



# AppAssure<sup>®</sup> 5

## The next generation of backup, replication and recovery software

### A better way to protect Windows<sup>®</sup> and Linux<sup>®</sup> environments

IT environments are increasingly complex, with virtual and physical machines spread across local, offsite and—increasingly—cloud resources. AppAssure 5 alleviates these concerns with fast backup and even faster replication and recovery. As a key data protection element of Dell's Fluid Data™ Architecture, AppAssure 5 controls cost, optimizes performance and enhances protection by unifying backup, replication and recovery within a single solution. It goes beyond backup by establishing a new, highly automated standard for data protection.

### How is AppAssure Different?

#### AppAssure 5 delivers innovative technologies:

##### TrueScale™ Architecture for data protection

TrueScale Architecture leverages a dynamic, multi-core pipeline storage system that scales linearly to store and manage data efficiently and deliver recovery point objectives (RPOs) and recover time objectives (RTOs) of minutes.

##### Global deduplication and compression

Inline deduplication and compression eliminates redundant data to save storage costs while optimizing backups for WAN replication.

##### One interface for virtual and physical machines

AppAssure combines technological innovation with ease of use to substantially reduce IT management and storage costs across every Windows and Linux machine in your IT environment. It backs up and recovers physical machines, and supports multiple hypervisor environments in private and public clouds.

##### Attractive total cost of ownership (TCO)

Rather than pay for and manage two or more unrelated software programs and costly add-on modules, AppAssure5 delivers all the data protection you need in one product, controlled with one interface.

##### Dell ProSupport™

Get 24x7 phone access to expert back-up and recovery technicians around the clock and around the globe. Also included: Remote Installation Services to get you up and running with a minimum of effort and Remote Advisory Services so you can consult directly with a highly qualified, certified expert regarding upgrades or system updates.

##### Data off-siting and disaster recovery

##### WAN Optimized replication

AppAssure 5 includes WAN-optimized, deduplication-aware replication to efficiently move data off site to public or private clouds.

##### AppAssure Smart Agent technology

Smart agents offer a number of advantages over both legacy agent-based and agentless technologies for VMs and physical servers. For instance, incremental-forever, changed-block tracking transmits only changed blocks from the protected disk volume to the AppAssure core, which can result in up to a 10X reduction in bandwidth requirements for VMs and physical servers.

##### Data seeding

Getting data off site is a critical first step to prepare your company for disaster recovery. AppAssure 5 allows you to seed your baseline data to an offsite target core if the cores are separated by a slow or highly latent links.

##### Virtual standby

Create and maintain an up-to-date, bootable virtual standby VMware or Microsoft Hyper-V machine for fast disaster recovery of all your Windows workloads including Exchange®, SharePoint and SQL.

##### Fail-over and fail-back

AppAssure 5 supports fail-over and fail-back in replicated environments. Once the primary site is restored, the core can "fail-back" protection to the machines at the primary site.

## Built in replication workflows

Customers who wish to replicate to managed service providers can use built-in workflows that allow them to request connections and receive automatic feedback notifications.

## Encrypted communications

AppAssure 5 uses the 256-Bit Advanced Encryption Standard (AES), with cipher block chaining (CBC) algorithm compliant with SHA-3, to protect backups from unauthorized access or use.

## Long term data retention

With its scalable object store and flexible enterprise data retention policies, AppAssure 5 handles Exabyte levels of data readily. Included are built-in global deduplication, compression, encryption, and replication to any private or public cloud infrastructure.

## Archiving

AppAssure 5's SmartArchive feature enables long-term data retention for SLA and regulatory compliance.

## Retention Policies

Highly flexible and granular backup retention policies can be customized easily for different business and compliance requirements without compromising availability or the integrity of backups.

## Innovative technologies protect Windows environments

AppAssure delivers three technologies to deliver rapid backup and recovery for Windows machines operating across virtual, physical and cloud environments.

### Live Recovery™

Recover the use of a Windows server to any location from the backup file directly onto any virtual or physical machine without having to wait to extract the full backup to production storage. Choose from as many as 288 recovery points a day to deliver an RPO of minutes.

### Recovery Assure™

Detects the presence of Microsoft Exchange and SQL and its respective databases and log files, then carries out a nightly test to confirm that database application backups are fully recoverable. If any backup fails this test, a notification is automatically sent so you can resolve the problem immediately.

### Universal Recovery™

Recover data and application to any VM or server. AppAssure enables one of the fastest and most flexible recovery procedures possible—taking just minutes, not hours or days, with a near-zero RPO. AppAssure provides your choice of full bare-metal recovery to dissimilar hardware and VM servers or granular recovery of individual objects, applications, files or messages.

## Linux System Protection: **NEW**

AppAssure Agent for Linux can be managed centrally from a single user interface. Incremental forever block-level snapshot backups with change block tracking permit each Linux machine to be 'snapped' and backed up much more frequently than traditional backup architectures allow.

## Cuts backup windows and speeds restores

AppAssure cuts Linux backup windows from hours to just minutes, so you can create more recovery point objectives and restore in minutes, to deliver superior recovery time objectives.

