8MAN

Access Rights Management. Only much Smarter.

Access Rights Management

System Requirements

Version 9

Protected Networks

1 Contact 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

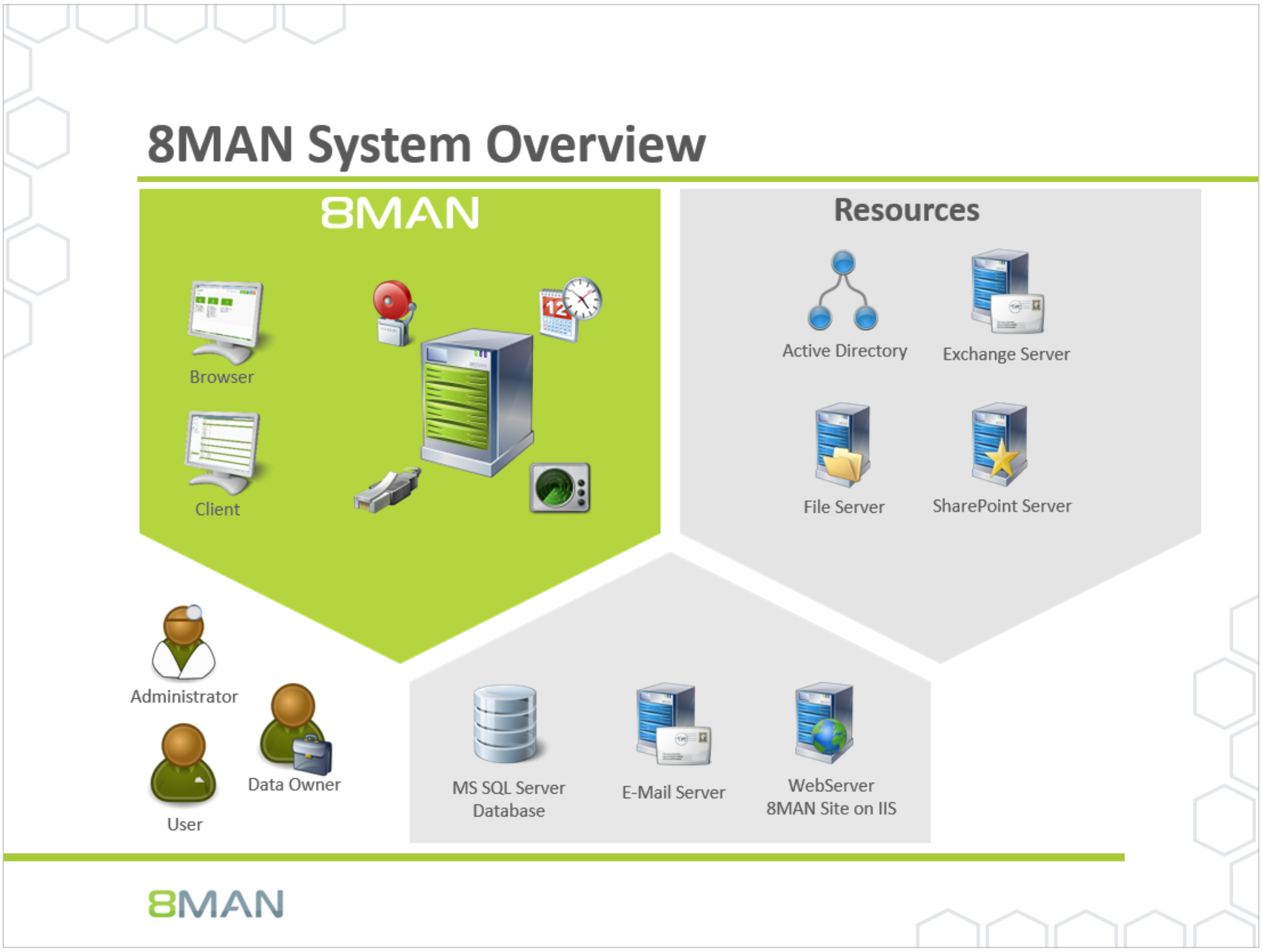
Website
https://susi.8man.com

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 non-public content and use the ticket system.

This process may take some time.

2 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.

3 8MAN base versions

3.1 8MAN server requirements

Hardware

Hardware requirements vary and are dependent on several factors. These include:

- the number of users in Active Directory (AD)
- the number of file servers and directories monitored by 8MAN
- the 8MATES used, especially the Logga
- data storage settings

Users	up to 1,000	up to 4,000	4,000+
RAM	4 GB	8 GB	16 GB
Processors	2	4	4
Disk space	30 GB	40 GB	40 GB

Intel Itanium plattforms are not suported.

Software

The 8MAN server can run on the following operating systems:
Microsoft Windows Server 2008 SP1 (32- bit and 64-bit), 2008 R2, 2012, 2012 R2 and 2016.
The 8MAN server must be a member of an Active Directory domain.
.NET 3.5 SP1 **and** .NET 4.5.2 (or higher) is required.

Clusters are not supported.
Server Core is not supported.

3.2 Collector requirements

Hardware

A collector server must fulfill the following requirements:

- 5 GB disk space
- 2 processor cores
- 4 GB RAM

Intel Itanium platforms are not supported.

Software

The 8MAN collector can be installed on the following operating systems:
Microsoft Windows Server 2008 SP1 (64-bit only), 2008 R2, 2012, 2012 R2 and 2016.

The 8MAN collectors can be installed on a member server (node) of a cluster.
The 8MAN collector can not be used as a cluster resource (failover cluster manager)

Server core versions are only supported if the graphical 8MAN setup can be executed. In case of doubt, please contact our support.

.NET 3.5 SP1 **and** .NET 4.5.2 (or higher) is required.

