

# HP OpenView Smart Plug-in for Microsoft Exchange Server

For the UNIX Operating System

Software Version: 10.00

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## Reference Guide

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# 1 Exchange 2003 Policies

## Summary of Exchange 2003 Monitor Policies

▶ In OVO for UNIX version 8 and earlier, policies are referred to as templates.

Policy group	Policy	Description
<b>EXSPI Specialized Groups (Ex2003)</b>		
<b>EXSPI Exchange Server</b>		
EXSPI Message Delivery (no monitor policies)		
EXSPI Server Availability		
	EXSPI-6X-0002	Inactive Process Monitor (Checks that processes are using CPU)
EXSPI Server Transaction Log		
	EXSPI-6X-0005	Low Log File Disk Space
	EXSPI-6X-0006	Transaction Log File Disc Space
<b>EXSPI Site Replication Service</b>		
	EXSPI-6X-0110	Monitors directory replication to verify that synchronization updates are being processed efficiently.
	EXSPI-6X-0111	Monitors directory replication to verify that synchronization updates are being processed efficiently
	EXSPI-6X-0112	Monitors the disk space used by the Site Replication Service database log files.
	EXSPI-6X-0113	Monitors the disk space used by the Site Replication Service database log files.

Policy group	Policy	Description
<b>EXSPI Standard Groups (Ex2003)</b>		
<b>EXSPI Availability</b>		
	EXSPI-6X-0001	Process Monitor (Monitors CPU time used by Exchange processes)
	EXSPI-6X-1001	MSExchange Services Monitor
<b>EXSPI Client Access (Ex2003)</b>		
EXSPI ActiveSync		
	EXSPI-65-ActiveSyncADRequests	Alarms on Microsoft Exchange ActiveSync current Active Directory requests.
	EXSPI-65-ActiveSyncMboxConnReq	Alarms on Microsoft Exchange ActiveSync outstanding Exchange mailbox server connection requests.
	EXSPI-65-ActiveSyncMboxPendReqs	Alarms on Microsoft Exchange ActiveSync outstanding Exchange mailbox server I/O requests.
	EXSPI-65-ActiveSyncUsers	Alarms on Microsoft Exchange ActiveSync current users.
EXSPI IMAP4		
	EXSPI-6X-IMAP4Connections	Monitors IMAP4 connections.
	EXSPI-6X-2811	IMAP4 Failed Connections percentage.
	EXSPI-6X-2812	IMAP4 Rejected Connection percentage.
EXSPI MAPI		
	EXSPI-6X-IS_RPCAveragedLatency	Alarms on the number of MAPI client Average Latency. IS RPC Averaged Latency is the RPC latency in milliseconds, averaged for the past 1024 packets.
	EXSPI-6X-IS_RPCOperations	Alarm on number of MAPI client RPC operations/sec
	EXSPI-6X-IS_RPCRequest	Alarm on number of MAPI client RPC requests
EXSPI OMA		
	EXSPI-65-OMAResponseTime	Monitors the response time of the last request in milliseconds.

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
EXSPI OWA		
EXSPI Back End (no monitor Policies)		
EXSPI Front End		
	EXSPI-6X-OWACurrentConnections	Monitors the OWA current connections.
EXSPI Outlook 2003		
	EXSPI-65-OutlookClientLatency10	Monitors the number of successful RPCs with latencies of more than 10 seconds.
	EXSPI-65-OutlookClientLatency5	Monitors the number of successful RPCs with latencies of more than 5 seconds.
	EXSPI-65-OutlookClientLatency2	Monitors the number of successful RPCs with latencies of more than 2 seconds.
EXSPI POP3		
	EXSPI-6X-POP3Connections	Monitors POP3 connections.
	EXSPI-6X-4911	POP3 Failed Connections percentage.
	EXSPI-6X-4912	POP3 Rejected Connection percentage.
<b>EXSPI Cluster (Ex2003)</b>		
	EXSPI-6X-ClusterConnLimits	Monitors the number of client processes connected to the information store. Server performance can degrade when connection limits exceed those recommended by Microsoft.
<b>EXSPI Directory</b>		
	EXSPI-6X-0023	Monitors the ratio of MExchangeDSAccess Cache hit rate (hits/sec) and miss rate (misses/sec).
<b>EXSPI Information Store (Ex2003)</b>		
EXSPI Epoxy (Ex2003)		
	EXSPI-65-EpoxyStoreOutQueueLength	Alarm on epoxy store out queue length
	EXSPI-65-EpoxyClientOutQueueLength	Alarm on epoxy client out queue length

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
EXSPI Full Text Index		
	EXSPI-6X-0074	This metric measures the percentage of free disk space available for the full text index of an Exchange server information store.
EXSPI Mailbox (Ex2003)		
	EXSPI-6X-ISMailboxReceiveQueueLength	Monitors the number of messages in the mailbox information store receive queue.
	EXSPI-6X-ISMailboxSendQueueLength	Monitors the number of messages in the mailbox information store send queue.
	EXSPI-6X-0070	Mailbox Database File Disk Space
	EXSPI-6X-ISPublicAverageDeliveryTime	Average Delivery Time is the average time between the submission of a message to the mailbox store, and submission to other storage providers, for the last 10 messages.
	EXSPI-6X-ISPublicAverageLocalDeliveryTime	Average Local Delivery Time is the average time in milliseconds between the submission of a message to the mailbox store and the delivery to all local recipients (recipients on the same server) for the last 10 messages. This counter should not be greater than zero for more than a few seconds.
EXSPI Performance (Ex2003)		
	EXSPI-6X-InformationStoreDbCacheSize	Alarms on the IS Database Cache Size Limits. The database cache size of an IS shows the amount of system memory used by the database cache manager to hold commonly used information from the database files in order to prevent file i/o operations.
	EXSPI-6X-InformationStoreDbLogRecordStallspersec	Alarm on Information Store Transaction Log Record Buffer Addition Stalls
	EXSPI-6X-InformationStoreDbLogThreadsWaiting	Alarm on Information Store Threads Waiting to write to Transaction Log
	EXSPI-6X-InformationStoreDbLogWritespersec	Alarm on the number of times the transaction log buffers are written
	EXSPI-6X-InformationStoreUserCount	Monitors the number of users connected to the information store.

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
	EXSPI-6X-InformationStoreVMLargestBlock	Alarms on largest free block of virtual memory. IS Largest Block is the size of the largest free block of virtual memory available to the store process.
	EXSPI-6X-InformationStoreVMLargeBlockBytes	Alarms on the total size of large VM blocks available. IS VM Total Large Free Block Bytes is the total size of all free virtual memory blocks that are greater than or equal to 16MB in size.
	EXSPI-6X-InformationStoreVM16MBBlocks	Alarms on the number of 16MB blocks available. IS VM Total 16MB Free Blocks is the total number of free virtual memory blocks that are greater than or equal in size to 16MB.
<b>EXSPI Public Folder (Ex2003)</b>		
	EXSPI-6X-ISPublicAverageDeliveryTime	Monitors the average time between the submission of a message to the public store and submission to other storage providers for the last 10 messages.
	EXSPI-6X-ISPublicReceiveQueueLength	Monitors the number of messages in the public store's receive queue.
	EXSPI-6X-ISPublicSendQueueLength	Monitors the number of messages in the public store's send queue.
	EXSPI-6X-ISPublicReplicationQueueLength	Monitors the number of replication messages waiting to be processed.
	EXSPI-6X-0072	Monitors the amount of disk space being used by the public folder database.
<b>EXSPI Transaction Log</b>		
	EXSPI-6X-0008	Monitors the oldest Exchange transaction log files for a storage group.
	EXSPI-6X-0004	Monitors the percentage of free disk space where the Exchange transaction log files reside.
<b>EXSPI Virus Scan</b>		
	EXSPI-6X-VSQueueLength	Checks the Information Store Anti Virus API Queue Length.

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
<b>EXSPI Messaging</b>		
EXSPI MTA		
	EXSPI-6X-0075	Alarms on the percent of free disk space available for the X.400 server MTA queue.
	EXSPI-6X-300006	This metric measures the Work Queue Length minus the Deferred Delivery Messages, with respect to the rate that messages are processed.
	EXSPI-6X-300007	This metric divides the number of Rejected Inbound Associations by Cumulative Inbound Associations, over the current interval, which reveals a relative rate of rejected associations.
	EXSPI-6X-300008	This metric measures the total number of messages rejected from this entity since the last interval, with respect to the total number of messages received since the last interval.
	EXSPI-6X-300009	This metric measures the number of outstanding messages in the Work Queue, which indicates the number of messages not yet processed to completion by the MTA, relative to the number of messages successfully processed by the MTA.
	EXSPI-6X-300010	This metric measures the number of failed associations since the last interval, divided by the number of associations since the last interval.
	EXSPI-6X-300011	This metric measures the total number of messages which failed to be converted from one form to another since the last interval, with respect to the total number of messages successfully converted since the last interval.
	EXSPI-6X-MTAConnectionQueueLengths	This metric measures the number of outstanding messages queued for transfer to the entity.
	EXSPI-6XMTAConnectionMessageDelay	This metric measures the amount of seconds that the oldest message has been in the MTA queue.



<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
EXSPI NNTP		
	EXSPI-6X-0058	Newsfeed Outbound Connections Failed.
EXSPI SMTP		
	EXSPI-6X-SMTPCategorizerQueueLength	Monitors the number of messages in the SMTP Categorizer Queue. The Categorizer performs lookups and checks limits and restrictions in Active Directory. Messages accumulate in this queue because the advanced queuing engine cannot categorize them.
	EXSPI-6X-SMTPLocalQueueLength	Monitors the number of messages in the SMTP Local queue.
	EXSPI-6X-SMTPRemoteRetryQueueLength	Monitors the number of messages that are destined for a remote delivery.
	EXSPI-6X-SMTPRemoteQueueLength	Monitors the number of messages that are destined for a remote delivery.
	EXSPI-6X-SMTPMessagesPendingRouting	Monitors the number of messages that have been categorized but not routed.
	EXSPI-6X-SMTPLocalRetryQueueLength	Monitors the number of messages in the SMTP Local Retry queue.
	EXSPI-6X-3000001	Monitors the SMTP Outbound Connection Refused. This is the percentage of outbound SMTP connections refused by remote sites against the total outbound connections for each SMTP virtual server.
	EXSPI-6X-0082	This metric measures the disk space usage by the SMTP badmail folder.
	EXSPI-6X-0083	This metric measures the growth rate of items in the SMTP badmail directory.
	EXSPI-6X-0084	This metric measures the disk space usage by the SMTP pickup folder.
	EXSPI-6X-0085	This metric measures the growth rate of items in SMTP pickup directory.

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
	EXSPI-6X-0086	This metric measures the disk space usage by the SMTP Queue folder.
	EXSPI-6X-0087	This metric measures the growth rate of items in the SMTP Queue directory.
EXSPI Tracking Log		
	EXSPI-6X-0076	This metric measures the percentage of free disk space available for the message tracking log.
<b>EXSPI OVO Exchange SPI core</b>		
EXSPI Data Collection (no monitor Policies)		

# Summary of Exchange 2003 Schedule Data Collection Policies

**Table 1 Exchange 2003 Schedule Data Collection Policies**

Policy Group/Policies	Description	Schedule
<b>EXSPI Specialized Groups</b>		
EXSPI Exchange Server		
EXSPI Message Delivery		
EXSPI-6X End to End Message Ping	Scheduler for End to End Message Ping metric	10,40 past each hr.
EXSPI Server Availability		
EXSPI-6X-10m-Serv & Processes	10m Scheduler for metrics in Services and Processes group	0, 10, 20, 30, 40, 50 past each hr.
EXSPI Server Transaction Log		
EXSPI-6X Transaction Log Storage Use	Determine megabytes used and available to the Transaction Log	43 past each hr.
EXSPI Site Replication Service		
EXSPI-6X-05m-SRS Data Space Usage	Monitors SRS data space activity	18 past each hr.
<b>EXSPI Standard Groups</b>		
EXSPI Availability		
EXSPI-6X-05m-Serv & Processes	5m Scheduler for metrics in Services and Processes group	1, 6, 11, 16, 21,26, 31, 36, 41, 46, 51, 56 past each hr.
EXSPI-6X-UrlScan State	Checks if the ISAPI filter is running.	Each hour
EXSPI-6X-MB on Front-End Server	Checks for mailboxes on front end servers.	Each day
EXSPI-6X-TransactionLog BackUp	Checks if Log Files are being truncated by backup.	Each day
EXSPI-6X-SSL for HTTPVS	Checks for server configurations that allow for non-SSL data transmission.	Each hour
EXSPI-6X-Circular Logging-On EXSPI-6X-Circular Logging-Off	Checks circular logging setting for storage groups.	Each day
EXSPI-6X-Heap DeCommit	Checks Heap De-commit registry key.	Each day
EXSPI-6X-HotFix Installed	Checks the hotfix/service pack IDs.	Each hour

<b>Policy Group/Policies</b>	<b>Description</b>	<b>Schedule</b>
EXSPI Client Access (Ex2003)		
EXSPI ActiveSync		
EXSPI-65-Dc-ActiveSync	Data collection of Microsoft Exchange ActiveSync perfmon counters	0, 15, 30, 45 past each hr.
EXSPI-65-Dc-ActiveSyncNotify	Data collection of MExchangeActiveSyncNotify OmaPush perfmon counters	0, 15, 30, 45 past each hr.
IMAP4		
EXSPI-6X-Dc-IMAP4 Performance	Collect IMAP4 performance metrics	On each hr.
EXSPI-6X-IMAP4FailedConnRate	IMAP4 Failed Connections percentage	0, 15, 30, 45 past each hr.
EXSPI-6X-IMAP4RejectedConnRate	IMAP4 Rejected Connection percentage	0, 15, 30, 45 past each hr.
EXSPI-6X-IMAP4 Port Response	Determine if the IMAP4 port is responsive	0,10,20,30,40,50 past each hr.
EXSPI MAPI (no schedule data collection policies)		
EXSPI OMA		
EXSPI-65-Dc-OMA	Data collection of MExchangeActiveSyncNotify OmaPush and MExchangeOMA perfmon counters	0, 15, 30, 45 past each hr.
EXSPI OWA		
EXSPI Back End		
EXSPI-6X-Dc-OWA Back End	Collect OWA Back End performance metrics	0, 15, 30, 45 past each hr.
EXSPI Front End		
EXSPI-6X-Dc-OWA Front End	Collect OWA Front End performance metrics	0, 15, 30, 45 past each hr.
EXSPI-6X HTTP Port Response	Determine if the HTTP port is responsive	0,10,20,30,40,50 past each hr.
EXSPI Outlook 2003		
EXSPI-65-Dc- Outlook Client	Log Outlook Client Metrics	0,10,20,30,40,50 past each hr.
EXSPI-65-ISClientRPCFailRate	Alarm on client RPC failure rate	0,10,20,30,40,50 past each hr.
EXSPI POP3		
EXSPI-6X-Dc-POP3 Performance	Collect POP3 performance metrics	On each hr.

<b>Policy Group/Policies</b>	<b>Description</b>	<b>Schedule</b>
EXSPI-6X-POP3FailedConnRate	POP3 Failed Connections percentage	0, 15, 30, 45 past each hr.
EXSPI-6X-POP3RejectedConnRate	POP3 Rejected Connection percentage	0, 15, 30, 45 past each hr.
EXSPI-6X-POP3 Port Response	Determine if the POP3 port is responsive	0,10,20, 30,40,50 past each hr.
EXSPI Cluster (no schedule data collection Policies)		
EXSPI Directory		
EXSPI-6X-15m-DSAccess	DSAccess Hit-Miss Ratio	0, 15, 30, 45 past each hr.
EXSPI Information Store		
EXSPI Epoxy (Ex2003) (no schedule data collection policies)		
EXSPI Full Text Index		
EXSPI-6X-Dc-Full Text Index	Collect disk space usage of full-text indexing	On each hr.
EXSPI Mailbox (Ex2003)		
EXSPI-6X--1h-Mailbox Space Usage	Monitors mailbox store space usage	M-F 6:05, 11:05, 15:05
EXSPI-6X-Dc-Mailbox Data	Collect data about all mailboxes on the system	M-F 21:05
EXSPI-6X-Database Mounted Search	Search an Exchange server for dismounted information store(s)	5,15,25,35,45,55 past each hr.
EXSPI-6X-Dc-Mailbox IS Sum Data	Collect summary data about Mailbox Information Stores	21:05 M,T,W,Th,Sat
EXSPI-6X-Dc-Mailbox IS Performance	Collect Performance Data on MSExchangeIS Mailbox Object	0, 15, 30, 45 past each hr.
EXSPI Performance (Ex2003)		
EXSPI-6X-Check Memory Configuration	Perform the optimal memory configuration check daily	7:00
EXSPI-6X-Dc-IS Performance	Collect Performance Data on MExchangeIS Object	3, 18, 33, 48 past each hr.
EXSPI Public Folder (Ex2003)		
EXSPI-6X-Dc-Public IS Sum Data	Collect summary data about Public Info Store (Folders)	M-F 22:05
EXSPI-6X-1h-PubFolder Space Usage	Monitors public folder space usage	Daily 6:05, 11:05, 15:05
EXSPI-6X-Database Mounted Search	Search an Exchange server for dismounted information store(s)	5,15,25,35,45,55 past each hr.

<b>Policy Group/Policies</b>	<b>Description</b>	<b>Schedule</b>
EXSPI-6X-Dc-Public Folder Data	Collect data about all public folders on the system	M-Sat 22:05
EXSPI-6X-Dc-IS PubFoldr Performance	Collect Performance Data on MSxchangeIS Public Object	1,16,31,46 past each hr.
EXSPI Transaction Log		
EXSPI-6X Transactn Log Backup Check	For each storage group determine age of oldest transaction log file	Daily 7:30
EXSPI-6X-Dc Trans. Log Space Usage	Collects and logs transaction log space usage activity	M-F 41 past each hr.
EXSPI Virus Scan (no schedule data collection policies)		
EXSPI Messaging		
EXSPI MTA		
EXSPI-6X-Dc -x400 Service MTA Queue	Determine and log X.400 service MTA queue storage metrics	Daily 6:05
EXSPI-6X-Dc-MTA Performance	Collect Performance Data on MSxchangeMTA Object	2, 17, 32, 47 past each hr.
EXSPI-6X-MTA Message Delay	Collect Message Delay Data on MSxchangeMTA Object	3,8,13,18,23,28,33,38,43,48,53,58 past each hr.
EXSPI-6X-MTA Rejected Inbnd Assocns	Collect Rejected Inbound Associations Data on MSxchangeMTA Object	12 past each hr.
EXSPI-6X-MTA Rejected Inbound Msgs	Message Transfer Agent Rejected Inbound Messages	11 past each hr.
EXSPI-6X-MTA Work Queue Length	Message Transfer Agent Work Queue Length	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59 past each hr.
EXSPI-6X-MTA Failed Outbnd Assocns	Message Transfer Agent Failed Outbound Associations	17 past each hr.
EXSPI-6X-MTA Failed Conversions	Message Transfer Agent Failed Outbound Conversions	17 past each hr.
EXSPI NNTP		
EXSPI-6X-1h-NNTP	1h Scheduler for metrics in NNTP group	On each hr.
EXSPI SMTP		
EXSPI-6X-15m-300001	Collect Performance Data on MSxchangeIS Public Object	1, 16, 31, 46 past each hr.

Policy Group/Policies	Description	Schedule
EXSPI-6X-Dc SMTP Queues	Collect SMTP queue metrics	2,7,12,17,22, 27, 32, 37, 42, 47, 52, 57 past each hr.
EXSPI-6X-Dc SMTP Server Performance	Collect SMTP queue metrics	8 past each hr.
EXSPI-6X-Dc SMTP Virtual Server Storage	Determine and log SMTP queue storage metrics	2,7,12,17,22, 27, 32, 37, 42, 47, 52, 57 past each hr.
EXSPI-6X-Dc SMTP NDR Percentage	Collect SMTP queue metrics	8,18,28,38,48,58 past each hr.
EXSPI-6X-Dc SMTP Outbound Connections Refused	Collect SMTP queue metrics	9,19,29,39,49,59 past each hr.
EXSPI-6X-Dc SMTP Port Response	Collect SMTP queue metrics	1,11,21,31,41,51 past each hr.
EXSPI-6X-SMTP Anonymous Relay	Checks for anonymous access on SMTP virtual servers	Each day
EXSPI-6X-SMTP Directories	Checks if Queue, Pick Up, and BadMail SMTP directories on SMTP virtual server are on NTFS file system drive.	Each day
EXSPI-6X-SMTP Services	Checks for SMTP entry in the Services file.	Each hour
EXSPI Tracking Log		
EXSPI-6X-Dc-Message Tracking Log Space Usage	Collect information about message tracking log space usage and free space available	Daily 6:10
EXSPI-6X-Dc-TrackLog SLA Delivery	Daily Reporter Collection of Tracking Log data for SLA Delivery Time	Daily 19:35
EXSPI-6X-Dc-TrackLog Data	Collect Tracking log data	M-Sat 19:00
EXSPI-6X-Dc-Tracking Log ACLs	Checks if Message Tracking Logs have <b>Everyone</b> group listed in the ACL permissions.	Each hour
EXSPI-6X-Dc-Message Tracking State	Checks if message tracking is enabled.	Each hour
EXSPI OVO Exchange SPI Core		
EXSPI Data Collection (no schedule data collection policiess)		

# Exchange 2003 Monitor Policy Specifications

## EXSPI-6X-0001 (Process Monitor)

<b>Policy:</b>	<b>EXSPI-6X-0001</b>
<b>Name:</b>	Process Monitor
<b>Description:</b>	Process Monitor (Monitors CPU time used by Exchange processes).
<b>Type:</b>	With reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter:</b> Process.% Processor Time</p> <p><b>Probable cause(s):</b> High CPU use could indicate an overloaded system. An Exchange process consuming a lot of CPU but processing few messages could indicate a problem with the process.</p> <p><b>Potential impact:</b> Failure, Performance</p> <p><b>Suggested action(s):</b> (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the service. (2) Monitor Exchange processes with NT Performance Monitor (Process.% Processor Time) and verify CPU consumption over a period of time. Constantly high value may indicate a scalability problem. (3) Stop and re-start the Exchange service. Use the NT Administrative Tool 'Service Manager'.</p> <p>NOTE: By default only Exchange processes are monitored. The 'Catch All' suppress condition prevents messages about other busy processes. To receive messages about other busy processes, simply add conditions before the 'Catch All'</p>



## EXSPI-6X-0002 (Inactive Process Monitor)

<b>Policy:</b>	<b>EXSPI-6X-0002</b>
<b>Name:</b>	Inactive Process Monitor
<b>Description:</b>	Monitors the core MS Exchange processes to check that they are using some CPU cycles. A process consistently at 0% could indicate a problem.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Low CPU use during the day on an active system could indicate a problem with the process.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b> (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the service. (2) Monitor Exchange processes with NT Performance Monitor (Process.% Processor Time) and verify CPU consumption over a period of time. Constantly high value may indicate a scalability problem. (3) Stop and re-start the Exchange service. Use the NT Administrative Tool 'Service Manager'.</p>

