EVault Software

Granular Restore for Microsoft Exchange and SQL 8.31 User Guide



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Acknowledgements: Two encryption methods, DES and TripleDES, include cryptographic software written by Eric Young. The Windows versions of these algorithms also include software written by Tim Hudson. Bruce Schneier designed Blowfish encryption.

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The EVault Software Agent, EVault Software CentralControl, and EVault Software Director applications have the encryption option of AES (Advanced Encryption Standard). Advanced Encryption Standard algorithm (named Rijndael, pronounced "Rain Doll") was developed by cryptographers Dr. Joan Daemen and Dr. Vincent Rijmen. This algorithm was chosen by the National Institute of Standards and Technology (NIST) of the U.S. Department of Commerce to be the new Federal Information Processing Standard (FIPS).

The EVault Software Agents and EVault Software Director applications also have the added security feature of an over the wire encryption method.

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## **1** Product overview

Granular Restore for Microsoft Exchange and SQL is a granular data extraction software for offline SQL databases and Microsoft Exchange Server mailbox stores and Outlook files. The utility provides direct access to unmounted database tables and mail store contents, displaying file structure and its contents with selective export functionality. With a search query tool, users are able to export specific queries rather than large tables or files.

For SQL databases, recovered items can be saved as SQL scripts or exported directly to a live SQL server. For Microsoft Exchange servers, files can be saved as Personal Storage File (.pst) files, to be opened with Microsoft Outlook or other compatible email clients, or exported directly into live Exchange Server mailboxes. The utility makes no changes to the store, preserving it in original unmodified state.

#### Main features of Granular Restore for Microsoft Exchange and SQL:

#### SQL Server Database

- Recovers entire tables, objects and object groups
- Recovers data obtained by specific search queries
- Recovers keys, scripts, functions, triggers and procedures
- Recovers default settings, user types and views
- Saves single or multiple points of data as SQL scripts or exports to live SQL database

#### Exchange Server

- Recovers mailboxes, folders, messages and file attachments
- Recovers notes, contacts, tasks and appointments
- Recovers creation dates for all objects
- Saves selected items to PST files or exports to live Exchange Server mailbox(es)

### 1.1 Supported Exchange database versions

Granular Restore for Microsoft Exchange and SQL supports the following mail store versions: Exchange Server 2016CU4, Exchange Server 2016CU3, Exchange Server 2016CU2, Exchange Server 2016CU1, Exchange Server 2016RTM, Exchange Server 2013CU12, Exchange Server 2013CU11, Exchange Server 2013CU10, Exchange Server 2013CU9, Exchange Server 2013CU8, Exchange Server 2013CU7, Exchange Server 2013CU6, Exchange Server 2013CU5, Exchange Server 2013SP1, Exchange Server 2013RTM, Exchange Server 2010SP3, Exchange Server 2010SP2, Exchange Server 2010SP1, Exchange Server 2010RTM, Exchange Server 2007SP3, Exchange Server 2007SP2, Exchange Server 2007SP1, Exchange Server 2007RTM

### 1.2 Supported Outlook versions

Granular Restore for Microsoft Exchange and SQL supports the following versions of PST/OST files: 2016, 2013 and 2010

Note

OST file of 2013, 2016 version is not supported

### 1.3 Supported SQL Server database versions

Granular Restore for Microsoft Exchange and SQL supports the following versions of MDF files: 2016, 2014, 2012, 2008R2, 2008 and 2005

### 1.4 System requirements

Basic system requirements:

Operating systems: Windows 10, Windows 8.1, Windows 8, Windows 7, Windows Server 2016, Windows Server 2012 R2, Windows Server 2012, and Windows Server 2008

RAM: 1024MB, depends on store size and OS version

Hard Disk: minimum 50MB of free space required for installation Display: 800 x 600 or higher resolution, 256 colors

Additionally, Granular Restore for Microsoft Exchange and SQL may require free space on disk 1.5x the size of mail store being processed. For example, for 300MB store, 450MB free space should be available.

### Live Exchange Server export requirements

#### Exchange Server

Exchange Server 2016, 2013, 2010 or 2007

Exchange Web Services enabled on Exchange Server

#### Network

Port 443 open on the network. The EWS messages are transported via SOAP-based API, which is essentially sending XML data using https protocol.

#### **Restore client**

Granular Restore for Microsoft Exchange and SQL installed. Access to Exchange server(s) over network.

### Live SQL Server export requirements

#### **SQL** Server

SQL Server 2016, 2014, 2012, 2008R2, 2008 or 2005

SQL Server Browser running on SQL Server

#### Network

To establish connection to live SQL Server, remote network access must be allowed on the server and TCP/IP protocol must be enabled in SQL Server Configuration Manager. For detailed instructions on how to do it, visit http://blogs.msdn.com/b/walzenbach/archive/2010/04/14/how-to-enable-remote-connections-in-sql-server- 2008.aspx

#### **Restore client**

Granular Restore for Microsoft Exchange and SQL installed. Access to SQL Server(s) over network.

### 1.5 Limitations

The current version of the product has the following limitations:

- Simultaneous recoveries are not supported.
- Simultaneous running of more than one instance of the product is not supported.
- Usage in "Run as different user" mode is not supported.

### **SQL Server Limitations**

- Log files are not processed.
- Encrypted SQL databases are not currently supported.
- System MDF and BAK files are not currently supported
- Calculated fields and fields of type [sql\_variant] in indexes cannot be used in SQL database search.
- Sparse columns in SQL databases are not supported.
- Filestream data type and Filetables in SQL databases are not currently supported.
- Searching by 'real' data type may return not full results.

• Command-line interface is not supported for MDF files

### **Exchange Server Limitations**

- Encrypted emails are not restored.
- Messages in the Outbox folder are not restored if they haven't been synchronized with the server.
- Messages with size over 64MB are not supported
- Recovery of delivery receipts and non delivery reports is not supported.
- OST files, created in Outlook 2013, are not supported.
- Password-protected PST files are not restored in command-line interface.

#### Injection limitations for Exchange Server

- Archived mailboxes (and items from such mailboxes) are not exported to live Exchange Server. Photos of contacts are not exported to original live mailbox in Exchange Server 2007.
- Emails with embedded images are displayed with an attachments icon after exporting into live Exchange Server 2007.
- Creation time and modified time are not restored. Exporting data into live public folder is not supported.
- Exporting data from PST/OST files into original mailbox is impossible.
- Contact groups and meeting requests cannot be exported into live Exchange Server 2007 instances. Use export through PST for these item types.
- Missing sent date is exported as current date/time into live Exchange Server.

#### Limitations for search in attachments content (available for EDB/PST/OST files)

Search in attachments does not work for:

- Text contained in embedded OLE objects, WordArt and smart objects, charts etc. Documents metadata (author, comments, tags etc.).
- Marker symbols in lists (numbered or bulleted). Text in header/footer.
- XLS/XLSX: number values, formulas, cell comments. PPT: tables content.

#### Тір

Note that the utility is best used for granular item extraction. The user interface of the program is designed for ease of locating, selecting and exporting specific messages, folders or mailboxes. Entire databases can be exported as well, but the restore time will significantly increase over a slow connection. For bulk operations that involve exporting more than one mailbox it is typically better to work with a local copy of the database.

### 1.6 Boundaries for optimal recovery and search

Usage of Granular Restore for Microsoft Exchange and SQL is optimal for files that do not exceed:

#### EDB:

EDB size: 2TB Mailbox size: 100GB

Number of messages in the EDB file: 2,000,000 Number of mailboxes in the EDB file: 2,000 Number of messages in one mailbox: 100,000

#### PST/OST:

PST/OST size: 100GB

Number of messages in the PST/OST file: 200,000 Number of folders in the PST/OST file: 1,000 Number of messages in one folder: 100,000

#### MDF:

MDF size: 1TB

Number of tables in the MDF file: 1,000 Number of rows in one table: 10,000,000

### 1.7 Customer support

For customer support, please contact EVault using one of the methods listed below.

Online:	https://www.evault.com/support/customer_login.html
email:	Support@EVault.com

### Tip

When contacting customer support with a technical issue, please have ready the program's log files and the store you are having difficulty with.

To get log files, click File menu and choose Open log folder. Zip the contents of the folder and attach the resulting archive to your support request.

If the log archive and/or mail store exceeds 10MB, it may be impossible to send them as an email attachment. In that case, upload instructions will be provided to you upon request.

# 2 Installation

This chapter describes the steps required to install Granular Restore for Microsoft Exchange and SQL. Depending on your preferences, it is possible to install the product in default or advanced mode.

#### Default mode

Default mode provides simple setup that requires just a few mouse clicks to complete. For the sake of simplicity, it does not offer any customization capabilities and uses the following default settings:

Granular Restore for Microsoft Exchange and SQL will be installed in a per-user folder and be available just for your user account. You do not need local administrator privileges in this case.

The default installation location is "C:\Program Files\EVault Software\" A shortcut for this program will be created on the desktop automatically.

Step by step instructions:

- 1. Double-click on the setup file to start the installation process.
- 2. The Software License Agreement appears. Read it and accept the terms in the License Agreement.



- 3. Click Install to start setup.
- 4. The installation will start. When finished, you will have an option to launch the installed product.

#### Advanced mode

Advanced setup mode allows changing default installation options. Step by step instructions:

- 1. Double-click on the setup file to start the installation.
- 2. The Software License Agreement appears. Read it and accept the terms in the License Agreement.



- 3. Click Advanced to change installation options described above.
- 4. Click **Next** to install the product to the default folder or **Change to choose another folder**. To add an icon shortcut to the desktop for quick start of the program, check **Create a shortcut for this program on the desktop**.

😸 Granular Restore for Microsoft Exchange and SQL Setup 🕒 💌
Destination Folder Click Next to install to the default folder or click Change to choose another.
Install Granular Restore for Microsoft Exchange and SQL to:
C:\Program Files (x86)\EVault Software\ Change
✓ Create a shortcut for this program on the desktop.
Back Next Cancel

- 5. Click Install to begin the installation. Click **Back** to change any of your installation settings. Click **Cancel** to exit the setup wizard.
- 6. After the installation finishes you can choose to Launch Granular Restore for Microsoft Exchange and SQL when setup exits to start the program automatically by clicking the appropriate checkbox. Click the **Finish** button to exit the setup wizard.

### 2.1 Product activation

When starting Granular Restore for Microsoft Exchange and SQL for the first time, you are prompted to activate the product by entering your license key.

Enter the license key, and provide the names of registered user and company. Click **Next** to finish the activation.

*Note:* If you enter an old license key, or continue to use an old license key after an upgrade, only Exchange restores will be available. To obtain the correct license key, contact your service provider.

Mode	:	Enter licen	se key	Con	firmation
Enter license key a	nd registration inf	formation.			
License key:	Enter the Licens	e key, supplied after th	e purchase		
Name:	Enter your name	•			
Company:	Enter the name	of the company (leave	blank if the prograr	m will be used for p	personal needs)
Help		Cancel	Previous		Next

Тір

When getting an error message, first of all check if the license key has been entered correctly. It's best to copy and paste the key to avoid typos.

### 2.2 Product deactivation

Deactivation of the product should be used before product uninstallation. Follow the steps below for successful deactivation:

1. Start the product. Go to the Help menu, click License manager.

Hel	p	
	Contents and index	F1
	Go to customer support online Go to Granular Restore for Microsoft Exchange web si	ite
	License manager About	

2. Select Deactivate product license for this computer in the opened window and click Next.

#### 3. Enter your license key

Mode	:	Enter licen	se key	Confirm	nation
Enter license key.					
License key:	Your license key	v will be automatically d	isplayed in this field	l.	
Name:	User Name				
Company:	Company				
Help		Cancel	Previous		Next

4. Click **Next** to finish the deactivation.

# **3** Opening a file

To directly open a file for browsing and export, launch Granular Restore for Microsoft Exchange and SQL and click file open button on the taskbar or select **File | Open** from the menu. On first launch, the file open dialog will be shown automatically.

e.		Open		×
Look in:	) Exchange Ser	ver Database 🗸 🗸	G 🤌 🖻 🛄 -	
Recent places	Name	sbase	Date modified 3/13/2014 3:51 AM	Type Exchange Server
Desktop				
Libraries				
i 🎑 This PC				
() Network	<			>
	File name:	Mailbox Database	~	Open
	Files of type:	All supported formats (*.edb, *.pst, *.	.ost, *.mdf, *.bak) ∨	Cancel
	Path to log files:		Browse	.:

Select the store you will be working with and click **Open**.

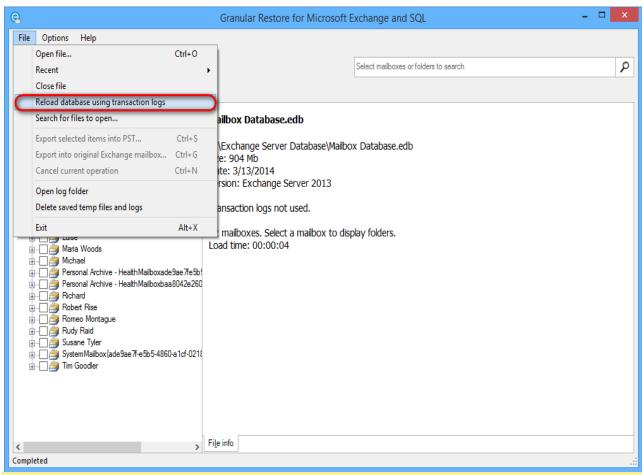
By default, a progress window will accompany opening the selected file. The window displays overall progress and information about the number of items and objects in the file (1). The window can be disabled by unchecking the **Show the dialog next time** check box (2) or from the **Options** menu. The progress window will be automatically closed in 3 seconds after database opening (3).

	Progress	
Completed		
Mailboxes Read speed Elapsed time	22 1 0 B/s 00:00:03	
Show the dia	alog next time	Close (1)

The current operation can be cancelled right on the progress dialog, by clicking an appropriate link.

After loading the file is complete, it will be available for browsing and export. The opened store will also become the default store and will be automatically reopened next time you launch the utility.

Opened database can be reloaded with database log files. Go to the File menu and select **Reload** database using transaction logs.



#### Note

If you closed the progress window, it can easily be shown again by clicking on the progress bar on the status panel.

### 3.1 Finding a file

In case when the location of the file is unknown, it is recommended to scan existing drives to find the data. Granular Restore for Microsoft Exchange and SQL scans local drives, as well as network drives and searches for PST/OST, MDF and EDB files.

