MAPILab Reports
Installation Guide
Document version 3.02

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Introduction

This manual has been produced by MAPILAB and contains the information needed for successful installation of MAPILab Reports for Exchange. We ask that you read the entire contents of all the sections of this manual carefully before installing the product.

This manual contains the following sections:

Section 1. Introduces the architecture of the product and gives instructions concerning the type of deployment which is permissions for your organization.

Section 2. Lists the system requirements and gives instructions concerning the preparation of computers for installation of the Product by installing the necessary applications and operating system components.

Section 3. Contains information which may be useful during installation of the product and which helps to complete the deployment with standard scenarios.

Section 4. Contains instructions for creating user accounts which will be used for the collection of data.

Section 5. Helps you complete installation and initial setup of the Product and describes the minimum Product settings which should be checked immediately after installation and what actions to take in preparation for the first data collection.

Product documentation includes two other manuals:

Administrator Guide. This contains a detailed description of the working principles of the Product, tips and tricks, optimization, and diagnostics of data collection.

User Guide. This contains a detailed description of all the programs included in the Product and information about working with the Product including report creation, use of the report designer and editing of visual schemes.

We strongly recommend performing installation and initial setup with the assistance of this Guide, and to familiarize yourself with the **Administrator Guide**.

1. Product architecture and general explanations
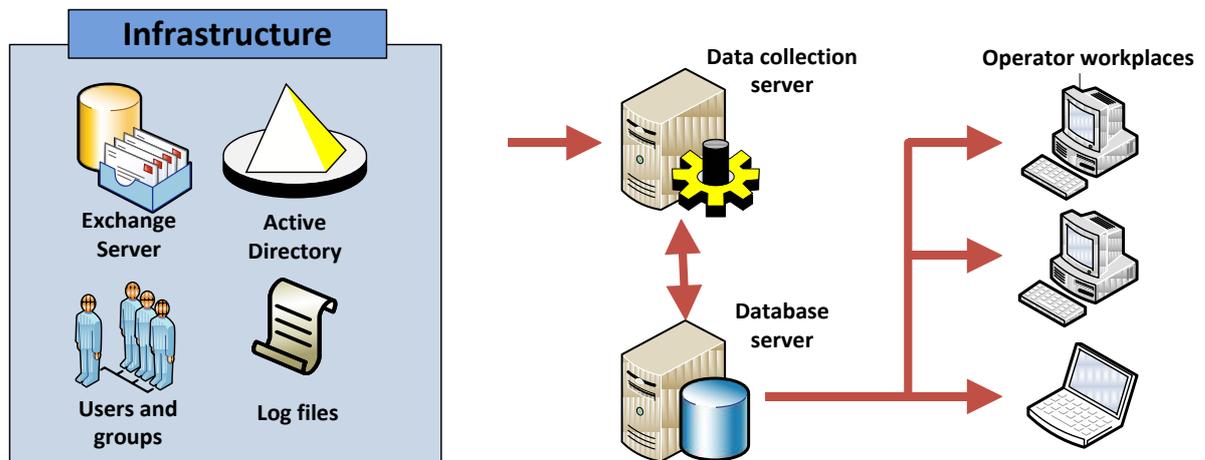
Here are the explanations of key concepts which are important to gain a general understanding of the architecture of the Product.

- **Infrastructure**. Active Directory domain controllers, workstations, Exchange servers and other **infrastructure objects**, from which MAPILab Reports for Exchange collects data. Note that data is remotely collected through various network interfaces, and no program modules are installed on infrastructure objects.

- **Administrator**. The User of the Product who performs installation, setup, and service of the Product.

- **Data collection server**. A physical or virtual computer, on which MAPILab Reports for Exchange is installed and from which data is collected. In other words, all program code which is run to perform remote data collection is executed on that computer. This computer has a **Console** installed, from which data collection can be set up and managed. This console can also be used to create reports. The Product license allows installation on only one data collection server (unless a special agreement is made).

- **Database server**. MAPILab Reports for Exchange uses Microsoft SQL Server to store collected data. A license for Microsoft SQL Server must be acquired separately; it is not included in the Product. It is possible to use the free edition, Microsoft SQL Server Express. MAPILab Reports for Exchange does not put any restrictions on the location of the DBMS — it can be deployed on a data collection server or on any workstation or server on the organization's network.

