Acronis® Recovery

for MS Exchange

User's Guide

ACRONIS, INC.

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Chapter 1. Introducing Acronis® Recovery for MS Exchange

This chapter provides general information about a new Acronis product - Acronis Recovery for MS Exchange – its features and advantages. You will learn about supported databases, operating systems and platforms.

1.1 What is Acronis Recovery for MS Exchange?

Acronis Recovery for MS Exchange offers a *fast and reliable disaster recovery solution* to protect your Microsoft Exchange data. It features a proven database backup technology that will drastically reduce disaster recovery time: you can be up and running again in minutes instead of hours. It also provides document level backup, providing incredible flexibility that allows backing up of only individual mailboxes/public folders and uses message filters to reduce both an archive size and duration of a backup process.

Acronis Recovery for MS Exchange is shipped in two editions – original Acronis Recovery for MS Exchange for larger organizations and Acronis Recovery for MS Exchange Small Business Edition (Acronis Recovery for MS Exchange SBE) for small and/or start-up businesses. See 1.3 "Difference Between Acronis Recovery for MS Exchange Editions" for more information.

One-step Recovery and Automated Recovery to a Point-of-Failure reduce downtime and helps improve your organization's Recovery Time Objective (RTO).

Acronis Recovery for MS Exchange is an excellent complement to the award-winning Acronis True Image suite of disaster recovery and system migration products that use patented disk-imaging technology. Together they deliver comprehensive server system backup and restore and also full Microsoft Exchange database protection — a winning disaster recovery plan combination.

- **Ultimate Granularity**

  Acronis Recovery for MS Exchange provides the ultimate in granularity for backup and restore. Backup and restore operation can be applied to a whole information store, individual storage groups, mailboxes/public folders or even single emails.

With Acronis Recovery for MS Exchange you can restore your crucial mailboxes or single emails from different kinds of backup – not only from brick-level backups, but from a whole-database backup archive as well.

- **Smaller, more manageable archives**

  Award-winning Acronis technology provides superior image file optimization. Customizable compression rates reduce the amount of data to store and transfer, leading to direct cost savings in storage and labor.

- **High Speed**

  Acronis Recovery for MS Exchange provides proven database backup technology that maximizes backup speed.

  With its ability to restore any data (mailboxes, public folders or individual emails) from a database level backup, Acronis eliminates the need for time-consuming brick-level backups.

- **Active Restore™**

  Active Restore™ mode provides full Microsoft Exchange Server functionality for users in minutes, while the system is still being restored. Using Active Restore™, combined with automated Dial-tone restore mode, you can limit downtime of your Microsoft Exchange 2007 Server to only seconds.

- **Continuous Data Protection**

  Continuously back up transactions to enable the complete restoration of Microsoft Exchange Server databases with minimum data loss.

- **Faster Disaster Recovery**

  One-step Recovery and Automated Recovery to the point-of-failure help organizations meet aggressive Recovery Time Objectives (RTO).

- **Encryption for Security**

  Protect companies' most valuable data with industry-standard encryption.

- **Centralized Management**

  The Acronis Recovery for MS Exchange Management Console automatically detects all database servers on the network. The servers are displayed clearly with status information, making it easy to manage enterprise-wide installations.

- **Resource Management**

  CPU and bandwidth throttling let you allocate resources during the backup process to ensure users remain productive.

- **Guided Disaster Recovery**

  Acronis database backup also provides you with a Disaster Recovery Plan, detailing step-by-step instructions to guide you or your team through a fast and complete recovery. Even non-technical staff members can follow these simple instructions to restore even the most sophisticated Microsoft Exchange server.

- **Integration with Acronis True Image Echo**

  Installed on the same computer, Acronis True Image Echo Update (build 8115 or later) and Acronis Recovery for MS Exchange can restore a whole

production server (operating system and whole information store) on bare metal from bootable CD or from a PXE.

- **Easy Administration**

  Intuitive wizard-driven GUI allows even non-DBAs to confidently configure and implement professional backup strategies.

1.2 Why Acronis Recovery for MS Exchange?

Comprehensive recovery requires more than just a backup of information stores. Your Microsoft Exchange mailbox server contains storage groups, logs, mailboxes, public folders, mails, and other components that structure the data. Using Acronis Recovery for MS Exchange, a cohesive and intuitive backup solution, is the critical step you can take to ensure a secure live Microsoft Exchange mailbox server backup that can be quickly recovered.

With Acronis Recovery for MS Exchange restoring individual emails became easier – you can do it from any kind of backup (both database and brick-level).

Recovery is now made easy with automated system restore to a point-of-failure. There is no need to walk through menus to get your system back online. This one-step process will return your database to the last known good state just before failure. Erroneous transactions will no longer cost you minutes or hours in recovery.

This powerful product includes an intuitive wizard-driven GUI that guides you through the scheduling process and reduces the possibility of errors. The Backup Strategy Assistant creates a Disaster Recovery Plan for your environment, delivering step-by-step instructions for recovery. Anyone, whether an experienced DBA or not, can schedule backup jobs and handle system restores rapidly. Acronis even provides FTP capability for storing your backup on any FTP server, worldwide.

1.3 Two Acronis Recovery for MS Exchange Editions

You can choose between two editions of Acronis Recovery for MS Exchange. Your choice is based on the size environment it will be installed in:

- **Acronis Recovery for MS Exchange**, appropriate for larger businesses
- **Acronis Recovery for MS Exchange Small Business Edition** (Acronis Recovery for MS Exchange SBE). This less expensive alternative is tailored for small and/or start-up businesses. The agent can only be installed on Windows SBS 2003 and Windows SBS 2008 operating systems.

1.4 Advantages

With Acronis Recovery for MS Exchange you get the following advantages:

- **Hot Backup**

  Backup can be performed while the Microsoft Exchange service is online and serving clients allowing 24/7 availability

- **Restore Emails from Database Level Backup**

  Acronis Recovery for MS Exchange provides the ability to restore specific emails from database level backup

- **Tuning a Backup Strategy with Acronis Recovery for MS Exchange Assistant**

Acronis Recovery for MS Exchange Assistant provides an intuitive GUI for easy creation and implementation of a backup strategy, even without DBA experience

- **Disaster Recovery Plan**

  Automatically creates and e-mails Disaster Recovery Plans with step-by-step instructions on recovering databases. The guided process makes it possible for staff to restore databases quickly, even without DBA skills

- **Recovery to a Selected Point-in-Time**

  With transaction log backed up, Acronis Recovery for MS Exchange allows you to specify a date and time to restore your data from

1.5 Key Features

- **Database Backup (Fastest Method)**

  Acronis Recovery for MS Exchange provides the ability to backup all data at a database level. This is the fastest, but the least flexible backup method

- **Brick-Level Backup**

  Acronis Recovery for MS Exchange provides the ability to backup all data at a documents level (brick-level). This is not the fastest, but the most flexible backup method

- **Bare Metal Restore**

  The bare metal restore feature restores a whole production server (operating system and all databases) on bare metal from a bootable CD or from a PXE. This feature is available only if Acronis True Image Echo Update (build 8115 or later) and Acronis Recovery for MS Exchange are installed on the server

- **Automated recovery to point-of-failure**

  Automated recovery to point-of-failure allows easy one-step recovery to a point just before failure or disaster with no loss of data

- **Encryption**

  Protect backups with industry strength-standard encryption technology. AES (Advanced Encryption Standard) is available with three key lengths – 128, 192 and 256 bits to balance performance and protection as desired

- **Compression**

  Create backups up to 10 times smaller than the original uncompressed format. Three compression levels let you optimize for faster performance, smaller size, or a balance of both

- **Dial Tone Recovery**

  Acronis Recovery for MS Exchange can restore e-mail service more quickly to users (providing them with a basic "dial tone") and then restore users' previous data as it becomes available

- **Bandwidth Throttling**

  Control bandwidth usage to keep the backup process transparent to network users

- **Notifications**

  Configure notification via e-mail and SNMP

- **Automated recovery staging**

  Every restore scenario can be executed in one step. There is no need to manually restore from different archives keeping in mind the database state

- **Scheduling complete backup strategy**

  Schedule the complete backup strategy, including Full and Incremental backup in one action

- **Restore Mailboxes from Brick-Level Backup**

  The system provides the ability to restore mailboxes from brick-level backup

- **Restore Mailboxes from Database-Level Backup**

  The system provides the ability to restore mailboxes from database level backup

- **Restore Emails from Brick-Level Backup**

  Acronis Recovery for MS Exchange provides the ability to restore specific mails from brick-level backup

- **Command-Line Mode**

  The system provides command-line user interface

1.6 Supported Microsoft Exchange versions

- Microsoft Exchange Server 2007 (Standard/Enterprise Editions)
- Microsoft Exchange Server 2003 (Standard/Enterprise Editions)
- Microsoft Exchange Server 2000 Server with post-Service Pack 3 rollup (Standard/Enterprise Editions)

	Important! Acronis Recovery for MS Exchange Agent is only guaranteed to work with Microsoft Exchange Server 2003 service packs installed. Note, to handle MAPI interfaces correctly, Service Pack 2 and hotfix kb908072 must be installed (see Microsoft website for details).
	In case you are using Microsoft Exchange Server 2007, make sure Microsoft Messaging API and Collaboration Data Objects 1.2.1 are installed (they are included in Microsoft Exchange Server 2007 product, but will not be installed by default). Visit Microsoft website: http://www.microsoft.com/downloads/details.aspx?FamilyID=94274318-27c4-4d8d-9bc5-3e6484286b1f&DisplayLang=en Note, this version of the package is now compatible with Windows Vista and Windows Server 2008.

Please note, Acronis Recovery for MS Exchange is **not** a cluster-aware product.

1.7 Supported Platforms

- x86 (for Microsoft Exchange Server 2000/2003)

- x86-64

1.8 Supported Operating Systems for Acronis Recovery for MS Exchange Agent

For Acronis Recovery for MS Exchange:

- Windows 2000 (SP4 Rollup 1)
- Windows Server 2003 (both 32-bit and 64-bit versions)
- Windows 2008 Server

For Acronis Recovery for MS Exchange Small Business Edition:

- Windows SBS 2003
- Windows SBS 2008

1.9 Supported Operating Systems for Acronis Recovery for MS Exchange Management Console

- Windows XP (SP 1)
- Windows Vista
- Windows 2000 (SP4 Rollup 1)
- Windows 2003
- Windows 2008

1.10 License Policy

Acronis Recovery for MS Exchange licensing is based on the number of servers on which Acronis Recovery for MS Exchange Agent is to be installed. You will need a unique serial number to install every single Acronis Recovery for MS Exchange Agent.

Acronis Recovery for MS Exchange is provided with three types of licenses:

Permanent – allows you to use the fully functional product without any time limitations (permanent serial number is required)

Trial - allows you to use the fully functional product for 14 days (trial serial number is required)

Registered – used for customers, registered on the Acronis web site. It also allows working with the fully functional product for 14 days (no serial number is required)

Obtaining Permanent Serial Numbers

Obtaining a permanent serial number depends on the way you purchase Acronis Recovery for MS Exchange:

- you will find it in the CD box if you buy the licensed Acronis Recovery for MS Exchange CD
- you can receive it after registering on the Acronis web site in case you download the product (also during installation of the product)

Trial Serial Numbers

Acronis allows you to have a trial serial number to be able to use Acronis Recovery for MS Exchange for 14 days without buying the product. You may obtain the trial serial number in one of the following ways:

- in the CD box

- contacting Acronis sales representatives. Visit

  http://www.acronis.com/enterprise/products/ARExchange/gettrial/

  You have to sign in (or register) to obtain a trial serial number.

If you downloaded a trial version of Acronis Recovery for MS Exchange from our web site and want to buy a permanent license to continue using the product, please contact our sales representatives. In this case you will not have to download the product again, but only enter a registered serial number during the installation.

	Note, the Management Console should be connected to Acronis Recovery for MS Exchange, otherwise the Registration menu item will not be presented in the Help menu.

The number of Acronis Recovery for MS Exchange Management Console installations is not limited.

1.11 Technical Support

As part of a purchased annual Support charge you are entitled to Technical Support as follows: to the extent that electronic services are available, you may electronically access at no additional charge, Support services for the Software, which Acronis shall endeavor to make available twenty four (24) hours a day, seven (7) days per week. Such electronic services may include, but are not limited to: user forums; software-specific information; hints and tips; bug fix retrieval via the internet; software maintenance and demonstration code retrieval via a WAN-accessible FTP server; and access to a problem resolution database via Acronis customer support system.

Support shall consist of supplying telephone or other electronic support to you in order to help you locate and, on its own, correct problems with the Software and supplying patches, updates and other changes that Acronis, at its sole discretion, makes or adds to the Software and which Acronis makes generally available, without additional charge, to other licensees of the Software that are enrolled in Support. Upon mutual agreement by both parties, Acronis shall: (i) supply code corrections to you to correct Software malfunctions in order to bring such Software into substantial conformity with the published operating specifications for the most current version of the Software unless your unauthorized modifications prohibit or hamper such corrections or cause the malfunction; or (ii) supply code corrections to correct insubstantial problems at the next general release of the Software.

More information about contacting Acronis Technical Support is available at the following link: http://www.acronis.com/enterprise/support/

Chapter 2. Understanding Acronis Recovery for MS Exchange

This chapter provides common information about working with Acronis Recovery for MS Exchange.

2.1 Components

Acronis Recovery for MS Exchange includes the following components:

- Management Tools including Acronis Recovery for MS Exchange Management Console
- Acronis Recovery for MS Exchange Agent

2.1.1 Acronis Recovery for MS Exchange Management Console

Acronis Recovery for MS Exchange Management Console is a tool for managing data backup/restore on the local network from a single location. Using it, you can install agents remotely, schedule tasks, recover data remotely, and set backup/restore options on remote Exchange servers.

2.1.2 Acronis Recovery for MS Exchange Agent

The Acronis Recovery for MS Exchange Agent is installed on the computers on which you want to backup/restore a Microsoft Exchange database.

2.2 Components Integration

Acronis Recovery for MS Exchange Management Console is installed on the computer from which you plan to manage operation processes on remote database servers.

After issuing a backup or restore command from the Management Console, Acronis Recovery for MS Exchange sends a request to the Acronis Recovery for MS Exchange Agent to retrieve the required storage group or mailbox from Microsoft Exchange and sends it to Acronis Recovery for MS Exchange, which backs up the selected data.

Below are diagrams describing interaction between Management Console and Agent.
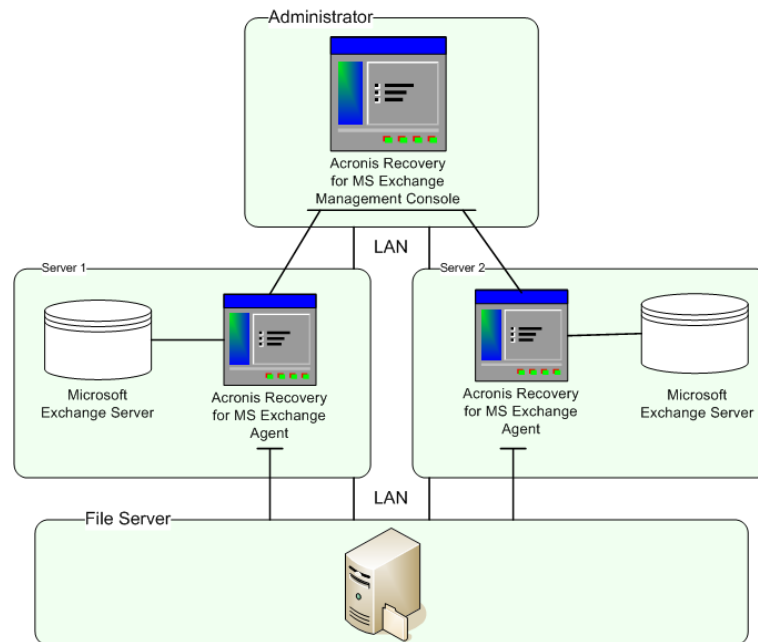
Integration between Acronis Recovery for MS Exchange and Acronis Recovery for MS Exchange Agents

2.3 Integration with Acronis True Image Echo Enterprise Server

Acronis Recovery products are integrated with Acronis True Image Echo Enterprise Server Update (build 8115 or later) that provides the ability to automatically execute preconfigured restore tasks in case of disaster.