To start a new search click **Search for files to open** in the **File** menu.

e.	Granular Restore for Microsoft Exchange and SQL – 🗖 🗙
File         Options         Help           Open file         Ctrl+O           Recent         Close file	Select mailboxes or folders to search
Reload database using transaction logs         Search for files to open         Export selected items into PST         Ctrl+S         Export into original Exchange mailbox         Ctrl+G         Cancel current operation         Open log folder         Delete saved temp files and logs	ailbox Database.edb         \Exchange Server Database\Mailbox Database.edb         e: 904 Mb         ite: 3/13/2014         rsion: Exchange Server 2013         ansaction logs not used.
Exit     Alt+X       Maria Woods       Personal Archive - Health Mailboxbae 8042e260       Richard       Robert Rise       Romeo Montague       Rudy Raid       Susane Tyler       System Mailbox(ade Sae 7r-e5b5-4860-a 1cf-0218       Tim Goodler	mailboxes. Select a mailbox to display folders. Load time: 00:00:05
< >> Completed	File info

The following form appears, displaying the list of mounted disks:

G	Sea	arch for files to open			×
Select source:				File types by application: ✓ Exchange Server (*.edb) ✓ Outlook (*.pst, *.ost) ✓ SQL Server (*.mdf, *.bak) Custom match: Example: *.edb;*.ost	
Found files:	Size	Date created	Filter: Date modified	Туре	~
Open file			Start	search Exit	

#### Select a location to search in.

G	Sea	arch for files to open				x
Select source:					File types by application: ✓ Exchange Server (*.edb) ✓ Outlook (*.pst, *.ost) ✓ SQL Server (*.mdf, *.bak) Custom match: Example: *.edb;*.ost	
Add location to search Found files:			Filt	er:	All	~
File	Size	Date created	Date modified		Туре	
Open file			S	Start s	search Exit	

List of found files will be displayed. Double-click a file to open it.

			File types by application:	
			Exchange Server (*.edb)	
			✓ Outlook (*.pst, *.ost)	
			SQL Server (*.mdf, *.bak)	
			Custom match:	
			Example: *.edb;*.ost	
			*****	
		Filter	All	v
Size	Date created	Date modified	Туре	^
904 MB	11/30/2015	3/13/2014	Exchange Server (*.edb)	
37.6 KB	8/18/2015	11/30/2015	SQL Server (*.mdf, *.bak)	
37.6 KB	12/8/2015	11/30/2015	SQL Server (*.mdf, *.bak)	
84.0 MB	11/25/2013	12/9/2015	Exchange Server (*.edb)	
24.0 MB	11/25/2013	12/9/2015	Exchange Server (*.edb)	
21.0 KB	6/24/2015	6/24/2015	SQL Server (*.mdf, *.bak)	
	11/25/2013	12/9/2015	Exchange Server (*.edb)	
24.0 MB				
24.0 MB 72.0 MB	11/25/2013	8/17/2015	Exchange Server (*.edb)	
	Size 904 MB 37.6 KB 37.6 KB 84.0 MB 24.0 MB	Size         Date created           904 MB         11/30/2015           37.6 KB         8/18/2015           37.6 KB         12/8/2015           37.6 KB         11/25/2013           24.0 MB         11/25/2013           24.0 MB         11/25/2013	Size         Date created         Date modified           904 MB         11/30/2015         3/13/2014           37.6 KB         8/18/2015         11/30/2015           37.6 KB         12/8/2015         11/30/2015           84.0 MB         11/25/2013         12/9/2015           24.0 MB         11/25/2013         12/9/2015	Image: Size         Date created         Date modified         Type           904 MB         11/30/2015         3/13/2014         Exchange Server (*.edb)           37.6 KB         8/18/2015         11/30/2015         SQL Server (*.mdf, *.bak)           37.6 KB         12/8/2015         11/30/2015         SQL Server (*.edb)           37.6 KB         11/25/2013         12/9/2015         SQL Server (*.edb)           24.0 MB         11/25/2013         12/9/2015         Exchange Server (*.edb)

# 4 Granular Restore for Microsoft SQL

### 4.1 Finding and browsing data

In general, Granular Restore for Microsoft Exchange and SQL provides two modes of processing file data: browsing the file tree and search. Using these, it is possible to efficiently form a set of objects for subsequent export, including the necessary ones and excluding ones to be skipped.

File Options Help	
Search 🔎 📰 🕶	
Browse	
B     Programmability (4)         Tables   No live servers connected.	
Image: Procedures (10)       71 objects. Select an object to display data.       Connect to a live server to enable export of objects from source storage of the server to enable export of objects from source storage of the server to enable export of objects from source storage of the server to enable export of objects from source storage of the server to enable export of objects from source storage of the server to enable export of objects from source storage export of objects from source export export of objects from source export export ex	e.
Completed	:

A newly opened database is shown in the **Browse** mode.

### **Browsing database tree**

Browse mode shows database in a tree-like structure and allows browsing folders and previewing individual objects.

This mode is best for navigating to a specific object, when it is precisely known what data needs to be extracted.

For example, a user may ask to restore some specific table. Expand the folder 'Tables' in the tree and select the table. Available rows will be listed to the right of the tree. Please note that product will not try

to load all rows in table. Instead of that rows will be loaded by portions each time you navigate to the end of list.

e Options Help						
<b>)</b>	Search in P	erson.Address			P	
owse						Destination
AdventureWorks2012_CS_Data.mdf	AddressID	AddressLine1	AddressLine2	City	Stat ^	No live servers connected
Programmability (4)	1	1970 Napa Ct.	NULL	Bothell	79	No live servers connected.
Tables (71)	2	9833 Mt. Dias Blv.	NULL	Bothell	79	Connect to a live server to enable
dbo.AWBuildVersion (1)	3	7484 Roundtree Drive	NULL	Bothell	79	export of objects from source storage
dbo.DatabaseLog (1,597) dbo.ErrorLog (0)	4	9539 Glenside Dr	NULL	Bothell	79	
	5	1226 Shoe St.	NULL	Bothell	79	
Human Resources. Employee (290)	6	1399 Firestone Drive	NULL	Bothell	79	
Human Resources. Employee (200)	7	5672 Hale Dr.	NULL	Bothell	79	
	8	6387 Scenic Avenue	NULL	Bothell	79	
	9	8713 Yosemite Ct.	NULL	Bothell	79	
Human Resources.Shift (3)	10	250 Race Court	NULL	Bothell	79	
Person.Address (19,614)	11	1318 Lasalle Street	NULL	Bothell	79	
Person.AddressType (6)	12	5415 San Gabriel Dr.	NULL	Bothell	79	
Person.BusinessEntity (20,777)	13	9265 La Paz	NULL	Bothell	79	
Person.BusinessEntityAddress (19,614)	14	8157 W. Book	NULL	Bothell	79	
Person.BusinessEntityContact (909)	15	4912 La Vuelta	NULL	Bothell	79	
Person.Contact Type (20)	16	40 Ellis St.	NULL	Bothell	79	
Person.CountryRegion (238)	17	6696 Anchor Drive	NULL	Bothell	79	
Person EmailAddress (19,972)	18	1873 Lion Circle	NULL	Bothell	79	
Person.Password (19,972)	19	3148 Rose Street	NULL	Bothell	79	
Person Person Phone (19,972)	20	6872 Thomwood Dr.	NULL	Bothell	79	
Person.PhoneNumberType (3)	21	5747 Shirley Drive	NULL	Bothell	79	
Person State Province (181)	22	636 Vine Hill Way	NULL	Portland	58	
Production.BillOfMaterials (2,679)	23	6657 Sand Pointe Lane	NULL	Seattle	79	
	24	80 Sunview Terrace	NULL	Duluth	36	
Production.Document (13)	25	9178 Jumping St.	NULL	Dallas	73	
Production.Illustration (5)	26	5725 Glaze Drive	NULL	San Francisco	9 🗸 🗸	
>	<				>	

In case if SQL script of a table is necessary, just right-click on the table in the database tree and select **'Show SQL script'** in the context menu.

e Options Help						
<b>-</b>	Search in P	erson.Address			P	-
owse						Destination
AdventureWorks2012_CS_Data.mdf	AddressID	AddressLine1	AddressLine2	City	Stat ^	No live servers connected.
Programmability (4)	1	1970 Napa Ct.	NULL	Bothell	79	No live servers connected.
Tables (71)	2	9833 Mt. Dias Blv.	NULL	Bothell	79	Connect to a live server to enable
dbo.AWBuildVersion (1)	3	7484 Roundtree Drive	NULL	Bothell	79	export of objects from source storage
dbo.DatabaseLog (1,597) dbo.ErrorLog (0)	4	9539 Glenside Dr	NULL	Bothell	79	
	5	1226 Shoe St.	NULL	Bothell	79	
Human Resources. Employee (290)	6	1399 Firestone Drive	NULL	Bothell	79	
Human Resources.Employee (200)	7	5672 Hale Dr.	NULL	Bothell	79	
	8	6387 Scenic Avenue	NULL	Bothell	79	
HumanResources.JobCandidate (13)	9	8713 Yosemite Ct.	NULL	Bothell	79	
Human Resources.Shift (3)	10	250 Race Court	NULL	Bothell	79	
Person.Address (19.614)	11	1318 Lasalle Street	NULL	Bothell	79	
Person.Addr Show SQL script		5415 San Gabriel Dr.	NULL	Bothell	79	
Person.BusinessEntity (20,777)	13	9265 La Paz	NULL	Bothell	79	
Person.BusinessEntityAddress (19,614)	14	8157 W. Book	NULL	Bothell	79	
Person.BusinessEntityContact (909)	15	4912 La Vuelta	NULL	Bothell	79	
Person.ContactType (20)	16	40 Ellis St.	NULL	Bothell	79	
Person.CountryRegion (238)	17	6696 Anchor Drive	NULL	Bothell	79	
Person.EmailAddress (19,972)	18	1873 Lion Circle	NULL	Bothell	79	
	19	3148 Rose Street	NULL	Bothell	79	
Person Person (19,972)	20	6872 Thomwood Dr.	NULL	Bothell	79	
Person.PhoneNumberType (3)	21	5747 Shirley Drive	NULL	Bothell	79	
Person StateProvince (181)	22	636 Vine Hill Way	NULL	Portland	58	
Production.BillOfMaterials (2,679)	23	6657 Sand Pointe Lane	NULL	Seattle	79	
	24	80 Sunview Terrace	NULL	Duluth	36	
Production.Document (13)	25	9178 Jumping St.	NULL	Dallas	73	
Production.Illustration (5)	26	5725 Glaze Drive	NULL	San Francisco	9 4	

Any particular row can also be scripted via context menu. By right click on the row, SQL script can be either shown or at once copied to clipboard.

e Options Help						
	Search in Pe	erson.Address			P	<b>•</b>
owse						Destination
AdventureWorks2012_CS_Data.mdf	AddressID	AddressLine1	AddressLine2	City	Stat ^	No live servers connected.
🕂 📄 Programmability (4)	1	1970 Napa Ct.	NULL	Bothell	79	No ive servers connected.
	2	9833 Mt. Dias Bly	NULL	Bothell	79	Connect to a live server to enable
dbo.AWBuildVersion (1)	3	7484 Roundtree Drive	NULL	Bothell	79	export of objects from source storag
dbo.DatabaseLog (1,597)	4	9539 Glenside Dr	NULL	Bothell	79	
	5	1226 Shoe St.	NULL	Bothell	79	
	6	1399 Firestone Drive	NULL	Bothell	79	
	7	5672 Hale Dr.	NULL	Bothell	79	
	8	6387 Scenic Avenue	NULL	Bothell	79	
	9	071016 - 0		Bothell	79	
Human Resources. Shift (3)			Bothell	79		
Person Address (19,614)			Bothell	79		
Person.AddressType (6)	12	Search for similar data		Bothell	79	
Person.BusinessEntity (20,777)	13			Bothell	79	
Person.BusinessEntityAddress (19,614)	14	Search for data related to	[AddressID]	Bothell	79	
Person.BusinessEntityContact (909)	15	4912 La Vuelta	NULL	Bothell	79	
Person.ContactType (20)	16	40 Ellis St.	NULL	Bothell	79	
Person.CountryRegion (238)	17	6696 Anchor Drive	NULL	Bothell	79	
Person.EmailAddress (19,972)	18	1873 Lion Circle	NULL	Bothell	79	
Person.Password (19,972)	19	3148 Rose Street	NULL	Bothell	79	
	20	6872 Thomwood Dr.	NULL	Bothell	79	
Person, Phone Number Type (3)	21	5747 Shirley Drive	NULL	Bothell	79	
Person.StateProvince (181)	22	636 Vine Hill Way	NULL	Portland	58	
Production.BillOfMaterials (2,679)	23	6657 Sand Pointe Lane	NULL	Seattle	79	
Production.Culture (8)	24	80 Sunview Terrace	NULL	Duluth	36	
Production.Document (13)	25	9178 Jumping St.	NULL	Dallas	73	
Production.Illustration (5)	26	5725 Glaze Drive	NULL	San Francisco	9 🗸 🗸	
>	<				>	

Rows filtering provides the ability to easily find specific values in tables. To enable filtering, just start typing necessary data, when focus is on the list or press **Ctrl+F** keys. Please note that rows filtering works only for rows that was already loaded in current view.

e.	Gran	ular Restore for M	licrosoft Exchange a	ind SQL		- 🗆 🗙
File Options Help						
	Search in P	erson.Address			ρ	-
Browse ⊡	AddressID	AddressLine1	AddressLine2	City	StatePr	Destination No live servers connected
🗄 📄 Programmability (4)	20	6872 Thomwood Dr.	NULL	Bothell	79	No live servers connected.
🖕 🗋 🛅 Tables (71)	46	5669 Ironwood Way	NULL	Kenmore	79	Connect to a live server to enable
dbo.AWBuildVersion (1)	55	591 Merriewood Drive	NULL	Snohomish	79	export of objects from source storage.
dbo.DatabaseLog (1,597)	61	7726 Driftwood Drive	NULL	Monroe	79	
dbo.ErrorLog (0)	77	9693 Mellowood Stree		Duvall	79	
HumanResources.Department (16)	86	390 Ridgewood Ct.	NULL	Camation	79	
Human Resources.Employee (290)	00	SSU Huge <mark>woo</mark> u et.	NOLL	Camation	13	
	-					
HumanResources.JobCandidate (13)						
Human Resources.Shift (3)						
Person Address (19,614)						
Person.AddressType (6)						
Person.BusinessEntity (20,777)						
Person.BusinessEntityAddress (19,614)						
Person.BusinessEntityContact (909)	-					
Person.ContactType (20)						
Person.CountryRegion (238)	-					
Person.EmailAddress (19,972)						
Person.Password (19,972)						
Person.Person (19,972)	-					
Person.PersonPhone (19,972)						
Person.PhoneNumberType (3)						
Production.BillOfMaterials (2,679)					-	
Production.Culture (8)	woo		Where: All	¥	T	
Production.Couldie (6)	-		1.9			
Production.Illustration (5)	Filter: o	n Select filte	ered items			
< >	<				>	
Completed						.:

### Using search

Granular Restore for Microsoft Exchange and SQL provides several ways to search for data:

- Standard search
- Search for related data
- SQL Query search

To access the Search tool, select a table where the search will be performed and click on the Search Bar (1) located at the top of the window.

