

IBM Tivoli Storage Manager for Application Servers

Highlights

- ***Protect your vital e-business infrastructure from data loss***
- ***Help improve the availability of your IBM® WebSphere® Application Server***
- ***Help minimize operating costs***
- ***Reduce complexity and help maximize efficiency by managing from a single point of control***

IBM Tivoli® Storage Manager for Application Servers is a software module that runs on WebSphere application servers to provide online “hot” data backups and restores of WebSphere data. In conjunction with the Tivoli Storage Manager client software, this module interfaces through a network with a centralized Tivoli Storage Manager data protection server to hold backed-up data. Tivoli Storage Manager for Application Servers helps protect both the infrastructure and application data of WebSphere Application Servers to improve their ability.

Tivoli Storage Manager for Application Servers works with the WebSphere Application Server to offer reproducible online backup of a WebSphere Application Server environment, including WebSphere administration database (DB2 Universal Database™), configuration data and deployed application program files. Changes to the WebSphere environment, such

as the addition of applications, are automatically detected and included in the backup to help keep backup data up-to-date. If data loss or data corruption occurs, Tivoli Storage Manager for Application Servers can automatically restore data of the WebSphere Application Server environment.

The control module runs on one WebSphere Application Server in a WebSphere administrative domain and communicates with the WebSphere administrative database to get current information about the WebSphere domain setup data. Based on this communication, Tivoli Storage Manager for Application Servers backs up the DB2 Universal Database and the corresponding transaction log files from the administration database server online. From there the data is transferred to the Tivoli Storage Manager server, which writes the data to defined storage media (Direct Access Storage Device, optical or tape).

After the backup of the WebSphere administrative database, Tivoli Storage Manager for Application Servers reads the application data, such as Java™ servlets, on each WebSphere Application Server within the WebSphere administrative domain and sends it to the Tivoli Storage Manager server over the local area network (LAN) or the storage area network (SAN).

From this point Tivoli Storage Manager manages the data with its proven, mature storage management functions. Similarly, in case of a restore, Tivoli Storage Manager for Application Servers restores the administration database and retrieves only the required transaction log files from the Tivoli Storage Manager server. As soon as the data is restored, Tivoli Storage Manager for Application Servers performs the recovery of the administration database and restores the application data of the linked WebSphere Application Server.

Key benefits of Tivoli Storage Manager for Application Servers include:

Helps protect vital e-business infrastructure from data loss—Helps provide protection for the WebSphere Application Server by including configuration data and deployed application program files. Also helps enforce consistent backups of single-node or multi-node environments by automatically detecting configuration changes.

Can help improve application availability—Helps reduce downtime through online backup of WebSphere Application Server environments and helps minimize backup and restore windows by automated operation.

Helps minimize operating costs—Helps decrease manual scripting by combining relevant data into one backup set and allows scheduling of backups from a central point.

Helps reduce complexity and increase efficiency and automation—

Helps reduce complexity through central management from a single point of control and helps reduce manual operations by policy-driven media management.

Data integrity

Tivoli Storage Manager for Application Servers helps maintain the integrity of backed-up data. The dynamically generated WebSphere Application Server setup data contains the required information to detect WebSphere Application Servers in the WebSphere administrative domain. The administration database and the application data of WebSphere Application Servers are included.

Online backup and restore

Tivoli Storage Manager for Application Servers provides the ability to back up WebSphere Application Servers online (hot backup). This means the WebSphere administration database

and the WebSphere Application Server are backed up during normal operation. No server shutdown is required; this helps Tivoli Storage Manager for Application Servers support 24x7 availability of the WebSphere environment. High backup and restore performance also helps minimize impacts on availability, even in disaster-recovery scenarios.

Automated backup process

Tivoli Storage Manager for Application Servers features an automated backup process. The ability to configure scheduled backups and the automatic detection of linked WebSphere Application Servers help avoid the need to provide customer-maintained scripts. Manual interventions are not required, and actions can be triggered from a single point of control.

LAN-free support

Tivoli Storage Manager for Application Servers can perform a backup and restore directly through the SAN instead of going through the LAN. It exploits LAN-free support on Microsoft®

Windows® and IBM AIX® platforms. In a SAN environment, Tivoli Storage Manager for Application Servers can be directly connected over the SAN to the respective storage devices. The data is transferred over the SAN, and the metadata flows over the LAN to the Tivoli Storage Manager server. This option lets you offload the LAN from network traffic by sending the data directly through the SAN. Furthermore, the read/write load on the centralized Tivoli Storage Manager server is dramatically reduced, because only the metadata gets processed.

Tivoli Storage Manager family of products

The Tivoli Storage Manager family of products starts with Tivoli Storage Manager, the base product that provides data backup and restore and managed data archive and retrieve for use with small tape libraries (up to three tape drives). Tivoli Storage Manager Extended Edition adds disaster preparation planning and recovery, NDMP utilization and support for tape libraries of any size to the core data

protection functions of backup and archive. Other Tivoli Storage Manager software modules add the following capabilities:

- ***IBM Tivoli Storage Manager for Space Management—Hierarchical Storage Management for Tivoli Storage Manager clients running AIX or Sun™ Solaris™***
- ***IBM Tivoli Storage Manager for Storage Area Networks—provides LAN-free and server-free data protection for Tivoli Storage Manager clients connected to a SAN***
- ***IBM Tivoli Storage Manager for Databases—online data protection for databases***
- ***IBM Tivoli Storage Manager for Enterprise Resource Planning—online data protection for SAP R/3***
- ***IBM Tivoli Storage Manager for Application Servers—online data protection for WebSphere***
- ***IBM Tivoli Storage Manager for Hardware—utilization of instant-copy technologies on both IBM ESS and EMC Symmetrix storage devices by Tivoli Storage Manager protected database servers***

System requirements

Hardware required for Microsoft Windows NT and Windows 2000

- An Intel®-based 32-bit system with at least:
 - 256MB RAM
 - 30MB free disk space

Hardware required for AIX

- Any IBM RS/6000® system with at least:
 - 256MB RAM
 - 60MB free disk space

Tivoli Storage Manager server

- Tivoli Storage Manager server, Version 4.1 or later

Software required for database node

- AIX 4.3.3 or later; Windows NT® 4.0, Service Pack 5 or later or Windows 2000, Service Pack 2
- DB2 Universal Database 7, Fixpack 5 or later
- Tivoli Storage Manager client API 4.1 or later

Software required for each WebSphere Application Server node

- AIX 4.3.3 or later; Windows NT 4.0, Service Pack 5 or later or Windows 2000, Service Pack 2
 - WebSphere Application Server 3.5 Standard Edition or Advanced Edition
 - Tivoli Storage Manager client API 4.1 or later
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To learn more

For information on Tivoli Storage Manager for Application Servers and integrated solutions from IBM, contact your IBM sales representative or visit info.tivoli.com/storageforsuccess

Tivoli software from IBM

An integral part of the comprehensive IBM e-business infrastructure solution, Tivoli technology management software helps traditional enterprises, emerging e-businesses and Internet businesses worldwide maximize their existing and future technology investments. Backed by world-class IBM services, support and research, Tivoli software provides a seamlessly integrated and flexible e-business infrastructure management solution that uses robust security to connect employees, business partners and customers.



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Software Group
Route 100
Somers, NY 10589
U.S.A.

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