

Access Rights Management. Only much Smarter.

Access Rights Management 8MATE for Exchange Manual

Version 9

© 2018 Protected Networks GmbH



1	8MATI	E for Exchange	. 4
2	Systen	n requirements	. 5
2.1	The 8N	IAN architecture	5
2.2	Exchan	ge requirements	6
2.3	8MAN	service account permissions	7
3	Load t	he license file and check covered features	. 9
4	Exchar	nge Scans	11
4.1	Prepare	e Exchange scans	11
	4.1.1	Prepare the PowerShell website	. 12
	4.1.2	Set up required permissions	. 14
	4.1.3	Exchange Web Services - Impersonation	. 15
	4.1.3.1	Identify connection problems	. 16
	4.1.4	Test the Exchange PowerShell connection	. 17
4.2	Configu	ure Exchange scans	18
	4.2.1	Add an Exchange scan	. 19
	4.2.2	Customize an Exchange scan configuration	. 20
	4.2.3	Assign resources to a domain	. 24
4.3	Advanc	ed Exchange scan settings in the configuration files	25
	4.3.1	Change the attribute for the creation of mailbox categories	. 25
	4.3.2	Change rule for shortened naming conventions of mailbox categories	. 26
	4.3.3	Prevent the creation of mailbox categories	. 27
	4.3.4	Adjust the throttling factor	. 28
5	Exchar	nge change configuration	29
5.1	Create	an Exchange change configuration	30
5.2	Custon	nize an Exchange change configuration	31
5.3	Delete	an Exchange change configuration	33
6	Using	the 8MATE for Exchange	34
6.1	Permis	sion Analysis	34
	6.1.1	Identify access rights on mailboxes	. 34
	6.1.2	Identify mailbox properties	. 35
	6.1.3	Identify access rights to calendars	. 36
	6.1.4	Identify access rights on mailbox folders	. 37
	6.1.5	Identify access rights on public folders	. 38
	6.1.6	Display distribution group properties	. 39
	6.1.7	Identify members of distribution groups	. 40
	6.1.8	Identify distribution group permissions	. 42

	6.1.9	Analyze historical access rights situations
6.2	Docum	entation & Reporting
	6.2.1	Who has access to what? 45
	6.2.2	Identify mailbox permissions
6.3	User Pr	rovisioning
	6.3.1	Create a mailbox (e-mail enable users)
	6.3.2	Change mailbox permissions
	6.3.3	Manage out of office notices
	6.3.4	Manage mailbox and e-mail size
	6.3.5	Manage e-mail addresses
	6.3.6	Manage distribution group memberships
	6.3.7	Manage distribution group permissions
	6.3.8	Change the moderation of distribution groups
	6.3.9	Change the manager of distribution groups
	6.3.10	Create and delete contacts
7	Contac	cting 8MAN support
8	Disclai	mer
9	Softwa	are license acknowledgments70

1 8MATE for Exchange

8MATE for Exchange expands 8MAN to include Exchange resources. This way the analysis and administration of access rights are standardized across various resources and systems. 8MAN shows you an overview, where you can see access rights to folders, email accounts, email folders or calendars on one easy to read screen.

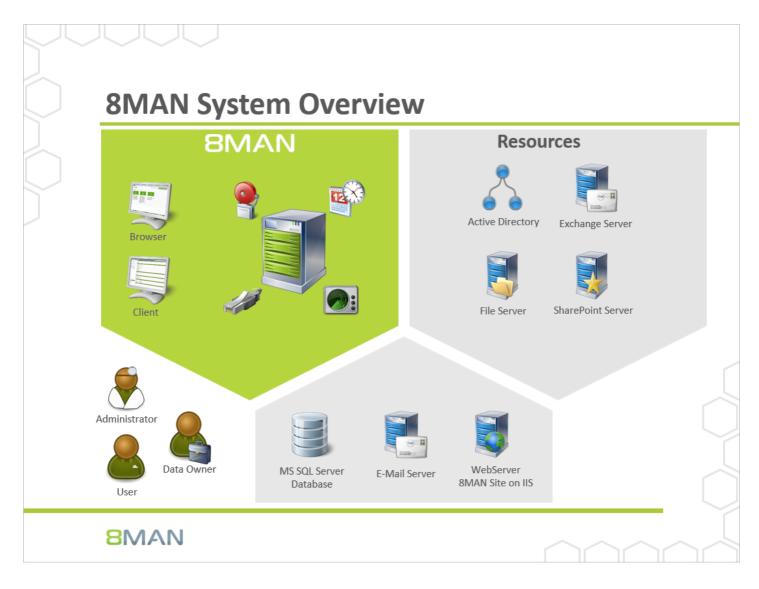
The administration of exchange is closely connected to the onboarding process. The creation of Email Inboxes and the assignment of access rights happens directly in 8MAN. All changes are documented in revision proof reports.

Besides analysis and administration of access rights for Exchange, 8MATE for Exchange contains additional features:

- Generation of out-of-office messages without having access to the Emailaccount
- Listing of substitutes and deputies for Inboxes and "send as" access rights
- Administration of Account size and storage
- Management of mailing lists incl. members, managers and moderators
- Management of contacts
- Management of Mailboxes
- Making changes to Email addresses

2 System requirements

2.1 The 8MAN architecture



The 8MAN Suite is comprised of three components:

- 8MAN server to process new data and requests from the 8MAN GUI
- Collectors to connect your resource and data systems
- 8MAN graphical user interface (application and configuration module, web interface)

The 8MAN component architecture allows you to run installations across a variety of remote resources in an extremely efficient manner. All individual components are connected with each other via network interfaces. You can even run several components on the same computer.

2.2 Exchange requirements

Das 8MATE for Exchange supports the following Exchange versions:

- Exchange Server 2010, 2013, 2016
- Exchange Online

Exchange 2016 Cumulative Update 2 is needed to modify out of office notices.

If you are using a hybrid variation, please contact <u>support</u>.

2.3 8MAN service account permissions

We recommend using service accounts (dedicated user accounts for 8MAN). This ensures that:

- the access rights of the service accounts are used by 8MAN, for example Active Directory read only without change rights
- it is easy to identify whether an action was performed by 8MAN or by a domain admin
- if the domain admin changes his password, the 8MAN configuration is not affected
- Avoid restrictions through activity limits (for example, Exchange Online allows only three parallel requests).

This approach allows for more detailed concepts by using several service accounts. In general, the more service accounts, the better you can fine tune and keep track of access rights. Please note that more detailed concepts generally also require more administrative efforts. The most basic concept only required one service account whom all required access rights are assigned to.

For 8MAN service accounts, please be sure to activate the option "Password never expires".

Feature	required access rights
8MAN server	The service account requires local administrator rights on the 8MAN server. Is the service account is a member of the domain Admin group, then this requirement is automatically fulfilled. If a server computer becomes a member of the domain (domain join) then the group Domain Admins will become a member of the local administrator group.
SQL Server	The 8MAN setup requires the role "dbcreator" on the SQL server. If you create a data base before, then 8MAN requires the role "dbowner". You can work with either Windows or SQL-server authorization.
Active Directory (AD)-Scan	Every user account requires at least read-only rights in order to be able to generate an AD scan. If you utilize delegation in your organization, then you must add the service account to a group that can read the required OUs.
AD Modify (8MAN Enterprise)	If you work with delegation in your company, you must assign the service account to a group that is allowed to change the relevant OUs. Without delegation: The service account becomes a member of the Domain admin group.
File Server (FS)-Scan	The user account requires access rights in order to be able to read NTFS permissions as well as traverse folder so that it can access the required folders. The service account can become a member of the domain admin group. If the domain admin account does not have access to all folders (for example user folders) then add the service account to the backup operators on the file server.

Feature	required access rights
AD Logga	The service account must be a member of the group "event log reader". Members of the domain admin group also have the required access rights to be able to read event protocols.
FS Logga	No service account is required for the FS-Logga functionality. The "NT Authority system" must have access to the monitored directories. You can find more information regarding required settings in the FS Logga handbook.
8MATE Exchange	To read exchange access rights please add the service account to the group "View-Only Organization Management". To be able to change access rights on the Exchange server please add the service account to the group "Organization Management" (read only rights are included). The service account requires admin rights on the collector server. Further access settings (impersonation, own mailbox) may be required and are contained in the section " <u>Exchange Scans</u> ".
8MATE SharePoint	The service account must be a member of the group "local adminstrator" of the SharePoint server. The service account must be a member of the SharePoint farm administrator group. The service account requires the special access right "SharePoint_Shell_Access" and must be a member of the local group "WSS_Admin_WPG". The service account requires "full access" to run the web interface. Further access settings are required (Authorization of the SharePoint data base, which is further described in the SharePoint handbook.
8MATE SharePoint (site collection)	The required permissions are described in chapter Accounts for a SharePoint scan via Remote Connector.
8MATE Exchange Logga	The logon account must be a member of the Organization Management and Records Management roles on the selected Exchange Server.

3 Load the license file and check covered features

License Information	Server Status	
	Uptime: 2 hours Version: 9.0.183.0	
	Logged in users: 1	
	Name Domain Host 8MAN Component	
No license available!		
Technologies		
Alerts		
Max. Logbook entry age in days		

8	Pleas	se choose a license fi	ile			X				
🛞 🕘 🔻 🕇 📕 « L	🔄 💿 👻 🕆 🕌 « Local Disk (C:) > ProgramData > protected-networks.com > 8MAN > licenses 🗸 🖒 Search licenses 🔎									
Organize 👻 New fold										
☆ Favorites	Name	Date modified	Туре	Size						
Desktop	8Man_20161117125549.license	11/17/2016 1:55 PM	LICENSE File	81	(B					
Downloads										
This PC Desktop Documents Downloads Music Pictures Videos Local Disk (C:) FS (E:)										
File <u>r</u>	name: 8Man_20161117125549.license			*	License files (*.license)	~				
					<u>O</u> pen Cance	el				

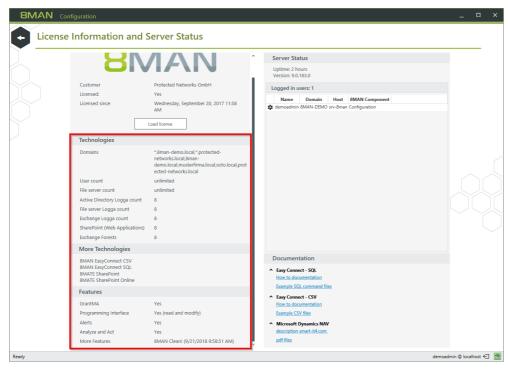
Select the path where your license key is stored.

8MAN license files have the file extension ".license".

After clicking on open, the license key will be copied to

%ProgramData%protectednetworks.com\8MAN\licenses

All licensed features are activated immediately.



 If the license file has been successfully loaded you will see detailed information on licensed features.



4 Exchange Scans

8MATE for Exchange allows you to integrate Exchange into the 8MAN Access Rights Management system as a resource.

8MATE for Exchange requires the appropriate license. You can find more information on how to verify your license status and load a new license in the following chapter: "Loading the Product License"

All system requirements must be adhered to. Please reference the following chapter: "Exchange Requirements".

An overview of the required permissions can be found in the following chapter: "<u>Service Account Permissions</u>". There are some more settings required as described on the following pages.

4.1 Prepare Exchange scans

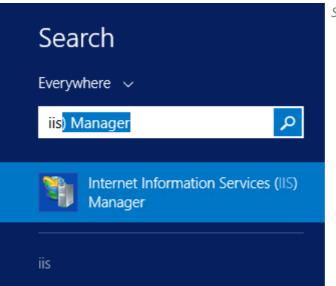
8MATE reads information from the Exchange server via a remote PowerShell connection.

An Exchange scan can be performed by any collector. The connection is established using a client access server or a DAG (database availability group).

4.1.1 Prepare the PowerShell website

The steps described in this chapter are not required for Exchange Online.

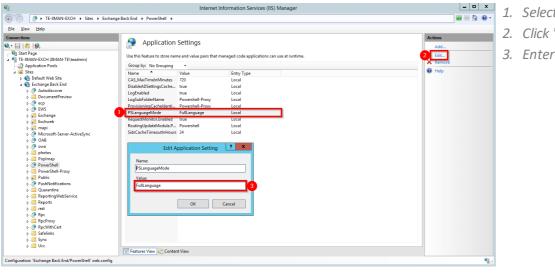
The Exchange Client Access Server (CAS) hosts a site within the IIS, that allows users to access the Exchange Server. It is called "Default Web Site" (2010) or "Exchange Back End" (2013 and higher) and includes the sub-site "PowerShell". This must be configured to allow 8MATE Exchange access.



Start the IIS Manager on the CAS.

E TE-8MAN-EXCH > Sites > Excl	hange Back End 🔸 PowerShell	•							🖬 🖾 🟠 🕷
Eile ⊻iew <u>H</u> elp									
Connections Con	Filter ASP.NET	.NET Compilation	Show All Group b	y: Area .NET Globalization Machine Key	• II • .NET Profile Pages and Controls	.NET Roles	NET Trust Levels		Actions Characterial Content of
 ⇒ Ectiveb ⇒ Microsoft-Server-ActiveSync ⇒ ⊕ Active Biological biologic	SMTP E-meil IIS Authentication	2 Compression	Default Document	Directory Browsing	Error Pages	Failed Request Tracing Rules	Handler Mappings	= ^	W Help
> Queractina > Reports > Sections > Sync > Sec	HTTP Redirect	HTTP Response Headers	Logging	MIME Types	Modules	Output Caching	eeuest Filtering	* *	
	Features View 💦 C	ontent View							
sady									

Navigate to "Powershell". In Exchange 2010 this can be found under "Default Web Site". In Exchange 2013 it is found under "Exchange Back End". Double-click "Application Settings".



