

Atempo, Inc.

LiveServ for Microsoft Exchange Evaluation Guide

*Setup LiveServ for Exchange evaluation
edition and work with data protection
and recovery features*

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Table of Contents

OVERVIEW	1
What's inside.....	1
Other sources for help.....	1
Contact Atempo.....	2
BEFORE YOU INSTALL	2
Minimum system requirements.....	2
Recommendations by Exchange environment	3
Microsoft SQL Server configuration	4
Microsoft Exchange Server configuration.....	4
INSTALLING IN A CLUSTERED ENVIRONMENT	5
INSTALLING LIVESERV SERVER	5
INSTALLING LIVESERV EXCHANGE AGENT	6
PLANNING PROTECTION CONFIGURATION AND INITIAL BACKUPS.....	6
CONFIGURING PROTECTION	7
Vault level protection of Storage Groups	7
Brick-level protection of Mailbox and Public Folder data.....	8
PERFORMING A MANUAL BACKUP	9
RECOVERING A MESSAGE	9
RECOVERING A MAILBOX STORE	10
One-step Exchange Store Recovery Wizard	10
Custom Exchange Store Recovery Wizard	10

Recover a corrupted or deleted store.....	11
Recover to an Exchange Recovery Storage Group.....	12
MONITORING PROGRESS	14
Event Viewer.....	14
Performance.....	14
Reports	14
Activity	14
MAINTAINING THE LIVESERV DATABASE	15
SUMMARY	15

Overview

Thank you for choosing to evaluate Atempo LiveServ. We are confident that you will find it to be a revolutionary tool in your Exchange management arsenal. You will be able to increase data recovery service levels drastically while eliminating the labor-intensive steps common with traditional tools.

This document will assist you in your evaluation process by guiding you through the installation, configuration, and backup process, and then pointing you to several key features to evaluate protection and recovery.

What's inside

This document contains information on the following topics:

- Before you install
- Installing in a clustered environment
- Installing LiveServ Server
- Installing LiveServ Exchange Agent
- Planning protection configuration and initial backups
- Configuring protection
- Performing a manual backup
- Recovering an email
- Recovering a mailbox store
- Monitoring progress
- Maintaining the LiveServ database

Other sources for help

This document provides an overview of the features and functionality that you can review during your evaluation of LiveServ. For detailed instructions and reference information, you can refer to the following guides, which you can download from the Atempo Web site at <http://cdp.atempo.com/support/downloads.asp>

- ***LiveServ Planning Guide***: This guide provides preparation information for intermediate and advanced administrators who are planning to deploy Atempo LiveServ for Microsoft Exchange in their enterprise. It includes information on analyzing your current environment, planning hardware and software for the best performance, planning protection configuration, and planning initial replication.
- ***Getting Started with LiveServ***: This guide describes pre-installation requirements, installation procedures for LiveServ Server and LiveServ Exchange Agent, and initial configuration.

- **LiveServ Recovery Guide:** This guide provides an overview of the LiveServ data recovery wizards, and then provides detailed steps for recovering Exchange data from specific loss scenarios. Scenarios range from simple message recovery to complete Exchange Server disaster recovery.
- **LiveServ Help Files:** Included with your LiveServ product installation are a series of help files, which describe all functionality and features in LiveServ Management Console, LiveServ Protection Console, and LiveServ Exchange Agent, as well as LiveServ Setup. You can run any of these files by double-clicking in the root installation folder, or after installation by selecting any Help menu item.

Throughout this document, you will find call-outs that reference information in the documents above, where appropriate.

Contact Atempo

If you need assistance at any time, feel free to contact your assigned Sales Engineer. You can also check the Atempo Web site at <http://www.atempo.com/liveserv>.

We appreciate your feedback!

Before you install

In addition to the standard minimum requirements, LiveServ's requirements are based directly on the Exchange Server(s) to be protected. The number of Exchange Servers, type of protection, and amount of data all directly affect the requirements of LiveServ.

This chapter includes information on the following:

- Minimum system requirements
- Recommendations by Exchange environment
- Microsoft SQL Server configuration
- Microsoft Exchange Server configuration

See also...
**Getting Started with
 LiveServ Guide
 Chapter 2**

Minimum system requirements

For details on LiveServ Server, Exchange Agent and Console minimum system requirements, see the *Getting Started with LiveServ Guide*.