- **Operator**. A User who has rights only to generate reports using the data from the database.

- **Operator workplaces**. This is the physical or virtual computer, on which MAPILab Reports for Exchange is installed but from which only reports may be generated from the database. Operators do not have the right to manage data collection or data collection settings. They only have the right to read data from the database and create reports. There is no limit on the number of operator workstations which can be created under a single product license.

Deployment types of MAPILab Reports for Exchange:

Compact deployment. In this case, deployment is completed on a single workstation (for example, running Windows XP or Windows Vista), on which the data collection server is deployed and where the DBMS is installed. Users having the rights to interactive access to this computer and to launch components of MAPILab Reports for Exchange can manage data collection and create reports. For other users, automatic generation of reports according to the needs of individual users can be scheduled. Generated reports can be sent by email or published in a shared folder, on SharePoint, or on an FTP server.

Typical deployment. In this case, the DBMS and the data collection server are located on different servers, and on one or more operator workplaces are set up. The reason for separation of the DMBS and the data collection server is usually to employ a high-performance database server which is already available in the organization, and to reduce the cost of licensing of the DMBS as well as the storage and data backup systems.

Because the license for MAPILab Reports for Exchange does not include a license for Microsoft SQL Server, and a license to MAPILab Reports for Exchange does not limit the number of operator workplaces, the type of deployment selected, or the use of a hybrid version, will not affect the licensing cost of MAPILab Reports for Exchange. You can choose or change the type of installation according to your needs.

Technologically, for example, in terms of the integrity of the database for MAPILab Reports for Exchange, there is no difference if data collection is performed on one computer or multiple computers at the same time. However, it should be noted that data collection can cause a significant load on the infrastructure objects (for example, when collecting data on the contents of Exchange mailboxes), which may lead to lower performance, and even partial denial of service, if a resource-intensive task is launched simultaneously from multiple computers. Therefore, management of data collection and the task schedule should be entrusted only to qualified personnel. In addition, the product license allows you to install only one data collection server. More information about the construction of a distributed deployment, you can find in **Administrator Guide**.

2. System requirements

2.1. Minimal hardware requirements

The minimal hardware requirements of the Product correspond to physical or virtual computers with the following configurations:

Installation role	CPU	RAM	HDD
Data collection server	1 GHz	256 MB	500 MB
Operator Workplace	600 MHz	128 MB	30 MB
Database server	1 GHz	512 MB	1.9 GB

2.2. General software requirements

For any of the above roles—data collection server, operator workplace, one of the following operating systems is required:
- Microsoft Windows Server 2003 with Service Pack 1 (SP1) or higher
- Windows Server 2003 R2
- Windows Server 2008
- Windows Server 2008R2
- Windows XP with SP2 or higher
- Windows Vista
- Windows 7

The Product can also be installed on the following systems:
- Small Business Server 2003 with SP1 or higher
- Small Business Server 2003 R2
- Small Business Server 2008
- Essential Business Server 2008

    Both 32- and 64-bit systems are supported.

Supported versions of Microsoft Exchange Server:
- Microsoft Exchange Server 2000
- Exchange Server 2003
- Exchange Server 2007
- Exchange Server 2010

To install the data collection server and operator workplace, the following applications and operating system components must be present before beginning:

- **Microsoft .NET Framework v3.5**. This is included standard in Microsoft Windows Server 2008R2, Windows Server 2008, Microsoft Windows Server 2003 R2, Windows 7and Windows Vista. For other operating systems, this platform can be downloaded from Microsoft website.

- **Microsoft Management Console v3.0**. This is included standard in Microsoft Windows Server 2003 R2, Windows Server 2008, Windows Server 2008R2, Windows XP SP3, Windows Vista and Windows 7. For other operating systems, this component can be downloaded from the Microsoft Knowledge Base.

- **Internet Information Services (IIS) metabase** (compatibility with IIS 6 metabase component). It is included into all supported operating systems, but is not installed by default. Installation of this component is varies for each of the following operating systems: Windows XP and Windows Server 2003, Windows Vista, Windows Server 2008. Installation instructions for this component are given in p.2.4.

