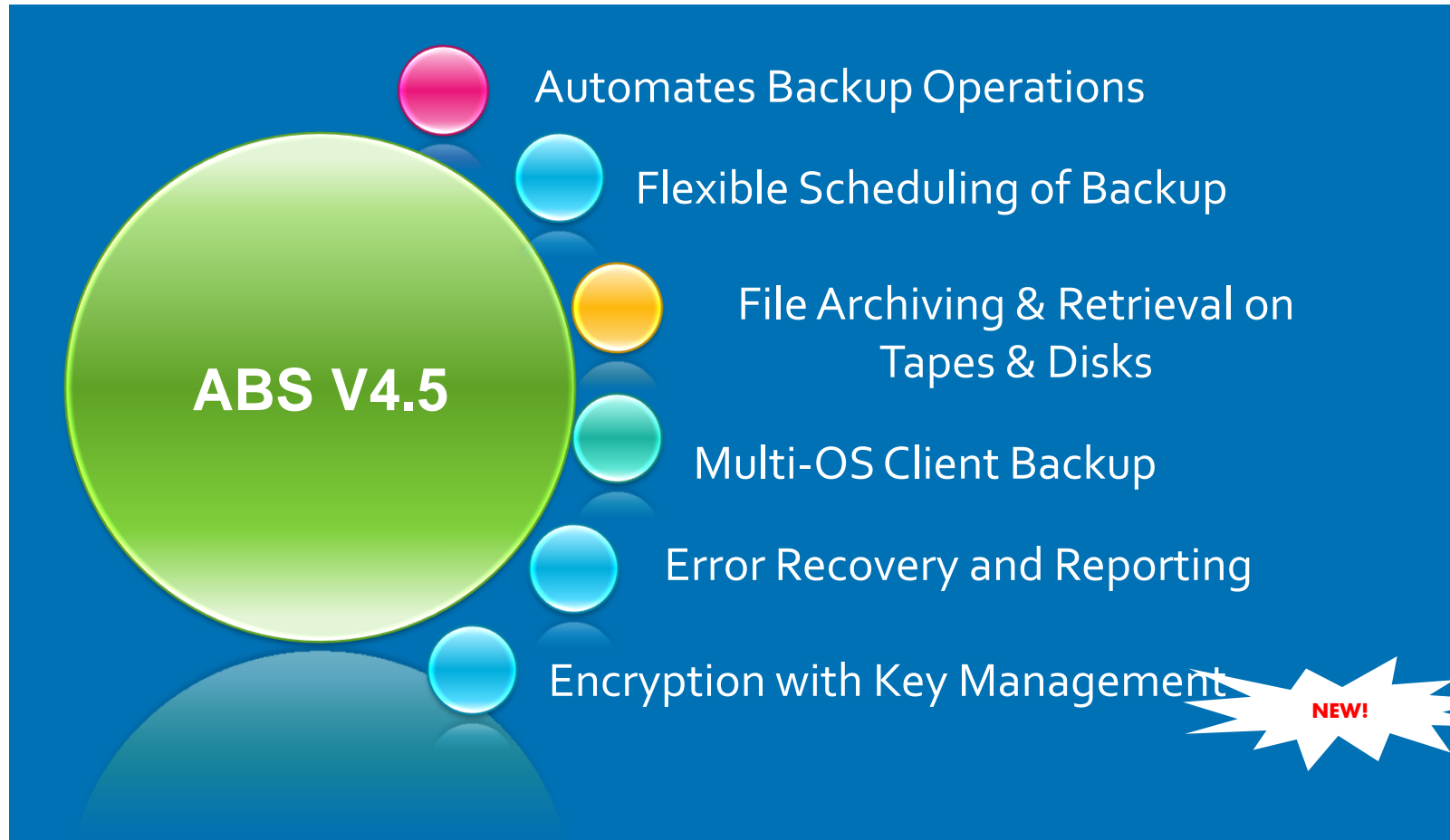


# HP Archive Backup System for OpenVMS, Version 4.5



# Archive Backup System (ABS) on I64 & Alpha



The diagram features a large green sphere on the left containing the text "ABS V4.5". To its right, a vertical column of six smaller, colorful spheres (pink, light blue, orange, teal, light blue, and light blue) is aligned with a list of features. A white starburst graphic with the word "NEW!" in red is positioned to the right of the bottom-most feature.