Before installing, be aware of the following issues that may affect your configuration:

General

- Server performance improves with increased RAM and faster disk subsystem.

Domains

- LiveServ is compatible with all domain configurations; however, LiveServ's configuration is simplest if you set up LiveServ Server and the protected servers to be members of the same domain.

Prerequisite software

LiveServ does not install prerequisite software such as .NET Framework and required service packs automatically, however, LiveServ does include all prerequisite software in a Prerequisites subfolder of the LiveServ installation package. See Chapter 2 of the *Getting Started with LiveServ* guide for details on installation.

Recommendations by Exchange environment

System recommendations for LiveServ should be based on the number of users, rate of change, and the total size of the Exchange Server database at the time of installation.

See also...

[LiveServ Planning Guide](#)

LiveServ will install and run properly given the minimum required hardware; however, speed, performance, and reliability improve with the recommendations.

LiveServ Server recommendations

< 500 Mailboxes	
Processor	Single Pentium 4, 3.0 Ghz or faster
RAM	2 GB
≥ 500 Mailboxes	
Processor	Dual Pentium 4, 3.0 Ghz or faster
RAM	4 GB

Storage requirements vary based on protection scheme, rate of change, and data retention settings. Atempo typically recommends 3 to 5 times the aggregate information store size, plus 250 MB free disk space for application files. RAID 5 or 10 configuration recommended.

LiveServ Exchange Agent recommendations

LiveServ Exchange Agent requirements mirror your Exchange Server software requirements, with an additional 180 MB of disk space required for installation.

Actual requirements depend heavily on your Exchange Server configuration. Atempo strongly recommends that you run Microsoft's Exchange Server Best Practices Analyzer Tool, which you can download from here

<http://www.microsoft.com/downloads/details.aspx?familyid=dbab201f-4bee-4943-ac22-e2ddb258df3&displaylang=en>.

If you configure your system as recommended by this tool, then LiveServ Exchange Agent will operate properly with no degradation to your system.

Note that additional software will also impact server and LiveServ performance. This software may include Anti-Virus, Spam Filters, and third-party backup tools. Make sure to account for this additional load when allocating hardware resources to your Exchange Server.

Microsoft SQL Server configuration

You must install and configure Microsoft SQL Server 2000¹ and apply SQL Server 2000 Service Pack 4, prior to installing LiveServ Server. Atempo and Microsoft recommend installing the latest available Service Packs for SQL Server.

Before and during the installation of SQL Server, please keep the following important points in mind:

- If you choose to install SQL Server on a remote server, you must install the SQL Server Client Tools locally on the LiveServ Server to enable communication between the LiveServ Server and the remote SQL Server. You must also install the LiveServ SQL Server Modules on the SQL Server to enable data storage. Install the SQL Server Modules prior to installing LiveServ Server.
- It is recommended that you install Windows Server, SQL Server, and the pagefile on three separate dedicated physical drives. Even better performance can be achieved if the log file and the database files are located on separate physical drives.
- Atempo recommends that you run the [Microsoft SQL Server Best Practices Analyzer tool](#), and then configure your LiveServ Server accordingly.

See also...

Getting Started with LiveServ Guide
“Microsoft SQL Server Setup” in Chapter 2

SEE ALSO *Microsoft SQL Server Introduction guide and Microsoft SQL Server online help, as well as the Microsoft SQL Server Web site at <http://www.microsoft.com/sql>*

Microsoft Exchange Server configuration

You can install the LiveServ Exchange Agent on any server running either Microsoft Exchange Server 2000 or Exchange Server 2003. Microsoft recommends some best practices for your Exchange Server setup. Atempo has found that the following recommendations improve performance and ease of setup for LiveServ. For full details on Microsoft Exchange Server best practices, see Microsoft’s documentation.