There are three points of integration:

- Ability to start Acronis Recovery for MS Exchange tasks from the Acronis True Image Echo Enterprise Server management console

- Bare metal restore

- Microsoft Exchange Server files exclusion while creating backup tasks with Acronis True Image Echo Enterprise Server

2.3.1 Starting Tasks from the Acronis True Image Echo Enterprise Server Management Console

Integration allows accessing main Acronis Recovery for MS Exchange functions (wizards and tools) from the Acronis True Image Echo Enterprise Server management console in case if both consoles are installed on the same computer. The Acronis Recovery for MS Exchange Agent must be installed on the remote computer.

Clicking the corresponding button, user will launch the desired Acronis Recovery for MS Exchange wizard or tool directly. This functionality will be disabled if any of Acronis Recovery for MS Exchange Agent or Management Console is not installed.

2.3.2 Bare Metal Restore

Acronis Recovery for MS Exchange provides the ability to restore a whole production server on bare metal from a bootable CD or from the PXE. This functionality is provided by Acronis True Image Echo Enterprise Server.

Configuring Bare Metal Restore

To restore all necessary information stores on bare metal or to create a bootable media, you need a previously created archive with required information stores backed up.

After creating an archive, do the following:

1. Launch a **Restore** wizard to schedule a restore task and choose a **Bare Metal Restore** option in the first step.

2. Specify a task execution account.

3. Choose an archive and point in time (point of failure), select the necessary storage groups and set additional parameters (such as a password) for each archive.

4. Backup a partition with Acronis Recovery for MS Exchange installed using Acronis True Image Echo Enterprise Server (see Acronis True Image Echo Enterprise Server User's Guide for detailed information).

Restoring a Server from a Bootable Media

After hardware failure it is necessary to restore the whole system, including the operating system and databases, located on different hard drives. To restore partitions and storage groups/databases (to the last possible state), do the following:

1. Start the computer from a bootable media, previously created using Acronis True Image Echo Enterprise Server.

2. Execute an Echo bare metal restore (see Acronis True Image Echo Enterprise Server User's Guide for detailed information).

In case a company stores databases on external SAN/NAS, and an administrator only needs to restore an operating system, the following actions should be performed: start the computer from a bootable media, previously created using Acronis True Image Echo Enterprise Server, and then execute an Echo bare metal restore (see Acronis True Image Echo Enterprise Server User's Guide for detailed information).

If databases are stored on SAN/NAS, while preparing for restoring, do not configure bare metal restore tasks, as described in section "Configuring Bare Metal Restore".

Starting a Bare Metal Restore Task

In case of hardware failure you have to restore the lost partition using the Acronis True Image Echo Enterprise Server, and then start the Acronis Recovery for MS Exchange bare metal restore task. To start this task automatically, you need to select the **Run Acronis Recovery for MS Exchange Bare Metal Restore after data recovery** option in the final step of the Acronis True Image Echo Enterprise Server **Restore Data** wizard.

2.3.3 Files Exclusion

Integration allows users to exclude Microsoft Exchange Server files while backing up a partition with Acronis True Image Echo Enterprise Server.

To exclude Microsoft Exchange Server files *(*.edb, *.stm, *.log, *.pat)*, in Acronis True Image Echo Enterprise Server **Create Backup** wizard at *Source Files Exclusion* step select the **Exclude all MS Exchange databases files** option.

Chapter 3. Installation of Acronis Recovery for MS Exchange

From this chapter you will learn how to install Acronis Recovery for MS Exchange components both locally and remotely.

3.1 Minimum System Requirements

Acronis Recovery for MS Exchange requires the following hardware:

- Pentium processor or higher
- 1024 MB RAM
- Mouse (recommended)

3.2 Security Policy

3.2.1 Credentials

Acronis Recovery for MS Exchange obtains access to networked computers using two types of credentials.

1. **Credentials with Guest Rights** – used for access to configuration and status data on each computer. The credentials you provide during Acronis Recovery for MS Exchange installation will be applied to all networked computers. This is convenient for domain administrators, who can create a domain user account with guest rights and remote access rights to every computer. In a workgroup, it would also make sense to create identical accounts with guest rights on each computer accessed by Acronis Recovery for MS Exchange.

   If you do not wish to create a uniform account, you will need to provide guest credentials for each computer after the installation and initial network discovery via **Manage Computer** -> **Set Credentials**.

   You can combine both methods. For example, set a uniform account for domain members and set individual accounts for members of a workgroup.

2. **Administrator Credentials** – used for performing migration, deployment or other tasks which require such rights. These are entered during creation of tasks.

Naturally, you are free to use administrator credentials for both purposes. This will work, but make sure it conforms to the security policy set in your network.

3.2.2 Firewall Settings

Acronis Recovery for MS Exchange uses the following ports for remote operation:

- server (Acronis Recovery for MS Exchange Agents)   UDP port: 9876

- server (Acronis Recovery for MS Exchange Agents) TCP port: 9876, if busy choose a port at random

- client (Acronis Recovery for MS Exchange)   UDP port: 9877, if busy choose a port at random

You might have to set the appropriate firewall access options. Options for the Windows Firewall, included in Windows XP Service Pack 2, Windows 2003 Server and later Windows versions, are set automatically during installation of Acronis Recovery for MS Exchange components. However, make sure that the option **File and Printer Sharing in the Control panel -> Windows Firewall -> Exceptions** is enabled on the remote computer, *before* the remote operation starts.

3.3 General Rules of Installation

Acronis Recovery for MS Exchange components and their features can be installed in multiple configurations, in terms of distributing the components and features among the networked computers.

3.3.1 Installing Acronis Recovery for MS Exchange Components

There are two ways to install Acronis Recovery for MS Exchange components – local and remote.

To install Acronis Recovery for MS Exchange Management Console and Acronis Recovery for MS Exchange Agent locally:

- run the Acronis Recovery for MS Exchange setup file

- in the Install Menu, select the program to install: Acronis Recovery for MS Exchange Management Tools or Acronis Recovery for MS Exchange Agent

- follow the install wizard instructions on the screen

It is recommended that you install Acronis Recovery for MS Exchange Management Console first. This will allow you to install Acronis Recovery for MS Exchange Agent remotely from the Management Console to any networked computer (for information about the remote installation see 3.3.2 "Installing Acronis Recovery for MS Exchange Agent remotely").

In addition, Acronis Recovery for MS Exchange supports the Microsoft Installer utility (*msiexec.exe*) and its commands, so that you can install Acronis Recovery for MS Exchange components from a command line. MSI installation command and options are listed in Appendix B.

3.3.2 Installing Acronis Recovery for MS Exchange Agent Remotely

To install Acronis Recovery for MS Exchange Agent remotely on a database server, you first need Acronis Recovery for MS Exchange Management Console installed on the local computer. The remote system must meet the requirements described in 3.1 "Minimum System Requirements".

> Before remotely installing Acronis Recovery for MS Exchange Agent on Windows 2008 Server, open port 25001 for TCP protocols for an inbound connection.

Run Acronis Recovery for MS Exchange and click **Install Acronis Recovery for MS Exchange Agent** in the **Pick a Tool** pane.

1. Specify the location of installation files of the Acronis Component you want to install.

   - Select from the registered components (by default)

   - Search removable media for the required installation files

   - Search for the installer in the specified location (you will have to specify the location by clicking **Browse…**)

   Click **Next** to continue.

2. Select the program you want to install on the remote computer from the list (Acronis Recovery for MS Exchange Agent) and click **Next**.

3. Enter a serial number for the selected product. For information about obtaining a serial number, see section 1.8 "License Policy". The **Next** button will not be active until you enter a serial number.

4. Select the computer in the **Computer** field: enter a computer name manually or click **Browse…** and select the required computer from the tree. Enter a **User name** and **password** into the corresponding fields to access the selected computer. By selecting the **Save password** check-box you can save the password for future connections.

5. The summary page displays all operations, which will be performed. Click Proceed to install Acronis Recovery for MS Exchange Agent on the remote computer.

By connecting to a remote computer with Acronis Recovery for MS Exchange Agent installed, you can set up backup and recovery tasks, and browse logs.

3.3.3 Extracting Acronis Recovery for MS Exchange Components

To install Acronis Recovery for MS Exchange from the command line, you need to extract the .msi file *prior* to starting the installation process. Here are the steps for extracting the file:

- run the Acronis Recovery for MS Exchange setup file;
- in the Install Menu, right-click on the component name and select **Extract**;
- select a location for the setup file and click **Save.**

3.3.4 Removing Acronis Recovery for MS Exchange Components

You can remove any Acronis Recovery for MS Exchange component separately by selecting **Control panel -> Add or Remove Programs -> <component name> -> Remove**.

Component names are: *Acronis Recovery for MS Exchange* and *Acronis Recovery for MS Exchange Agent*.

Follow instructions on the screen. You may need to reboot your computer to complete the uninstallation.

Chapter 4. Getting started with Acronis Recovery for MS Exchange

This chapter will help you to start working with Acronis Recovery for MS Exchange, and will guide you through connecting to a remote server, and remote installation of Acronis Recovery for MS Exchange Agent.

4.1 Running Acronis Recovery for MS Exchange Management Console

To run Acronis Recovery for MS Exchange Management Console, select **Start -> Programs -> Acronis Recovery for MS Exchange Management Console -> Acronis Recovery for MS Exchange Management Console**.

	Important! Before starting managing the servers' list (discovering, adding or deleting servers), modifying the storage groups list for the Disaster Recovery Plan (see Chapter 6), or changing default options (while creating backup or restore tasks), make sure the required users have read/write permissions for the following files, located in *Documents and Settings\All Users\Application Data\Acronis*: DatabaseServersExtensions\serverslist.dat for Acronis Recovery for MS Exchange Management Console, DisasterRecoveryPlans\dbaselist.dat and RecoveryMSExchangeAgent\settings.cfg for Acronis Recovery for MS Exchange Agent.
	Note, in case Acronis Recovery for MS Exchange Agent is installed on Microsoft Windows 2000, BackupUser/BackupGroup must be a member of *Domain Admins* group. To configure these settings, go to *Control Panel → Administrative Tools*. Then sequentially add the BackupUser/BackupGroup in each of the following security policies: Domain Controller Security Settings, Domain Secirity Settings and Local Security Settings (*Local Policies → User Rights Assignment → Act as a part of the operating system*).

Please be aware: Acronis Recovery for MS Exchange *will not operate* if there is no free space on the system partition, and the software does not send notices when there is no free space.

4.2 Acronis Recovery for MS Exchange Workspace

Acronis Recovery for MS Exchange workspace includes the Acronis Recovery for MS Exchange Management Console window - the primary tool for managing data backup/restore on local and remote computers where Acronis Recovery for MS Exchange Agent is installed.

The workspace consists of the main area with operation icons, as well as the menu, the toolbar, and the common tasks bar. On the left there is a sidebar featuring the **Computers** or **Help** panels.

	Note, that the content shown in the main window will change depending on whether Acronis Recovery for MS Exchange Management Console is disconnected or connected to a remote server.

4.2.1 Main Area

The main area of Acronis Recovery for MS Exchange workspace contains Task and Tools groups.

Before you connect to an Exchange server where Acronis Recovery for MS Exchange Agent is installed, operation icons will appear in the main program window that will allow you to navigate and manage computers.

The **Pick a Task** group contains one operation:

- **Connect to a Remote Computer** – connect to a remote server where Acronis Recovery for MS Exchange Agent is already installed

If you select a server in the Computers pane, on which Acronis Recovery for MS Exchange Agent is not installed, Acronis Recovery for MS Exchange workspace will display two operation icons in the **Pick a Tool** group:

- **Add Servers** – add a Microsoft Exchange server to the group
- **Install Acronis Agents** – install Acronis Agents on remote computers

As soon as you are connected to a Microsoft Exchange server where Acronis Recovery for MS Exchange Agent is installed, your workspace will show operations you can execute on this server, such as backup or restore, managing tasks, etc.

In this case the main area contains operation icons divided into two groups.

The **Pick a Task** group contains the following operations:

- **Back Up Information Store** – create storage groups backup archive
- **Back Up Mailboxes** – create mailboxes and public folders backup archive
- **Restore Information Store** – restore storage groups from a previously created archive
- **Restore Mailboxes** – restore mailboxes and public folders from a previously created archive
- **Backup Location Clean-up** - clean database backup locations

The **Pick a Tool** group contains the following items:

- **Restore E-mails** – restore separate e-mails from a previously created archive

- **Manage Tasks** – manage tasks scheduled on a computer

- **Logs** – open the Log Viewer window

- **Disaster Recovery Plan** – generate step-by-step instructions on how to restore your databases in case of any kind of failure

4.2.2 Computers Pane

The Computers pane is located on the left side of the main program window. It displays computers (with their Microsoft Exchange servers identified) which have been discovered by the system or added manually.

Acronis Recovery for MS Exchange Management Console allows you to connect to a remote computer where Acronis Recovery for MS Exchange Agent is already installed, or to install Acronis Recovery for MS Exchange Agent remotely.

At the top of the Computers pane there is a toolbar with the following buttons:

- **Add server** - opens the Add Server window, where you can specify a server to be added to the tree

- **Discover servers** - automatically finds servers on the network and adds them to the tree

- **Delete server** - removes the selected server from the tree

4.2.3 Program Menu

The program menu bar features the **Tasks, Tools, View** and **Help** items.

The **Operations** menu contains five available operations:

- **Backup Information Store** - create storage groups backup archive

- **Back Up Mailboxes** – create mailboxes and public folders backup archive

- **Restore Information Store** - restore storage groups from a previously created archive

- **Restore Mailboxes** – restore mailboxes and public folders from a previously created archive

- **Backup Location Clean-up** - clean database backup locations

The **Tools** menu contains five available operations:

- **Restore E-mails** – restore separate e-mails from a previously created archive

- **Manage Tasks** – manage tasks scheduled on a computer

- **Logs** – open the Log Viewer window

- **Disaster Recovery Plan** – generate step-by-step instructions on how to restore your databases in case of any kind of failure

- **Options** – open a window for editing default backup/restore options, setting text appearance (fonts), configuring notifications etc

The **View** menu contains an item for managing the appearance of the program window:

- **Status Bar** – enables/disables the status bar

Acronis Recovery for MS Exchange allows using shortcut keys to navigate through the program menu. To do this, hold down *<Alt>* and press the access key (the underlined letter) of the required menu item. A selected item becomes active, and still holding down *<Alt>*, press the access key of the required command from the submenu.

4.2.4 Help Menu

The **Help** menu is used to invoke help and obtain information about Acronis Recovery for MS Exchange.

To view the Help panel, disable the **Computers Tree** option in the **View** menu.

4.2.5 Status Bar

At the bottom of the main window, there is a status bar divided into two parts. The left side briefly describes the selected operation; the right side indicates operation progress and results. If you double-click on the operation results, you will see the logs window.

4.3   Navigation

At the top on the Computers pane there are four buttons; clicking them allows you to add new servers to the tree manually, to start the discovering process, to delete a server from a tree if needed, or to refresh the Computers Tree.

Computers with Acronis Recovery for MS Exchange Agent already installed are marked with a green icon.

Select the required server from the tree to perform the required operation (connecting, installing Acronis Recovery for MS Exchange Agent remotely).

To hide the Computers pane and view Help topics, click on the **Show or Hide** button from the menu.

4.4   Management

Acronis Recovery for MS Exchange Management Console allows installation of Acronis Recovery for MS Exchange components on remote computers. To perform any of these operations you will need administrator rights on the target machine.

To connect to the server click **Connect to a Remote Server** in the **Pick a Task** pane (see 4.7 "Connecting to a Remote Database Server"). If Acronis Recovery for MS Exchange Agent is not installed on a server, click **Install Acronis Agents** in the **Pick a Tool** pane (see Chapter 3 "Installation").

To add a new server to the tree pane, click **Add Servers** in the **Pick a Tool** pane (see 4.6 "Adding Servers").

4.5   Discovering Servers

The purpose of discovering servers is to find servers on the network automatically and add them to the list in the Computers pane. The first time the program is executed, the list in the Computers pane list is empty and you will be prompted to discover servers. In order to be able to create backup and recovery operations on servers, you should launch the search or add servers to the list manually.