1.	Select	"PS	LanguageMode
----	--------	-----	--------------

- 2. Click "Edit"
- 3. Enter the value "FullLanguage".

le ⊻iew <u>H</u> elp				
nnections • 🔜 🖄 😪	Authentication]		Actions Help
💱 Start Page 髶 TE-8MAN-EXCH (8MAN-TE\teadmin)	Group by: No Grouping •			
Application Pools	Name	Status	Response Type	
4 - Sites	Anonymous Authentication	Disabled		
Default Web Site	ASP.NET Impersonation	Disabled		
A 🗑 Exchange Back End	Basic Authentication	Enabled	HTTP 401 Challenge	
> 🕀 Autodiscover	Digest Authentication	Disabled	HTTP 401 Challenge	
DocumentPreview	Forms Authentication	Disabled	HTTP 302 Login/Redirect	
þ 💮 ecp	Windows Authentication	Enabled	HTTP 401 Challenge	
EWS				
5 🐖 Exchange				
Exchweb				
þ 😥 mapi				
Microsoft-Server-ActiveSync				
DAB				
Þ- 🔮 owa				
p in photos				
Popimap PowerShell				
PowerShell-Proxy				
Powersneit-Proxy Powersneit-Proxy Powersneit-Proxy				
P				
Quarantine				
ReportingWebService				
Reports				
p - iii rest				
þ 💮 Rpc				
RpcProxy				
P RpcWithCert				
b - Safelinks				
þ 🛅 Sync				
þ - 🔛 Ucc				

ctivate the desired authentication nethod. You must later select the ame authentication method in the Exchange scan configuration that ou activate here.

More useful information on uthentication can be found at Microsoft.

Alternatively you can activate the authentication with PowerShell. For example: Activate Windows-authentication (Kerberos)

Get-PowerShellVirtualDirectory | Set-PowerShellVirtualDirectory -WindowsAuthentication \$true



You must restart the IIS in order to apply any changes.

For example in the command line or PowerShell:

iisreset

4.1.2 Set up required permissions

The service account that is used to scan Exchange requires the following access rights:

- 1. Membership in the Exchange security group "View-Only Organization Management"
- 2. Read permissions in Active Directory (During the scan distinguished names are resolved and access rights are partially read from the mailbox user)
- 3. Impersonation rights to recall deputy rules, mailbox folders. Please see the following chapter: "<u>Exchange Web</u> <u>Service – Impersonation</u>"
- 4. Its own mailbox to scan public folders

The service account that you want to use to modify Exchange requires additional different rights:

Membership in the Exchange security group "Organization Management"

Please note that deny rights applied to mailbox content may hinder successful scans.

For Exchange Online, create a user (with an email address) that is "Global Administrator" on the server and does not need to be licensed. Add the user to the group "View-Only Organization Management" for read only access, "Organization Management" for modify access.

4.1.3 Exchange Web Services - Impersonation

PowerShell allows you to recall administrative information, such as the structure and permissions of objects, from Exchange, via mailboxes and public folders. The Exchange Web Service allows you to access their content.

Substitution rules can currently only be recalled from the Exchange Web Service.



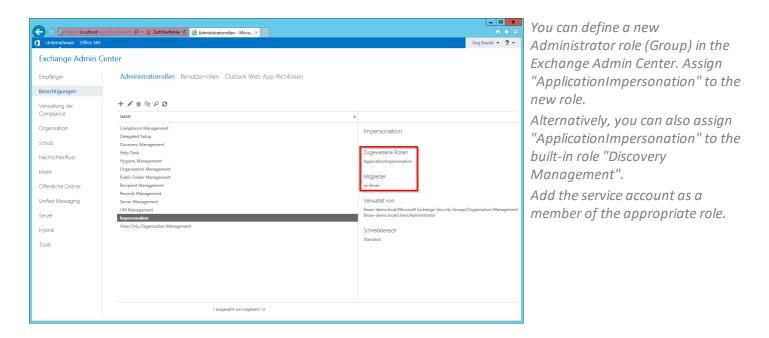
Access to the Exchange Web Service always happen in context with the mailbox user. This requires that the scan account (service account) has the right to impersonate.

Please note that impersonation only works on *active* Active Directory accounts.

Examples for the configuration of impersonations via Power Shell can be found here:

Exchange 2010 (en): <u>https://msdn.microsoft.com/en-us/library/office/bb204095(v=exchg.140).aspx</u> Exchange 2013, online und Office 365 (de): <u>https://msdn.microsoft.com/de-</u> <u>de/library/office/dn722376(v=exchg.150).aspx</u>

Alternatively to the process described by Microsoft you can use the GUI of the Exchange Admin Center:



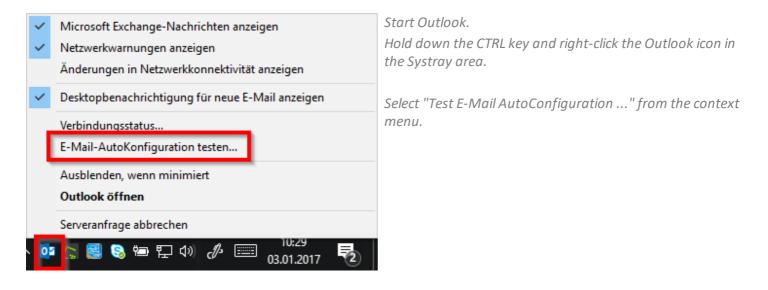
Summary: The scan account must be assigned a management role, including the explicit impersonation right.

4.1.3.1 Identify connection problems

The following solutions can help with connection problems:

- 1. A firewall prevents the Autodiscovery function from being used
- Check for discarded packets in the firewall.
- 2. The responsible CAS is not available

Test the email autoconfiguration with Outlook.



4.1.4 Test the Exchange PowerShell connection

Please use the following process to rest the connection to PowerShell:

1. Start a power shell console with the credentials that are also used for the remote session. (STRG+SHIFT+right-click on the PowerShell-Icon -> "Run as different user")

2. Create a credential object.

\$cred = get-credential

3. Create a SessionOption Objekt (Turn off all checks for the test).

\$so = New-PSSessionOption -SkipCACheck -SkipCNCheck -SkipRevocationCheck

3. Create a session. Adjust the URI, Authentication (authentication mechanism) and encryption http(s).

\$session = New-PSSession -configurationname Microsoft.Exchange -connectionURI https://srvex01/PowerShell/ -Credential \$cred -SessionOption \$so -Authentication Default

4. Starting the session. You can execute cmdlets (which ones, depends on their rights).

Enter-PSSession \$session

4.2 Configure Exchange scans

BMAN Configuration	Version:				_	Select "scans" from the home page of the configuration module.
	Server Status License Information		Jobs Summary	Colle Configu		of the configuration module.
	Logged in users: 2			1 Connected 1 Configured in Total		
	Licensed	6 Scheduled		All Collectors are Operational		
	🔾 Filter				12	
	Resource Configurations, Logga, File Server (SV Import	Open Order Descriptions	User Managemen User Management Management	le Organizational Categories, Data Owners, Resources, Additional Group Wizard Settings Alerts Configuration		
	Status Change Configuration Common Change Settings Vives	Status, Job Categories	BMAN Collectors Overview Configuration Server GrantMA, Comments, En Storage of Scomments, En	Basic configuration		
Ready	econology-specific Change Configurations	news or neports	Check, Server Logging		demoadmin © localhost 🗲 🊈	



4.2.1 Add an Exchange scan

8MAN Configuration Ve	rsion:			×	Select "Exchange".
Back File server CSV imp	ort			0	
 Select a technology below to add a 	new resource configuration				
Active Directory Resource	Exchange Exchange Resource	File server File Server Resource	Local Accounts Local Accounts of a server	Logga - Active Directory Monitoring an Active Directory	
Monitoring a File Server	SharePoint ☆ Sharepoint Resource (Farm Based)	VSphere VMware vSphere Resource]		
A Filter				7	-
🖧 🕨 🕘 8man.	-demo.local			×	
Permissions will not be scanne In case of errors, i.e. if the serv	er is not available due to maintenance, se	count <u>8man-demo\sa-8man</u> on <u>SRV-8MA</u> cans will be retried <u>3 times</u> . The delay betw			
additional group prefix (8GP)	ne Organizational Unit (OU) <u>not set</u> and g not set. (<u>« Less</u>)		OU for users is <u>not set</u> . 8MAN Groups will		
U resources are associated	d with this domain. Add resource configu	uration *		· · · · · · · · · · · · · · · · · · ·	
Ready				dempadmin @ localhost 🕤 🌁	
Ready				demoadmin @ localhost 🛀 🔤	

8MAN Configuration Version:	H2H4	×
 Select a technology below to add a new r 		
	Exchange selection ×	Monitoring an Active Directory
Monitoring a File Server	Please select a resource. You can change the credentials and refresh the list when the given credentials are insufficient to find all resources.	
A Filter	Credentials <u>8man-demo\sa-8man</u>	7
& b 0	A filter or type IP or Name 1 🐞	^ ×
Bman-demo.	local 0 Name 2 OMicrosoft Exchange Online	
The domain <u>8man-demo.local</u> will be 0 resources are associated with the	e scanne	
o resources are associated with	mis dom	
The file server SRV-8MAN of type Wir		×
Refresh data all 10 minutes.Monitored	d actions	
3 reports are configured. Add: Who	dio wha	
OFF 8man-demo.local (8		×
The domain 8man-demo.local is mon <u>Following filters</u> have been set. Loggi Refresh data all (1) minutes.		
		×
SRV-8MAN (Assigned collectors	
The SharePoint <u>SRV-8MAN</u> will be so	anned C SRV-8MAN	
SRV-EXCHAN		×
The Exchange <u>SRV-EXCHANGE.8man</u>		
The Exchange SKV-EXCHANGE.onan		
🛃 🕨 🕅 8man-demo.	com	×
Ready		demoadmin @ localhost 🗲 🌁

- 1. Enter the account information for the account that should be used to execute the Exchange scan. The credentials from the basic configuration will be suggested automatically.
- 2. Select the Exchange Server. All DAGs* or servers that are contained in the current Active Directory site will be listed. Enter the desired server into the search field (this is possible even when it is not listed).
- 3. Assign a collector.

Special considerations for Exchange Online:

- 1. The credentials displayed here are not relevant for Exchange Online. They must be adjusted later in the <u>Scan configuration</u>.
- 2. Exchange Online is always shown.
- 3. For Exchange Online the collector requires internet access.

* 8MAN can connect to DAG servers (Database Availability Groups) and execute scans on them. You are able to select the DAG server directly in the scan configuration. Please note that you have to adjust the settings described in the chapter "<u>Preparing the PowerShell Website</u>" on every involved DAG Exchange server. The decision, which server the collector establishes a connection with is made by the DAG during the initial connection build up. This means that successive scans may take place on different servers.

Since IP less DAGs (from Exchange 2016 Default Setting, optional in Exchange 2013) do not have an Administrative Access Point (AAP), the Exchange server cannot be managed via this DAG. In this case, specify an Exchange server directly or use the load balancing namespace.