- **Exchange Management Console (EMC).** This console is included into the Exchange 2007 Management Tools (for Microsoft Exchange Server 2010 – in installation pack). Note that to collect data from Microsoft Exchange Server 2003 servers, installation of EMC is not required; installation of the EMC does not affect the data collection from Exchange 2003. For 64-bit operating systems, the EMC can be installed from Microsoft Exchange 2007 (2010) installation package (details are given in the following document: http://technet.microsoft.com/en-us/library/bb232090.aspx.) The Exchange 2007 Management Tools For 32-bit operating systems can be downloaded from the Microsoft company website: http://www.microsoft.com/downloads/details.aspx?FamilyID=6be38633-7248-4532-929b-76e9c677e802. Exchange Management Console 2010 can be installed only on 64-bit operating systems.

Instructions for installing these components can be found on the Microsoft company website.

2.3. Database server software

The role of database server for MAPILab Reports for Exchange is performed by one or multiple computers running Microsoft SQL Server 2005 or Microsoft SQL Server 2008; the free versions, Microsoft SQL Server 2005 Express Edition and Microsoft SQL Server 2008 Express, are also supported.

None of the modules of the Product are installed on the database server, and no files of the Product are copied onto the database server. During installation of the Product, the database and the structure of tables in the database are created.

A license for Microsoft SQL Server is not included in the Product and must be obtained separately. Microsoft SQL Server 2008 Express can be downloaded from the Microsoft website.

2.4. Installation of Internet Information Services (IIS) metabase

For data collection about usage of Outlook Web Access, the **Internet Information Services (IIS) metabase component** (IIS 6 metabase compatibility component) is required. Installation of this component is different for the various operating systems: Windows XP and Windows Server 2003, Windows Vista, and Windows Server 2008.