## EXSPI-6X-0004 (Transaction Log)

<b>Metric Name:</b>	<b>EXSPI-0004</b>
<b>Description:</b>	Percent Low Log File Disk Space
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 41 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	20
<b>Critical Threshold</b>	10

## EXSPI-6X-0005 (Low Log File Disk Space)

<b>Policy:</b>	<b>EXSPI-6X-0005</b>
<b>Name:</b>	Low Log File Disk Space
<b>Description:</b>	Monitors the free disk space remaining on the logical disk drive where the transaction log files for the IS public and private databases reside.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The amount of free disk space on the disk drive where the Exchange transaction log files reside is getting low.</p> <p><b>Potential impact:</b> Failure. Exchange will shutdown processing if there is no disk space for additional transaction log files.</p> <p><b>Suggested action(s):</b> (1) Free up disk space on this drive. (2) If this drive is filling up because of many Exchange transaction log files, verify that Exchange backups are completing successfully (log files are removed when the i backup completes) and that backups are being done frequently enough.</p>

## EXSPI-6X-0006 (Transaction Log File Disc Space)

<b>Policy:</b>	<b>EXSPI-6X-0006</b>
<b>Name:</b>	Transaction Log File Disc Space
<b>Description:</b>	Monitors the disk space used by the Exchange transaction and reserved transaction log files.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every day
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The amount of disk space being used by the Exchange transaction log files is getting large (disk space being used by edb*.log and res*.log files in the mdbdata and dsadata directories).</p> <p>A large amount of used disk space could indicate a possible problem with backups.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b> (1) Verify that Exchange backups are completing successfully (log files are removed when the backup completes). (2) Verify that backups are being done frequently enough. If they are, the conditions can be edited to increase the threshold values so this message is not generated as often.</p>

## EXSPI-6X-0008 (Transaction Log Backup Check Monitor)

<b>Policy:</b>	<b>EXSPI-6X-0008</b>
<b>Name:</b>	Transaction Log Backup Check Monitor
<b>Description:</b>	Monitors the oldest Exchange transaction log files for a Storage group.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every day
<b>Message Group:</b>	EXSPI
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The transaction log files are named Enn*.log, where nn is a number from 00 to 03 and corresponds to a storage group. The current log file is Enn.log. Completed log files are EnnXXXXX.log (the XXXXX portion of the name is a hexadecimal number starting with 00001). There are also two reserved files (res1.log and res2.log). When a backup is completed, the transaction log files are deleted. Old transaction log files could indicate a possible problem with backups.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b> (1) Verify that Exchange backups are completing successfully (log files are removed when the backup completes). (2) Verify that backups are being done frequently enough. If they are, the conditions can be edited to increase the threshold values so this message is not generated as often.</p>

## EXSPI-6X-0023 (Directory Svc Access)

<b>Policy:</b>	<b>EXSPI-6X-0023</b>
<b>Name:</b>	Exchange DSAccess Cache Hit-Miss Ratio
<b>Description:</b>	Monitors the ratio of MExchangeDSAccess Cache hit rate (hits/sec) and miss rate (misses/sec).
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 15mins
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b></p> <p>The component MExchangeDSAccess has not been tuned.          Potential impact: Performance</p> <p>(1) Performance of the Exchange server degrades.          (2) There are long latencies for client's logging on to the server.</p> <p><b>Suggested actions:</b></p> <p>(1) Enable MExchangeDSAccess caching:          Registry key: HKEY_LOCAL_MACHINE          \SYSTEM\CurrentControlSet\Services\MExchangeDSAccess          Value name: CachingEnabled          Value: 0x1 (0x1 to enable and 0x2 to disable caching)</p> <p>(2) Adjust cache expiration time, maximum number of entries, and maximum memory size.          Registry key:          HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\ServiceS\MExchangeDSAccess\Instance0          Value name: CacheTTL (entry expiration time)          Value type: REG_DWORD (second)          Value name: MaxMemory (maximum memory)          Value type: REG_DWORD (kilobyte)          Value name: MaxEntries (maximum number of entries)          Value type: REG_DWORD (number of entries)</p> <p>For more information, see Exchange 2000 server resource kit,          Chapter 17 - Backbone Configuration and Tuning, <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/reskit/part4/c17back.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/reskit/part4/c17back.asp</a></p> <p>Microsoft Knowledge Base Article:          Q318228, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;318228">http://support.microsoft.com/default.aspx?scid=kb;en-us;318228</a></p>

## EXSPI-6X-300001 (SMTP Outbound Connections Refused)

<b>Policy</b>	<b>EXSPI-6X-300001</b>
<b>Name:</b>	SMTP Outbound Connections Refused
<b>Description:</b>	SMTP Outbound Connection Refused is the percentage of outbound SMTP connections refused by remote sites against the total outbound connections for each SMTP virtual server.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Outbound Connections Refused.&lt;instance&gt; SMTP Server.Outbound Connections Total.&lt;instance&gt;</p> <p>If this is the first time the metric is run or the counter values are less than the previous counter values, then the values are just stored and thresholds are not processed.</p> <p>The percentage is calculated by subtracting the previous counter values from the current counter values to get the number of NDRs and number of messages for the current interval. The formula used to get the metric value is: NDRs this interval / outbound messages this interval * 100.</p> <p><b>Probable cause(s):</b></p> <p>(1) There maybe a problem with the SMTP service making connections to remote systems.</p> <p>(2) No route exists for message delivery. For example, Exchange cannot determine a route or a connector to the final destination, or all available routes or connectors are marked as down.</p> <p><b>Potential impact:</b></p> <p>A high rate of failures could indicate problems with the network, remote systems, or the SMTP configuration.</p> <p><b>Suggested action(s):</b></p> <p>(1) Verify that there are no network problems.</p> <p>(2) Check the SMTP configuration using Exchange System Manager.</p> <p>(3) Check other messages in the Message Reader to see if Exchange has been reporting problems with the SMTP Service.</p> <p>(4) Enable Diagnostics Logging for the SMTP service (using Exchange System manager) to help in troubleshooting.</p> <p><b>For more information</b>, see Microsoft Knowledge Base article: Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p>

## EXSPI-6X-300006 (MTA Message Delay)

<b>Policy:</b>	EXSPI-6X-300006
<b>Name:</b>	MTA Message Delay
<b>Description:</b>	This metric measures the Work Queue Length less the Deferred Delivery Messages with respect to the rate that messages are processed ((Work Queue Length - Deferred Delivery)/ Messages per Second).
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Delay of messages being processed could indicate problems with system load, the MTA, connectors, or the network.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Run Exchange Administrator and check for 'stuck' messages in the MTA queue. (3) Verify that there are no network problems.</p> <p><b>Additional Information:</b> Exchange 2000 and 2003 servers use the MTA to transfer messages over non-smtp connections such as X.400 connectors. The X.400 connector is primarily used to transfer messages with Exchange 5.5 servers. Typically X.400 connectors are used while migrating from Exchange 5.5 to a later version of Exchange although there are other uses. Due to the inherit inefficiency of the Exchange 2000 and later version of the MTA, there are a number of Microsoft recommendations, depending on your use. Please follow the link <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp</a> and go to the section titled 'Chapter 9: Tuning Exchange 2000 Server for Performance'.</p>



## EXSPI-6X-300007 (MTA Rejected Inbound Associations)

<b>Policy:</b>	EXSPI-6X-300007
<b>Name:</b>	MTA Rejected Inbound Associations
<b>Description:</b>	Monitors the percentage of rejected inbound remote associations to the MTA
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Rejected Inbound Associations.&lt;instance&gt; MExchangeMTA Connections.Cumulative Inbound Associations.&lt;instance&gt;</p> <p><b>Probable cause(s):</b> There may be problems with the MTA on a remote system making connections to this system.</p> <p>A high rejection rate could indicate problems with the local or remote MTA, the connector, or system load.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system. (3) Verify that there are no network problems. (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

## EXSPI-6X-300008 (MTA Rejected Inbound Messages)

<b>Policy:</b>	EXSPI-6X-300008
<b>Name:</b>	MTA Rejected Inbound Messages
<b>Description:</b>	Monitors the percentage of Messages submitted to the MTA that are rejected
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeMTA Connections.Inbound rejected Total.&lt;instance&gt;  MSExchangeMTA Connections.Inbound Messages Total.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>  There may be problems with the MTA on a remote system sending messages to this system.</p> <p>A high rate of rejected messages could indicate problems with the remote or local MTA or the connector.</p> <p><b>Potential impact:</b>  Performance</p> <p><b>Suggested action(s):</b>  (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.  (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.  (3) Verify that there are no network problems.  (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

## EXSPI-6X-300009 (MTA Work Queue Length)

<b>Policy:</b>	EXSPI-6X-300009
<b>Name:</b>	MTA Work Queue Length
<b>Description:</b>	The metric measures the number of outstanding messages in the Work Queue, which indicates the number of messages not yet processed to completion by the MTA, relative to the number of messages successfully processed by the MTA
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA.Work Queue Length MExchangeMTA.Deferred Delivery Msgs</p> <p><b>Probable cause(s):</b> Delay of messages being processed could indicate problems with system load, the MTA, connectors, or the network.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Run Exchange Administrator and check for 'stuck' messages in the MTA queue. (3) Verify that there are no network problems.</p> <p><b>Additional Information:</b> Exchange 2000 and 2003 servers use the MTA to transfer messages over non-smtp connections such as X.400 connectors. The X.400 connector is primarily used to transfer messages with Exchange 5.5 servers. Typically X.400 connectors are used while migrating from Exchange 5.5 to a later version of Exchange although there are other uses. Due to the inherit inefficiency of the Exchange 2000 and later version of the MTA, there are a number of Microsoft recommendations, depending on your use. Please follow the link <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp</a> and go to the section titled 'Chapter 9: Tuning Exchange 2000 Server for Performance'.</p>

## EXSPI-6X-300010 (MTA Failed Outbound Associations)

<b>Policy:</b>	<b>EXSPI-6X-300010</b>
<b>Name:</b>	MTA Failed Outbound Associations
<b>Description:</b>	Monitors the percentage of failed outbound associations from the MTA
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Failed Outbound Associations.&lt;instance&gt; MExchangeMTA Connections.Cumulative Outbound Associations.&lt;instance&gt;</p> <p><b>Probable cause(s):</b> There may be problems with the MTA making connections to another system. A high failure rate could indicate problems with the local or remote MTA, the connector, or the network.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system. (3) Verify that there are no network problems. (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

## EXSPI-6X-300011 (MTA Failed Conversions)

<b>Policy:</b>	<b>EXSPI-6X-300011</b>
<b>Name:</b>	MTA Failed Conversions
<b>Description:</b>	Monitors the ratio of failed and successful conversion of messages from one form to another.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1hr
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA.Total Failed Conversions MExchangeMTA.Total Successful Conversions</p> <p><b>Probable cause(s):</b> There may be problems with the MTA converting messages from one format to another.</p> <p><b>Potential impact:</b> Performance/Failure. A high failure rate could indicate problems with the MTA or how messages being received are formatted.</p> <p><b>Suggested action(s):</b> (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems converting messages. (2) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

## EXSPI-6X-MTAConnectionMessageDelay)

<b>Policy:</b>	<b>EXSPI-6X-MTAConnectionMessageDelay</b>
<b>Name:</b>	MTA Connection Message Delay
<b>Description:</b>	Monitors the time (secs) since the oldest message in this entity's queue was placed in the MTA queue
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Oldest Message Queued.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>            Delivery of messages to another Exchange server may be delayed by the MTA because of possible problems with a connection.</p> <p>A long delay time could indicate problems with connectors, system load, the MTA, or the network.</p> <p><b>Potential impact:</b>            Performance/Failure.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor queue length for the specific connection with NT Performance Monitor:</li> <li>(2) If queue lengths for multiple connections are large, that could indicate performance or network problems. Also check that the MTA process (emsmta) is running.</li> <li>(3) Run Exchange Administrator and check for 'stuck' messages in the MTA queue.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Verify that this isn't a performance problem with the MTA service. See 'Additional Information' below for more information.</li> </ol> <p><b>Additional Information:</b></p> <p>Exchange 2000 and 2003 servers use the MTA to transfer messages over non-smtp connections such as X.400 connectors. The X.400 connector is primarily used to transfer messages with Exchange 5.5 servers. Typically X.400 connectors are used while migrating from Exchange 5.5 to a later version of Exchange although there are other uses. Due to the inherent inefficiency of the Exchange 2000 and later version of the MTA, there are a number of Microsoft recommendations, depending on your use. Please follow the link <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp</a> and go to the section titled 'Chapter 9: Tuning Exchange 2000 Server for Performance'.</p>

## EXSPI-6X-MTAConnectionQueueLengths)

<b>Policy:</b>	<b>EXSPI-6X-MTAConnectionQueueLengths</b>
<b>Name:</b>	MTA Connection Queue Lengths
<b>Description:</b>	Monitors the number of outstanding messages queued for transfer to another Exchange Server.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>            Delivery of messages to another Exchange server may be delayed by the MTA because of possible problems with a connection.</p> <p>A large queue length could indicate problems with connectors, system load, the MTA, or the network.</p> <p><b>Potential impact:</b>            Performance/Failure.</p> <p><b>Suggested action(s):</b>            (1) Monitor queue length for the specific connection with NT Performance Monitor:            MExchangeMTA Connections.Queue Length.&lt;CONNECTION&gt;</p> <p>(2) If queue lengths for multiple connections are large, that could indicate performance or network problems. Also check that the MTA process (emsmta) is running.</p> <p>(3) Run Exchange Administrator and check for 'stuck' messages in the MTA queue.</p> <p>(4) Verify that there are no network problems</p> <p><b>Additional Information:</b>            Exchange 2000 and 2003 servers use the MTA to transfer messages over non-smtp connections such as X.400 connectors. The X.400 connector is primarily used to transfer messages with Exchange 5.5 servers. Typically X.400 connectors are used while migrating from Exchange 5.5 to a later version of Exchange although there are other uses. Due to the inherent inefficiency of the Exchange 2000 and later version of the MTA, there are a number of Microsoft recommendations, depending on your use. Please follow the link <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp</a> and go to the section titled 'Chapter 9: Tuning Exchange 2000 Server for Performance'.</p>

## EXSPI-6X-ISPublicAverageDeliveryTime

<b>Policy:</b>	<b>EXSPI-6X-ISPublicAverageDeliveryTime</b>
<b>Name:</b>	IS Public Average Delivery Time
<b>Description:</b>	Monitors the time between the submission of a message to the public information store and submission to the MTA, by taking an average for the last 10 messages.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) The system is overloaded.</li> <li>(3) There is a problem with the Information Store.</li> <li>(4) There is a problem with the Active Directory.</li> <li>(5) A large queue length could indicate be a problem with the SMTP process (inetinfo.exe), that SMTP is not processing messages being sent by the Information Store at all or quickly enough.</li> </ol> <p><b>Potential impact:</b></p> <ol style="list-style-type: none"> <li>(1) Delivery of public folder messages to other Exchange servers may be delayed.</li> </ol> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or Performance Monitor to determine if the system is overloaded. Also check that SMTP (inetinfo.exe) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with Information Store or the SMTP service on either the problem system or the remote system.</li> <li>(3) Verify that there are no Active Directory problems.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Enable Diagnostics Logging for the SMTP (using Exchange System Manager) to help in troubleshooting.</li> <li>(6) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol>



Policy:	EXSPI-6X-ISPublicAverageDeliveryTime
<b>For more information:</b>	<p>See the Microsoft Knowledge Base Articles:</p> <p>328906: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;328906">http://support.microsoft.com/default.aspx?scid=kb;en-us;328906</a></p> <p>289779: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;289779">http://support.microsoft.com/default.aspx?scid=kb;en-us;289779</a></p> <p>313983: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;313983">http://support.microsoft.com/default.aspx?scid=kb;en-us;313983</a></p> <p>322258: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;322258">http://support.microsoft.com/default.aspx?scid=kb;en-us;322258</a></p> <p>811067: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811067">http://support.microsoft.com/default.aspx?scid=kb;en-us;811067</a></p> <p>811862: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811862">http://support.microsoft.com/default.aspx?scid=kb;en-us;811862</a></p> <p>824467: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;824467">http://support.microsoft.com/default.aspx?scid=kb;en-us;824467</a></p> <p>276081: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;276081">http://support.microsoft.com/default.aspx?scid=kb;en-us;276081</a></p> <p>304228: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;304228">http://support.microsoft.com/default.aspx?scid=kb;en-us;304228</a></p> <p>326992: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;326992">http://support.microsoft.com/default.aspx?scid=kb;en-us;326992</a></p> <p>816199: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;816199">http://support.microsoft.com/default.aspx?scid=kb;en-us;816199</a></p>

## EXSPI-6X-ISMailboxAverageLocalDeliveryTime

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxAverageLocalDeliveryTime</b>
<b>Name:</b>	IS Mailbox Average Local Delivery Time
<b>Description:</b>	Monitors the average time between submission of a message to the public information store and the delivery to all local recipients (recipients on the same server) for the last 10 messages. This counter should not be greater than zero for more than a few seconds.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIS Public.Average Local Delivery Time.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ul style="list-style-type: none"> <li>(1) A large queue length could indicate be a problem with the store process (store.exe).</li> <li>(2) The thresholds are set too low.</li> <li>(3) The system is overloaded.</li> <li>(4) There is a problem with the Information Store.</li> </ul> <p><b>Potential impact:</b> Delivery of messages to local recipients may be delayed.</p> <p><b>Suggested action(s):</b></p> <ul style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or Performance Monitor to determine if the system is overloaded. Also check that the store (store.exe) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with Information Store.</li> <li>(3) Enable Diagnostics Logging for the store (MSExchangeIS using Exchange System Manager) to help in troubleshooting.</li> <li>(4) Adjust policy thresholds when establishing normal server performance baselines.</li> </ul>

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxAverageLocalDeliveryTime</b>
<b>For more information:</b>	<p>See the Microsoft Knowledge Base Articles:</p> <p>289779: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;289779">http://support.microsoft.com/default.aspx?scid=kb;en-us;289779</a></p> <p>313983: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;313983">http://support.microsoft.com/default.aspx?scid=kb;en-us;313983</a></p> <p>322258: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;322258">http://support.microsoft.com/default.aspx?scid=kb;en-us;322258</a></p> <p>811067: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811067">http://support.microsoft.com/default.aspx?scid=kb;en-us;811067</a></p> <p>811862: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811862">http://support.microsoft.com/default.aspx?scid=kb;en-us;811862</a></p> <p>824467: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;824467">http://support.microsoft.com/default.aspx?scid=kb;en-us;824467</a></p> <p>276081: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;276081">http://support.microsoft.com/default.aspx?scid=kb;en-us;276081</a></p> <p>304228: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;304228">http://support.microsoft.com/default.aspx?scid=kb;en-us;304228</a></p> <p>326992: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;326992">http://support.microsoft.com/default.aspx?scid=kb;en-us;326992</a></p> <p>329171: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329171">http://support.microsoft.com/default.aspx?scid=kb;en-us;329171</a></p> <p>823505: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823505">http://support.microsoft.com/default.aspx?scid=kb;en-us;823505</a></p> <p>291248: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;291248">http://support.microsoft.com/default.aspx?scid=kb;en-us;291248</a></p> <p>816199: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;816199">http://support.microsoft.com/default.aspx?scid=kb;en-us;816199</a></p>

## EXSPI-6X-ISPublicReplicationQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISPublicReplicationQueueLength</b>
<b>Name:</b>	IS Public Replication Queue Length
<b>Description:</b>	Monitors the number of replication messages in the public information store's replication receive queue. Replication Receive Queue size is the number of replication messages waiting to be processed
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIS Public.Replication Receive Queue Size.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) A large queue length could indicate problems with system load or the Information Store process.</li> <li>(3) A large queue length could indicate problems with replication intervals.</li> </ol> <p><b>Potential impact:</b></p> <ol style="list-style-type: none"> <li>(1) Delivery of replication messages to public folders may be delayed.</li> </ol> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or Performance Monitor to determine if the system is overloaded.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the Information Store or SMTP service.</li> <li>(3) Verify that there are no Active Directory problems.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Verify that replication occurs at the right intervals.</li> <li>(6) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol> <p><b>For more information</b> see the Microsoft Knowledge Base Articles:</p> <p>328906: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;328906">http://support.microsoft.com/default.aspx?scid=kb;en-us;328906</a></p> <p>273479: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;273479">http://support.microsoft.com/default.aspx?scid=kb;en-us;273479</a></p>

## EXSPI-6X-ISMailboxReceiveQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxReceiveQueueLength</b>
<b>Name:</b>	IS Mailbox Receive Queue Length
<b>Description:</b>	Monitors the number of messages in the ISs receive queue
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Grp:</b>	EX-Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Delivery of replication messages to public folders may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Check the Perfmon counter MExchangeIS Mailbox.Messages Received/Min. If this value is relatively low, then the messages are backing up. If this value is relatively high, then it could be a spike in incoming traffic.</li> <li>(2) Monitor system with Windows NT Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(3) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Verify that there are no Active Directory problems.</li> <li>(6) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> <li>(7) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol> <p><b>For more information</b> see the Microsoft Knowledge Base Articles:</p> <p>329167: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329167">http://support.microsoft.com/default.aspx?scid=kb;en-us;329167</a></p> <p>317539: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;317539">http://support.microsoft.com/default.aspx?scid=kb;en-us;317539</a></p> <p>314744: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;314744">http://support.microsoft.com/default.aspx?scid=kb;en-us;314744</a></p> <p>828938: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;828938">http://support.microsoft.com/default.aspx?scid=kb;en-us;828938</a></p> <p>813781: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813781">http://support.microsoft.com/default.aspx?scid=kb;en-us;813781</a></p> <p>329639: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329639">http://support.microsoft.com/default.aspx?scid=kb;en-us;329639</a></p> <p>319653: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319653">http://support.microsoft.com/default.aspx?scid=kb;en-us;319653</a></p>

## EXSPI-6X-ISMailboxSendQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxSendQueueLength</b>
<b>Name:</b>	IS Mailbox Send Queue Length
<b>Description:</b>	Monitors the number of messages in the information store's send queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Public.Send Queue Size.&lt;instance&gt;</p> <p><b>Probable cause(s):</b> Delivery of replication messages to public folders may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(3) Verify that there are no network problems.</li> <li>(4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> </ol>

## EXSPI-6X-ISMailboxAverageDeliveryTime

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxAverageDeliveryTime</b>
<b>Name:</b>	IS Mailbox Average Delivery Time
<b>Description:</b>	Monitors the average time between submission of a message to the Mailbox information store and submission to the MTA for the last 10 messages
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Mailbox.Average Delivery Time.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) The system is overloaded.</li> <li>(3) There is a problem with the Information Store.</li> <li>(4) There is a problem with the Active Directory.</li> <li>(5) A large queue length could indicate be a problem with the SMTP process (inetinfo.exe), that SMTP is not processing messages being sent by the Information Store at all or quickly enough.</li> </ol> <p><b>Potential impact:</b></p> <p>Delivery of messages to other Exchange servers may be delayed.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or Performance Monitor to determine if the system is overloaded. Also check that SMTP (inetinfo.exe) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with Information Store or the SMTP service on either the problem system or the remote system.</li> <li>(3) Verify that there are no Active Directory problems.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Enable Diagnostics Logging for the SMTP (using Exchange System Manager) to help in troubleshooting.</li> <li>(6) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol>