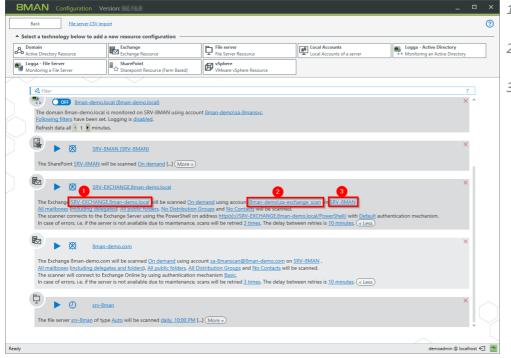


4.2.2 Customize an Exchange scan configuration

Active Directory Resource	Exchange Exchange Resource	File server File Server Resource	Local Accounts	Logga - Active Directory	ory
Logga - File Server Monitoring a File Server	SharePoint				
~~~~					
A Filter	.local (8man-demo.local)				7
	al is monitored on SRV-8MAN using	account <u>8man-demo\sa-8mansvc</u> .			
The domain 8man-demo.loc Following filters have been s Refresh data all 4 1 • mini					
Following filters have been s Refresh data all 1 mini	ites.				×
Following filters have been s Refresh data all 1 minin	-8MAN (SRV-8MAN)				×
Following filters have been s Refresh data all 1 minin	ites.	<u>re »)</u>			×
Following filters have been s Refresh data all (1) minu The SharePoint <u>SRV-BMAN</u> 2	utes. - <u>8MAN (SRV-8MAN)</u> will be scanned <u>On demand</u> [] ( <u>Mo</u>	ne )			×
Collowing filters have been s Refresh data all (1) mini	ARE STANDARD	re ) I On demand using account 8man-demo ution Groups and No Contracts will be on address http://JSN-IXCHANCE ance. scans will be retried <u>3 times</u> . The de	nned. man-demo.local/PowerShell/ with <u>Defau</u>		×
Following filters have been s Refresh data all (1) mini	ARE STANDARD	I On demand using account 8man-demo ution Groups and No Contacts will be sc ell on address http:///SRV-EXCHANGE.	nned. man-demo.local/PowerShell/ with <u>Defau</u>		×
Following fitters have been s Refresh data all (1) mini Refresh data a	Ites: -SMAN (SRV-BMAN) will be scanned <u>On demand</u> [] ( <u>Mo</u> <b>S</b> -DXCHANGE Bman-demolocal GE Bman-demolocal will be scanned gates). All public folders. No Tothic Exchange Server using the PowerSh rever is not available due to mainten: In-demo.com com will be scanned <u>On demand</u> usir gates and folders). All public folders Exchange Onite yusing authentic	I On demand using account 8man-demo ution Groups and No Contracts will be enders will be retried 3 times. The de access and will be retried 3 times. The de account sa-8manscan@8man-demo.c All Distribution Groups and No Contac	nned. man-demo (cal/PowerShell/ with <u>Defau</u> ay between retries is <u>10 minutes</u> . ( <u>Less</u> <u>m</u> on <u>SRV-8MAN</u> . will be scanned.	)	××××
Collowing filters have been s Refresh data all (1) mini Construction of the second Construction of the second C	Ites: -SMAN (SRV-BMAN) will be scanned <u>On demand</u> [] ( <u>Mo</u> <b>S</b> -DXCHANGE Bman-demolocal GE Bman-demolocal will be scanned gates). All public folders. No Tothic Exchange Server using the PowerSh rever is not available due to mainten: In-demo.com com will be scanned <u>On demand</u> usir gates and folders). All public folders Exchange Onite yusing authentic	I On demand using account 8man-demo uton Groups and Nr Contacts will be so ell on address http://SRV-EXCHANGE. ance, scans will be retried 3 times. The de so account sa-8manscan@8man-demo.c A III Distribution Groups and No Contact tion mechanism Baie.	nned. man-demo (cal/PowerShell/ with <u>Defau</u> ay between retries is <u>10 minutes</u> . ( <u>Less</u> <u>m</u> on <u>SRV-8MAN</u> . will be scanned.	)	××××

- 1. You can start an Exchange Scan in the configuration menu. The typical scan speed is around 10 elements per second. You can interrupt a running scan.
- 2. Schedule regular scans.
- 3. Change the name of the configuration.

Arrows: The symbol allows you to quickly identify an Exchange scan configuration.



- 1. Change the Exchange Server that you want to scan.
- 2. Change the credentials that are used to execute the scan.
- 3. Switch the collector server. Please note that the collector server requires internet access when using Exchange Online.

Select a technology below to add	a new resource configuration				
Domain Active Directory Resource	Exchange Resource	File server File Server Resource	Local Accounts	Logga - Active Directory Monitoring an Active Directory	
Logga - File Server Monitoring a File Server	SharePoint	VSphere VMware vSphere Resource			
A Filter	.local (8man-demo.local)			7	
The domain 8man-demo.loca Following filters have been se	I is monitored on SRV-8MAN using acco et. Logging is <u>disabled</u> .	ount <u>8man-demo\sa-8mansvc</u> .			
Refresh data all 🔨 1 🕨 minu	ites.				
	tes. <u>BMAN (SRV-BMAN)</u> will be scanned <u>On demand</u> [] ( <u>More »</u>	)		×	
The SharePoint SRV-BMAN v	SMAN (SRV-SMAN) will be scanned <u>On demand [] (More »</u> EXCHANGE Bman-demolocal GEBm an-demolocal will be scanned On	demand using account &man-demo		×	
The SharePoint SRV-EXCHANG	SMAN (SRV-SMAN) will be scanned <u>On demand [] (More »</u> EXCHANGE&man-demo.local GE&m pudami.local will be scanned On gates <u>All public folders</u> <u>Un Darkholoc</u> Exchange Server using the Powersheld	demand using account Aman-demo n.Groups and No Contacts will be soc in address https://SRV-EXCHANGE.			
The SharePoint SRV-SRVAN W The SharePoint SRV-SRVAN W The SharePoint SRV-SRV-SRVAN The Exchange SRV-SRV-EXCHANK All mailboxes including dele The Scance Connects to the In case of errors, i.e. if the ser	SMAN (SRV-SMAN) will be scanned <u>On demand [] (More »</u> EXCHANGE&man-demo.local GE&m pudami.local will be scanned On gates <u>All public folders</u> <u>Un Darkholoc</u> Exchange Server using the Powersheld	demand using account Aman-demo n.Groups and No Contacts will be soc in address https://SRV-EXCHANGE.	nned. Iman-demo.local/PowerShell/ with Default		
Konstant State Stat	BMAN (SRV-SMAN) will be scanned <u>On demand</u> [-] ( <u>More</u> - <u>EXCHANGE.Bman-demolocal</u> SERm tadem lacat will be scanned <u>On</u> <u>Bartes</u> <u>All public folders</u> <u>In</u> <u>Distributo</u> Exchange server using the Powershell river is not available due to maintenance <u>n-demo.com</u> om will be scanned <u>On demand</u> using a <u>gates and folder</u> ). <u>All public folders</u> <u>All</u>	demand using account forain demo finance in the context will be ac andress integrative exceeded account satemanscan@@man.demo.c Distribution Groups and Nac Contact mechanim Basis.	nned. iman-demo Local/PowerShell/ with <u>Default</u> ay between retries is <u>10 minutes</u> . ( <u>&lt; Less</u> ) am on <u>SRV-BMAN</u> .	×	

efine the range of the scan ne links lead to the following alog...

Exchange scan options		×
<ul> <li>Scan mailboxes</li> <li></li></ul>	Mailbox Type       Room mailbox       Equipment mailbox	
<ul> <li>✓ ∞ ▶ ∞ Number of public directories</li> <li>→ Scan distribution groups</li> <li>✓ ∞ ▶ ∞ Number of distribution groups</li> </ul>	<ul> <li>Legacy mailbox</li> <li>Linked mailbox</li> <li>User mailbox</li> <li>Shared mailbox</li> <li>Discovery mailbox (2010 or higher)</li> </ul>	
Scan contacts	Apply Discard	

If you select only a subset of folders for readable public folders, then no statistical data will be available.

Administrative permissions to public folders are not available (since Exchange 2013).

A filter is applied to the mailbox property "RecipientTypeDetails", to select the mailbox type.

8MAN Configuration Ve	rsion:			_ □	ı ×
Back File server CSV imp	ort				0
<ul> <li>Select a technology below to add a</li> </ul>	Select a technology below to add a new resource configuration				
Active Directory Resource	Exchange Exchange Resource	File server File Server Resource	Local Accounts Local Accounts of a server	Logga - Active Directory Monitoring an Active Directory	
Monitoring a File Server					
A Filter				7	
🛃 🕨 🔊 SRV-E	VCHANGE 8man-demo.local			×	
The Exchange SRV-EXCHANGE All mailboxes (including deleg The scanner connects to the E	SRV-EXCHANGE.8man-demo.local      The Exchange SRV-EXCHANGE.8man-demo.local will be scanned.     All mailboxe (including delegates and folders). Will be public folders No. Distribution Groups and No. Contacts will be scanned.     The scanner connects to the Exchange Serve using the PowerShell on address <u>https://SRV-EXCHANGE.8man-demo.local/PowerShell</u> / with <u>Default</u> authentication mechanism.     In case of errors, i.e. if the server is not available due to maintenance, scans will be retried 3.times. The delay between retries is <u>10 minutes</u> , ( <u>etes</u> )				
🔁 🕨 🕅 8man-	-demo.com			×	
The Exchange &man-demo.com will be scanned <u>On demand using account sa-&amp;manscan@&amp;man-demo.com</u> on <u>SRV-BMAN</u> . <u>All mailboxes (including delegates and folders). All public folders. All Distribution Groups and No Contacts will be scanned.</u> The scanner will connect to Exchange Online by using authentication mechanism <u>Basic</u> . In case of errors, i.e. if the server is not available due to maintenance. scans will be retried <u>3 times</u> . The delay between retries is <u>10 minutes</u> ( <u>e Less</u> )				$\bigcirc$	
				v	
Ready				demoadmin @ localhos	+
				canodanin @ locanos	

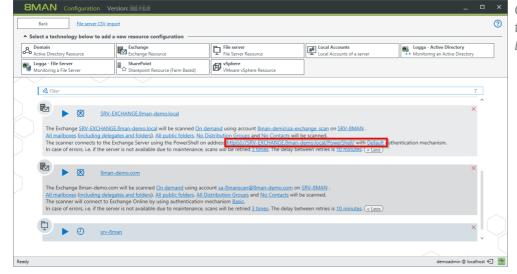
You can determine if substitution rules and mailbox folders are read. Please note that "<u>Exchange Web</u> Services - Impersonation" is used.

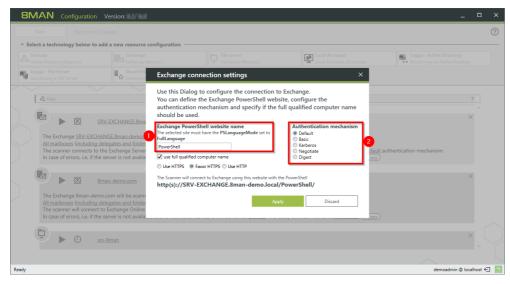


Determine the range in which mailbox details are read with Exchange Web Service (EWS).

The selection of mailbox type is independent for scans with PowerShell and EWS. This means that you can determine which <u>mailbox types are scanned</u> and for which mailbox types the mailbox folders are scanned.

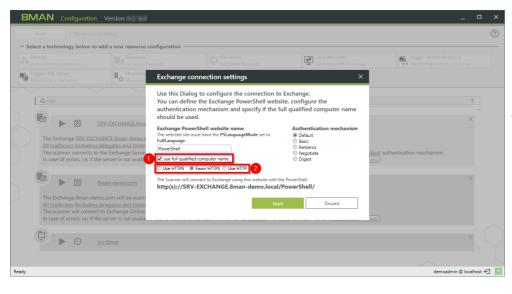
*Click one of the links to configure the connections settings for the Exchange scan.* 





The following settings must match those of the IIS-website. These are described in the chapter "<u>Preparation of the PowerShell</u> <u>website</u>".

- 1. Enter the name of the Exchange PowerShell website. In standard settings this is "PowerShell".
- 2. Select an authentication mechanism. For Exchange Online select "Basic".



- In some cases the client access server is not reachable via the fully qualified computer name. In this scenario, deactivate this option. Please note the preview.
- 2. Select if an encrypted connection should be used. This setting must match those of the PowerShell website.



#### 4.2.3 Assign resources to a domain

You can assign a file server, Exchange or SharePoint scan to a domain. Use drag & drop in order to make this assignment, or to remove it.

BMAN Configuration Back File server CSV				_ 0	× ⑦
Select a technology below to ad     Domain     Active Directory Resource     Logga - File Server     Monitoring a File Server	dd a new resource configuration Exchange Exchange Resource Exchange Resource Exchange Resource Configuration Configuratio Configuratio Configuratio Configuratio Configuratio Configurat	File server File Server Resource VMware vSphere Resource	Local Accounts	Logga - Active Directory     Monitoring an Active Directory	
	Eman-demo.local ocal will be scanned <u>daily, 10:00 PM [] (Mor</u> d with this domain. Add resource configura			8 ×	
The following shar The depth of the f In case of errors, i.	sov-8man -8man of type Auto will be scanned daily. 103 res will be scanned during the scheduled scan file server scan will be unlimited; from a dept a.e if the server is not available due to maintee count and the list right management have m	ns: Organization, Projects, Templates, Use h of § and on only different rights will be nance, scans will be retried <u>3 times</u> . The d	rs. reported. elay between retries is <u>10 minutes</u> .	×	
Ready		,		demoadmin © localhost •	€ 🛃

8MAN will only show any added resources in the 8MAN GUI, if the appropriate domain has been selected.

8MAN Configuration Ve	rsion:			_ 🗆 ×
Back File server CSV imp	ort			0
<ul> <li>Select a technology below to add a</li> </ul>	new resource configuration			
Active Directory Resource	Exchange Exchange Resource	File server File Server Resource	Local Accounts	Logga - Active Directory     Monitoring an Active Directory
Monitoring a File Server	SharePoint	VSphere VMware vSphere Resource	]	
🖉 demo				4 of 6 🗙
	<u>-demo.local</u> will be scanned <u>daily. 10:00 PM</u> [] ( <u>Mor</u>	<u>e</u> »)		×
0 resources are associated	d with this domain. Add resource configu	ration *		
	XCHANGE.8man-demo.local	mand [] (More »)		×
	the seamed <u>of sea</u>	the the the the		
	- <u>demo.com</u> m will be scanned <u>On demand</u> [] ( <u>More</u>	•		×
🕨 🕨 🛛 demo	🗘 🕨 demo (srv-8man) 🗙			
The file server srv-8man of typ	pe Auto will be scanned daily, 10:00 PM [	] (More »)		
Ready				demoadmin © localhost 🗲 🍯

Resources that have not been assigned are always shown by 8MAN GUI, regardless of which domain is selected by the user.

## 4.3 Advanced Exchange scan settings in the configuration files

Some settings can not be made in the graphical configuration interface. Advanced settings must be adjusted in the configuration files.

The settings are only effective after a new scan.

#### 4.3.1 Change the attribute for the creation of mailbox categories

By default 8MAN sorts mailboxes into categories, upwards of 1000 mailboxes, according to the Active Directory property "sn".

The selected property can be be changed to any desired text attribute from Active Directory, via the configuration file.

*Configuration file:* pnJob.config.xml

*Computer:* Collector server which is configured for the Exchange Scan.

Path:

%ProgramData%\protected-networks.com\8MAN\cfg

If the file is not available, copy the "template" from the following path, delete the content and enter the code.

%ProgramFiles%\protected-networks.com\8MAN\etc

Code:
<?xml version="1.0" encoding="utf-8"?>

<config> <collector.scanner.exchange.sortingProperty type="System.String"><mark>sn</mark></collector.scanner.exchange.sortingProperty>

</config>

*Possible Vaues:* Replace "sn" with any desired text attribute.

8MAN

#### 4.3.2 Change rule for shortened naming conventions of mailbox categories

By default the category descriptions are generated from the first 10 characters of the first and last mailbox. You can change the length of utilized descriptions.

*Configuration file:* pnServer.config.xml

*Computer:* 8MAN-Server

Path:
%ProgramData%\protected-networks.com\8MAN\cfg

Code: in the section <config>

<exchange.CategoryLength type="System.Int32">10</exchange.CategoryLength>

Possible values: <mark>1 to 500</mark>

#### 4.3.3 Prevent the creation of mailbox categories

By default 8MAN sorts mailboxes into categories, upwards of 1000 mailboxes. You can turn off the creation of categories.

*Configuration file:* pnServer.config.xml

*Computer:* 8MAN-Server

Path:
%ProgramData%\protected-networks.com\8MAN\cfg

*Code:* in the section <config>

<exchange.makeMailBoxCategories type="System.Boolean">false</exchange.makeMailBoxCategories>

Possible values:

false no categories (flat list of mailboxes in the resource view)eine Kategorien (flache Liste von Postfächern in der Ressourcen-Ansicht)

true Utilize categories

### 4.3.4 Adjust the throttling factor

The Exchange Web-Service is used for the recalling of delegations. The scan orients itself bsed on the throttling settings of the Exchange server for the scan account (service account).

The scan can be accelerated with an optimal throttling setting. Please also see: <u>http://technet.microsoft.com/en-us/library/dd298094(v=exchg.150).aspx</u>).

The setting "EWSMaxConcurrency" is important. It affects the number of parallel requests used by the scan to recall delegation rules.

By default 8MAN uses the maximum number of possible parallel requests allowed by the throttling policy. If the throttling policy allows for an unlimited number of parallel requests, then the number of processors is multiplied by 8. You are able to change this value.

*Configuration file:* pnJob.config.xml

Computer:

Kollektor-Server, der für den Exchange-Scan konfiguriert ist.

Path:

%ProgramData%\protected-networks.com\8MAN\cfg

Code:

in the section <config>

<?xml version="1.0" encoding="utf-8"?>

<config>