- Distribute user mailboxes across multiple Mailbox stores. This distribution increases performance and reliability. Also, if a particular store goes down, then only a subset of mailboxes are affected.
- Do not host your Exchange Server on a Windows domain controller. Hosting Exchange Server on a member server improves both Exchange Server and LiveServ performance and security.
- Store Exchange log files and Exchange database files on different physical RAID arrays.
- Do not install Microsoft Outlook on the Exchange Server.
- Disable Circular Logging in Exchange System Manager. If Circular Logging is enabled, then LiveServ cannot create incremental backups because Exchange is overwriting the log files. Therefore, LiveServ disables all incremental backup options.
- All Mailbox Stores must have a system mailbox, which Exchange creates by default.

SEE ALSO *Microsoft Exchange Server 2000 Resource Kit at <http://www.microsoft.com/technet/prodtechnol/exchange/2000/library/reskit/default.msp?mfr=true> and Microsoft Exchange Server 2003 Resource Kit at <http://www.microsoft.com/MSPress/books/6816.asp>.*

¹ LiveServ 2.x does not support Microsoft SQL Server 2005.

Installing in a clustered environment

LiveServ is compatible with your clustered server environment. Install

- LiveServ Server within a Microsoft SQL Server 2003 cluster group.
- LiveServ Exchange Agent within an active/passive Exchange 2000 or 2003 Server cluster group.

See also...

***Getting Started with
LiveServ Guide
Appendix B***

Before you install LiveServ within a Windows cluster, keep the following tips in mind:

- You must manually install LiveServ prerequisites on all cluster nodes. Since some of these installations may require a system restart, it is recommended that you plan this work during off-hours.
- For the clustered installation, you install LiveServ into the active node of the cluster, and the setup procedure will install the product on all cluster nodes automatically. This setup will install all necessary LiveServ files as well as setup the initial cluster configuration within the SQL cluster group or other cluster group you choose.
- To complete the installation, all cluster nodes must be online.
- When installed on a cluster, LiveServ services are configured for a manual startup and are controlled solely by the Windows Cluster Manager. As LiveServ will be managed as a cluster resource, you can also rely on the Windows Cluster Manager to manage fail-overs. For more information on cluster management, see your Microsoft Windows documentation.

Installing LiveServ Server

The LiveServ Server installation procedure installs the following components:

- **LiveServ Management Console:** This Microsoft Management Console (MMC) snap-in enables you to manage the server, allocate disk space, configure tasks, monitor performance, manage agents globally, and generate reports.
- **LiveServ Server:** This component receives data from protected servers and stores it in a Microsoft SQL database. It also transmits data back to the protected servers when data recovery is requested.
- **LiveServ Server SQL modules:** These components enable LiveServ to integrate with SQL Server to store protected data.

See also...

***Getting Started with
LiveServ Guide
Chapter 3***

To install LiveServ Server

1. Login to the server using a domain account that has local administrative privileges.
2. Insert the LiveServ Disc 1 CD-ROM into your CD-ROM drive.
3. Click **Install LiveServ Server**.
4. Follow the directions on your screen.

Installing LiveServ Exchange Agent

After you have installed LiveServ Server, you can begin setting up protection on each of your protected servers. To do so, you must install the following:

- **LiveServ Exchange Agent:** Protect Microsoft Exchange Server data, including complete storage groups, public and private folders, individual mail messages, and data from Exchange 2000 Server or Exchange 2003 Server.
- **LiveServ Protection Console:** Manage the protection agents, configure protection settings, create backup checkpoints and versions, and recover protected data from this Microsoft Management Console (MMC) snap-in. You may install this component on either the protected server, or any other computer that has access to the protected server.

To install LiveServ Exchange Agent

1. Login to the server using a domain account that has local administrative privileges.
2. Insert the LiveServ Disc 1 CD-ROM into your CD-ROM drive.
3. Click **Install LiveServ Exchange Server Agent**.
4. Follow the directions on your screen.

See also...

***Getting Started with
LiveServ Guide
Chapter 5***

Planning protection configuration and initial backups

LiveServ protects Exchange data in two ways:

- **Brick-level message protection:** LiveServ backs up each individual message (email, contact, note, appointment, etc.) from the Exchange Server to the LiveServ Server. This type of protection is called “brick-level protection.” LiveServ provides brick-level protection in real time: as changes are made and messages created, they are copied to the server.
- **Vault protection:** LiveServ also protects Exchange storage groups by backing them up as a vault of data. You can schedule full and incremental backups of the Exchange vault.