3.3 User interface requirements

Hardware

The computer executing the 8MAN graphical user interface (GUI) must fulfill the following requirements.

- 500 MB free disk space
- 2 processor cores
- 2 GB RAM
- Screen resolution: 1280x1024, recommended 1920x1080 (FullHD)
- optional: Graphic card with DirectX 10

Software

The 8MAN GUI can be run on the following operating systems:
Microsoft Windows Server 2008 SP1 (32-bit and 64-bit), 2008 R2, 2012, 2012 R2 and 2016
Microsoft Windows Vista, 7, 8, 10

.NET 3.5 SP1 **and** .NET 4.5.2 (or higher) is required.

3.4 SQL server requirements

8MAN supports Microsoft SQL Server 2008 SP1, 2012, 2014, 2016 (32-bit und 64-bit).

Your storage requirements may vary depending on several factors. These include:

- The number of users in Active Directory (AD)
- The number of file servers and directories
- The presence of 8MATES, especially FS Logga und AD Logga
- Data storage settings

Users	up to 500	500 to 1.000	1.000 to 4.000	over 4.000
Data base storage	10 GB	30 GB	50 GB	50 GB

3.4.1 SQL Express and 8MAN

Microsoft SQL-Server Express Edition has the following limitations:

- 10 GB maximum data base size -> only a limited number of scans can be stored
- 1 GB maximum RAM use -> poor performance in large environments
- 4 cores maximum -> poor performance in large environments

8MAN allows you to configure your settings in order to optimize data storage:
Information on actual data base size can be found in the Server Health-Check.
Details on reducing data base size can be found in the following chapters: data storage and SQL-Server data base maintenance.

Information on SQL server editions are available from Microsoft.

3.5 File server requirements

Windows

8MAN supports the following Windows Server Versions:

- Microsoft Windows Server 2008 (32-bit and 64-bit), 2008 R2, 2012, 2012 R2 and 2016

A collector can only be installed on the server core versions on which the graphical 8MAN setup can be executed. In case of doubt, please contact our Support.

Failover-Clusters are supported.

DFS (Domain integrated and stand-alone Computer) are supported.

Intel Itanium Platforms are not supported.

NetApp

8MAN supports CIFS-based shares on NetApp file servers.

EMC

8MAN supports CIFS-based shares of EMC file servers.

4 8MATES

4.1 AD Logga requirements

The 8MATE AD Logga supports domain controllers (DCs) that run on the following server versions:

- Microsoft Windows Server 2008 (32-bit and 64-bit), 2008 R2, 2012, 2012 R2 and 2016

The 8MATE Logga does not require a dedicated collector. Even the 8MAN server itself can be used as a collector.

4.2 FS Logga requirements

Windows file server

8MATE FS Logga supports the following Windows Server Versions:

- Microsoft Windows Server 2008 R2, 2012, 2012 R2 and 2016

Server Core Versions are only supported which support the execution of an interactive graphical setup. For compatibility with Windows Server 2008 (not R2) and in case of doubt please contact our support.
Failover-Clusters are supported.

Intel Itanium Platforms are not supported.
DFS is not supported.

Windows file servers that have been virtualized through XenServer are supported from version 6.5 onwards. A XenServer Tools/Windows Management agent must be installed.

8MATE FS Logga requires a filter driver installation on the Windows server as well as a dedicated collector.

NetApp file server

8MATE FS Logga supports NetApp file servers in the following versions:

- NetApp Data ONTAP Release 7.x, Minimum 7.3.1.
- NetApp Clustered Data ONTAP Version 8.x and 9.0 are supported. SSL is supported.

The 8MATE FS Logga utilizes a NetApp integrated monitoring policy (FPolicy). This requires a dedicated collector.

Please refer to the 8MAN FS Logga Manual for more information.

EMC file server

8MATE FS Logga supports the following EMC file server versions:

- NAS 5.5 or higher in Celerra and VNX product series.
- Product Line Isilon

The 8MATE FS Logga utilizes the components and services provided by EMC. This requires a dedicated collector. We recommend installing the collector on the same server as the Common Event Enabler (CEE). The CEE is supported up to version 6.6.

Please refer to the 8MAN FS Logga Manual for more information.

4.3 SharePoint requirements

8MAN supports the following SharePoint versions:

- Microsoft SharePoint Server 2010, 2013 (Cumulative Update December 2014 required), 2016 and SharePoint Online via SharePoint Remote Connector (Client Side Object Model)

Installing a collector on the SharePoint server is not required.

- Microsoft SharePoint Server 2010, 2013

Installing a collector on the SharePoint server is required. The Server Side Object Model will no longer be supported by 8MAN Version 8.5 (fall 2017).

4.4 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 support.

4.5 Exchange Logga Voraussetzungen

The 8MATE Exchange Logga supports the following Exchange versions:

- Exchange Server (on-premise) 2013, 2016
- Exchange Online

For the on-premise variants, the servers holding the mailbox databases must primarily use the en-US language. Installing language packs may require a reboot. For more information, visit Microsoft.

8MATE for Exchange is not mandatory - the Exchange Logga can be used independently.

5 Web components and web interface requirements

Web components supports the following operating systems:
Microsoft Windows Server 2008 R2, 2012, 2012 R2 and 2016.
.NET 3.5 SP1 **and** .NET 4.5.2 (or higher) is required.
Internet Information Services (IIS) Version 7.5 or higher. Required components may be complemented by 8MAN setup.

Cluster is not supported.
Server Core is not supported.

The following browsers are supported:

- Internet Explorer 11.0.22 or higher
- Mozilla Firefox 49 or higher
- Google Chrome 54 or higher
- Edge 38.14393 or higher

Cookies and Javascript must be enabled.

