

# ESCAPE

## ALL LIMITATIONS

### PROTECTING WINDOWS **MICROSOFT** **EXCHANGE SERVER**

GROWTH IN DATA FOR **MICROSOFT EXCHANGE** IS EXPANDING AT A RAPID GROWTH RATE. **MAILBOX SIZES** ARE INCREASING DUE TO MULTIMEDIA FILE, DOCUMENTATION COLLABORATION AND DATABASE GROWTH. **WITH THIS GROWTH**, MOBILITY AND VIRTUALIZATION OF APPLICATIONS AND DATA IS INCREASING AS WELL.

As the infrastructures for messaging move from traditional physical environments to virtualized, cloud-base deployments, traditional backup methods are not going to meet the need. Traditionally, the change rate of data for Microsoft Exchange application data is backed up daily has actually changed since the last backup.

Unitrends solution for Microsoft Exchange backup provides an automated, efficient, online protection and granular recovery for Microsoft Exchange residing in physical or virtual environments. These solutions are completely integrated with Microsoft Exchange through Microsoft Volume Shadow Copy Service (VSS), Database Availability Groups (DAGs), and Active Directory.

Solution Brief Areas of Focus:

- Granular recovery of data
- Restore and recover in minutes vs. hours
- Ensure application data availability
- Simplify backup
- Lower total cost of ownership by with a single solution

*"Unitrends' assistance has brought me peace of mind many times, because **I know I'm in good hands.**"*

*Murugappan Periyakaruppan  
Warrior Sports*

*"**Support has been very good** when I needed it. I've been able to get a hold of individuals and they've been able to help me solve my problems in a short order."*

*Chris Howe  
Rollins College*



**UNITRENDS**

## PROTECTING WINDOWS MICROSOFT EXCHANGE SERVER DATA PROTECTION

Unitrends support for Exchange 2010 but has architected leveraging our fundamental approach to protecting Exchange. Our Exchange agent supports Exchange 2010, 2007, and 2003 and offers the most recent data protection capabilities available for Exchange. In this document we'll first present an overview of the Exchange data protection architecture provided by Microsoft and then explore the ways that Unitrends offers the best Exchange protection in the industry.

Microsoft Exchange Data Protection Architecture Exchange has traditionally been protected using the "streaming backup" method that was encoded in Windows Server 2003 "ntbackup." With the previous version of Windows Server, Microsoft has moved away from the traditional online streaming backup to VSS (Volume Shadow Copy Service). VSS (also called "snapshot")-based Exchange backups are available for Windows Server 2012, Windows Server 2008 and Windows Server 2003 for Exchange Server 2010, 2007, and 2003.

Exchange has an associated VSS writer. When the Exchange VSS writer is asserted, it creates a point-in-time image (snapshot) of the appropriate data. This point-in-time image is called a "Shadow Copy." There are two basic types of Shadow Copies:

Exchange has an associated VSS writer. When the Exchange VSS writer is asserted, it creates a point-in-time image (snapshot) of the appropriate data. This point-in-time image is called a "Shadow Copy." There are two basic types of Shadow Copies:

- Clone (Full Copy or Split Mirror)
- Copy on Write (Differential Copy)

The VSS infrastructure for Exchange consists of the following components:

- Writer: A writer provides a consistent point-in-time image by quiescing Exchange Server when it is asserted.
- Provider: A provider is the interface to the point-in-time image created by the VSS writer.

- Requestor: This is the software that invokes VSS and manages the shadow copy.

Unitrends has created the requestor for Exchange 2010, 2007, and 2003. The remainder of this paper will discuss the high-level attributes of the implementation of the requestor within the Unitrends appliance architecture.

Unitrends Exchange Data Protection Unitrends has implemented Exchange Server data protection in such a manner as to offer to its customers a number of advantages; these are briefly called out in this section.

Fully integrated with the Exchange VSS writer technology for consistent, reliable backups The Unitrends Exchange Server agent implements a VSS requestor that is fully integrated with the Exchange Server VSS writer.

Full and differential backups of mailbox and public folder databases Unitrends offers full and differential backup of the entire Exchange Server infrastructure. Full a prior Exchange integrity checking performed inline Unitrends performs complete inline Exchange Server integrity validation before it invokes the Exchange Server VSS writer infrastructure for validation of the Exchange Server storage infrastructure.