To discover servers click on the **Discover Computers** icon from the Computers pane on the left. You will be asked if you want to search for database servers on the network. Click **YES** to do it immediately, or **NO** to do it later. Discovery will update the current status of all computers already included in the list.

If, for any reason, a server cannot be found with this tool, you can add it manually to the tree (see 4.6 "Adding Servers").

4.6   Adding Servers

If you cannot locate a server with the Discover Computers tool, you can add it to the tree manually.

You can apply any discovery operation later as required. The operation will add newly connected servers to the list in the Computers pane. At the same time, discovery will update the current status of all computers already included in the list.

You can start an **Add Computer** dialog to add servers to the tree of the Computers pane in several ways. Here are two:

- Click on the **Add Servers** icon in the main area
- Click on the **Add Servers** button in the Computers pane toolbar

1. Enter the server name or IP address manually in a **Server** field or choose it from the drop-down list. You can also click **Browse** to view all available computers and select the one you want to add.

2. Click **OK** to add the server to the tree.

4.7   Connecting to a Remote Microsoft Exchange Server

In order to perform any operation on a remote Microsoft Exchange server, you must first connect to it. Once connected, you can manage tasks: set up backup/restore options on remote database servers and schedule backup, restore and backup location clean-up tasks.

To establish a remote connection, select a server in the Computers pane and click **Connect to a Remote Computer** in the right pane. If you have connected to this server previously, Acronis Recovery for MS Exchange will use credentials for accessing the computer automatically. Otherwise a dialog window will be opened:

- In the **Computer** field, enter the name or the IP address of the computer or select a computer from the drop-down list, by clicking the **Browse...** button
- To provide credentials for accessing the computer, click the **Options>>** button

- Specify the username (as <*domain\user*>) and password on the server you want to connect to, in the corresponding fields

- Select the **Save Password** check box if you want to save the password.

Note, that username (including the domain name) and password must be defined explicitly while connecting to a stand-alone Microsoft Exchange Server.

Having provided all the necessary information for connection, click **Connect** to establish connection.

	If Acronis Recovery for MS Exchange Management Console cannot connect to the remote computer which was not rebooted after installing Acronis Recovery for MS Exchange Agent, connection must be established with explicit credentials.

As soon as you connect to a database server, you can manage tasks as if it is as a local computer.

4.8 Remote Installation of Acronis Recovery for MS Exchange Agent

The remote installation of Acronis Recovery for MS Exchange Agent is described in detail in 3.3.2.

Chapter 5. Creating Backup Archives

This chapter provides general information about backup types, describes how to backup Microsoft Exchange information stores, storage groups or even mailboxes/public folders, and which options can be set using Acronis Recovery for MS Exchange.

5.1 General Information

Backup is crucial to maintaining a timely and consistent record of your Microsoft Exchange servers for recovery in case of failure. Acronis Recovery for MS Exchange offers an easy and flexible process for creation of backup archives.

5.1.1 What is a backup?

The concept of backing up data is based on copying it to a safe place to restore when necessary. With an active database you need to backup and protect more than just your database files and data. Databases include many components, such as transaction logs, that must be backed up as well to make sure your data will be fully functional after restoration.

Acronis Recovery for MS Exchange is a tool that backs up the necessary tables, data, and user-defined objects, but it treats the database as more than just a combination of files. When the backup procedure starts, Acronis Recovery for MS Exchange finishes all the active transactions, makes a snapshot of the database and resumes the transactions immediately. The database idle state is minimal and the backup will be written to the archive location while the database is online.

> Using this process to back up the database ensures that the restored copy will be fully operational. Since the copy is made according to the snapshot, no transactions made after the start of the process will be included into the current backup.

5.1.2 Backup Types

Acronis Recovery for MS Exchange can create full and incremental backups for comprehensive protection of your data from hardware failure, user errors or even natural disaster.

A **full** backup contains all data at the moment of backup creation – a complete storage group or mailbox/public folder. You can recover the entire database by restoring the

database from a full database backup to a chosen location. Enough of the transaction log is included in the backup to let you recover the database to the time when the backup finished. When the database is recovered, uncommitted transactions are rolled back. The restored database matches the state of the original database when the backup finished, minus any uncommitted transactions.

For a small database that can be backed up quickly, it is convenient to use only full database backups. However, as the database becomes larger, full backups take more time to finish and require more storage space. Therefore, for a large database, you might want to supplement full database backups with incremental backups.

A full backup can form a base for further incremental backups or can be used as a standalone archive.

The **incremental** backup records all transactions and database modifications made by each transaction since the last full or incremental backup were created. The transaction log is a crucial component of the database and, if there is a system failure, applying the transaction log might be required to bring your database back to a consistent state. The transaction log file has a fixed size and an automatically generated filename. After creating the incremental backup, transaction logs will be truncated.

To choose the appropriate backup type (or types), you have to determine how you need to make the data available for recovery. Your overall backup strategy defines the type and frequency of backups as well as the type and capacity of the hardware required for the archive location. See the next section 5.1.3 "Which Backup Strategy to Choose?" for our recommendations.

5.1.3 Which Backup Strategy to Choose?

Follow the recommendations below to define the best backup strategy for your organization:

- Database activity is low to medium:
    - Full backup once a week
    - Incremental backup every 12 hours

- Database size is small to medium, but activity is high:
    - Full backup every two days
    - Incremental backup every ten minutes

- Database size is large and activity is high:
    - Full backup once a week
    - Incremental backup every ten minutes

For advice on creating the best strategy you can also rely upon Acronis Recovery for MS Exchange Assistant while working with the **Create Backup** wizard. See 5.2.6 for detailed information.

> We recommend that you do not use several third-party backup tools simultaneously since backup operations may conflict. Instead, combine different backup types to protect your data with Acronis Recovery for MS Exchange.

5.1.4 Server Roles

As a messaging system that is widely used in both large organizations and small businesses, Microsoft Exchange Server has always been scalable in both directions. However, new demands on messaging – such as compliance, security, and disaster recovery – have created new challenges for delivering a messaging system that works well in small businesses and large enterprises alike.

Microsoft Exchange Server provides a complete messaging system that can run on a single server – meaning that all Exchange services reside on one server, as with the Microsoft Small Business Server product. However, there are significant gains in deployment, management, and security that come from having a flexible, modular system that can be installed across more than one machine. Customers would typically customize their Microsoft Exchange Server 2003 installation, creating specific server roles manually. In Microsoft Exchange Server 2007, roles are predefined and chosen during installation. The role selected during installation ensures that only the necessary services and components are installed.

Microsoft Exchange Server has the following server roles:

- **Client Access role** - similar to the front-end server in earlier versions of Microsoft Exchange Server, this server proxies Internet client traffic to the correct mailbox server.

- **Mailbox role** - this role hosts user mailboxes stored in databases that can be replicated or clustered.

- **Hub Transport role** – this role provides internal routing of all messages – from Edge servers, Unified Messaging (UM) servers, or between two users on the same mailbox database. The Hub Transport role is also where messaging policy is enforced for messages moving within and outside the organization.

- **Unified Messaging role** – this role enables PBX integration to allow voice mail and fax messages to be delivered to Exchange mailboxes, and provides voice dial-in capabilities to Microsoft Exchange Server.

- **Edge Transport role** - this server resides outside your internal network and provides on-premise e-mail security, antivirus, and anti-spam services for Microsoft Exchange Server.

With the exception of the Edge Transport role, multiple roles or all roles can be installed on a single system. This is because an Exchange server running the Edge Transport role in a perimeter network (DMZ) is not a member of Active Directory or the Exchange organization for security reasons. Another role limitation: clustered mailbox servers can only be configured with the Mailbox server role.

Acronis Recovery for MS Exchange allows backing up of the Mailbox role only. See section 5.3 for detailed instructions.

5.1.5 Storage Groups and Information Stores

Exchange Server 2007 Enterprise Edition supports up to 50 storage groups and 50 databases per server. You can configure up to five databases per storage group, and up to a maximum of 50 databases. Now mailbox data can be distributed across more databases, and mailbox databases can be distributed across more storage groups, than in earlier versions of Exchange Server. Exchange Server Standard Edition supports up to five storage groups and five databases per server. Both Enterprise Edition and Standard Edition have an unlimited database size limit.

Thus, an individual database in Microsoft Exchange is only a dependent part of a storage group, and backing it up separately becomes pointless, because it does not guarantee a data integrity after restoring.
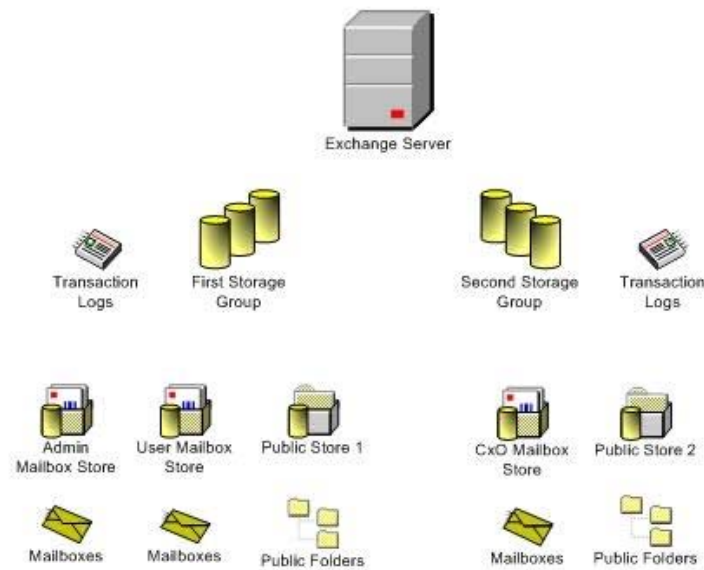
5.1.6 Circular Logging

The Microsoft Windows 2000 Active Directory service and the Microsoft Windows Server 2003 Active Directory service use the circular logging feature to maintain transactions in the database file (Ntds.dit). The log files are maintained until the data that they contain is written to the database file. The circular logging feature uses these log files to recover transactions if the database file is shut down in an inconsistent state. For example, a power failure or a Stop error can cause a transaction failure. In Windows 2000 and in Windows Server 2003, there is currently no way to disable the circular logging feature.

5.1.7 Disaster Recovery Plan

With Acronis Recovery for MS Exchange you can create a Disaster Recovery Plan. This plan provides all the necessary information about the Microsoft Exchange server in the form of step-by-step instructions for restoring the entire server in case of failure, a disaster, or data corruption.

With the Disaster Recovery Plan any person, even non-DBAs, will be able to restore the system in the shortest possible time. Such a plan also helps to reduce unexpected issues during the recovery of the Exchange server.

It is recommended that you update and test the disaster recovery plan from time to time. Doing so will ensure that the company's staff is prepared, acts efficiently, and feels practiced in the process of recovering lost or corrupted data.

See Chapter 6 "Disaster Recovery Plan" to learn how Acronis Recovery for MS Exchange can help you generate the disaster recovery plan.

5.1.8 Continuous Data Protection

Continuous data protection (CDP, but also may be called *continuous backup*) technology makes it possible to save data changes automatically and uninterruptedly, restoring your data to its exact state at the moment of failure.

When you choose CDP technology during the creation of a backup task, you will have to schedule only full backups. Acronis Recovery for MS Exchange controls folders with archived logs and backs up all new logs into a CDP archive. A CDP archive contains a set of full backups and an archive log, created after the last full backup. As a result, you can restore data back to the last full backup, or to previously created archived log backups, stored in the CDP archive.

When a new full backup is created, CDP logs will be truncated.

Please note, before starting any restore process, a CDP task must be stopped. In case of restoring a whole database, a full backup must be created right after the restoration process to protect your data.

A CDP task is processed in two ways: in a common task script and in a registry. The registry's format is known only by CDP service (CDP agent). Thus, to change or delete CDP task from Acronis Recovery for MS Exchange Management Console, you also need a CDP service started.

> Note, CDP technology cannot be used while backing up to tapes.

5.1.9 Backing up to Tape Libraries and Tape Drives

Acronis Recovery for MS Exchange supports tape libraries, autoloaders and SCSI tape drives as storage devices.

Backing up to Tape Libraries and Autoloaders

A tape library is a high-capacity storage device consisting of one or more tape drives and a loader, which automatically selects and loads multiple tape cartridges identified with barcodes. Tape libraries having one drive and a loader are known as autoloaders.

Tape libraries are widely used as an efficient repository for long-term stored archival data. Once the tape library is full, old data is progressively overwritten by new data. With tape library support, Acronis Recovery for MS Exchange can store several backup chains from different machines. Please review Acronis True Image Echo Enterprise Server User's Guide on how to backup to a tape drive in the network (section 3.8.3 "Setting up Backup to a Tape or a Tape Library in the Local Network" of the Echo User's Guide).

Backing up to Tape Drives

SCSI tape drives are accessible both remotely using the Acronis ® Backup Server (shipped with Acronis True Image Echo Enterprise Server) and locally when they are connected to the computer that is being backed up.

The locally connected tape drive will appear in the list of backup destination devices along with other available drives. For instructions on how to enable backup to a tape drive connected to a remote computer, see Acronis True Image Echo Enterprise Server documentation section 3.8.3 "Setting up Backup to a Tape or a Tape Library in the Local Network" of the User's Guide.

Backup and restore operations on a tape drive proceed in the same way as with other devices with the following exceptions.

1. You do not have to provide filenames for backups.

2. As soon as the tape is full and the Acronis Recovery for MS Exchange Management Console is connected to the computer, a dialog window with a request to insert a new cartridge will appear.

3. If the tape already contains data, but is not full, new contents will be appended.

You may experience short pauses that are required to rewind the tape.

> You may experience short pauses when the tape rewinds. A low-quality and old tape, or dirt on the magnetic head, may lead to pauses that can last up to several minutes.

Acronis Recovery for MS Exchange can back up to remote tape drives when using Acronis Backup Server (shipped with Acronis True Image Echo Enterprise Server).

5.2 Backing up Databases

To restore lost data or roll back Microsoft Exchange Server databases to a certain state, you must first create a backup file. The **Backup Information Stores** wizard allows you to schedule the creation of archives and set the required options.

To launch the wizard, click on the backup operation icon in the main workspace.

> You can use *<Alt>+<N>* to go to the next page and *<Alt>+<B>* to go to the previous page of any Acronis Recovery for MS Exchange wizard.

5.2.1 Defining a Backup Strategy

In the first step of the **Create a Backup** wizard you will define the backup strategy. Acronis Recovery for MS Exchange provides four ways to define the strategy:

- Schedule a backup task with Acronis Recovery for MS Exchange Assistant

- Schedule a backup task manually

- Use continuous data protection technology

- Create a backup now

If you are not sure which backup strategy to choose, use **Schedule a backup task with Acronis Recovery for MS Exchange Assistant** (selected by default). See 5.2.6 for details.

If you know which backup type to use for your data, select the **Schedule a backup task manually** option. In this case you will have to define backup types and schedule parameters for backup tasks.

Select **Use continuous data protection technology** option to enable CDP. In this case you will have to schedule your full backups. See section 5.1.8 for more details.

To immediately run a backup task once select the **Create a Backup Now** option. A full backup will be created.

While creating a backup task, you have to select, which way to back up your data. Note, transaction logs files require considerable disk space, so you will have to delete (or move to another place for storing) them manually, taking into account which files are safe to remove.

For more information about backup types see 5.1.2 "Backup Types".

5.2.2 Specifying a Task Execution Account

In this step of the **Backup Information Store** wizard you specify an account that is valid for the computer housing databases you want to back up – task execution account. These credentials will be used during each task execution for connecting to the server and by default for connecting to the Microsoft Exchange Server.

The task will run as if it was started by the specified user.

Enter the user name and password, then click **Next**. Note, the domain name must also be specified if the user is a member of a domain (*DOMAIN\Username*).

	Note, this step will be skipped if in the first one you selected the **Create a backup now** option.

5.2.3 Selecting Items to Back Up

In this step of the wizard you have to specify which items to back up.

In the left pane of the window select an information store with Microsoft Exchange installed and expand it to view and specify storage groups to back up. In case an information store is selected, all associated storage groups will also be selected.

Information on the selected item is displayed in the right pane of the window: information store name, installed operating system and the number of storage groups.