Policy:	EXSPI-6X-ISMailboxAverageDeliveryTime
<b>For more information:</b>	<p>See the Microsoft Knowledge Base Article(s):</p> <p>289779: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;289779">http://support.microsoft.com/default.aspx?scid=kb;en-us;289779</a></p> <p>313983: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;313983">http://support.microsoft.com/default.aspx?scid=kb;en-us;313983</a></p> <p>322258: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;322258">http://support.microsoft.com/default.aspx?scid=kb;en-us;322258</a></p> <p>811067: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811067">http://support.microsoft.com/default.aspx?scid=kb;en-us;811067</a></p> <p>811862: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811862">http://support.microsoft.com/default.aspx?scid=kb;en-us;811862</a></p> <p>824467: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;824467">http://support.microsoft.com/default.aspx?scid=kb;en-us;824467</a></p> <p>276081: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;276081">http://support.microsoft.com/default.aspx?scid=kb;en-us;276081</a></p> <p>304228: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;304228">http://support.microsoft.com/default.aspx?scid=kb;en-us;304228</a></p> <p>326992: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;326992">http://support.microsoft.com/default.aspx?scid=kb;en-us;326992</a></p> <p>329171: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329171">http://support.microsoft.com/default.aspx?scid=kb;en-us;329171</a></p> <p>823505: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823505">http://support.microsoft.com/default.aspx?scid=kb;en-us;823505</a></p> <p>291248: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;291248">http://support.microsoft.com/default.aspx?scid=kb;en-us;291248</a></p> <p>816199: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;816199">http://support.microsoft.com/default.aspx?scid=kb;en-us;816199</a></p>



## EXSPI-6X-ISMailboxReceiveQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxReceiveQueueLength</b>
<b>Name:</b>	IS Mailbox Receive Queue Length
<b>Description:</b>	Monitors the number of messages in the mailbox information store's receive queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Delivery of messages to mailboxes may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Check the Perfmon counter MExchangeIS Mailbox.Messages Received/Min. If this value is relatively low, then the messages are backing up. If this value is relatively high, then it could be a spike in incoming traffic.</li> <li>(2) Monitor system with Windows NT Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(3) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Verify that there are no Active Directory problems.</li> <li>(6) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> <li>(7) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol> <p>For more information see the Microsoft Knowledge Base Article:</p> <p>329167: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329167">http://support.microsoft.com/default.aspx?scid=kb;en-us;329167</a></p> <p>317539: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;317539">http://support.microsoft.com/default.aspx?scid=kb;en-us;317539</a></p> <p>314744: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;314744">http://support.microsoft.com/default.aspx?scid=kb;en-us;314744</a></p> <p>828938: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;828938">http://support.microsoft.com/default.aspx?scid=kb;en-us;828938</a></p> <p>813781: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813781">http://support.microsoft.com/default.aspx?scid=kb;en-us;813781</a></p> <p>329639: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329639">http://support.microsoft.com/default.aspx?scid=kb;en-us;329639</a></p> <p>319653: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319653">http://support.microsoft.com/default.aspx?scid=kb;en-us;319653</a></p>

## EXSPI-6X-ISMailboxSendQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxSendQueueLength</b>
<b>Name:</b>	IS Mailbox Send Queue Length
<b>Description:</b>	Monitors the number of messages in the mailbox information store's send queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Mailbox.Send Queue Size.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>            Delivery of messages to other Exchange servers may be delayed by the MTA.</p> <p>A large queue length could indicate that the MTA is not processing messages being sent by the Information Store at all or quickly enough so they are backing up in the queue.</p> <p>There could be a problem with system load or the MTA process.</p> <p><b>Potential impact:</b>            Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(3) Verify that there are no network problems.</li> <li>(4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> </ol>

## EXSPI-6X-InformationStoreDbLogRecordStallsPerSec

<b>Metric Name:</b>	EXSPI-6X-InformationStoreDbLogRecordStallsPerSec
<b>Description:</b>	Alarm on Information Store Transaction Log Record Buffer Addition Stalls. Log Record Stalls/sec is the number of log records that cannot be added to the log buffers per second because they are full.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	2
<b>Critical Threshold</b>	1
<b>Instruction Text:</b>	<p><b>Probable cause:</b> Transaction log buffer is too small</p> <p><b>Potential impacts:</b> (1) If this counter is non-zero most of the time, the log buffer size may be a bottleneck. (2) Significant performance degradation will be seen if the server is under load or if users are sending large messages.</p> <p><b>Suggested action:</b> The default value (84) of the msExchESEParamLogBuffers attribute is too low; this value should be increased to 9000 on all servers.</p> <p><b>For more information</b>, see Microsoft TechNet article: Microsoft Exchange 2000 Internals: Quick Tuning Guide, <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/maintain/optimize/exchtune.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/maintain/optimize/exchtune.asp</a></p>

## EXSPI-6X-InformationStoreDbLogThreadsWaiting

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreDbLogThreadsWaiting</b>
<b>Description:</b>	Alarm on Information Store Threads Waiting to Write to Transaction Log. Information store Log Threads Waiting is the number of threads waiting for their data to be written to the log in order to complete an update of the database.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	2
<b>Critical Threshold</b>	1
<b>Instruction Text:</b>	<p><b>Probable cause:</b> Transaction log buffer is too small.</p> <p><b>Potential impacts:</b> (1) If this counter is too high, the log may be a bottleneck. (2) Significant performance degradation will be seen if the server is under load or if users are sending large messages.</p> <p><b>Suggested action:</b> The default value (84) of the msExchESEParamLogBuffers attribute is too low; this value should be increased to 9000 on all servers.</p> <p><b>For more information</b>, see Microsoft TechNet article: Microsoft Exchange 2000 Internals: Quick Tuning Guide, <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/maintain/optimize/exchtune.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/maintain/optimize/exchtune.asp</a></p>

## EXSPI-6X-InformationStoreDbLogWritesPerSec

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreDbLogWritesPerSec</b>
<b>Description:</b>	Alarm on the number of times the transaction log buffers are written. Information store Log Writes/sec is the number of times the log buffers are written to the log file(s) per second.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	500
<b>Critical Threshold</b>	n/a
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The media used to host transaction log file(s) has a low write rate.</p> <p><b>Potential impact:</b> If this number approaches the maximum write rate for the media holding the log file(s), the log may be a bottleneck.</p> <p><b>Suggested actions:</b></p> <p>(1) Adjust the threshold to be close to maximum write rate of the actual storage.</p> <p>(2) Determine whether your transaction log device is handling the load properly by monitoring the device for counter 'PhysicalDisk. Avg. Disk sec/write', making sure it stays well below 5ms or 1ms when write-back cache is enabled.</p>

## EXSPI-6X-InformationStoreDbCacheSize

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreDbCacheSize</b>
<b>Description:</b>	Monitors the database cache size of an information store which shows the amount of system memory used by the database cache manager to hold commonly used information from the database file(s) in order to prevent file i/o operations.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	On large servers, this counter should be in the range of 800,000,000 to 1,200,000,000 bytes at all times. The database cache size is automatically adjusted, based upon the physical memory configured in the server, and possible fine-tuning of the STORE virtual address space. The cache size should be less than 1.2GB: if you have incorrectly configured the maximum cache size, you run the risk of running out of virtual memory and eventually causing significant performance degradation and STORE crash.

## EXSPI-6X-InformationStoreUserCount

<b>Policy:</b>	<b>EXSPI-6X-InformationStoreUserCount</b>
<b>Name:</b>	IS User Count
<b>Description:</b>	Monitors the number of client processes connected to the information store. This metric could be baselined and put in the perspective of the RPC operations rate for an understanding of system resource utilization.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS.User Count</p> <p><b>Probable cause(s):</b> The number of client processes logged on to the Information Store is low.</p> <p>A low user logon count during the day could indicate problems with the Information Store process or network connectivity.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Verify that this system has active mailboxes. If it does not, this Policy should be removed from this system. (2) Using a test mailbox account, verify that you can connect to the server without problems. (3) Verify that there are no network problems.</p>

## EXSPI-6X-IS\_RPCOperations

<b>Metric Name:</b>	<b>EXSPI-6X-IS_RPCOperations</b>
<b>Description:</b>	Alarm on number of MAPI client RPC operations/sec. Information store RPC operations/sec: this counter indicates outstanding MAPI client requests. The value of the counter is specific to the organization and server, but it should remain at 0 on 4 processor machines during normal operations.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	1
<b>Critical Threshold</b>	2
<b>Instruction Text:</b>	<p><b>Probable causes:</b></p> <ul style="list-style-type: none"><li>(1) The server is overloaded with users using MAPI clients.</li><li>(2) The threshold is set too low.</li></ul> <p><b>Potential impact:</b></p> <p>MAPI clients are unable to contact the Exchange server.</p> <p><b>Suggested actions:</b></p> <ul style="list-style-type: none"><li>(1) Adjust the thresholds after establishing normal server performance baselines.</li><li>(2) Relocate some users of this server to another Exchange server.</li></ul>



## EXSPI-6X-IS\_RPCRequests

<b>Metric Name:</b>	<b>EXSPI-6X-IS_RPCRequests</b>
<b>Description:</b>	Alarm on number of MAPI client RPC requests. Information Store RPC Requests is the number of MAPI RPC client requests currently being processed by the information store.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	80
<b>Critical Threshold</b>	100
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> MAPI RPC clients are unable to log on to the server when RPC requests are consistently over the maximum number of RPC requests (100) that can be processed by a server.</p> <p><b>Suggestion action:</b> Relocate some users from this server to another server.</p>

## EXSPI-6X-InformationStoreVMLargestBlock

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreVMLargestBlock</b>
<b>Description:</b>	Monitors the size (in bytes) of the largest free block of virtual memory available to the store process. This Block Size should remain above 32 MB at all times. When the VM Largest Block Size drops below 10MB the Databases will not mount.
<b>Type:</b>	Reset
<b>Schedule:</b>	10 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	16
<b>Critical Threshold</b>	32
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> With the addition of more users and therefore more Exchange usage the amount of information store virtual memory can run low. Overall server performance will degrade as the lack of large virtual memory blocks causes the store to use the page file.</p> <p><b>Suggestion for action:</b> Add up to 4GB of RAM. Relocate some users from this server to another server.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:  <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;296073&amp;sd=ee">http://support.microsoft.com/default.aspx?scid=kb;en-us;296073&amp;sd=ee</a>  <a href="http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=9582&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0">http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=9582&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0</a></p>

## EXSPI-6X-InformationStoreVM16MBBlocks

<b>Metric Name:</b>	<b>EXSPI-6X-InforamtionStoreVM16MBBlocks</b>
<b>Description:</b>	Monitors total number of free virtual memory blocks that are greater than or equal to 16 MB.
<b>Type:</b>	Reset
<b>Schedule:</b>	5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	3
<b>Critical Threshold</b>	5
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> With the addition of more users and therefore more Exchange usage the amount of information store virtual memory can run low. Overall server performance will degrade as the lack of large virtual memory blocks causes the store to use the page file.</p> <p><b>Suggestion action:</b> Add up to 4GB of RAM. Relocate some users from this server to another server.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:  <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;325044&amp;sd=ee">http://support.microsoft.com/default.aspx?scid=kb;en-us;325044&amp;sd=ee</a>  <a href="http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=12800&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0">http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=12800&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0</a></p>

## EXSPI-6X-InformationStoreVMLargeBlockBytes

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreVMLargeBlockBytes</b>
<b>Description:</b>	Monitors the total size of all free virtual memory blocks that are greater than or equal to 16 MB in size. This total should remain above 50 MB at all times.
<b>Type:</b>	Reset
<b>Schedule:</b>	10 mins
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	6X
<b>Critical Threshold</b>	55
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> With the addition of more users and therefore more Exchange usage the amount of information store virtual memory can run low. Overall server performance will degrade as the lack of large virtual memory blocks causes the store to use the page file.</p> <p><b>Suggestion action:</b> Add up to 4GB of RAM. Relocate some users from this server to another server.</p> <p><b>For more information,</b> see Microsoft Knowledge Base articles:  <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;296073&amp;sd=ee">http://support.microsoft.com/default.aspx?scid=kb;en-us;296073&amp;sd=ee</a>  <a href="http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=9582&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0">http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=9582&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0</a></p>

## EXSPI-6X-SMTPCategorizerQueueLength)

<b>Metric:</b>	<b>EXSPI-6X-SMTPCategorizerQueueLength</b>
<b>Name:</b>	SMTP Categorizer Queue Length
<b>Description:</b>	Monitors the number of messages in the SMTP Categorizer Queue. The Categorizer performs lookups and checks limits and restrictions in Active Directory.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Categorizer Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <p>(1) The Categorization Queue Length counter may show an incorrect number of messages in the queue.</p> <p>(2) The advanced queuing engine may not be able to access the global catalog servers or to access the recipient information. Or, the global catalog servers are unreachable or are performing slowly.</p> <p><b>Potential impact:</b></p> <p>The SMTP server may not deliver or delay the delivery of messages either locally or remotely.</p> <p><b>Suggested action(s):</b></p> <p>(1) Install the latest Microsoft Exchange service pack.</p> <p>(2) Increase diagnostic logging for the MExchangeDSAccess service and for the MExchangeTransport service to collect information about Categorizer components.</p> <p>(3) Active Directory Lookups may be an issue. Consider implementing another Active Directory server.</p> <p>(4) If you have the Windows+ SPI, deploy the ADS policies to the Active Directory server. These policies may also have recommendations to increase Active Directory Lookup performance.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q814018, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;814018">http://support.microsoft.com/default.aspx?scid=kb;en-us;814018</a></p>

## EXSPI-6X-SMTPLocalQueueLength)

<b>Policy:</b>	<b>EXSPI-6X-SMTPLocalQueueLength</b>
<b>Name:</b>	SMTP Local Queue Length
<b>Description:</b>	Monitors the number of messages to the SMTP Local Queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Local Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) A corrupted message is at the head of the queue.</li> <li>(2) The header of the message is malformed.</li> <li>(3) The message is deeply nested.</li> <li>(4) There is cross membership in Security Groups.</li> <li>(5) A message is forwarded to an inappropriately configured public folder.</li> <li>(6) The information store is not accepting messages for local delivery. Slow or sporadic message delivery can indicate that a looping message or that a performance problem exists.</li> </ol> <p><b>Potential impact:</b></p> <p>Delivery of messages to the local Exchange server may be delayed by the Exchange Information Store.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Install the latest Exchange service pack</li> <li>(2) Follow the instructions described in the following Microsoft Knowledge Base articles to remove the root cause of the problem.</li> <li>(3) Reduce the Exchange server load by moving some users to another Exchange server.</li> <li>(4) Increase diagnostic logging for the MExchangeIS service and for the MExchangeTransport service for the SMTP Store Driver components.</li> </ol> <p><b>For more information,</b> see Microsoft Knowledge Base articles:</p> <p><b>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></b></p> <p><b>Q283291, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;283291">http://support.microsoft.com/default.aspx?scid=kb;en-us;283291</a></b></p> <p><b>Q319461, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319461">http://support.microsoft.com/default.aspx?scid=kb;en-us;319461</a></b></p> <p><b>Q329639, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329639">http://support.microsoft.com/default.aspx?scid=kb;en-us;329639</a></b></p> <p><b>Q813781, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813781">http://support.microsoft.com/default.aspx?scid=kb;en-us;813781</a></b></p> <p><b>Q318334, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;318334">http://support.microsoft.com/default.aspx?scid=kb;en-us;318334</a></b></p>

## EXSPI-6X-SMTPLocalRetryQueueLength)

<b>Policy:</b>	<b>EXSPI-6X-SMTPLocalRetryQueueLength</b>
<b>Name:</b>	SMTP Local Retry Queue Length
<b>Description:</b>	Monitors the number of messages in the SMTP Local Retry queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) A corrupted message is at the head of the queue.</li> <li>(2) The header of the message is malformed.</li> <li>(3) The message is deeply nested.</li> <li>(4) There is cross membership in Security Groups.</li> <li>(5) A message is forwarded to an inappropriately configured public folder.</li> <li>(6) The information store is not accepting messages for local delivery. Slow or sporadic message delivery can indicate that a looping message or that a performance problem exists.</li> </ol> <p><b>Potential impact:</b></p> <p>Delivery of messages to the local Exchange server may be delayed by the Exchange Information Store.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Install the latest Exchange service pack</li> <li>(2) Follow the instructions described in the following Microsoft Knowledge Base articles to remove the root cause of the problem.</li> <li>(3) Reduce the Exchange server load by moving some users to another Exchange server.</li> <li>(4) Increase diagnostic logging for the MExchangeIS service and for the MExchangeTransport service for the SMTP Store Driver components.</li> </ol> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q283291, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;283291">http://support.microsoft.com/default.aspx?scid=kb;en-us;283291</a></p> <p>Q319461, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319461">http://support.microsoft.com/default.aspx?scid=kb;en-us;319461</a></p> <p>Q329639, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329639">http://support.microsoft.com/default.aspx?scid=kb;en-us;329639</a></p> <p>Q813781, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813781">http://support.microsoft.com/default.aspx?scid=kb;en-us;813781</a></p> <p>Q318334, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;318334">http://support.microsoft.com/default.aspx?scid=kb;en-us;318334</a></p>

## EXSPI-6X-SMTPMessagesPendingRouting

<b>Policy:</b>	<b>EXSPI-6X-SMTPMessagesPendingRouting</b>
<b>Name:</b>	SMTP Messages Pending Routing
<b>Description:</b>	Monitors the number of messages that have been categorized but not routed.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Messages Pending Routing.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) Connector delivery restrictions may not work correctly</li> <li>(2) The Least-Cost route to the destination server is scoped and rerouting the message takes longer time.</li> <li>(3) The system resource is low or Active Directory server or DNS is slow.</li> <li>(4) Reinstallation of IIS on the Exchange server may result in not being able to start Exchange routing engine.</li> </ol> <p><b>Potential impact:</b></p> <p>Delivery of messages to other Exchange servers may be delayed by the SMTP Server.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Install the latest Microsoft Exchange service pack.</li> <li>(2) Disable any unnecessary connector restrictions because the restrictions can cause a significant degradation in server performance.</li> <li>(3) Increase diagnostic logging for the MExchangeTransport service for the Routing category component to gather additional information.</li> <li>(4) Determine if network problems are preventing message flow.</li> <li>(5) Reinstallation of IIS on the Exchange server may require reinstallation of Exchange server.</li> </ol> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q277872, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;277872">http://support.microsoft.com/default.aspx?scid=kb;en-us;277872</a></p> <p>Q287058, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;287058">http://support.microsoft.com/default.aspx?scid=kb;en-us;287058</a></p> <p>Q323672, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;323672">http://support.microsoft.com/default.aspx?scid=kb;en-us;323672</a></p>



## EXSPI-6X-SMTPRemoteQueueLength

<b>Policy:</b>	<b>EXSPI-6X-SMTPRemoteQueueLength</b>
<b>Name:</b>	SMTP Remote Queue Length
<b>Description:</b>	Monitors the number of messages in the queue for remote delivery
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Remote Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <p>(1) There is a problem with network connection to the remote server with 'host unreachable' errors.</p> <p>(2) A backlog occurs in the SMTP remote delivery queues because of waiting threads in message tracking.</p> <p>(3) The server is being used as an open relay SMTP server for unsolicited commercial e-mail (UCE) messages, or spam.</p> <p><b>Potential impact:</b></p> <p>Delivery of messages to other Exchange servers may be delayed by the SMTP Server.</p> <p><b>Suggested action(s):</b></p> <p>(1) You can use an Network Monitor tool to obtain information about network connection errors. For example use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as 'host unreachable' errors, use telnet.exe to try to connect to the destination computer.</p> <p>(2) To troubleshoot protocol errors, increase diagnostic logging for the MExchangeTransport service for the SMTP Protocol component, and review the logs for errors.</p> <p>(3) Resolve message tracking or security issues if a backlog occurs.</p> <p>(4) Configure the Exchange server to block open SMTP relaying.</p> <p><b>For more information,</b> see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q328931, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;328931">http://support.microsoft.com/default.aspx?scid=kb;en-us;328931</a></p> <p>Q324958, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;324958">http://support.microsoft.com/default.aspx?scid=kb;en-us;324958</a></p> <p>Q821746, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;821746">http://support.microsoft.com/default.aspx?scid=kb;en-us;821746</a></p>

## EXSPI-6X-SMTPRemoteRetryQueueLength)

Policy	EXSPI-6X-SMTPRemoteRetryQueueLength
<b>Name:</b>	SMTP Remote Retry Queue Length
<b>Description:</b>	Monitors the number of messages in the retry queue for remote delivery
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Remote Retry Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <p>(1) There is a problem with network connection to the remote server with 'host unreachable' errors.</p> <p>(2) A backlog occurs in the SMTP remote delivery queues because of waiting threads in message tracking.</p> <p>(3) The server is being used as an open relay SMTP server for unsolicited commercial e-mail (UCE) messages, or spam.</p> <p><b>Potential impact:</b></p> <p>Delivery of messages to other Exchange servers may be delayed by the SMTP Server.</p> <p><b>Suggested action(s):</b></p> <p>(1) You can use an Network Monitor tool to obtain information about network connection errors. For example, use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as 'host unreachable' errors, use telnet.exe to try to connect to the destination computer.</p> <p>(2) To troubleshoot protocol errors, increase diagnostic logging for the MExchangeTransport service for the SMTP Protocol component, and review the logs for errors.</p> <p>(3) Resolve message tracking or security issues if a backlog occurs.</p> <p>(4) Configure the Exchange server to block open SMTP relaying.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q328931, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;328931">http://support.microsoft.com/default.aspx?scid=kb;en-us;328931</a></p> <p>Q324958, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;324958">http://support.microsoft.com/default.aspx?scid=kb;en-us;324958</a></p> <p>Q821746, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;821746">http://support.microsoft.com/default.aspx?scid=kb;en-us;821746</a>.</p>

## EXSPI-6X-SMTPNDRPercentage

<b>Policy:</b>	EXSPI-6X-0056
<b>Name:</b>	SMTP NDR Percentage
<b>Description:</b>	Monitors the percentage of NDRs for each SMTP virtual server
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.NDRs Generated.&lt;instance&gt; SMTP Server.Outbound Messages.&lt;instance&gt;</p> <p>If this is the first time the metric is run or the counter values are less than the previous counter values, then the values are just stored and thresholds are not processed.</p> <p>The percentage is calculated by subtracting the previous counter values from the current counter values to get the number of NDRs and number of messages for the current interval. The formula used to get the metric value is: NDRs this interval / outbound messages this interval * 100.</p> <p><b>Probable cause(s):</b> A high rate of non-delivery reports could indicate problems with the SMTP configuration, the network, or how mail is being addressed.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) If the SMTP server has been configured to send notification of NDRs, check the configured mailbox for the system to get information about the NDRs. Otherwise, configure the SMTP server to send notifications for NDRs to help in troubleshooting.</li> <li>(2) Verify that there are no network problems.</li> <li>(3) Check other problems in the Message Reader to see if Exchange has been reporting problems with the SMTP server.</li> <li>(4) Enable diagnostics logging for the SMTP server (using Exchange System manager) to help in troubleshooting.</li> </ol>