```
<collector.scanner.exchange.processormultiplierForUnlimitedThrottling
type="System.Int32"><mark>8</mark></collector.scanner.exchange.processormultiplierForUnlimitedThrottling>
```

</config>

#### Possible values:

Replace the value "8" with your desired number. The entered number will be multiplied with the number of processors and its product indicates the number of parallel requests to the Exchange Web Service.

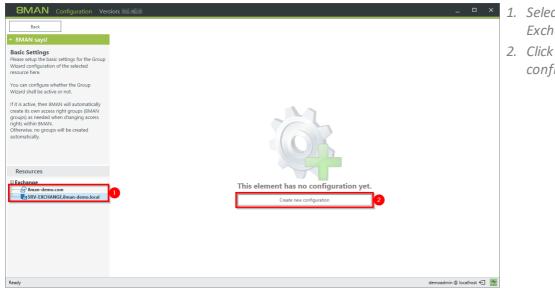
### 5 Exchange change configuration

8MAN Configuration	Version:				_ 🗆 ×
	Common Char Set up technology-inde	ge Settings pendent configurations for ch	nange actions		
		Þ			
	Authorization 8MAN administrator autorization for changes with 8MAN	Scripting Scripting configuration for change actions			
		ecific Change Con ations for each supported tec			
	<u></u>		Ļ	☆	
	Active Directory Basic change configuration for Active Directory domains	Exchange Exchange mailbox specific change configurations	File server File server specific change configurations and Group Wizard settings	<b>SharePoint</b> Sharepoint Resource (Farm Based)	
	e)	É			
	SharePoint SharePoint Site Collection	SharePoint Online SharePoint Online Site Collection			
у					moadmin @ localhost 🗲 🔸

Select "Change configuration" from the 8MAN configuration home menu. Click "Exchange".

### 5.1 Create an Exchange change configuration

After creating an <u>Exchange Scan</u>, the Exchange resource does not have a valid change configuration. You must have executed an Exchange scan in order to create a change configuration.



- 1. Select an (already scanned) Exchange server.
- 2. Click "Create new configuration".

BMAN

Resources Exchange
8man-demo.com
Roserverse

8MAN email address policy

Configuration

Basic Settings

 Create mailbox Enable distribution group

Change Configuration SRV-EXCHANGE

Mailbox Access Categories

-demo.local 

Mailbox Settings

Distribution Groups Access Categories

ntial for changes <u>8man-demo\sa-8man</u> 4

Use Exchange email address policies (addresses will be generated 8MAN email address policy [SMTP:<tolowerCase>((samaccountname))@<tolowerCase>((fqdn))

#### Customize an Exchange change configuration 5.2

BMAN Configuration Version:		
Back		
* 8MAN says!	Configuration	
Basic Settings Please setup the basic settings for the Group Wizard configuration of the selected resource here. You can configure whether the Group Wizard shall be active or not. If it is active, then BMAN will automatically create its come access right groups (BMAN group) as needed when changing access rights within BMAN. Otherwise, no groups will be created automatically.	Change Configuration SRV-EXCHANGE&man-demolocal	
Resources	Connectivity © Insule drukesynce per default © Insule Churlook Web App (OWA) per default © Insule KMP oper default © Insule KMP per default © Insule KMP per default	
C Exchange Sman-demo.com SRV-EXCHANGE.8man-demo.local	Enable distribution group     Mailbox Access Categories	
	<ul> <li>Distribution Groups Access Categories</li> </ul>	
	<ul> <li>Mailbox Settings</li> </ul>	
Ready	demozalmin © localhost 🕤 🚈	

- 1. Enter the desired credentials to make changes to Exchange. Please note additional information in the following sections: <u>Service accounts</u> and required permissions. If you don't enter any credentials, users will be requested to enter this information for every change or session.
- 2. Designate the settings for the creation of a mailbox. Creating mailboxes for Exchange Online is not supported.

Determine how email addresses for mailing lists are built.

#### **Option activated:**

×

demoadmin @ localhost 🗲 🏾 🗠

E-Mail-Addresses are automatically built based on Exchange guidelines. When activating emails for mailing lists the email address can not be changed.

#### **Option deactivated:**

Email addresses are generated based upon the defined settings. For example, you can use the OU instead of the group name. You may define email addresses differently than allowed by standard Exchange guidelines. When activating emails for mailing lists, the email address can be changed.

Creating distribution groups in Exchange Online is not supported.

**8MAN** 



Quota increase step

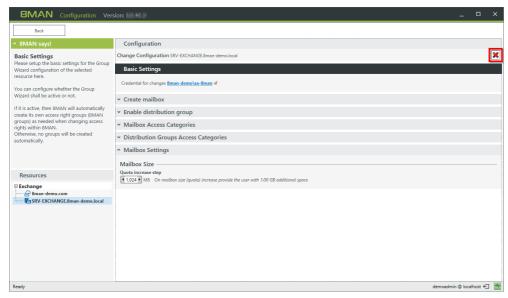
ith 1.00 GB a

BOMAN Sugar ack     ack     ack	cion: Configuration Configuration SRV-EXCHANGEEman-demolocal   Basic Settings   Credenial for charges Eman-demoles Eman-	Determine which mailbox access categories are available to 8MAN users. The category "Receive As" is not supported by Exchange Online.
Ready	demoadmin 🕏 localhost 🕣 🏄	
BMAN Configuration Ver Back  A BMAN says!  A BMAN says!  Here you can configure access rights or MAN. Tabled categories you will find in the "Modify access rights or MAN. Tabled categories you will find in the "Modify access rights or uses and groups via drag and drop.  For each category you can also define,  - which indicator should be added to the default names of related BMAN groups - which and instrators as well as - all non-administrators can use it in BMAN.  Resources  C Exchange  B SRV-EXCHANGEBman-demo.local	sion: _     Configuration   Change Configuration SRV-EXCHANGE&man-demolocal     Basic Settings   Create mailbox   • Create mailbox   • Enable distribution group   • Mailbox Access Categories   • Distribution Groups Access Categories   • Send On Backet   • Send On Backet   • Send As   • Rective As	<ol> <li>Determine which distribution group access categories are available to 8MAN users.</li> <li>Determine the increments that will be used to increase mailbox size.</li> </ol>

demoadmin © localhost 🗲 🏼 🏄

Ready

# 5.3 Delete an Exchange change configuration



If you delete an Exchange change configuration you lose all customized settings and can create a new configuration with default settings.

#### 6 Using the 8MATE for Exchange

#### 6.1 Permission Analysis

#### 6.1.1 Identify access rights on mailboxes

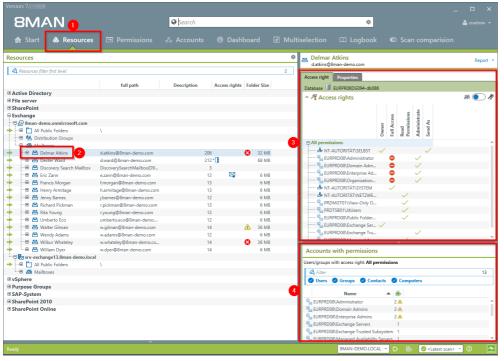
#### **Background / Purpose**

Who as access to which mailbox? 8MATE Exchange shows you all access rights in the resources view.

#### **Additional Services**

Report: <u>"Who has access to what?"</u> Report <u>"Identifying mailbox permissions"</u>

#### Step by step process



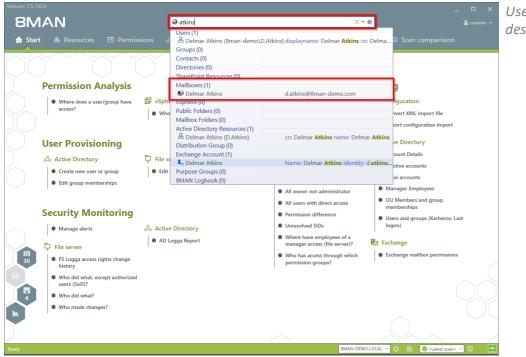
- 1. Select "Resources".
- 2. Navigate to the desired mailbox.
- 3. 8MAN shows you which users/groups have which rights.
- 4. 8MAN shows all accounts with access rights in a flat list.

#### 6.1.2 Identify mailbox properties

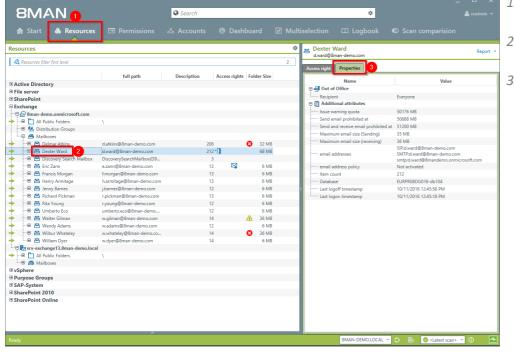
#### **Background / Purpose**

8MATE Exchange shows the properties of individual mailboxes.

#### Step by step process



Use the search field to find the desired mailbox.



- 1. 8MAN automatically changes to the resource view.
- 2. You are focusing on the desired mailbox.
- 3. Click on the tab "properties".

### 6.1.3 Identify access rights to calendars

#### Background / Value

A calendar shows a lot of information. For this reason 8MATE for Exchange includes access rights to calendars. You can find these in the resource view below the mailboxes.

#### Step by step process

Version: 7.		>
8MAN	Search	🗢 🔷 cradmin א
	e pouron	
🚖 Start 💩 Resources 🖃 Permissions		
Resources	\$	Calendar Report
Resources filter first level	2	
		Access rights
full path	Description Access righ	^ № Access rights &
Active Directory	^	
File server		
SharePoint		None Free Busy
Exchange		None Free/E time
All Public Folders      B    M Distribution Groups		All permissions
		🕎 Anonymous (Exchange\A 🗸
Maliboxes     Maliboxes     d.atkins@8man-demo.com	210	🦾 🕎 Default (Exchange\Default) 🗸
Deimar Atkins     d.atkins@8man-demo.com     d.ward@8man-demo.com	210	
Overser ward o.ward@sman-demo.com     Overser \     Top of Information Store \	204 - []	
G Galendar (Calendar	2	
Birthdays \Calendar/Birthdays	2	
United States holida\Calendar/United States holi	165	
Calendar Logging \Calendar Logging	103	
Contacts		
Conversation Action Se\Conversation Action Settings		A CONTRACTOR OF