Using a big amount of data in Analyze & Act grids the webbrowsers perform very different. We recommend using a webbrowser by the following priority:

1. Chrome
2. Firefox
3. Edge
4. Internet Explorer

6 Network requirements, and firewall settings

6.1 Used ports overview

8MAN uses the following ports:

AD Scan

- LDAP (389)

FS Scan

- NetBIOS (139)
- Microsoft DS (CIFS) (445)
- Lokal users/groups = WMI/DCOM/RPC (135 + dynamic)

Alerts FS Logga

- 5671 TCP

MS SQL Server

- 1433

Authentication

- Kerberos (88)

8MAN components standard port

- (55555 + dynamic)

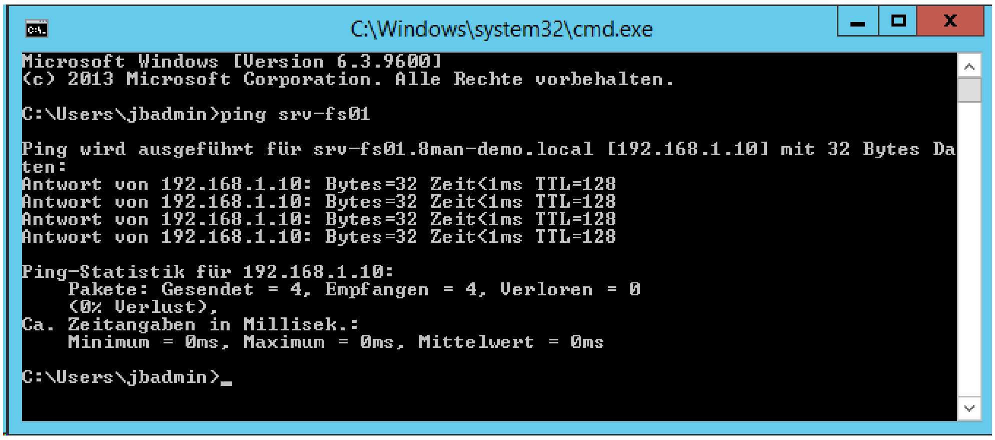
If possible define an application rule, because of the usage of dynamic ports (random high ports).

6.2 Ensuring a connection between 8MAN server and collector

By default 8MAN uses port "55555" for all communication between collectors and the 8MAN server. The port must be available bi-directionally.

If you would like to use a different port, please contact support.

6.2.1 Simple connection check



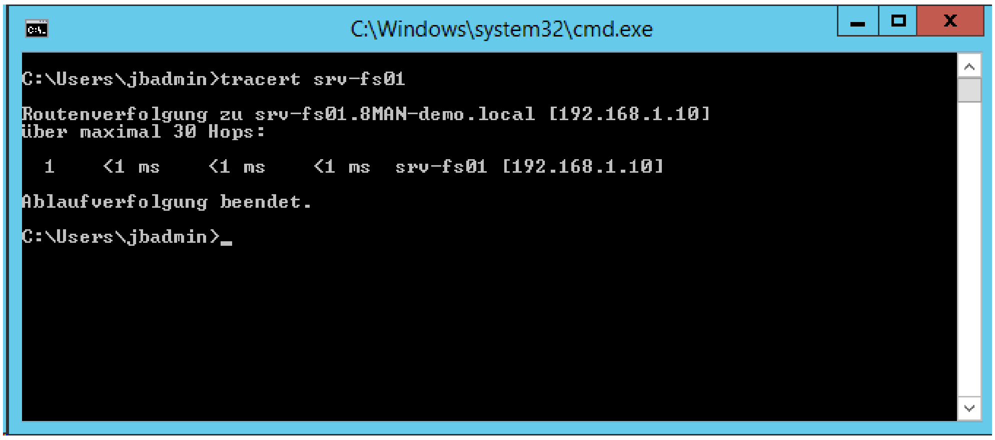
```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. Alle Rechte vorbehalten.

C:\Users\jbadmin>ping srv-fs01

Ping wird ausgeführt für srv-fs01.8man-demo.local [192.168.1.10] mit 32 Bytes Da
ten:
Antwort von 192.168.1.10: Bytes=32 Zeit<1ms TTL=128
Antwort von 192.168.1.10: Bytes=32 Zeit<1ms TTL=128
Antwort von 192.168.1.10: Bytes=32 Zeit<1ms TTL=128
Antwort von 192.168.1.10: Bytes=32 Zeit<1ms TTL=128

Ping-Statistik für 192.168.1.10:
    Pakete: Gesendet = 4, Empfangen = 4, Verloren = 0
    (0% Verlust),
Ca. Zeitangaben in Millisek.:
    Minimum = 0ms, Maximum = 0ms, Mittelwert = 0ms

C:\Users\jbadmin>_
```

A simple connection check can be performed with a

`ping`.

If a ping is successful the firewall may still block port "55555".

Run a "browser test".



```
C:\Users\jbadmin>tracert srv-fs01

Routenverfolgung zu srv-fs01.8MAN-demo.local [192.168.1.10]
über maximal 30 Hops:

  1    <1 ms    <1 ms    <1 ms  srv-fs01 [192.168.1.10]

Ablaufverfolgung beendet.

C:\Users\jbadmin>_
```