- Automates Backup Operations
- Flexible Scheduling of Backup
- File Archiving & Retrieval on Tapes & Disks
- Multi-OS Client Backup
- Error Recovery and Reporting
- Encryption with Key Management **NEW!**

# New features in ABS V4.5

NEW!

## Features



1. Software Encryption and Key Management

## Enhanced features

2. Improved support for Daylight Saving Time (DST)
3. Improved performance for RDF customers

**Are your archived data safe?**

# Encryption with ABS V4.5

## Hardware Encryption

- Hardware Encryption is the process of encrypting data with a separate hardware device that has encryption capabilities.
- The LTO4 drive in an EML/ESL library with a Secure Key Manager provides hardware encryption capabilities. ABS V4.5 also has been qualified with the MSL LTO-4 Encryption kit.

## Software Encryption

- Software Encryption & Key Management is performed by ABS using encryption algorithms like AES & DES.
- Uses more host processing which results in larger backup window.
- This is much less expensive than hardware encryption.

# Software Encryption and Key Management



## What is encryption?

- ❑ It is the process of concealing information from unauthorized parties by means of a cipher or algorithm that disguises the underlying text.
- ❑ Encryption keys are required to read and restore the secure encrypted data.

## Why do customers need encryption?

- ❑ To protect their business' sensitive information - loss of data also translates into loss of revenue and customers.
- ❑ To comply with Data Security Regulations on businesses to protect their customer data with penalties for non-compliance.

# Software Encryption in ABS V4.5



- ❑ Uses cryptographic algorithms like AES and DES.
- ❑ Data is encrypted before being stored on storage device.
- ❑ Works with all qualified storage devices.
- ❑ Unlike Hardware Encryption, it does not need a separate hardware-encryption enabled device.

# Software Encryption in ABS V4.5



ABS encryption feature is based on the encryption capability of OpenVMS Version 8.3 BACKUP Utility

- ❑ Therefore, this feature is restricted to only VMS data files just as in the BACKUP Utility.
- ❑ ABS and the BACKUP Utility on OpenVMS Alpha V7.3-2 will also support encryption if the license for Encryption for OpenVMS V1.6 is purchased.
- ❑ Key Management is not available in the BACKUP Utility.



# Encryption Key Management in ABS V4.5



## Manual & Automatic Key Management

- ❑ Manual Key Management involves manual provisioning of cryptographic keys for encryption
  - ❑ The key should be remembered, otherwise encrypted data cannot be retrieved.
- ❑ Automatic Key Management System handles
  - ❑ *Key Generation* before data encryption (OpenSSL generates the random numbers)
  - ❑ *Key Retrieval* during data restoration from the storage device.

# Improved Features in ABS V4.5



# DST Support during Backup



## Backup and restore of data during Daylight Saving Time (DST)

- While running the SAVE operation if system's time is changed, the operation will be completed and not be aborted as was the case with prior ABS versions.

# RDF Performance Enhancement



- ❑ The RDF logicals, RDEV\_WRITE\_GROUP\_DELAY and RDEV\_WRITE\_GROUP\_SIZE are provided to enhance performance for certain customers who use RDF.
- ❑ After ABS V4.5 installation, the system will need to be rebooted to update new RDF images.

# Software Requirements for ABS V4.5



# Encryption Utility for OpenVMS V1.6



- ❑ The Encrypt Utility that is available on OpenVMS V8.3 or later is required to be installed on the system.
- ❑ On OpenVMS V8.2 no separate license required, but this utility must be installed.
- ❑ On OpenVMS V7.3-2 a valid Encrypt Utility license needs to be purchased.

# Operating System Versions Supported



- OpenVMS on Integrity Servers:
  - V8.2-1, V8.3, V8.3-1H1
  
- OpenVMS on Alpha:
  - V7.3-2, V8.2, V8.3

*That's all Folks!*