

EPA – Exchange Server Profile Analyzer

Written by Marc Grote - <mailto:grotem@it-training-grote.de>

Abstract

In this article I will show you how to install and use the Exchange Server Profile Analyzer (EPA) to get statistics about your Exchange Server usage.

Let's begin

You can use the Exchange Server Profile Analyzer tool to collect statistical information from your Exchange mailbox stores. The Microsoft Exchange Server Profile Analyzer is a great tool to see statistics about your Exchange mailbox stores. You can use the Microsoft Exchange Server Profile Analyzer to analyze the performance and health of your Exchange Servers. The results of EPA can also be used for capacity planning of your Exchange Server infrastructure because you see several counters and based on the results you can plan to move mailboxes to other servers or add additional Exchange servers. EPA creates a user profile that describes how many actions an average user performs in an average day so that you have a good understanding about what your users do.

Installation

You can download EPA for free from the following [website](#). After downloading the tool, extract the files to a temporary directory and begin the installation by double clicking the EPA.MSI package.

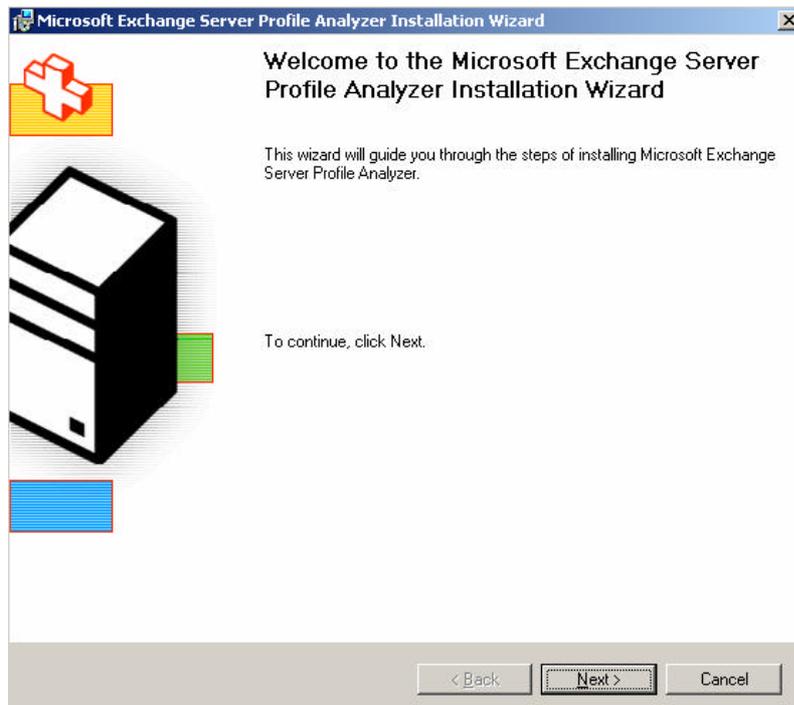


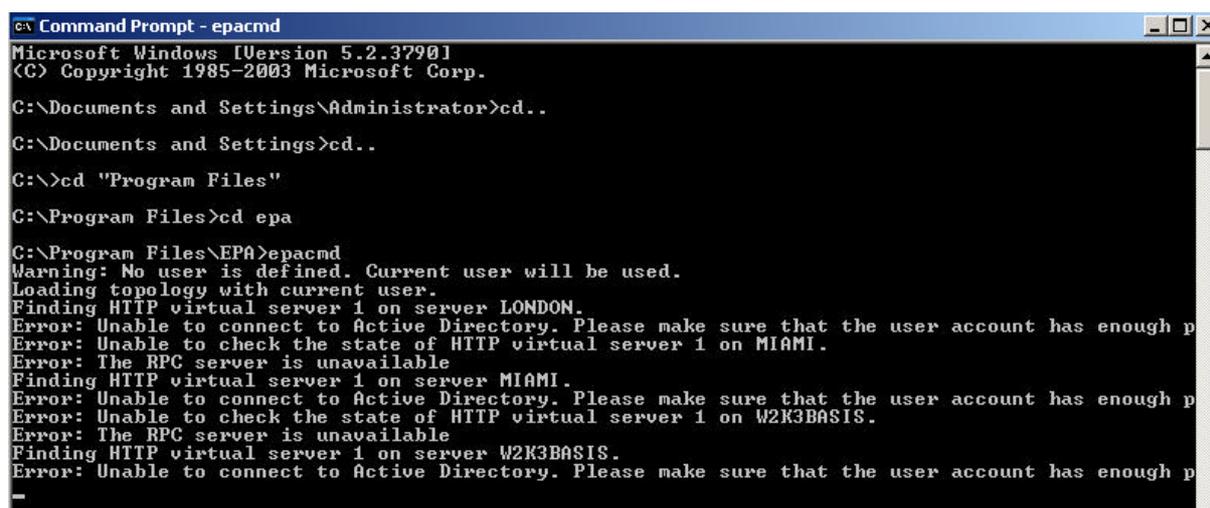
Figure 1: EPA installation

The EPA tool is building a profile in a similar way to the [storstat.exe](#) tool from the Microsoft Backoffice Resource Kit.

EPA is available in two versions

- EPAWin
- EPACmd

EPAWin is the GUI tool and EPACmd is the command line tool which you can use to automate the collection via scripts and batch files.