- To install the metabase components in Windows XP or Windows Server 2003, the World Wide Web Service component must be installed in the operating system; this is a subcomponent of Internet Information Services (IIS) and is included in the subcomponents of all supported operating systems. Please note that World Wide Web Service, which is an IIS component, contains a subcomponent which is also called World Wide Web Service. Installation of the subcomponent of the lowest level is sufficient; as it showed in the image below:
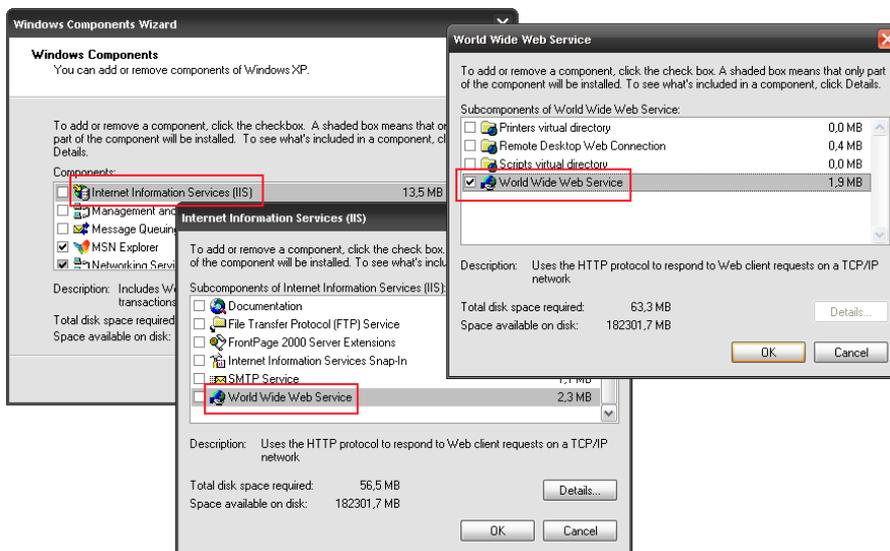
- For the Windows Vista family of operating systems, the operating system component called "IIS Metabase and IIS 6 configuration compatibility" is required, which included in the IIS components, as shown in the image below:
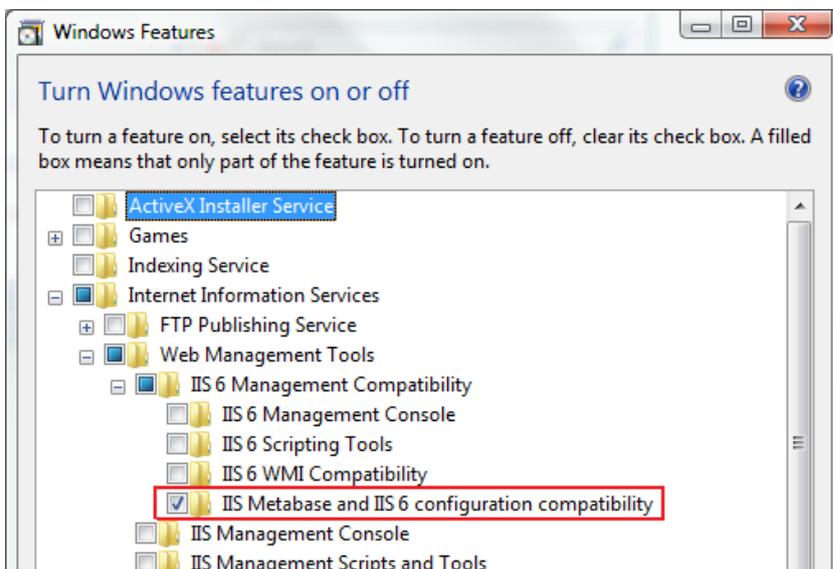
- For the Windows Server 2008 family of operating systems, installing the "IIS 6 Metabase compatibility" component is required, as shown in the image below:
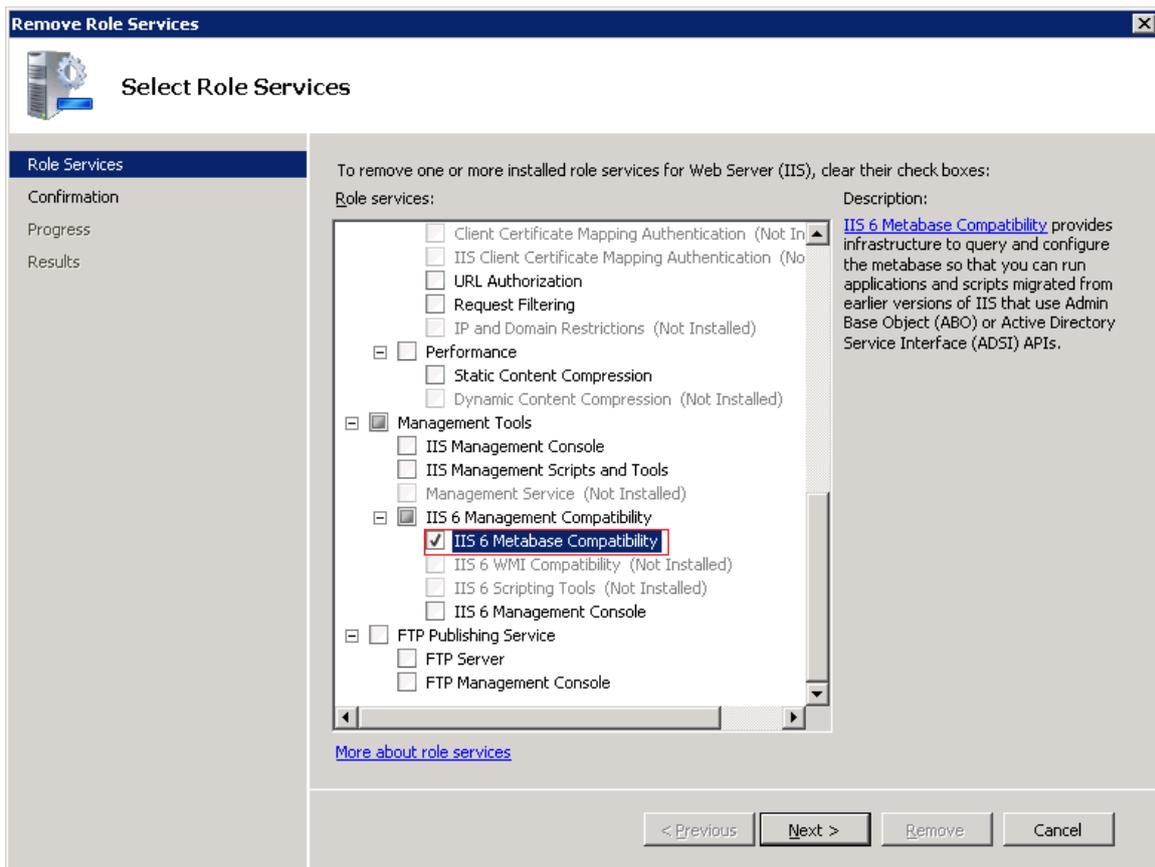
For data collection about the size of mailboxes and public folders, obtaining a list of disabled mailboxes and about accessing mailboxes at Microsoft Exchange Server 2007 or 2010, Exchange Management Console (EMC) is required. If your organization needs to collect data from the Exchange 2007 or 2010 servers, you need to setup the EMC on the data collection server.