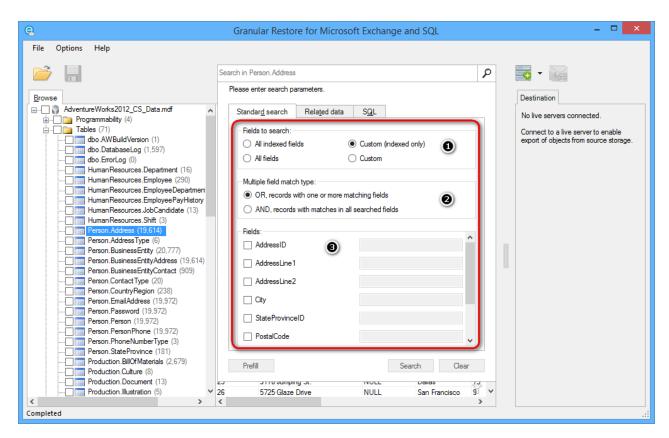
e Options Help						
<u>-</u>	Search in P	erson.Address			P	
owse						Destination
AdventureWorks2012_CS_Data.mdf	AddressID	AddressLine1	AddressLine2	City	Stat ^	No live servers connected
Programmability (4)	1	1970 Napa Ct.	NULL	Bothell	79	NO INC SCIVES CONNECTED.
	2	9833 Mt. Dias Blv.	NULL	Bothell	79	Connect to a live server to enable
dbo.AWBuildVersion (1)	3	7484 Roundtree Drive	NULL	Bothell	79	export of objects from source storage
dbo.DatabaseLog (1,597) dbo.ErrorLog (0)	4	9539 Glenside Dr	NULL	Bothell	79	
	5	1226 Shoe St.	NULL	Bothell	79	
	6	1399 Firestone Drive	NULL	Bothell	79	
Human Resources.Employee (200)	7	5672 Hale Dr.	NULL	Bothell	79	
Human Resources.EmployeePayHistory	8	6387 Scenic Avenue	NULL	Bothell	79	
Human Resources. JobCandidate (13)	9	8713 Yosemite Ct.	NULL	Bothell	79	
Human Resources. Shift (3)	10	250 Race Court	NULL	Bothell	79	
Person.Address (19,614)	11	1318 Lasalle Street	NULL	Bothell	79	
Person.AddressType (6)	12	5415 San Gabriel Dr.	NULL	Bothell	79	10
Person.BusinessEntity (20,777)	13	9265 La Paz	NULL	Bothell	79	
Person.BusinessEntityAddress (19,614)	14	8157 W. Book	NULL	Bothell	79	
Person.BusinessEntityContact (909)	15	4912 La Vuelta	NULL	Bothell	79	
Person.ContactType (20)	16	40 Ellis St.	NULL	Bothell	79	
	17	6696 Anchor Drive	NULL	Bothell	79	
Person.EmailAddress (19,972)	18	1873 Lion Circle	NULL	Bothell	79	
Person Person (19,972)	19	3148 Rose Street	NULL	Bothell	79	
Person Person Phone (19,972)	20	6872 Thomwood Dr.	NULL	Bothell	79	
Person, Phone Number Type (3)	21	5747 Shirley Drive	NULL	Bothell	79	
Person.StateProvince (181)	22	636 Vine Hill Way	NULL	Portland	58	
Production.BillOfMaterials (2,679)	23	6657 Sand Pointe Lane	NULL	Seattle	79	
Production.Culture (8)	24	80 Sunview Terrace	NULL	Duluth	36	
Production Document (13)	25	9178 Jumping St.	NULL	Dallas	73	
Production.Illustration (5)	26	5725 Glaze Drive	NULL	San Francisco	9. V	

Search results will be displayed on separate tabs with the ability to select query results and export them either into Live SQL Server or in the form of SQL script files which can be executed on server manually.

ile <u>O</u> ptions <u>H</u> elp						
🔁 🔒	Search in P	erson.Address			9	-
prowse Search 1 ×						Destination
Person.Address	AddressID	AddressLine1	AddressLine2	City	StateProvinceID ^	No live servers connected.
	1	1970 Napa Ct.	NULL	Bothell	79	
	2	9833 Mt. Dias Blv.	NULL	Bothell	79	Connect to a live server to enable
	3	7484 Roundtree Drive	NULL	Bothell	79	export of objects from source storage
	4	9539 Glenside Dr	NULL	Bothell	79	
	5	1226 Shoe St.	NULL	Bothell	79	
	6	1399 Firestone Drive	NULL	Bothell	79	
	7	5672 Hale Dr.	NULL	Bothell	79	
	8	6387 Scenic Avenue	NULL	Bothell	79	
	9	8713 Yosemite Ct.	NULL	Bothell	79	
	10	250 Race Court	NULL	Bothell	79	
	11	1318 Lasalle Street	NULL	Bothell	79	
	12	5415 San Gabriel Dr.	NULL	Bothell	79	
	13	9265 La Paz	NULL	Bothell	79	
	14	8157 W. Book	NULL	Bothell	79	
	15	4912 La Vuelta	NULL	Bothell	79	
	16	40 Ellis St.	NULL	Bothell	79	
	17	6696 Anchor Drive	NULL	Bothell	79	
	18	1873 Lion Circle	NULL	Bothell	79	
	19	3148 Rose Street	NULL	Bothell	79	
	20	6872 Thomwood Dr.	NULL	Bothell	79	
	21	5747 Shirley Drive	NULL	Bothell	79	
	40	1902 Santa Cruz	NULL	Bothell	79	
	834	99300 223rd Southeast	NULL	Bothell	79	
	868	25111 228th St Sw	NULL	Bothell	79	
	18249	5509 Newcastle Road	NULL	Bothell	79	
	26486	7057 Striped Maple Court	NULL	Bothell	79 🝸 🗸	
	<				>	

### Standard search mode

To access Standard search click on the Search Bar and select 'Standard search' tab in the displayed window.



There are three sets of parameters to customize for this search:

#### Fields to search (1)

This options defines the set of fields which will be used to perform search. The user can choose to search in all indexed fields, all fields, custom selection from indexed fields or custom selection from all fields.

#### Multiple field match type (2)

In case more than one field is selected for search the user can choose which logical operator will be used to combine these fields.

OR - search results will include records which have at least one field that matches search parameters. AND - search results will include records which have matching values in all fields which were selected for search.

#### Fields (3)

If *Custom (indexed only)* or *Custom* was selected in *Fields to search* the user will be able to choose fields which will be used for search. To select a field simply click on the field name, the field will then become selected and the user will be able to choose which comparison operator to use and to enter the value to search for.

There are also two ways to fill search fields with values from selected tow, which helps to avoid entering long string manually:

Right-click on a row and select *Search for similar data* from context menu. This fill set the field selection to *Custom* and fill search from with values from selected row.

OR

Select a row, then select *Standard search* tab and click *Prefill* button.

### Search for related data

Search for related data can be used to search for rows which relate to the selected row - that are rows which have fields from the selected table as foreign keys.

Related data search can be accessed either by right-clicking on a row and selecting *Search for data related to...* from context menu or by selecting *Related data* tab in search window.

File       Options       Help	Granular Restore for Microsoft Exchange and SQL – 🗖 🗙
Browse       Please enter search parameters.         Programability (4)         Tables (71)         do AVMultiVersion (1)         do Low DatabaseLog (1597)         do DatabaseLog (1597)         Human Resources Employee Department (16)         Human Resources Employee PayHstory         Human Resources Employee PayHstory         Human Resources Strophyse (19)         Human Resources Strophyse (19)         Human Resources Strophyse (19)         Human Resources Strophyse (19)         Person Address Type (6)         Person Address Type (7)         Person Reson EntrityAddress (19)         Person Address Type (8)         Person Reson Person Matchess (19)         Person Reson Person Reson (19)         Person Reson Reson Person Reson (19)         Person Reson Reson Reson Person Reson (19)         Person Reson R	ile Options Help
	Source     Adventure Works2012 C.S. Data mdf     Please enter search parameters.     Please enter search parameters.     Tables (71)   do AWbuld/Version (1)   do AWbuld/Version (1)   do Databaselog (1587)   do Databaselog (1587)   HumanResources Employee Department (16)   HumanResources Employee Capatheric (16)   HumanResources Employee Department (16)   HumanResources Employee Department (16)   Person Address (19513)   Person Address (19514)   Person Address (19516)   Person Address (19512)   Person Address (19512)
Completed	

The application will analyze the selected table and automatically detect which fields are used in other tables as foreign keys (1). It will also provide a list of tables which relate to the selected table (2).

The user will then be able to enter field values which will be used when searching for related data and select from a list of tables where to perform search.

### SQL Query mode

SQL Query search mode provides the ability to write complex search queries using SQL-like query language to narrow search results as much as possible.

SQL query mode can be accessed by clicking on Search Bar and selecting SQL tab.

G	Granular Restore for Microsoft Exchange and SQL	- 🗆 🗙
File Options Help		
	Search in Person.Address	
Decement	Please enter search query.	Destination
Browse Browse Browse AdventureWorks2012_CS_Data.mdf	Standar <u>d</u> search Related data S <u>Q</u> L	No live servers connected
ia [ important programmability (4) ia	SELECT * FROM Person.Address WHERE	Connect to a live server to enable
dbo.AWBuildVersion (1) dbo.DatabaseLog (1,597)	0	export of objects from source storage.
dbo.ErrorLog (0) HumanResources.Department (16)		
Human Resources. Employee Pay History     Human Resources. JobCandidate (13)		
HumanResources.Shift (3)		
Person.AddressType (6)	2	
Person.BusinessEntityAddress (19,614)	Please enter the remaining part of the query to search for data. The following operators are supported in search queries: AND, OR, (, ), <, >, =,	
Person.Contact Type (20)	!=, <=, >=, LIKE Examples: 1) Department='Engineering' AND Age>42	
Person.Country Region (236) 	2) Name='Steve' OR Salary>=100000 3) (Department='Marketing' OR Position='Intern') AND Age<30	
Person (19,972)	<ol> <li>Salary&gt;100000 OR (Department='Engineering' AND (YearsOfService&lt;5 OR Position='Intem'))</li> </ol>	
Person.PersonPhone (19,972)	5) Department LIKE "%keting" OR (Position LIKE '_ntern' OR Position LIKE "[a-k]ntern")	
Person.StateProvince (181) Production.BillOfMaterials (2,679)	Prefill Search Clear	
Production.Culture (8) Production.Document (13)	zo orrosompinglot. NOLL Dallas (o	
Production.Illustration (5)	26 5725 Glaze Drive NULL San Francisco 9 🗸	
Completed		

The user is presented with a text field (1) which is used to enter search query. The beginning of the query is given and the user has to fill in the remaining part of WHERE clause.

The query may include field names, comparison operators, field values, logical operators and brackets. The text field makes it easier for entering search query by providing auto-complete feature, which automatically suggests possible query elements. The auto-complete window will appear automatically when first letters of query are typed, it can also be accessed by pressing **Ctrl+Space**. To select an item (field name, logical or comparison operator) from the list please press **Tab** or **Enter**.

Query examples are given at the bottom of the SQL tab (2).

### 4.2 Exporting items

Granular Restore for Microsoft Exchange and SQL allow a user to export the whole database or just particularly objects (tables, views, functions, etc.) into live SQL Server and to SQL scripts, that can be used for manual import to a live server.

### **Restore to live SQL Server**

Granular Restore for Microsoft Exchange and SQL includes the injection capability for items (tables, views, functions, etc.) from offline database to live SQL database.

*Note:* Errors can occur when you try to restore data that violates SQL constraints (e.g., primary key/foreign key constraints).

The following options are presented:

- Authentication
- Connection to a database using valid credentials. To provide the connection, host (domain name or IP), user logon name and password are required. It is also possible to connect through current Windows credentials.
- Connecting to several tables on different servers simultaneously.
- Browsing folder hierarchy of a connected database, browsing folder contents and viewing objects and rows.
- To provide injection, running the application as administrator or using a machine from AD domain, in which there is SQL Server with destination database, is not required.

### **Connection to SQL Server**

To establish a new connection, use the button **Connect to live server** (1), next to the Search field or go to **File -> New connection->Attach to live SQL Server database** (2).

e.	Granular Restore for Microsoft Exchange and SQL	- 🗆 🗙
File       Options       Help         Open file       Ctrl+O         Recent       +         Close file       +         New connection       +         Search for files to open       -         Save selected objects into SQL scripts       Ctrl+S         Export into live server       Ctrl+E         Cancel current operation       Ctrl+N	Granular Restore for Microsoft Exchange and SQL arch P Attach to live SQL Server database Ctrl+Q Recent , or- uidserver\Testing\TestCases\msr\Sample\AdventureWorks2012_CS\4 ze: 188 Mb ate: 5/21/2012	Destination No live servers connected. Connect to a live server to enable export of objects from source storage.
	etc: 5/21/2012 ersion: SQL Server 2012 I tables. Select a table to display records bad time: 00:00:14	
Completed		.:

To access the server, enter the domain name or the IP address, or just click on the arrow (1) to get the drop- down list of automatically detected servers and provide valid credentials.

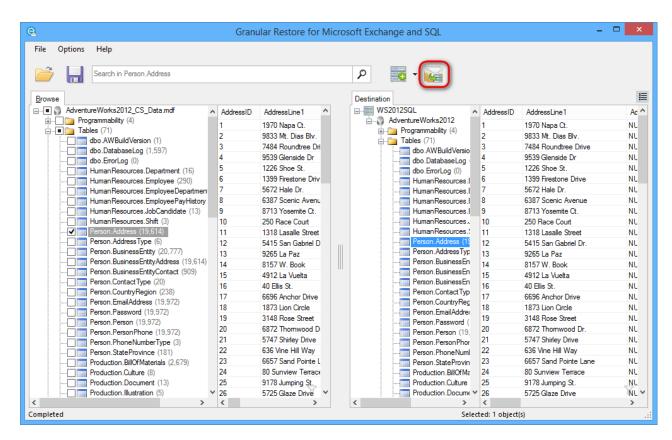
G	Connect to SQL Server	×
Server name (ex.: conto WS2012SQL DKATKOV-C\ADK DKATKOV-C\SQLEXPH OR-ENVSERVER\ORE WS2008R2SQL\SQLS WS2008SQL\SQLSER WS2012SQL Password: Save password	ENVSS SERVER2008R2	
Database name:	<b>∨</b>	Refresh
	Connect	Cancel

List of available databases will be shown after clicking the Refresh button (1) or the arrow near the Database name field (2), if entered credentials are correct.

