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 <u>website</u>. 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 <u>storstat.exe</u> 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.



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*

Microsoft Exchange Server P	rofile Analyzer	: لولي
Microsoft Excha	nge Server Profile Analyzer	🖉 Windows Server System
Melcand Connect to Active Directory	Welcome	
Configuration Status Report	The Microsoft Profile Analyzei tool enables server administrators to capture estimated usage profile in organization. Data collected by this tool is used to estimate how hequerity users perform various action. This tool generates profile information by crawing Prough data in user mailboxes. The process of gath	remation for users on a single mailbox store or actoss an Exchange one against their meilboxes. hening the data is very time consuming. Generally, you will likely see
About	the tool collecting 500KB to 1NB of data per second which can be used to determine the approximate Connect to Active Directory	te runtime of this taol in your environment.

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 Echange 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.

Microsoft Exchange Server P	rofile: Analyzer	
Microsoft Excha	nge Server Profile Analyzer	🕈 Windows Server System
Velcone Connect to Active Directory Conliguration Status Report About	Connect to Active Directory The Profile Analyzer must have read access to Active Directory. By default, the toolwill use the currently to appropriate global catalog server. To run this tool, you will need an account that hav malbox accesse permit If you are surving the Profile Analyzer in a different domain or wart to specify a different global catalog serve catalog server here. Active Directory To run the Profile Analyzer under different accounts, click "Show advanced light options". A Hole advanced light options To run the Profile Analyzer under different accounts, click "Show advanced light options". A Hole advanced light options To run the Profile Analyzer under different accounts, click "Show advanced light options". Connect User Name Password Connect	ggethen account, and will automatically find and connect to an stion to the malibourstoree that you want to examine.

Figure 4: Specify credentials to execute the tool

The Exchanger Server Profile Analyzer now collects information from Active Directory

Microsoft Exchange Server P	rofile Analyzer		
Microsoft Excha	nge Server Profile Analyzer		💐 Windows Server System
Welcome Connect to Active Directory Configuration Status Report About	Connecting To Active Directory Please wat while loading the lopology The Profile Analyzer is verifying that you have network connectivity and permission as well as to the Configuration and Users containers. The tool also requires reach ac- alter you select where the scan will run.	60% s to access Active Directory. The looling poss to the Einshange server that will br	eeds reachaccess to the Active Directory scheme scanned. These permissions will be phecked

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 Anaylzer 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
MessageContainsAtLeastOne AttachmentCount	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
Manage as Family and Dars David	restrict to last N days)
MessageForwardsSentPerDay	Average number of messages
Aggregates	prenixed with "Fw:" sent per day
	(provides Avg, win, wax and can
MaaaagaBaduTuraaCaunt	Number of measures in each hady
MessageBodyTypesCount	Number of messages in each body
	type requested (takes list of body
	IVPES as input, e.g.
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, win, wax, can be
AppointmentCoust	Number of appointments in the
AppointmentCount	colondar
AppointmontCroatedParDay	Number of appointments created per
AppointmentoreatedPerDay	day (provides Ave Min Mey can be
	restricted to last N days)
MeetingRequestCount	Number of meeting requests in the
เพราะเทษาราวาร์เอานาเ	calendar

MeetingRequestReceivedPerDayAggregates	Statistics on number of meeting
	requestes received per day (provides
	Avg,Min,Max, can be restricted to last
	N days)

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.

Partice of the second text of the second sec	rofile Analyzer		
Microsoft Excha	nge Server Profile Analyzer		4
 Welcome Connect to Active Directory Configuration Status Report About 	Configuration See below for the options to customize profile collection. Logging/Stats Options Information Warning Error Verbose Output statistics for individual mailbox First Administrative Group Mailbox Store (MIAMI) (First Storage Group) W2K3BASIS Postfachspeicher (W2K3BASIS) (Erste Speichergruppe) LONDON Mailbox Store (LONDON) (First Storage Group) HANNOVER Mailbox Store (HANNOVER) (First Storage Group) Mailbox Store (HANNOVER) (First Storage Group)	Timeframe (local time) From I 12/22/2005 00:00:00 To II 12/22/2005 23:59:59	
	Start collect		

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.

PMicrosoft Exchange Server P	rofile Analyzer								
Microsoft Excha	inge Server Profile Analyzer								
Welcome Connect to Active Directory Configuration Status Report	Server Status See below for the progress of each server.								
About	Total Servers: 4								
	First Administrative Group B LONDON InProgress								

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.

🚏 Microsoft Exchange Server Pi	ofile Analyzer
Microsoft Excha	nge Server Profile Analyzer
 Welcome Connect to Active Directory Configuration Status Report About 	Collect Completed See below for the final status of each server. Report list Descriptions to come.
	First Administrative Group Ond Servers: LONDON CompletedWithException

Figure 8: After several minutes, EPA has finished

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

Microsoft Exchange Server Pr	rofile Analyzer
Microsoft Excha	nge Server Profile Analyzer
Welcome Connect to Active Directory Configuration Status Report	Report See below for a list of profile reports generated so far. C:\Documents and Settings\Administrator\Application Data\Microsoft\EPA\epadata20051228_083219.html
About	 Go back to configuration Finish

Figure 9: View an EPA report

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

[F	Forests								
Exchange Organization		Forest							
	Northwind Traders		DC=nwtrader	DC=nwtraders,DC=msft					
	-Server Statistic	s							
	Server	Status	Mailboxes P	rocessed	Processed but Fai	ed			
	E LONDON	CompletedWithException	1011		939				
	🖃 Statistics								
	All sizes are d	isplayed in kilobytes (KB).							
	🗄 Mailbox								
	🗄 Rules								
	🗄 Folder H	lierarchy							
	🗄 Folder S	Size							
	🗄 Message Counts								
	🗄 Message Size								
	🗄 Message Frequency								
	🗄 Message Body Type								
	🗄 Recipier	nts							
	🗄 Attachn	nents							
	🗄 Calenda	ar							
	🗄 Contact	s							
	🗄 Tasks								
	🗄 Notes								
	🗆 Statistics p	er mailbox store							
	Mailbox	Store	Total Mailboxes	Mailboxes Processe	d E	xceptions			
	🗄 Mailbox 🗄	Store (LONDON)	1011	1011	90	39			
		2.02							

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⁽³⁾)

🖃 Statistics per mailbox store								
Mailbox Store Total Mail		Mailbo	xes		Mailboxes Processed		Exceptions	
🗏 Mailbox Store (LONDON)		1011				1011		939
🗖 Statistics								
All sizes are displayed in kilobytes (KB). 🖃 Mailbox								
	avg:	0.14						
Aggregate of mailbox size:	min:	0						
	max	8.79						
Total count:	72							
Total size:	9.90							
🗄 Rules								
🖃 Folder Hierarchy								
Total number of folders:	Total number of folders: Total number of search folders: Total number of top level folders:			727				
Total number of search fold				0				
Total number of top level f				727				
Total number of user creat	ed fold	lers:		0				
Total number of user creat	ed top	leve	folders	:0				
Total number of Outlook cr	eated	folde	rs:	727				
Height of folder hierarchy:				2				
Aggregates of height of top	Aggregates of height of top level folder: Aggregates of subfolders of top level folder:		r:	avg: 1	.00			
				min: 1	.00			
				max: 1	.00			
Aggregates of subfolders o			older:	avg: 0	1			
				min: 0	1			
				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