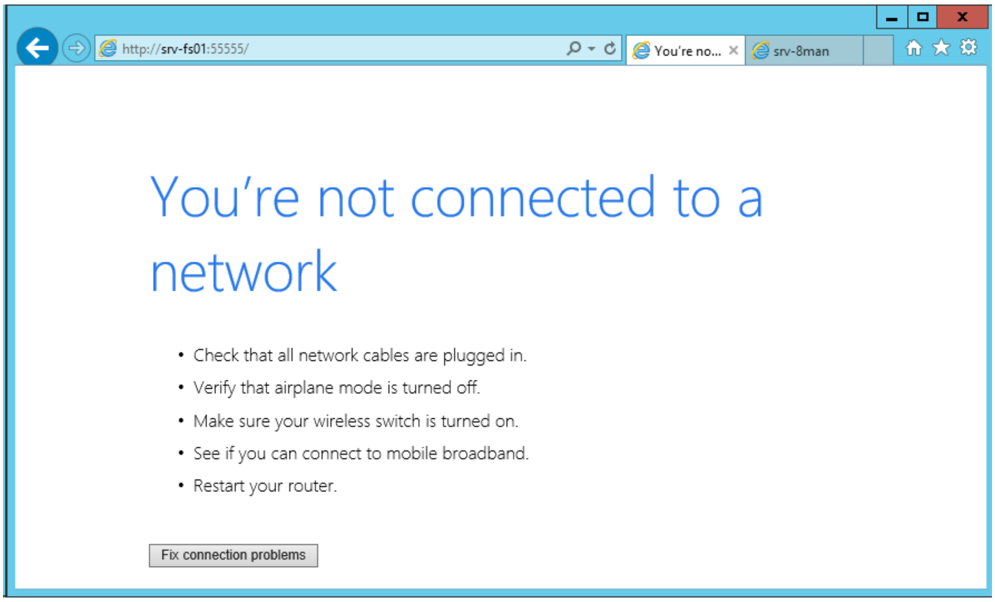
By using the command

`tracert`

you can trace any blocks of packages and identify "external" firewalls.

6.2.2 Using a browser to test the connection to a collector

By using a "browser test" you can investigate whether a connection between a collector and the 8MAN server is possible.



You're not connected to a network

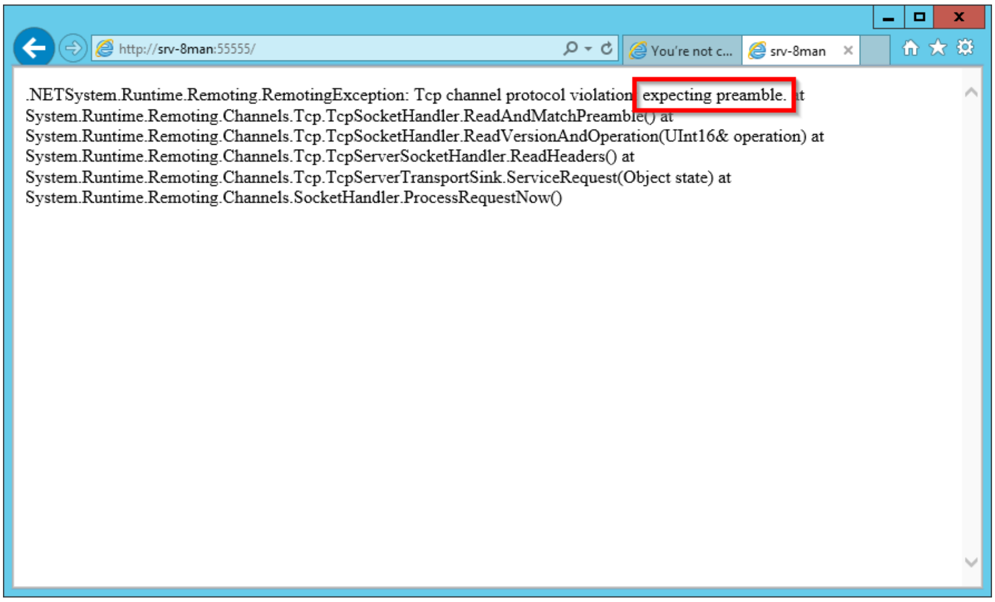
- Check that all network cables are plugged in.
- Verify that airplane mode is turned off.
- Make sure your wireless switch is turned on.
- See if you can connect to mobile broadband.
- Restart your router.

Open a browser on the 8MAN server and enter the address of the collector including port "55555".

For example:

`http://srv-fs01:55555`

If you receive an error message after a time out, then the connection is blocked.



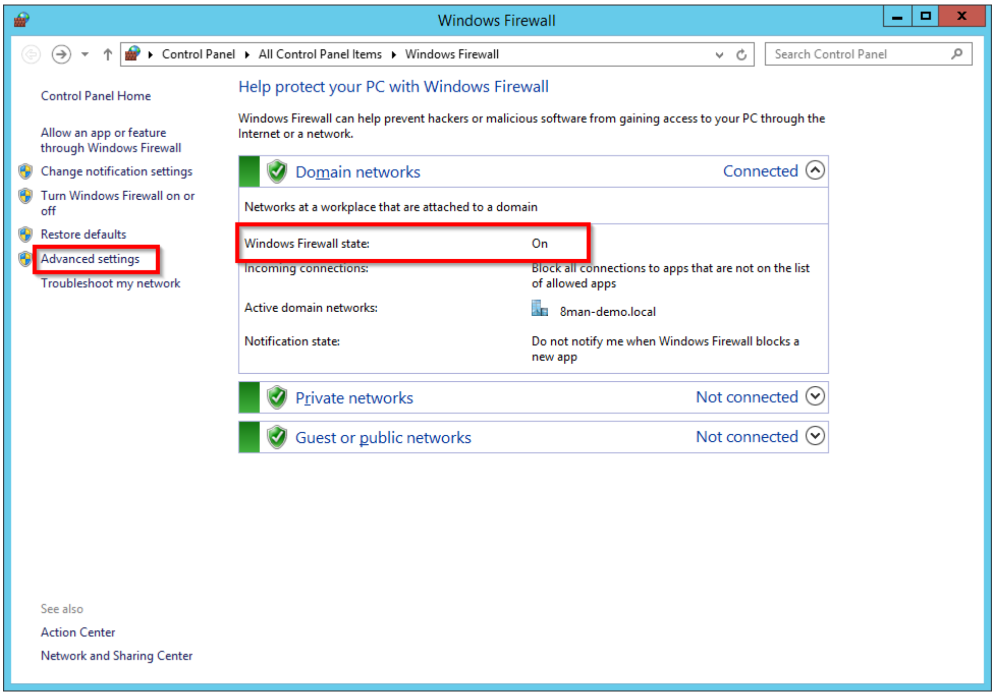
```
.NETSystem.Runtime.Remoting.RemotingException: Tcp channel protocol violation: expecting preamble. at
System.Runtime.Remoting.Channels.Tcp.TcpSocketHandler.ReadAndMatchPreamble() at
System.Runtime.Remoting.Channels.Tcp.TcpSocketHandler.ReadVersionAndOperation(UInt16& operation) at
System.Runtime.Remoting.Channels.Tcp.TcpServerSocketHandler.ReadHeaders() at
System.Runtime.Remoting.Channels.Tcp.TcpServerTransportSink.ServiceRequest(Object state) at
System.Runtime.Remoting.Channels.SocketHandler.ProcessRequestNow()
```