Connect	to SQL Server ×
Server name (ex.: contoso.com\MSSQLSERVER or 192.1 WS2012SQL Use current Windows credentials SQL Server login (ex.: user1): Rick Password:	68.0.5\MSSQLSERVER):         ✓       Refresh         Please enter the server address and provide user credentials for connection.         The application will then fetch the list of databases available on the target server.         After that you will be able to choose the desired database from the list and connect.
Database name:   AdventureWorks2012	Connect Cancel

## Injection workflow

Once data has been selected, click the **Export** button and select an Export option.



Granular Restore for Microsoft Exchange and SQL presents several injection modes for specified data:

- **Export to original object** The source object will be restored to the object listed under Destination Object.
- **Export to new Object** The user may edit the Destination Object for any source object, and the Granular Restore for Microsoft Exchange and SQL application will create a new destination object to restore to.
- **Schema only** Export only the schema of the source objects. The destination object can be edited and the schema(s) will be restored to the new destination object.
- Unselect successfully exported objects This will unselect the data objects that were selected for export once they have been successfully exported to the live server. This will allow the user to more easily identify which objects encountered errors and were not exported.

6	Export into live SQL	Server	- 🗆 🗙
Destination database: WS2012SQL\AdventureWorks2012 Object names are valid. Click ' <u>Start</u> ' to begin export.			¥
Source object	Destination object	Status	Action
[Person].[Address]	[Person].[Address]	v Source table found	<u>Remove</u>
Export to original object (creating)	eate if not exists) O Export to new object	⊖ Schema only	
Unselect successfully expo	rted objects	Start	Cancel

### **Restore to SQL scripts**

*Note:* Errors can occur when you try to restore data that violates SQL constraints (e.g., primary key/foreign key constraints).

To save objects marked for export, click the **Export selected objects into SQL scripts** button on the toolbar or select the point in the **File** menu.

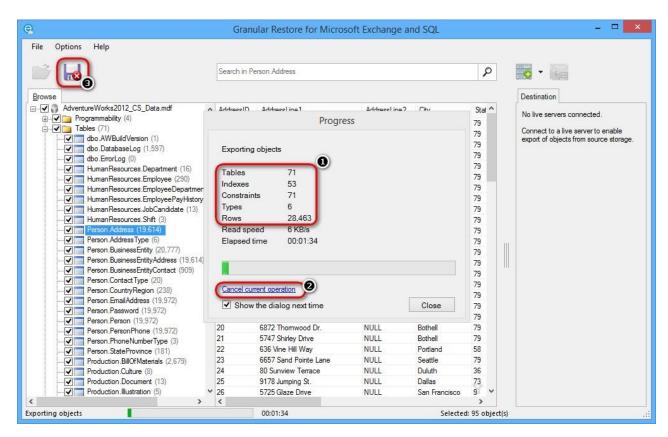
e Options Help						
	Search in Pe	erson.Address			9	-
owse						Destination
AdventureWorks2012_CS_Data.mdf	∧ AddressID	AddressLine1	AddressLine2	City	Stat ^	No live servers connected
Programmability (4)	1	1970 Napa Ct.	NULL	Bothell	79	No live servers connected.
	2	9833 Mt. Dias Blv.	NULL	Bothell	79	Connect to a live server to enable
dbo.AWBuildVersion (1) dbo.DatabaseLog (1,597)	3	7484 Roundtree Drive	NULL	Bothell	79	export of objects from source storage
	4	9539 Glenside Dr	NULL	Bothell	79	
	5	1226 Shoe St.	NULL	Bothell	79	
Human Resources. Employee (290)	6	1399 Firestone Drive	NULL	Bothell	79	
	7	5672 Hale Dr.	NULL	Bothell	79	
	8	6387 Scenic Avenue	NULL	Bothell	79	
Human Resources JobCandidate (13)	9	8713 Yosemite Ct.	NULL	Bothell	79	
Human Resources.Shift (3)	10	250 Race Court	NULL	Bothell	79	
Person.Address (19,614)	11	1318 Lasalle Street	NULL	Bothell	79	
Person.AddressType (6)	12	5415 San Gabriel Dr.	NULL	Bothell	79	
····· Person.BusinessEntity (20,777)	13	9265 La Paz	NULL	Bothell	79	
Person.BusinessEntityAddress (19,614)	14	8157 W. Book	NULL	Bothell	79	
Person.BusinessEntityContact (909)	15	4912 La Vuelta	NULL	Bothell	79	
Person.Contact Type (20)	16	40 Ellis St.	NULL	Bothell	79	
Person.CountryRegion (238)	17	6696 Anchor Drive	NULL	Bothell	79	
Person.EmailAddress (19,972)	18	1873 Lion Circle	NULL	Bothell	79	
Person.Password (19,972)	19	3148 Rose Street	NULL	Bothell	79	
Person, Person Phone (19,972)	20	6872 Thomwood Dr.	NULL	Bothell	79	
Person.PhoneNumberType (3)	21	5747 Shirley Drive	NULL	Bothell	79	
Person State Province (181)	22	636 Vine Hill Way	NULL	Portland	58	
Production.BillOfMaterials (2,679)	23	6657 Sand Pointe Lane	NULL	Seattle	79	
Production.Culture (8)	24	80 Sunview Terrace	NULL	Duluth	36	
Production.Document (13)	25	9178 Jumping St.	NULL	Dallas	73	
Production.Illustration (5)	✓ 26	5725 Glaze Drive	NULL	San Francisco	9. 🗸	

To start exporting process, select destination folder or create a new one and click OK.

Select destination folder	×
Selected data will be saved into SQL script(s). To start the export select the destination folder or create a new one and click OK. The export process will start immediately.	
Documents	^
🐌 Downloads	
Favorites	
📝 Links	
🔰 Music	
Pictures	
🕞 Saved Games	
Searches	
📔 Videos	
L	¥
Make New Folder OK Cancel	

Required time depends on how many objects are selected for export. By default, a progress window appears after the export starts. The window shows the number of saved objects and rows (1). You can disable the progress window directly in the window or go to the **Options** menu and select **Show progress dialog**.

The export can be cancelled by clicking an appropriate link in the progress dialog window (2) or by clicking the Cancel export button on the taskbar (3).



#### Тір

If you closed the progress window, it can be shown again by clicking on the progress bar on the status panel.

### **Restoring exported scripts into SQL Server**

SQL scripts exported from the offline database can be easily imported into live SQL Server manually

For this purpose a special bat-file, commit.bat, is generated while extracting data. It is stored in the folder with restored scripts.

Usage for trust connection: commit.bat server\_name db\_name Usage for mistrust connection:

commit.bat server\_name db\_name user\_name password

# **5** Granular Restore for Microsoft Exchange

# 5.1 Special features

Usage of Granular Restore for Microsoft Exchange and SQL can be more comfortable for a user due to additional **Options** menu, which allows user to customize program work.

Detailed information about every option is described in this help section.

#### Note

PST encoding and Show deleted items options are not available for PST/OST files.

### **PST encoding**

Exporting mail store data into PST allows to select a PST format that suits your version of Microsoft Outlook. Outlook 2003, Outlook 2007, Outlook 2010 and Outlook 2013 process both Unicode and ANSI PST files, but as for older versions of Outlook, they will not be able to open Unicode formatted PST files. Previous versions of Outlook were using only ANSI format. The main reason for this change was to allow for international character support and to extend the maximum size of PST files beyond the 2GB limit of the ANSI formatted PST files.

In Granular Restore for Microsoft Exchange and SQL there are two ways to select suitable encoding for output PST.

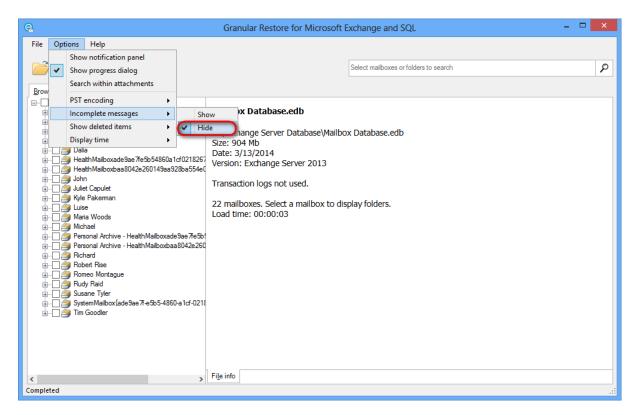
Output PST encoding can be changed while selecting a destination folder for restored PST files.

Select destination folder	×
Selected data will be saved into .pst file(s). To start the export select the destina folder or create a new one and click OK. The export process will start immediate	
Program Files	^
Program Files (x86)	
Recovered_session1	
Recovered_session2	
Recovered_session3	
Recovered_session4	
Recovered_session5	
Recovered_session6	
b 🏊 totalcmd	*
PST encoding: Unicode (Microsoft Outlook 2003, 2007, 2010 and 2013) Make New Fold ANSI (Microsoft Outlook 2003, 2007, 2010 and 2013) ANSI (Microsoft Outlook 2002 and earlier)	

Alternatively, encoding for the output file can be changed in the **Options** menu at any time the program runs. Selected value will be saved and used on the next program launch.

### Incomplete messages

Incomplete messages, such as messages with missing properties, bodies, are hidden by default. This option can be changed in the Options menu.



#### Note

After changing the way of displaying incomplete items, the database will be reopened.

### **Showing deleted items**

Granular Restore for Microsoft Exchange and SQL provides an ability to process deleted items and folders. This special feature can be enabled via the Options menu. There are three available display modes:

- non-deleted items displays actual items in folders
- show only deleted items displays items/folders deleted from a mailbox hierarchy, but not physically
- show both deleted and non-deleted items displays both actual items in folders and items/folders deleted from a mailbox hierarchy.

Note that after selecting any way of processing deleted items, the database will be reopened.

Items, deleted from Exchange Server 2010 and 2013 databases, are stored in the folder Deletions and have an appropriate type.

Gran	ular Restore for Micro	soft Exch	ange and SQL	
ile Options Help				
🎽 📕 🧠		Sear	rch in Andrew Wait	
Browse				
	Subject	From	То	Created
Alex Clark	JESSICA I am sorry thou	Dalia	Romeo Montague; Tim Goodler; Maria	Thursday, August 16, 2012 3:00:17 A
🗄 🖳 🎒 Alex Clark	ABHORSON Do you call	Michael	Andrew Wait; Susane Tyler; Juliet Cap	
Andrew Wait				
Calendar (0)				
Deleted items (0)				
Junk E-Mail (0)				
Notes (0)				
Outbox (0)				
Sent Items (0)				
🟹 Tasks (0)				
🗄 🦳 🚔 Andy Kort				
🗄 🦳 🎒 Brian				
🗄 🗋 🚈 Dalia				
🗄 🗋 🎒 John				
⊕ [@ Juliet Capulet				
⊕ @ Kyle Pakerman				
⊕				
ia				
Hobert Rise     Among Romeo Montague				
mpleted				

As for items deleted from Exchange Server 2007 databases, they are stored in the their original folders but can be easily recognized by an appropriate status.

#### Note

Items, stored in the folder Deletions, cannot be recovered to live Exchange Server database. It is recommended to restore items from the Deletion folder to PST and then import to live Exchange Server.

### **Display time**

There are two dates display formats available for users, local time and GMT.

To switch dates display format between local computer time and GMT, use the Options menu.

ile Op	otions Help						
~	Show notification panel Show progress dialog Search within attachments			Search in Alex	Clark		۶
÷	Incomplete messages  Show deleted items Display time	Type () ocal MT MT G G G G G G G G G G G G G	Subject She was glad that Jo should In itsnature, it is arbitrary an It is my lady mother. It is my Butthat it might not appeart Do you persuade yourself th I regret that I am unable to r Asa, the heavy basketwhic He went up a dark and narr Noone, even there, could II One of the things particularI Stephen Brice read the new Give me some light! Give m His condition leaves him no	Kyle Pakerman Juliet Capulet John Andy Kort Brian Alex Clark Rudy Raid Romeo Montague Robert Rise Luise Michael	To Maria Woods; Kyle Pakerman; Luise; Andrew Wait; Richard; John; Dalia; Ro. Romeo Mortague; Richard; Dalia; Mic Romeo Mortague; Andy Kort; Juliet Capulet. John; Brian; Tim Goodler; Kyle Pakerm Dalia, Kyle Pakerman; Michael, Susan; Brian; Michael; Richard; Dalia; Luise; T. Brian; Michael; Richard; Dalia; Luise; T. Brian; Mara Woods; Richard; Alex Clar, John; Maria Woods; Richard; Alex Clar, Alex Clark; John; Tim Goodler; Michael. Romeo Mortague; Richard; Andrew W. Romeo Montague; Richard; Juliet Cap	<ul> <li>Wednesday, March 12, Wednesday, March 12, Wednesday, March 12, Wednesday, March 12,</li> <li>Wednesday, March 12,</li> </ul>	2014 2014 2014 2014 2014 2014 2014 2014
	Dalia Heath Mailboxade9ae7te5b54860a1cf0218 Heath Mailboxbaa8042e260149aa928ba55 John Juliet Capulet Kyle Pakeman Luise Maria Woods Michael Personal Archive - Health Mailboxbaa8042e: Personal Archive - Health Mailboxbaa8042e: Rchard Robert Rise	Alas, the From: Al Sent: W To: "D Cc: "D But she did r Colonel Carv Aunt Easter,	'ednesday, March 12, 2014 2 )alia" <dalia@no-such-emai< td=""><td>0:29:00 UTC+03:0 1.com&gt;, "Kyle Pake 1.com&gt;, "Kyle Pake was very poor indeed sssisted by Uncle Ber sing dainties which</td><td>v on erman" <kyle.pakerman@no erman" <kyle.pakerman@no ifor</kyle.pakerman@no </kyle.pakerman@no </td><td>6 attachment(s): DR.gif, 27.5 KB ESSAYS-7.txt, 2.22 KI ESSAYS-10.txt, 1.20 H ESSAYS-42.txt, 561 b ESSAYS-46.txt, 2.08 H ESSAYS-48.txt, 2.31 H</td><td>KB ytes KB</td></dalia@no-such-emai<>	0:29:00 UTC+03:0 1.com>, "Kyle Pake 1.com>, "Kyle Pake was very poor indeed sssisted by Uncle Ber sing dainties which	v on erman" <kyle.pakerman@no erman" <kyle.pakerman@no ifor</kyle.pakerman@no </kyle.pakerman@no 	6 attachment(s): DR.gif, 27.5 KB ESSAYS-7.txt, 2.22 KI ESSAYS-10.txt, 1.20 H ESSAYS-42.txt, 561 b ESSAYS-46.txt, 2.08 H ESSAYS-48.txt, 2.31 H	KB ytes KB

If you switch display time, a warning, that the file will be reloaded, appears.

e.	Warning	×
0	Switching display time requires reloading the file. This may take a long time. Do you want to continue?	

