Exchange Mailbox Quota Custom Service

About

The Exchange Mailbox Quota custom service is a combination of a powershell script and service designed to monitor the size of mailboxes on either Exchange 2007 or 2010 and the status of the mailbox compared to the size quota. This service detects the mailbox database's default limits as well as any mailbox-specific limits. The mailbox status is derived directly from Exchange's reporting. This means that the warning state is defined by the mailbox size surpassing the Warning or Prohibit Send limits.

The script creates and uses a custom WMI class to act as the proxy repository of the information retrieved from Exchange. This approach has two benefits over using EDF to push the data directly up to N-Central:

- The service is added to the Exchange server in N-Central, which semantically is where you would expect to look for this information. With the EDF approach, you have to create a separate device for each EDF instance. This would become onerous and require the creation of custom device classes within N-Central to manage anything more than a handful of mailboxes.
- An EDF service instance consumes a professional license. Since this implementation uses a normal WMI custom service added to an existing device, it consumes no additional licenses."

On Exchange 2007, the script must be run on an Exchange server, and in Exchange 2010 this is recommended as well.

Configuration

There are two settings to configure in the script:

1. ExchFQDN – set this to the fully qualified domain name for the exchange server you are monitoring. This value is only used when the Exchange server being monitored is Exchange 2010.

   Powershell in Exchange 2010 uses Windows Remote Management, which is processed through https://<ExchFQDN>/powershell. This FQDN must be reachable from computer where the script will be running; to verify, browse to https://<ExchFQDN>/powershell. You should receive an AuthenticateRequest error from Kerberos.

   The script will need to be run with the credentials of a user able to create WMI classes – domain administrators have this access, so the user account that your Windows Probe is running under will suffice. In Exchange 2010, this user *also* needs to be enabled for Powershell Remote Shell. This is enabled by default for the account that installed the first Exchange 2010 server in the organization, but needs to be enabled for any user other than this account. For more information, see http://technet.microsoft.com/en-us/library/dd298084.aspx.

   While in Exchange 2010, this script can technically be run from a device other than an Exchange server, there is additional configuration required which is outside the scope of this documentation. See http://technet.microsoft.com/en-us/library/dd335083.aspx for more information.

2. MBDatabase – set this to the mailbox database name as viewed in the Exchange Management Console. Only the mailboxes from this database will be retrieved. This means that if you have multiple mailbox databases, then you will need multiple copies of the powershell script, each customized for one of the databases.

Implementation

Place the powershell script in whatever script folder you use. Logon to a session as the account under which you plan to run the script. Open Powershell *in Elevated mode* and execute the script. It will dump a few lines of text to the console for each WMI instance it creates. You should receive no errors. The most common causes of errors are:

- Running the script in a regular Powershell session – authorization error
- Errors in the mailbox database name

You may see *warnings* for mailboxes that have never been signed into and have not received any mail. These mailboxes are skipped because there are no statistics for them and no corresponding WMI instance is created; they will be automatically added when the script is run after the mailbox has statistics.

With WBEMTEST you can confirm the parent class, the subclass, and the instances were created. Connect to root\cimv2, and enumerate the NCentral class. You will find the NCentral_Exchange_Mailbox class. Open this and then click on the Instances button and you will find an instance for each mailbox with the mailbox *alias* as the instance name. Note these instances names – *they are case sensitive* – to configure the instances of the custom class in N-Central.

This powershell script should be configured to run in the task scheduler on a periodic basis – typically hourly. The custom service checks the WMI metrics every 30 minutes by default.

Note:

- The task should be set to run with *Highest Privilege*
- The account running the script must have *Logon as Batch File* local user rights

Import the custom service into the NAC – it is titled Exchange Mailbox Quota. Add the service to your Exchange server and enter the mailbox alias in the *Qualified mailbox alias* field on the Service details tab.

The custom service has one important limitation. The mailbox status actually has five values – Normal (1), Warning (2), Prohibit Send (4), Disabled (16), and No Checking (8). The Normal threshold in the service is 1 – 1, while “normal” is really 1 *or* 8. Since the only reason for including a mailbox with no checking as an instance of the quota service would be to gather historical metrics on mailbox size, turn off thresholds for such a mailbox, otherwise the service will show a misconfigured state.