Conversation History \Conversation History		Accounts with permissions
Deleted Items \Deleted Items		Users/groups with access right: All permissions
Drafts \Drafts		A Filter 2
ExternalContacts \ExternalContacts		Users O Groups O Contacts O Computers
····· 🎦 Files \Files	2	o users o droups o contacts o computers
Inbox Vinbox	40	Name 🔺 🕷
🚱 Journal 🛛 🗤 Vournal		Anonymous (Exchange\Anonymous) 1
📩 Junk Email 🛛 🗸 Uunk Email		Default (Exchange\Default) 1
····· 🥥 Notes 🛛 🖓 Notes		· · · · · · · · · · · · · · · · · · ·
····· 🗋 Outbox \Outbox		
····· 🛅 Sent Items \Sent Items	10	
····· 🚺 Tasks 🛛 \Tasks		
Yammer Root Vammer Root		
→ E 🗠 Discovery Search Mailbox DiscoverySearchMailbox{D9	3	
		8man-demo.local 🗸 🕟 📑 🥥 <latest scan=""> 🖌 🛈</latest>
Ready		8man-demo.local 👻 💿 😓 🥝 <latest scan=""> 👻 🛈</latest>

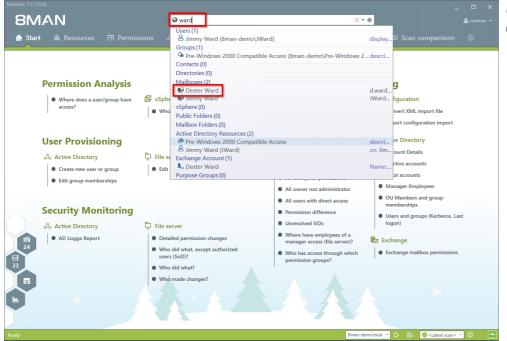
Select the desired calendar. 8MAN shows you all access rights.

## 6.1.4 Identify access rights on mailbox folders

### Background / Value

Exchange allows you to create folders to facilitate collaboration and sharing. These are assigned to the individual users and are also managed via access rights. 8MATE Exchange displays the access rights situation on every folder.

### Step by step process



Use the search field to find the desired mailbox.

**8MAN** Search \$ ≎ sources Report A Resources filter first lev Access rights BActive Directory File server BharePoint Bachange Bhana demo.com Bhana de full path 8 Access rights Vone Default (Exc 210 264 • d.ward@8ma Top of Informa
 Galendar
 Galendar
 Galendar Log
 Gonversation
 Conversation
 Deleted Items
 Drafs
 Drafs
 Drafs \Conversation F \Deleted Items \Drafts \ExternalContac nts with permissions with access right: All p - 🗋 I 0 Groups 🕝 Cont acts 📀 Co ····· 📩 Junk Email lunk Email Name ▲ 🖗 Notes
 Outbox
 Outbox
 Sent Ite
 Tasks
 Yamme s (Exchange\Ar Anonymous (Exchange\Anon Default (Exchange\Default) Construction
 C 3 e.zann@8man-dem f.morgan@8man-de 201 62 local 👻 🕑 🖶 🥝 <Latest scan> 👻

Navigate to the desired mailbox folder. 8MAN shows you all access rights.

## 6.1.5 Identify access rights on public folders

### **Background / Value**

Keeping an overview of access rights to public folders can be extremely challenging with native tools. 8MAN shows you the access rights situation to public folders in the resource view.

### **Additional services**

Report: <u>Who has access to what?</u> Report: <u>Identifying Mailbox access rights</u> <u>Creating a Mailbox</u> <u>Changing access rights to email accounts</u> <u>Changing out-of office notice</u> <u>Changing Mailbox size</u>

Version: 7				-	n x
8MAN ₁		Search		\$	🐣 cradmin 👻
	_				
🔒 Start 💩 Resources	Permissions				0
Resources	_		\$	Support	Report 🝷
Resources filter first level			2	Access rights	
	full path	Description	Access rights	Database III Public Folder Database	
Active Directory				^ ₱ Access rights	æ 💽 🦧
File server					
SharePoint				ž	
Exchange				Author Owner Create items	
			<b>_</b>	Author Owner Create i	
SRV-EXCHANGE.8man-demo.loc	al			C Ow	
→ All Public Folders					
Development     Development     Development	IT@8man-demo.local		6	🖾 Default (Exchange\Default) 🗸	
→ ····   Marketing	Marketing1@8man-demo.lo		5	🗸 🖓 🔯 cradmin (8man-demo 🗸	
Durcharing	Markeung regoman-demo.io		5	👓 🕸 🔯 Administrator (8man 🗸	
→ ····································				🕎 Anonymous (Exchange\A 🗸	
···· 🖓 🐻 🧐 Support	Support1@8man-demo.local		6		
Cases			-		
🖲 😝 Team Calendar				* *	
vSphere				Accounts with permissions	
Purpose Groups				Accounts with permissions	
				Users/groups with access right: All permissions	
				A Filter	6
				Users Groups Contacts Computers	
				Name 🔺 🕷	
			4	Administrator (8man-demo\Administrator) 1	
			-	Anonymous (Exchange\Anonymous) 1	
				A Baum, Adam (8man-demo\Adam Baum) 1	
				Scradmin (8man-demo\cradmin) 1	
				Default (Exchange\Default) 1	
				🗟 van Meulendijk, Jan (8man-demo\Jan van Meulendijk) 1	
<					
Ready				8man-demo.local 👻 🗔 🛃 🥥 <latest scan=""></latest>	- () 🛃

- 1. Select "Resources".
- 2. Navigate to the desired public folder.
- 3. 8MAN shows which users/groups have which access rights.
- 4. 8MAN shows accounts with access rights in a flat list view.

# 6.1.6 Display distribution group properties

### Background / Value

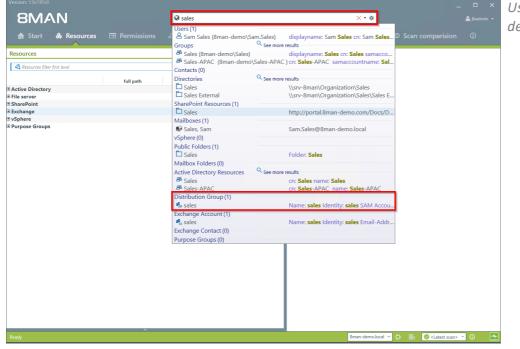
8MAN allows you to quickly identify properties of mailing lists. In an easy to read overview you can see moderation settings, maximum Email size, Email addresses and other properties.

#### **Additional services**

Making changes to the moderation of mailing lists Making changes to managers of mailing lists

This is also possible for dynamic Exchange groups.

#### Step by step process



*Use the search field to find the desired distribution group.* 

Version:						-	. <b>–</b> ×
8MAN		Search			\$		📥 jbadmin 🤊
🖨 Start   & Resources							
Resources				🌣 🎿 sales			
Resources filter first level				sales@8man-de	emo.com		
					roperties Members		
Active Directory	full path	Description	Access rights Folder Size		Name	Value	
File server				🖶 👷 Manager acco			
SharePoint					ins (8man-demo.com\d.atkins)		
Exchange				🖶 🖁 Moderation			
				····· Is moderation a	active?	4	
All Public Folders				····· Send Moderati	on Notifications	Always	
The Maria Distribution Groups				··· 🕀 Moderators		If Empty the owners are this grou	ps moderators.
development	development@8man-demo			🔩 Eric Zanı	n (8man-demo.com\e.zann)		
external consultants	externalConsultants@8man					Senders for whom no moderatio	n is needed.
sales	sales@8man-demo.com			Loo Delmar	Atkins (8man-demo.com\d.atkins	:)	
Mailboxes	sales@oman-demo.com			🕀 🚺 Additional at	tributes		
R SRV-EXCHANGE.8man-demo.local				····· Identifier		sales	
				····· Maximum ema	il size (Sending)	unlimited	
Sphere				····· Maximum ema	il size (receiving)	unlimited	
Purpose Groups				> ····· Approval for m	embers to join	Closed	
				····· Approval for m		Closed	
				····· Recipient Type		MailUniversalDistributionGroup	
				····· Recipient Type		MailUniversalDistributionGroup	
				Email-Addresse		SMTP:sales@8man-demo.com	
				email address p		Not activated	
					8man-demo.local ~	O <latest scan=""></latest>	- (î)

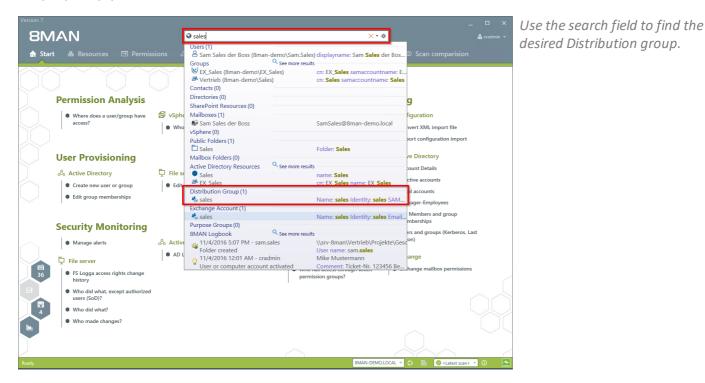
6.1.7 Identify members of distribution groups

#### **Background / Purpose**

8MAN allows you to display all members and / or recipients of distribution lists. In typical 8MAN fashion this also includes nested group memberships.

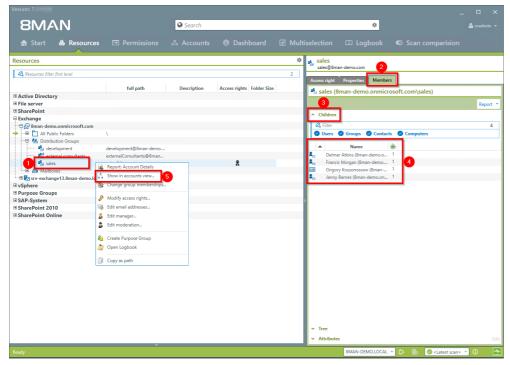
This is also possible for dynamic Exchange groups.

#### Step by step process

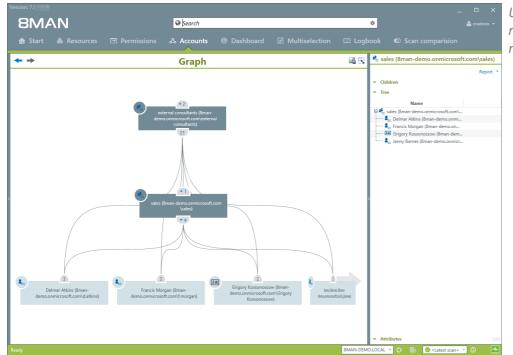


*Click the "properties" tab. 8MAN shows you managers, moderators and maximum email sizes.* 

3 2018 Protected Networks GmbH



- 1. Focus on the desired distribution group.
- 2. Select the tab "Members".
- 3. Open the "Children" area.
- 4. You can then see all members of the distribution group in a flat list.
- 5. Alternatively you can analyze the group in the accounts view. Right-click on the distribution group and select "Show in accounts view" from the context menu.



Use the accounts view to analyze recursions and group memberships.

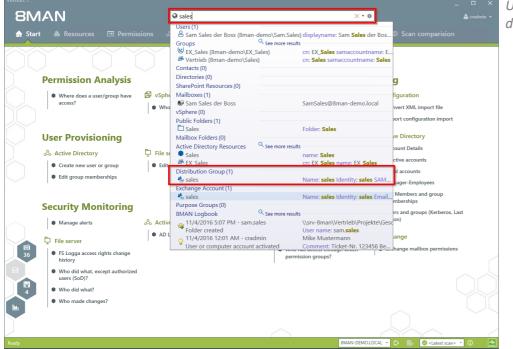
# 6.1.8 Identify distribution group permissions

### Background / Value

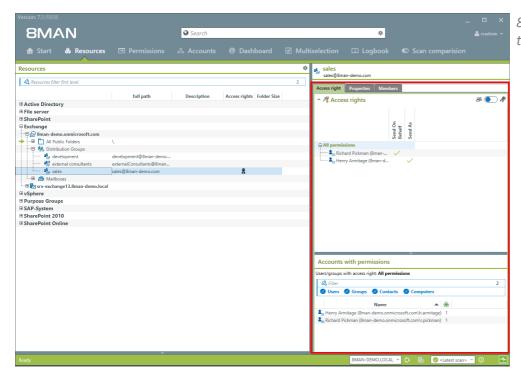
With 8MAN you can quickly check who is allowed to to send Emails from which distribution list. The relevant cases are "send as" and "send on behalf of". The former is the most critical, since it is not easy to identify who actually sent the Email. In the scenario for "send on behalf" the PA or deputy sending the email is clearly recognizable.

Displaying these access rights is also possible with dynamic Exchange groups.

### Step by step process



*Use the search field to find the desired Distribution group.* 



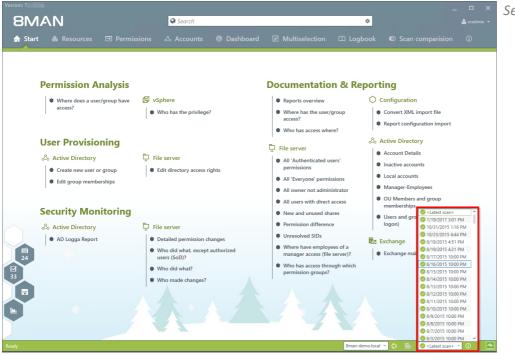
8MAN shows all access rights on the right-hand side.

# 6.1.9 Analyze historical access rights situations

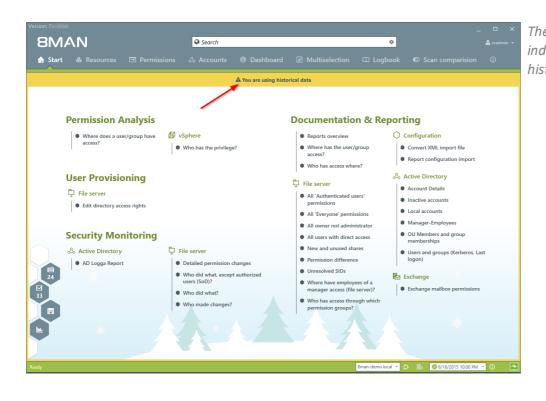