```
Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\Administrator>cd..
C:\Documents and Settings>cd..
C:\>cd "Program Files"
C:\Program Files>cd epa
C:\Program Files\EPA>epacmd
Warning: No user is defined. Current user will be used.
Loading topology with current user.
Finding HTTP virtual server 1 on server LONDON.
Error: Unable to connect to Active Directory. Please make sure that the user account has enough p
Error: Unable to check the state of HTTP virtual server 1 on MIAMI.
Error: The RPC server is unavailable
Finding HTTP virtual server 1 on server MIAMI.
Error: Unable to connect to Active Directory. Please make sure that the user account has enough p
Error: Unable to check the state of HTTP virtual server 1 on W2K3BASIS.
Error: The RPC server is unavailable
Finding HTTP virtual server 1 on server W2K3BASIS.
Error: Unable to connect to Active Directory. Please make sure that the user account has enough p
```

Figure 2: EPACMD

EPA contains two more executables:

EPAOWACMD is designed to generate a user profile by analyzing OWA log files
EPASUMMARIZER is a tool for EPA to combine output files from EPA to summarize statistics across multiple data collections.

After setup has finish you can start the Exchange Server Profile Analyzer from the Start menu under *All Programs - Microsoft Exchange*

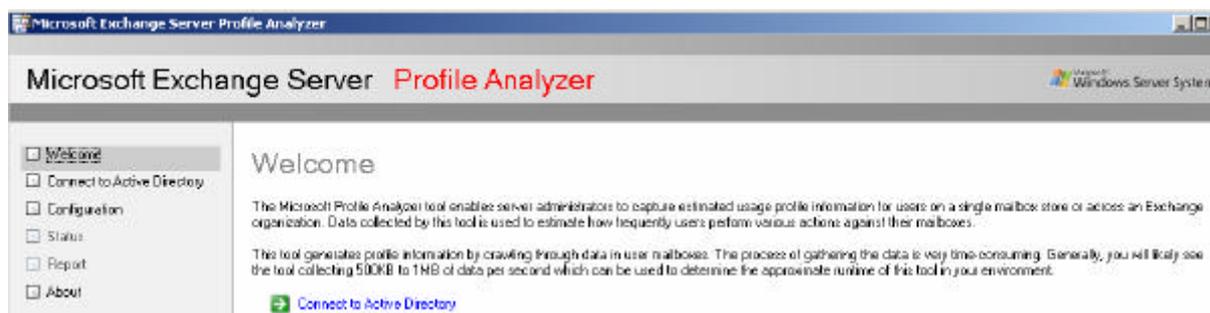


Figure 3: EPA Welcome screen

As a first you must connect to the Active Directory. EPA reads the Exchange configuration from the configuration partition in AD and collects things like Exchange Server, Exchange Organization name, Storage Groups and many more.

