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CONSOLIDATED MESSAGING PROJECT

Exchange 2007 Features and Benefits

This document highlights the more significant improvements (compared to Exchange 2003). However, not all features may be available in the initial phases of our consolidation, and some (such as "Outlook Anywhere" may be restricted for security reasons.

Optimized Growth

As a native 64-bit application, Exchange Server 2007 eliminates the memory and cache limitations of previous versions. This provides higher performance and increased scalability, while accommodating much larger mailboxes and mailstore databases.

This reduces the number of mailbox servers needed to support the same number of users. There also could be a significant improvement in storage utilization and a reduction in input/output, so storage investments can be optimized and lower cost storage options considered.

Single Instance Storage

Government agencies, by their very nature, are data redundant. Each email and its attachments may be shared with many, possibly hundreds, of intra-agency coworkers, managers, and employees. This increases the database size exponentially by every email sent to multiple people. With single instance storage, each email and its attachments are stored only once with pointers assigned to it, instead of separate stores for each recipient, saving both disk space and backup time for the organization.

"Anywhere" Access

In Exchange Server 2007, employees can access their important inbox and calendar information from virtually anywhere using their desktop computer, laptop computer, browser window from any Internet-connected computer, mobile device, or even a telephone when no Internet connectivity is available.

Outlook Web Access (OWA) has been improved to provide much better performance and usability. Enhancements in 2007 include a new Scheduling Assistant to help employees efficiently book meetings, fast server-side search, integrated unified messaging as well as new features to access documents and attachments more easily from outside the office. With two-

factor authentication support and attachment viewing in HTML format, OWA also offers enhanced security compared with previous versions.

The *Private computer* security setting now allows you to stay logged in for up to 24 hours. OWA provides the ability to open another user's mailbox (assuming you have the appropriate rights to do so). Public Folders open in the same OWA window.

Active push technology replaces the expensive costs of Blackberry servers and licenses and mobile devices can be remotely wiped if stolen. Documents can be accessed without the need of costly and difficult to configure VPN access or network tunnels.

Unified Messaging

With new unified messaging in Exchange Server 2007, employees can receive their e-mail, voice mail, and faxes through a single inbox that can be accessed from anywhere. Employees can manage all of their messages in one place just as they manage e-mail today. For example, voice mail can be forwarded, or if the recipient adds text notes to the voice mail, messages can be found using built-in search. Providing these features can lower the costs and complexity by consolidating the voice mail infrastructure.

Web-Ready Document Viewing

Web-Ready Document Viewing renders common document types for viewing within OWA, even if the application is not installed on that computer. For example, if you want to view an Excel attachment from a machine that does not have Excel installed, click the "*View as web page*" link next to the attachment. Exchange 2007 will convert the spreadsheet to a web page for viewing.

Reduced Compliance Risk

Exchange Server 2007 incorporates features specifically designed to help organizations comply with corporate, regulatory, and legal requirements. These features enable you to apply retention rules, scan and act on messages in transport, flexibly journal, and perform rich text searches across mailboxes. Exchange Server 2007 eases the toll often placed on administrators charged with applying and enforcing compliance policies, while avoiding adverse impact on employees and their productivity.

Managed folders allow administrators to configure common corporate folders that will display in users' Outlook and OWA that have specific retention periods. For example, a folder named *Legal* may have a seven year retention policy. Any items in this folder older than 7 years will automatically be purged to maintain the company's corporate retention policy.

Security

Exchange Server 2007 provides integrated antivirus, anti-spam and anti-phishing technologies to stop the latest threats before they impact employees and the organization. Reports show that over 70% of incoming traffic to government agencies is SPAM or Phishing attempts.

Multi-pronged message filtering in the perimeter network is available through the Edge Transport Server. For customers who prefer to use a service, similar capabilities are provided in the “cloud” (as an Internet-based service) through Exchange Hosted Filtering.

Edge Server for Exchange is a non-domain server that acts as the gateway between the Internet and the internal network. It replaces both the current SMTP gateway and Interscan servers, saving both hardware and software costs. It provides both anti-spam and anti-virus services for the organization. EdgeSync is a process that synchronizes the email addresses in AD and the user Junk Mail safe lists/block lists with the Edge server to reduce spam at the network edge.