Selecting Information Stores to Back Up

When selecting an information store to back up Acronis Recovery for MS Exchange will automatically back up all of the storage groups associated with this information store.

	A list of information stores can be obtained, with the connected user's privileges that cannot be changed.

Screenshot

	Note, Acronis Recovery for MS Exchange does not back up the Active Directory. This means, that even there were any changes after a backup archive was created, after restoring the Microsoft Exchange Server structure will remain the same as it was before the restoration process. As a result, while restoring information stores, only storage groups will be restored one by one. For example, mailboxes created or deleted after the last backup, will still exist phisically after the restore, but they will not be mounted, and so will not be usable.

The right pane will display the information store name, Microsoft Exchange version, the installed operating system and amount of storage groups.

Selecting Storage Groups to Back Up

Select the specific storage group you want to back up. The right pane will display its name, size, number and total size of associated databases, as well as circular logging status (enabled/disabled).

After selecting the appropriate object for back up, click **Next** to continue.

5.2.4 Selecting a Backup Archive Location

Acronis Recovery for MS Exchange supports the following places and media for backup destinations:

- Local HDD

- Network shares, SAN, NAS

- FTP

- Tape drives, Autoloaders, Tape libraries

- Acronis Backup Server (shipped with Acronis True Image Echo™ Enterprise Server)

	Acronis Backup Server
	This software application, when installed on a networked computer, automatically manages backup archives and retention policies for the specified location and ensures optimal usage of storage space. Outdated archives will automatically be deleted as specified in the retention policies set by the administrator. In addition, Acronis Backup Server facilitates the creation and execution of group backup tasks.
	Acronis Backup Server is shipped with Acronis True Image Echo Enterprise Server.

We recommend you store the archives for each task in a separate locations to avoid confusion during recovery.

Note, the further you store the backup archive from the original location, the safer it will be in case of data damage. For example, saving the archive to another hard disk will protect your data if the primary disk is damaged. Data saved to a network disk or backup server will survive even if all your local hard disks are down.

Select the desired archive location from the folders tree or specify a backup location in the **Folder** field.

In case you have chosen an ftp server as a backup location, provide login and password for this server in a special pop-up window which appears after you select this item from the tree.

Important! Do not enter the login and password in the **Folder** field ("*ftp://login:password@ftpserver*"); the product will not process this command.

	Acronis Recovery for MS Exchange guarantees the integrity of the backup chain only in a separate archive. Thus, creation of a new archive will start a new chain of backups. Acronis Recovery for MS Exchange behavior does not depend on what you want to back up (the entire information store or only a separate storage group). By default, transaction logs are truncated before creating such a chain to decrease the archive size and duration of the backup

	operation. You can change this behavior by specifying additional settings in backup options (see 5.4.7 for detailed information).

	Please note that unsupported Acronis Backup Server versions will not be displayed in the Acronis Backup Servers list. To provide compatibility with Acronis Recovery for MS Exchange, please install most up-to-date version, available at: http://www.acronis.com/enterprise/download/ATIBS .

	Note, Acronis Recovery for MS Exchange does not display mapped network drives in the **Folders** tree.

Acronis Recovery for MS Exchange allows you to clean storage places to avoid storing out of date archives. See Chapter 8 "Backup Location Clean-up" for details.

5.2.5 Using Acronis Recovery for MS Exchange Assistant

Acronis Recovery for MS Exchange Assistant will help you define backup strategy and creation parameters. You will be prompted to answer a few questions, and Acronis Recovery for MS Exchange Assistant will choose and schedule the appropriate backup type for protecting your company's databases from loss or damage (see a table of backup strategies at the end of this document).

Performance

Decide what is most important to your operation – a strategy that requires less storage space or faster data recovery.

Select an option:

- **Quick backup and smaller backup archives** - backups are created fast and occupy less space. However, recovery requires more time and you cannot restore data to a point-in-time. This option is set by default.

- **Medium backup and recovery speed with average archive size** - backups require an average amount of disk space and backup speed is normal. No restoration to a point-in-time.

- **Quick recovery but backups require more storage space** - backups will take more time to be created and occupy more disk space in comparison to a quick backup. Recovery is faster and there is an opportunity to specify a point in time to restore data to.

Click **Next** to continue.

Acceptable Data Loss

At this step specify a period of time when data changes significantly. This will help Acronis Recovery for MS Exchange Assistant define the schedule for backup creation – how often to run the backup operation and which backup type to choose.

Select one of the following options:

- **10 Minutes** – use when significant changes occur at least every ten minutes (this option is available only while backing up an information store and is disabled for mailboxes because the backup technology does not allow specifying such short periods of time)

- **Hour** – select this option if you want to back up the selected data hourly

- **Day** - select this option if you want to back up the selected data daily

Click **Next** to continue.

Server Load During a Week

Specify the workload distribution on the Exchange server during a week. The Assistant will use this information to define a backup schedule according to your company's server's load. The load information is used to determine when and what type of backups to create to avoid data loss (backup creation frequency), as well as when to execute the operation.

In the table there are three rows representing three levels of load (High, Medium and Low), and seven columns representing the days of the week.

By default the most widely used pattern is specified (selected cells are highlighted in blue). To change the value for a certain day, click the appropriate cell.

Click **Next** to continue.

Server Load During a Day

Specify workload distribution on the Exchange server throughout the day. As in the previous step, this information will help to define a backup schedule that complements the peaks and valleys of your company's server loads.

In the table there are three rows representing three levels of load (High, Medium and Low), and 24 columns representing the hours of the day.

By default the most widely used pattern is specified (selected cells are highlighted in blue). To change the value of a particular hour, click the appropriate cell.

Initial Task Starting

Specify a time for applying the selected scheme:

- **Now** – select this option to execute the scheduled task immediately after you finish the wizard

- **On the specified date and time** – the selected scheme will be applied on the specified date. Note that if there is no full backup when the first incremental backup is to be performed, a full backup will be performed independently of the actual date on which it is scheduled. You may consider setting this date on the day of the week when your server load is not high

Click **Next** to view (and change if necessary) the schedule for backup tasks, created by Acronis Recovery for MS Exchange Assistant.

Table of Backup Strategies

The table below describes different backup strategies according to your requirements for storage space and speed. The final strategy created by Acronis Recovery for MS Exchange Assistant will be displayed in a **Schedule** page (see 5.2.6 for details).

Data change rate	Backup Type	Performance		
		Quick backup and smaller archive size	*Medium archive size and speed*	*Quick recovery and large archive size*
10 minutes	*Full*	Week	2 days	Day
	Incremental	10 minutes	10 minutes	10 minutes
Hour	*Full*	Week	2 days	Day
	Incremental	1 hour	1 hour	1 hour
Day	*Full*	Week	2 days	Day
	Incremental	12 hours	12 hours	12 hours

5.2.6 Setting Backup Scheduling Parameters

If you used Acronis Recovery for MS Exchange Assistant, it will create a schedule for the choices you made. Click **Edit** to change the existing schedule settings.

If you decided to define the backup strategy manually, you have to set a schedule for each backup type. See Chapter 9 "Scheduling Tasks" for detailed information.

Click **Add** to add new schedule settings for the appropriate type (full or transaction logs). Clicking **Delete** will allow you to delete the existing schedule settings.

All the settings you made are displayed in the **Result** field at the bottom of the window. To save your settings, click **OK**.

To quit task scheduling without saving, click **Cancel**.

Note, Acronis Recovery for MS Exchange allows you to set multiple schedules for one task. For example, you should not only backup your data once a week, but also on the last day of each month. You can specify Weekly and Monthly parameters to have the necessary operation scheduled.

5.2.7 Backup Options

Select the backup options (pre/post commands, compression level etc.). You may **Use default options** (see 5.4 for detailed information about backup options) or **Set the options manually**. If you set the options manually, the settings will only be applied to the current backup task.

5.2.8 Specifying a Task Name and Providing Comments

On the **Task Name and Archive Comments** wizard page, you can provide a name and comments for the backup task.

Enter a task name in the **Task Name** field to identify and organize tasks by operation (edit, delete, etc.).

You may provide comments for the archives you create. The backup file size and creation date are automatically appended to the description, so you do not need to enter this information.

5.2.9 Backup Summary

The final stage of the backup is the summary window, which displays the list of operations to be performed.

Click **Finish** to save the created schedule or start the backup creation task immediately. You will be redirected to the Task List automatically, where you can view and edit created tasks.

5.3 Backing up Mailboxes

Brick-level (document level) backup is the most flexible type of backup. It offers advanced configuration options and performs backups at folder levels and quick restoring at separate messages level, allowing the most accurate level of restore. It also supports advanced filtering during backup.

Use Mailbox backup and restore when you want the flexibility to back up individual mailboxes, public folders and use mail level filters.

Also you can restore mailboxes and even separate e-mails from database backups.

5.3.1 Defining a Backup Strategy

In the first step of the **Back up Mailboxes** wizard you will define the backup strategy. Acronis Recovery for MS Exchange provides three ways to define the strategy:

- Schedule a backup task with Acronis Recovery for MS Exchange Assistant
- Schedule a backup task manually
- Create a backup now

If you are not sure which backup strategy to choose, use **Schedule a backup task with Acronis Recovery for MS Exchange Assistant** (selected by default). See 5.2.6 for details.

If you know which backup type to use for your data, select the **Schedule a backup task manually** option. In this case you will have to define backup types and schedule parameters for backup tasks.

To immediately run a backup task once select the **Create a Backup Now** option. In this case a full backup will be created.

For more information about backup types see 5.1.2 "Backup Types".

5.3.2 Specifying a Task Execution Account

In this step of the **Create a Backup** wizard you specify an account that is valid for the computer housing Mailboxes you want to backup – task execution account. These

credentials will be used during each task execution for connecting to the server and by default for connecting to the Microsoft Exchange.

The task would run as if it was started by the specified user.

Enter the user name and password, then click **Next**. Note, the domain name must also be specified if the user is a member of a domain (*DOMAIN\Username*).

	Note, this step will be skipped if you selected the **Create a Backup Now** in the previous step (5.3.1 Defining a Backup Strategy).

5.3.3 Selecting Items to Back Up

In this step of the wizard you have to specify which items to backup: mailboxes and/or public folders. Select an information store, the required storage group, then expand it to view its mailboxes and public folders. In case an information store is selected, all associated storage groups will also be selected.

Information on the selected item is displayed in the right pane of the window: information store name, installed operating system and the number of storage groups.

Selecting Mailboxes to Back Up

Choose a storage group and mailbox store from which you want to back up a mailbox. Information (size and number of mailboxes) about the selected items will be displayed on the right.

In the list, specify the mailbox (or separate folders) you want to back up. Information about size, number of folders and subfolders, as well as the total number of e-mails will be displayed on the right.

	A list of information stores can be obtained, with the connected user's privileges that cannot be changed.

Selecting Public Folders to Back Up

Choose a storage group, public folder store and public folder from which you want to back up a specific folder. Information about the selected items will be displayed on the right.

In the list, specify the public folder you want to back up. Information about the size, number of folders and subfolders, as well as the total number of e-mails will be displayed on the right.

After selecting the appropriate object for back up, click **Next** to continue.

5.3.4 Excluding Objects

In this step the **Backup** wizard specify objects you want to exclude from the backup archive to be created.

Select **Exclude the following objects from the backup** to enable excluding options and then select the required ones:

- **"Deleted Items" folder** – exclude the "Deleted Items" folder from the backup file to be created

- **"Sent Items" folder –** exclude the "Sent Items" folder from the backup file to be created

- **Items that were modified before** – select day, month and year to exclude objects modified earlier than the chosen date

- **Attachments larger than** – select this item and specify the maximum attachment size to be included into the backup file

- **The following types of attached files** – select this item to exclude attachments with files of the types listed below. Also you can change the list of file types by clicking **Specify types of files to exclude** and delete or add the required ones. Note, you can enter several file extensions under one name by separating them with commas.

5.3.5 Selecting a Backup Archive Location

Acronis Recovery for MS Exchange supports the following places and media for backup destinations:

- Local HDD

- Network shares, SAN, NAS

- FTP

- Tape drives, Autoloaders, Tape libraries

- Acronis Backup Server (shipped with Acronis True Image Echo™ Enterprise Server)

We recommend that you store the archives of each task in a separate location to avoid confusion during recovery.

Note, the further you store the backup archive from the original location, the safer it will be in case of data damage. For example, saving the archive to another hard disk will protect your data if the primary disk is damaged. Data saved to a network disk or backup server will survive even if all your local hard disks are down.

Select the desired archive location from the folders tree or specify a backup location in the **Folder** field.

In case you have chosen an ftp server as a backup location, provide a login and password for this server in a special pop-up window which appears after you select this item from the tree.

Important! Do not enter the login and password in the **Folder** field ("*ftp://login:password@ftpserver*"), the product will not process this command.

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Acronis Backup Server

This software application, when installed on a networked computer, automatically manages backup archives and retention policies for the specified location and ensures optimal usage of storage space. Outdated archives will automatically be deleted as specified in the retention policies set by the administrator. In addition, Acronis Backup Server facilitates the creation and execution of group backup tasks.

Acronis Backup Server is shipped with Acronis True Image Echo Enterprise Server.

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Select the desired archive location from the folders tree or specify a backup location in the **Folder** field.

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<td>Acronis Recovery for MS Exchange guarantees the integrity of the backup chain only in a separate archive. Thus, creation of a new archive will start a new chain of backups.</td>
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</table>

Acronis Recovery for MS Exchange allows you to clean storage places to avoid storing out of date archives. See Chapter 8 "Backup Location Clean-up" for details.

5.3.6 Using Acronis Recovery for MS Exchange Assistant

Acronis Recovery for MS Exchange Assistant will help you with define backup strategy and creation parameters. See section 5.2.5 for detailed information on using Acronis Recovery for MS Exchange Assistant.

5.3.7 Setting Backup Scheduling Parameters

If you used Acronis Recovery for MS Exchange Assistant, Acronis Recovery for MS Exchange will offer the appropriate schedule for the choices you made. Click **Edit** to change existing schedule settings.

If you decided to define the backup strategy manually, you have to set a schedule for each backup type. See Chapter 9 "Scheduling Tasks" for detailed information.

Click **Add** to add new schedule settings for the appropriate type (full or transaction logs). Clicking **Delete** will allow you to delete the existing schedule settings.

All the settings you made are displayed in the **Result** field at the bottom of the window. To save your settings, click **OK**.

To quit task scheduling without saving, click **Cancel**.

Note, Acronis Recovery for MS Exchange allows you to set multiple schedules for one task. For example, you should not only backup your data once a week, but also on the

last day of each month. You can specify Weekly and Monthly parameters to schedule the necessary operation.

5.3.8   Backup Options

Select the backup options (pre/post commands, compression level etc.). You may **Use default options** (see 5.4 for detailed information about backup options) or **Set the options manually**. If you set the options manually, the settings will only be applied to the current backup task.

5.3.9   Specifying a Task Name and Providing Comments

On the **Task Name and Archive Comments** wizard page, you can provide a name and comments for the backup task.

Enter a task name in the **Task Name** field to identify and organize tasks by operation (edit, delete, etc.).

You may provide comments for the archives you create. The backup file size and creation date are automatically appended to the description, so you do not need to enter them.

5.3.10   Backup Summary

The final stage of the backup is the summary window, which displays the list of operations to be performed.

Click **Finish** to save the created schedule or start the backup creation task immediately. You will be redirected to the Task List automatically, where you can view and edit created tasks.

5.4 Setting Default Backup Options

Acronis Recovery for MS Exchange lets you set the backup options you want to use as default for future tasks.

To edit the default backup options, select **Tools -> Options** from the main program menu.

You will also still be able to edit the backup options while creating a backup task.

5.4.1 Pre/Post Commands

You can specify commands (or even batch files) that will be automatically executed before and after the backup procedure. For example, you may want to start/stop certain Windows processes, or check your data before starting the backup operation.

You can use commands set by default, as well as specify your own commands.

Select **Use commands**, type commands manually or click **Edit** to configure the command:

- Select commands to be executed before the backup process starts in the **Before backup process** field. To create a new command or select a new batch file click the **Edit** button.

- Select the command to be executed after the backup process ends in the **After backup process** field. To create a new command or select a new batch file click the **Edit** button.