If you receive the following message, then a connection is possible.

The message "...expecting preamble..." is generated by the 8MAN service.

Run the browser test in both directions. Accessing the 8MAN server from the collector and vice versa. Bi-directional communication is required.

6.2.3 Opening a windows firewall port for 8MAN


Windows Firewall
Control Panel ▸ All Control Panel Items ▸ Windows Firewall
Search Control Panel
Control Panel Home
Allow an app or feature through Windows Firewall
Change notification settings
Turn Windows Firewall on or off
Restore defaults
Advanced settings
Troubleshoot my network
See also
Action Center
Network and Sharing Center

Help protect your PC with Windows Firewall

Windows Firewall can help prevent hackers or malicious software from gaining access to your PC through the Internet or a network.

Domain networks — Connected

Networks at a workplace that are attached to a domain

Windows Firewall state:	On
Incoming connections:	Block all connections to apps that are not on the list of allowed apps
Active domain networks:	8man-demo.local
Notification state:	Do not notify me when Windows Firewall blocks a new app

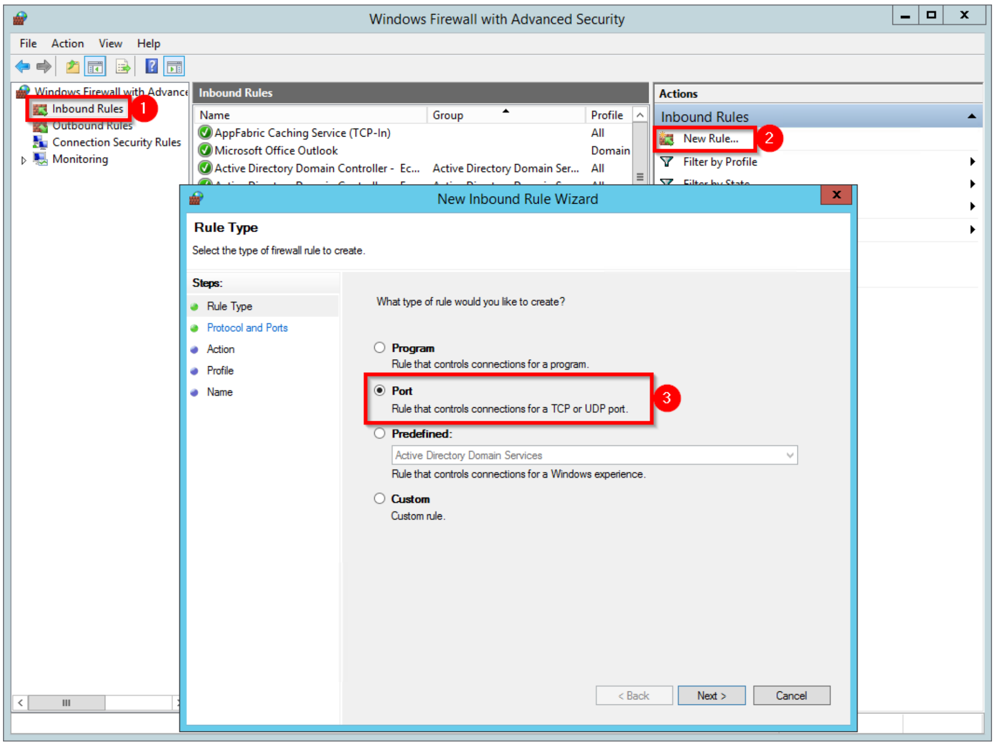
Private networks — Not connected

Guest or public networks — Not connected

If the Windows firewall is turned on, then a rule must be created for successful communication.

This applies to the 8MAN server as well as all collector servers.

Select "Advanced settings".



Name	Group	Profile
AppFabric Caching Service (TCP-In)		All
Microsoft Office Outlook		Domain
Active Directory Domain Controller - Ec...	Active Directory Domain Ser...	All

Rule Type

Select the type of firewall rule to create.

What type of rule would you like to create?