Additionally, Forefront Security for Exchange Server protects Exchange servers from viruses and worms by utilizing multiple antivirus engines simultaneously. Up to five different antivirus engines (from a collection of nine) can be selected to scan each email against. This provides greater defense than previously possible. To protect from evolving threats, all filters are kept up to date with frequent and automatic updates.

Suspected spam that is not blocked by the Edge server is identified and delivered to Outlook's built-in Junk E-mail folder. Users can choose to block or allow emails from users or domains directly from Outlook without the need for third-party software.

Business Continuity and Disaster Recovery

In the past, Microsoft’s only answer to high availability was to run data-stores in a cluster environment or an expensive third party forwarding solution such as Zantaz. Nevertheless, this did not actually provide data storage protection. If the database was corrupted, then the entire solution failed.

New data replication capabilities in Exchange Server 2007 provide increased availability at a lower cost. Exchange 2007 offers several forms of fault tolerance:

Local Continuous Cluster (LCR) maintains a continuously updated copy of the active mailbox database on a different LUN to provide immediate failover capability if the active database becomes corrupt. The second copy is activated manually by the administrator. This delivers database redundancy with rapid recovery, and minimizes the frequency of full tape backups.

Cluster Continuous Replication (CCR) is a local cluster model where each node maintains its own database and replication is performed using log shipping. In the event of failure of a service, the cluster services immediately failover to the passive node and continue servicing client requests, minimizing downtime. CCR clusters can be stretched over distances, providing geographically dispersed clusters. In combination with Microsoft Cluster Service (MSCS), CCR provides both database and service redundancy without requiring expensive shared storage, even when clusters span geographic locations.

Standby Continuous Replication (SCR) is similar to CCR, but the failover node resides in a different geographic location. It utilizes log shipping for replication and the Hub Transport servers "fill in the blanks" for messages that may not have replicated since the time the active node went offline. SCR provides agencies with a full transaction log copy of the active node copied to an offsite facility in 1 MB increments, and allows for multiple path replications, for greater data backup redundancy and higher availability.

Exchange 2007 uses Dial-tone recovery which brings up Exchange service at a remote location without having immediate access to all data. Users can at least log in, receive mail and communicate during the time of adjustment, with the understanding that their previous data will be accessible once the other important systems are restored. However, that data may not be complete - it could be simply a copy of the last night's backup which can be restored onto the servers at the secondary site.

Using "Dial-tone" (and an associated model called "Standby Clustering", where manual activation of standby servers in a secondary datacenter can bring service - and maybe data - online), can provide a way of keep service availability high (albeit with temporary lowering of the quality, since all the historic data isn't there) at a time when you might really need that service (i.e. in a true disaster). Both of these approaches can be achieved without the complexity and expense of sharing disk storage, and without having to replicate the data in real-time to a secondary location.

Another important built-in feature of Exchange 2007 is the ability to restore a single user's mailbox without affecting others. Previously when a user accidently deleted an important email, the entire data store had to be shut down and restored. With Exchange 2007, the restoration storage group allows administrators to easily restore a single user's mailbox.

Administrator Productivity Tools

Exchange Server 2007 helps administrators save time and reduce effort with advanced management tools. A new command line interface gives administrators complete, fine-grained control over Exchange objects as well as the power to easily automate all types of operations with scripts. In addition, the graphical management console has been completely updated, with a more intuitive user interface, improved discoverability and a toolbox work center that integrates diagnostics, monitoring, and troubleshooting tools including the Exchange Best Practices Analyzer and the Exchange Troubleshooting Assistant.

Deployment and Management

Exchange Server 2007 has a modern, modular architecture based on server roles. The server role concept is integrated into setup and deployment, helping to eliminate potential errors resulting from manual configuration, reducing the surface area for malicious attacks, and simplifying day-to-day management. Server roles are not tied to particular hardware configurations (except for the Edge Transport role which is intentionally designed to reside by itself in the perimeter network). The new Autodiscover feature further eases deployment by creating an automatic connection between Exchange Server and Outlook 2007 clients where no special scripts or complex user intervention is required.

Technical Support

Microsoft has announced on their website (http://support.microsoft.com/lifecycle/?p1=1773) that they will no longer provide mainstream support for Exchange 2003 effective April 14, 2009.