The console is contained in Exchange 2007 Management Tools (in installation pack for Exchange 2010). Note that installation of the console is not required for data collection from Microsoft Exchange Server 2003; installation of Exchange 2007 (2010) console does not affect data collection from servers using Exchange 2003.

For 64-bit operating systems, Exchange 2007 console can be installed from the installation pack of Microsoft Exchange Server; more detailed information can be found in the document:

http://technet.microsoft.com/en-us/library/bb232090%28EXCHG.80%29.aspx.

Exchange 2007 Management Tools for 32-bit operating systems can be downloaded from the Microsoft site:

http://www.microsoft.com/downloads/details.aspx?FamilyID=6be38633-7248-4532-929b-76e9c677e802.

For 64-bit operating systems, Exchange 2010 console can be installed from the installation pack of Microsoft Exchange Server; more detailed information can be found in the document:

http://technet.microsoft.com/en-us/library/bb232090.aspx

3. Product installation

The installation process will vary depending on the type of deployment – compact, typical, or a combination of the two.

3.1. Compact deployment scenario

Compact deployment entails installation of all components of the Product, including the database server, on a single workstation. Note that to install the product local administrator permissions are required. A list of required actions follows:

a. Install the components required in Section 2 of this guide on the computer.
b. Install Microsoft SQL Server on the computer in compliance with its manual.
c. Launch the installation file and follow the instructions of the installation wizard.
d. In the "Setup type" step, choose "Data collection server".
e. In the next step, choose all components.
f. In the "Database server" step, choose the local computer and specify a user account which has the permissions to create a database and which will have the 'db_owner' role of the database created.
g. Follow the instructions of the wizard to complete the installation of the Product.

3.2. Typical deployment scenario

Typical deployment means that the data collection server and the database server are located on different computers, and there is one or more operator workplace. Note that to install the product local administrator permissions are required. A list of required actions follows:
A. On the computer which will serve as the data collection server:
   a. Install all components required in Section 2 of this Guide.
   b. Launch the installation program file and follow the instructions of the installation wizard.
   c. In the "Type of deployment" step, choose "Data collection server".
   d. In the next step, choose all components.
   e. In the "Database server" step, indicate the database server and a user account which has the permissions to create a database and which will have the 'db_owner' role to the created database.
   f. Follow the instructions in the wizard to complete the installation.
B. On the database server, create a user with 'db_datareader' role permissions for the database of the Product.
C. On each computer which will serve as an operator workplace:
   a. Install the components **Microsoft .NET Framework v3.5** and **Microsoft Management Console v3.0,** which are required in Section 2 of this Guide.
   b. Launch the installation file and follow the instructions in the wizard.

c. In the "Type of deployment" step, choose "Operator workplace".

d. In the next step, choose all components.

e. In the "Database server" step, specify the database server and the user account which was created in Step B.

f. Follow the instructions in the wizard to complete the installation.

3.3. Combination deployment

Combination deployment refers to, among other possibilities, the following installation types:

- **Distributed deployment.** In some complicated environments, one data collection server may not have physical access to all infrastructure objects in the organization. In this case, each segment of the network must have its own data collection server, and all data collection servers must save data in a united database.
- **Deployment with multiple databases.** The Product allows use of different databases for different report packs and even for different data collectors inside one report pack. This type of deployment can be applied for the load balancing or for improved management of access permissions.