Initial replication of brick-level data is launched as soon as you select the Mailboxes and Public Folders that you want to protect from LiveServ Protection Console. The initial replication of Exchange brick-level data is the most resource intensive step in the LiveServ protection process in terms of network bandwidth, Exchange Server, and LiveServ Server hits. This intensive use of the system is because all Exchange data is replicated to the LiveServ Server at this time. After the initial replication, only changes are replicated, greatly reducing the network and system usage.

Consider this resource usage when you perform LiveServ's initial replication. It is recommended that you launch brick-level protection during off-peak Exchange Server usage, such as at night or over the weekend. You should also schedule your initial vault backup of storage groups to begin either before or after initial brick-level replication is complete.

By replicating during off-peak hours and by staggering your brick-level and vault-level replication, you can ensure optimal system resource usage during the initial replication.

Configuring protection

To protect Exchange data using LiveServ's Exchange Agent, you will need to configure both vault and brick level protection.

Vault level protection of Storage Groups

LiveServ's vault protection of Exchange data protects the entire Exchange information store. The information store is represented by one or more storage groups, which are comprised of mailbox stores, public folder stores, and log files. This information is protected as one data set: it is backed up as a whole and restored as a whole. To configure vault protection,

- Select the check boxes beside the storage groups and information stores that you want to protect
- Set a backup schedule
- Configure data aging to remove older versions

As you configure vault protection, keep the following points in mind:

- The initial backup will always be full.
- You schedule backups by selecting the frequency at which LiveServ creates backups. You can set the backup schedule to occur hourly, daily, weekly, or monthly. Depending on which interval you choose, LiveServ performs backups as follows:
 - **Hourly:** On the next full hour.
 - **Daily:** At midnight of the next day.
 - **Weekly:** On Sunday at midnight.
 - **Monthly:** At midnight on the first day of the month.

For the first full backup, LiveServ will always begin the backup at the next available interval. For example, if you choose Weekly, and today is Tuesday, then the first backup will occur Tuesday night at midnight, and subsequent backups will occur on Sundays.

- Incremental backups are created solely from Exchange's log files. Therefore, to create incremental backups as well as full, you must disable Exchange Server's Circular Logging option, which recycles log files to save disk space. If you do not, then LiveServ incremental backups will be disabled.
- If you have configured a third-party backup application to create incremental backups of your Exchange stores, then make sure to disable this option in LiveServ to avoid a conflict.
- You can schedule full or incremental backups of Exchange storage groups. You can schedule only full backups of individual Mailbox or Public Folder stores.

See also...

*Getting Started with
LiveServ Guide
Chapter 7*

- Although you cannot create incremental backups of individual stores, every time LiveServ creates an incremental backup of a storage group, it automatically creates an incremental backup of each store as well. These incremental backups will be available for recovery.
- Data aging removes older backups based on a number of criteria, including minimum versions to keep, maximum versions per day, total number of versions, and number of days old. To learn more about these options, see the *Help for LiveServ Exchange Agent*.

Brick-level protection of Mailbox and Public Folder data

LiveServ's brick-level protection backs up all mail data individually in real time, as changes are made. One brick is equivalent to one message, task, contact, etc. This live protection of bricks may be applied to any mailbox(es) or public folder(s), and protects the contents of those folders including messages, tasks, notes, contacts, etc. Brick-level protection can be configured from the Mailboxes and Public Folders nodes in LiveServ Protection Console, and its settings in both nodes are identical.

To configure message protection,

- Select the check boxes beside the mailboxes, mailbox folders, and public folders that you want to protect
- Exclude protection of mail read receipts and tracing information where appropriate
- Configure data aging to remove older versions

As you configure brick-level protection of your mailbox and public folder messages, keep the following points in mind:

- To exclude mail read receipts and tracing information on any mailbox or public folder, go to the folder's Protection Properties\Exclusions page, and select the desired exclude options.
- LiveServ does not protect the contents of the Outbox or Deleted Items folders.
- LiveServ live protects mailboxes of disabled users who have Allow permissions for an Associated External Account, as configured in the User Properties dialog box, under Exchange Advanced\Mailbox Rights in Active Directory Users and Computers.
- LiveServ does not live protect mailboxes of any other disabled users; however, these mailboxes will be backed up as part of your storage group backups.
- LiveServ does not protect disconnected mailboxes; however, these mailboxes will also be backed up as part of your storage group backups
- Sent messages are protected only if they are saved to the Sent Items folder. Sent messages will not be protected if they are saved in any other folder, including a subfolder of Sent Items.
- LiveServ protects messages with subject lines containing up to 64 backslashes and up to 150 special symbols.