5.4.2 Compression Level

Select the compression level for the backup. With higher compression ratios the archive file size will be smaller, but the backup process may take longer.

You can choose one of the compression levels for a backup archive:

- **None** - the data will be copied without any compression
- **Normal** - the recommended data compression level (set by default)
- **High** - higher archive compression level
- **Maximum** - maximum backup archive compression
- **Ultimate** – ultimate level of compression

Generally, it is recommended to use the default **Normal** compression level. You might want to select **Maximum** compression so the backup archive occupies less storage space.

5.4.3 Backup Priority

You can set up the backup process priority:

- **Low** - the backup process will run slower, but it will not influence other processes running on your computer
- **Normal** - the backup process will run with normal priority
- **High** - the backup process will run faster, but it may influence other processes running on your computer

Changing the priority of a backup process can make it run faster or slower, but it can also adversely affect the performance of other programs running simultaneously. The priority of any process running in the system determines the amount of CPU usage and system resources allocated to that process. Decreasing the backup priority will increase the number of compute cycles available to other processes.

5.4.4 Backup Protection

Password

The preset is **No Password**.

You can password protect your archives so that they will be inaccessible to others. Enter a password in the text field and confirm it. The password is case sensitive.

Please keep in mind that in the **Restore Data** wizard, Acronis Recovery for MS Exchange will ask for a password after you select a folder within the archive location. Only those archives that were protected with the password you typed in or non password-protected archives will be displayed. Best practices suggest using the same password for backup archives in the same folder within the archive location.

Encryption

After setting a password, you can choose to encrypt the backup with an industry-standard AES cryptographic algorithm for advanced security.

To set up backup encryption, select one of the following encryption types:

- **None** – backups will not be encrypted
- **AES 128** – the quickest encryption method available (set by default)
- **AES 192** – encryption will take longer than 128-bit, but is more secure
- **AES 256** – requires the most amount of time to cipher, but it is also the most secure setting available

5.4.5 Backup Type Substitution

You need to create full backup of data before creating an incremental one. If for some reason a full backup does not exist, you will need to create a full backup independently of the backup strategy you have configured.

Specify the schedule of creating backups so that a full backup will be created first (see Chapter 9 "Scheduling Tasks" for detailed information), or select the check box **If creation of a selected type of backup failed, try to create a full backup**.

5.4.6 Bandwidth Throttling

You can limit the bandwidth used by the backup process so that network resources will be available for other processes.

To set the desired data transfer speed, check the **Enable bandwidth throttling** parameter. Select a maximum bandwidth value from the drop-down list or enter a value manually.

5.4.7 Additional Settings

1. Validate backup once it has been created

When enabled, the program will verify the integrity of the archive immediately after it is created.

> To validate the archive data integrity you must have all of the backups in the series (full and incremental backups) available in the same location. If any of the successive backups are missing, validation will not be possible.

2. Backup metadata

This parameter is selected by default, which allows backing up metadata.

3. Overwrite data on the tape

Select this parameter if you use tapes as a backup location and want to choose an overwrite mode. See 5.1.9 for detailed information.

4. Fast incremental backup

Select this parameter to create only brick-level (document level) backup, which provides quicker restoring of individual e-mails and mailboxes.

5. Do not truncate transaction logs

This parameter is available only while backing up information stores and storage groups will be enabled only if you create independent full backups (Acronis Recovery for MS Exchange will check the specified backup strategy). This parameter is selected by default.

In all other cases Acronis Recovery for MS Exchange will truncate transaction logs, since creating an archive chain (full and incremental backups) is impossible with transaction logs not truncated after the first full backup.

Chapter 6. Disaster Recovery Plan

It is extremely important for all organizations and users to have detailed instructions describing the process for recovering data quickly and efficiently in case of disaster – a Disaster Recovery Plan. This plan should contain all of the required information to guide someone through the recovery process. When creating a Disaster Recovery Plan, be sure to include scenarios and procedures for different kinds of disaster situations (loss of the Exchange server, data corruption, complete loss of storage groups etc).

The Disaster Recovery Plan should include step-by-step instructions for every possible type of disaster, as well as each server's hardware and software configuration.

With the **Create Disaster Recovery Plan** wizard, you can generate and view a Disaster Recovery Plan for your database server immediately, or schedule to receive it via e-mail after each update.

6.1 Viewing a Disaster Recovery Plan Immediately

Launch the **Disaster Recovery Plan Creation** wizard by clicking on the Disaster Recovery Plan operation icon in the main workspace.

1. In the first step of the wizard, choose the **View the Disaster Recovery Plan for the selected database** option to generate and view the Disaster Recovery Plan for the selected databases immediately

2. Select the items you want to obtain the Disaster Recovery Plan for

3. Choose whether you want to receive the Disaster Recovery Plan by e-mail or to view it in HTML format

4. If in the previous step you selected to receive the Disaster Recovery Plan by e-mail, you will need to specify the e-mail parameters

   Specify the e-mail account that will be used for sending the Disaster Recovery Plan. Provide the e-mail address to which the plan will be sent and the outgoing SMTP server name. You can specify several e-mail addresses separating them by commas

   A Username and a password may also be needed if the SMTP server requires authentication.

You can check if the settings are correct by clicking the **Send test E-Mail message** button

5. The final stage of the **Disaster Recovery Plan Creation** wizard is the summary window, which display the list of operations to be performed.

   Click **Finish** to obtain the Disaster Recovery Plan immediately.

   In the latter case an e-mail will be sent to the address you specified or a HTML version of the Disaster Recovery Plan will be opened in your web browser after you click **Finish**.

6.2   Scheduling Receipt of the Disaster Recovery Plan

Launch the **Disaster Recovery Plan Creation** wizard by clicking on the Disaster Recovery Plan operation icon in the main workspace.

1. In the first step of the wizard, use the **Define databases for which you want to receive the plan each time it is updated** option to choose which items to generate the Disaster Recovery Plan for each time any changes occur. The updated version of the plan will automatically be sent to e-mail addresses you specify.

2. Select the databases for which you want to obtain the Disaster Recovery Plan.

3. Specify the e-mail account that will be used for sending the Disaster Recovery Plan. Provide the e-mail address to which the plan will be sent and the outgoing SMTP server name. You can specify several e-mail addresses separating them with commas.

   A Username and a password may also be needed if the SMTP server requires authentication.

   You can check if the settings are correct by clicking the **Send test E-Mail message** button.

4. The final stage of the **Disaster Recovery Plan Creation** wizard is the summary window which displays the list of operations to be performed.

   Click **Finish** to schedule receipt of the Disaster Recovery Plan after each update.

6.3   Summary

Thus, in case of disaster, you only need to take the most recent version of the Disaster Recovery Plan and follow the instructions to restore your databases.

Chapter 7. Backup Location Clean-up

Sooner or later the backups you create will fill up the assigned storage space. Acronis Recovery for MS Exchange allows you to clean up backup locations by specifying how long to store the archive and/or the maximum number of full backups to store. By default, these options are disabled.

Launch the **Backup Location Clean-up** wizard by clicking on the icon in the main program window.

7.1 Specifying a Task Execution Account

In the first step of the **Backup Location Clean-up** wizard, you have to specify a local or domain account which is valid on the computer where the archives are stored – a task execution account. The specified account must have rights and permissions to manage files in the backup location you want to clean up.

Enter the user name and password then click **Next**. The domain name must be specified if the user is a member of a domain (*DOMAIN\Username*).

7.2 Selecting the Backup Archive Location

Select the backup location you want to clean from the tree, or manually specify the path to it in the **Path** field below the tree. You can also select Acronis backup locations (such as Acronis Backup Server).

The following resources may also be selected for backup locations:

- Entire disk or disk folder
- Network share, SAN, NAS
- FTP
- Acronis Backup Server

> **Important!** The backup location clean-up operation will be performed for the selected location and affect all database archives, created by Acronis Recovery (even if these are archives for Microsoft Exchange, Microsoft SQL Server, or Oracle).

Click **Next** to provide a password, if one is required, for archives in the selected backup location.
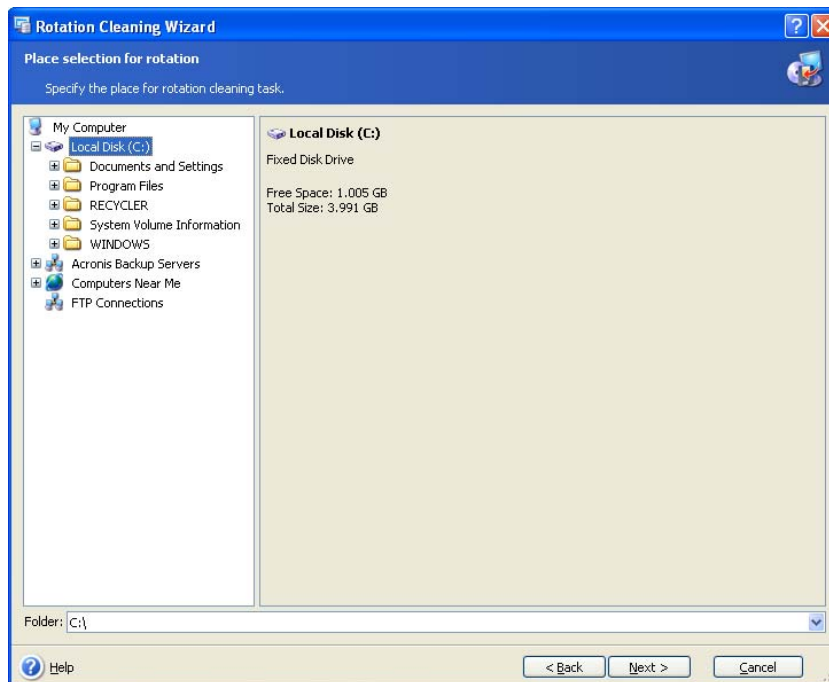
7.3 Providing a Password

If there are any password-protected backup archives in the location you have selected (see 7.2), you will need to enter the password to clean up the archive location.
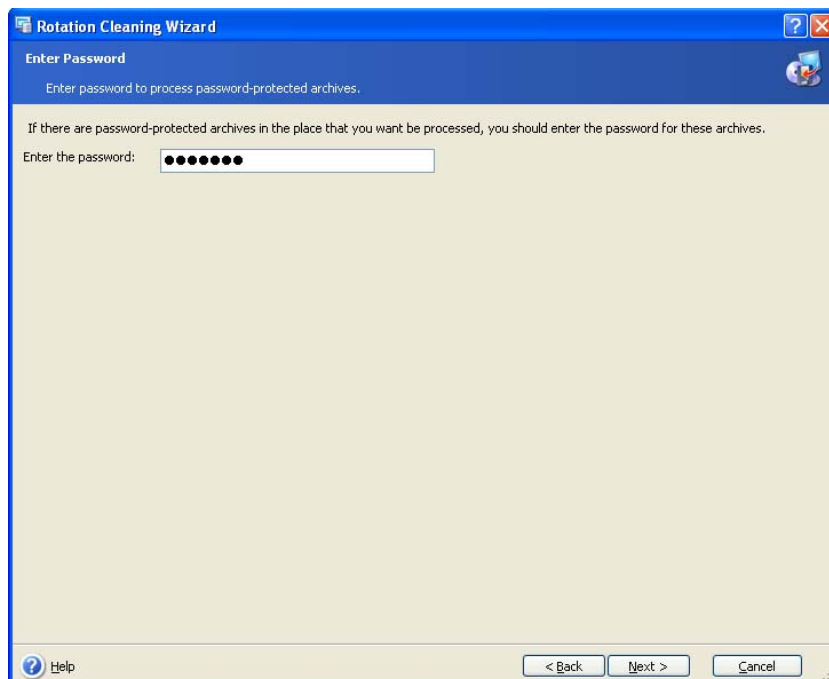
Click **Next** to continue.

7.4 Specifying Cleaning Options

At this step specify the **GFS** or **Simple** (selected by default) scheme to use for location cleaning.

7.4.1 GFS Scheme

Select this option to enable GFS clean-up scheme.

GFS (Grandfather-Father-Son) scheme will keep three sets of backups in the selected location. This scheme, if chosen, is activated on the day the first full backup was created: all backup archives (full and incremental) for the current week (7 days starting from the day of creating the first full backup); one full backup for each week of the current month; and finally one full backup for each month of the current year.

You may also specify notification receiving, if free space in the backup location is lower, that the selected size (in GB). You will receive an e-mail, but no archives will be deleted automatically. To specify e-mail parameters, go to the **Tools → Options** (see 11.1 "E-mail Notifications" for more details).

7.4.2 Simple Scheme

Select **Use the simple scheme** option to specify the following parameters:

Minimum free space

Select this parameter to check the remaining free space and to specify the minimum size in GB. With this option selected, you will be able to specify the minimum number of full backups to keep and the minimum lifetime of archives to store (in days).

Maximum number of full backups

Select the **Remove the oldest archives if the total number of full backups is more than** check box and type or select the maximum number of full backup archives to store.

Maximum archive's lifetime

Select the **Remove archives that are more than** check box and type or select the maximum number of days to store archives in the **day(s) old** box.

7.5 Schedule Cleaning

Acronis Recovery for MS Exchange allows you to schedule backup location clean-up. Specify the schedule that is the best for your needs (see Chapter 9 "Scheduling Tasks" for detailed information).
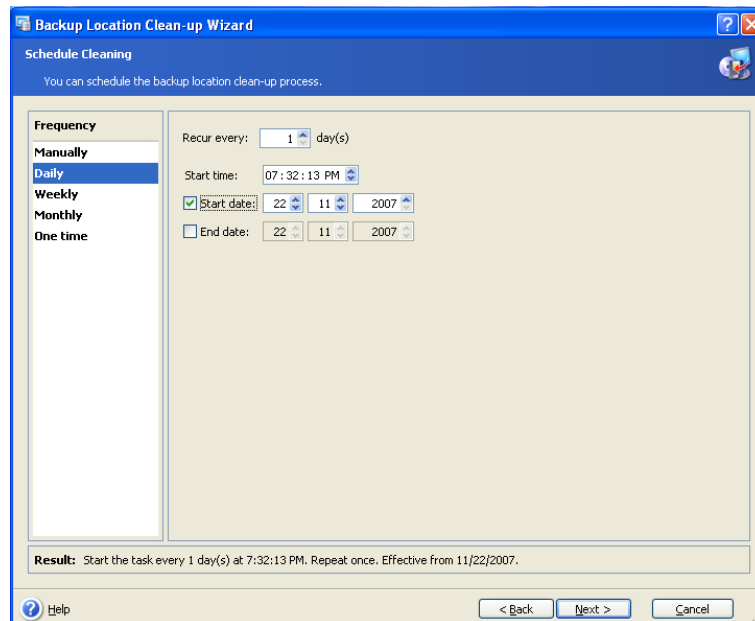
7.6 Backup Location Clean-up Summary

The final stage of the backup location clean-up is the summary window, where the list of operations that will be performed is displayed.

Click **Finish** to save the created schedule or start the backup location clean-up task immediately.

Chapter 8. Restoring the Backup Data

Acronis Recovery for MS Exchange restores storage groups and mailboxes from previously created backup archives.

8.1 Restoring Information Stores

Launch the **Restore Information Store** wizard by clicking on the restore operation icon in the main workspace.

8.1.1 Restoration Time Selection

In the first step of the **Restore Data** wizard you will select when to run the restoration process. There are two choices:

- **Now** – select this option to execute the restore operation immediately after you finish the wizard

- **On schedule** – select this option to schedule the operation

- **When restoring on bare metal –** this option is available if Acronis True Image Echo Enterprise Server is installed and allows restoring the whole production server on a bare metal (see section 2.3.2 for details)

8.1.2 Specifying a Task Execution Account

In this step of the **Restore Data** wizard, you are specifying an account that is valid on the computer where the data you want to restore is located – a task execution account. These credentials will be used during each task execution for connecting to the server.

The task will run as if it was started by a specified user.

Enter the Username and password then click **Next**. The domain name must be specified if the user is a member of a domain (*DOMAIN\Username*).

8.1.3 Selecting a Backup Location

Select the appropriate backup location in the tree or specify the path to it manually in the **Path** field below the tree. Acronis Recovery for MS Exchange stores up to ten locations for the last archives created in a special folder – **Recent Backup Locations** - so you can easily locate the appropriate archive.