This deployment scenario does not differ in principle from the compact or typical deployments. Nevertheless, we recommend that you familiarize yourself with the **Administrator Guide** before beginning this process.

3.4. Update from a previous version

When updating the Product from a previous version, it is necessary to read the installation instructions which you receive with the update carefully.

Generally, you will need to launch the installation program on all data collection servers and all operator workplaces and, as instructed in the installation wizard, carry out the steps needed to update each installed component of the Product.

In the case of multiple databases, you must upgrade all the databases of the product in your organization. In this case, for each database, you must run the installer, choose "Custom installation', in the Components list, and select the "Database components" only. At the step "Database Server" specify the updated database server and the database which are used by the product. During the installation, the program will be added to the required tables in the database, all stored data in the database are kept.

3.5. Uninstalling

Removing of the product is a performed through the applet "Add or Remove Programs (Programs and Features) in the Control panel of a computer. After removal of the product are remained the following elements:

- Product database on the database server;
- Data collection tasks for Windows Scheduler;
- Products logs and configuration files.

This allows you to update the product with saving all settings and database and subsequent installation in the same folder as a new version. Remove these items manually if you do not want to keep them.

4. Creating a user account for data collection

Before beginning the setup process, a user account which will be used by the Product to collect data must be created. In this guide, the simplest method of creating an appropriate user account is given. A detailed list of objects and services from which data can be collected and the required permissions for access to each of them can be found in the **Administrator Guide**.

For data collection, a user account must be created with:

- read permissions for all naming context Active Directory;
- read permissions to Microsoft Exchange Server and IIS log folders;
- read permissions to the contents of all Exchange public folders;
- read permissions to the contents of all Exchange mailboxes;
- read and write permissions on the database
- user must have a mailbox.

These permissions, in most cases, cannot be given to a single user account. Reading permissions to Active Directory objects and access to log folders can be obtained by including the user account in the Domain Admins group in all domains of your organization, but such domain administrators are, by default, denied access to the contents of mailboxes in Exchange stores.

Therefore, we recommend that two user accounts be created for data collection.

The first user account, for data collection from Active Directory, Exchange and IIS log files, is provided with all necessary permissions be including it in the Domain Admins group of all domains of the organization. Also, this user must provide the db_datareader and db_datawriter role for the database of the product (if these permissions were not inherited by this user)

The second user account, for data collection of the contents of mailboxes and public folders, should be simply included into the Domain Users group, Exchange Organization Administrators (Organization Management, Public Folder Management – for Exchange 2010) group and local Administrator group on the data collection server computer (for Exchange 2003 you must delegate

Exchange Full Administrator permissions to this user account). Also, this user must provide the db_datareader and db_datawriter role for the database of the product. In addition, for this user must be granted access to read the content of users' mailboxes. The process of granting such permissions to the user account differs according to the version of Microsoft Exchange Server:

- **Microsoft Microsoft Exchange Server 2003.**

   In the Exchange System Manager snap-in for all mail message stores, open the properties window, go to the Security tab and add the user account. The system grants full access rights by default to the user account. Some of the rights granted are extraneous and you can limit them, leaving only "Read", "Execute", "Read permissions", "List object", "Read properties", "Receive As" and "Administer information store".
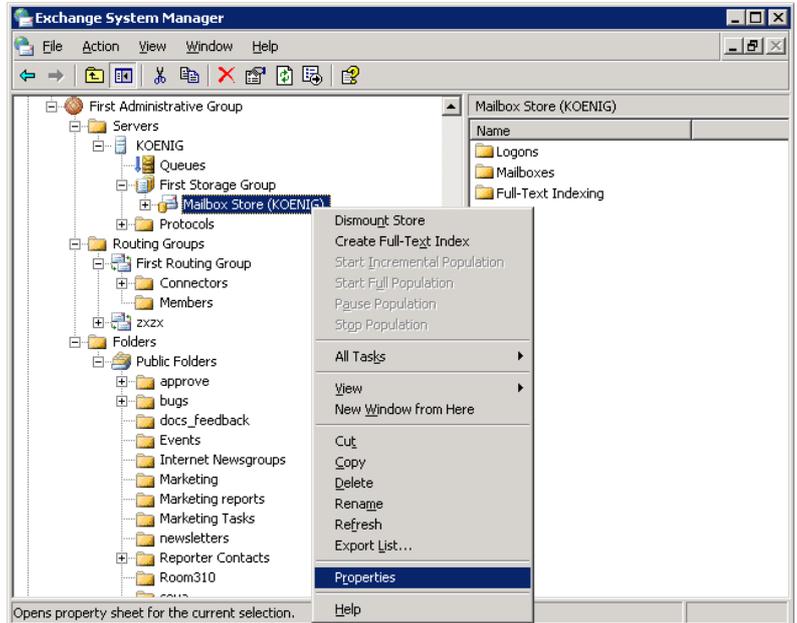
- **Microsoft Exchange Server 2007.**
   Launch the Exchange Management Shell and run two following commands:

   Get-ClientAccessServer | Add-ADPermission -User "username" -AccessRights ExtendedRight -ExtendedRights MS-Exch-EPI-May-Impersonate, MS-Exch-EPI-Impersonation

   and

   Add-ADPermission -Identity "Mailbox Database" -User "username" -ExtendedRights Receive-As

   Where:
   	Mailbox Database − the name of the mailbox store;
   	Username − user account for data collection.

   The second command must be executed for all mailbox stores on all Exchange servers. Note that these rights do not cover newly created mail stores. When creating a new store, do not forget to allow necessary permissions to the user account used for data collection.

- **Microsoft Exchange Server 2010.**
   Launch the Exchange Management Shell and run two following commands:

   Get-ClientAccessServer | Add-ADPermission -User "username" -AccessRights ExtendedRight -ExtendedRights MS-Exch-EPI-May-Impersonate, MS-Exch-EPI-Impersonation

and

Add-ADPermission -Identity "Database Distinguished Name" -User "username" -ExtendedRights Receive-As

Where:

Username – user account for data collection;

Database Distinguished Name - container where all mailbox databases exist in Active Directory.

This Distinguished Name you can get by two ways.

1. Run following command in EMS:

Get-MailboxDatabase |fl DistinguishedName.

It will return the DNs of all the MBX DBs like this:

"CN=Mailbox Database,CN=Databases,CN=Exchange Administrative Group (FYDIBOHF23SPDLT),CN=Administrative Groups,CN=First Organization,CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=example,DC=local"

Discard the name of the Mailbox Database (i.e first CN= entry) and select the container DN from this which will be:

Add-ADPermission -Identity " CN=Databases,CN=Exchange Administrative Group (FYDIBOHF23SPDLT),CN=Administrative Groups,CN=First Organization,CN=Microsoft Exchange,CN=Services,CN=Configuration,DC=example,DC=local " -User "username" -ExtendedRights Receive-As

2. Using ADSIEdit.msc tool:

Open ADSIEdit and then go to "Configuration-> Services->Microsoft Exchange->YourExchangeOrgnaizationName->Administrative Groups->Exchange Administrative Group (FYDIBOHF23SPDLT)->Databases", where YourExchangeOrgnaizationName – name of your Exchange organization. you can see its DN by looking at the property of this "Databases" container.

5. Initial setup of the Product

Initial setup of the Product includes a minimal number of settings on the data collection server, and creation of data collection tasks and a schedule for their execution. Only after this, as data collection tasks are created and completed, does data appear in the database such that reports can be generated from operator workplaces.

Operator workplaces do not require initial setup, since all settings (connection to the database) are usually made during installation of the Product.

After installation, the Product will work for 30 days at fully functional trial mode. When this period has expired, data collection ends and reports can no longer be created. To prevent an

interruption in service, it is advisable to make the decision concerning licensing before the trial period expires.

Step 1. Installation of necessary components

MAPILab Reports for Exchange automatically checks installation of necessary software components, as described in Section 2.2. If necessary components are absent in the MAPILab Reports for Exchange console will indicate their absence in "Deployment" section. Return to paragraph 2.2 of this guide and install necessary components.
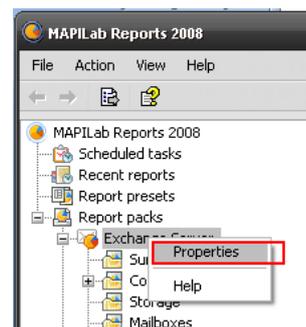
Step 2. User accounts for data collection

MAPILab Reports for Exchange automatically checks access permissions of the user accounts. To do this in the MAPILab Reports for Exchange console click "Run" in the "Deployment" section on Step 2. In the wizard, enter the credentials of the first user account, created by subsection 4 of this Guide. The wizard will display the result of the check of the first user and prompt you for credentials of the second user. Similarly, a second user account will be tested. The result will be reflected on the step 2 in the Deployment console.

