, Business Partners supply you with IT workflows that fit your IT infrastructure and respond dynamically to your business priorities.

**On demand automation solutions from IBM bring you business value**

Tivoli on demand automation solutions help speed your transformation into an on demand business as you optimize your infrastructure so it can flexibly respond when business opportunities and priorities change.

IBM on demand automation solutions include products, bundled offerings, services and best-practices intellectual capital—including tools that leverage the best practices of your business. Together, these components enable you to deploy effective infrastructure management that suits your current skills and IT resources and supports your business strategies and objectives.

These IBM solutions for automating intelligent infrastructure management keep you in the driver’s seat. Because today’s on demand businesses must deliver results—fast.





### For more information

To measure your infrastructure's current level of on demand automation, contact your IBM Business Partner or IBM representative. They can help you use the on demand Automation Assessment Tool from IBM and can tell you more about how Tivoli intelligent management software can help your business. To learn more about IBM on demand automation solutions, you can also visit [ibm.com/tivoli/launch](http://ibm.com/tivoli/launch)

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