- LiveServ fully supports non-English characters, such as those in Kanji Script, as long as the corresponding locale support is installed on the Exchange Server computer and configured with the Exchange Server software.

Performing a manual backup

You can create manual versions of storage groups, information stores, mailboxes, or public folders. This type of backup is useful if live protection is disabled, or if you choose not to back up on a schedule. It is also helpful for creating a point-in-time snapshot of your Exchange Server data at any point in time.

To perform a manual backup, right-click the data such as storage group, mailbox, or message that you want to back up, and then choose **Back up now**. Choose backup options and then click **OK**.

You can check the progress of the backup under the **Activity** node in LiveServ Protection Console. Once the job has finished, you can verify the backup by checking the **Versions** page in the data **Properties** sheet.

See also...

[Help for LiveServ Exchange Agent "Back up data"](#)

Recovering a message

Recovering one or more lost messages may be the most common restoration task for which you use LiveServ. If one or more messages in any user's protected mailbox is deleted for any reason, you can restore it within minutes. Since LiveServ protects messages in real time, it captures and saves messages immediately in the LiveServ Server storage database, so you always have the latest messages available. You can restore any available version.

Note that in the following procedure, messages refer to all types of Exchange mail data, including email, contacts, tasks, notes, etc. To recover message level data, you must have configured live protection for the folder containing the message you want to restore. If you have not protected this mailbox, then recovery will not be available.

To restore one or more lost messages:

1. Run LiveServ Protection Console.
2. Expand LiveServ Protected Servers, and then expand a *servername*.
3. Expand **Exchange Protection**, and then click **Mailboxes**.
All users' mailboxes appear in the center pane of the LiveServ Protection Console.
4. Locate the specific user's mailbox, and then expand it.
All folders within the mailbox appear, such as Inbox, Sent Items, etc.
5. Click the folder that originally contained the lost message.
All protected messages, both current and previously deleted, appear in the right pane of the LiveServ Protection Console. Previously deleted messages will appear with the status *Recover*, indicating that they are available for recovery.
6. Press **Ctrl** as you click each message that you want to recover. Right-click any selected message, and then click **Message recovery**.
The Exchange Message Recovery Wizard appears.

7. To restore the most recent version of the message to its original location, accept the defaults in the wizard by clicking **Next** in each page. Then in the final Summary page, click **Recover**.

Within moments, the selected message is restored to the mailbox and will be available on the end-user's system again.

Recovering a mailbox store

There are two Store Recovery Wizards that help you restore the Exchange data vault:

- One-step Exchange Store Recovery Wizard, for point in time recovery of the entire Exchange information store
- Custom Exchange Store Recovery Wizard, for recovery of any information store and access to custom recovery options

One-step Exchange Store Recovery Wizard

The One-step Exchange Store Recovery Wizard provides one step recovery of the entire Exchange vault of information stores up to the minute that you select. When you run this wizard, you specify just the time to which you want to restore. LiveServ recovers the appropriate full and incremental backups, and then applies the most recent changes made to messages that were captured by LiveServ's live protection.

You can use this recovery wizard on any Exchange storage group, public folder store, or mailbox store.

Custom Exchange Store Recovery Wizard

The Exchange Custom Store Recovery Wizard lets you recover a full or incremental backup of any Exchange storage group, mailbox store, or public folder store. You can customize how data is restored using options such as selecting a specific manual or scheduled backup version, choosing a store location, mounting stores, applying log files, and backing up data before recovering it.

Note that although this wizard provides the option of applying log files, it will not restore live-protected individual messages up to a specific point in time, as the One-step Exchange Store Recovery Wizard does. To restore the incremental changes to individual messages, you must run either the One-step Exchange Store Recovery Wizard or run the Exchange Message Recovery Wizard after completing the Custom Recovery Wizard.