You can use the credentials of the currently logged on user or you can specify alternate credentials. The account must have the right to read the Exchange configuration.



Figure 4: Specify credentials to execute the tool

The Exchanger Server Profile Analyzer now collects information from Active Directory

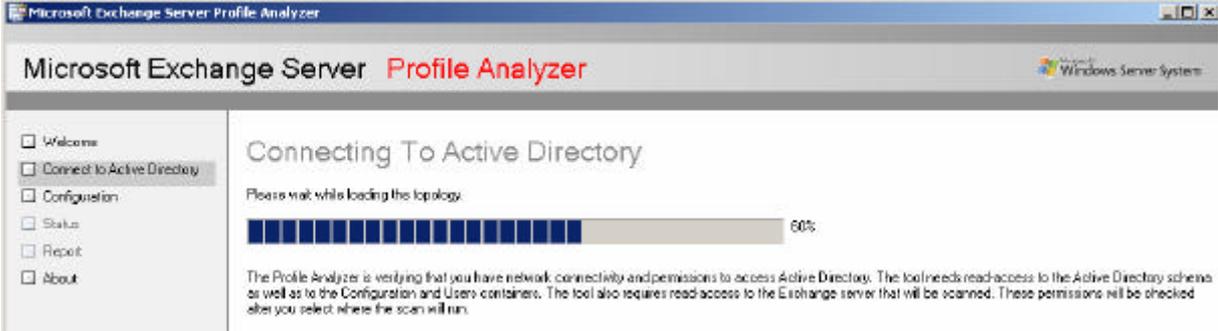


Figure 5: Connect to Active Directory

How EPA collects data from single mailbox

The Exchange Server Profile Analyzer collects mailbox information by using WebDAV and requires the Full Mailbox access right for the account that executes EPA.

Exchange Server Profile Analyzer Data Collectors

Collector Name	Description
MailboxTotalSize	The total size, in bytes, of the mailbox
RulesTotalCount	Total number of rules defined in the mailbox
FolderTotalCount	Total number of visible folders in the mailbox
FolderMaxMessageCount	Maximum number of messages in any one folder
FolderTopLevelCount	Number of visible folders in the mailbox
FolderUserCreatedTopLevelCount	Number of user created folders that are direct children of the root of the mailbox
SearchFolderCount	Number of search folders in the current mailbox
FolderHierarchyHeight	The height of the folder tree
FolderTopLevelAverageSubfolders	Average number of children each child of the folder tree root has.
FolderTopLevelAverageHeight	Average height of each of the root folder's children's subtrees.
FolderSize	Size in bytes of all the messages in a folder (takes list of folders to measure, e.g. "Inbox, Deleted Items, Sent Items")
FolderSizeAggregates	Folder size statistics (across all folders in mailbox) - provides Avg, Min, Max.
MessageMailboxCount	Number of messages in the mailbox
MessageFolderCount	Number of messages in a folder (takes a list of folders to measure, e.g. ("Inbox", "Deleted Items", "Sent Items"))
MessageUnreadCount	Number of messages that are unread
MessageDAMCount	Number of Deferred Action Messages in the mailbox
MessageReplyCount	Number of messages where the subject prefix is "RE:" or equivalent subject prefix for the given culture
MessageForwardCount	Number of messages where the subject prefix is "FW:" or equivalent subject prefix for the given culture
MessageContainsAtLeastOneDLCount	Number of messages containing at least 1 distribution list in the recipients table
MessageContainsAtLeastOneAttachmentCount	Number of messages containing at least 1 attachment
MessageSizeDistribution	Counts messages in a size range (takes a list of ranges, e.g. "2,10,100,1024" would provide counts of messages from 0-2,2-10,10-