- Continually protects multiple servers per AppAssure core
- Linux server bare-metal restores and disaster recovery
- Web-based interface that is easy to use

## Key functions found in AppAssure Agent for Linux:

### Continual snapshots for outstanding recovery point objective (RPO) granularity

Snapshot technology essentially eliminates backup windows with disk-to-disk backups comprised of an initial full backup followed by incremental forever backups. Administrators can back up a server as frequently as every 15 minutes, creating many RPOs to choose from.

### Centralized backup

AppAssure simplifies administration by managing your Linux servers from the same Web-based central management console used to manage your Windows machines.

### Fast recoveries

AppAssure bare metal restores take only minutes to complete, rather than the hours required to complete manual system rebuilds and lengthy file restores.

### Data retention

AppAssure archiving provides long-term, low-cost backup archive data retention for SLA and regulatory compliance. Archive data is deduplicated, compressed and encrypted to maximize disk use and can span multiple devices.

### Management

Management functions include:

- A Central Management Console that simplifies the process of managing and reporting on AppAssure 5 Cores distributed across an environment. It provides role-based access to objects that users can access in an AppAssure 5 environment. AppAssure 5 features comprehensive reporting for all protected machines—virtual or physical—across all your sites.
- A Service management API that provides programmatic access to all of the functionality available through the Management Console. The management REST API can be used for managing your services and deployments. PowerShell scripting helps administrators automate administration and management of AppAssure 5 resources. A license portal provides easy-to-use tools for managing license entitlements. Event log monitoring and management effectively logs and alerts administrators about the state of completion for ongoing tasks. Administrators can create group notifications based on servers, tasks or events.



## Virtualization and cloud

### VMware®, Hyper-V®, and XenServer® support

AppAssure 5 can create ad hoc or continuous exports of any protected or replicated machine to VMware, Hyper-V, or XenServer. With continuous exports, a virtual machine is incrementally updated after every snapshot so a standby clone is ready to power up with a click of a button. AppAssure 5 also adds clustering support for VMware and Hyper-V environments.

More detailed information on AppAssure 5 is found in the AppAssure 5 brochure and in online product documentation.

AppAssure Core	
Operating system	<ul style="list-style-type: none"> <li>• Microsoft Windows 7</li> <li>• Microsoft Windows Server 2008</li> <li>• Microsoft Windows Server 2008 R2</li> <li>• Microsoft Windows Server 2012</li> </ul>
Architecture	<ul style="list-style-type: none"> <li>• 64-bit only</li> </ul>
Memory	<ul style="list-style-type: none"> <li>• 8 GB or Higher. AppAssure highly recommends using ECC Memory, to ensure optimum performance of AppAssure core servers</li> </ul>
Processor	<ul style="list-style-type: none"> <li>• Quad-Core or higher recommended for better performance</li> </ul>
Storage	<ul style="list-style-type: none"> <li>• Direct Attached, Storage Area Network (SAN) or Network Attached Storage (NAS)</li> </ul>

AppAssure 5 central management console	
Operating system	<ul style="list-style-type: none"> <li>• Microsoft Windows 7</li> <li>• Microsoft Windows 8</li> <li>• Microsoft Windows 2003</li> <li>• Microsoft Windows Server 2008</li> <li>• Microsoft Windows Server 2008 R2</li> <li>• Microsoft Windows Server 2012</li> </ul>
Architecture	<ul style="list-style-type: none"> <li>• 64-bit only</li> </ul>

AppAssure 5 Agent	
Operating systems	<p>Windows supported distributions:</p> <ul style="list-style-type: none"> <li>• Microsoft Windows XP</li> <li>• Microsoft Windows Vista</li> <li>• Microsoft Windows 7</li> <li>• Microsoft Windows 8</li> <li>• Microsoft Windows Server 2003</li> <li>• Microsoft Windows Server 2008</li> <li>• Microsoft Windows Server 2008 R2</li> <li>• Microsoft Windows Server 2012</li> </ul> <p>Linux Supported distributions:</p> <ul style="list-style-type: none"> <li>• Red Hat Enterprise Linux (RHEL) 6.3 (32 and 64 bit)</li> <li>• CentOS 6.3 (32 and 64 bit)</li> <li>• Ubuntu 12.04 LTS (32 and 64 bit)</li> <li>• SuSE Linux Enterprise Server 11 SP2 (32 and 64 bit)</li> </ul>
Virtualization platforms	<ul style="list-style-type: none"> <li>• VMware ESX/ESX (i)</li> <li>• Microsoft Hyper-V</li> <li>• Citrix XenServer</li> </ul>
Architecture	<ul style="list-style-type: none"> <li>• 32-bit or 64-bit</li> </ul>
Memory	<ul style="list-style-type: none"> <li>• 4 GB or Higher</li> </ul>
Microsoft Exchange support	<ul style="list-style-type: none"> <li>• Microsoft Exchange 2007 SP1 Rollup 5 or later</li> <li>• Microsoft Exchange 2010</li> <li>• Support for Database Availability Groups</li> <li>• Support for Single Copy Clusters</li> <li>• Support for Cluster Continuous Replication</li> </ul>

\* Availability and terms of Dell Services vary by region. For more information, visit [www.dell.com/servicesdescriptions](http://www.dell.com/servicesdescriptions) or contact your sales representative.

Manage data differently at [DellStorage.com](http://DellStorage.com)