## EXSPI-6X-0058 (Newsfeed Outbound Connections Failed)

<b>Policy:</b>	<b>EXSPI-6X-0058</b>
<b>Name:</b>	Newsfeed Outbound Connections Failed
<b>Description:</b>	Monitors the percentage of outbound newsfeed connections that failed
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> NNTP Server.Total Outbound Connections Failed.&lt;instance&gt; NNTP Server.Total Outbound Connections.&lt;instance&gt;</p> <p>If this is the first time the metric is run or the counter values are less than the previous counter values, then the values are just stored and thresholds are not processed.</p> <p>The percentage is calculated by subtracting the previous counter values from the current counter values to get the number of NDRs and number of messages for the current interval. The formula used to get the metric value is: NDRs this interval / outbound messages this interval * 100.</p>

## EXSPI-6X-0070 (Mailbox Database File Disk Space)

<b>Metric Name:</b>	<b>EXSPI-0070</b>
<b>Description:</b>	Mailbox Database File Disk Space
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 1 hr.
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	20
<b>Critical Threshold</b>	10
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The amount of disk space being used by the Exchange Mailbox Database files is getting large. A large amount of used disk space indicates a growing number of users and/or size of users' mailboxes.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"><li>(1) Get more disk space for the drive that the Mailbox database resides on.</li><li>(2) Enable or decrease mailbox quota to reduce the amount of disk space used by the users.</li><li>(3) Move some of the users to another mailbox database.</li></ol>

## EXSPI-6X-0072 (Public Folder Database File Disk Space)

<b>Metric Name:</b>	<b>EXSPI-0072</b>
<b>Description:</b>	Monitors the amount of disk space being used by the public folder database.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 1 hr.
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	20
<b>Critical Threshold</b>	10
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b></p> <p>The public folder database has grown to nearly filling the disk. Users have added files into the public folder database. Other files on the volume may have filled up the volume.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b></p> <p>(1) Increase the size of the volume that the public folder database resides on.</p> <p>(2) Using the Inactive Public Folder report, decide which inactive public folder files can be archived to tape and deleted. Recover the space by running the defragment utility.</p> <p>(3) Move any extraneous files from the volume where the public folder database resides on.</p>

## EXSPI-6X-0110 (SRS Pending Replication Synchronizations)

<b>Policy:</b>	<b>EXSPI-6X-0110</b>
<b>Name:</b>	SRS Pending Replication Synchronizations
<b>Description:</b>	SRS Pending Replication Synchronizations.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeSRS.Pending Replication Synchronizations</p> <p><b>Probable cause(s):</b> Replication of directory information may be delayed. A delay in processing replication updates could indicate problems with system load or the Site Replication Service process.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Check that the Directory process (dsamain) is running. (2) Verify that there are no network problems. (3) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</p>

## EXSPI-6X-0111 (SRS Remaining Replication Updates)

<b>Policy:</b>	EXSPI-6X-0111
<b>Name:</b>	SRS Remaining Replication Updates
<b>Description:</b>	SRS Remaining Replication Updates.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeSRS.Remaining Replication Updates</p> <p><b>Probable cause(s):</b> Replication of directory information may be delayed. A delay in processing replication updates could indicate problems with system load or the Site Replication Service process.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Check that the Directory process (dsamain) is running. (2) Verify that there are no network problems. (3) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</p>



## EXSPI-6X-1001 (Services Monitor)

<b>Policy:</b>	<b>EXSPI-1001</b>
<b>Name:</b>	MSExchange Services Monitor
<b>Description:</b>	Monitors Exchange Server process. Generates event if an Exchange service is currently stopped but configured startup automatic.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> A service marked for automatic start-up is not running.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b></p> <p>(1) Unless the service is known to be down for maintenance, use the Services tool in the Control Panel to re-start the service.</p> <p>NOTE: By default only Exchange related services are monitored. If you would like to receive messages about other stopped services, simply add conditions. A value of 0.0 is sent for running services and 1.0 for stopped services.</p>

## EXSPI-6X-1002 (End to End Message Ping)

<b>Policy:</b>	<b>EXSPI-6X-1002</b>
<b>Name:</b>	MSExchange End to End Message Ping Monitor
<b>Description:</b>	Monitors the round trip time for a message
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 30min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Slow or non-reply of messages could indicate problems with system load, the MTA, connectors, or the network. The threshold could be too low. For the most accurate alarming, separate thresholds should be set for each ping system pair.</p> <p><b>Potential impact:</b> Failure or Performance</p> <p><b>Suggested action(s):</b></p> <p>If the threshold is too low, make it bigger. See the User's Guide for information on how to set the threshold differently for each system pair.</p> <p>If the threshold is accurate, then evaluate the following suggestions on the source and destination servers:</p> <p>Select the Performance Monitor 'MS Exchange Server Health' to determine if the source system is overloaded. Also check that the MTA process (emsmta) is running. (If it is not running, it will not be shown on the graph.) Re-start it if needed.</p> <p>Select the Performance Monitor 'MS Exchange Server Health' to determine if the message queue to the destination system is large or growing.</p> <p>If the queues on either side are large or growing and the systems are not overloaded, run Exchange Administrator and check for 'stuck' messages in the MTA queue.</p> <p>If there are no stuck messages, check if there are network problems between the two systems.</p> <p>If the connection between the source and destination system is not direct (e.g., the message travels through bridgehead servers), check the connector queue lengths and system load on those systems as well.</p>

## EXSPI-65-EpoxyClientOutQueueLength

<b>Metric Name:</b>	<b>EXSPI-65-EpoxyClientOutQueueLength</b>
<b>Description:</b>	Alarm on epoxy client out queue length. This indicates the number of requests waiting to be processed by the Exchange store.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	2
<b>Critical Threshold</b>	5
<b>Instruction Text:</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"><li>(1) The thresholds are set too low.</li><li>(2) The Exchange server is heavily loaded.</li></ul> <p><b>Potential impact:</b></p> <ul style="list-style-type: none"><li>(1) The Microsoft Exchange IMAP4 service may stop responding to client requests.</li><li>(2) The performance of SMTP and information store processes (Inetinfo.exe and Store.exe) degrades as data is shuttled back and forth.</li></ul> <p><b>Suggested action:</b></p> <ul style="list-style-type: none"><li>(1) Adjust policy thresholds when establishing normal server performance baselines.</li><li>(2) Alleviate load of the server by moving some users to another server.</li></ul> <p><b>For more information</b>, see the Microsoft Knowledge Base article - Q81705</p> <p><b><a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;817051">http://support.microsoft.com/default.aspx?scid=kb;en-us;817051</a></b></p>

## EXSPI-65-EpoxyStoreOutQueueLength

<b>Metric Name:</b>	<b>EXSPI-65-EpoxyStoreOutQueueLength</b>
<b>Description:</b>	Alarm on epoxy store out queue length. This indicates the number of requests waiting to be processed by the IIS protocol handlers.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	2
<b>Critical Threshold</b>	5
<b>Instruction Text:</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) The Exchange server is heavily loaded.</li> </ul> <p><b>Potential impact:</b></p> <ul style="list-style-type: none"> <li>(1) The Microsoft Exchange IMAP4 service may stop responding to client requests.</li> <li>(2) The performance of information store processes (Inetinfo.exe and Store.exe) degrades as data is shuttled back and forth.</li> </ul> <p><b>Suggested action:</b></p> <ul style="list-style-type: none"> <li>(1) Adjust policy thresholds when establishing normal server performance baselines.</li> <li>(2) Alleviate load of the server by moving some users to another server.</li> </ul> <p><b>For more information</b>, see the Microsoft Knowledge Base article - Q81705</p> <p><b><a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;817051">http://support.microsoft.com/default.aspx?scid=kb;en-us;817051</a></b></p>

## EXSPI-65-ActiveSyncUsers

<b>Metric Name:</b>	<b>EXSPI-65-ActiveSyncUsers</b>
<b>Description:</b>	Alarms on Microsoft Exchange ActiveSync current users
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable causes:</b> Outlook mobile users are overloaded in this Exchange 2003 server.</p> <p><b>Potential impact:</b></p> <ol style="list-style-type: none"><li>1) The Exchange server ActiveSync service is unable to process incoming outlook mobile connect requests</li><li>2) The performance of the Exchange server is deteriorated</li></ol> <p><b>Suggested action:</b> Move some Outlook mobile users to another Exchange 2003 server.</p>

## EXSPI-65-ActiveSyncMboxPendReqs

<b>Metric Name:</b>	<b>EXSPI-65-ActiveSyncMboxPendReqs</b>
<b>Description:</b>	Alarms on Microsoft Exchange ActiveSync Outstanding Exchange Mailbox Server I/O Requests: the number of pending connection requests from Exchange ActiveSync to the Exchange mailbox server.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable causes:</b></p> <ol style="list-style-type: none"><li>1) Outlook mobile users are overloaded in this Exchange 2003 server</li><li>2) Resources such as CPU time and memory are low in this Exchange 2003 server.</li></ol> <p><b>Potential impact:</b></p> <p>The Exchange server ActiveSync service is unable to synchronize the mobile device with the Exchange mailbox server.</p> <p><b>Suggested actions:</b></p> <ol style="list-style-type: none"><li>1) Check hardware performance of the Exchange 2003 server</li><li>2) Move some Outlook mobile users to another Exchange 2003 server.</li></ol>

## EXSPI-65-ActiveSynMboxConnReqs

<b>Metric Name:</b>	<b>EXSPI-65-ActiveSyncMboxConnReqs</b>
<b>Description:</b>	Microsoft Exchange ActiveSync Outstanding Exchange Mailbox Server Connection Requests is the number of pending connection requests from Exchange ActiveSync to the Exchange mailbox server.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable causes:</b></p> <ol style="list-style-type: none"><li>1) Outlook mobile users are overloaded in this Exchange 2003 server</li><li>2) Resources such as CPU time and memory are low in this Exchange 2003 server.</li></ol> <p><b>Potential impact:</b></p> <p>The Exchange server ActiveSync service is unable to process incoming outlook mobile connection requests.</p> <p><b>Suggested actions:</b></p> <ol style="list-style-type: none"><li>1) Check hardware performance of the Exchange 2003 server</li><li>2) Move some Outlook mobile users to another Exchange 2003 server.</li></ol>

## EXSPI-65-ActiveSyncADRequests

<b>Metric Name:</b>	<b>EXSPI-65-ActiveSyncADRequests</b>
<b>Description:</b>	Microsoft Exchange ActiveSync Current Active Directory Requests is the current outstanding requests to Active Directory.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable causes:</b></p> <ol style="list-style-type: none"><li>1) Outlook mobile users are overloaded in this Exchange 2003 server</li><li>2) Global catalog server is slow in response to the active directory requests.</li></ol> <p><b>Potential impact:</b></p> <p>The Exchange server ActiveSync service is unable to process incoming outlook mobile access requests.</p> <p><b>Suggested actions:</b></p> <ol style="list-style-type: none"><li>1) Check performance of Active Directory service with ADSPI</li><li>2) Move some Outlook mobile users to another Exchange 2003 server.</li></ol>



## EXSPI-65-InformationStoreAdditionalHeaps

<b>Metric Name:</b>	<b>EXSPI-65-InformationStoreAdditionalHeaps</b>
<b>Description:</b>	The Information Store process utilizes an internal heap; this heap allocation is called exchmem. Information Store Exchmem Number of additional heaps is the total number of exchmem heaps that have been created since startup.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 15 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> At startup the Information Store process creates several exchmem heaps. New heaps are created when the initial heaps are fully utilized or are fragmented to the point the allocation request of contiguous memory fails. When this is the case the Information Store creates new exchmem heaps. When the Information Store process must consistently create heaps then the overall Information Store virtual memory becomes fragmented or depleted.</p> <p>Suggestion action:</p> <ol style="list-style-type: none"> <li>1. Add up to 4GB of RAM.</li> <li>2. Relocate some users from this server to another server.</li> <li>3. Use a minimum number of Storage Groups to accomplish service agreements. For each additional Storage Group the Information Store process allocates and uses additional memory.</li> <li>4. If the server is performing multiple roles (Mailbox Server and Public Folder Server) consider moving a role to a new server.</li> </ol> <p>For more information, see Microsoft Knowledge Base article: <b><a href="http://support.microsoft.com/?kbid=815372">http://support.microsoft.com/?kbid=815372</a></b></p>

## EXSPI-65-InformationStoreHeapMemoryErrors

<b>Metric Name:</b>	<b>EXSPI-65-InformationStoreHeapMemoryErrors</b>
<b>Description:</b>	Information Store Exchmem Number of heaps with memory errors is the total number of exchmem heaps that failed allocations due to insufficient available memory
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 15 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> The Information Store process utilizes an internal heap; this heap allocation is called exchmem. At startup the Information Store process creates several exchmem heaps. New heaps are created when the initial heaps are fully utilized or are fragmented to the point the allocation request of contiguous memory fails. When this is the case the Information Store creates new exchmem heaps. When the Information Store process must consistently create heaps then the overall Information Store virtual memory becomes fragmented or depleted.</p> <p><b>Suggestion action:</b></p> <ol style="list-style-type: none"> <li>1. Add up to 4GB of RAM.</li> <li>2. Relocate some users from this server to another server.</li> <li>3. Use a minimum number of Storage Groups to accomplish service agreements. For each additional Storage Group the Information Store process allocates and uses additional memory.</li> <li>4. If the server is performing multiple roles (Mailbox Server and Public Folder Server) consider moving a role to a new server.</li> </ol> <p><b>For more information</b>, see Microsoft Knowledge Base article: <b><a href="http://support.microsoft.com/?kbid=815372">http://support.microsoft.com/?kbid=815372</a></b></p>

## EXSPI-65-InformationStoreMemoryErrors

<b>Metric Name:</b>	<b>EXSPI-65-InformationStoreMemoryErrors</b>
<b>Description:</b>	Information Store Exchmem Number of memory errors is the total number of exchmem allocations that could not be satisfied by available memory.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 15 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> The Information Store process utilizes an internal heap; this heap allocation is called exchmem. At startup the Information Store process creates several exchmem heaps. New heaps are created when the initial heaps are fully utilized or are fragmented to the point the allocation request of contiguous memory fails. When this is the case the Information Store creates new exchmem heaps. When the Information Store process must consistently create heaps then the overall Information Store virtual memory becomes fragmented or depleted.</p> <p><b>Suggestion action:</b></p> <ol style="list-style-type: none"> <li>1. Add up to 4GB of RAM.</li> <li>2. Relocate some users from this server to another server.</li> <li>3. Use a minimum number of Storage Groups to accomplish service agreements. For each additional Storage Group the Information Store process allocates and uses additional memory.</li> <li>4. If the server is performing multiple roles (Mailbox Server and Public Folder Server) consider moving a role to a new server.</li> </ol> <p><b>For more information</b>, see Microsoft Knowledge Base articles: <b><a href="http://support.microsoft.com/?kbid=815372">http://support.microsoft.com/?kbid=815372</a></b></p>

## EXSPI-65-OutlookClientLatency10

<b>Metric Name:</b>	<b>EXSPI-65-OutlookClientLatency10</b>
<b>Description:</b>	Alarms on the number of successful RPCs with RPC latency > 10 seconds.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> RPC clients experience high latencies and may even be unable to log on to the server. Most likely the RPC requests are also over the maximum number of RPC requests (100) that can be processed by a server.</p> <p><b>Suggestion action:</b> Relocate some users from this server to another server.</p>

## EXSPI-65-OutlookClientLatency5

<b>Metric Name:</b>	<b>EXSPI-65-OutlookClientLatency5</b>
<b>Description:</b>	Alarms on the number of successful RPCs with RPC latency > 5 seconds.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> RPC clients experience high latencies and may even be unable to log on to the server. Most likely the RPC requests are also over the maximum number of RPC requests (100) that can be processed by a server.</p> <p><b>Suggestion action:</b> Relocate some users from this server to another server.</p>

## EXSPI-65-OutlookClientLatency2

<b>Metric Name:</b>	<b>EXSPI-65-OutlookClientLatency2</b>
<b>Description:</b>	Alarms on the number of successful RPCs with RPC latency > 2 seconds.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> RPC clients experience high latencies and may even be unable to log on to the server. Most likely the RPC requests are also over the maximum number of RPC requests (100) that can be processed by a server.</p> <p><b>Suggestion action:</b> Relocate some users from this server to another server.</p>

## EXSPI-65-2920 (Client RPC Failure Rate)

<b>Metric Name:</b>	<b>EXSPI-65-2920</b>
<b>Description:</b>	Alarms on client RPC failure rate: the percentage of MExchangeIS client RPCs failed against MExchangeIS client RPCs attempted.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 15 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b> Outlook RCP clients can not log on the Exchange server due to server unavailable, server too busy, call cancelled, call failed, access denied, or other errors.</p> <p><b>Potential impact:</b> Performance (1) Performance of the Exchange server degrades. (2) RPC clients are unable to log on the Exchange server.</p> <p><b>Suggested actions:</b> (1) Identify the root cause for the high RPC failure rate through the graph \"Outlook Client Failures\". (2) Move some mailboxes to other Exchange server if the high RPC failure rate is due to server too busy.</p>





## 2 Exchange 2000 Policies

### Summary of Exchange 2000 Monitor Policies

- ▶ In OVO for UNIX version 8 and earlier, policies are referred to as templates.

Policy group	Policy	Description
<b>EXSPI Specialized Groups (Ex2000)</b>		
<b>EXSPI Exchange Server</b>		
EXSPI Message Delivery (no monitor Policies)		
EXSPI Server Availability		
	EXSPI-6X-0002	Inactive Process Monitor (Checks that processes are using CPU)
EXSPI Server Transaction Log		
	EXSPI-6X-0005	Checks the amount of free disk space where the Exchange transaction log files reside.
	EXSPI-6X-0006	Checks the amount of disk space being used by the Exchange transaction log files.
<b>EXSPI Site Replication Service</b>		
	EXSPI-6X-0110 SRS Pending Replication Synchronizations	Monitors directory replication to verify that synchronization updates are being processed efficiently.
	EXSPI-6X-0111 SRS Remaining Replication Updates	Monitors directory replication to verify that synchronization updates are being processed efficiently
	EXSPI-6X-0112 SRS Data File Space	Monitors the disk space used by the Site Replication Service database log files.
	EXSPI-6X-0113 Percent Low SRS Data Free Space	Monitors the disk space used by the Site Replication Service database log files.

Policy group	Policy	Description
<b>EXSPI Standard Groups (Ex2000)</b>		
<b>EXSPI Availability</b>		
	EXSPI-6X-0001	Process Monitor (Monitors CPU time used by Exchange processes)
	EXSPI-6X-1001	MSExchange Services Monitor
<b>EXSPI Client Access (Ex2000)</b>		
EXSPI IMAP4		
	EXSPI-6X-IMAP4Connections	Monitors IMAP4 connections.
	EXSPI-6X-2811	IMAP4 Failed Connections percentage.
	EXSPI-6X-2812	IMAP4 Rejected Connection percentage.
EXSPI MAPI		
	EXSPI-6X-IS_RPCAveragedLatency	Alarms on the number of MAPI client Average Latency. IS RPC Averaged Latency is the RPC latency in milliseconds, averaged for the past 1024 packets.
	EXSPI-6X-IS_RPCOperations	Alarm on number of MAPI client RPC operations/sec
	EXSPI-6X-IS_RPCRequest	Alarm on number of MAPI client RPC requests
EXSPI OWA		
EXSPI Back End (no monitor policies)		
EXSPI Front End		
	EXSPI-6X-OWACurrentConnections	Monitors OWA current connections.
EXSPI POP3		
	EXSPI-6X-POP3Connections	Monitors POP3 connections.
	EXSPI-6X-4911	POP3 Failed Connections percentage.
	EXSPI-6X-4912	POP3 Rejected Connection percentage.

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
<b>EXSPI Cluster (Ex2000)</b>		
	EXSPI-6X-ClusterConnLimits	Monitors the number of client processes connected to the information store. Server performance can degrade when connection limits exceed those recommended by Microsoft.
<b>EXSPI Directory</b>		
	EXSPI-6X-0023	Monitors the ratio of MExchangeDSAccess Cache hit rate (hits/sec) and miss rate (misses/sec).
<b>EXSPI Information Store (Ex2000)</b>		
EXSPI Epoxy (Ex2000)		
	EXSPI-60-EpoxyStoreOutQueueLength	Alarm on epoxy store out queue length
	EXSPI-60-EpoxyClientOutQueueLength	Alarm on epoxy client out queue length
EXSPI Full Text Index		
	EXSPI-6X-0074	This metric measures the percentage of free disk space available for the full text index of an Exchange server information store.
EXSPI Mailbox (Ex2000)		
	EXSPI-6X-ISMailboxReceiveQueueLength	Monitors the number of messages in the mailbox information store receive queue.
	EXSPI-6X-ISMailboxSendQueueLength	Monitors the number of messages in the mailbox information store send queue.
	EXSPI-6X-0070	Mailbox Database File Disk Space
	EXSPI-6X-ISMailboxAverageDeliveryTime	Average Delivery Time is the average time between the submission of a message to the mailbox store, and submission to other storage providers, for the last 10 messages.

Policy group	Policy	Description
	EXSPI-60-ISMailboxAverageLocalDeliveryTime	Average Local Delivery Time is the average time in milliseconds between the submission of a message to the mailbox store and the delivery to all local recipients (recipients on the same server) for the last 10 messages. This counter should not be greater than zero for more than a few seconds.
EXSPI Performance (Ex2000)		
	EXSPI-6X-InformationStoreDbCacheSize	Alarms on the IS Database Cache Size Limits. The database cache size of an IS shows the amount of system memory used by the database cache manager to hold commonly used information from the database files in order to prevent file i/o operations.
	EXSPI-6X-InformationStoreDbLogRecordStallpersec	Alarm on Information Store Transaction Log Record Buffer Addition Stalls
	EXSPI-6X-InformationStoreDbLogThreadsWaiting	Alarm on Information Store Threads Waiting to write to Transaction Log
	EXSPI-6X-InformationStoreDbLogWritespersec	Alarm on the number of times the transaction log buffers are written
	EXSPI-6X-InformationStoreUserCount	Monitors the number of users connected to the information store.
	EXSPI-6X-InformationStoreVMLargestBlock	Alarms on largest free block of virtual memory. IS Largest Block is the size of the largest free block of virtual memory available to the store process.
	EXSPI-6X-InformationStoreVMLargeBlockBytes	Alarms on the total size of large VM blocks available. IS VM Total Large Free Block Bytes is the total size of all free virtual memory blocks that are greater than or equal to 16MB in size.
	EXSPI-6X-InformationStoreVM16MBBlocks	Alarms on the number of 16MB blocks available. IS VM Total 16MB Free Blocks is the total number of free virtual memory blocks that are greater than or equal in size to 16MB.