Powerful, flexible, and comprehensive scheduling allows administrators to create, manage, and monitor schedules that make the most sense for your Exchange environment if you have more than one Exchange server, you'll find that you can manage each from a single pane of glass user interface without having to use an autonomous interface and set of procedures for each Exchange server. Even if you don't have other Exchange servers, you'll find the single pane of glass user interface allows you to manage the entire system upon which the Exchange server is hosted in a comprehensive and elegant fashion.

Exchange backup status is easily viewed and integrated with all other system, file, and application backup types Even the simplest Exchange Server is implemented upon an underlying physical or virtual Windows Server. This server has system state, file state, and possibly other applications. Unitrends doesn't just protect

Exchange – we protect the underlying server as well and in addition all of the other computers and storage that constitutes the customer’s information technology infrastructure.

Intuitive point-in-time recovery capability with support for original and alternative location restoration We provide an integrated, simple, and elegant single pane of glass user interface that may be used to manage multiple Unitrends appliances and which provides intuitive point-in-time Exchange Server recovery. Restoration may occur either to the original location or to an alternative location depending upon the desires of the administrator.

## SUPPORTS RESTORATION TO AN ON-APPLIANCE LOCATION FOR FAST GRANULAR ITEM-LEVEL RECOVERY

It is possible to restore Exchange to an alternative location which is actually on the Unitrends appliance. This is typically done in order to accelerate granular item-level recovery.

## SUPPORTS MIGRATION AMONG EXCHANGE SERVERS

Using alternative location restoration the administrator can specify not only the same Exchange Server recovery database but another Exchange Server as well. Exchange and iseReduced Exchange backups are compressed using Unitrends’ proprietary iseReduced compression technology on the Unitrends appliance. This means not only is the backup compressed but it’ compressed with no performance impact on your Exchange server.

iseReduced is a variable byte-by-byte compression scheme that has a storage overhead of 0.03% plus 6-bytes per stream and a theoretical compression ratio of 1032:1 (typical compression ratios range from 2:1 to 4:1 and higher.)

Exchange and InCrypt Exchange backups may be optionally encrypted via the Unitrends Incrypt technology on the Unitrends appliance.

## INCRYPT TECHNOLOGY ON THE UNITRENDS APPLIANCE

This technology uses AES-256 bit encryption on the Unitrends appliance. This

means not only is the backup encrypted but it's encrypted with no performance impact on your Exchange server.

Exchange backups may be vaulted using our vaulting (replication) capability over LAN or WAN .

Unitrends offers off-premise replication via its vaulting technology for disaster recovery. We offer advanced in-flight deduplication between an on-premise appliance and an off-premise appliance in order to optimize the LAN or WAN interconnect between premises. Unitrends also offers cross-vaulting which allows bi-directional replication among two or more premises.

Exchange backups may be archived using D2D2D technology and rotated off-site for disaster recovery Unitrends also offers rotational archiving via D2D2D (Disk-to-Disk-to- Disk) technology using from one to four disks. Coupled with iseReduced technology, this allows terabytes of data to be carried off-site in those situations in which a customer can't afford to use vaulting for off-premise disaster recovery protection.

## STAYING ON THE EDGE

With the introduction of Microsoft Exchange Server 2013 and the RTM in September 2012, Unitrends is committed to supporting the next wave of messaging and collaboration from Microsoft. Exchange Server 2013 cloud enhancements; data loss prevention (DLP); the Exchange Administration Center (EAC); built-in defenses against viruses, spam, and phishing attacks are some of the new features offered in this new release.

Unitrends is testing and will be ready to meet customer requests on this new version.

## CONCLUSION

Many small and medium businesses turn to Windows in an attempt to reduce their operational costs through maintaining a homogeneous operating environment. The

# PROTECTING WINDOWS MICROSOFT EXCHANGE SERVER

hope is that the job of monitoring and managing Windows, including protecting the Windows systems, associated storage, and applications will be pretty simple.

What these businesses discover is that Windows itself presents unique challenges and its own type of heterogeneity as Windows versions evolve and different types of Windows client and server operating systems and applications are adopted. Unitrends is uniquely positioned to handle the complexity of Windows environments – we're a company that from its beginning has supported many types of operating systems and applications – both within the Windows ecosystem and outside of the Microsoft environment as well. Our approach to Exchange Server support is consistent with our continual commitment to offer state-of-the-art data protection while providing the lowest total cost of ownership to our customers.