	100,100-1024,1024-beyond)
MessageSizeAggregates	Message size statistics across all messages (provides Avg,Min,Max)
MessageReceivedPerDayAggregates	Average number of messages received per day (provides Avg,Min,Max, and can restrict to the last N days)
MessageSentPerDayAggregates	Average number of rows in each sub table when the sent items folder is categorized by date (provides Avg,Min,Max and can restrict to last N days)
MessageRepliesSentPerDayAggregate	Average number of messages prefixed with "RE:" sent per day (provides Avg,Min,Max and can restrict to last N days)
MessageForwardsSentPerDay Aggregates	Average number of messages prefixed with "FW:" sent per day (provides Avg,Min,Max and can restrict to last N days)
MessageBodyTypesCount	Number of messages in each body type requested (takes list of body types as input, e.g. "RTF,HTML,Other")
RecipientsPerMessageSentAggregates	Average number of recipients of each message in the Sent Items folder
RecipientsDLPerMessageSentAggregates	Average number of distribution list recipients of each message in the Sent Items folder
AttachmentSizeAggregates	Attachment size statistics across all attachments (provides Avg,Min,Max)
AttachmentSizeDistribution	Counts attachments in specified size ranges (takes a range list of inputs, e.g. "2,10,100,1024" provides counts for ranges 0-2,2-10,10-100,100-1024,1024-up)
AttachmentPerMessageAggregates	Statistics on number of attachments per message (provides Avg,Min,Max)
ContactCount	Number of contacts in the mailbox
ContactCreatedPerDay	Number of contacts created per day (provides Avg,Min,Max, can be restricted to last N days)
AppointmentCount	Number of appointments in the calendar
AppointmentCreatedPerDay	Number of appointments created per day (provides Avg,Min,Max, can be restricted to last N days)
MeetingRequestCount	Number of meeting requests in the calendar.

MeetingRequestReceivedPerDayAggregates	Statistics on number of meeting requestes received per day (provides Avg,Min,Max, can be restricted to last N days)
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Source: <http://blogs.technet.com/exchange/archive/2005/12/27/416524.aspx>

Now it is time specify the configuration. You can select the Logging and Statistic options to display and the timeframe from which EPA should collect data. You can specify the Servers from which you want to collect information. The Servers must be running because the Exchange Server Profile Analyzer reads several Information from the Exchange database stores.