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
<b>EXSPI Public Folder (Ex2000)</b>		
	EXSPI-6X-ISPublicAverageDeliveryTime	Monitors the average time between the submission of a message to the public store and submission to other storage providers for the last 10 messages.
	EXSPI-6X-ISPublicReceiveQueueLength	Monitors the number of messages in the public store's receive queue.
	EXSPI-6X-ISPublicSendQueueLength	Monitors the number of messages in the public store's send queue.
	EXSPI-6X-ISPublicReplicationQueueLength1	Monitors the number of replication messages waiting to be processed.
	EXSPI-6X-0072	Monitors the amount of disk space being used by the public folder database.
<b>EXSPI Transaction Log</b>		
	EXSPI-6X-0008	Monitors the oldest Exchange transaction log files for a storage group.
	EXSPI-6X-0004	Monitors the percentage of free disk space where the Exchange transaction log files reside.
<b>EXSPI Virus Scan</b>		
	EXSPI-6X-VSQueueLength	Checks the Information Store Anti Virus API Queue Length.
<b>EXSPI Messaging</b>		
<b>EXSPI MTA</b>		
	EXSPI-6X-0075	Alarms on the percent of free disk space available for the X.400 server MTA queue.
	EXSPI-6X-300006	This metric measures the Work Queue Length minus the Deferred Delivery Messages, with respect to the rate that messages are processed.
	EXSPI-6X-300007	This metric divides the number of Rejected Inbound Associations by Cumulative Inbound Associations, over the current interval, which reveals a relative rate of rejected associations.

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
	EXSPI-6X-300008	This metric measures the total number of messages rejected from this entity since the last interval, with respect to the total number of messages received since the last interval.
	EXSPI-6X-300009	This metric measures the number of outstanding messages in the Work Queue, which indicates the number of messages not yet processed to completion by the MTA, relative to the number of messages successfully processed by the MTA.
	EXSPI-6X-300010	This metric measures the number of failed associations since the last interval, divided by the number of associations since the last interval.
	EXSPI-6X-300011	This metric measures the total number of messages which failed to be converted from one form to another since the last interval, with respect to the total number of messages successfully converted since the last interval.
	EXSPI-6X-MTAConnectionQueueLengths	This metric measures the number of outstanding messages queued for transfer to the entity.
	EXSPI-6XMTAConnectionMessageDelay	This metric measures the amount of seconds that the oldest message has been in the MTA queue.
<b>EXSPI NNTP</b>		
	EXSPI-6X-0058	Newsfeed Outbound Connections Failed
<b>EXSPI SMTP</b>		
	EXSPI-6X-SMTPCategorizerQueueLength	Monitors the number of messages in the SMTP Categorizer Queue. The Categorizer performs lookups and checks limits and restrictions in Active Directory. Messages accumulate in this queue because the advanced queuing engine cannot categorize them.
	EXSPI-6X-SMTPLocalQueueLength	Monitors the number of messages in the SMTP Local queue.

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
	EXSPI-6X-SMTPRemoteRetryQueueLength	Monitors the number of messages that are destined for a remote delivery.
	EXSPI-6X-SMTPRemoteQueueLength	Monitors the number of messages that are destined for a remote delivery.
	EXSPI-6X-SMTPMessagesPendingRouting	Monitors the number of messages that have been categorized but not routed.
	EXSPI-6X-SMTPLocalRetryQueueLength	Monitors the number of messages in the SMTP Local Retry queue.
	EXSPI-6X-3000001	Monitors the SMTP Outbound Connection Refused. This is the percentage of outbound SMTP connections refused by remote sites against the total outbound connections for each SMTP virtual server.
	EXSPI-6X-0082	This metric measures the disk space usage by the SMTP badmail folder.
	EXSPI-6X-0083	This metric measures the growth rate of items in the SMTP badmail directory.
	EXSPI-6X-0084	This metric measures the disk space usage by the SMTP pickup folder.
	EXSPI-6X-0085	This metric measures the growth rate of items in SMTP pickup directory.
	EXSPI-6X-0086	This metric measures the disk space usage by the SMTP Queue folder.
	EXSPI-6X-0087	This metric measures the growth rate of items in the SMTP Queue directory.
EXSPI Tracking Log		
	EXSPI-6X-0076	This metric measures the percentage of free disk space available for the message tracking log.
<b>EXSPI OVO Exchange SPI core</b>		
EXSPI Data Collection (no monitor policies)		

Policy group	Policy	Description
<b>EXSPI Optional Services</b>		
EXSPI Chat Service		
	EXSPI-60-0830	Microsoft Exchange Chat Service.Active DNS logon threads
	EXSPI-60-0831	Microsoft Exchange Chat Service.Client Timeout Related Disconnects
	EXSPI-60-0833	Microsoft Exchange Chat Service.Anonymous Clients
)	EXSPI-60-0834	Microsoft Exchange Chat Service.Authenticated Clients
	EXSPI-60-0835	Microsoft Exchange Chat Service.Authentication Failures
	EXSPI-60-0836	Microsoft Exchange Chat Service.Server operations queued
EXSPI Conferencing Service		
EXSPI Conferencing Server		
	EXSPI-60-0800	MSEExchangeCONF.Active Conferences
	EXSPI-60-0801	DCOM Calls To MCUs
	EXSPI-60-0802	Average Load Per MCU
EXSPI Conferencing Bridge		
	EXSPI-60-0805	Failed Conference Join Attempts
	EXSPI-60-0806	Video Conferences in Progress
	EXSPI-60-0807	Incomplete Calls
EXSPI MCU Server		
	EXSPI-60-0803	MCU.Active Connections
	EXSPI-60-0804	MCU Load
EXSPI Instant Messaging		
	EXSPI-60-0841	MSEExchangeIM Virtual Servers.Current Users Online
	EXSPI-60-0842	MSEExchangeIM Virtual Servers.Current Subscriptions
	EXSPI-60-0845	MSEExchangeIM.Failed Requests/sec
	EXSPI-60-0846	MSEExchangeIM.Rejected Requests/sec



# Summary of Exchange 2000 Schedule Data Collection Policies

**Table 1 Exchange 2000 Schedule Data Collection Policies**

Policy Group/Policy	Description	Schedule
<b>EXSPI Specialized Groups</b>		
EXSPI Exchange Server		
EXSPI Message Delivery		
EXSPI-6X End to End Message Ping	Scheduler for End to End Message Ping metric	10,40 past each hr
EXSPI Server Availability		
EXSPI-6X-10m-Serv & Processes	10m Scheduler for metrics in Services and Processes group	0, 10, 20, 30, 40, 50 past each hr
EXSPI Server Transaction Log		
EXSPI-6X Transaction Log Storage Use	Determine megabytes used and available to the Transaction Log	43 past each hr
EXSPI Site Replication Service		
EXSPI-6X-05m-SRS Data Space Usage	Monitors SRS data space activity	18 past each hr
<b>EXSPI Standard Groups</b>		
EXSPI Availability		
EXSPI-6X-05m-Serv & Processes	5m Scheduler for metrics in Services and Processes group	1, 6, 11, 16, 21,26, 31, 36, 41, 46, 51, 56 past each hr
EXSPI-6X-UrlScan State	Checks if the ISAPI filter is running.	Each hour
EXSPI-6X-MB on Front-End Server	Checks for mailboxes on front end servers.	Each day
EXSPI-6X-TransactionLog BackUp	Checks if Log Files are being truncated by backup.	Each day
EXSPI-6X-SSL for HTTPVS	Checks for server configurations that allow for non-SSL data transmission.	Each hour
EXSPI-6X-Circular Logging-On EXSPI-6X-Circular Logging-Off	Checks circular logging setting for storage groups.	Each day
EXSPI-6X-Heap DeCommit	Checks Heap De-commit registry key.	Each day
EXSPI-6X-HotFix Installed	Checks the hotfix/service pack IDs.	Each hour
EXSPI Client Access (Ex2000)		
IMAP4		
EXSPI-6X-Dc-IMAP4 Performance	Collect IMAP4 performance metrics	On each hr

<b>Policy Group/Policy</b>	<b>Description</b>	<b>Schedule</b>
EXSPI-6X-IMAP4FailedConnRate	IMAP4 Failed Connections percentage	0, 15, 30, 45 past each hr
EXSPI-6X-IMAP4RejectedConnRate	IMAP4 Rejected Connection percentage	0, 15, 30, 45 past each hr
EXSPI-6X-IMAP4 Port Response	Determine if the IMAP4 port is responsive	0,10,20, 30,40,50 past each hr
EXSPI MAPI (no schedule data collection policies)		
EXSPI OWA		
EXSPI Back End		
EXSPI-6X-Dc-OWA Back End	Collect OWA Back End performance metrics	0, 15, 30, 45 past each hr
EXSPI Front End		
EXSPI-6X-Dc-OWA Front End	Collect OWA Front End performance metrics	0, 15, 30, 45 past each hr
EXSPI-6X HTTP Port Response	Determine if the HTTP port is responsive	0,10,20, 30,40,50 past each hr
EXSPI POP3		
EXSPI-6X-Dc-POP3 Performance	Collect POP3 performance metrics	On each hr
EXSPI-6X-POP3FailedConnRate	POP3 Failed Connections percentage	0, 15, 30, 45 past each hr
EXSPI-6X-POP3RejectedConnRate	POP3 Rejected Connection percentage	0, 15, 30, 45 past each hr
EXSPI-6X-POP3 Port Response	Determine if the POP3 port is responsiv	0,10,20, 30,40,50 past each hr
EXSPI Cluster (no schedule data collection policies)		
EXSPI Directory		
EXSPI-6X-15m-DSAccess	DSAccess Hit-Miss Ratio	0, 15, 30, 45 past each hr
EXSPI Information Store		
EXSPI Epoxy (Ex2000) (no schedule data collection policies)		
EXSPI Full Text Index		
EXSPI-6X-Dc-Full Text Index	Collect disk space usage of full-text indexing	On each hr
EXSPI Mailbox (Ex2000)		
EXSPI-6X--1h-Mailbox Space Usage	Monitors mailbox store space usage	M-F 6:05, 11:05, 15:05

<b>Policy Group/Policy</b>	<b>Description</b>	<b>Schedule</b>
EXSPI-6X-Dc-Mailbox Data	Collect data about all mailboxes on the system	M-F 21:05
EXSPI-6X-Database Mounted Search	Search an Exchange server for dismounted information store(s)	5,15,25,35,45,55 past each hr
EXSPI-6X-Dc-Mailbox IS Sum Data	Collect summary data about Mailbox Information Stores	21:05 M,T,W,Th,Sat
EXSPI-6X-Dc-Mailbox IS Performance	Collect Performance Data on MSxchangeIS Mailbox Object	0, 15, 30, 45 past each hr
EXSPI Performance (Ex2000)		
EXSPI-6X-Check Memory Configuratr	Perform the optimal memory configuration check daily	7:00
EXSPI-6X-Dc-IS Performance	Collect Perfomance Data on MExchangeIS Object	3, 18, 33, 48 past each hr
EXSPI Public Folder (Ex2000)		
EXSPI-6X-Dc-Public IS Sum Data	Collect summary data about Public Info Store (Folders)	M-F 22:05
EXSPI-6X-1h-PubFolder Space Usage	Monitors public folder space usage	Daily 6:05, 11:05, 15:05
EXSPI-6X-Database Mounted Search	Search an Exchange server for dismounted information store(s)	5,15,25,35,45,55 past each hr
EXSPI-6X-Dc-Public Folder Data	Collect data about all public folders on the system	M-Sat 22:05
EXSPI-6X-Dc-IS PubFoldr Performance	Collect Performance Data on MSxchangeIS Public Object	1,16,31,46 past each hr
EXSPI Transaction Log		
EXSPI-6X Transactn Log Backup Check	For each storage group determine age of oldest transaction log file	Daily 7:30
EXSPI-6X-Dc Trans. Log Space Usage	Collects and logs transaction log space usage activity	M-F 41 past each hr
EXSPI Virus Scan (no schedule data collection policies)		
EXSPI Messaging		
EXSPI MTA		
EXSPI-6X-Dc -x400 Service MTA Queue	Determine and log X.400 service MTA queue storage metrics	Daily 6:05
EXSPI-6X-Dc-MTA Performance	Collect Performance Data on MSxchangeMTA Object	2, 17, 32, 47 past each hr

<b>Policy Group/Policy</b>	<b>Description</b>	<b>Schedule</b>
EXSPI-6X-MTA Message Delay	Collect Message Delay Data on MSxchangeMTA Object	3,8,13,18,23,28,33,38,43,48,53,58 past each hr
EXSPI-6X-MTA Rejected Inbnd Assocns	Collect Rejected Inbound Associations Data on MSxchangeMTA Object	12 past each hr
EXSPI-6X-MTA Rejected Inbound Msgs	Message Transfer Agent Rejected Inbound Messages	11 past each hr
EXSPI-6X-MTA Work Queue Length	Message Transfer Agent Work Queue Length	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59 past each hr
EXSPI-6X-MTA Failed Outbnd Assocns	Message Transfer Agent Failed Outbound Associations	17 past each hr
EXSPI-6X-MTA Failed Conversions	Message Transfer Agent Failed Outbound Conversions	17 past each hr
<b>EXSPI NNTP</b>		
EXSPI-6X-1h-NNTP	1h Scheduler for metrics in NNTP group	On each hr
<b>EXSPI SMTP</b>		
EXSPI-6X-15m-300001	Collect Performance Data on MSxchangeIS Public Object	1, 16, 31, 46 past each hr
EXSPI-6X-Dc SMTP Queues	Collect SMTP queue metrics	2,7,12,17,22, 27, 32, 37, 42, 47, 52, 57 past each hr
EXSPI-6X-Dc SMTP Server Performance	Collect SMTP queue metrics	8 past each hr
EXSPI-6X-Dc SMTP Virtual Server Storage	Determine and log SMTP queue storage metrics	2,7,12,17,22, 27, 32, 37, 42, 47, 52, 57 past each hr
EXSPI-6X-Dc SMTP NDR Percentage	Collect SMTP queue metrics	8,18,28,38,48,58 past each hr
EXSPI-6X-Dc SMTP Outbound Connections Refused	Collect SMTP queue metrics	9,19,29,39,49,59 past each hr
EXSPI-6X-Dc SMTP Port Response	Collect SMTP queue metrics	1,11,21,31,41,51 past each hr
EXSPI-6X-SMTP Anonymous Relay	Checks for anonymous access on SMTP virtual servers	Each day
EXSPI-6X-SMTP Directories	Checks if Queue, Pick Up, and BadMail SMTP directories on SMTP virtual server are on NTFS file system drive.	Each day

<b>Policy Group/Policy</b>	<b>Description</b>	<b>Schedule</b>
EXSPI-6X-SMTP Services	Checks for SMTP entry in the Services file.	Each hour
EXSPI Tracking Log		
EXSPI-6X-Dc-Message Tracking Log Space Usage	Collect information about message tracking log space usage and free space available	Daily 6:10
EXSPI-6X-Dc-TrackLog SLA Delivery	Daily Reporter Collection of Tracking Log data for SLA Delivery Time	Daily 19:35
EXSPI-6X-Dc-TrackLog Data	Collect Tracking log data	M-Sat 19:00
EXSPI-6X-Dc-Tracking Log ACLs	Checks if Message Tracking Logs have <b>Everyone</b> group listed in the ACL permissions.	Each hour
EXSPI-6X-Dc-Message Tracking State	Checks if message tracking is enabled.	Each hour
EXSPI OVO Exchange SPI Core		
EXSPI Data Collection (no schedule data collection policies)		
EXSPI Optional Services		
EXSPI Chat Service		
EXSPI-60-15m-Chat	15m Scheduler for Chat Metrics	23 past each hr
EXSPI-60-Dc-Chat Service Clients and Channels	Collects data about Exchange Chat Service clients and channels	M-F 18 and 43 past each hr

<b>Policy Group/Policy</b>	<b>Description</b>	<b>Schedule</b>
EXSPI Conferencing Service		
EXSPI Conference Server		
EXSPI-60-Dc-ConfTrends	Collect data on trends in conferencing	M-F 8-17 24 and 54 past each hr
EXSPI-60-10m-Conf	10m Scheduler for active conferencing	M-F 8-17 2,12,22,32,42,52 past each hr
EXSPI Conferencing Bridge		
EXSPI-60-10m-ConfBridge	10m Scheduler for failed user join attempts and video conferences in progress	M-F 8-17 3,13,23,33,42,53 past each hr
EXSPI MCU Server		
EXSPI-60-10m-MCU	10m Scheduler for MCU conferencing trends	M-F 8-17 16,26,36,46,56 past each hr
EXSPI-60-Dc-MCU	Collect data on MCU conferencing trend	M-F 8-17 27, 57 past each hr
EXSPI Instant Messaging		
EXSPI-60-Dc-InstMsg Enabled Users	Reporting Collection for Instant Messaging Enabled Users	M-Sat 1:20

# Exchange 2000 Monitor Policy Specifications

## EXSPI-6X-0001 (Process Monitor)

<b>Policy:</b>	<b>EXSPI-6X-0001</b>
<b>Name:</b>	Process Monitor
<b>Description:</b>	Process Monitor (Monitors CPU time used by Exchange processes).
<b>Type:</b>	With reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter:</b> Process.% Processor Time</p> <p><b>Probable cause(s):</b> High CPU use could indicate an overloaded system. An Exchange process consuming a lot of CPU but processing few messages could indicate a problem with the process.</p> <p><b>Potential impact:</b> Failure, Performance</p> <p><b>Suggested action(s):</b> (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the service. (2) Monitor Exchange processes with NT Performance Monitor (Process.% Processor Time) and verify CPU consumption over a period of time. Constantly high value may indicate a scalability problem. (3) Stop and re-start the Exchange service. Use the NT Administrative Tool 'Service Manager'.</p> <p>NOTE: By default only Exchange processes are monitored. The 'Catch All' suppress condition prevents messages about other busy processes. To receive messages about other busy processes, simply add conditions before the 'Catch All'</p>

## EXSPI-6X-0002 (Inactive Process Monitor)

<b>Policy:</b>	<b>EXSPI-6X-0002</b>
<b>Name:</b>	Inactive Process Monitor
<b>Description:</b>	Monitors the core MS Exchange processes to check that they are using some CPU cycles. A process consistently at 0% could indicate a problem.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Low CPU use during the day on an active system could indicate a problem with the process.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b> (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the service. (2) Monitor Exchange processes with NT Performance Monitor (Process.% Processor Time) and verify CPU consumption over a period of time. Constantly high value may indicate a scalability problem. (3) Stop and re-start the Exchange service. Use the NT Administrative Tool 'Service Manager'.</p>



## EXSPI-6X-0004 (Transaction Log)

<b>Metric Name:</b>	EXSPI-0004
<b>Description:</b>	Percent Low Log File Disk Space
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 41 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	20
<b>Critical Threshold</b>	10

## EXSPI-6X-0005 (Low Log File Disk Space)

<b>Policy:</b>	EXSPI-6X-0005
<b>Name:</b>	Low Log File Disk Space
<b>Description:</b>	Monitors the free disk space remaining on the logical disk drive where the transaction log files for the IS public and private databases reside.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The amount of free disk space on the disk drive where the Exchange transaction log files reside is getting low.</p> <p><b>Potential impact:</b> Failure. Exchange will shutdown processing if there is no disk space for additional transaction log files.</p> <p><b>Suggested action(s):</b> (1) Free up disk space on this drive. (2) If this drive is filling up because of many Exchange transaction log files, verify that Exchange backups are completing successfully (log files are removed when the i backup completes) and that backups are being done frequently enough.</p>

## EXSPI-6X-0006 (Transaction Log File Disc Space)

<b>Policy:</b>	<b>EXSPI-6X-0006</b>
<b>Name:</b>	Transaction Log File Disc Space
<b>Description:</b>	Monitors the disk space used by the Exchange transaction and reserved transaction log files.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every day
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The amount of disk space being used by the Exchange transaction log files is getting large (disk space being used by edb*.log and res*.log files in the mdbdata and dsadata directories).</p> <p>A large amount of used disk space could indicate a possible problem with backups.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b> (1) Verify that Exchange backups are completing successfully (log files are removed when the backup completes). (2) Verify that backups are being done frequently enough. If they are, the conditions can be edited to increase the threshold values so this message is not generated as often.</p>

## EXSPI-6X-0008 (Transaction Log Backup Check Monitor)

<b>Policy:</b>	<b>EXSPI-6X-0008</b>
<b>Name:</b>	Transaction Log Backup Check Monitore
<b>Description:</b>	Monitors the oldest Exchange transaction log files for a Storage group.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every day
<b>Message Group:</b>	EXSPI
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The transaction log files are named Enn*.log, where nn is a number from 00 to 03 and corresponds to a storage group. The current log file is Enn.log. Completed log files are EnnXXXXX.log (the XXXXX portion of the name is a hexadecimal number starting with 00001). There are also two reserved files (res1.log and res2.log). When a backup is completed, the transaction log files are deleted. Old transaction log files could indicate a possible problem with backups.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b> (1) Verify that Exchange backups are completing successfully (log files are removed when the backup completes). (2) Verify that backups are being done frequently enough. If they are, the conditions can be edited to increase the threshold values so this message is not generated as often.</p>

## EXSPI-6X-0023 (Directory Svc Access)

<b>Policy:</b>	<b>EXSPI-6X-0023</b>
<b>Name:</b>	Exchange DSAccess Cache Hit-Miss Ratio
<b>Description:</b>	Monitors the ratio of MExchangeDSAccess Cache hit rate (hits/sec) and miss rate (misses/sec).
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 15mins
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause:</b></p> <p>The component MExchangeDSAccess has not been tuned.          Potential impact: Performance</p> <p>(1) Performance of the Exchange server degrades.          (2) There are long latencies for client's logging on to the server.</p> <p><b>Suggested actions:</b></p> <p>(1) Enable MExchangeDSAccess caching:          Registry key: HKEY_LOCAL_MACHINE          \\SYSTEM\\CurrentControlSet\\Services\\MExchangeDSAccess          Value name: CachingEnabled          Value: 0x1 (0x1 to enable and 0x2 to disable caching)</p> <p>(2) Adjust cache expiration time, maximum number of entries, and maximum memory size.          Registry key:          HKEY_LOCAL_MACHINE\\SYSTEM\\CurrentControlSet\\ServiceS\\MExchangeDSAccess\\Instance0          Value name: CacheTTL (entry expiration time)          Value type: REG_DWORD (second)          Value name: MaxMemory (maximum memory)          Value type: REG_DWORD (kilobyte)          Value name: MaxEntries (maximum number of entries)          Value type: REG_DWORD (number of entries)</p> <p>For more information, see Exchange 2000 server resource kit, Chapter 17 - Backbone Configuration and Tuning, <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/reskit/part4/c17back.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/reskit/part4/c17back.asp</a></p> <p>Microsoft Knowledge Base Article:          Q318228, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;318228">http://support.microsoft.com/default.aspx?scid=kb;en-us;318228</a></p>

## EXSPI-6X-300001 (SMTP Outbound Connections Refused)

<b>Policy</b>	<b>EXSPI-6X-300001</b>
<b>Name:</b>	SMTP Outbound Connections Refused
<b>Description:</b>	SMTP Outbound Connection Refused is the percentage of outbound SMTP connections refused by remote sites against the total outbound connections for each SMTP virtual server.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Outbound Connections Refused.&lt;instance&gt; SMTP Server.Outbound Connections Total.&lt;instance&gt;</p> <p>If this is the first time the metric is run or the counter values are less than the previous counter values, then the values are just stored and thresholds are not processed.</p> <p>The percentage is calculated by subtracting the previous counter values from the current counter values to get the number of NDRs and number of messages for the current interval. The formula used to get the metric value is: NDRs this interval / outbound messages this interval * 100.</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) There maybe a problem with the SMTP service making connections to remote systems.</li> <li>(2) No route exists for message delivery. For example, Exchange cannot determine a route or a connector to the final destination, or all available routes or connectors are marked as down.</li> </ol> <p><b>Potential impact:</b></p> <p>A high rate of failures could indicate problems with the network, remote systems, or the SMTP configuration.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Verify that there are no network problems.</li> <li>(2) Check the SMTP configuration using Exchange System Manager.</li> <li>(3) Check other messages in the Message Reader to see if Exchange has been reporting problems with the SMTP Service.</li> <li>(4) Enable Diagnostics Logging for the SMTP service (using Exchange System manager) to help in troubleshooting.</li> </ol> <p><b>For more information</b>, see Microsoft Knowledge Base article: Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p>