Recover a deleted store

You can use LiveServ in conjunction with Exchange System Manager to recover a protected store that has been deleted. With LiveServ, recovery is simple: recreate the store using the exact name as the original, and then use LiveServ's Custom Exchange Store Recovery Wizard to restore any valid checkpoint to the new store. For this scenario, you must use LiveServ's recovery to an alternate location rather than the original location, because the new store has different GUID than the original, making recovery to the original destination impossible.

You should recover corrupted stores to an alternate location if the configuration information about store/storage group has been removed from Active Directory (for example, due to accidental user error or domain controller failure).

When recovering any deleted store, Public Folder Store, or Exchange Server 2000 store, you must use LiveServ's option to recover to an alternate location rather than recover to a Recovery Storage Group, because Recovery Storage Groups do not support this functionality. To learn about using Recovery Storage Groups, see the next section.

SEE ALSO For more information, see: [Disaster Recovery for Microsoft Exchange Server 2000](#)

To recover a corrupted or deleted store:

1. Run Exchange System Manager and create a copy of the desired store.
The new store must have the exact name and location as the original store.
2. In LiveServ Protection Console, run the Custom Exchange Store Recovery Wizard on the desired store.
 - Expand **LiveServ Protected Servers**, then *servername*, and then **Exchange Protection**. Click **Storage Groups**.
 - In the details pane, expand the parent Storage Group.
 - Right-click the store, and then click **Custom Recovery**.
3. On the Welcome page, click **Next**.
4. On the Data Store Version Selection page, click the Full version of the store that you want to recover, and then click **Next**.
5. On the Recovery Location page, click **Restore store(s) to the following location**. Click **Browse**, and then select the store you created in step 1, and click **OK**. The store you selected appears in the location box on the wizard page. Click **Next**.
6. On the Recover Options page, select **Mount stores at the end of recovery**, and then click **Next**.
7. On the Pre-Recovery Backup page, make sure the **Back up current data before recovery** check box is cleared, and then click **Next**.
8. On the Completing page, click **Recover**. LiveServ recovers the store to the location you selected.
9. After recovery completes, make sure that all mailboxes are reconnected to the desired users: In Exchange System Manager, right-click the disconnected mailbox, and then click **Reconnect**. A dialog box is displayed in which you can choose the mailbox owner.

Recover to an Exchange Recovery Storage Group

Microsoft Exchange Server 2003 supports recovery storage groups. Using a recovery storage group, you can mount a second copy of an Exchange mailbox store and recover a backup copy to that store with no interruption in mail service to clients.

LiveServ supports Exchange Recovery Storage Groups as a recovery destination in its Custom Exchange Store Recovery Wizard.

According to Microsoft Exchange, using recovery storage groups is appropriate in the following situations:[©](#)

- The logical information about the storage group and its mailboxes remains intact and unchanged in Microsoft® Active Directory® directory service.
- You are working with Exchange Server 2003 Mailbox stores (Public Folder Stores are not supported).
- You need to recover a single mailbox, a single database, or a group of databases in a single storage group. Recovery scenarios include:
 - Recovering deleted items that a user mistakenly purged from their mailbox.
 - Recovering or repairing an alternate copy of a database while another copy remains in production (typically, with the goal of merging data between the two databases using the Mailbox Merge Wizard (ExMerge) tool.
 - Recovering a database on a server other than the original server for that database. If needed, you can then merge the recovered data back to the original server (although performance would be slower than if the recovery storage group and the original database were on the same server).

Exchange 2003 logically isolates the database copy running in the recovery storage group from the rest of the Exchange organization. Clients cannot log on to this database, and mail cannot be delivered to it. To use the data in the recovery storage group, you must use the Exchange Mailbox Merge Wizard (ExMerge) to extract mailbox data from this database. For more information on ExMerge, see [ExMerge Strategies and Best Practices](#).

LiveServ enables you to recover stores to their original location or an alternate location in addition to recovering to a recovery storage group. Whether you use recovery storage groups is a decision you must make after carefully considering all the implications in Microsoft Exchange. Read [Using Recovery Storage Groups in Exchange Server 2003](#), on the Microsoft Web site.