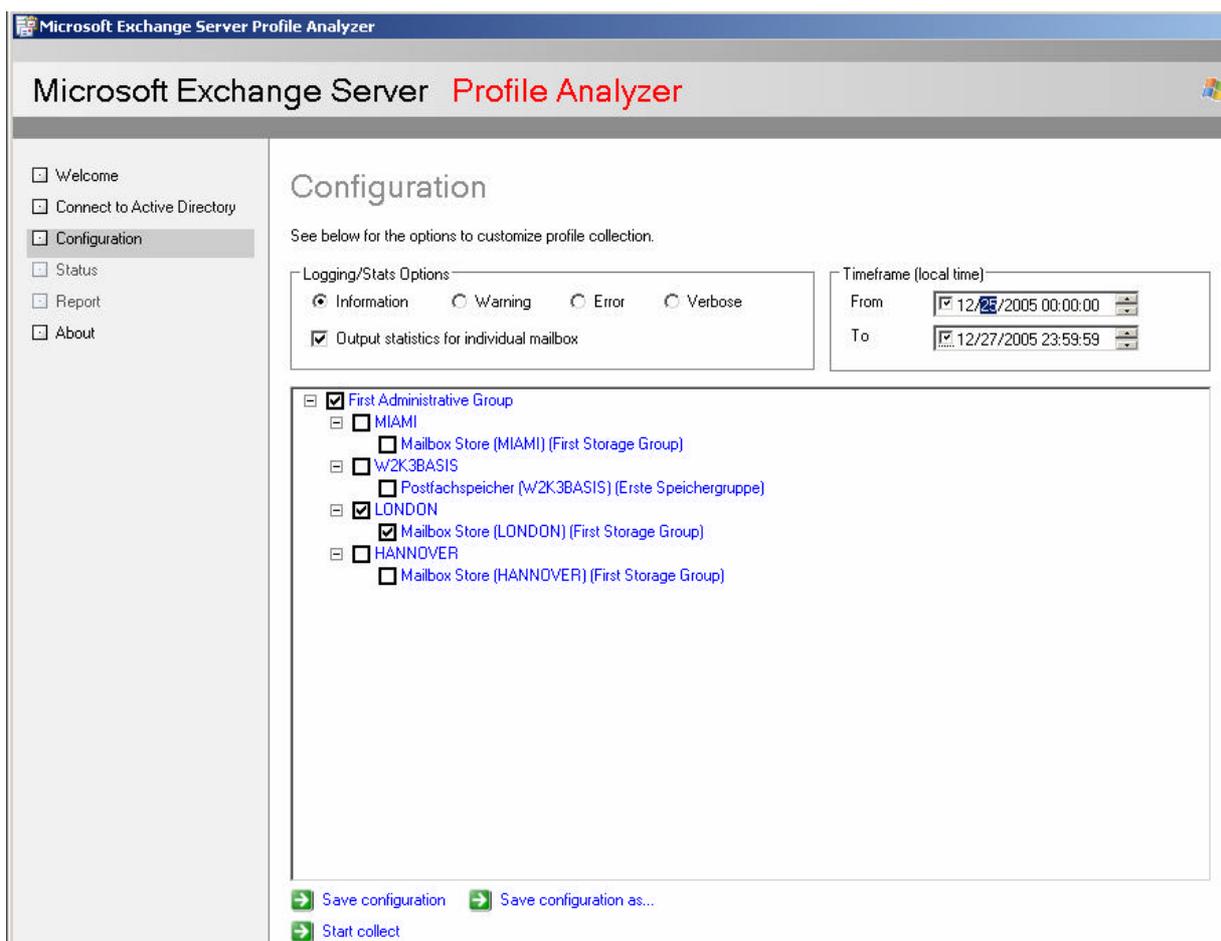


Figure 6: Select the information to collect for EPA

Processing data is a very time consuming process. In my tests I collect data for about 1.000 mailboxes (programmatically generated with a very small mailbox size) on a guest operating system from Microsoft Virtual Server 2005. It takes about 12 minutes to finish the analyzing of data.

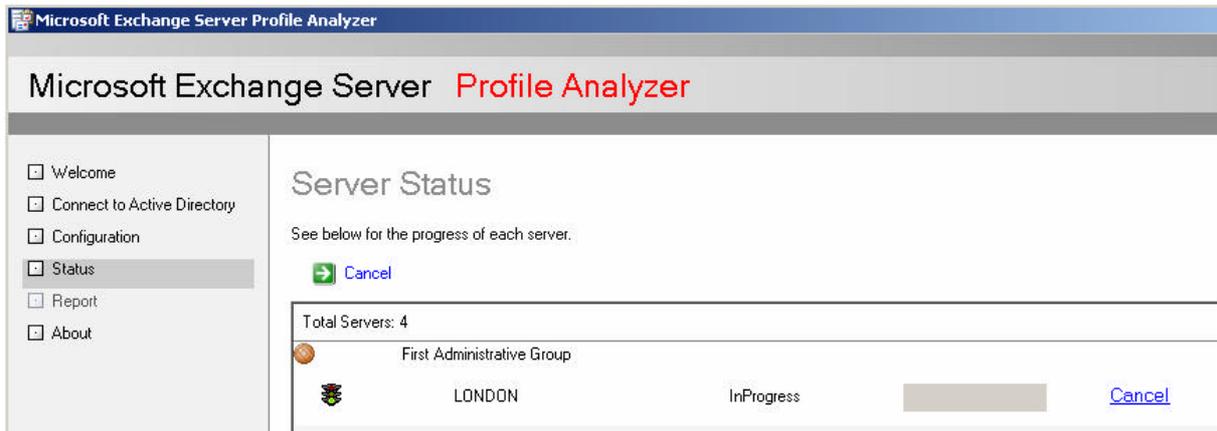


Figure 7: Processing the data for EPA can be very time consuming

After a few minutes (depending on the Exchange configuration) EPA has finished collecting data.