A message in GMT format looks the following way:

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⊡		В	utthat it might not appeart	John	Romeo Montague; Andy Kort; Robert	Wednesday,	12 Mar 2014 1	7:
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🗄 🗌 🧑 Kyle Pakerman	Sent	-	nesday, 12 Mar 2014 17:2			ESSAYS-4	7.txt. 1.10 KB	
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# Showing notification panel

Every program action is accompanied by an appropriate notification for user. Notification panel is disabled by default, but can be easily enabled by checking **Show notification panel** in the **Options** menu.

e.	Granular Restore for Microsoft Exchange and SQL – 🗖 🗙
File       Options       Help         Show notification panel       Show progress dialog         Search within attachments       Search within attachments         Brow       PST encoding         Incomplete messages       Incomplete messages         Brow deleted items       Display time         Display time       Display time         Use       John         Health Mailboxade 9ae 7e 5b 54860a 1cf 0218267         Juliet Capulet       Kyle Pakeman         Juliet Capulet       Kyle Pakeman         Maia Woods       Maria Woods         Personal Archive - Health Mailboxade 9ae 7re 5b 54860a 1cf 0218267         Personal Archive - Health Mailboxade 9ae 7re 5b 54860a 1cf 0218267         Richard       Robert Rise         Romeo Montague       Romeo Montague         Rudy Raid       System Mailbox(ade 9ae 7re 5b 5-4860a 1cf 0218267         Tim Gooder       Tim Gooder	Select mailboxes or folders to search         Ø         Mailbox Database.edb         C:\Exchange Server Database\Mailbox Database.edb         Size: 904 Mb         Date: 3/13/2014         Version: Exchange Server 2013         Transaction logs not used.         22 mailboxes. Select a mailbox to display folders.         Load time: 00:00:02
< >> Completed	File info

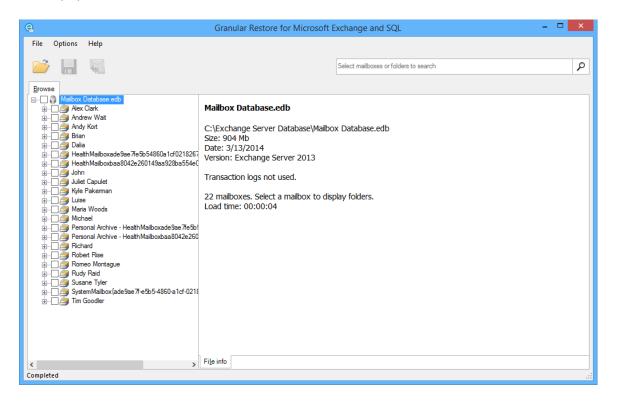
After that user will see additional information about opening file, export results, search results, etc.

G	Granular Restore for Microsoft Exchange and SQL	- 🗆 🗙
File Options Help		
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Prove		
Browse  Alex Clark  Adex Clark  Dala  Adex Clark  Dala  Adex Clark  Dala  Adex Clark  Dala  Dal	Version: Excluding Server 2013         Transaction logs not used.         22 mailboxes. Select a mailbox to display folders.         Load time: 00:00:04         File info         second(s)         and 4,872 message(s) into \\autotest-s\Recovered\CLIENT-PC\Recovery 001*.pst	×,
Completed	Selected: 3 mailbox(es)	

# 5.2 Finding and selecting messages, folders and mailboxes

Granular Restore for Microsoft Exchange and SQL provides two mutually complementary modes of finding, previewing and selecting items: browsing the mailbox tree and search. Using these, it is possible to efficiently form a set of items for subsequent export, including the necessary ones and excluding ones to be skipped.

A newly opened database is shown in the **Browse** mode.



## Browsing mail store tree

Browse mode shows mail store in a tree-like structure and allows browsing folders and previewing individual items.

This mode is best for navigating to specific mailboxes, folders and messages when it is precisely known what data needs to be extracted.

For example, a user may ask to restore a specific message from a known folder. Expand his or her mailbox in the tree, select the folder, find and click the item. All available properties and information about the item will be displayed in the **Preview** window to the right of the tree.

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Browse Mailbox Database.edb	∧ Type	C Subject	From	То	Created
🗄 🗋 🎒 Alex Clark		In itsnature, it is arbitrary an	Kyle Pakeman	Andrew Wait; Richard; John; Dalia; Ro	Wednesday March 12 2014
🗄 🗌 🎒 Andrew Wait		It is my lady mother. It is my		Romeo Montague: Richard; Dalia; Mic	
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inbox (1.024)		He went up a dark and narr	Rudy Raid	Brian; Michael; Richard; Dalia; Luise; T.,	Wednesday, March 12, 2014
Journal (27)		Noone, even there, could li	Romeo Montague	Brian; Alex Clark; Richard; Romeo Mon	Wednesday, March 12, 2014
Junk Email (0)		Stephen Brice read the ne	Luise	Alex Clark; John; Tim Goodler; Michael	Wednesday, March 12, 2014
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Outbox (0)		It were good, therefore, that	Andy Kort	Romeo Montague; Andrew Wait; Kyle	Wednesday, March 12, 2014
Sent Items (0)		I The riders could be heard,I	Andrew Wait	Susane Tyler; Maria Woods; Romeo M	. Wednesday, March 12, 2014
		I The sinewand heart of man	Susane Tyler	Brian; Juliet Capulet; Andy Kort; Robert	. Wednesday, March 12, 2014
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🗄 🗌 🎒 Personal Archive - Health Mailboxade9ae7fe		house in Olive Street. Both anxiety a eves as they followed her son out of t			
Personal Archive - Health Mailboxbaa8042e:	Street tw	vo men were lounging on the comer	s, each of whom gland		
≟	him listes	ssly as he passed. He went up a dar	k and narrow stair into	o a	

There is a check box next to the message. Check it to mark the message for export. Continue to mark other items, folders and mailboxes for export in a similar way.

ile Options Help						
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	Preview	which have given you happy home Properties	s, and the sacramen	ts which		-

Use filtering feature for better browsing the list of items in a folder.

Enable filtering by pressing **Ctrl+F** keys. A special panel will appear in the right part of the program window.

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< > > Completed	Preview	Properties			

Use search in preview feature for quick find text in item preview.

Enable search in preview by pressing **Ctrl+D** keys after opening preview of item. A special panel will appear in the right part of the program window.

ile Options Help									
🗎 🔚 🐺						Search in Andy Kor	t		۶
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🗄 🖳 🚔 Robert Rise	+		Prope		r dets the love	of Gonzago's wife			

### Тір

Each individual item, folder and mailbox has a check box next to it. Using these check boxes, it is possible to select as many or as few items for export as necessary.

To export an entire:

- mail store, mark the root check box with the mail store name.
- mailbox, mark the check box next to mailbox in the tree.
- folder, expand a mailbox and mark the check box next to the desired folder.

### **Using search**

The search in the main window provides the ability to search single or multiple mailboxes and perform actions on the search results.

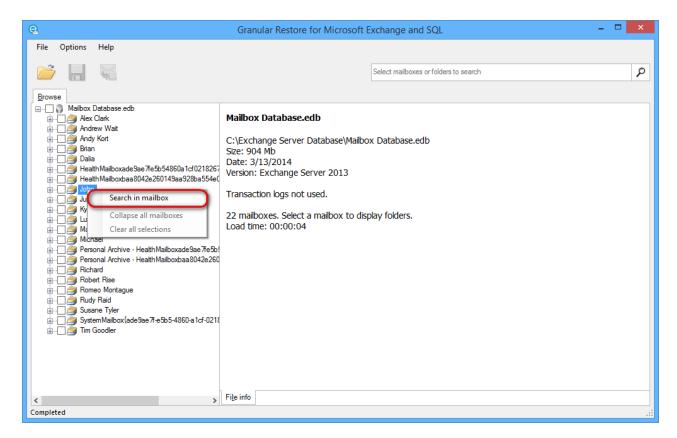
The best application of search mode is when the location and/or number of items to extract is not known exactly. Using keyword search, it is possible to narrow down on specific messages, folders and mailboxes. The quickest way to get search results is clicking on a particular mailbox, entering some keywords in the **Search** field and clicking the button **Start search**.

Search results will be displayed on a separate tab.

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Browse Search: "wait" (977) ×							
💭 Search: "wait" (977)	Туре	Location	(j Su	ibject	From	То	Crea
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	<						

If a user knows exactly in what mailbox or folder the data is located, using **Search in mailbox option** will speed up the search.

Right-click on a folder/a mailbox will open a context menu.



By clicking on this menu advanced mode of search dialog will be opened and **Search in** field will be filled with the selected mailbox/folder.

Fill in necessary search parameters and start the search.

For more precise searches click on the **Search** field, drop-down list of all search fields will appear:

• Search in - specifies mailbox(es)\folder(s) to search in. Default: entire database. If you select one or more Search in check boxes, but specify no additional search criteria, the utility will return all items from the selected folder(s).

Search in		×
🖃 🔲 Mailbox Database.edb		^
🛓 🖳 🚔 Alex Clark		
🗄 🗋 🥭 Andrew Wait		
🗄 🗹 🎒 Andy Kort		
🚊 🗉 🧐 Brian		
Calendar (444)		
Contacts (44)		
Deleted Items (28)		
Drafts (0)		
Inbox (1,018)		
Junk Email (0)		
Notes (40)		
Health Mailboxade9ae 7fe5b54860a1cf021826768790		
HealthMailboxbaa8042e260149aa928ba554e009d7d3		
in International Internationa		
🖥 🖳 🧖 Juliet Capulet		
🛓 🗌 🚎 Kyle Pakeman		
🗄 🖳 🥭 Luise		
🗄 🗌 🦾 Maria Woods		
🗄 🗋 🥭 Michael		
🚋 🥅 🚈 Personal Archive - HealthMailboxade9ae7fe5b54860a1cf0218	326768790	~
Include mailboxes that are expanded, have items selected or were searched	ed before	
	OK Car	icel

- Has words search for mail store items that have words or phrases entered in the field.
- Doesn't have search for items that do not have words or phrases entered in the field.
- Has attachments search for items with attachments.
- From search for keywords in the From: field.
- To search for keywords in the To: field.
- **Subject** search for keywords in subject.
- **Date range** set specific date range if known. It is obligatory to set both the beginning and the end of the desired time period.

The outcomes of a search can be:

1. The program was able to find items (1) that corresponds to specified search parameters (2). The user can select separate items or mark search results for recovery.

Clicking an item in the search results tab will open the item preview. Selecting item(s) in search results will make their recovery possible.

e.	Granular Restore for Microsoft Exchange and SQL -	
File Options Help	Search in all mailboxes: from:(Andrew) has:attachment wait	٩
Browse         Search: "from:(Andrew) has:at" (96)         X           Search: "from:(Andrew) has:at" (96)         Alex Clark (20)           Alex Clark (20)         hox (20)           Andrew Wait (43)         Andrew Wait (43)           Browse         Calendar (25)           hox (18)         hox (19)           Brian (14)         hox (14)	Type       Location       G       Subject         Yee       Vardy Kort\nbox       G       The ridd         Wex Clark\lnbox       G       The ridd         Wardy Kort\nbox       G       Cuyme         Wardy Kort\nbox       G       Apartic         Wardy Kort\nbox       G       She wa         Subject:       Date range:       To:         Wardy Kort\nbox       G       If drop         Wardy Kort\nbox </th <th>Clear Raid; Jul Michael; Tyler; Ri Tyler; Ri Tyler; Ri man; Mi</th>	Clear Raid; Jul Michael; Tyler; Ri Tyler; Ri Tyler; Ri man; Mi
Search complete, 96 matches		.:

Counters of found elements are automatically updated or can be updated manually by clicking on the **Refresh** button. If any folder is selected and the program has found new elements in it, then the following value will be shown: previous(value, when we selected the folder) value of a counter + count(in green) of newly found elements, which will be updated in real-time.

				Search in all mailbo	xes: wait		
Browse Search: "wait" (4,311) ×							
	Туре	Location	0	Subject	From	То	
		\Alex Clark\Deleted Items		THERSITES.	Alex Clark	Andy Kort; Juliet Capulet; Michael; Rob.	. 1
Calendar (274)		\Alex Clark\Deleted Items		The emoluments of	Alex Clark	Juliet Capulet; Brian; Romeo Montague.	
<u>8-</u> Contacts (1) Deleted Items (16)		\Alex Clark\Inbox		Part of them,linen	Michael	Andrew Wait; Juliet Capulet; Romeo M	. 1
		\Alex Clark\Inbox			Maria Woods	Alex Clark; Andrew Wait; Luise; Robert	. 1
Tasks (1)		\Alex Clark\Inbox			Luise	Susane Tyler; Michael; Kyle Pakeman	. 1
Andrew Wait (1,461)		\Alex Clark\Inbox		Indeed there can	John	Juliet Capulet; Dalia; John; Alex Clark	١
Calendar (421)		\Alex Clark\Inbox		So came his	Brian	Brian; Richard; Michael; Susane Tyler;	. 1
Deleted Items (26)		\Alex Clark\Inbox		Where is	Andrew Wait	Richard; John; Andrew Wait; Alex Clar	1
		\Alex Clark\Inbox		'Tis	Richard	Romeo Montague; Brian; John; Tim Go	. 1
🔄 📕 Journal (2)		\Alex Clark\Inbox		The average	John	Robert Rise; Luise; John; Susane Tyler.	
Notes (2)		\Alex Clark\Inbox		VIRGILIA. VIRGILIA.	Andrew Wait	Kyle Pakerman; Brian; Michael; Andre	
🛄 🧳 Tasks (2)		\Alex Clark\Deleted Items		Of poets perhaps	Alex Clark	Brian; Richard; Michael; Susane Tyler;	
🚔 💭 🎒 Andy Kort (943)		\Alex Clark\Inbox			Robert Rise	Robert Rise; Alex Clark; Dalia; Andrew	
Calendar (276)		\Alex Clark\Inbox		Amongst a man's	Rudy Raid	Robert Rise; Luise; Kyle Pakerman; Jul	. 1
Deleted Items (16)		\Alex Clark\Inbox			Tim Goodler	Susane Tyler; Andy Kort; Juliet Capulet	. 1
<b>Inbox</b> (646)		\Alex Clark\Inbox		On this we	Luise	Richard; Romeo Montague; Juliet Cap	
Journal (2)		\Alex Clark\Inbox		The people of	Maria Woods	Brian; Juliet Capulet; Luise; Kyle Paker	. 1
Votes (3)		\Alex Clark\Inbox		"I am thirsty	Andrew Wait	Romeo Montague; Kyle Pakerman; Juli	. 1
Calendar (272)		\Alex Clark\Deleted Items		Time,	Alex Clark	Andy Kort; Juliet Capulet; Michael; Rob.	
		\Alex Clark\Inbox		Where's	John	Robert Rise; Rudy Raid; Alex Clark; An.	
Deleted Items (14)		\Alex Clark\Inbox		Stay yet another	Dalia	Susane Tyler; Tim Goodler; Kyle Paker	. 1
Inbox (640)		\Alex Clark\Inbox		Good repose the	Andrew Wait	Robert Rise; Luise; Kyle Pakerman; Jul.	. 1
Tasks (1)		\Alex Clark\Inbox		It is certainly	Rudy Raid	Juliet Capulet; Tim Goodler; Michael; B	. 1
		\Alex Clark\Inbox		Froude and others.	Andy Kort	Michael; Romeo Montague; Andrew W.	54

Words and phrases which match the search query are highlighted in the preview, which helps to easily identify where the match was found.

