BrightStor® ARCserve® Backup for Mainframe Linux

Release Summary

r11.5

D01223-2E

Contents

Chapter 1: New Features

This document provides a brief overview of the new features and enhancements, to help you identify what has changed and begin taking advantage of the powerful new functionality of BrightStor ARCserve Backup.

BrightStor ARCserve Backup delivers comprehensive data protection for distributed environments. It provides assured virus-free backup and restore operations. An extensive set of options and agents extends data protection throughout the workgroup and delivers enhanced functionality, including online hot backup and restore of application and data files, and advanced device and media management.

This chapter summarizes the new features that have been introduced for BrightStor® ARCserve® Backup for Mainframe Linux r11.5 SP1 and r11.5.

New Features for BrightStor ARCserve Backup r11.5 SP1

These sections provide an overview of the new features added to BrightStor ARCserve Backup, to help you identify and utilize the powerful new functionality of BrightStor ARCserve Backup.

This release of BrightStor ARCserve Backup for Mainframe Linux provides support for:

- Novell Open Enterprise Server
- File System Agent for FreeBSD

Novell Open Enterprise Server Support

This release BrightStor ARCserve Backup will extend support to protect OES services. The enhancements discussed here refer only to OES SP1 Server installations.

You are able to completely protect the OES servers (traditional file systems as well as NSS file systems) by deploying the existing Client Agent for Linux as well as a newly introduced BAB OES agent.

The OES agent has a configurable capability to protect traditional file systems. However, due to certain limitations pertaining to protection of ACL's and extended attributes, it is recommended that users deploy and use the regular file system agent to backup file systems other than NSS.

File System Agent for FreeBSD

BrightStor ARCserve Backup Agent for FreeBSD provides basic backup and restore functionality, as well as support of FreeBSD specific features. The File System Agent for FreeBSD supports FreeBSD versions 4.11, 5.3 and 5.4. The specific FreeBSD features include:

- Backup and restore of FreeBSD Access Control Lists (5.3 and 5.4)
- Backup and restore of Extended Attributes (5.3 and 5.4)
- Backup and restore of File System Flags (4.11, 5.3 and 5.4)
- Backup and restore of Special Attribute Flags
- Backup and restore support for Fast File Systems
- Backup and restore support for Virtual Hosts
- Backup and restore support for VINUM Logical Volume

New Features for BrightStor ARCserve Backup r11.5

These sections provide an overview of the new features added to BrightStor ARCserve Backup, to help you identify and utilize the powerful new functionality of BrightStor ARCserve Backup.

This release of BrightStor ARCserve Backup for Mainframe Linux provides support for:

- Smart Restore
- Optimize Restore Option
- Disk Staging Option
  - File System Device Capacity Management
  - Multistreaming
  - SnapLock™ Support
  - Command Line Support
- Mainframe Linux Support (IBM zSeries and S/390)

Smart Restore

Smart Restore is an automated process that BrightStor ARCserve Backup deploys to ensure that restore jobs continue without interruption, even when a media error occurs. Media or tape drive errors or hardware problems can cause a restore job to fail. If this occurs, BrightStor ARCserve Backup immediately scans your environment to find duplicate copies of the backup session that was being restored. This functionality is available when back up is performed using the Disk Staging Option or tapecopy. If a duplicate, or clone, of the backup session exists, BrightStor ARCserve Backup uses the copied session to complete the restore job automatically.

Optimize Restore Option

BrightStor ARCserve Backup discovers duplicate backup sessions, where one session resides on tape media and another session resides on a file system device, the Optimize Restore option directs BrightStor ARCserve Backup to restore the data from the session that resides on the file system device. This functionality is available when back up is performed using the Disk Staging Option or tapecopy.

Under most circumstances, restoring data from a file system device is faster than restoring from tape media. However, you may wish to consider disabling the Optimize Restore option if you are using tape media or a library with high-speed reading capabilities.

The Optimize Restore option is a global setting that is applied to all restore operations, and is enabled by default. To disable the Optimize Restore option, clear the check mark from the Optimize Restore check box.

Disk Staging Option

Using the Disk Staging Option you can back up data to a temporary data storage location, migrate (copy) the data to permanent storage media, and purge the data from the staging area at a later time. When necessary, the Disk Staging Option lets you restore data directly from the staging device.

Backing up to a file system device is generally faster than backing up to tape media. Faster backups require smaller backup windows. In addition, you can further decrease the backup window by streaming jobs simultaneously to a file system device.

BrightStor ARCserve Backup provides you with the capability of streaming multiple jobs simultaneously to the FSD. The base product allows you to write a maximum of two streams per job simultaneously. Licensing the Disk Staging Option enables you to increase the simultaneous streams to 32 (for each job and each staging group).

The Disk Staging Option also reduces the restore window. Restoring data from disk is generally faster than restoring from a tape, because there are no delays due to tape load and seek latency. When you back up data to a staging device, you can create policies so that the data can remain on the staging device after it is copied to tape media. If you need to restore data that exists in two locations (on the device and on tape), you can reduce the restore window by restoring your data directly from the staging device rather than retrieving the data from a tape stored in an off-site vault.

The Disk Staging Option provides you with the flexibility to change your backup destination by defining staging policies. For example, if your tape library is disabled, you can divert the backup job to an alternate file system device or library. Similarly, if a file system device reaches its storage threshold or is disabled, you can divert the backup job to a tape library.

Note: You cannot change the backup destination once the job has been created.