## EXSPI-6X-300006 (MTA Message Delay)

<b>Policy:</b>	EXSPI-6X-300006
<b>Name:</b>	MTA Message Delay
<b>Description:</b>	This metric measures the Work Queue Length less the Deferred Delivery Messages with respect to the rate that messages are processed ((Work Queue Length - Deferred Delivery)/ Messages per Second).
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Delay of messages being processed could indicate problems with system load, the MTA, connectors, or the network.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Run Exchange Administrator and check for 'stuck' messages in the MTA queue. (3) Verify that there are no network problems.</p> <p><b>Additional Information:</b> Exchange 2000 and 2003 servers use the MTA to transfer messages over non-smtp connections such as X.400 connectors. The X.400 connector is primarily used to transfer messages with Exchange 5.5 servers. Typically X.400 connectors are used while migrating from Exchange 5.5 to a later version of Exchange although there are other uses. Due to the inherent inefficiency of the Exchange 2000 and later version of the MTA, there are a number of Microsoft recommendations, depending on your use. Please follow the link <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp</a> and go to the section titled 'Chapter 9: Tuning Exchange 2000 Server for Performance'.</p>

## EXSPI-6X-300007 (MTA Rejected Inbound Associations)

<b>Policy:</b>	EXSPI-6X-300007
<b>Name:</b>	MTA Rejected Inbound Associations
<b>Description:</b>	Monitors the percentage of rejected inbound remote associations to the MTA
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Rejected Inbound Associations.&lt;instance&gt; MExchangeMTA Connections.Cumulative Inbound Associations.&lt;instance&gt;</p> <p><b>Probable cause(s):</b> There may be problems with the MTA on a remote system making connections to this system.</p> <p>A high rejection rate could indicate problems with the local or remote MTA, the connector, or system load.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system. (3) Verify that there are no network problems. (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>



## EXSPI-6X-300008 (MTA Rejected Inbound Messages)

<b>Policy:</b>	EXSPI-6X-300008
<b>Name:</b>	MTA Rejected Inbound Messages
<b>Description:</b>	Monitors the percentage of Messages submitted to the MTA that are rejected
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeMTA Connections.Inbound rejected Total.&lt;instance&gt;  MSExchangeMTA Connections.Inbound Messages Total.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>  There may be problems with the MTA on a remote system sending messages to this system.</p> <p>A high rate of rejected messages could indicate problems with the remote or local MTA or the connector.</p> <p><b>Potential impact:</b>  Performance</p> <p><b>Suggested action(s):</b>  (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.  (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.  (3) Verify that there are no network problems.  (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

## EXSPI-6X-300009 (MTA Work Queue Length)

<b>Policy:</b>	EXSPI-6X-300009
<b>Name:</b>	MTA Work Queue Length
<b>Description:</b>	The metric measures the number of outstanding messages in the Work Queue, which indicates the number of messages not yet processed to completion by the MTA, relative to the number of messages successfully processed by the MTA
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA.Work Queue Length MExchangeMTA.Deferred Delivery Msgs</p> <p><b>Probable cause(s):</b> Delay of messages being processed could indicate problems with system load, the MTA, connectors, or the network.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Run Exchange Administrator and check for 'stuck' messages in the MTA queue. (3) Verify that there are no network problems.</p> <p><b>Additional Information:</b> Exchange 2000 and 2003 servers use the MTA to transfer messages over non-smtp connections such as X.400 connectors. The X.400 connector is primarily used to transfer messages with Exchange 5.5 servers. Typically X.400 connectors are used while migrating from Exchange 5.5 to a later version of Exchange although there are other uses. Due to the inherent inefficiency of the Exchange 2000 and later version of the MTA, there are a number of Microsoft recommendations, depending on your use. Please follow the link <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp</a> and go to the section titled 'Chapter 9: Tuning Exchange 2000 Server for Performance'.</p>

## EXSPI-6X-300010 (MTA Failed Outbound Associations)

<b>Policy:</b>	<b>EXSPI-6X-300010</b>
<b>Name:</b>	MTA Failed Outbound Associations
<b>Description:</b>	Monitors the percentage of failed outbound associations from the MTA
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Failed Outbound Associations.&lt;instance&gt; MExchangeMTA Connections.Cumulative Outbound Associations.&lt;instance&gt;</p> <p><b>Probable cause(s):</b> There may be problems with the MTA making connections to another system. A high failure rate could indicate problems with the local or remote MTA, the connector, or the network.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system. (3) Verify that there are no network problems. (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

## EXSPI-6X-300011 (MTA Failed Conversions)

<b>Policy:</b>	<b>EXSPI-6X-300011</b>
<b>Name:</b>	MTA Failed Conversions
<b>Description:</b>	Monitors the ratio of failed and successful conversion of messages from one form to another.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1hr
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA.Total Failed Conversions MExchangeMTA.Total Successful Conversions</p> <p><b>Probable cause(s):</b> There may be problems with the MTA converting messages from one format to another.</p> <p><b>Potential impact:</b> Performance/Failure. A high failure rate could indicate problems with the MTA or how messages being received are formatted.</p> <p><b>Suggested action(s):</b> (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems converting messages. (2) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

## EXSPI-6X-MTAConnectionMessageDelay)

<b>Policy:</b>	<b>EXSPI-6X-MTAConnectionMessageDelay</b>
<b>Name:</b>	MTA Connection Message Delay
<b>Description:</b>	Monitors the time (secs) since the oldest message in this entity's queue was placed in the MTA queue
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Oldest Message Queued.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>            Delivery of messages to another Exchange server may be delayed by the MTA because of possible problems with a connection.</p> <p>A long delay time could indicate problems with connectors, system load, the MTA, or the network.</p> <p><b>Potential impact:</b>            Performance/Failure.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor queue length for the specific connection with NT Performance Monitor:</li> <li>(2) If queue lengths for multiple connections are large, that could indicate performance or network problems. Also check that the MTA process (emsmta) is running.</li> <li>(3) Run Exchange Administrator and check for 'stuck' messages in the MTA queue.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Verify that this isn't a performance problem with the MTA service. See 'Additional Information' below for more information.</li> </ol> <p><b>Additional Information:</b></p> <p>Exchange 2000 and 2003 servers use the MTA to transfer messages over non-smtp connections such as X.400 connectors. The X.400 connector is primarily used to transfer messages with Exchange 5.5 servers. Typically X.400 connectors are used while migrating from Exchange 5.5 to a later version of Exchange although there are other uses. Due to the inherent inefficiency of the Exchange 2000 and later version of the MTA, there are a number of Microsoft recommendations, depending on your use. Please follow the link <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp</a> and go to the section titled 'Chapter 9: Tuning Exchange 2000 Server for Performance'.</p>

## EXSPI-6X-MTAConnectionQueueLengths)

<b>Policy:</b>	<b>EXSPI-6X-MTAConnectionQueueLengths</b>
<b>Name:</b>	MTA Connection Queue Lengths
<b>Description:</b>	Monitors the number of outstanding messages queued for transfer to another Exchange Server.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b> Delivery of messages to another Exchange server may be delayed by the MTA because of possible problems with a connection.</p> <p>A large queue length could indicate problems with connectors, system load, the MTA, or the network.</p> <p><b>Potential impact:</b> Performance/Failure.</p> <p><b>Suggested action(s):</b> (1) Monitor queue length for the specific connection with NT Performance Monitor: MExchangeMTA Connections.Queue Length.&lt;CONNECTION&gt;</p> <p>(2) If queue lengths for multiple connections are large, that could indicate performance or network problems. Also check that the MTA process (emsmta) is running.</p> <p>(3) Run Exchange Administrator and check for 'stuck' messages in the MTA queue.</p> <p>(4) Verify that there are no network problems</p> <p><b>Additional Information:</b> Exchange 2000 and 2003 servers use the MTA to transfer messages over non-smtp connections such as X.400 connectors. The X.400 connector is primarily used to transfer messages with Exchange 5.5 servers. Typically X.400 connectors are used while migrating from Exchange 5.5 to a later version of Exchange although there are other uses. Due to the inherent inefficiency of the Exchange 2000 and later version of the MTA, there are a number of Microsoft recommendations, depending on your use. Please follow the link <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/itsolutions/guide/default.asp</a> and go to the section titled 'Chapter 9: Tuning Exchange 2000 Server for Performance'.</p>

## EXSPI-6X-ISPublicAverageDeliveryTime

<b>Policy:</b>	<b>EXSPI-6X-ISPublicAverageDeliveryTime</b>
<b>Name:</b>	IS Public Average Delivery Time
<b>Description:</b>	Monitors the time between the submission of a message to the public information store and submission to the MTA, by taking an average for the last 10 messages.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) The system is overloaded.</li> <li>(3) There is a problem with the Information Store.</li> <li>(4) There is a problem with the Active Directory.</li> <li>(5) A large queue length could indicate be a problem with the SMTP process (inetinfo.exe), that SMTP is not processing messages being sent by the Information Store at all or quickly enough.</li> </ol> <p><b>Potential impact:</b></p> <ol style="list-style-type: none"> <li>(1) Delivery of public folder messages to other Exchange servers may be delayed.</li> </ol> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or Performance Monitor to determine if the system is overloaded. Also check that SMTP (inetinfo.exe) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with Information Store or the SMTP service on either the problem system or the remote system.</li> <li>(3) Verify that there are no Active Directory problems.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Enable Diagnostics Logging for the SMTP (using Exchange System Manager) to help in troubleshooting.</li> <li>(6) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol>

Policy:	EXSPI-6X-ISPublicAverageDeliveryTime
<p><b>For more information:</b></p>	<p>See the Microsoft Knowledge Base Articles:</p> <p>328906: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;328906">http://support.microsoft.com/default.aspx?scid=kb;en-us;328906</a></p> <p>289779: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;289779">http://support.microsoft.com/default.aspx?scid=kb;en-us;289779</a></p> <p>313983: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;313983">http://support.microsoft.com/default.aspx?scid=kb;en-us;313983</a></p> <p>322258: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;322258">http://support.microsoft.com/default.aspx?scid=kb;en-us;322258</a></p> <p>811067: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811067">http://support.microsoft.com/default.aspx?scid=kb;en-us;811067</a></p> <p>811862: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811862">http://support.microsoft.com/default.aspx?scid=kb;en-us;811862</a></p> <p>824467: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;824467">http://support.microsoft.com/default.aspx?scid=kb;en-us;824467</a></p> <p>276081: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;276081">http://support.microsoft.com/default.aspx?scid=kb;en-us;276081</a></p> <p>304228: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;304228">http://support.microsoft.com/default.aspx?scid=kb;en-us;304228</a></p> <p>326992: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;326992">http://support.microsoft.com/default.aspx?scid=kb;en-us;326992</a></p> <p>816199: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;816199">http://support.microsoft.com/default.aspx?scid=kb;en-us;816199</a></p>



## EXSPI-6X-ISMailboxAverageLocalDeliveryTime

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxAverageLocalDeliveryTime</b>
<b>Name:</b>	IS Mailbox Average Local Delivery Time
<b>Description:</b>	Monitors the average time between submission of a message to the public information store and the delivery to all local recipients (recipients on the same server) for the last 10 messages. This counter should not be greater than zero for more than a few seconds.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIS Public.Average Local Delivery Time.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) A large queue length could indicate be a problem with the store process (store.exe).</li> <li>(2) The thresholds are set too low.</li> <li>(3) The system is overloaded.</li> <li>(4) There is a problem with the Information Store.</li> </ol> <p><b>Potential impact:</b> Delivery of messages to local recipients may be delayed.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or Performance Monitor to determine if the system is overloaded. Also check that the store (store.exe) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with Information Store.</li> <li>(3) Enable Diagnostics Logging for the store (MSExchangeIS using Exchange System Manager) to help in troubleshooting.</li> <li>(4) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol>

Policy:	EXSPI-6X-ISMailboxAverageLocalDeliveryTime
<b>For more information:</b>	<p>See the Microsoft Knowledge Base Articles:</p> <p>289779: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;289779">http://support.microsoft.com/default.aspx?scid=kb;en-us;289779</a></p> <p>313983: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;313983">http://support.microsoft.com/default.aspx?scid=kb;en-us;313983</a></p> <p>322258: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;322258">http://support.microsoft.com/default.aspx?scid=kb;en-us;322258</a></p> <p>811067: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811067">http://support.microsoft.com/default.aspx?scid=kb;en-us;811067</a></p> <p>811862: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811862">http://support.microsoft.com/default.aspx?scid=kb;en-us;811862</a></p> <p>824467: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;824467">http://support.microsoft.com/default.aspx?scid=kb;en-us;824467</a></p> <p>276081: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;276081">http://support.microsoft.com/default.aspx?scid=kb;en-us;276081</a></p> <p>304228: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;304228">http://support.microsoft.com/default.aspx?scid=kb;en-us;304228</a></p> <p>326992: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;326992">http://support.microsoft.com/default.aspx?scid=kb;en-us;326992</a></p> <p>329171: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329171">http://support.microsoft.com/default.aspx?scid=kb;en-us;329171</a></p> <p>823505: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823505">http://support.microsoft.com/default.aspx?scid=kb;en-us;823505</a></p> <p>291248: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;291248">http://support.microsoft.com/default.aspx?scid=kb;en-us;291248</a></p> <p>816199: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;816199">http://support.microsoft.com/default.aspx?scid=kb;en-us;816199</a></p>

## EXSPI-6X-ISPublicReplicationQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISPublicReplicationQueueLength</b>
<b>Name:</b>	IS Public Replication Queue Length
<b>Description:</b>	Monitors the number of replication messages in the public information store's replication receive queue. Replication Receive Queue size is the number of replication messages waiting to be processed
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIS Public.Replication Receive Queue Size.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) A large queue length could indicate problems with system load or the Information Store process.</li> <li>(3) A large queue length could indicate problems with replication intervals.</li> </ol> <p><b>Potential impact:</b></p> <ol style="list-style-type: none"> <li>(1) Delivery of replication messages to public folders may be delayed.</li> </ol> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or Performance Monitor to determine if the system is overloaded.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the Information Store or SMTP service.</li> <li>(3) Verify that there are no Active Directory problems.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Verify that replication occurs at the right intervals.</li> <li>(6) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol> <p><b>For more information</b> see the Microsoft Knowledge Base Articles:</p> <p>328906: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;328906">http://support.microsoft.com/default.aspx?scid=kb;en-us;328906</a></p> <p>273479: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;273479">http://support.microsoft.com/default.aspx?scid=kb;en-us;273479</a></p>

## EXSPI-6X-ISMailboxReceiveQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxReceiveQueueLength</b>
<b>Name:</b>	IS Mailbox Receive Queue Length
<b>Description:</b>	Monitors the number of messages in the ISs receive queue
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Grp:</b>	EX-Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Delivery of replication messages to public folders may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Check the Perfmon counter MExchangeIS Mailbox.Messages Received/Min. If this value is relatively low, then the messages are backing up. If this value is relatively high, then it could be a spike in incoming traffic.</li> <li>(2) Monitor system with Windows NT Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(3) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Verify that there are no Active Directory problems.</li> <li>(6) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> <li>(7) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol> <p><b>For more information</b> see the Microsoft Knowledge Base Articles:</p> <p>329167: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329167">http://support.microsoft.com/default.aspx?scid=kb;en-us;329167</a></p> <p>317539: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;317539">http://support.microsoft.com/default.aspx?scid=kb;en-us;317539</a></p> <p>314744: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;314744">http://support.microsoft.com/default.aspx?scid=kb;en-us;314744</a></p> <p>828938: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;828938">http://support.microsoft.com/default.aspx?scid=kb;en-us;828938</a></p> <p>813781: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813781">http://support.microsoft.com/default.aspx?scid=kb;en-us;813781</a></p> <p>329639: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329639">http://support.microsoft.com/default.aspx?scid=kb;en-us;329639</a></p> <p>319653: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319653">http://support.microsoft.com/default.aspx?scid=kb;en-us;319653</a></p>

## EXSPI-6X-ISMailboxSendQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxSendQueueLength</b>
<b>Name:</b>	IS Mailbox Send Queue Length
<b>Description:</b>	Monitors the number of messages in the information store's send queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Public.Send Queue Size.&lt;instance&gt;</p> <p><b>Probable cause(s):</b> Delivery of replication messages to public folders may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(3) Verify that there are no network problems.</li> <li>(4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> </ol>

## EXSPI-6X-ISMailboxAverageDeliveryTime

<b>Policy:</b>	EXSPI-6X-ISMailboxAverageDeliveryTime
<b>Name:</b>	IS Mailbox Average Delivery Time
<b>Description:</b>	Monitors the average time between submission of a message to the Mailbox information store and submission to the MTA for the last 10 messages
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Mailbox.Average Delivery Time.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) The system is overloaded.</li> <li>(3) There is a problem with the Information Store.</li> <li>(4) There is a problem with the Active Directory.</li> <li>(5) A large queue length could indicate be a problem with the SMTP process (inetinfo.exe), that SMTP is not processing messages being sent by the Information Store at all or quickly enough.</li> </ol> <p><b>Potential impact:</b></p> <p>Delivery of messages to other Exchange servers may be delayed.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or Performance Monitor to determine if the system is overloaded. Also check that SMTP (inetinfo.exe) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with Information Store or the SMTP service on either the problem system or the remote system.</li> <li>(3) Verify that there are no Active Directory problems.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Enable Diagnostics Logging for the SMTP (using Exchange System Manager) to help in troubleshooting.</li> <li>(6) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol>

Policy:	EXSPI-6X-ISMailboxAverageDeliveryTime
<b>For more information:</b>	<p>See the Microsoft Knowledge Base Article(s):</p> <p>289779: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;289779">http://support.microsoft.com/default.aspx?scid=kb;en-us;289779</a></p> <p>313983: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;313983">http://support.microsoft.com/default.aspx?scid=kb;en-us;313983</a></p> <p>322258: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;322258">http://support.microsoft.com/default.aspx?scid=kb;en-us;322258</a></p> <p>811067: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811067">http://support.microsoft.com/default.aspx?scid=kb;en-us;811067</a></p> <p>811862: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;811862">http://support.microsoft.com/default.aspx?scid=kb;en-us;811862</a></p> <p>824467: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;824467">http://support.microsoft.com/default.aspx?scid=kb;en-us;824467</a></p> <p>276081: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;276081">http://support.microsoft.com/default.aspx?scid=kb;en-us;276081</a></p> <p>304228: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;304228">http://support.microsoft.com/default.aspx?scid=kb;en-us;304228</a></p> <p>326992: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;326992">http://support.microsoft.com/default.aspx?scid=kb;en-us;326992</a></p> <p>329171: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329171">http://support.microsoft.com/default.aspx?scid=kb;en-us;329171</a></p> <p>823505: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823505">http://support.microsoft.com/default.aspx?scid=kb;en-us;823505</a></p> <p>291248: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;291248">http://support.microsoft.com/default.aspx?scid=kb;en-us;291248</a></p> <p>816199: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;816199">http://support.microsoft.com/default.aspx?scid=kb;en-us;816199</a></p>

## EXSPI-6X-ISMailboxReceiveQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxReceiveQueueLength</b>
<b>Name:</b>	IS Mailbox Receive Queue Length
<b>Description:</b>	Monitors the number of messages in the mailbox information store's receive queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Delivery of messages to mailboxes may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Check the Perfmon counter MExchangeIS Mailbox.Messages Received/Min. If this value is relatively low, then the messages are backing up. If this value is relatively high, then it could be a spike in incoming traffic.</li> <li>(2) Monitor system with Windows NT Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(3) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(4) Verify that there are no network problems.</li> <li>(5) Verify that there are no Active Directory problems.</li> <li>(6) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> <li>(7) Adjust policy thresholds when establishing normal server performance baselines.</li> </ol> <p>For more information see the Microsoft Knowledge Base Article:</p> <p>329167: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329167">http://support.microsoft.com/default.aspx?scid=kb;en-us;329167</a></p> <p>317539: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;317539">http://support.microsoft.com/default.aspx?scid=kb;en-us;317539</a></p> <p>314744: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;314744">http://support.microsoft.com/default.aspx?scid=kb;en-us;314744</a></p> <p>828938: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;828938">http://support.microsoft.com/default.aspx?scid=kb;en-us;828938</a></p> <p>813781: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813781">http://support.microsoft.com/default.aspx?scid=kb;en-us;813781</a></p> <p>329639: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329639">http://support.microsoft.com/default.aspx?scid=kb;en-us;329639</a></p> <p>319653: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319653">http://support.microsoft.com/default.aspx?scid=kb;en-us;319653</a></p>



## EXSPI-6X-ISMailboxSendQueueLength

<b>Policy:</b>	<b>EXSPI-6X-ISMailboxSendQueueLength</b>
<b>Name:</b>	IS Mailbox Send Queue Length
<b>Description:</b>	Monitors the number of messages in the mailbox information store's send queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Mailbox.Send Queue Size.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>            Delivery of messages to other Exchange servers may be delayed by the MTA.</p> <p>A large queue length could indicate that the MTA is not processing messages being sent by the Information Store at all or quickly enough so they are backing up in the queue.</p> <p>There could be a problem with system load or the MTA process.</p> <p><b>Potential impact:</b>            Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(3) Verify that there are no network problems.</li> <li>(4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> </ol>

## EXSPI-6X-InformationStoreDbLogRecordStallsPerSec

<b>Metric Name:</b>	EXSPI-6X-InformationStoreDbLogRecordStallsPerSec
<b>Description:</b>	Alarm on Information Store Transaction Log Record Buffer Addition Stalls. Log Record Stalls/sec is the number of log records that cannot be added to the log buffers per second because they are full.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	2
<b>Critical Threshold</b>	1
<b>InstructionText:</b>	<p><b>Probable cause:</b> Transaction log buffer is too small</p> <p><b>Potential impacts:</b></p> <p>(1) If this counter is non-zero most of the time, the log buffer size may be a bottleneck.</p> <p>(2) Significant performance degradation will be seen if the server is under load or if users are sending large messages.</p> <p><b>Suggested action:</b></p> <p>The default value (84) of the msExchESEParamLogBuffers attribute is too low; this value should be increased to 9000 on all servers.</p> <p><b>For more information</b>, see Microsoft TechNet article: Microsoft Exchange 2000 Internals: Quick Tuning Guide, <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/maintain/optimize/exchtune.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/maintain/optimize/exchtune.asp</a></p>

## EXSPI-6X-InformationStoreDbLogThreadsWaiting

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreDbLogThreadsWaiting</b>
<b>Description:</b>	Alarm on Information Store Threads Waiting to Write to Transaction Log. Information store Log Threads Waiting is the number of threads waiting for their data to be written to the log in order to complete an update of the database.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	2
<b>Critical Threshold</b>	1
<b>Instruction Text:</b>	<p><b>Probable cause:</b> Transaction log buffer is too small.</p> <p><b>Potential impacts:</b> (1) If this counter is too high, the log may be a bottleneck. (2) Significant performance degradation will be seen if the server is under load or if users are sending large messages.</p> <p><b>Suggested action:</b> The default value (84) of the msExchESEParamLogBuffers attribute is too low; this value should be increased to 9000 on all servers.</p> <p><b>For more information</b>, see Microsoft TechNet article: Microsoft Exchange 2000 Internals: Quick Tuning Guide, <a href="http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/maintain/optimize/exchtune.asp">http://www.microsoft.com/technet/treeview/default.asp?url=/technet/prodtechnol/exchange/exchange2000/maintain/optimize/exchtune.asp</a></p>

## EXSPI-6X-InformationStoreDbLogWritesPerSec

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreDbLogWritesPerSec</b>
<b>Description:</b>	Alarm on the number of times the transaction log buffers are written. Information store Log Writes/sec is the number of times the log buffers are written to the log file(s) per second.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	500
<b>Critical Threshold</b>	n/a
<b>InstructionText:</b>	<p><b>Probable cause:</b> The media used to host transaction log file(s) has a low write rate.</p> <p><b>Potential impact:</b> If this number approaches the maximum write rate for the media holding the log file(s), the log may be a bottleneck.</p> <p><b>Suggested actions:</b></p> <p>(1) Adjust the threshold to be close to maximum write rate of the actual storage.</p> <p>(2) Determine whether your transaction log device is handling the load properly by monitoring the device for counter 'PhysicalDisk. Avg. Disk sec/write', making sure it stays well below 5ms or 1ms when write-back cache is enabled.</p>

## EXSPI-6X-InformationStoreDbCacheSize

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreDbCacheSize</b>
<b>Description:</b>	Monitors the database cache size of an information store which shows the amount of system memory used by the database cache manager to hold commonly used information from the database file(s) in order to prevent file i/o operations.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	On large servers, this counter should be in the range of 800,000,000 to 1,200,000,000 bytes at all times. The database cache size is automatically adjusted, based upon the physical memory configured in the server, and possible fine-tuning of the STORE virtual address space. The cache size should be less than 1.2GB: if you have incorrectly configured the maximum cache size, you run the risk of running out of virtual memory and eventually causing significant performance degradation and STORE crash.