### Background / Value

After the occurrence of data breaches and other security incidents it is often useful to review historical access rights situations. This allows you to understand who had access and who could not possibly have had access during a given point in time. 8MAN allows you to access historical scans in the usual "Look and Feel" to understand the security implications of access rights situations at the time of the incident.

### Step by step process



Select the desired scan date.



The warning and the orange frame indicates that you are viewing historical information.

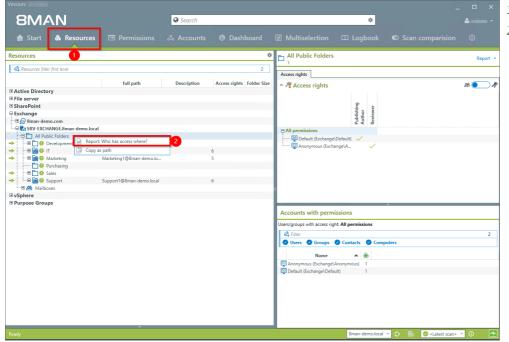


# 6.2 Documentation & Reporting

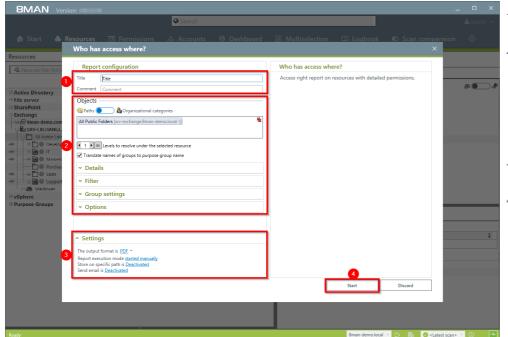
### 6.2.1 Who has access to what?

#### **Background / Value**

Managers and team leads know best who should have access to what. Having an understanding of your access rights situation is extremely important, especially for public Exchange folders and mailboxes. The report "who has access to what?" provides an overview of all users and their access to public folders. In addition 8MAN highlight the access right "send as", due to its potential risk.



- 1. Select "Resources".
- 2. Right click on any or all public folders. Select the report "Who has access where?" from the context menu.



- 1. Enter a title for the report and add a comment.
- 2. Define the range of the report. In order to reduce complexity, we recommend selecting "user view" in the "group settings" area. All other settings are targeted at expert users.
- 3. Define the desired report settings.
- 4. Start the report.

### 6.2.2 Identify mailbox permissions

### **Background / Value**

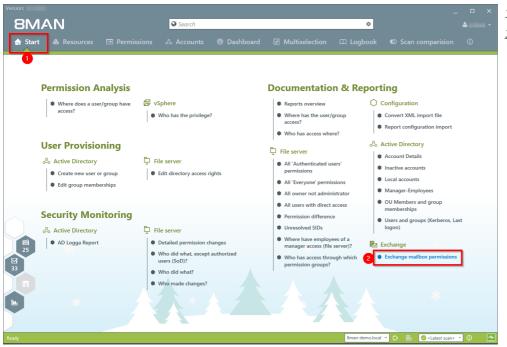
8MAN generates a variety of reports that shows Mailbox access rights. These include:

- Mailbox directories and their access rights
- Properties (Mailbox size)
- Deputies for Mailboxes
- Out of Office notices

Mailboxes and their directories require a high degree of security. However, in practice they often contain excessive access rights. It is extremely important to maintain an overview of these rights as folders often contain sensitive Emails.

#### **Additional Services**

"Send As" access rights are shown in the report "Who has access to what?".



- 1. Select "Start".
- 2. Click on "Exchange Mailbox permissions".

- 1. Enter a title for the report and add a comment.
- 2. Define the range of the report.
- 3. Define the desired report settings.
- 4. Start the report.

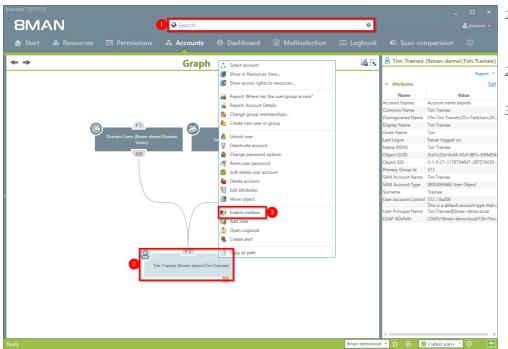
		Search		
🖨 Start 💩	Resources 🖃 Permissions Exchange mailbox permissio		🗷 Multiselection 🕮 Logbook	© Scan comparision ① ×
User & Ac • 1 • 1 • 1 • 1 • 1 • 1	Report configuration         Trite         Comment         Comment         Resources         Parts         Abott Peter /Peter Abott@Bman-demolec         • Properties         * The output format is PDE *         Report exclusion mode started mensually Store on specific path is Descivated Send email is Descivated		Exchange mailbox permissions Please select resource(s)  Eschange Big StV-XCHMKG.Bman-demo.local Big StV-XCHMKG.Bman-demo.loc	port nos. Last Issions
Ready			8man-demo.local	<ul> <li>O B</li> <li><latest scan=""></latest></li> <li>O</li> </ul>

## 6.3 User Provisioning

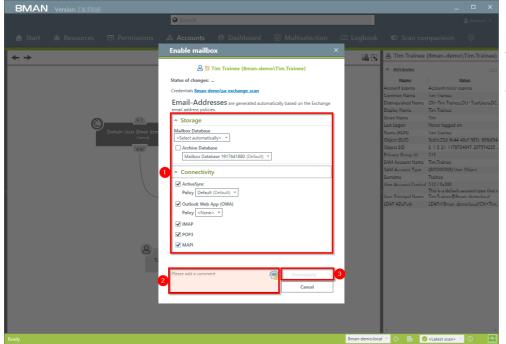
### 6.3.1 Create a mailbox (e-mail enable users)

#### **Background / Value**

If your license agreement includes 8MATE for Exchange you can create Mailboxes (email enable users) with 8MAN.



- 1. Select the desired User or distribution group (type: universal).
- 2. Right-click on the user. You can do this in the Accounts view.
- 3. Click on "Enable mailbox" from the context menu. This option is only available if no mailbox has been created yet.



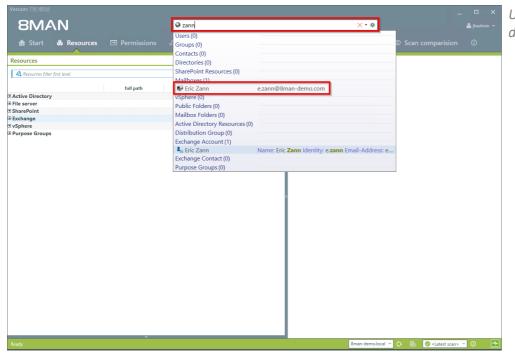
- 1. Determine the Exchange options.
- 2. You must enter a comment, for example a ticket number.
- 3. Start the creation of the mailbox.

## 6.3.2 Change mailbox permissions

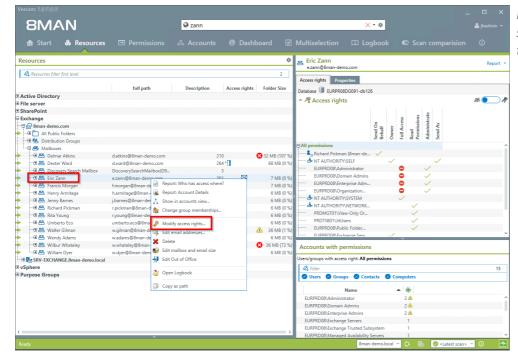
### Background / Value

8MATE Exchange displays the access rights to Mailboxes in the resource view. Mailbox access rights are shown as follows: "Owner", "Full access", Read Access rights" and "Administrate". Additionally you can also assign the following access rights to individual users: "Full access", "Send as" and "Receive as".

### Step by step process



Use the search field to find the desired mailbox.



Right-click on the mailbox and select "Modify access rights" from the context menu.

🛛 zann

Send As

Name NT AUTHORITY\SELF Rita Young (8man-demo

Exchance
Eric Zann

Full Access

Name

Miscellaneous rights
 Switch to horizontal view

×·¢

Send On Behalf

Name Sa Arichard Pickman (8man-demo) Smith, James (8man-demo)

**8MAN** 

Dupp, Nick (8man-de

Na

io\Tom Ai

Nick Dupp

- 1. Use the search field to find the desired account.
- 2. Use drag & drop to move the account to an access rights column.
- 3. Click on "Apply".

Copy as path

- EMAN
  Version:

   • Ann
   • Cann
   • Cann
- 1. You must enter a comment, for example a ticket number.
- 2. Start the access rights change.

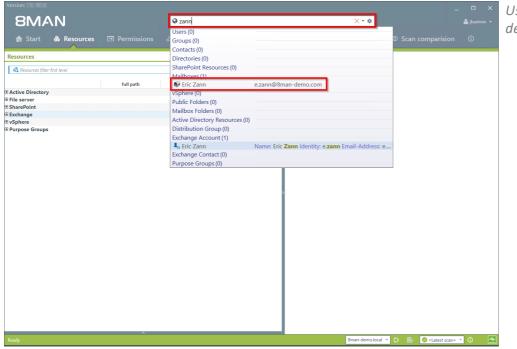
**8MAN** 

## 6.3.3 Manage out of office notices

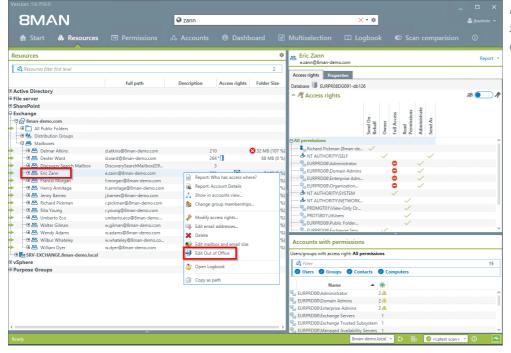
### Background / Value

8MAN allows help desk to set out of office notices for employees without gaining access to email content.

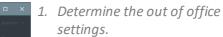
### Step by step process



Use the search field to find the desired mailbox.



Right-click on the mailbox and select "Edit Out of Office" from the context menu. 8MAN Ver



- 2. You must enter a comment, for example a ticket number.
- 3. Start the process.

Resources		Out of Office ×	
Resources filter first level		en Eric Zann	
s nestantes part pra never	tull path	Eric Lann ezann@8man-demo.com	
ctive Directory	init parti	✓ I am Out of Office	
lle server		From Tuesday, March 7, 2017 1:00 AM until Tuesday, March 14, 2017 1:00 AM 🗱	- SA 💽
harePoint		Send a reply once to each sender inside my organization with the following message	
xchange		合의 눈 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이	
Bman-demo.com			
W 🛅 All Public I olders		and the second se	
···· Distribution Groups		8 0 C 2 2 4 8	
Halboxes			
10 🖾 Delmar Atkins	d.atkins@liman-der		
	d.ward@8man-der		
10 🖾 Discovery Search Mailbox	DiscoverySearchMa	Internal Message 📔 🔍 👻 🗸	
🕀 📇 Fric 7ann	e.zann@8man-dem	• V	
の 🕾 Francis Morgan	f.morgan@ßman-de	Also send reply to senders on my contact list	
🗆 🖾 Henry Armitage	h.amitage@ßman-	이와 체수적 N / 인생성 부분 중 명리 프 프 💡 🔍	
m 🖾 Jenny Barnes	j.harnes@ßman-der		
🗇 📇 Richard Pickman	npickman@Aman-d		
🗆 🖾 Rita Young	nyoung@liman-der		
🗆 📇 Umberto Eco	umberto.eco@ßmai		
10 🖾 - Walter Gilman	w.gilman@ilman-de		
01 🕮 Wendy Adams	w.adams@/iman-de		
10 🖾 Wilbur Whateley	w.whateley@liman-	External Message	
🗄 DI 🕮 William Dyer	w.dyen@liman-dem		
Reg SRV-EXCHANGE.liman-demo.local		Credentials <u><not set=""></not></u>	
Sphere		Riease add a comment	11
urpose Groups	6	These day is committeen	
		Gancel	
		Status of changes:	
		status of changes 2 A	
		2 🗠	
		Rea FURPRDOR/Enterprise Admins 2.0	
		Rus EURPRD08\Exchange Servers 1	
		Reg EURPRD00\Exchange Trusted Subayatem 1	
		² R ₂₀ EURPRD08\Managed Availability Servers 1	

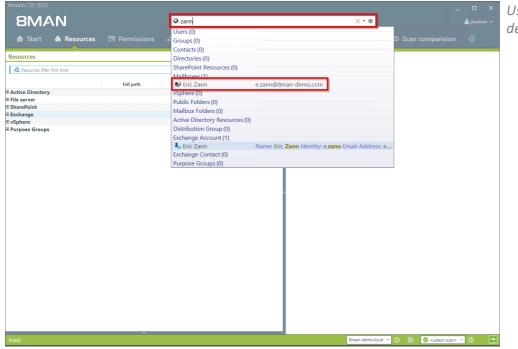


### 6.3.4 Manage mailbox and e-mail size

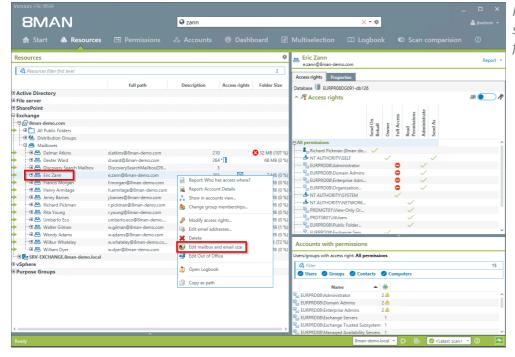
#### **Background / Value**

Managing mailbox size is a common task for help desk. 8MAN allows you to make these quickly and efficiently.

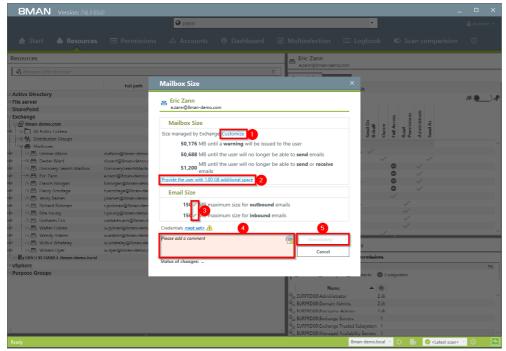
#### Step by step process



Use the search field to find the desired mailbox.



Right-click on the Mailbox and select "Edit mailbox and email size" from the context menu.



- 1. Click on "Customize" to change the mailbox size.
- 2. Quickly add 1 GB of storage. <u>The increments</u> can be adjusted in the configuration module.
- 3. Click on the pen icon to edit the maximum email size.
- 4. You must enter a comment, for example a ticket number.