File Options Help	Gr	anular Restore for Mi	croso	IT Exchange and SQL			
泸 🔒 🧠				Search in all mailboxes: from:(Andrew	v Wait) wait		۶
Browse Search: "from:(Andrew Wait) wait" (109) ×	Туре	Location	Q	Subject	From	То	_
Andrew Wait (109)     Calendar (47)     Deleted Items (26)     Inbox (36)		\Andrew Wait\Inbox \Andrew Wait\Inbox \Andrew Wait\Inbox	0	I'll drop the paper- Sweet leaves, sha They were getting kind of interested. T	Andrew Wait Andrew Wait	Andy Kort; Robert Rise; Ru Rudy Raid; Andrew Wait; Andy Kort; Romeo Montag	Romeo jue; Micł
		\Andrew Wait\Inbox \Andrew Wait\Inbox \Andrew Wait\Inbox	0	Alone she was in thehouse-her brother In this action it isgenius; not the privileg SHALLOW. SHALLOW. SHALLO	Andrew Wait Andrew Wait	Kyle Pakeman; John; Sus John; Kyle Pakeman; Ron Alex Clark; Juliet Capulet; I	neo Mor Luise; R
		\Andrew Wait\Inbox \Andrew Wait\Inbox \Andrew Wait\Inbox \Andrew Wait\Inbox	Q	Thesubscribers to a new loan, who me Let it be virtuous to be obstinate. Let it Hisgaments hung in tatters; his boots	Andrew Wait	Robert Rise; Maria Woods John; Michael; Luise; Susa Alex Clark; Andrew Wait; L Kyle Pakerman; Maria Wo	ane Tyle uise; Ro
		Andrew Wait\Inbox	Ø	And in the ages to come, women such [Aside to MENAS] I think th'art mad. [A	Andrew Wait	Andrew Wait; Luise; Kyle F John; Kyle Pakerman; And	Pakema
	Hisga		rs; his	boots were ripped and solele v	ess.		;
	From: Sent: To:	Andrew Wait Wednesday, March 12, 2		):25:00 AM UTC-07:00 an@no-such-email.com>, "Maria Wo	ode" < Maria \	Moode@no-euch-email.o	
	Cc:	"Kyle Pakerman" <kyle.f< td=""><td>akerm</td><td>an@no-such-email.com&gt;, "Maria Wo</td><td></td><td>-</td><td></td></kyle.f<>	akerm	an@no-such-email.com>, "Maria Wo		-	
	gaments	and privation had wom him do hung in tatters; his boots wer flour had been used up, and w Proper <u>ti</u> es	e ripped	and soleless. Long			
	14 4	Page 1 of 2	Ű			100 messages	per pag

2 The search didn't match any items. Review search parameters and run another search.

To delete temporary data, generated by Granular Restore for Microsoft Exchange and SQL, go to the **File** menu and click Delete saved search indexes and logs.

Open file Recent	Ctrl+0				Search in all mailbo	xes: wait		
Close file								1
Reload database using transaction logs Search for files to open		e	Location	Ø	Subject	From	То	
Search for mes to open		1	\Alex Clark\Deleted Items		THERSITES.	Alex Clark	Andy Kort; Juliet Capulet; Michael; Rob.	
Export selected items into PST	Ctrl+S		\Alex Clark\Inbox			Brian	Alex Clark; Tim Goodler; John; Romeo	
Export into original Exchange mailbox	Ctrl+G		\Alex Clark\Inbox		The maintenance of	Andrew Wait	Kyle Pakeman	
Cancel current operation	Ctrl+N		\Alex Clark\Inbox		Chaudiere had	Susane Tyler	Andrew Wait; Andy Kort; Alex Clark; M	
Cancel current operation	Ctri+N	-	\Alex Clark\Inbox		Beside	Robert Rise	Richard; Andy Kort; Maria Woods; Sus	
Open log folder			\Alex Clark\Inbox		Break off thy	Dalia	Alex Clark; Rudy Raid; Luise; Tim Goo	
Delete saved temp files and logs	_		\Alex Clark\Inbox		How frequently	Richard	Maria Woods; Michael; Robert Rise; R	
Delete saved temp files and logs		10	\Alex Clark\Inbox		She was going	Rudy Raid	John; Susane Tyler; Luise; Romeo Mo	
Exit	Alt+X	-	\Alex Clark\Inbox		Now,	Michael	Luise; Brian; Michael; Rudy Raid; Andy.	
		, <u>11</u>	\Alex Clark\Inbox			Kyle Pakerman	Alex Clark; Rudy Raid; Maria Woods;	
Notes (2)			\Alex Clark\Inbox		Suit the action	Tim Goodler	Kyle Pakerman; Susane Tyler; Rudy R	
Tasks (2)			\Alex Clark\Inbox			Luise	Juliet Capulet; Brian	
Andy Kort (943)			\Alex Clark\Inbox		So	Andrew Wait	Brian; Luise; Tim Goodler; Alex Clark; K.	
Calendar (276) Deleted Items (16)			\Alex Clark\Inbox			Romeo Montague	Romeo Montague; Andrew Wait; Juliet	
			\Alex Clark\Inbox		What false Italian-	Robert Rise	John; Andrew Wait; Michael; Richard;	
			\Alex Clark\Deleted Items		The emoluments of	Alex Clark	Juliet Capulet; Brian; Romeo Montague	
Notes (3)			\Alex Clark\Inbox		A tradesmanwho had	Kyle Pakerman	Juliet Capulet; Susane Tyler; Richard;	
			\Alex Clark\Inbox		ROSS.	Romeo Montague	Andrew Wait; Robert Rise; Richard; Bri.	
Calendar (272)			\Alex Clark\Inbox		Part of them,linen	Michael	Andrew Wait; Juliet Capulet; Romeo M	
Contacts (3)			\Alex Clark\Inbox			Maria Woods	Alex Clark; Andrew Wait; Luise; Robert	
Deleted Items (14)			\Alex Clark\Inbox		Indeed there can	John	Juliet Capulet; Dalia; John; Alex Clark	
inbox (640)		]	\Alex Clark\Inbox		So came his	Brian	Brian; Richard; Michael; Susane Tyler;	
Tasks (1)			\Alex Clark\Inbox		Where is	Andrew Wait	Richard; John; Andrew Wait; Alex Clar	
		]	\Alex Clark\Inbox		'Tis	Richard	Romeo Montague; Brian; John; Tim Go.	-
	<							

#### Note

Next search in the same folder/mailbox will be almost instant (only if saved search indexes and logs haven't just been deleted).

#### Note

Search with empty query is not available.

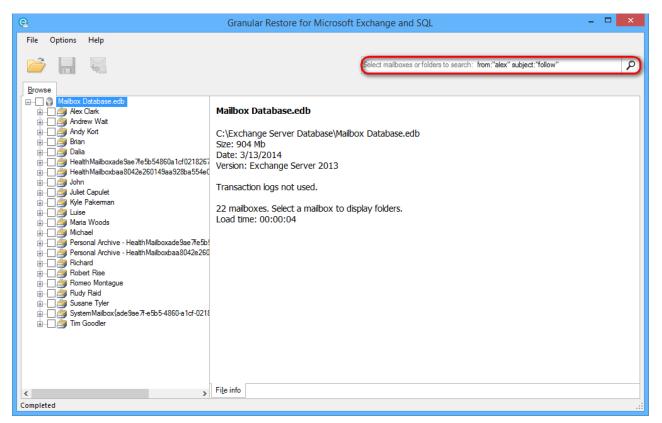
### Note

Asterisk ('\*') is added to all words in search fields by default. This allows to find not only specified words but also their word forms. Use quotes ("") to search for an exact phrase.

#### **Advanced search**

Advanced search uses symbols and operators in queries. These operators allow you to find what you're looking for quickly and accurately.

To use advanced search enter operators and their values into the Search field (1).



#### Operators are listed below:

Operator	Definition	Example
from:	Used to specify the sender.	Example: from:alex Meaning: messages from Alex.
to:	Used to specify a recipient.	Example: to:John Meaning: all messages that were sent to John (by any user).
subject:	Search for words in the subject line.	Example: subject:dinner Meaning: messages that have the word "dinner" in the subject.
OR	Search for messages matching term A or term B. OR must be in all caps	Example: from:alex OR from:john Meaning: messages from Alex or from John.

Operator	Definition	Example
AND or Space	Search for messages matching term A and term B. AND must be in all caps.	Example: from:alex AND from:john Meaning: messages from Alex and from John.
- (hyphen)	Used to exclude messages from your search.	Example: dinner -movie Meaning: messages that contain the word "dinner" but do not contain the word "movie".
has:attachment	Search for messages with an attachment.	Example: from:john has:attachment Meaning: messages from John that have an attachment.
att_name:	Search for messages with specified attachment name.	Example: to:jane att_name:photo.png Meaning: messages to Jane that have an attachment with specified attachment name.
cc: bcc:	Used to specify recipients in the cc: or bcc: fields Search on bcc: cannot retrieve messages on which you were blind carbon copied.	Example: cc:John Meaning: messages that were cc-ed to John.
" " (quotes)	Used to search for an exact phrase* *capitalization isn't taken into consideration.	Example: "i'm feeling lucky" Meaning: messages containing the phrase "i'm feeling lucky" or "I'm feeling lucky". Example: subject: "dinner and a movie" Meaning: messages containing the phrase "dinner and a movie" in the subject.
()	Used to group words Used to specify terms that shouldn't be excluded.	Example: from:alex (dinner OR movie) Meaning: messages from Alex that contain either the word "dinner" or the word "movie". Example: subject:(dinner movie)
		Meaning: messages in which the subject contains both the word "dinner" and the word "movie".
create_time:[yyyymmdd yyyymmdd]	Search for messages created during a certain period of time.	Example: create_time:[20110416 20110516] Meaning: messages created between April 16, 2011 and May 16, 2011.

Operator	Definition	Example
after: before:	Search for messages sent or received during a certain period of	Example: after:20110416 before:20110516
older: newer:	time (using the date format yyyymmdd).	Meaning: messages sent between April 16, 2011 and May 16, 2011. More precisely: messages sent after 12:00 AM (or 00:00) April 16, 2011 and before May 16, 2011.
older_than: newer_than:	Similar to older and newer, but allows relative dates using d, m, and y for day, month, and year.	Example: newer_than:2d Meaning: finds messages sent within the last two days.
size:	Search for messages larger than the specified size in bytes. Abbreviations for numbers (B, K, M) are allowed. Size limit is 2000MB.	Example: size:300 Meaning: messages larger than 300 bytes Example: size:[300 2000] Meaning: messages larger than 300 bytes but smaller than 2000 bytes.
larger: smaller:	Similar to size, allows abbreviations for numbers (B, K, M). Size limit is 2000MB.	Example: larger:1M Meaning: All messages of at least 1MB in size. Example: larger:150K smaller:1M Meaning: messages larger than 150KB but smaller than 1MB.
+ (plus sign)	Match the search term exactly.	Example: +movie Meaning: minds messages containing "movie" but not "movies" or "movei".

#### Using wildcard characters

A wildcard character is a keyboard character such as an asterisk (\*) or a question mark (?) that is used to represent one or more characters when you are searching for files, folders, printers, computers, or people. Wildcard characters are often used in place of one or more characters when you do not know what the real character is or you do not want to type the entire name.

Wildcard character	Definition	Example				
* (asterisk)	Used to substitute for zero or more characters.	Example: subject:d*g Meaning: finds messages containing words "doing", "dog", "debug", etc.				

?	Used to substitute for a single	Example: subject:d?g
(question mark)	character in a name.	Meaning: finds messages containing
		words "dog", "dig", "dug", etc.

Note

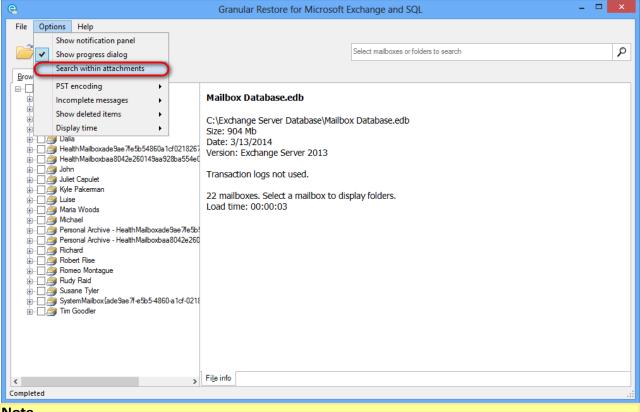
Use checked 'Find whole word only' in case using question mark ("?") in the start of the word.

#### Note

Other special characters are not used for search. Search query, containing special characters, may return incorrect results.

## Search within attachments

Search within attachments is enabled by default. This option can be changed in the Options menu. This option allows to perform search in attachments' content.



#### Note

After enabling this option the database will have to be reopened. Search process may take longer when search within attachments is enabled.

# 5.3 Exporting items

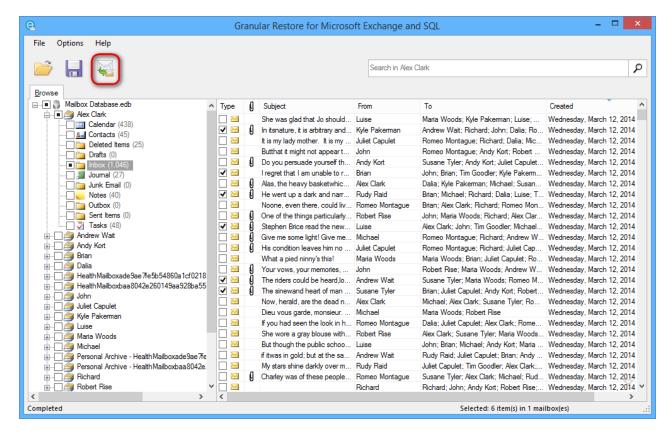
Granular Restore for Microsoft Exchange and SQL includes the injection capability for items (emails, calendars, contacts, etc.) from offline database and PST/OST files to original live Exchange databases as well as granular data extraction to Personal Storage File (.pst) files.