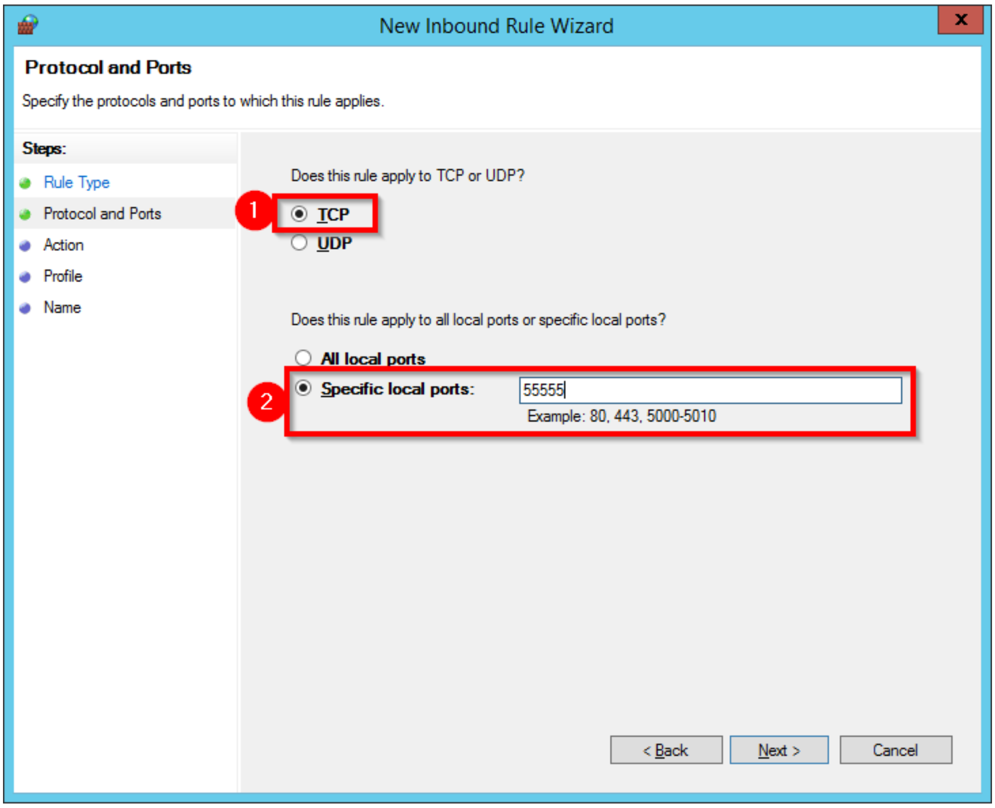
○ Program
Rule that controls connections for a program.

● Port
Rule that controls connections for a TCP or UDP port.

○ Predefined:
Active Directory Domain Services
Rule that controls connections for a Windows experience.

○ Custom
Custom rule.

Create a new rule and select the type "port".



Protocol and Ports

Specify the protocols and ports to which this rule applies.

Does this rule apply to TCP or UDP?

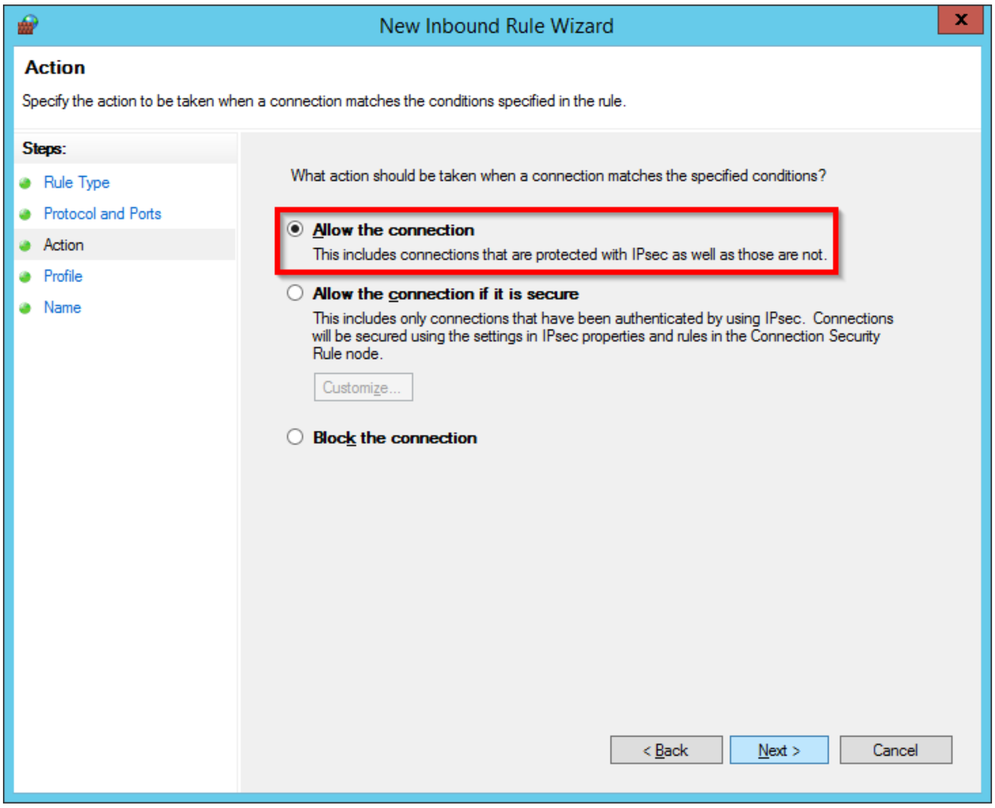
● TCP
○ UDP

Does this rule apply to all local ports or specific local ports?

○ All local ports
● Specific local ports: 55555

Example: 80, 443, 5000-5010

Select "TCP" and enter port number "55555".



Action

Specify the action to be taken when a connection matches the conditions specified in the rule.