## EXSPI-6X-InformationStoreUserCount

<b>Policy:</b>	<b>EXSPI-6X-InformationStoreUserCount</b>
<b>Name:</b>	IS User Count
<b>Description:</b>	Monitors the number of client processes connected to the information store. This metric could be baselined and put in the perspective of the RPC operations rate for an understanding of system resource utilization.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS.User Count</p> <p><b>Probable cause(s):</b> The number of client processes logged on to the Information Store is low.</p> <p>A low user logon count during the day could indicate problems with the Information Store process or network connectivity.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Verify that this system has active mailboxes. If it does not, this Policy should be removed from this system. (2) Using a test mailbox account, verify that you can connect to the server without problems. (3) Verify that there are no network problems.</p>

## EXSPI-6X-IS\_RPCOperations

<b>Metric Name:</b>	<b>EXSPI-6X-IS_RPCOperations</b>
<b>Description:</b>	Alarm on number of MAPI client RPC operations/sec. Information store RPC operations/sec: this counter indicates outstanding MAPI client requests. The value of the counter is specific to the organization and server, but it should remain at 0 on 4 processor machines during normal operations.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 10 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	1
<b>Critical Threshold</b>	2
<b>Instruction Text:</b>	<p><b>Probable causes:</b></p> <ul style="list-style-type: none"> <li>(1) The server is overloaded with users using MAPI clients.</li> <li>(2) The threshold is set too low.</li> </ul> <p><b>Potential impact:</b></p> <p>MAPI clients are unable to contact the Exchange server.</p> <p><b>Suggested actions:</b></p> <ul style="list-style-type: none"> <li>(1) Adjust the thresholds after establishing normal server performance baselines.</li> <li>(2) Relocate some users of this server to another Exchange server.</li> </ul>

## EXSPI-6X-IS\_RPCRequests

<b>Metric Name:</b>	<b>EXSPI-6X-IS_RPCRequests</b>
<b>Description:</b>	Alarm on number of MAPI client RPC requests. Information Store RPC Requests is the number of MAPI RPC client requests currently being processed by the information store.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	80
<b>Critical Threshold</b>	100
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> MAPI RPC clients are unable to log on to the server when RPC requests are consistently over the maximum number of RPC requests (100) that can be processed by a server.</p> <p><b>Suggestion action:</b> Relocate some users from this server to another server.</p>



## EXSPI-6X-InformationStoreVMLargestBlock

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreVMLargestBlock</b>
<b>Description:</b>	Monitors the size (in bytes) of the largest free block of virtual memory available to the store process. This Block Size should remain above 32 MB at all times. When the VM Largest Block Size drops below 10MB the Databases will not mount.
<b>Type:</b>	Reset
<b>Schedule:</b>	10 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	16
<b>Critical Threshold</b>	32
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> With the addition of more users and therefore more Exchange usage the amount of information store virtual memory can run low. Overall server performance will degrade as the lack of large virtual memory blocks causes the store to use the page file.</p> <p><b>Suggestion for action:</b> Add up to 4GB of RAM. Relocate some users from this server to another server.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:  <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;296073&amp;sd=ee">http://support.microsoft.com/default.aspx?scid=kb;en-us;296073&amp;sd=ee</a>  <a href="http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=9582&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0">http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=9582&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0</a></p>

## EXSPI-6X-InformationStoreVM16MBBlocks

<b>Metric Name:</b>	<b>EXSPI-6X-InforamtionStoreVM16MBBlocks</b>
<b>Description:</b>	Monitors total number of free virtual memory blocks that are greater than or equal to 16 MB.
<b>Type:</b>	Reset
<b>Schedule:</b>	5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	3
<b>Critical Threshold</b>	5
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> With the addition of more users and therefore more Exchange usage the amount of information store virtual memory can run low. Overall server performance will degrade as the lack of large virtual memory blocks causes the store to use the page file.</p> <p><b>Suggestion action:</b> Add up to 4GB of RAM. Relocate some users from this server to another server.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:  <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;325044&amp;sd=ee">http://support.microsoft.com/default.aspx?scid=kb;en-us;325044&amp;sd=ee</a>  <a href="http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSEExchangeIS&amp;EvtID=12800&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0">http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSEExchangeIS&amp;EvtID=12800&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0</a></p>

## EXSPI-6X-InformationStoreVMLargeBlockBytes

<b>Metric Name:</b>	<b>EXSPI-6X-InformationStoreVMLargeBlockBytes</b>
<b>Description:</b>	Monitors the total size of all free virtual memory blocks that are greater than or equal to 16 MB in size. This total should remain above 50 MB at all times.
<b>Type:</b>	Reset
<b>Schedule:</b>	10 mins
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	6X
<b>Critical Threshold</b>	55
<b>Instruction Text:</b>	<p><b>Probable cause:</b> The server is overloaded.</p> <p><b>Potential impact:</b> With the addition of more users and therefore more Exchange usage the amount of information store virtual memory can run low. Overall server performance will degrade as the lack of large virtual memory blocks causes the store to use the page file.</p> <p><b>Suggestion action:</b> Add up to 4GB of RAM. Relocate some users from this server to another server.</p> <p><b>For more information,</b> see Microsoft Knowledge Base articles:  <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;296073&amp;sd=ee">http://support.microsoft.com/default.aspx?scid=kb;en-us;296073&amp;sd=ee</a>  <a href="http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=9582&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0">http://www.microsoft.com/products/ee/transform.aspx?EvtSrc=MSExchangeIS&amp;EvtID=9582&amp;ProdName=Exchange&amp;LCID=1033&amp;ProdVer=6.5.6940.0</a></p>

## EXSPI-6X-SMTPCategorizerQueueLength)

<b>Metric :</b>	<b>EXSPI-6X-SMTPCategorizerQueueLength</b>
<b>Name:</b>	SMTP Categorizer Queue Length
<b>Description:</b>	Monitors the number of messages in the SMTP Categorizer Queue. The Categorizer performs lookups and checks limits and restrictions in Active Directory.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Categorizer Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <p>(1) The Categorization Queue Length counter may show an incorrect number of messages in the queue.</p> <p>(2) The advanced queuing engine may not be able to access the global catalog servers or to access the recipient information. Or, the global catalog servers are unreachable or are performing slowly.</p> <p><b>Potential impact:</b></p> <p>The SMTP server may not deliver or delay the delivery of messages either locally or remotely.</p> <p><b>Suggested action(s):</b></p> <p>(1) Install the latest Microsoft Exchange service pack.</p> <p>(2) Increase diagnostic logging for the MExchangeDSAccess service and for the MExchangeTransport service to collect information about Categorizer components.</p> <p>(3) Active Directory Lookups may be an issue. Consider implementing another Active Directory server.</p> <p>(4) If you have the Windows+ SPI, deploy the ADS policies to the Active Directory server. These policies may also have recommendations to increase Active Directory Lookup performance.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q814018, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;814018">http://support.microsoft.com/default.aspx?scid=kb;en-us;814018</a></p>

## EXSPI-6X-SMTPLocalQueueLength)

<b>Policyr:</b>	<b>EXSPI-6X-SMTPLocalQueueLength</b>
<b>Name:</b>	SMTP Local Queue Length
<b>Description:</b>	Monitors the number of messages to the SMTP Local Queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Local Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) A corrupted message is at the head of the queue.</li> <li>(2) The header of the message is malformed.</li> <li>(3) The message is deeply nested.</li> <li>(4) There is cross membership in Security Groups.</li> <li>(5) A message is forwarded to an inappropriately configured public folder.</li> <li>(6) The information store is not accepting messages for local delivery. Slow or sporadic message delivery can indicate that a looping message or that a performance problem exists.</li> </ol> <p><b>Potential impact:</b></p> <p>Delivery of messages to the local Exchange server may be delayed by the Exchange Information Store.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Install the latest Exchange service pack</li> <li>(2) Follow the instructions described in the following Microsoft Knowledge Base articles to remove the root cause of the problem.</li> <li>(3) Reduce the Exchange server load by moving some users to another Exchange server.</li> <li>(4) Increase diagnostic logging for the MExchangeIS service and for the MExchangeTransport service for the SMTP Store Driver components.</li> </ol> <p><b>For more information,</b> see Microsoft Knowledge Base articles:</p> <p><b>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></b></p> <p><b>Q283291, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;283291">http://support.microsoft.com/default.aspx?scid=kb;en-us;283291</a></b></p> <p><b>Q319461, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319461">http://support.microsoft.com/default.aspx?scid=kb;en-us;319461</a></b></p> <p><b>Q329639, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329639">http://support.microsoft.com/default.aspx?scid=kb;en-us;329639</a></b></p> <p><b>Q813781, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813781">http://support.microsoft.com/default.aspx?scid=kb;en-us;813781</a></b></p> <p><b>Q318334, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;318334">http://support.microsoft.com/default.aspx?scid=kb;en-us;318334</a></b></p>

## EXSPI-6X-SMTPLocalRetryQueueLength)

<b>Policy:</b>	<b>EXSPI-6X-SMTPLocalRetryQueueLength</b>
<b>Name:</b>	SMTP Local Retry Queue Length
<b>Description:</b>	Monitors the number of messages in the SMTP Local Retry queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) A corrupted message is at the head of the queue.</li> <li>(2) The header of the message is malformed.</li> <li>(3) The message is deeply nested.</li> <li>(4) There is cross membership in Security Groups.</li> <li>(5) A message is forwarded to an inappropriately configured public folder.</li> <li>(6) The information store is not accepting messages for local delivery. Slow or sporadic message delivery can indicate that a looping message or that a performance problem exists.</li> </ol> <p><b>Potential impact:</b></p> <p>Delivery of messages to the local Exchange server may be delayed by the Exchange Information Store.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Install the latest Exchange service pack</li> <li>(2) Follow the instructions described in the following Microsoft Knowledge Base articles to remove the root cause of the problem.</li> <li>(3) Reduce the Exchange server load by moving some users to another Exchange server.</li> <li>(4) Increase diagnostic logging for the MExchangeIS service and for the MExchangeTransport service for the SMTP Store Driver components.</li> </ol> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q283291, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;283291">http://support.microsoft.com/default.aspx?scid=kb;en-us;283291</a></p> <p>Q319461, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319461">http://support.microsoft.com/default.aspx?scid=kb;en-us;319461</a></p> <p>Q329639, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;329639">http://support.microsoft.com/default.aspx?scid=kb;en-us;329639</a></p> <p>Q813781, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813781">http://support.microsoft.com/default.aspx?scid=kb;en-us;813781</a></p> <p>Q318334, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;318334">http://support.microsoft.com/default.aspx?scid=kb;en-us;318334</a></p>

## EXSPI-6X-SMTPMessagesPendingRouting

<b>Policy:</b>	<b>EXSPI-6X-SMTPMessagesPendingRouting</b>
<b>Name:</b>	SMTP Messages Pending Routing
<b>Description:</b>	Monitors the number of messages that have been categorized but not routed.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Messages Pending Routing.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) Connector delivery restrictions may not work correctly</li> <li>(2) The Least-Cost route to the destination server is scoped and rerouting the message takes longer time.</li> <li>(3) The system resource is low or Active Directory server or DNS is slow.</li> <li>(4) Reinstallation of IIS on the Exchange server may result in not being able to start Exchange routing engine.</li> </ol> <p><b>Potential impact:</b></p> <p>Delivery of messages to other Exchange servers may be delayed by the SMTP Server.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Install the latest Microsoft Exchange service pack.</li> <li>(2) Disable any unnecessary connector restrictions because the restrictions can cause a significant degradation in server performance.</li> <li>(3) Increase diagnostic logging for the MExchangeTransport service for the Routing category component to gather additional information.</li> <li>(4) Determine if network problems are preventing message flow.</li> <li>(5) Reinstallation of IIS on the Exchange server may require reinstallation of Exchange server.</li> </ol> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q277872, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;277872">http://support.microsoft.com/default.aspx?scid=kb;en-us;277872</a></p> <p>Q287058, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;287058">http://support.microsoft.com/default.aspx?scid=kb;en-us;287058</a></p> <p>Q323672, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;323672">http://support.microsoft.com/default.aspx?scid=kb;en-us;323672</a></p>

## EXSPI-6X-SMTPRemoteQueueLength

<b>Policy:</b>	<b>EXSPI-6X-SMTPRemoteQueueLength</b>
<b>Name:</b>	SMTP Remote Queue Length
<b>Description:</b>	Monitors the number of messages in the queue for remote delivery
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Remote Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <p>(1) There is a problem with network connection to the remote server with 'host unreachable' errors.</p> <p>(2) A backlog occurs in the SMTP remote delivery queues because of waiting threads in message tracking.</p> <p>(3) The server is being used as an open relay SMTP server for unsolicited commercial e-mail (UCE) messages, or spam.</p> <p><b>Potential impact:</b></p> <p>Delivery of messages to other Exchange servers may be delayed by the SMTP Server.</p> <p><b>Suggested action(s):</b></p> <p>(1) You can use an Network Monitor tool to obtain information about network connection errors. For example use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as 'host unreachable' errors, use telnet.exe to try to connect to the destination computer.</p> <p>(2) To troubleshoot protocol errors, increase diagnostic logging for the MExchangeTransport service for the SMTP Protocol component, and review the logs for errors.</p> <p>(3) Resolve message tracking or security issues if a backlog occurs.</p> <p>(4) Configure the Exchange server to block open SMTP relaying.</p> <p><b>For more information,</b> see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q328931, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;328931">http://support.microsoft.com/default.aspx?scid=kb;en-us;328931</a></p> <p>Q324958, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;324958">http://support.microsoft.com/default.aspx?scid=kb;en-us;324958</a></p> <p>Q821746, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;821746">http://support.microsoft.com/default.aspx?scid=kb;en-us;821746</a></p>



## EXSPI-6X-SMTPRemoteRetryQueueLength)

Policy	EXSPI-6X-SMTPRemoteRetryQueueLength
<b>Name:</b>	SMTP Remote Retry Queue Length
<b>Description:</b>	Monitors the number of messages in the retry queue for remote delivery
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 2 min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.Remote Retry Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b></p> <p>(1) There is a problem with network connection to the remote server with 'host unreachable' errors.</p> <p>(2) A backlog occurs in the SMTP remote delivery queues because of waiting threads in message tracking.</p> <p>(3) The server is being used as an open relay SMTP server for unsolicited commercial e-mail (UCE) messages, or spam.</p> <p><b>Potential impact:</b></p> <p>Delivery of messages to other Exchange servers may be delayed by the SMTP Server.</p> <p><b>Suggested action(s):</b></p> <p>(1) You can use an Network Monitor tool to obtain information about network connection errors. For example, use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as 'host unreachable' errors, use telnet.exe to try to connect to the destination computer.</p> <p>(2) To troubleshoot protocol errors, increase diagnostic logging for the MExchangeTransport service for the SMTP Protocol component, and review the logs for errors.</p> <p>(3) Resolve message tracking or security issues if a backlog occurs.</p> <p>(4) Configure the Exchange server to block open SMTP relaying.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>Q823489, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;823489">http://support.microsoft.com/default.aspx?scid=kb;en-us;823489</a></p> <p>Q328931, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;328931">http://support.microsoft.com/default.aspx?scid=kb;en-us;328931</a></p> <p>Q324958, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;324958">http://support.microsoft.com/default.aspx?scid=kb;en-us;324958</a></p> <p>Q821746, <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;821746">http://support.microsoft.com/default.aspx?scid=kb;en-us;821746</a>.</p>

## EXSPI-6X-SMTPNDRPercentage

<b>Policy:</b>	EXSPI-6X-0056
<b>Name:</b>	SMTP NDR Percentage
<b>Description:</b>	Monitors the percentage of NDRs for each SMTP virtual server
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> SMTP Server.NDRs Generated.&lt;instance&gt; SMTP Server.Outbound Messages.&lt;instance&gt;</p> <p>If this is the first time the metric is run or the counter values are less than the previous counter values, then the values are just stored and thresholds are not processed.</p> <p>The percentage is calculated by subtracting the previous counter values from the current counter values to get the number of NDRs and number of messages for the current interval. The formula used to get the metric value is: NDRs this interval / outbound messages this interval * 100.</p> <p><b>Probable cause(s):</b> A high rate of non-delivery reports could indicate problems with the SMTP configuration, the network, or how mail is being addressed.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) If the SMTP server has been configured to send notification of NDRs, check the configured mailbox for the system to get information about the NDRs. Otherwise, configure the SMTP server to send notifications for NDRs to help in troubleshooting.</li> <li>(2) Verify that there are no network problems.</li> <li>(3) Check other problems in the Message Reader to see if Exchange has been reporting problems with the SMTP server.</li> <li>(4) Enable diagnostics logging for the SMTP server (using Exchange System manager) to help in troubleshooting.</li> </ol>

## EXSPI-6X-0058 (Newsfeed Outbound Connections Failed)

<b>Policy:</b>	<b>EXSPI-6X-0058</b>
<b>Name:</b>	Newsfeed Outbound Connections Failed
<b>Description:</b>	Monitors the percentage of outbound newsfeed connections that failed
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>            NNTP Server.Total Outbound Connections Failed.&lt;instance&gt;            NNTP Server.Total Outbound Connections.&lt;instance&gt;</p> <p>If this is the first time the metric is run or the counter values are less than the previous counter values, then the values are just stored and thresholds are not processed.</p> <p>The percentage is calculated by subtracting the previous counter values from the current counter values to get the number of NDRs and number of messages for the current interval. The formula used to get the metric value is: NDRs this interval / outbound messages this interval * 100.</p>

## EXSPI-6X-0070 (Mailbox Database File Disk Space)

<b>Metric Name:</b>	<b>EXSPI-0070</b>
<b>Description:</b>	Mailbox Database File Disk Space
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 1 hr
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	20
<b>Critical Threshold</b>	10
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The amount of disk space being used by the Exchange Mailbox Database files is getting large. A large amount of used disk space indicates a growing number of users and/or size of users' mailboxes.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"><li>(1) Get more disk space for the drive that the Mailbox database resides on.</li><li>(2) Enable or decrease mailbox quota to reduce the amount of disk space used by the users.</li><li>(3) Move some of the users to another mailbox database.</li></ol>

## EXSPI-6X-0072 (Public Folder Database File Disk Space)

<b>Metric Name:</b>	<b>EXSPI-0072</b>
<b>Description:</b>	Monitors the amount of disk space being used by the public folder database.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 1 hr
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	20
<b>Critical Threshold</b>	10
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The public folder database has grown to nearly filling the disk. Users have added files into the public folder database. Other files on the volume may have filled up the volume.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Increase the size of the volume that the public folder database resides on.</li> <li>(2) Using the Inactive Public Folder report, decide which inactive public folder files can be archived to tape and deleted. Recover the space by running the defragment utility.</li> <li>(3) Move any extraneous files from the volume where the public folder database resides on.</li> </ol>

## EXSPI-6X-0110 (SRS Pending Replication Synchronizations)

<b>Policy:</b>	<b>EXSPI-6X-0110</b>
<b>Name:</b>	SRS Pending Replication Synchronizations
<b>Description:</b>	SRS Pending Replication Synchronizations.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeSRS.Pending Replication Synchronizations</p> <p><b>Probable cause(s):</b> Replication of directory information may be delayed. A delay in processing replication updates could indicate problems with system load or the Site Replication Service process.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Check that the Directory process (dsamain) is running. (2) Verify that there are no network problems. (3) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</p>

## EXSPI-6X-0111 (SRS Remaining Replication Updates)

<b>Policy:</b>	EXSPI-6X-0111
<b>Name:</b>	SRS Remaining Replication Updates
<b>Description:</b>	SRS Remaining Replication Updates.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeSRS.Remaining Replication Updates</p> <p><b>Probable cause(s):</b> Replication of directory information may be delayed. A delay in processing replication updates could indicate problems with system load or the Site Replication Service process.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Check that the Directory process (dsamain) is running. (2) Verify that there are no network problems. (3) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</p>

## EXSPI-6X-1001 (Services Monitor)

<b>Policy:</b>	<b>EXSPI-1001</b>
<b>Name:</b>	MSExchange Services Monitor
<b>Description:</b>	Monitors Exchange Server process. Generates event if an Exchange service is currently stopped but configured startup automatic.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> A service marked for automatic start-up is not running.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b></p> <p>(1) Unless the service is known to be down for maintenance, use the Services tool in the Control Panel to re-start the service.</p> <p>NOTE: By default only Exchange related services are monitored. If you would like to receive messages about other stopped services, simply add conditions. A value of 0.0 is sent for running services and 1.0 for stopped services.</p>