You can also select specific Acronis backup locations (such as Acronis Backup Server).

The following resources may also be selected as backup locations:

- Entire disk or disk folder
- Network share, SAN, NAS
- FTP
- Tapes, Autoloaders, Tape Libraries
- Acronis Backup Server

The number of archives in the selected folder is displayed in the right pane.

Click **Next** to continue.

8.1.4 Selecting a Backup Task

If several backup tasks use the same location to store archives, you have to select the task you want to restore from.

> Note, Acronis Recovery for MS Exchange does not protect archives form possible physical corruption. In case you try to restore data from the corrupted archive, an error message will appear and the restore task will not be executed. We recommend you to rename or delete the last archive's slice (since the corrupted one and all subsequent slices should be renamed or deleted), and then try to execute the restore task once more.

Click **Next** to continue.

8.1.5 Providing a Password

If there are any password-protected backup archives in the location you have selected (see 9.1.3), you will need to enter the password to restore your data from the archives.

Click **Next** to continue.

8.1.6 Restore Point Selection

Specify to which state you want to restore your data.

Acronis Recovery for MS Exchange offers four ways for restoring your data:

- **to the point of failure** – the data will be restored to the state at the point of failure. To be able to restore to the point of failure, a chain of backed up logs and also newly created log files (including an active log) must be available in the selected location. Otherwise only restoring to the time of the latest backup is available. Keep in mind, that restoring to the point of failure can take a long time.

- **to the time of the latest backup** – choosing this option will restore your data to the state when the last backup was created. Restoring to the latest backup will be faster, than restoration to the point of failure.

- **to a specific point in time** - Acronis Recovery for MS Exchange allows you to specify a date and time to restore your data from. Note, to be able to restore to a specific point in time, Microsoft Exchange transaction logs must be backed up. Data will be restored to the time of the last created backup before the specified time, and then transaction logs will be applied.

- **from the selected backup** – select this option to choose a backup from which to restore. A list of backups will be available by clicking on the **Select from the list of backups** link. Choose the backup you want to restore from and click **OK**.

To use special recovery modes, enable the corresponding parameter and select **Acronis Active Restore** or **Dial tone recovery**.

Select **Dial tone recovery** in order to recover e-mail service in the first place, this will enable users to send and receive e-mail while all other data is being restored. You can use dial tone recovery only while restoring data from the latest backup. Dial tone recovery may be used only with Microsoft Exchange Server 2007 (see 8.6 for details).

Restart an e-mail application after the restoration process is completed to bring data to up-to-date state.

To overwrite previously created dial tone databases generated by third-party tools, select the corresponding check box. This step eliminates the need to delete the old databases manually.

After selecting the appropriate option click **Next** to continue.

8.1.7 Content Selection

Acronis Recovery for MS Exchange restores information stores and separate storage groups. Select a database server from the tree in the left pane.

Restoring Information Stores

Choose an information store to restore. Information about this item will be displayed on the right. Note, only databases, which existed before creating a full backup, will be displayed. Newly created databases cannot be restored only from storage groups' transaction logs. In terms of this, we recommend you to create full backups after new databases are created.

> **Important!** While restoring an information store, e-mail service will not be available, i.e. users will not be able to send and receive e-mails.

Restoring Storage Groups

Choose the storage group to restore.

You can restore storage groups to its original location, choose another storage group as a new location or restore to Recovery Storage Group (in this case only one storage group can be restored).

Click **Next** to continue.

8.1.8 Restore Options

Select the options for the restoration process (Pre/Post commands, restoration process priority etc.). You can **Use default options** (See 8.2 "Setting Default Restore Options" for more information.) or **Set the options manually**. In the latter case, the settings will be applied only to the current restore task.

8.1.9 Selecting Start Parameters

You can run a restore task manually or specify the frequency (Daily, Weekly or Monthly). See Chapter 9 "Scheduling Tasks" for detailed information.

8.1.10   Echo Task Selection

When restoring on bare metal, you need to select the Acronis True Image Echo Enterprise Server task responsible for the restoration of system volumes and volumes where Microsoft Exchange Server is located. You can do it either immediately after **Restore Data** wizard completes or do it manually later.

Choose one of the following actions:

- **Do not run Echo task** - in this case, you will have to select Acronis True Image Echo Enterprise Server task manually later.

- **Run the following Echo task** - in this case, you have to select Acronis True Image Echo Enterprise Server task from the list below. The selected task will be started immediately after **Restore Data** wizard completion.

Having selected the appropriate action, click **Next** to continue.

8.1.11   Restore Summary

In the final step, the restoration summary is displayed. Up to this point, you can click **Back** to make changes in the created task.

If you click **Cancel**, no databases will be restored.

Click **Finish** to save the schedule or start the restore task immediately.

8.2 Restoring Mailboxes

Launch the **Restore Mailboxes** wizard by clicking on the restore operation icon in the main workspace.

8.2.1 Restoration Time Selection

In the first step of the **Restore Data** wizard you decide when to run the restoration process. There are two choices:

- **Now** – select this option to execute the restore operation immediately after you finish the wizard

- **On schedule** – select this option to schedule the operation

8.2.2 Specifying a Task Execution Account

In this step of the **Restore Data** wizard, specify an account that is valid on the computer where the backup archives you want to restore are located – a task execution account. These credentials will be used during each task execution for connecting to the server and for connecting to the Microsoft Exchange.

Thus, the task will run as if it was started by the specified user.

Enter the Username and password then click **Next**. The domain name must be specified if the user is a member of a domain (*DOMAIN\Username*).

8.2.3 Selecting a Backup Location

Select the appropriate backup location in the tree or specify the path to it manually in the **Path** field below the tree.

You can also select specific Acronis backup locations (such as Acronis Backup Server).

The following resources may also be selected as backup locations:

- Entire disk or disk folder

- Network share, SAN, NAS

- FTP

- Tapes, Autoloaders, Tape Libraries

- Acronis Backup Server

The number of archives in the selected folder is displayed in the right pane.

Click **Next** to continue.

8.2.4 Selecting a Backup Task

If several backup tasks use the same location to store archives, you have to select the task you want to restore from.

> Note, Acronis Recovery for MS Exchange does not protect archives form possible physical corruption. In case you try to restore data from the corrupted archive, an error message will appear and the restore task will not be executed. We recommend you to rename or delete the last archive's slice (since the corrupted one and all subsequent slices should be renamed or deleted), and then try to execute the restore task once more.

Click **Next** to continue.

8.2.5 Providing a Password

If there are any password-protected backup archives in the location you have selected (see 9.1.3), you will need to enter the password to restore your data from archives.

Click **Next** to continue.

8.2.6 Restore Point Selection

Specify to which state you want to restore your data.

Acronis Recovery for MS Exchange offers four ways for restoring your data:

- **to the point of failure** – the data will be restored to the state at the point of failure. To be able to restore to the point of failure, a chain of backed up logs and also newly created log files (including an active log) must be available in the selected location. Otherwise only restoring to the time of the latest backup is available. Keep in mind, that restoring to the point of failure can take a long time.

- **to the time of the latest backup** – choosing this option will restore your data to the state when the last backup was created. So restoration to the latest backup will be faster, than restoration to the point of failure.

- **to a specific point in time** - Acronis Recovery for MS Exchange allows you to specify a date and time to restore your data from. Note, to be able to restore to a specific point in time, Microsoft Exchange transaction logs must be backed up. Data will be restored to the time of the last created backup before the specified time, and then transaction logs will be applied.

- **from the selected backup** – select this option to choose a backup from which to restore. A list of backups will be available by clicking on the **Select from the list of backups** link. Choose the backup you want to restore from and click **OK**.

After selecting the appropriate option click **Next** to continue.

8.2.7 Content Selection

Acronis Recovery for MS Exchange allows restoring mailboxes and separate public folders. First, select a database server from the tree in the left pane.

Also Acronis Recovery for MS Exchange allows using a filter to display only the required items in the tree. Type a word, which will help you to define the necessary folders, in the **Filter** field.

Restoring Mailboxes

Choose a Storage Group and Mailbox Store from which you want to restore a mailbox. Information (size and number of Mailboxes) about the selected items will be displayed on the right.

In the drop-down list, specify the Mailbox (or separate folders) you want to restore. Information about the size, number of folders and subfolder, as well as the total number of e-mails will be displayed on the right.

You can restore mailboxes to their original location or choose another mailbox database as a new location. In the latter case the **Next** button will be disabled until you choose a mailbox to restore to.

Restoring Public Folders

Choose a Storage Group, Public Folder Store and Public Folder from which you want to restore a specific folder. Information about the selected items will be displayed on the right.

In the drop-down list, specify the public folder you want to restore. Information about size, number of folders and subfolders, as well as total number of e-mails will be displayed on the right.

You can restore public folders to their original location or choose another folder as a new location. In the latter case the **Next** button will be disabled until you choose a public folder to restore to.

Click **Next** to continue.

8.2.8 Restore Options

Select the options for the restoration process (Pre/Post commands, restoration process priority etc.). You can **Use default options** (See 9.2 "Setting Default Restore Options" for more information.) or **Set the options manually**. If the latter is the case, the settings will be applied only to the current restore task.

8.2.9 Selecting Start Parameters

You can run a restore task manually or specify the frequency (Daily, Weekly or Monthly). See Chapter 9 "Scheduling Tasks" for detailed information.

8.2.10   Restore Summary

In the final step, the restoration summary is displayed. Up to this point, you can click **Back** to make changes in the created task. If you click **Cancel**, no databases will be restored.

	Note, temporary files, created during the restore process, may require considerable disk space. Hence, it is advisable to choose the appropriate location for theses files.
	While working with Acronis Recovery for MS Exchange Beta2 version, such a location is selected automatically (current user's *TMP* folder).

Click **Finish** to save the schedule or start the restore task immediately.

8.3 Restoring Individual E-mails

In addition to restoring storage groups and mailboxes, Acronis Recovery for MS Exchange can restore individual e-mails.

Start the e-mail restoration process by clicking on the restore operation icon in the **Tools** group.

8.3.1 Selecting a Backup Location

To view available storage groups and mailboxes select the appropriate backup location by clicking the **Select location…** link or specify the path to it manually in the **Backup location** field.

You can also select specific Acronis backup locations (such as Acronis Backup Server).

The following resources may also be selected as backup locations:

- Entire disk or disk folder

- Network share, SAN, NAS

- FTP

- Tapes, Autoloaders, Tape Libraries

- Acronis Backup Server

8.3.2 Selecting a Backup Task and Point to Restore

If several backup tasks use the same location to store archives, you have to select the task you want to restore from. Click the **Select task…** link to choose the backup task and a point to restore e-mails to.

The left pane will display a list of available tasks. A selected task's comments will be displayed on the right.

Below you have to select to which state you want to restore e-mails.

Acronis Recovery for MS Exchange offers four ways for restoring your data:

- **At the moment of failure** – e-mails will be restored to the state at the point of failure. Keep in mind, that restoring to the point of failure can take a long time.

- **At the time of the latest backup** – choosing this option will restore your e-mails to the state when the last backup was created. So restoration to the latest backup will be faster, than restoration to the point of failure.

- **On the following date** - Acronis Recovery for MS Exchange allows you to specify a date and time to restore your e-mails from.

- **At the time of the following backup** – select this option to choose a backup from which to restore. A list of backups will be available by clicking on the **Select from the list of backups** link. Choose the backup you want to restore from and click **OK**.

After selecting the appropriate option click **OK** to return to the **E-mail Restoration** window.

8.3.3 Setting Additional Search Options

Filter

Acronis Recovery for MS Exchange allows using a filter to display only the required items in the tree. Type a word, which will help you to define the necessary folders, in the **Filter** field. Only Mailboxes containing this word will be displayed in the tree below.

Text to search

You can enter a text you want to search for in e-mails' subjects in a corresponding field and click the **Search** button. As a result, only e-mails whose subject contains that text will be displayed below.

Advanced search options

Click the **Advanced search options** link to specify additional options for e-mail searching:

- **Search by person** – select this option to specify e-mail addresses of a sender and/or recipient

- **Search by date** – select this option to specify the period of time (**From** and **To**) to search for required e-mail

- **Search in** – select this option to specify the following parameters:

  o *Message header* – Acronis Recovery for MS Exchange will search for the required text only in messages' headers

  o *Messages with attachments only* – Acronis Recovery for MS Exchange will search for the required text only in messages with attachments.

After setting the appropriate options click **OK** to return to the **E-mail Restoration** window.

8.3.4 Selecting E-mail Exporting parameters

Select the way you want to export selected emails from the drop-down list before starting the restoration process, and then click **Restore**:

- **To original location** – e-mails will be restored to their original location (mailbox or public folder)

- **Save to file** – select the location where e-mails will be saved and choose a type of the file (*.txt, *.oft, *.msg, *.htm, *.mht*) and click **OK**

- **Send by e-mail** – restored e-mails will be sent to specified addresses. Provide e-mail addresses and the outgoing SMTP server name. A Username and a password may also be needed if the SMTP server requires authentication and click **OK**.

8.4 Setting Default Restore Options

To view or edit the default restore options, select **Tools -> Options -> Default Restoration Options** from the main program menu.

You can also edit restore options while creating a restore task.
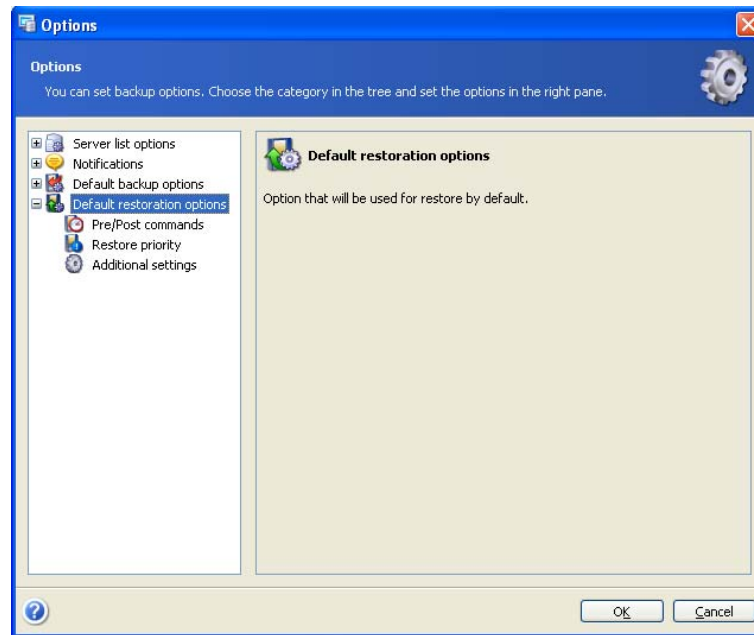
8.4.1 Pre/Post Commands

You can specify commands or batch files to be automatically executed before and after the restore procedure. Click **Edit** to open the **Edit Command** window and input the command, its arguments and the working directory, or browse folders to find a batch file. Interactive commands (commands that require user input) are not supported).
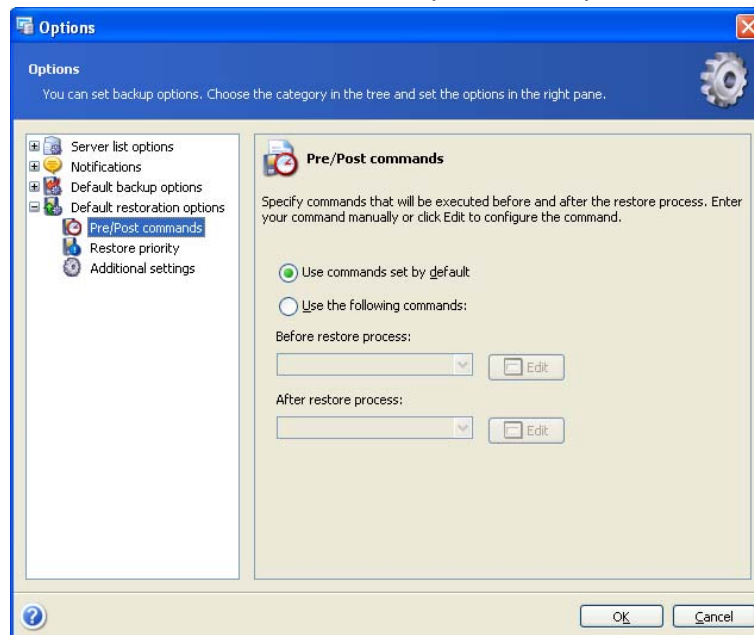
8.4.2 Restoration Priority

You can set up the restore process priority:

- **Low** - the restore process will run slower, but it will not influence other processes running on your computer

- **Normal** - set by default. The restore process will run with normal priority

- **High** - the restore process will run faster, but it may influence other processes running on your computer

Changing the restore process priority may have an adverse effect on the performance of other programs running simultaneously. The priority of any process running in the system determines the amount of CPU usage and system resources allocated to that process.
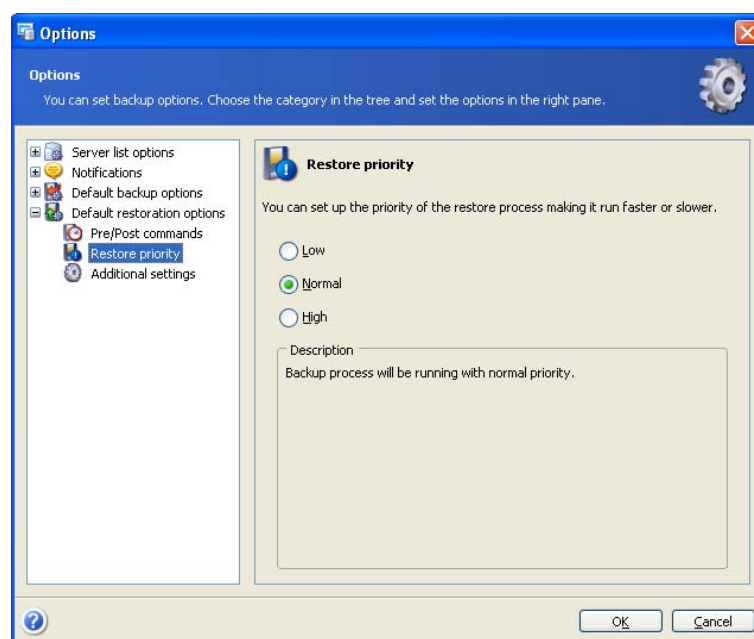

8.4.3 Additional Settings

Backup archive validation

Before data is restored from the archive, Acronis Recovery for MS Exchange can check its integrity. If you suspect that the archive might have been corrupted, select **Validate backup archive before restoration**.