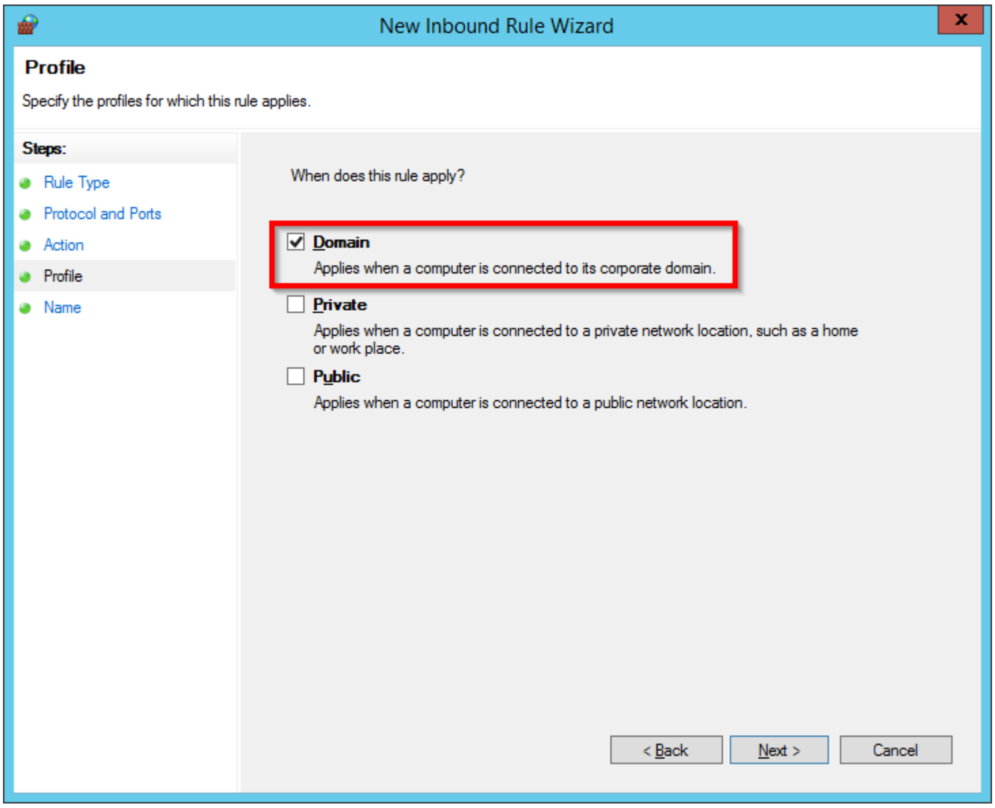
What action should be taken when a connection matches the specified conditions?

● Allow the connection
This includes connections that are protected with IPsec as well as those are not.

○ Allow the connection if it is secure
This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.

○ Block the connection

Select "Allow the connection".



New Inbound Rule Wizard

Profile

Specify the profiles for which this rule applies.

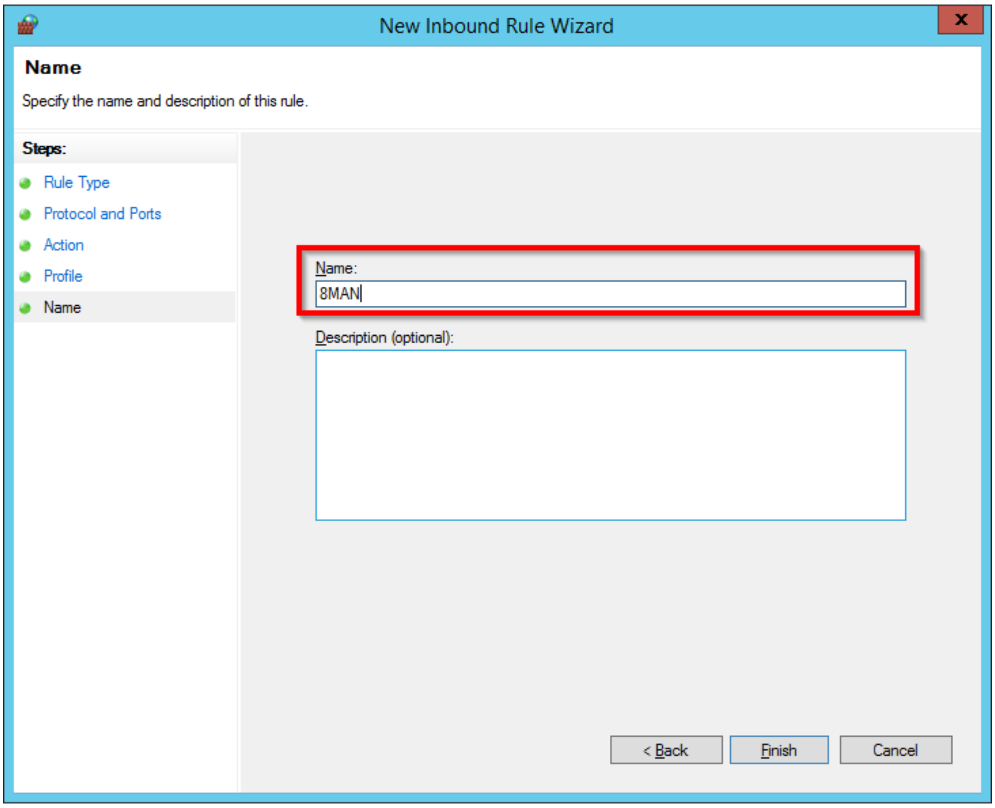
When does this rule apply?

☑ **Domain**
Applies when a computer is connected to its corporate domain.

□ **Private**
Applies when a computer is connected to a private network location, such as a home or work place.

□ **Public**
Applies when a computer is connected to a public network location.

Select only the option "domain".



New Inbound Rule Wizard

Name

Specify the name and description of this rule.

Name: 8MAN

Description (optional):

Enter a name for the rule.

Repeat as necessary. Create a rule for the 8MAN server and all collectors where Windows firewalls are active.

6.3 Communication between the 8MAN Server and the Graphical User Interface (GUI)

By default 8MAN uses port "55555" for all communication between server and client (GUIs).
If you would like to use a different port, please contact support.