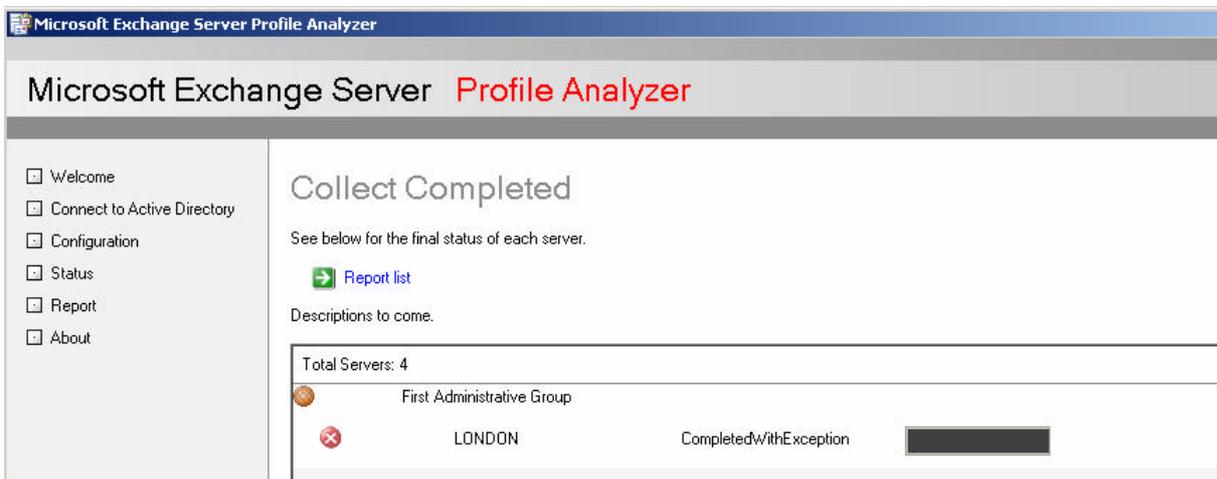


Figure 8: After several minutes, EPA has finished

Now you can view several collected data from the Exchange Server Profile Analyzer.



Figure 9: View an EPA report

EPA shows a very detailed Server Statistic for your Exchange Organization.

Forests

Exchange Organization	Forest
Northwind Traders	DC=nwtraders,DC=msft

Statistics

Server Statistics

Server	Status	Mailboxes Processed	Processed but Failed
LONDON	CompletedWithException	1011	939

Statistics

All sizes are displayed in kilobytes (KB).

- Mailbox
- Rules
- Folder Hierarchy
- Folder Size
- Message Counts
- Message Size
- Message Frequency
- Message Body Type
- Recipients
- Attachments
- Calendar
- Contacts
- Tasks
- Notes

Statistics per mailbox store

Mailbox Store	Total Mailboxes	Mailboxes Processed	Exceptions
Mailbox Store (LONDON)	1011	1011	939

Generated by EPAWin (6.5.0.0)

Figure 10: View EPA report details

In this example you can see the average size of the mailboxes in this mailbox store (thanks to the users that works very economically with their mailboxes 😊)

Statistics per mailbox store

Mailbox Store	Total Mailboxes	Mailboxes Processed	Exceptions
Mailbox Store (LONDON)	1011	1011	939

Statistics

All sizes are displayed in kilobytes (KB).

Mailbox

Aggregate of mailbox size:	avg: 0.14
	min: 0
	max: 8.79
Total count:	72
Total size:	9.90

Rules

Folder Hierarchy

Total number of folders:	727
Total number of search folders:	0
Total number of top level folders:	727
Total number of user created folders:	0
Total number of user created top level folders:	0
Total number of Outlook created folders:	727
Height of folder hierarchy:	2
Aggregates of height of top level folder:	avg: 1.00
	min: 1.00
	max: 1.00
Aggregates of subfolders of top level folder:	avg: 0
	min: 0
	max: 0

Figure 11: Detailed view of Public folder stats

Conclusion

The Microsoft Exchange Server Profile Analyzer is a great tool to analyze your Exchange Server databases and give you a lot of helpful statistics which you can use to determining the health of your information stores. EPA is also a great tool for Exchange Server capacity planning.

Related Links

Exchange Server Profile Analyzer Download

<http://www.microsoft.com/downloads/details.aspx?FamilyId=8F575F60-BD80-44AA-858B-A1F721108FAD&displaylang=en>