- 5. Start the process.

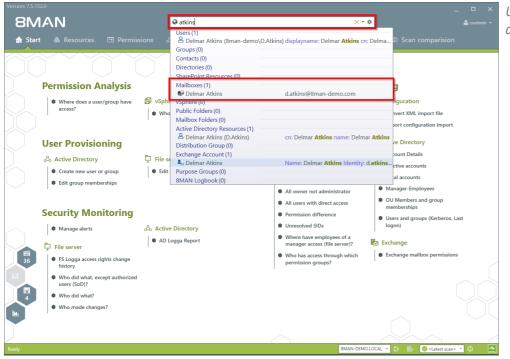


## 6.3.5 Manage e-mail addresses

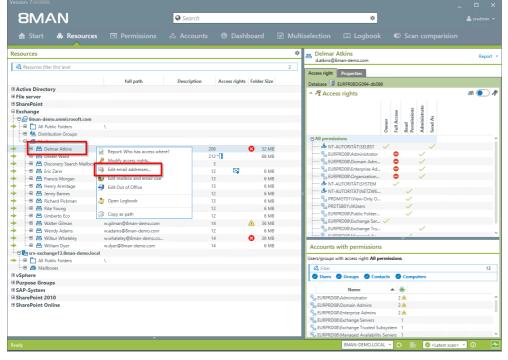
### Background / Value

With 8MAN you can assign and remove multiple email addresses to mailboxes, distribution groups and contacts. The process is documented automatically.

### Step by step process



*Use the search field to find the desired mailbox.* 



Right-click on the Mailbox and select "Edit email addresses" from the context menu.

- 1. Add an email address or delete an existing one.
- 2. Select the primary email address.
- 3. Double-click the field where you want to enter or change the address.
- 4. You must enter a comment, for example the ticket number.
- 5. Start the process.

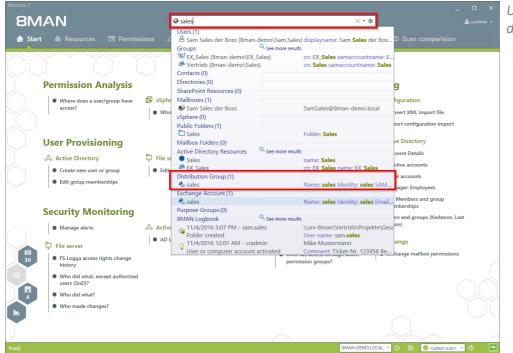
Start & Resource	es 🖃 Permissions	Search	☑ Multiselection	🖽 Logbook	O Scan comparisic     O	an E
sources			- Delma			
			2 d.atkins@	©8man-demo.com		
	Edit email addresses		A data		×	
Active Directory File server SharePoint Exchange 국 중 8man-demo.onmicrosoft.co	Delmar Atkins     datkins@8man-demo.com     Email-Addresses     2				0	# 💓
All Public Folders     Millows     Millows     Mailhows     Better Ward     Discovery Search Mail	Protocol Primary addr SIP ✓ SMTP ✓ smtp □	ss d.atkins@Bman-demo.com d.atkins@Bman-demo.com d.atkins@Bman.demo.onmicrosoft.com deimar.atkins@Bman.com	Value		Send As	
III ≥ inc /ann U ≤ Irancis Morgan E ≤ Henry Armitage E ≤ Jenny Barnes E ≤ Richard Pickman II ≤ Richard Pickman II ≤ Mithe Young U ≤ Umberto Loo	smtp SMTP sip SIP					
		4		5	/	
H A William Dyer     Marketery     H A William Dyer     All Public Folders	Credentials <u><not set=""></not></u>	4		G Immediately Cancel	y 🔸	
⊕ 📇 Mailboxes Sphere					13	
urpose Groups AP-System					*   #	
harcPoint 2010 harePoint Online				008/Administrator 008/Domain Admins 008/Enterprise Admins 008/Exchange Servers 008/Exchange Trusted Subsyste 008/Exchange Availability Serve		
dy				8MAN-DEMO.LOCAL		n> (I)

# 6.3.6 Manage distribution group memberships

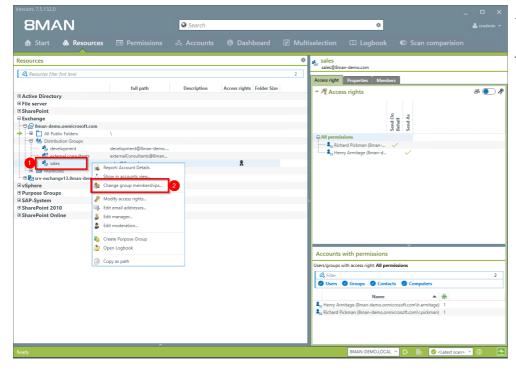
### Background / Value

8MAN allows you to manage the members of distribution groups. This includes the addition and removal of recipients as well as the nesting within other groups (parent child relationships). The process is automatically documented.

### Step by Step process

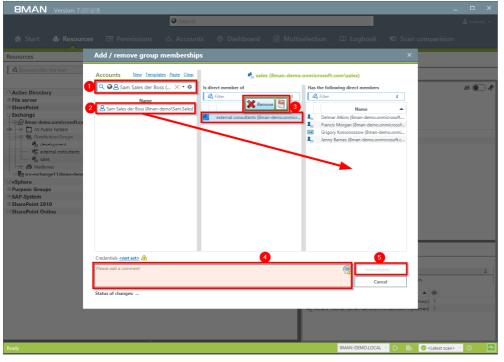


Use the search field to find the desired distribution group.



- 1. You are focusing on the desired group.
- 2. Right-click on the group and select "Change group memberships".

- 1. Find an account.
- 2. Use drag & drop to move the account to a column, to assign a group membership.
- 3. You can remove memberships with the "Remove" button.
- 4. You must enter a comment, for example a ticket number.
- 5. Click on "Immediately".

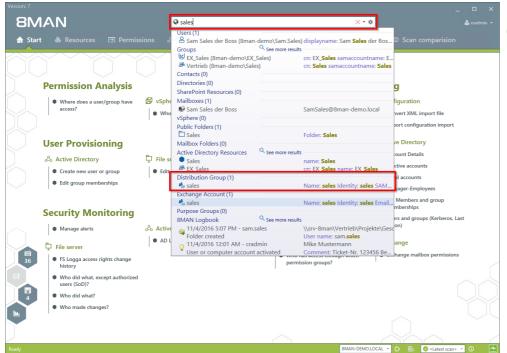


# 6.3.7 Manage distribution group permissions

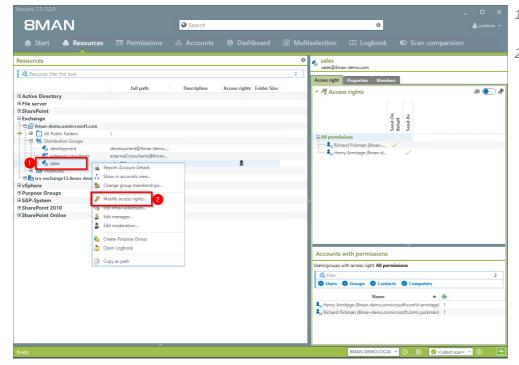
### Background / Value

8MAN allows you to change who can send emails from which distribution groups. As usual, this is automatically documented. The most relevant cases are "Send as" and "Send on behalf". The former is especially sensitive since it is not clearly indicated who actually sent the Email. With "Send on behalf" on the other hand the "deputy" sender is clearly visible.

### Step by step process



Use the search field to find the desired mailing list.



- 1. Find the desired distribution group.
- 2. Right-click on the group and select "Modify access rights" from the context menu.

Search

8MAN

- 1. Use the search function to find the account.
- 2. Use drag & drop to assign the desired permission.
- 3. Select an entry and use the context menu to remove a permission.
- 4. Click on "Apply".
- See Tengliste Bots (Bran den 2 + 4)

  New

  See der Boss (Bran den 2 + 4)

  See der Boss (Bran den 2 + 4)
  </tr

\$

- 1. Enter a comment .
- 2. Start the access rights change.

8MAN Version: 7.		
	Search	
Accounts New Templates Paste Clear	Resource	
ও 🖉 🖉 Sam Sales der Boss (8man-demo\S +	$\phi_{gg}^{*}$ > Exchange > 8man-demo.onmicrosoft.com > Distribution Groups (	> sales
Name	sales	
A Sam Sales der Boss (8man demo\Sam.Sales)	Send As	Send On Behalf
	Name	Name
	a _{an} A Henry Armitage (8man-demo.onmicrosoft.com\h.armitage) Siam Siam Sales der Boss (Bman-demo\)am.Sales)	and Alchard Pickman (8man-demo.onmicrosoft.com\r.pickman)
	Change access rights	
	🚓 sales	
	sales@8man-demo.com	
	Credential for changes <u><not set=""></not></u>	2
	Ticket 123456	Immediately 1
		Cancel
	<ul> <li>Miscellaneous rights</li> </ul>	
	¢	
	Switch to hurizontal view	
Ready		8MAN-DEMO.LOCAL 🕥 🕞 🛛 🖉 <latest scan=""> 🔧 🕕</latest>

### 6.3.8 Change the moderation of distribution groups

#### **Background / Purpose**

With 8MAN you can quickly modify the moderation of distribution groups. The process will be documented automatically.

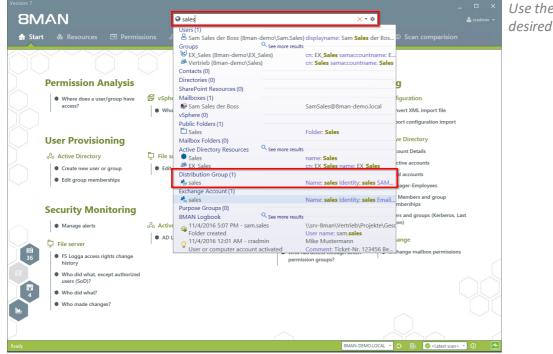
If no moderators are nominated the role is filled out by the manager of the group.

#### **Additional Services**

Display distribution group properties Change the manager of distribution groups

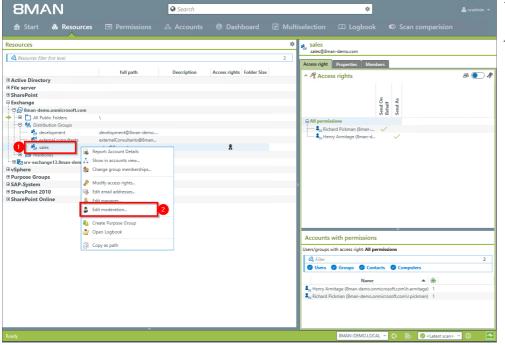
The change also works for dynamic Exchange groups.

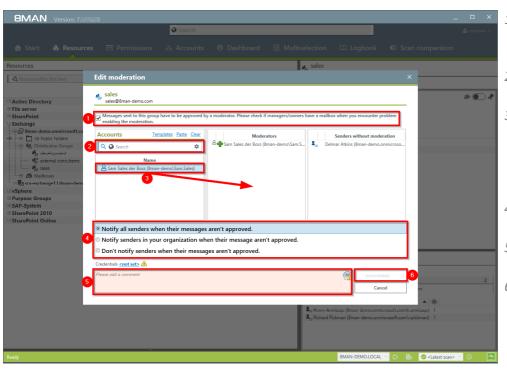
#### Step by step process



Use the search field to find the desired distribution group.

- 1. You are focusing in the desired group.
- 2. Right-click on a group and select "Edit moderation".





- 1. Enable or disable the moderation of the distribution group.
- 2. Use the search field to find accounts.
- 3. Use drag & drop to move accounts to the column"Moderators" or "Sender without moderation" (Whitelist).
- 4. Determine the workflow for rejected messages.
- 5. You must enter a comment, for example a ticket number.
- 6. Start the process.

### 6.3.9 Change the manager of distribution groups

#### Background / Value

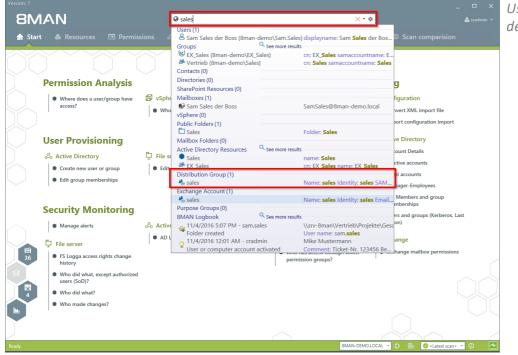
8MAN allows you to quickly change managers for distribution groups. The process is automatically documented. In the default settings, managers are the only ones allowed to change the configuration.

The change also works for dynamic Exchange groups.

#### **Additional Services**

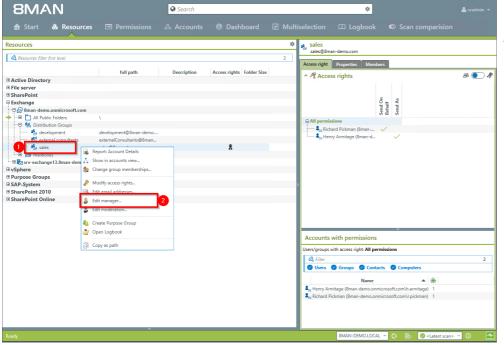
Display distribution group properties Modify moderation of distribution groups

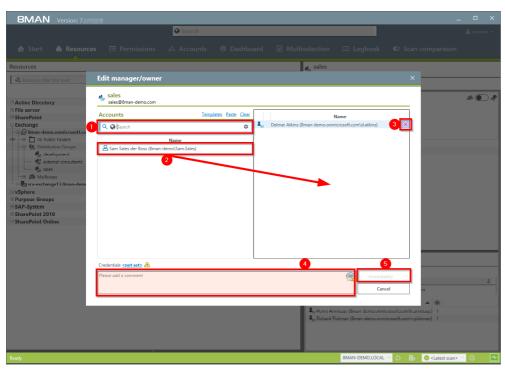
#### Step by step process



*Use the search field to find the desired distribution group.* 

- 1. You are focusing on the desired group.
- 2. Right-click on the group and select "Edit Manager".





- 1. Use the search field to find the desired accounts.
- Use drag & drop to move accounts to the column "Moderators" or "Send without moderation" (Whitelist).
- 3. You can also remove accounts.
- 4. You must enter a comment, for example a ticket number.
- 5. Start the process.

## 6.3.10 Create and delete contacts

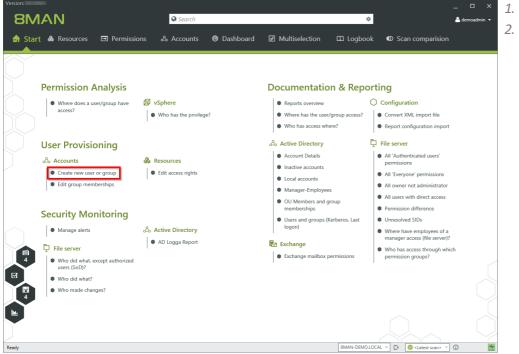
### Background / Value

With 8MAN, you can documented create contacts and manage them quickly, e.g. to add them to distribution groups.

### **Additional Services**

Manage distribution group memberships

#### Step by step process



8MAN Version: Create Accounts **Permission Analysis** orting Please select the type of account you want to create O Configuration Where does a user/group have access? 🖉 Filter Convert XML import file Administrator Report configuration imp Contact via Exchange 42 User Provisioning Development - Neue Gruppe 28 All 'Authenticate Bevelopment - Neuer Benutzer Create new user or group All 'Everyone' per Ldit group memberships All owner not administrate පු Example - new distribution group 28 Permission difference Security Monitoring Unresolved SIDs 88 Finance - Neue Gruppe Manage alerts Where have employees of a manager access (file server) Se Finance - Neuer Benutzer Who has access through
 mission groups? 88 Group Who did wh users (SoD)? Who did what? Who made change AN-DEMO.LOCAL Catest sca

 Select "Start".
 Click "Create new user or group".