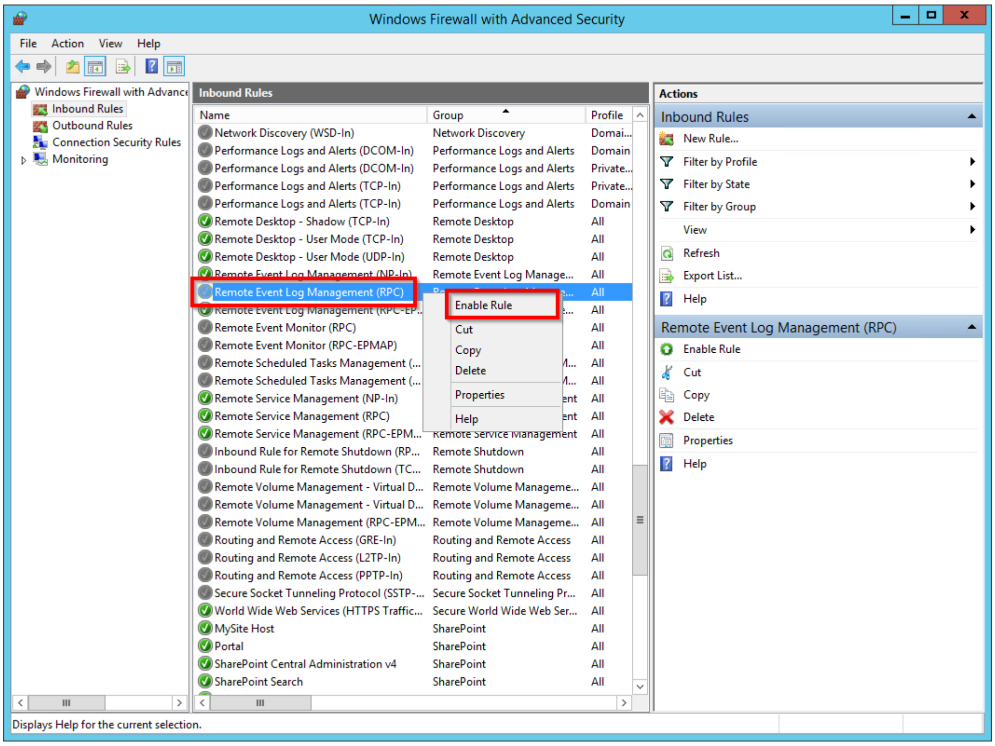
Once you have initiated the connection a random high port is used for any response communication.
If the firewall is blocking communication between client and server, then a random port range can be selected to be excluded from the firewall and allow proper communication. In these cases please contact support.

6.4 Communication between the 8MAN Server and SQL Server

By default 8MAN uses TCP port 1433 for all communication between the 8MAN server and SQL server. Collectors only communicate with the 8MAN server and do not communicate directly with the SQL server.

For more information regarding remote access to SQL servers and the required firewall settings, please contact Microsoft.

6.5 Configuring the Windows Firewall for AD Logga



Name	Group	Profile
Network Discovery (WSD-In)	Network Discovery	Domai...
Performance Logs and Alerts (DCOM-In)	Performance Logs and Alerts	Domain
Performance Logs and Alerts (DCOM-In)	Performance Logs and Alerts	Private...
Performance Logs and Alerts (TCP-In)	Performance Logs and Alerts	Private...
Performance Logs and Alerts (TCP-In)	Performance Logs and Alerts	Domain
Remote Desktop - Shadow (TCP-In)	Remote Desktop	All
Remote Desktop - User Mode (TCP-In)	Remote Desktop	All
Remote Desktop - User Mode (UDP-In)	Remote Desktop	All
Remote Event Log Management (NP-In)	Remote Event Log Manage...	All
Remote Event Log Management (RPC)	Re... e...	All
Remote Event Log Management (RPC-EP...	e...	All
Remote Event Monitor (RPC)		All
Remote Event Monitor (RPC-EPMAP)		All
Remote Scheduled Tasks Management (...	M...	All
Remote Scheduled Tasks Management (...	M...	All
Remote Service Management (NP-In)	ent	All
Remote Service Management (RPC)	ent	All
Remote Service Management (RPC-EPM...	Remote Service Management	All
Inbound Rule for Remote Shutdown (RP...	Remote Shutdown	All
Inbound Rule for Remote Shutdown (TC...	Remote Shutdown	All
Remote Volume Management - Virtual D...	Remote Volume Manageme...	All
Remote Volume Management - Virtual D...	Remote Volume Manageme...	All
Remote Volume Management (RPC-EPM...	Remote Volume Manageme...	All
Routing and Remote Access (GRE-In)	Routing and Remote Access	All
Routing and Remote Access (L2TP-In)	Routing and Remote Access	All
Routing and Remote Access (PPTP-In)	Routing and Remote Access	All
Secure Socket Tunneling Protocol (SSTP-...	Secure Socket Tunneling Pr...	All
World Wide Web Services (HTTPS Traffic...	Secure World Wide Web Ser...	All
MySite Host	SharePoint	All
Portal	SharePoint	All
SharePoint Central Administration v4	SharePoint	All
SharePoint Search	SharePoint	All

If the Windows firewall is applied on the DC that you would like to monitor, then a pre-defined Microsoft rule "Remote Event Log Management (RPC)" must be enabled.

Repeat the process as needed for all DCs that you would like to monitor.

7 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 "Exchange Scans".
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.

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- JetBrains Annotations, ©2007-2012 JetBrains, http://www.apache.org/licenses/LICENSE-2.0
- 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, https://communities.netapp.com/docs/DOC-1152 (Usage only for FS Logga for NetApp Fileserver)
- WPF Shell Integration Library 3.0.50506.1, © 2008 Microsoft Corporation , http://archive.msdn.microsoft.com/WPFShell/Project/License.aspx
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