In the case of failure, please check paragraph 4 of this Guide or Administrator Guide to configure the necessary privileges of user accounts for data collection.

Step 3. Creating data collection tasks

On this step, the Wizard allows you to quickly configure the data collection tasks. The data collection tasks are used to reduce the load on the infrastructure of the organization of data collection, as well as to accelerate the formation of reports based on stored data. More about data collection tasks can be found in the Administrator Guide. By default, the Wizard of data collection tasks is configured to create three tasks of data collection. This is done in order to distribute the load on the data collection server as well as on infrastructure objects.

In the "Deployment" section of the MAPILab Reports for Exchange console, on Step 3 click "Start" to start the wizard. On the step of data collection filters, you can limit the collection of data, if necessary (details in the Administrator Guide). On the next step of the wizard, specify the task start time, the values of other fields can be left unchanged. On the following steps, adjust remaining two tasks of data collection in the same way.

Note, that the run time of tasks is recommended to set the period of minimum load of infrastructure, such as a night, and with the maximum time intervals between tasks.

Step 4. Wait on one or more tasks to complete

To generate reports, you will need to await the completion of data collection task. Despite the established schedule, you can force the implementation of data collection in section Scheduled tasks of the MAPILab Reports for Exchange console. To do this, go to the specified section, and run one or more tasks of data collection by clicking the appropriate button in the "Actions" bar of the console or in the context menu. Please note that a large amount of information infrastructure, data collection may take a long time. After completion of data collection, you can see its results in the section "Scheduled tasks" and start to generate reports.

6. Diagnostics of malfunctions

After completing the first data collection, a diagnostic check should be performed to check whether all data has been collected. Information about diagnosis of malfunctions can be found in the corresponding section of the **Administrator Guide**.

In conclusion

For more detailed information about the product and its work features, check the **Administrator Guide** of MAPILab Reports for Exchange.

Appendix A. Troubleshooting of common problems

A. *During installation of MAPILab Reports for Exchange an error of code 27502 occurs: «Unable to connect to Microsoft SQL Server".*

The installation wizard is unable to find the database server. Make sure that the name of the database server is correctly entered and that the server has its TCP/IP protocol setting as 'Enabled'. By default, the TCP/IP protocol in Microsoft SQL Server 2005 is disabled.

B. *After installing MAPILab Reports for Exchange in the terminal or remote desktop session, the fonts in the report viewer are incorrectly displayed.*

Log off the system. Upon logging again, the fonts will appear properly.

C. *When creating a report, the message, "No report data found. Create empty report?" appears.*

There is no data in the database for the report in question. Make a diagnostic check on data collection. (See the **Administrator Guide**).

D. *On the execution results of the data collection tasks for some of the tables it is «skipped» in the "time" field.*

In this table data is not collected, because such data has already existed in the database. Data were collected by other category collector, it doesn't need to update.

E. *On the execution results of the data collection tasks for some of the tables is «0» in the "Rows" field and in the "time" field does not indicated "skipped".*

This indicates that the data in this table is not collected. The reasons may be different: such data doesn't exist in the source (e.g., table ExchangeAdministratorsPre2007 - if your organization doesn't have Exchange versions 2003 and earlier, such groups don't exist in Active Directory); the user on which behalf the data have been collected, doesn't have enough permissions to collect such information; the table is a dictionary and its completion is performed on another level. To identify the problem, check the **Administrator Guide**.

F. *In the wizard, which checks accounts for the data collection «Error» is written, although all the necessary permissions granted.*

Test accounts wizard are used to test the same methodology as data collectors. In such cases it is necessary to determine effective permissions for the account for each data source. Use **Administrator Guide** or our technical support service to solve the problem.