8MAN provides a sample template for the creation of contacts. You must customize this template

Select a template to create a

contact.

before you can use it. See Customizing Templates Manual.

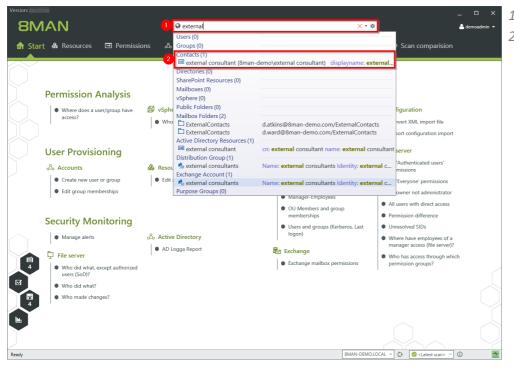
8MAN creates contacts using the Exchange Powershell connection. A license for the 8MATE for Exchange is required.



8MAN Versi

- 1. Specify an OU.
- 2. Enter names and email addresses.
- 3. You must enter a comment.
- 4. Start the execution.

	Search	
🖨 Start ४	Create new contact within the Active Directory ×	sion
	Contacts will be created in 8MAN-DEMO.LOCAL	-
	Creates a contact via Exchange	
	Organisational unit (OU) Organisational unit (OU)   Sales 💙	
Pe	rm Name 🔝	
	Externe E-Mail-Adresse	
	act	e
		nport
Us	er	
A	Acci	s'
	Cri	ons
	0 La	rator
		cess
Se	cur	
	P Ma	s of a
	File	nver)? th which
	D WI	fir Willian
R	05 9 W	
	Credentials 8man-demo\sa-8man	
	Please add a comment	
h.	Cancel	
Deads	SMAN-DEMOLICAL - 🔿 🥥 «Laitet sc	
Ready	8MAIN-DEMOLUÇAL 🗸 🗸 🧭 clatest sci	



- 1. Use the search to find a contact.
- 2. Click on the search result.

- **8MAN** Search \$ 🚖 Start 🛭 💩 Resources & Accounts @ Dashboard Multiselection Scan comparisio 0 **+ +** Graph 🚜 🔣 😐 external \land Filter . Name * Name Value on Na ultant Distinguished Na., CN=external consul Display Name external consultant external ven Name Name (RDN external consultant daa625f1-326d-4c74-a0d1-97f12... Object GUID nsultan Organizational Un... CN=Users,DC=8man-demo,DC=I. nizational Un... User 8 🗟 Re Where has the user/g Report: Account Details 춼 Change group m Create new user or group 🙀 Add note 🎒 Open Logboo Copy as path Tree Ready 8MAN-DEMO.LOCAL ~ 🗘 🔗 <Latest scan> ~ 🛈 -1-
- 1. 8MAN switches to the Accounts view.
  - 2. Right-click the contact.
  - 3. Select Delete account.

- Status
   Accounts
   Control
   Accounts
   Control
   Contro
   Control
   Control
- 1. 8MAN shows the contact to be deleted.
  - 2. 8MAN shows the login with which the contact is deleted. If necessary, specify other credentials.
  - 3. You must enter a comment.
  - 4. Start the execution.

You do not need an 8MATE for Exchange license to delete contacts.

### 7 Contacting 8MAN support

You can reach our support under the following number:

Germany (German and English) +49 30 390 6345-99

United Kingdom (English) +44 12 76 91 99 89

Monday through Friday from 9 am until 5 pm (CET).

E-Mail support@8man.com

#### Website

https://susi.8man.com

You start on the website with a self-registration. After completion, you can see the publicly accessible content. After registration, you will be assigned to an authorization level by our support team. Only then you can see nonpublic content and use the ticket system.

This process may take some time.

### 8 Disclaimer

Information provided in this document may change at any given time and without prior notice. Its provision does not entail any kind of legal obligation at Protected Networks's end.

The usage of Protected Networks's software 8MAN is outlined in an End User Licence Agreement (EULA). 8MAN must only be used in accordance with its stipulations.

Without prior written consent from Protected Networks this document must not be partially or entirely reproduced, transmitted or translated, be it by electronic, mechanical, manual or optical means.

This document should be considered part of a framework consisting of Protected Networks's Terms & Conditions, EULA and Privacy Statement to be found on their website.

#### Copyright

8MAN is the registered trademark of a software solution and its related documents and is the intellectual property of Protected Networks.

All product and company names are trademarks[™] or registered[®] trademarks of their respective holders even without special marking.

Protected Networks GmbH Alt-Moabit 73 10555 Berlin

+49 30 390 63 45 - 0 www.protected-networks.com

# 9 Software license acknowledgments

- Json.net, © 2006-2014 Microsoft, <u>https://json.codeplex.com/license</u>
- JSON.NET Copyright (c) 2007 James Newton-King <u>https://github.com/JamesNK/Newtonsoft.Json/blob/master/LICENSE.md</u>
- Irony Copyright (c) 2011 Roman Ivantsov <a href="http://irony.codeplex.com/license">http://irony.codeplex.com/license</a>
- Jint Copyright (c) 2011 Sebastien Ros <a href="http://jint.codeplex.com/license">http://jint.codeplex.com/license</a>
- #ziplib 0.85.5.452, © 2001-2012 IC#Code, <a href="http://www.icsharpcode.net/opensource/sharpziplib/">http://www.icsharpcode.net/opensource/sharpziplib/</a>
- PDFsharp 1.33.2882.0, © 2005-2012 empira Software GmbH, Troisdorf (Germany), <u>http://www.pdfsharp.net/PDFsharp_License.ashx</u>
- JetBrains Annotations, © 2007-2012 JetBrains, <a href="http://www.apache.org/licenses/LICENSE-2.0">http://www.apache.org/licenses/LICENSE-2.0</a>
- Microsoft Windows Driver Development Kit, © Microsoft, EULA, installed on the computer on which the FS Logga for Windows file servers is installed: C:\Program Files\protected-networks.com\8MAN\driver (Usage only for FS Logga for Windows file server)
- NetApp Manageability SDK, © 2013 NetApp, <u>https://communities.netapp.com/docs/DOC-1152</u> (Usage only for FS Logga for NetApp Fileserver)
- WPF Shell Integration Library 3.0.50506.1, © 2008 Microsoft Corporation , <u>http://archive.msdn.microsoft.com/WPFShell/Project/License.aspx</u>
- WPF Toolkit Library 3.5.50211.1, © Microsoft 2006-2013, <u>http://wpf.codeplex.com/license</u>
- Bootstrap, © 2011-2016 Twitter, Inc, <a href="https://github.com/twbs/bootstrap/blob/master/LICENSE">https://github.com/twbs/bootstrap/blob/master/LICENSE</a>
- jQuery, © 2016 The jQuery Foundation, <u>https://jquery.org/license</u>
- jquery.cookie, © 2014 Klaus Hartl, <u>https://github.com/carhartl/jquery-cookie/blob/master/MIT-LICENSE.txt</u>
- jquery-tablesort, © 2013 Kyle Fox, <a href="https://github.com/kylefox/jquery-tablesort/blob/master/LICENSE">https://github.com/kylefox/jquery-tablesort/blob/master/LICENSE</a>
- LoadingDots, © 2011 John Nelson, <u>http://johncoder.com</u>
- easyModal.js, © 2012 Flavius Matis, <u>https://github.com/flaviusmatis/easyModal.js/blob/master/LICENSE.txt</u>
- jsTimezoneDetect, © 2012 Jon Nylander
   <u>https://bitbucket.org/pellepim/jstimezonedetect/src/f9e3e30e1e1f53dd27cd0f73eb51a7e7caf7b378/LICENCE.txt?</u>
   <u>at=defaultjquery-tablesort</u>
- Sammy.js, © 2008 Aaron Quint, Quirkey NYC, LLC <u>https://raw.githubusercontent.com/quirkey/sammy/master/LICENSE</u>
- Mustache.js, © 2009 Chris Wanstrath (Ruby), © 2010-2014 Jan Lehnardt (JavaScript) and © 2010-2015 The mustache.js community <a href="https://github.com/janl/mustache.js/blob/master/LICENSE">https://github.com/janl/mustache.js/blob/master/LICENSE</a>
- Metro UI CSS 2.0, © 2012-2013 Sergey Pimenov, <a href="https://github.com/olton/Metro-UI-CSS/blob/master/LICENSE">https://github.com/olton/Metro-UI-CSS/blob/master/LICENSE</a>
- Underscore.js, © 2009-2016 Jeremy Ashkenas, DocumentCloud and Investigative Reporters & Editors <u>https://github.com/jashkenas/underscore/blob/master/LICENSE</u>
- Ractive.js, © 2012-15 Rich Harris and contributors, <a href="https://github.com/ractivejs/ractive/blob/dev/LICENSE.md">https://github.com/ractivejs/ractive/blob/dev/LICENSE.md</a>
- RequireJS, © 2010-2015, The Dojo Foundation, <u>https://github.com/jrburke/requirejs/blob/master/LICENSE</u>
- typeahead.js, © 2013-2014 Twitter, Inc, <a href="https://github.com/twitter/typeahead.js/blob/master/LICENSE">https://github.com/twitter/typeahead.js/blob/master/LICENSE</a>
- Select2, © 2012-2015 Kevin Brown, Igor Vaynberg, and Select2 contributors <u>https://github.com/select2/select2/blob/master/LICENSE.md</u>
- bootstrap-datepicker, © Copyright 2013 eternicode <u>https://github.com/eternicode/bootstrap-datepicker/blob/master/LICENSE</u>
- RabbitMQ, © Copyright 2007-2013 GoPivotal, <u>https://www.rabbitmq.com/mpl.html</u>
- EPPlus, JanKallman, <a href="https://github.com/JanKallman/EPPlus/blob/master/LICENSE">https://github.com/JanKallman/EPPlus/blob/master/LICENSE</a>

**8MAN**