Overwriting mode

Enable **Overwrite existing e-mails** parameter to make Acronis Recovery for MS Exchange overwrite existing e-mails with restored ones.

8.5 Acronis Active Restore or Dial Tone Recovery?

Acronis Recovery for MS Exchange allows a faster databases recovery using two methods – Acronis Active Restore and dial tone mode. This section describes differences and advantages of each method.

Using Acronis Active Restore

Acronis Active Restore acts the following way: after starting s restore task, a backed up database is mounted directly from the archive. Then transaction logs, which are being taken from the archive, will be applied. It is important, that database becomes available for users after a short time – users can work with their folders, calendars, e-mails. All other data is being restored from the archive in the background. After the restore operation is completed, the database will be remounted, which takes less, than a minute.

> Please note, using Acronis Active Restore is inefficient if archives are located on tapes or ftp servers – this operation may be time consuming.

Using Dial Tone Recovery

Restoring a huge Microsoft Exchange Server database may take several hours before users can start working with it again after a disaster. But Acronis Recovery for MS Exchange makes it possible to use a **dial tone** to recover e-mail service in the first place, and only then restore users' data as it becomes available (only in Microsoft Exchange Server 2007).

Main advantages of using dial tone mode are independence from the log's size and almost instant access to the e-mail service.

At first, a temporary empty dial tone database will be created. Microsoft Exchange Server will create new mailboxes (with the same GUID values as the old ones) in this database, so that users can start sending and receiving e-mails, but other data (such as contact lists, rules, stored e-mails, etc.) still will not be available. This process takes only two minutes or even less. After restoring the database to the selected location and applying logs, all recovered data will be merged with new e-mails (which were sent or received during the dial tone recovery) bringing mailboxes to the up-to-date state, which takes the database off-line for several minutes. On operation completion, temporary dial tone databases will be deleted.

> Note, public folders can not be restored using dial tone mode, i.e while restoring storage groups, which contain mailboxes and public folders, only mailboxes will be restored. We recommend you to restore public folders separately, not using dial tone mode.

Comparing Acronis Active Restore and Dial Tone Recovery

	Acronis Active Restore	**Dial Tone Recovery**
MS Exchange accessibility while restoring	yes	limited
Public folders restoring	yes	no
Supported MS Exchange editions	all editions	only MS Exchange 2007
Logs size affection	yes	no

Chapter 9. Scheduling Tasks

9.1 What is a task?

A task is a job you execute for a database that includes the type of operation (backup, restore, etc.), parameters of the operation (what to backup, what to restore, etc.) and a schedule (optional). Each time you want to perform an operation with specific parameters, you should create a task. Once the task is created, you can execute it manually at any time or run it on a scheduled basis (if provided). You can also schedule independent or redundant tasks for the same information store or storage group.

9.2 Setting Schedule Parameters

You can run a task manually or specify the frequency (Daily, Weekly or Monthly).

Manually – this option allows you to create a task without specifying the exact schedule of its execution. The created task appears in the task management list and may be run at any time.
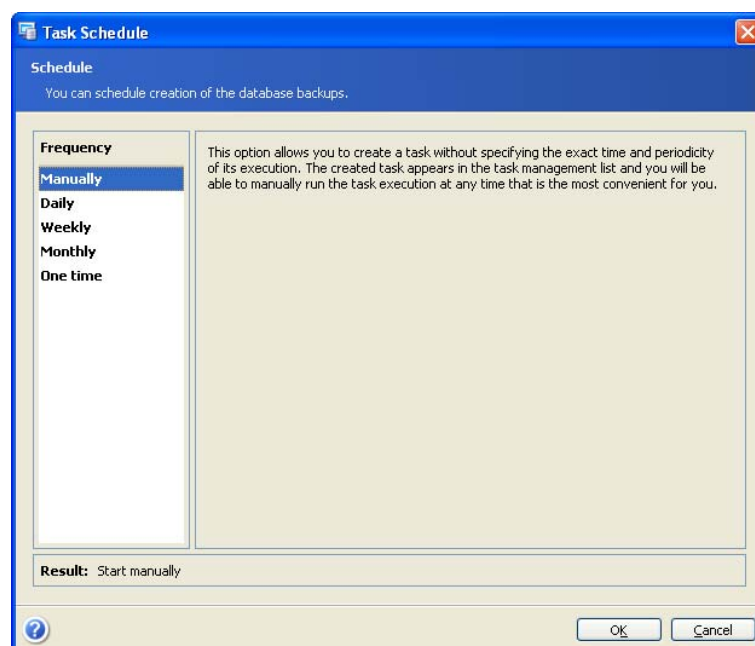
Daily - the task will be executed daily at the specified time. You can set the following parameters:

Parameter	Description
Recur every (...) days	The task execution frequency
Start time	Time for starting the task. The current time is set by default
Repeat	Task execution frequency: **Once** for a single execution and **Every (...)** for periodic executions throughout the day (in minutes or hours)
End time	Time when the schedule will be disabled
Start date	Select this check box to specify the date to enable this schedule
End date	Select this check box to specify the date when this schedule will be disabled

Weekly - the task will be executed on a weekly basis at the specified time and days. You can set the following parameters:

Parameter	Description
Recur every (...) weeks	The task execution frequency. Select individual days of the week, all days or only workdays.
Start time	Time for starting the task. The current time is set by default
Repeat	Task execution frequency: **Once** for a single execution and **Every (...)** for periodic executions during the day (in hours)
End time	Time when the schedule will be disabled
Start date	Select this check box to specify the date to enable this schedule

End date	Select this check box to specify the date when this schedule will be disabled

Monthly - the task will be executed monthly at the specified time and day. You can set the following parameters:

Parameter	Description
Months	Select months for the task execution from the drop-down list. Then choose one of the following parameters: **Days** - choose this parameter to specify days of the selected months for task execution. Choose the dates from the drop-down list. Also you can select **Last** (to execute the task on the last day of the chosen months) or **All** days. For example, if you have selected "15" and "Last", the task will be executed on every 15th and every last day of the selected months. **On** - choose this parameter to select a week number of the month (also **Last** or **All)** and the day of the week (as well as **All days** and **All Workdays**) for task execution. For example, if you have selected "First" and "Monday", the task will be executed on the first Monday of the selected months.
Start time	Time for starting the task. The current time is set by default
Repeat	Task execution frequency: **Once** for a single execution and **Every (…)** for periodic executions during the day (in hours)
End time	Time when this schedule will be disabled
Start date	Select this check box to specify the date to enable this schedule
End date	Select this check box to specify the date when this schedule will be disabled

One time - the task will be executed once at the specified time and day. You can set the **Start time** parameter: specify the date and time to start the operation. Current time is set by default.

All the settings you made are displayed in the **Result** field at the bottom of the window.

To save your settings, click **OK**.

To quit task scheduling without saving, click **Cancel**.

Note, Acronis Recovery for MS Exchange allows you to set multiple schedules for one task. For example, you can backup your data not only once a week, but also on the last day of each month. You can specify Weekly and Monthly parameters to have the necessary operation schedule.

Chapter 10.   Managing Tasks

To manage operations, click **Manage Tasks** in the **Pick a Tool** group or select the **Tools -> Manage tasks** menu item.

All the scheduled tasks appear in the Scheduled Tasks pane in the Manage Computer Tasks window of the Acronis Recovery for MS Exchange Management Console. Information about the task name, credentials, the type of backup, its status (completed, scheduled), the task's schedule and the date and time when it was run last is displayed.

You can edit, start, and delete the scheduled tasks from these windows, as well as edit the scheduled set of tasks.

	Note, backup tasks may consist of two subtasks: full and incremental backups. You can manage these subtasks separately.

10.1 Editing a Task

To edit a task, select it in the Tasks window and click **Edit Task** on the left. Follow the wizard's instructions on the screen.

10.2 Deleting a Task

To delete an existing task, select it in the Tasks window and click **Delete Task** on the left. Follow the wizard's instructions on the screen.

10.3 Starting a Task

To begin executing an existing task immediately, select it in the Tasks window and click **Start Task Now** on the left.

10.4 Viewing a Disaster Recovery Plan

Click the **View Disaster Recovery Plan** link in the tasks pane. The plan is provided in HTML format. See details in Chapter 6 "Disaster Recovery Plan".

Chapter 11.   Notifications

Acronis Recovery for MS Exchange can notify you when a task is complete using an SNMP service or via e-mail.

By default all notifications are disabled.

11.1 E-mail Notifications

Specify a singular default e-mail account that will be used for notifications regarding the backup operation process. Provide the e-mail address to which notifications will be sent and the outgoing SMTP server name. A username and a password may also be needed if the SMTP server requires authentication.

You can choose when you want to receive notifications:

- after successful completion of the operation
- if the operation fails

You can also add full log to notification selecting the corresponding parameter.
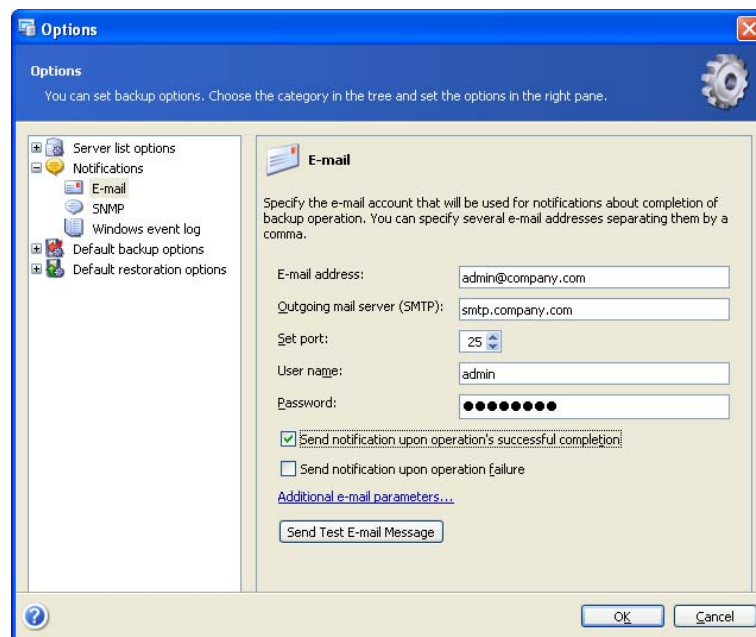
Click the **Additional e-mail parameters...** link to specify the **From** and **Subject** fields for the notification e-mail.

You can check if the settings are correct by clicking the **Send Test E-mail Message** button.

11.2 SNMP

You can choose whether to send event log messages issued by Acronis Recovery for MS Exchange to computers running SNMP (Simple Network Management Protocol) management applications.

To specify SNMP settings, check the Send Notification with SNMP parameter to enable SNMP notification.

In the **Community Name** field, enter the name of the SNMP community to which both the Host (the computer running the SNMP management application) and the computer running the task belong.

In the **Host Name** field, enter the name of the computer running the SNMP management application, to which notifications will be sent. If not specified, messages will be sent to all SNMP clients found in the local network.

Below in this window you can choose whether you want to get notifications:

- upon the operation's successful completion parameter
- upon the operation failure parameter

You can check if the settings are correct by clicking the **Send test SNMP message** button.

11.3 Windows event log

You can save event messages to the Windows Event Log (to see this log, run eventvwr.exe or select Control Panel -> Administrative tools -> Event Viewer).

To save event messages to Windows Event Log select the **Save messages** option and choose one of the following from the drop-down list:

- **All events** - all events (information, warnings and error messages) will be recorded to the Windows Event Log
- **Warnings and errors** - warnings and error messages will be recorded to the Windows Event Log
- **Errors only** - only error messages will be recorded to the Windows Event Log

Chapter 12. Viewing Logs

Acronis Recovery for MS Exchange working logs. The logs provide information about scheduled task results, including failure reasons, if any. To view logs, click the **Logs** item in the **Pick a Tool** group.

The log browsing window contains two panels: the left panel features the log list, and the right panel displays the selected log's contents. You can set up list parameters to only display messages of a particular type, display particular columns, or select a sorting order.

To the left, there are 3 message filter options:

- filter error messages
- filter warnings
- filter information messages

To select columns to display, click the button and check columns to display.

To sort messages by a particular column, click its header (click again to reverse the order) or the button (the second from the right) and select the desired column.

You can also change column width by dragging its borders with the mouse.

Chapter 13.   Command-line Mode

Acronis Recovery for MS Exchange supports the command-line mode. The command-line user interface provides the ability to execute most of Acronis Recovery for MS Exchange functionality. There are four operations you can run in command-line mode:

- **List** – obtain a list of archive locations, archives' ID, credentials and other information

- **Info** – obtain information about required items, such as a name of a storage group, number of its databases, their total size, etc

- **Backup** – back up required items, as well as specify backup options

- **Restore** – restore required items, as well as specify restore options

Commands may be accompanied with options.

	It is **important** to keep the prescribed order of specifying parameters.
	Note, parameters should be entered in double quotes in case they contain non-Latin symbols (see usage examples).

To view all available commands and their options, execute the following command Cmd.exe [/h] [/?] in command line prompt.

Below are sections describing each command and their options with corresponding usage examples.

13.1 List Command

Cmd.exe   list   [/location:<URI>   [/credentials:"<login>:<password>"]] [/archive:<name> [/password:<password>]] [/item:"<item>"] [/pit:<time>]

13.1.1 Description of Options
/location:<URI>

Lists an archive location's URI. The path may be specified in one of the following ways: "C:\path\to\dir\", "\\computer\share\dir\", "ftp://host/mybackups/" or "bsp://host/BackupServer".