In addition, staging provides you with the following features:

- File System Capacity Management
- Multistreaming
- SnapLock Support
- Command Line Support

File System Device Capacity Management

Using the Disk Staging Option you can specify file system device capacity thresholds. The threshold can be represented as either the total volume used or as a percentage of the disk's total capacity used. This feature affords the following benefits:

- To ensure that BrightStor ARCserve Backup does not exhaust the full capacity of a disk, backup jobs fail when writing to a file system device when the total disk space used exceeds the threshold.
- To increase overall backup success rate, you can define staging policies that direct BrightStor ARCserve Backup to create a makeup job on Hold when data migration fails or create makeup jobs that will back up data to a final destination under disk full conditions.
- You can perform full, incremental, and differential backups.

Multistreaming

The Disk Staging Option lets you back up multiple jobs to the same file system device simultaneously, decreasing the backup window. Multistreaming provides you with the ability to restore data while backup jobs are running.

The BrightStor ARCserve Backup base product allows you to stream two jobs simultaneously. To stream more than two jobs, you must license the Disk Staging Option. After you license the Disk Staging Option, you can transmit up to 32 streams of data to the staging device.

SnapLock Support

SnapLock™ is technology from Network Appliance that provides non-erasable, non-rewritable, Write Once Read Many (WORM) data security. SnapLock is available on any Network Attached Storage (NAS) device from Network Appliance that supports at a minimum ONTAP™ version 6.4.1.

When you back up data using SnapLock protection, you cannot purge or over-write the backed up data until the specified retention date elapses. This ability helps to ensure that your enterprise complies with regulatory data-retention requirements.

Command Line Support

BrightStor ARCserve Backup lets you create backup to staging device jobs using either the graphical user interface or the command line utility. In the event a copy to tape operation fails, you can use the Query tool to analyze the file and session contents on the staging device. You can purge sessions from a staging device, using the Purge tool to remove data and free disk space from a staging device.

Mainframe Linux Support (IBM zSeries and S/390)

BrightStor ARCserve Backup r11.5 supports Mainframe Linux (IBM zSeries and S/390) as a server platform; providing 31- and 64-bit support for the following processors:

- RHEL 3 and 4
- SLES 8 and 9

Chapter 2: Changes to Existing Features

BrightStor ARCserve Backup r11.5 SP1 includes all of the features and functionality available in BrightStor ARCserve Backup r11.5 and includes multiple enhancements to that functionality, in addition to its many new features, to help you maximize backup and restore performance. The following Chapter provides information about the enhancements to existing features included in this release.

Modified Features in BrightStor ARCserve Backup r11.5 SP1

This section describes the following enhancements to the existing features.

Enhancements to Existing Features

The following areas have been enhanced for BrightStor ARCserve Backup r11.5 SP1:

- FSD Session Chunking Support
- FSD Catalog Merge Support
- Extended Path Support

FSD Session Chunking Support

BrightStor ARCserve Backup has been enhanced to backup to a file system device (FSD). A backup job to a FSD can be a large session. However, depending upon the limitations of the operating system, the maximum file size for a single backup session may be restricted. To overcome this file size limitation, BrightStor ARCserve Backup chunks these excessively large sessions into smaller session slices so that the size of each slice is less than the maximum supported size.

FSD Catalog Merge Support

The catalog merge functionality has been extended to sessions that are created on file system devices. This feature allows FSD to merge sessions in a more efficiently.

Extended Path Support

In this release of BrightStor ARCserve Backup file path support has be increased from 256 bytes to 512 bytes.

Note: Longer path names will be available starting with BAB r11.5 SP1. Previous versions will still have path name limitations.

Modified Features in BrightStor ARCserve Backup r11.5

This section describes enhancements to existing features.

Enhancements to Existing Features

The following area has been enhanced for BrightStor ARCserve Backup r11.5 for Mainframe Linux: Vulnerability Enhancements

Vulnerability Enhancements

BrightStor ARCserve Backup r11.5 has been updated to correct the following vulnerability issues:

- BrightStor ARCserve/Enterprise Backup Discovery Service SERVICEPC Remote Buffer Overflow Vulnerability
- BrightStor ARCserve/Enterprise Backup UDP Probe Remote Buffer Overflow Vulnerability
- BrightStor ARCserve/Enterprise Backup Agent for SQL Buffer Overflow Vulnerability
- BrightStor ARCserve/Enterprise Backup Default Backdoor Account Vulnerability
- BrightStor ARCserve Backup home directory access has been limited for non-administrators
- Usage of 3DES encryption is used for internal data

Chapter 3: Fixes Included in this Release

The following sections provide information regarding fixes included in this release of BrightStor ARCserve Backup r11.5 SP1 and r11.5 for Mainframe Linux. Each item in the following sections includes a fix number and a brief synopsis of the fix.

All items in the following sections beginning with [Txxxxxx] or [Qxxxxxx], where xxxxxx is the test or published fix number, are included in this update. If you received a test fix not listed in any of the following sections, contact Computer Associates Customer Support to determine how the fix can be reapplied.

Included Fixes for BrightStor ARCserve Backup r11.5 SP1

- [T3EE061] BrightStor ARCserve Backup r11.1 now removes zombie processes (ENDSESS, DETTAPEor CONTEOT) that are left in the system after the backup job runs for a while.
- [T380102] When a media is moved from Save set to Scratch set, the media will be marked for scratch on the tape management system on mainframe.