## Restore to original live Exchange Server. Standard mode

#### **Important Note**

Standard export mode requires access to Active Directory to establish connection to Exchange Server. The program requests users list from Active Directory and checks if IDs of offline and live user mailboxes match. That's why the user, logged in, must be a domain user.

After startup, opening an EDB file and checking items the main window of the application looks as follows:



Clicking the injection button will bring up the following dialog box:

lost (ex.: contoso.com or 192.168.0.5):	1144	0.22	About export into original mailbox
ES2013.no-such-email.com	Refresh	Advanced	Selected items will be copied from
Details:			offline mailboxes into their original locations on live Exchange Server
Export from source mailbox "Alex Clark" to destination			The destination Exchange Server i detected automatically using the current Active Directory domain. Current user should be a member of the same domain as target Exchange Server and should have <u>Exchange impersonation</u> access to destination mailboxes. Each selected item will go to its original location in respective mailbox, e.g. Patrick's offline mail will go to Patrick's mailbox, Lisa's calendar items to Lisa's mailbox, etc. When selected items cannot b matched to destination mailbox, they will not be exported.

Domain name of the machine with Exchange Server will be automatically detected if current machine is in the same domain with Exchange Server. Otherwise, the host will not be detected and has to be entered manually. By default, Granular Restore for Microsoft Exchange and SQL uses current user to establish the connection. If current user doesn't have rights to impersonate selected for export user, an appropriate error will appear in details.

In case of error it is recommended to use the **Advanced** button and configure the connection settings.

ę,	Connect to Exchange Server mailbox
	Host (ex.: contoso.com or 192.168.0.5):         ES2013.no-such-email.com         ✓ Use current Windows credentials         User logon name (ex.: user1):         Password:         Save password
	Connect Cancel

There are two ways to connect to selected mailbox:

- 1. Use credentials of selected mailbox.
- 2 Specify the user that has impersonation rights.

To use credential of selected mailbox, enter host name of machine with Client Access Role, unmark **Use** current Windows credentials enter user name and password and press Connect.

ę,	Connect to Exchange Server mailbox	×
	Host (ex.: contoso.com or 192.168.0.5):         ES2013.no-such-email.com         Use current Windows credentials         User logon name (ex.: user1):         Aex.Clark         Password:         • Save password	
	Connect Cancel	

To use **Exchange impersonation** to establish the connection, enter host name of machine with Client Access role, unmark **Use current Windows credentials**, enter credentials of the user with impersonation rights and press **Connect**. In the example below Brian has impersonation rights to access Dalia's mailbox.

ę,	Connect to Exchange Server mailbox	×
	Host (ex.: contoso.com or 192.168.0.5):         ES2013.no-such-email.com         Use current Windows credentials         User logon name (ex.: user1):         Brian         Password:         •••••••••         • Save password	
	Connect Cancel	

Exporting to live Exchange is also available via the **File** menu.

			Gran	ular Restore for Microso	oft Ex	change and	d SQL			
ile	Options Help									
	Open file Ctrl+O	- 1			_					
	Recent	ъ I			1	Search in Alex (	Clark			
	Close file	·								
		- 1								
	Reload database using transaction logs	t	A	Subject	From	,	To	Created		
	Search for files to open	Ĩ	6							
	For established items into DCT Child C		a n	She was glad that Jo should				Wednesday,		
_	Export selected items into PST Ctrl+S	_	3 U	In itsnature, it is arbitrary and			Andrew Wait; Richard; John; Dalia; Ro			
	Export into original Exchange mailbox Ctrl+G		2	It is my lady mother. It is my Butthat it might not appeart			Romeo Montague; Richard; Dalia; Mic Romeo Montague; Andy Kort; Robert	Wednesday, Wednesday,		
	Cancel current operation Ctrl+N	F	a A A	Butthat it might not appear t Do you persuade yourself th			Romeo Montague; Andy Kort; Robert Susane Tyler; Andy Kort; Juliet Capulet			
			- U	I regret that I am unable to r			John; Brian; Tim Goodler; Kyle Pakerm	-		
	Open log folder	Ē	a p	Alas, the heavy basketwhic			John; Bran; Tim Goodler; Kyle Pakerm Dalia: Kyle Pakerman: Michael: Susan			
	Delete saved temp files and logs	Ē	ุ่ ⊴ ผิ	He went up a dark and narr			Brian: Michael: Richard: Dalia: Luise: T			
	-		a 6	Noone, even there, could liv			Brian; Michael; Richard; Dalla; Luise; T Brian; Alex Clark; Richard; Romeo Mon			
	Exit Alt+X		a 4 ()	One of the things particularly		-	John: Maria Woods: Richard; Alex Clar			
				Stephen Brice read the new			Alex Clark: John: Tim Goodler: Michael			
,	Andrew Wait			Give me some light! Give me			Romeo Montague: Richard: Andrew W			
1	Andy Kort			His condition leaves him no			Romeo Montague; Richard; Andrew W Romeo Montague; Richard; Juliet Cap			
Ē			- 0	What a pied ninny's this!		Woods	Maria Woods: Brian: Juliet Capulet: Ro			
÷	📖 🧑 Dalia			Your vows, your memories,			Robert Rise; Maria Woods; Andrew W			
÷	🧃 Health Mailboxade9ae7fe5b54860a1cf0218		- 0	The riders could be heard.lo			Susane Tyler; Maria Woods; Andrew W			
ŧ	🗋 🎒 Health Mailboxbaa 8042e 260 149aa 928ba 55		- 0	The sinewand heart of man			Brian; Juliet Capulet; Andy Kort; Robert			
ŧ	I 🗋 🥭 John			Now, herald, are the dead n			Michael: Alex Clark: Susane Tyler: Ro			
ŧ				Dieu vous garde, monsieur			Maria Woods: Robert Rise	Wednesday		
÷				If you had seen the look in h			Dalia; Juliet Capulet; Alex Clark; Rome			
+				She wore a gray blouse with		-	Alex Clark: Susane Tyler: Maria Woods			
1	a <b>] / / / / / / / / / / / / / / / / / / </b>			But though the public schoo			John; Brian; Michael; Andy Kort; Maria			
Ē				if itwas in gold: but at the sa			Rudy Raid; Juliet Capulet; Brian; Andy			
Ē	Personal Archive - Health Mailboxade ae //			My stars shine darkly over m			Juliet Capulet; Tim Goodler; Alex Clark;	-		
±				Charley was of these people			Susane Tyler; Alex Clark; Michael; Rud			
	☐ Robert Rise ✓		- 0	anality was or mose people	Richa	-	Richard; John; Andy Kort; Robert Rise;			
	>	<	-				Tionard, contr, rendy funt, flobolit flido,		, maron n	>
mal	leted						Selected: 1 folder(s) in 1 m	ailboy(ac)		

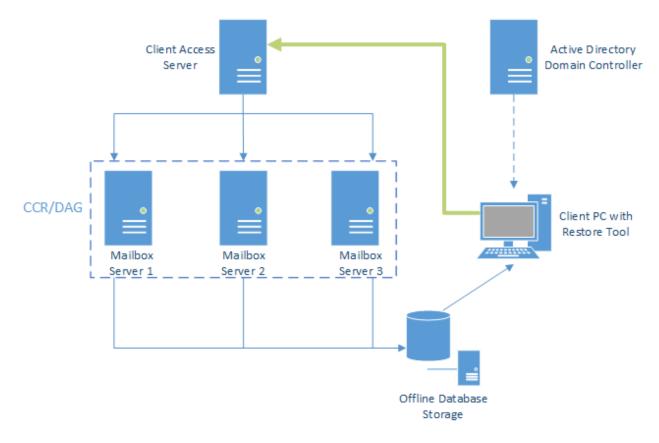
After establishing the connection, the export will start. Required time depends on how many items are selected for export. You will be shown a progress window during the export. The window shows the number of saved folders, messages, errors and total expected items to be restored. You can disable the progress window directly in the window or go to the **Options** menu and select **Show progress dialog**.

The export can be cancelled by clicking the Cancel exporting button on the taskbar.

1	Gran	ular Restore for Microso	oft Exchange a	nd SQL		
File Options Help						
			Search in Alex	ĸ Clark		
Browse						
⊒∎ 🌒 Mailbox Database.edb	^ Type	Subject	From	То	Created	
🖃 🗹 🎒 Alex Clark	✓ ≥	She was glad that Jo should	Luise	Maria Woods: Kyle Pak	erman; Luise; Wednesda	av. March 12, 2014
Calendar (438)	V 🖂 🖞				John; Dalia; Ro Wednesda	
Contacts (45)		and the second			nard: Dalia: Mic Wednesda	4 · · · · · · · · · · · · · · · · · · ·
Deleted Items (25)     Drafts (0)		Progres	S		v Kort; Robert Wednesda	2 · · · · · · · · · · · · · · · · · · ·
					t: Juliet Capulet Wednesda	
	-				er; Kyle Pakerm Wednesda	2 · · · · · · · · · · · · · · · · · · ·
	Exporting	into original Exchange Serv	er mailbox		Michael: Susan Wednesda	· · · · · · · · · · · · · · · · · · ·
Notes (40)					: Dalia: Luise: T Wednesda	4 · · · · · · · · · · · · · · · · · · ·
	Folders	0			ard; Romeo Mon Wednesda	
Sent Items (0)	Message	s O			chard: Alex Clar Wednesda	4 · · · · · · · · · · · · · · · · · · ·
🗸 🏹 Tasks (48)	Errors	0			oodler: Michael Wednesda	2 · · · · · · · · · · · · · · · · · · ·
🗄 🖳 🚔 Andrew Wait	Total me	ssages count 0		ie: Rich	nard; Andrew W Wednesda	av. March 12, 2014
🗄 🗋 🎒 Andy Kort	Elapsed	time 00:00:06			nard; Juliet Cap Wednesda	•
🗄 🦳 🎒 Brian					liet Capulet: Ro Wednesda	4 · · · · · · · · · · · · · · · · · · ·
🛓 🧾 🎒 Dalia	Cancel cu	rent operation		ria Wo	ods; Andrew W Wednesda	av. March 12, 2014
🖶 🗌 🎒 Health Mailboxade 9ae 7fe 5b 54860a 1cf 0218	Show	the dialog next time			oods; Romeo M Wednesda	· · · · · · · · · · · · · · · · · · ·
		·····,			ndy Kort; Robert Wednesda	4 · · · · · · · · · · · · · · · · · · ·
🗄 💭 John	✓ 🖂	Now, herald, are the dead n	Alex Clark		sane Tyler; Ro Wednesda	
in	✓ ≥	Dieu vous garde, monsieur		Maria Woods; Robert F	· · · ·	ay, March 12, 2014
ia	✓ ≥	If you had seen the look in h		Dalia; Juliet Capulet; Al	ex Clark; Rome Wednesda	
	✓ ≥	She wore a grav blouse with	-		er; Maria Woods Wednesda	4 · · · · · · · · · · · · · · · · · · ·
	<ul> <li>✓ Max call, Stable 1918, Maile Wood, 1919</li> <li>✓ But though the public schoo Luise</li> <li>John; Brian; Michael; Andy Kort; Maria W</li> </ul>					•
		if itwas in gold; but at the sa			et; Brian; Andy Wednesda	
Personal Archive - HealthMailboxadesae/re     Personal Archive - HealthMailboxadesae/re		My stars shine darkly over m			dler; Alex Clark; Wednesda	
	V 🖂 🔒				k; Michael; Rud Wednesda	
	<ul> <li>Image: Second sec</li></ul>	,	Richard		ort; Robert Rise; Wednesda	
>	<					>
oorting into original Exchange Server mailbox (folders	0 00:00:0	)6		Selected: 1 mail	hov(es)	

## Working with clustered Exchange Server configuration

Exporting data into live instance of clustered Exchange Server does not differ from working with any other server configuration. Even if there are several servers with Mailbox Server roles in your configuration, and they have been added to your CCR/DAG, data can be easily restored.



As you can see on the scheme, to export data into live server, Granular Restore for Microsoft Exchange and SQL calls Client Access Server to get access to specified mailbox. And it doesn't really matter which of existing Mailbox Servers stores target mailbox - data will be exported to the right place.

The IP-address or FQDN of Client Access Server should be specified in the **Host** field while using the **Expert** mode. In the **Export into original** mode FQDN of this server is detected automatically by calling Active Directory domain controller.

# **Restore to PST files**

To save items marked for export, click the **Export selected items** button on the toolbar or select the point in the **File** menu.

2		Gran	ular Restore for Microso	oft E	kchange an	d SQL		
File Options Help								
					Search in Alex (	Clark		ړ
Browse								
⊡∎ 🜍 Mailbox Database.edb	∧ Typ	e (	Subject	Fror	n	То	Created	
🚊 🖷 🧐 Alex Clark	<b>v</b>		She was glad that Jo should	Luie		Maria Woods; Kyle Pakerman; Luise;	Wednesday	March 12, 2014
Calendar (438)	~					Andrew Wait; Richard; John; Dalia; Ro		
<u>8-</u> Contacts (45)	~		It is my lady mother. It is my			Romeo Montague: Richard: Dalia; Mic		
Deleted Items (25)	<ul> <li></li> <li></li> </ul>		Butthat it might not appear t			Romeo Montague; Andy Kort; Robert		
Drafts (0)						Susane Tyler: Andy Kort: Juliet Capulet		
<b>V</b> inbox (1,046)	~		I regret that I am unable to r			John: Brian: Tim Goodler: Kyle Pakerm		
Junk Email (0)						Dalia: Kyle Pakeman; Michael; Susan		
Votes (40)						Brian: Michael: Richard: Dalia: Luise: T		
			Noone, even there, could liv			Brian; Alex Clark; Richard; Romeo Mon		
	~				-	John: Maria Woods: Richard: Alex Clar		
Tasks (48)			2.1			Alex Clark: John: Tim Goodler: Michael		
🗊 🗌 🎒 Ändrew Wait						Romeo Montague: Richard: Andrew W		
🛓 🦳 🊎 Andy Kort			-			Romeo Montague: Richard: Juliet Cap		
🗄 🗋 🚔 Brian			What a pied ninny's this!		a Woods	Maria Woods: Brian: Juliet Capulet: Ro		
🚋 🗋 🧿 Dalia						Robert Rise; Maria Woods; Andrew W		
🗑 🗌 🎒 Health Mailboxade9ae 7fe5b54860a1cf0218	-		The riders could be heard lo			Susane Tyler; Maria Woods; Romeo M		
🗄 🗌 🎒 Health Mailboxbaa 8042e 260 149aa 928ba 55	-		The sinewand heart of man	Susa	ne Tyler	Brian; Juliet Capulet; Andy Kort; Robert		
ii	-		Now, herald, are the dead n			Michael; Alex Clark; Susane Tyler; Ro		
			Dieu vous garde, monsieur			Maria Woods; Robert Rise		March 12, 2014
ia	-		If you had seen the look in h			Dalia; Juliet Capulet; Alex Clark; Rome		
ia @ Luise ia @ Maria Woods	-		She wore a gray blouse with		-	Alex Clark; Susane Tyler; Maria Woods	Wednesday.	March 12, 2014
	-		But though the public schoo			John; Brian; Michael; Andy Kort; Maria		
	-		if itwas in gold; but at the sa			Rudy Raid; Juliet Capulet; Brian; Andy		
Personal Archive - Health Mailboxbaa8042e;	-		My stars shine darkly over m			Juliet Capulet; Tim Goodler; Alex Clark;		
u Aichard	-					Susane Tyler; Alex Clark; Michael; Rud		
🗑 🦳 🎽 Robert Rise	~ 🗸			Rich	-	Richard; John; Andy Kort; Robert Rise;		
>	<						-71	>
mpleted						Selected: 1 folder(s) in 1 m	ailbox(es)	

You will be asked to select or create the destination folder for recovered data:

Selected data will be saved into .pst file(s). To start the export select the de folder or create a new one and click OK. The export process will start imme	
🛛 🌗 Program Files	^
🛛 🌗 Program Files (x86)	
Recovered_session1	
Recovered_session2	
Recovered_session3	
Recovered_session4	
Recovered_session5	
Recovered_session6	
▶      totalcmd	~
PST encoding: Unicode (Microsoft Outlook 2003, 2007, 2010 and 20	13) 🗸
Make New Folder OK	Cancel

After selecting folder, the export will start. Required time depends on how many items are selected for export. You will be shown a progress window during the export. The window shows the number of saved mailboxes, folders, messages and total expected items to be restored (1). You can disable the progress window directly in the window or go to the **Options** menu and select **Show progress dialog**.