/credentials:<login>:<password>

Displays task execution account's credentials

/archive:<name>

Lists an ID of an archive within the specified location

/password:<password>

Displays a password for the required archive location

/item:<item>

Lists a parent item in the following format:

"*//StorageGroup_name/Mailbox_name/Folder_name*". It can be null for storage groups

/pit:<date><time>

Displays items in a specific point in time. The time format depends on a system locale of the particular computer (i.e. "01.06.2008 12:07:55"). The value can also be <latest> that means the latest backup, and <pof> - point of failure

13.1.2 Usage Examples

- *cmd.exe list /item:"//StorageGroup1"*

  This command will list all mailboxes of storage group 1

- *cmd.exe list /location:"bsp://host/BackupServer" /archive:archive1 /pit:latest*

  This command will list all storage groups in archive1 located in bsp://host/BackupServer

13.2 Info Options

Cmd.exe info [/location:<URI> [/credentials:"<login>:<password>"]] [/archive:<name> [/password:<password>]] /item:"<item>" [/pit:<time>]

13.2.1 Descriptions of Options

/location:<URI>

Displays an archive location's URI. The path may be specified in one of the following ways: "C:\path\to\dir\", "\\computer\share\dir\", "ftp://host/mybackups/" or "bsp://host/BackupServer".

/credentials:<login>:<password>

Task execution account's credentials

/archive:<name>

Displays an ID of an archive within the specified location

/password:<password>

Displays a password for the required archive location

/item:<item>

Displays parent item information

/pit:<date><time>

Displays items in a specific point in time. The time format depends on a system locale of the particular computer (i.e. "01.06.2008 12:07:55"). The value can also be <latest> that means the latest possible state, and <pof> - point of failure

13.2.2 Usage examples

- *Cmd.exe   info   /location:"bsp://host/BackupServer" [/credentials:"admin:qwerty"] /archive:<archive1> [/password:<password>]*

    This command will display information about archive1 located in *bsp://host/BackupServer*, credentials used are admin (login) and qwerty (password)

13.3 Backup Options

Cmd.exe backup /location:<URI> [/credentials:"<login>:<password>"] /archive:<name> [/item:"<item>"] [/backupType:Full|Incremental] [/compression:None|Normal|High|Maximum|Ultimate] [/encryption:"None|AES 128|AES 192|AES 256:<password>"] [/substitute] [/throttle:<throttle>] [/validate] [/priority:Low|Normal|High] [/forceBrick]

13.3.1 Description of Options

/location:<URI>

Displays an archive location's URI. The path may be specified in one of the following ways: "C:\path\to\dir\", "\\computer\share\dir\", "ftp://host/mybackups/" or "bsp://host/BackupServer".

/credentials:<login>:<password>

Task execution account's credentials

/archive:<name>

Displays an ID of an archive within the specified location

/item:<item>

This parameter is optional and displays a parent item in the following format:

"*//StorageGroup_name/Mailbox_name/Folder_name*"

To back up all storage groups set "*//*" as the parameter's value. If this parameter is not specified, the whole information store will be backed up

/compression:<None|Normal|High|Maximum|Ultimate>

Specifies archive compression level. Normal is set by default

/backupType:<Full|Incremental>

Specifies a type of backup to be created.

/encryption

/encription:<"AES 128|AES 192|AES 256">

Specifies the encryption method of the created archive

/password:<password>

Displays a password for the required archive location

/substitute

Specifies substitution

/throttle

Specifies throttle bandwidth in kb/s (the value can be from 0 to 100000 kb/s)

/validate

Specify this parameter to validate the created backup archive

/priority:<Low|Normal|High>

Specifies priority of the backup operation

/forceBrick

Use this parameter to force brick level backup method. For storage groups' items operation uses database level, for mailboxes/folders – brick level

13.3.2 Usage Examples

- *Cmd.exe backup /location":bsp://host/BackupServer" /archive:archive1 /item:"//MyStorageGroup/MyAccount" /credentials:"admin:qwerty"*

    This command will back up *MyStorageGroup/MyAccount* to the *bsp://host/BackupServer* folder, the created archive will be called *archive1*, credentials will be used: admin (login) and qwerty (password)

13.4 Restore Options

Cmd.exe restore /location:<URI> [/credentials:"<login>:<password>"] /archive:<name> [/password:<password>] [/item:"<item>" [/storagegroup:<storagegroupname>][/activerestore] [/dialtone [/overwriteDialtoneDB]]] [/pit:<time>] [/priority:Low|Normal|High] [/validate] [/overwriteExistingEmails]

13.4.1 Description of Options

/location:<URI>

Displays an archive location's URI. The path may be specified in one of the following ways: "C:\path\to\dir\", "\\computer\share\dir\", "ftp://host/mybackups/" or "bsp://host/BackupServer".

/credentials:<login>:<password>

Task execution account's credentials

/archive:<name>

Displays an ID of an archive within the specified location

/password:<password>

Displays a password for the required archive location

/item:<item>

This is an optional parameter. It specifies a parent item in the following format:

"*//StorageGroup_name/Mailbox_name/Folder_name*"

To restore all storage groups set "*//*" as the parameter's value. If this parameter is not specified, the whole information store will restored

/activerestore

Specify this parameter to use Active Restore mode (for restoring storage groups only)

/dialtone

Specify this parameter to use dial tone mode (for restoring storage groups only)

/storagegroup

Specifies a storage group to restore. Note, this option is incompatible with *//dialtone* command

/pit:<date><time>

Specifies a point in time to which to restore the required item. The time format depends on a system locale of the particular computer (i.e. "01.06.2008 12:07:55"). The value can also be *<pof>* that means the point of failure.

/validate

Specify this parameter to validate the backup archive before restoring

/priority:<Low|Normal|High>

Specifies priority of the restore operation

/overwriteExistingEmails

Forces overwriting existing e-mails

13.4.2 Usage Examples

- *Cmd.exe restore /location:"bsp://host/BackupServer" /archive:archive1 /item:"//MyStorGroup1" /itemLogon:admin:qwerty /item:MyStorGroup2*

  This command will restore *MyStorGroup1* and *MyStorGroup2* from the archive called *archive1*, located in *bsp://host/BackupServer*

Appendix A. Acronis Recovery for MS Exchange: Best Practices

This section provides instructions for best practices when using Acronis Recovery for MS Exchange.

A.1 Protect your server from hardware failure, user errors and viruses

Scenario

The company is running several internet and intranet applications on several Windows 2000 servers using Microsoft Exchange as the back end (using different information stores). Since all transactions are stored in the database, any data loss is not acceptable. The database administrator must provide protection from hardware failure, user errors and virus attacks.

Acronis solution

Use the following components
- Acronis Recovery for MS Exchange Agent (on all servers with databases)
- Acronis Recovery for MS Exchange Management Console (on an administrator workstation, from which you plan to manage tasks)

To schedule periodic backup
1. Install Acronis Recovery for MS Exchange Management Console on the database administrator workstation and Acronis Recovery for MS Exchange Agents on the server where Microsoft Exchange information stores are located

For every Microsoft Exchange instance perform the following actions:

2. Connect to the server from the Acronis Recovery for MS Exchange Management Console using the appropriate credentials

3. Launch the **Create Backup** wizard and follow the instructions to create a backup task:

   a. Select the whole Microsoft Exchange instance (or all available instances) as a backup source

   b. Select a backup destination

   c. Select **Full and Incremental backups** type

   d. Schedule full backups for every month, incremental backups for every week

e. Use default settings for backup

f. Add the necessary comments for the task

g. Save the created task

To recover all data in case of hardware failure

For every damaged server perform the following actions:

1. Install and configure a new server. Install the necessary Microsoft Exchange information stores on the server.

2. Install Acronis Recovery for MS Exchange Agent on the server

3. Connect to the server from Acronis Recovery for MS Exchange Management Console using the appropriate credentials

4. Launch the **Restore Data** wizard and follow the instructions to restore the database:

    a. Select the backup archive location

    b. Select the **Restore to point of failure** option

    c. Select the whole Microsoft Exchange information store (or several storage groups) to restore from, then specify the target storage group for each storage group.

    d. Start the restore operation

All Microsoft Exchange storage groups will be restored to the point of failure to avoid data loss.

To recover all data in case of a user mistake

For all servers perform the following actions:

1. Connect to the server from Acronis Recovery for MS Exchange Management Console using the appropriate credentials

2. Launch the **Restore Data** wizard and follow instructions to restore the database:

    a. Select the backup archive location

    b. Select the **Restore to point in time** option and specify the date and time manually, or select the backup from the list of backups.

    c. Select the database to restore from the archive

    d. Start the restore operation

| | Only one database will be restored to the selected point in time. |

To recover all data in case of a virus attack

For all servers perform the following actions:

1. Recover the server from viruses, reinstall the operating system or replace the server with a new one.

2. Connect to the server from Acronis Recovery for MS Exchange Management Console using the appropriate credentials

3. Launch the **Restore Data** wizard and follow the instructions to restore the database:

   a. Select a backup archive location

   b. Select the **Restore to a point in time** option and specify the date and time manually or select the required backup from the list of backups.

   c. Select the whole Microsoft Exchange information store (or several storage groups) to restore, and specify the target location for each information store.

   d. Start the restore operation

| | All Microsoft Exchange information stores will be restored to a point in time. |

A.2 Protect your server to guarantee minimal data loss

Scenario

The database administrator must organize the server backup creation so that in case of a server failure for any reason, the maximum data loss would not be more than 15 minutes.

Acronis solution

Connect to Acronis Recovery for MS Exchange Management Console and create a backup task for Microsoft Exchange with the following backup strategy: Full Backup (every week) + Incremental backup (every day).

To recover all data in case of failure, use the same procedure as described in the previous scenario (A.1).

A.3 Backing up several databases

Scenario

The company uses only one Microsoft Exchange instance for running several databases. All databases have different levels of importance concerning data loss: some of them need to be backed up every day, others require only weekly backups.

Acronis solution

The database administrator should create independent tasks for different databases. While creating a task, the database administrator specifies the appropriate schedule for each database.

A.4 Encrypting database archives for storage

Scenario

The company stores database backup archives off-site, hence they should be effectively protected (encrypted).

Acronis solution

While creating a backup task, the database administrator should set a password to protect the archive and encryption type (AES 128, 192 or 256) by specifying backup options.

While creating the restore task, the administrator has to provide the correct password to the archive in order to restore the data. The password should be kept in a safe place so that data may be restored if the company hires new administrators.

A.5 Using the Disaster Recovery Plan to restore databases

Scenario

The business owner wants to be sure that the databases can be restored at any time, even in case the database administrator is not available for any reason. For that purpose, a comprehensive Disaster Recovery Plan should be created, which will help a person without DBA knowledge restore damaged databases.

Acronis solution

While creating a backup task, the database administrator should specify a Disaster Recovery Plan option, so that it would be sent to the business owner's email. In case of a disaster, the staff can restore databases according to the instructions contained in the Disaster Recovery Plan.

A.6 Manual backup (before crucial changes in databases)

Scenario

The company is preparing to make extensive changes to the databases. To avoid possible loss, the databases must be backed up.

Acronis solution

The database administrator can use previously created backup tasks and start them manually from the Acronis Recovery for MS Exchange Management Console.

Another option is to start a new task for creating full backups. The administrator can specify it so that it will only be executed manually.

Appendix B. Installing Acronis Recovery for MS Exchange from command line

Acronis Recovery for MS Exchange supports the Microsoft Installer utility (*msiexec.exe*) with all its commands. Here is the MSI installation command and options:

Install Options

> `/i <Component.msi | ProductCode>`
>
> Installs or configures a product. ProductCode is the serial number of your personal copy of Acronis Recovery for MS Exchange Agent
>
> **COMPONENT=[component]**
>
> Specifies the component you want to install:
>
> AcronisRecoveryMsExchangeAgent - Acronis Recovery for MS Exchange Agent
>
> AcronisRecoveryMsExchangeConsole - Acronis Recovery for MS Exchange Management Console
>
> **USERNAME=[username] PASSWORD=[password]**
>
> Specifies username and password for running Acronis Recovery for MS Exchange Agent installation
>
> `/e[path]`
>
> Specifies a path to extract an .msi file to.
>
> `/a <Component.msi | ProductCode>`
>
> Applies the administrative installation option
>
> `/x <Component.msi | ProductCode>`
>
> Uninstalls the product

Example

msiexec /i C:\ AcronisRecoveryMsExchangeAgent.msi

Installs Acronis Recovery for MS Exchange Agent.

Reinstall Options

/f[p|o|e|d|c|a|u|m|s|v] <Component.msi | ProductCode>

Reinstalls or upgrades the product

p – reinstalls only missing files

o – reinstalls the file if it is missing or it is an older version

e - reinstalls the file if it is missing or is the same or an older version

d - reinstalls the file if it is missing or a different version is present

c – verifies the checksum values, and reinstalls the file if it is missing or corrupt

a – reinstalls all files

u – rewrites all required registry entries from the Registry Table that go to the *HKEY_CURRENT_USER or HKEY_USERS* registry hive

m – rewrites all required registry entries from the Registry Table that go to the *HKEY_LOCAL_MACHINE* or *HKEY_CLASSES_ROOT* registry hive

s – reinstalls all shortcuts and re-caches all icons overwriting any existing shortcuts and icons

v - used to run from the source package and re-cache the local package.

This option ignores any property values you specify at the command line. The default value for this option is */fpecms.*

Example

msiexec /fpecms C:\ AcronisRecoveryMsExchangeAgent.msi

Reinstalls Acronis Recovery for MS Exchange Agent.

Advertising Options

/j[u|m]

Advertises a component with the following options:

u – only for the current user

m – for all users of the computer

/g LanguageID – identifies the language

/t TransformList – applies transform to advertised component

This option ignores any property values you specify at the command line. To install the component with elevated privileges, use */jm.*

Example

msiexec /jm C:\ AcronisRecoveryMsExchangeAgent.msi

Advertises Acronis Recovery for MS Exchange Agent for all users of the computer.

Logging Level Options

msiexec /L [i][w][e][a][r][u][c][m][p][v][+][!]*LogFile*.txt

/L - Specifies the path to the log file

i - Logs status messages

w - Logs nonfatal warnings

e - Logs all error messages

a - Logs startup of actions

r - Logs action-specific records

u - Logs user requests

c - Logs initial user interface parameters

m - Logs out-of-memory

p - Logs terminal properties

v - Logs verbose output. To use **v**, specify **/L*v**

+ - Appends to existing file

! - Flushes each line to the log

* - Logs all information except for the **v** option. This is a wildcard

***LogFile*.txt -** Name and path of the text log file

To include the **v** option into a log file using the wildcard flag, specify */L*v* at the command line.

Example

msiexec /i C:\ AcronisRecoveryMsExchangeAgent.msi /Lime logs.txt

Installs Acronis Recovery for MS Exchange Agent and creates log file *logs.txt* containing information about the status, out-of-memory and error messages.

Applying a Patch Options

/p PatchPackage

/p - Applies a patch

***PatchPackage* -** Specific patch

Example

msiexec /p PatchPackage /a C:\ AcronisRecoveryMsExchangeAgent.msi

Applies a patch to an administrative installation component.

Options for Installing a Transform

msiexec /i *component* TRANSFORMS=*TransformList*

TRANSFORMS= - Property that is used to specify what transform (*.mst*) files should be applied to the component

***TransformList* -** List of paths separated by semicolons

Options for Advertising Using a Transform

msiexec /j[u][m] *component* **/t** *TransformList*

User Interface Level Options

msiexec /q{n|b|r|f|n+|b+|b-}

/qn - Displays no user interface

/qb - Displays a basic user interface

/qr - Displays a reduced user interface with a modal dialog box displayed at the end of the installation

/qf - Displays the full user interface with a modal dialog box displayed at the end

/qn+ - Displays no user interface, except for a modal dialog box displayed at the end

/qb+ - Displays a basic user interface with a modal dialog box displayed at the end

/qb- - Displays a basic user interface with no modal dialog boxes

Note, */qb+-* is not a supported user interface level. The modal box is not displayed if the user cancels the installation.

Example

msiexec /qb AcronisRecoveryMsExchangeAgent.msi

Displays the basic user interface options during the Acronis Recovery for MS Exchange Agent installation.

Copyright Information Displaying Options

msiexec {/?|/h}

Displays the Windows Installer version and copyright information.

Calling the system API DllRegisterServer Option

msiexec /y|z *module*

/y - Calls the system API DllRegisterServer to self-register modules passed on the command line

/z - Calls the system API DllUnRegisterServer to unregister modules passed on the command line

module - Specifies the file name of the module

These options are only used for registry information that cannot be added using the registry tables of the *.msi* file.