To recover to a recovery storage group using LiveServ:

1. In Exchange System Manager, create a recovery storage group, or make sure one exists.
2. In LiveServ Protection Console, run the Custom Exchange Store Recovery Wizard on the desired store.
3. On the Welcome page, click **Next**.
4. On the Data Store Version Selection page, click the full or incremental version of the store that you want to recover, and then click **Next**.
5. On the Recovery Location page, click **Restore store(s) to the Recovery Storage Group**. Click **Next**.
6. On the Recover Options page, clear **Mount stores at the end of recovery**, and then click **Next**.
7. On the Pre-Recovery Backup page, make sure the **Back up current data before recovery** check box is cleared, and then click **Next**.
8. On the Completing page, click **Recover**. LiveServ recovers the store to the recovery storage group.
9. After recovery completes, you must follow Exchange procedures for making the data accessible. See your accompanying Microsoft Exchange Server 2003 documentation.

Monitoring progress

LiveServ provides the following tools for monitoring functionality:

Event Viewer

The Windows Event Viewer is available as a snap-in to both the LiveServ Management Console and the LiveServ Protection Console. Click the **Event Viewer** node under the *servername* to view informational messages, warnings, and errors about LiveServ functionality.

Performance

The Windows Performance Monitor is available as a snap-in to both the LiveServ Management Console and the LiveServ Protection Console. Click the **Performance** node under the *servername* to configure counters and monitor LiveServ's performance.

Reports

LiveServ provides a number of reports on LiveServ Server functionality. These reports are available along with Tasks under the LiveServ Management Console. The following reports are available:

- **Data profile:** Analyzes the contents of the LiveServ storage database and provides information about the total size of data stored in the LiveServ Server as well as the storage space saved as a result of compression and redundancy elimination.
- **Data storage growth:** Calculates the increase in storage requirements for all data in the server since the last time the report was run. The results display all data growth and the total aggregate growth.
- **Data transfer:** Calculates the size of data transferred between the LiveServ Server and the protected server since the last time the report was run. The results display the total data transferred.
- **Security violations:** Tracks the number of security access violations for the server since the last time the report was run. The results display the number of errors for all data, as well as the total aggregate for the LiveServ system.

See also...

[Help for LiveServ Management Console "Tasks"](#)

Activity

You can view jobs and job properties for LiveServ backup and recovery tasks, including the type of job, job start and elapsed times, and the percentage or amount of data being processed. To monitor progress of back and recovery jobs, click **Activity** in the LiveServ Protection Console.

See also...

[Help for LiveServ Protection Console "Monitor Job Activity"](#)

Maintaining the LiveServ database

LiveServ offers a number of tools for maintaining the LiveServ database. These tools are accessible from the LiveServ Management Console under **Tasks**. The default schedule works best for most environments, but if necessary, you can modify the schedule or run each task manually.

See also...

*Help for LiveServ
Management Console
“Tasks”*

The following tasks are available:

- **Data aging:** Scans the LiveServ database and removes outdated and intermediate data versions, decreasing total storage requirements. Data Aging settings are specified in the LiveServ Protection Console for each individual agent. It is recommended that you leave the default schedule. If this default schedule conflicts with another task, such as database backup or peak load, you may alter the start time, but do not disable this task.
- **Index defragmentation:** Reorganizes the storage of the index data to remove fragmentation. This task is an online operation. It does not hold locks long-term, and thus will not block running queries or updates. This operation can be stopped and restarted with no loss of previous work. It is recommended that you leave the default schedule. If the default schedule conflicts with another process, such as database backup or peak load, you may alter the start time, but do not disable this task.
- **Index rebuild:** Optimizes the LiveServ database indexes for faster performance. This task is an offline operation, placing exclusive table locks. While the task is running, the underlying table is unavailable to database users. It is recommended that you run this task weekly during off-peak hours, when the LiveServ Server is not busy with backups.

Summary

Throughout this guide, you have sampled each major feature of LiveServ, including protection configuration, backup, message recovery, store recovery, monitoring, and database maintenance. After this evaluation, we are confident that you will trust LiveServ for complete continuous data protection of your Exchange Server data.

When you are ready to take the next step, please contact your assigned Sales Engineer, if you have one, or the Atempo Sales department:

Email: livesales@atempo.com

Phone: (650) 494-2600

Web: <http://www.atempo.com/liveserv>

Support: (310) 302-7270