The export can be cancelled by clicking an appropriate link in the progress dialog window (2) or by clicking the Cancel export button on the taskbar (3).

<u>e</u>	Granular Restore for Microsoft Exchange and SQL	- 🗆 🗙
File Options Help	Search in all mailboxes	٩
Imaibox Database edb     Acx Clark     Acx Clark     Adrew Wait     Adrew Wait     Adrew Wait     Bran	Mailbox Database.edb Progress	
Dala	Exporting into PST 7% Mailboxes 6 Folders 67 Messages 2,165 Total messages count 28,163 Read speed 559 KB/s Elapsed time 00:01:06 Cancel current operation 2 Show the dialog next time Close	
C Second	File info           00:01:06         Selected: 22 mailbox(es)	

#### Тір

If you closed the progres window, it can be shown again by clicking on the progress bar on the status.

### PST file naming, size and format

Granular Restore for Microsoft Exchange and SQL exports each mail store into a separate.pst file named "Recovery NNN - <Mailbox Name>[ - VVV] . pst", where NNN is current recovery session identifier, VVV – volume number in case the PST has to be written in more than one volume.

Example:

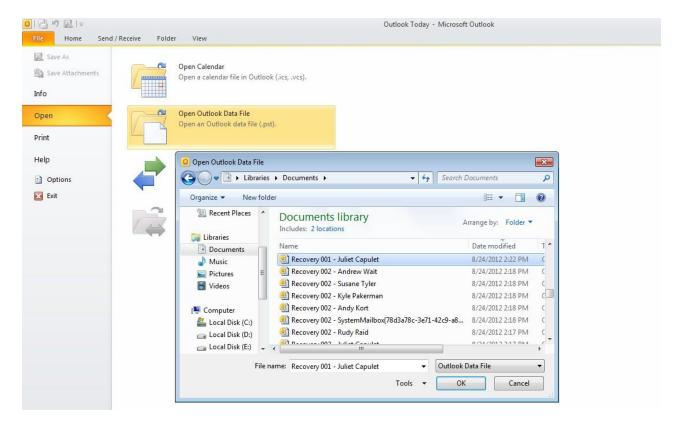
Recovery 001 - John Doe.pst Recovery 001 - John Doe - 001.pst Recovery 001 - John Doe - 002.pst Recovery 001 - Mary Smith.pst

With large exports, there can be more than one file on the output. Additional files are created automatically when the file size limit is hit. The size volume limit depends on the output file encoding. For ANSI PST files the limit is 1GB, for Unicode files it is 19GB.

# **Opening exported items in Outlook**

To view and manipulate exported items, use Microsoft Outlook to open the Personal Storage File (.pst) files exported by Granular Restore for Microsoft Exchange and SQL:

- 1. Start Outlook.
- 2 Click File and choose Open Outlook Data File.
- 3. Select exported pst file and click OK.



#### Note

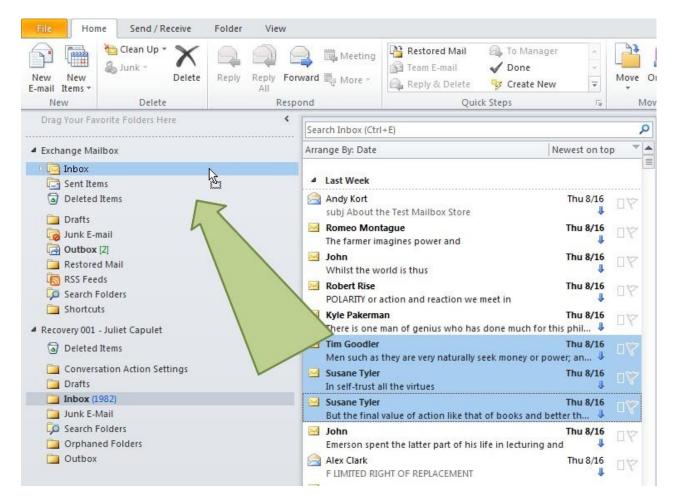
It is not recommended to move .pst files that are open in Outlook. Before moving, right - click the name of the Outlook Data File (.pst) and click Close .

### **Restoring exported items into Exchange Server**

Items extracted from a mail store can be easily restored into a live server:

- 1. Make sure you have Microsoft Outlook with access to the mailbox you want to restore items into.
- 2 Open .pst file with exported messages.
- 3. Open the mailbox you need to import data into.

4. Select the items and drag-and-drop them back into the original folders. They will be automatically synchronized with the live Exchange Server database.



# 6 Command-line interface

The command line feature allows you to easily process several databases. Usage: esr.exe <source> <destination>

Example: esr.exe "c:\Mailbox Database.edb" "c:\results\"

Below is a list of commands with their description that can be used in command line: There are s everal ways to set the source file(s):

Operation	Description	Example
<file mask="" path=""></file>	mask to path with files	esr.exe c:\*.edb c :\results\
/list= <path></path>	sets a path to file which contains a list withfiles to	esr.exe /list=d:\files_to_recover.txt
/list={file1, file2,, fileN}	sets enumeration of files to recover. Full pathto file must be	esr.exe/list={d:\1.edb, d:\2.edb} c:

Specify the destination directory for the recovered file(s):

Operation	Description	Example
<out dir=""></out>	path to output directory	esr.exe c:\*.edb c :\results\
Detailing parameters:		

Operation	Description	Example
/initdir= <path></path>	sets the initial directory for the Open database dialog	esr.exe /initdir="c:\EDB Mailboxes \"
-notfilterfaultymessages	shows messages that have been filtered due to their damage	esr.exe - not filter faulty messages
/redirect= <path></path>	redirects console output to text file	esr.exe c:\*.edb c :\results\ / redirect="c:\result.txt"
/cleartemp	if set - the product will remove all temp data on startup	esr.exe /cleartemp

# 6.1 Extended command-line interface

Extended command-line interface can help to automate various command-line operation.

Automation commands begin with /auto switch. To address individual items, such as mailboxes, folders and messages, their IDs are used. To obtain an object's ID, the 'lh' automation command is used.

Oper ation	Description	Example
/auto	Begins automation sequence. Parameters that follow will specify automation.	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto lh / items={FF55DD44-EE6788DD, BB3345F4-EE788922}
lh	Lists EDB objects (tab-separated: Id, Name, Parent Id). Also see /items and /r options. Note: mailbox(es) or folder(s) IDs must be used in /items parameter.	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto lh /items={FF55DD44-EE6788DD, BB3345F4- EE788922}
lm	Lists messages (tab-separated: Id, Subject). Also see /items and /r options. Note: folder(s) ids must be used in /items parameter	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto lm / items={FF55DD44-EE6788DD, BB3345F4- EE788922}
fd	Shows folder details (tab-separated: Id, Name, MessageCount, Class). Also see /items option. Note: folder(s) ids must be used in /items parameter	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto fd /items={FF55DD44-EE6788DD}
e	Extracts items. Also see /items and /rcs options. See /pstencoding to set PST encoding. See /outdir to set output folder. Note: mailbox(es), folder(s) or email(s) IDs must be used in /items parameter.	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto e / items={FF55DD44-EE6788DD}/outdir="C: \results\"
ea	Extracts attachments from message. Also see /items option. See /outdir to set output folder. Note: folder(s) or email(s) ids must be used in / items parameter	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto ea /items={FF55DD44-EE6788DD}/outdir="C: \results\"

Oper ation	Description	Example
pm	Does performance test (tab-separated output: Operation Elapsed time hh:mm:ss, Count). Sequence: 1. Opens EDB 2. Saves items. Use /itemscount to pass a number of items to save Use /items to pass a folder with items to save or an item list(or one item) to save. See /pstencoding to set PST encoding. See /outdir to set output folder. Note: if you pass an email id in /items parameter it will be saved "/itemscount" times.	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto pm / items={FF55DD44-EE6788DD}/ itemscount=3000 /outdir="C:\results\"
S	Searches for provided query string (see /query option). Output: same as in Im command. Use /items option to set a folder where to search. Otherwise, search will be performed on a whole database.	

Below there is list of options and their descriptions that can be used with command-line operations, described above.

Operation	Description	Example
• • •	calendar IDs etc.) in hexadecimal format Root	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto Ih /items={FF55DD44-EE6788DD, BB3345F4-EE788922}
/r	operation.	esr.exe "c:\EDB Mailboxes\priv1.edb" /auto lm /items={FF55DD44-EE6788DD, BB3345F4-EE788922}/r
/ itemscount= <c ount&gt;</c 		esr.exe "c:\EDB Mailboxes\priv1.edb" /auto ps /items={FF55DD44-EE6788DD}/ itemscount=5

### **Application Exit Codes**

Co de	Description
0	ОК
1	Some errors in parameters
2	No data to restore
3	Empty /item or / outdir parameter, operation did not start

# 7 Glossary

This glossary lists terms and their synonyms, most commonly used in Granular Restore for Microsoft Exchange and SQL help.

**AD** - Active Directory (AD) is a directory service implemented by Microsoft for Windows domain networks. An AD domain controller authenticates and authorizes all users and computers in a Windows domain type network. For additional information, please visit http://en.wikipedia.org/wiki/Active\_Directory.

**ANSI PST format -** An old PST-file format, used in Outlook 97-2002. ANSI format has a 2 GB limit in file size.

Deleted items - Items/folders deleted from a mailbox hierarchy.

Destination folder/mailbox - A folder/mailbox, selected for export.

**EDB** - An Exchange database format, used to store information from users' mailboxes. Synonyms: Exchange Server database, dataset.

**EWS** - Exchange Web Services. EWS provides the functionality to enable client applications to communicate with the Exchange server. EWS provides access to much of the same data that is made available through Microsoft Office Outlook.

**Exchange impersonation** - Exchange impersonation enables a caller to impersonate a given account so that the operations can be performed with the rights of the impersonated account, instead of the rights that are associated with the caller's account. Configuration information is available at http://msdn.microsoft.com/en-us/ library/office/bb204095(v=exchg.140).aspx

**Exchange Server** - A mail server, calendaring software and contact manager developed by Microsoft. **Export** - Copying information from an offline mailbox so it can be stored in a pst file or on the live Exchange Server.

GMT - Greenwich Mean Time (GMT) is considered as a reference point for time.

Host - Domain name of the machine with Client Access role of Exchange Server, or IP address.

**Injection** - The process of copying data from offline mailbox to live or original connected mailbox on the server. **Local time** - Local time is calculated by adding or subtracting a number of hours, depending on a time zone, to UTC.

**Live Exchange Server mailbox** - Destination Exchange server mailbox, that exists on the server and is available for connection. Synonym: attached mailbox.

**Mail Store** - A type of self-storage whereby customers send items by mail or delivery service (usually by the box) to be stored at a central location. Synonyms: mailbox, offline database, Outlook storage, database storage(depending on the conext).

**Original mailbox** - A mailbox in live Exchange Server that corresponds to the mailbox in the opened database.

**OST** - An Offline Storage Table (.ost) format. OST is used by Microsoft Exchange Server that enables users to work with their messages and mail data even when access to the mail server isn't available.

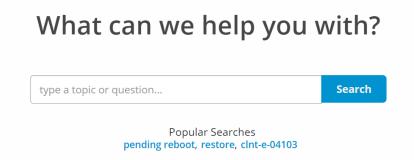
**PST** - A Personal Storage File (.pst) format, used to store copies of messages, calendar events, and other items. PST files are readable with Outlook or other compatible email client.

**Unicode PST format** - A PST-file format used in Outlook 2003, Outlook 2007, Outlook 2010 and Outlook 2013, so older versions of Outlook will not be able to open Unicode formatted PST files. Previous versions of Outlook were using ANSI format. The main reason for this change was to allow for international character support and to extend the maximum size of PST files beyond the 2GB limit of the ANSI formatted PST files. **UTC** - Coordinated Universal Time (UTC) is the primary time standard by which the world regulates clocks and time. Usually used with references to time zones.

# 8 EVault Customer Care

If you have a question about EVault that isn't covered in this guide, our frequently-updated Knowledge Base contains comprehensive information about EVault. The Knowledge Base is your first stop when searching for any EVault solutions you may need. We highly recommend searching here first for the quickest answers to your questions.

EVault Knowledge Base: http://support.carbonite.com/evault



# 8.1 Contacting EVault

If you need live assistance from a qualified support agent, EVault Customer Care is here for you 24 hours a day, 7 days a week (excluding US holidays). Please feel free to get in touch with us, and we'll help out any way we can! You can find the contact information for EVault Customer Care in the EVault Knowledge Base: <a href="http://support.carbonite.com/evault">http://support.carbonite.com/evault</a>



**Tip**: When contacting EVault Customer Care with a technical issue, please have both the program's log files and the store you are having difficulty with ready.

To gather log files, click **File** menu and choose *Open log folder*. Compress the contents of the folder in a .zip file and attach it to your support request.

If the log archive and/or mail store exceeds 10MB, you may not be able to send them as an email attachment. In that case, upload instructions will be provided to you upon request.