## EXSPI-6X-1002 (End to End Message Ping)

<b>Policy:</b>	<b>EXSPI-6X-1002</b>
<b>Name:</b>	MSExchange End to End Message Ping Monitor
<b>Description:</b>	Monitors the round trip time for a message
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 30min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Slow or non-reply of messages could indicate problems with system load, the MTA, connectors, or the network. The threshold could be too low. For the most accurate alarming, separate thresholds should be set for each ping system pair.</p> <p><b>Potential impact:</b> Failure or Performance</p> <p><b>Suggested action(s):</b></p> <p>If the threshold is too low, make it bigger. See the User's Guide for information on how to set the threshold differently for each system pair.</p> <p>If the threshold is accurate, then evaluate the following suggestions on the source and destination servers:</p> <p>Select the Performance Monitor 'MS Exchange Server Health' to determine if the source system is overloaded. Also check that the MTA process (emsmta) is running. (If it is not running, it will not be shown on the graph.) Re-start it if needed.</p> <p>Select the Performance Monitor 'MS Exchange Server Health' to determine if the message queue to the destination system is large or growing.</p> <p>If the queues on either side are large or growing and the systems are not overloaded, run Exchange Administrator and check for 'stuck' messages in the MTA queue.</p> <p>If there are no stuck messages, check if there are network problems between the two systems.</p> <p>If the connection between the source and destination system is not direct (e.g., the message travels through bridgehead servers), check the connector queue lengths and system load on those systems as well.</p>

## EXSPI-60-EpoxyClientOutQueueLength

<b>Metric Name:</b>	<b>EXSPI-60-EpoxyClientOutQueueLength</b>
<b>Description:</b>	Alarm on epoxy client out queue length. This indicates the number of requests waiting to be processed by the Exchange store.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	2
<b>Critical Threshold</b>	5
<b>Instruction Text:</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) The Exchange server is heavily loaded.</li> </ul> <p><b>Potential impact:</b></p> <ul style="list-style-type: none"> <li>(1) The Microsoft Exchange IMAP4 service may stop responding to client requests.</li> <li>(2) The performance of SMTP and information store processes (Inetinfo.exe and Store.exe) degrades as data is shuttled back and forth.</li> </ul> <p><b>Suggested action:</b></p> <ul style="list-style-type: none"> <li>(1) Adjust policy thresholds when establishing normal server performance baselines.</li> <li>(2) Alleviate load of the server by moving some users to another server.</li> </ul> <p><b>For more information</b>, see the Microsoft Knowledge Base article - Q81705</p> <p><b><a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;817051">http://support.microsoft.com/default.aspx?scid=kb;en-us;817051</a></b></p>

## EXSPI-60-EpoxyStoreOutQueueLength

<b>Metric Name:</b>	<b>EXSPI-60-EpoxyStoreOutQueueLength</b>
<b>Description:</b>	Alarm on epoxy store out queue length. This indicates the number of requests waiting to be processed by the IIS protocol handlers.
<b>Type:</b>	Reset
<b>Schedule:</b>	Every 5 min
<b>Message Group:</b>	EX_Perf
<b>Warning Threshold</b>	2
<b>Critical Threshold</b>	5
<b>Instruction Text:</b>	<p><b>Probable cause:</b></p> <ul style="list-style-type: none"> <li>(1) The thresholds are set too low.</li> <li>(2) The Exchange server is heavily loaded.</li> </ul> <p><b>Potential impact:</b></p> <ul style="list-style-type: none"> <li>(1) The Microsoft Exchange IMAP4 service may stop responding to client requests.</li> <li>(2) The performance of information store processes (Inetinfo.exe and Store.exe) degrades as data is shuttled back and forth.</li> </ul> <p><b>Suggested action:</b></p> <ul style="list-style-type: none"> <li>(1) Adjust policy thresholds when establishing normal server performance baselines.</li> <li>(2) Alleviate load of the server by moving some users to another server.</li> </ul> <p><b>For more information</b>, see the Microsoft Knowledge Base article - Q81705</p> <p><b><a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;817051">http://support.microsoft.com/default.aspx?scid=kb;en-us;817051</a></b></p>

## EXSPI-60-0800 (Active Conferences)

<b>Policy:</b>	EXSPI-60-0800
<b>Name:</b>	Active Conferences
<b>Description:</b>	Monitors active MS Exchange Conferences
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<b>Counter(s):</b> MExchangeCONF.Active Conferences You have hit the threshold for the number of active conferences. Ensure that performance is not being impacted. If not, consider increasing the threshold.

## EXSPI-60-0801 (DCOM calls to MCUs)

<b>Policy:</b>	<b>EXSPI-60-0801</b>
<b>Name:</b>	DCOM Calls To MCU servers.
<b>Description:</b>	Monitors the number of Distributed Component Object Model (DCOM) Calls to T.120 MCU in the site. Examining this parameter over time helps to determine Conferencing Server activity in your organization, which can help in scaling it appropriately across multiple servers.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeDesMgr.DCOM Calls To MCUs</p> <p>Surpassing the threshold for the number of DCOM calls to the MCU indicates you may wish to add another MCU server.</p> <p><b>Possible Cause:</b></p> <p>Large number of DCOM calls to the MCU servers.</p> <p><b>Potential impact:</b></p> <p>If the value is high, this may result in a high load on the server. This may impact the network performance.</p> <p><b>Suggested action(s):</b></p> <p>You may wish to add another MCU server to balance the load.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>260960: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;260960&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;260960&amp;Product=exch2k</a></p> <p>281602: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k</a></p>

## EXSPI-60-0802 (Average Load per MCU)

<b>Policy:</b>	EXSPI-60-0802
<b>Name:</b>	Average Load per MCU
<b>Description:</b>	Monitors average load per MCU server
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeDcsMgr.Average Load Per MCU</p> <p>Surpassing this threshold may indicate that you need to add another MCU server.</p> <p><b>Possible Cause:</b></p> <p>Large number of DCOM calls to the MCU servers.</p> <p><b>Potential impact:</b></p> <p>If the value is high, this may result in a high load on the server. This may impact the network performance.</p> <p><b>Suggested action(s):</b></p> <p>You may wish to add another MCU server to balance the load.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>260960: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;260960&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;260960&amp;Product=exch2k</a></p> <p>290174: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;290174&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;290174&amp;Product=exch2k</a></p> <p>281602: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k</a></p>

## EXSPI-60-0803 (MCU Active Connections)

<b>Policy:</b>	<b>EXSPI-60-0803</b>
<b>Name:</b>	MCU Active Connections
<b>Description:</b>	Monitors the number of active T.120 Multipoint Control Units (MCU) in this site. Examining this parameter over time helps to determine the actual activity of Conferencing Server in your organization and therefore helps you to scale it properly across multiple servers.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeT120.Active Connections</p> <p>Surpassing this threshold indicates that you have more conference participants than expected.</p> <p><b>Probable cause(s):</b></p> <p>There are too many active T.120 MCU connections.</p> <p><b>Potential impact:</b></p> <p>If the value is high, this may result in a high load on the server. This may impact the network performance.</p> <p><b>Suggested action(s):</b></p> <p>You may wish to add another MCU server to balance the load.</p> <p><b>For more information,</b> see Microsoft Knowledge Base articles:</p> <p>245459: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;245459&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;245459&amp;Product=exch2k</a></p> <p>260960: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;260960&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;260960&amp;Product=exch2k</a></p> <p>264763: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;264763&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;264763&amp;Product=exch2k</a></p> <p>281602: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k</a></p>

## EXSPI-60-0804 (MCU Load)

<b>Policy:</b>	<b>EXSPI-60-0804</b>
<b>Name:</b>	MCU Load
<b>Description:</b>	Monitors load on MCU servers. Examining this parameter over time helps to determine the actual activity of Conferencing Server in your organization and therefore helps you to scale it properly across multiple servers.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeT120.T.120 MCU Load</p> <p>Surpassing this threshold indicates that too much work has been offloaded to the MCU.</p> <p><b>Probable cause(s):</b></p> <p>High load on the MCU server.</p> <p><b>Potential impact:</b></p> <p>If the value is high, this may result in a high load on the server. This may impact the network performance.</p> <p><b>Suggested action(s):</b></p> <p>You may wish to add another MCU server to balance the load.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>260960: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;260960&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;260960&amp;Product=exch2k</a></p> <p>290174: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;290174&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;290174&amp;Product=exch2k</a></p> <p>281602: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k</a></p>



## EXSPI-60-0805 (Failed Conference Join Attempts)

<b>Policy:</b>	<b>EXSPI-60-0805</b>
<b>Description:</b>	Monitors failed user attempts to join MS Exchange Conferences
<b>Schedule:</b>	Every 10min
<b>Message Grp:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIpconf.Failed User Join Attempts</p> <p>Failed logins could be a sign of an attempted security breach to your conferencing server.</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) Exchfilt.dll Internet Server API (ISAPI) filter is not loaded or is not working properly.</li> <li>(2) Conferencing server password is more than 32 characters.</li> <li>(3) Requested server may be overbooked.</li> <li>(4) Authentication may have failed.</li> <li>(5) There might be a probable attack on the Conferencing server.</li> <li>(6) There may be a problem with network connection.</li> </ol> <p><b>Potential impact:</b></p> <p>If this value is too high, it may indicate an attack on the server to breach security.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Check if the Exchfilt.dll Internet Server API (ISAPI) filter is loaded or working properly (Refer KB - Q258050).</li> <li>(2) You can use an Network Monitor tool to obtain information about network connection errors, e.g. use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as host unreachable errors, to use Telnet.exe to try to connect to the destination computer.</li> </ol> <p><b>For more information,</b> see Microsoft Knowledge Base articles:</p> <p>258050: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;258050&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;258050&amp;Product=exch2k</a></p> <p>253909: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;253909&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;253909&amp;Product=exch2k</a></p> <p>256426: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;256426&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;256426&amp;Product=exch2k</a></p> <p>245827: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;245827&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;245827&amp;Product=exch2k</a></p> <p>245826: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;245826&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;245826&amp;Product=exch2k</a></p> <p>252866: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;252866&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;252866&amp;Product=exch2k</a></p> <p>282105: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;282105&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;282105&amp;Product=exch2k</a></p> <p>281602: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k</a></p>

## EXSPI-60-0806 (Active Video Conferences)

<b>Policy:</b>	EXSPI-60-0806
<b>Name:</b>	Video Conferences in Progress
<b>Description:</b>	Monitors video conferences in progress
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIpconf.Video Conferences in Progress</p> <p><b>Probable cause(s):</b> High number of Video Conferences that are in Progress.</p> <p><b>Potential impact:</b> If the value is high, this may result in a high load on the server. This may impact the network performance heavily.</p> <p><b>Suggested action(s):</b> You may wish to add another Conferencing server to balance the load.</p> <p>For more information, see Microsoft Knowledge Base articles:</p> <p>263948: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;263948&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;263948&amp;Product=exch2k</a></p> <p>302464: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;302464&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;302464&amp;Product=exch2k</a></p> <p>281602: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k</a></p>

## EXSPI-60-0807 (Incomplete H323 Calls)

<b>Policy:</b>	<b>EXSPI-60-0807</b>
<b>Name:</b>	Incomplete H.323 Calls
<b>Description:</b>	Monitors the number of incomplete H.323 calls that could not be bridged since the service started. This could be a sign of an attempted security breach to your conferencing server.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeH323.Incomplete Calls</p> <p><b>Probable cause(s):</b> There might be an attack on the Conferencing server.</p> <p><b>Potential impact:</b> If this value is too high, it may indicate an attack on the server to breach security.</p> <p><b>Suggested action(s):</b> You may need to apply the latest Service Pack.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>245827: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;245827&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;245827&amp;Product=exch2k</a></p> <p>245826: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;245826&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;245826&amp;Product=exch2k</a></p> <p>326172: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;326172&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;326172&amp;Product=exch2k</a></p> <p>281602: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;281602&amp;Product=exch2k</a></p>

## EXSPI-60-0830 (Chat Service: Active DNS Logons)

<b>Policy:</b>	<b>EXSPI-60-0830</b>
<b>Name:</b>	Active DNS logon threads
<b>Description:</b>	Monitors number of worker threads waiting to process DNS lookup requests.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> Microsoft Exchange Chat Service.Active DNS logon threads</p> <p>This counter is the total number of worker threads waiting to process DNS lookup requests. When this value is high, you may be experiencing DNS server failures.</p> <p><b>Probable cause(s):</b></p> <ul style="list-style-type: none"> <li>(1) There may be a problem with network connection.</li> <li>(2) DNS Server may be down.</li> </ul> <p><b>Potential impact:</b></p> <p>When the value becomes very high, Clients may be experiencing DNS server failures.</p> <p><b>Suggested action(s):</b></p> <ul style="list-style-type: none"> <li>(1) You can use a Network Monitor tool to obtain information about network connection errors, e.g. use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as 'host unreachable' errors, use Telnet.exe to try to connect to the destination computer.</li> <li>(2) The clients need to wait for sometime before trying again.</li> </ul> <p><b>For more information,</b> see Microsoft Knowledge Base articles: 813110: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;813110&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;813110&amp;Product=exch2k</a></p>

## EXSPI-60-0831 (Chat Service: Timeout Disconnects)

<b>Policy:</b>	EXSPI-60-0831
<b>Name:</b>	Chat Service Timeout Disconnects
<b>Description:</b>	Monitors the number of Chat Service client timeout related disconnects
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> Microsoft Exchange Chat Service.Client Timeout Related Disconnects</p> <p>This counter is the total number of clients disconnected because of a ping timeout. If this value is high it may indicate network lag or the client's computer is malfunctioning.</p> <p><b>Probable cause(s):</b></p> <ul style="list-style-type: none"> <li>(1) There may be a problem with network connection.</li> <li>(2) Client computer is malfunctioning.</li> </ul> <p><b>Potential impact:</b></p> <p>If this value is high it may indicate network lag or the client's computer is malfunctioning.</p> <p><b>Suggested action(s):</b></p> <ul style="list-style-type: none"> <li>(1) You can use a network monitor tool to obtain information about network connection errors. For example, use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as 'host unreachable' errors, use telnet.exe to try to connect to the destination computer.</li> <li>(2) You can install the latest security patches.</li> </ul>

## EXSPI-60-0833 (Chat Service: Anonymous Clients)

<b>Policy:</b>	EXSPI-60-0833
<b>Name:</b>	Chat Service Anonymous Clients
<b>Description:</b>	Monitors number of anonymous clients actively connected to Chat services
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> Microsoft Exchange Chat Service.Anonymous Clients</p> <p>This is the number of anonymous clients currently connected to this chat community.</p> <p><b>Probable cause(s):</b></p> <p>    Clients are not authenticated on the server.</p> <p><b>Potential impact:</b></p> <p>    When Chat Service is first installed, it imposes no logon restrictions on chat users. Any user can establish an anonymous client connection with the chat server.</p> <p><b>Suggested action(s):</b></p> <p>    Many options are available to configure the Chat Service server to the specific requirement.</p> <p><b>For more information</b>, see Microsoft Knowledge Base articles:  245085: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;245085&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;245085&amp;Product=exch2k</a></p>

## EXSPI-60-0834 (Chat Service: Active Authenticated Clients)

<b>Policy:</b>	EXSPI-60-0834
<b>Name:</b>	Chat Service Authenticated Clients
<b>Description:</b>	Monitors number of authenticated clients currently connected
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> Microsoft Exchange Chat Service.Authenticated Clients</p> <p>This is the number of authenticated clients currently connected to this chat community.</p> <p><b>Probable cause(s):</b></p> <p>There are too many chat clients logged in.</p> <p><b>Potential impact:</b></p> <p>If this value is high, this may impact the network performance.</p> <p><b>Suggested action(s):</b></p> <p>You may wish to add another chat server.</p>

## EXSPI-60-0835 (Chat Service: Authentication Failures)

<b>Policy:</b>	EXSPI-60-0835
<b>Name:</b>	Chat Service Authentication Failures
<b>Description:</b>	Monitors number of authentication failures to MS Exchange Chat Service
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> Microsoft Exchange Chat Service.Authentication Failures</p> <p>This is the total number of failed authentication attempts by users trying to connect to the chat server.</p> <p><b>Probable cause(s):</b></p> <ul style="list-style-type: none"> <li>(1) A probable attack on the chat server.</li> <li>(2) There may be a problem with network connection.</li> <li>(3) Spaces in the user password cannot be passed on to the Exchange 2000 Chat Server for proper chat authentication.</li> </ul> <p><b>Potential impact:</b></p> <p>If this value is high, it may indicate an attack on the server to breach security.</p> <p><b>Suggested action(s):</b></p> <ul style="list-style-type: none"> <li>(1) You can use a Network Monitor tool to obtain information about network connection errors, e.g. use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as 'host unreachable' errors, to use Telnet.exe to try to connect to the destination computer.</li> <li>(2) Ensure that the password does not contain spaces.</li> </ul> <p><b>For more information,</b> see Microsoft Knowledge Base articles:</p> <p>245085: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;245085&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;245085&amp;Product=exch2k</a></p> <p>241603: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;241603&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;241603&amp;Product=exch2k</a></p> <p>239663: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;239663&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;239663&amp;Product=exch2k</a></p>



## EXSPI-60-0836 (Chat Service: Server Operations Queued)

<b>Policy:</b>	EXSPI-60-0836
<b>Name:</b>	Chat Service Operations Queued
<b>Description:</b>	Monitors queue of operations on the MS Exchange Chat Service server
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> Microsoft Exchange Chat Service.Server operations queued</p> <p><b>Probable cause(s):</b> High Load on the Chat server.</p> <p><b>Potential impact:</b> If this value is too high there could be a problem in the server load. This may impact the network performance.</p> <p><b>Suggested action(s):</b> You may wish to add another Chat server to balance the load.</p>

## EXSPI-60-0841 (IM: Active Users)

<b>Policy:</b>	EXSPI-60-0841
<b>Name:</b>	Active Users IM Virtual Servers
<b>Description:</b>	Monitors number of IM Virtual Servers users currently online
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIM Virtual Servers.Current Users Online</p> <p><b>Probable cause(s):</b> High number of IM clients logged in.</p> <p><b>Potential impact:</b> If the value is high, this may result in a high load on the server. This may impact the network performance and other clients may be impacted.</p> <p><b>Suggested action(s):</b> You may wish to add another IM server to balance the load.</p>

## EXSPI-60-0842 (IM: Current Subscriptions)

<b>Policy:</b>	EXSPI-60-0842
<b>Name:</b>	IM Current Subscriptions
<b>Description:</b>	Monitors the number of subscription notifications sent to the server by the Instant Messaging client. A subscription notification occurs when a user is added to the contact list. This gives an indication of how heavily clients are using Instant Messaging.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIM Virtual Servers.Current Subscriptions</p> <p><b>Probable cause(s):</b> More number subscriptions on the server.</p> <p><b>Potential impact:</b> If the value is high, this may result in a high load on the server. This may impact the network performance and other clients may be impacted.</p> <p><b>Suggested action(s):</b> You may wish to add another IM server to balance the load.</p>

## EXSPI-60-0845 (IM: Failed Requests)

<b>Policy:</b>	<b>EXSPI-60-0845</b>
<b>Name:</b>	IM Failed Requests
<b>Description:</b>	Monitors number of IM failed requests per sec.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIM.Failed Requests/sec</p> <p><b>Probable cause(s):</b></p> <ol style="list-style-type: none"> <li>(1) Incorrect client connectivity Settings.</li> <li>(2) If the IM User Name contains more than 20 Characters, log on to an Instant Messaging home server will fail.</li> <li>(3) Log On to Instant Messaging Using Domain Name Only.</li> <li>(4) Authentication may have failed.</li> <li>(5) There might be a probable attack on the IM server.</li> <li>(6) There may be a problem with network connection.</li> </ol> <p><b>Potential impact:</b></p> <p>If this value is too high, it may indicate an attack on the server to breach security.</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Check the client connectivity settings.</li> <li>(2) Cannot Log On to Instant Messaging with More Than 20 Characters in User Name.</li> <li>(3) You can use a network monitor tool to obtain information about network connection errors. For example, use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as host unreachable errors, use telnet.exe to try to connect to the destination computer.</li> </ol> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <p>242882: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;242882&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;242882&amp;Product=exch2k</a></p> <p>252496: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;252496&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;252496&amp;Product=exch2k</a></p> <p>258861: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;258861&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;258861&amp;Product=exch2k</a></p> <p>278974: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;278974&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;278974&amp;Product=exch2k</a></p>

## EXSPI-60-0846 (IM: Rejected Requests)

<b>Policy:</b>	<b>EXSPI-60-0846</b>
<b>Name:</b>	IM Rejected Requests
<b>Description:</b>	Monitors the number of rejected IM requests per sec.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIM.Rejected Requests/sec</p> <p><b>Probable cause(s):</b></p> <ul style="list-style-type: none"> <li>(1) Authentication failed.</li> <li>(2) IM Clients that are trying to connect to the Instant Messaging Server through a firewall.</li> <li>(3) There might be an attack on the IM server.</li> <li>(4) There may be a problem with network connectivity.</li> </ul> <p><b>Potential impact:</b></p> <p>If this value is too high, it may indicate an attack on the server to breach security.</p> <p><b>Suggested action(s):</b></p> <ul style="list-style-type: none"> <li>(1) Check the client connectivity settings.</li> <li>(2) Note that one cannot log on to Instant Messaging with more than 20 characters in user name.</li> <li>(3) You can use a network monitor tool to obtain information about network connection errors. For example, use the NSlookup utility to review possible issues with Domain Name System (DNS) resolution. For connection and protocol issues such as host unreachable errors, use telnet.exe to try to connect to the destination computer.</li> </ul> <p><b>For more information</b>, see Microsoft Knowledge Base articles:</p> <ul style="list-style-type: none"> <li>278974: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;278974&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;278974&amp;Product=exch2k</a></li> <li>317339: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;317339&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;317339&amp;Product=exch2k</a></li> <li>316654: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;316654&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;316654&amp;Product=exch2k</a></li> <li>306776: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;306776&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;306776&amp;Product=exch2k</a></li> <li>319758: <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;319758&amp;Product=exch2k">http://support.microsoft.com/default.aspx?scid=kb;en-us;319758&amp;Product=exch2k</a></li> </ul>



## 3 Exchange 5.5 Policies

### Summary of Exchange 5.5 Policies

In OVO for UNIX version 8 and earlier, policies are referred to as templates

**Table 2 Summary of Exchange 5.5 Monitor Policies**

Policy group	Policy	Description
<b>Exchange Service Discovery</b>		
EXSPI_Discovery		
<b>EXSPI-55 Add-Ons</b>		
<b>EXSPI-55 cc:Mail Connector</b>		
	EXSPI-55-0090	cc:Mail MTS-IN Queue Length
	EXSPI-55-0091	cc:Mail MTS-OUT Queue Length
	EXSPI-55-0092	Exchange NDRs to cc:Mail
	EXSPI-55-0093	cc:Mail NDRs to Exchange
<b>EXSPI-55 Internet Mail Services</b>		
	EXSPI-55-0060	MSX 5.5-IMS Failed Connections
	EXSPI-55-0061	MSX 5.5-IMS Rejected Connections
	EXSPI-55-0062	MSX 5.5-IMS MTS-IN Queue Length
	EXSPI-55-0063	MSX 5.5-IMS MTS-OUT Queue Length
	EXSPI-55-0064	MSX 5.5-IMS Queued Inbound
	EXSPI-55-0065	MSX 5.5-IMS Queued Outbound
	EXSPI-55-0066	MSX 5.5-IMS NDRs Inbound
	EXSPI-55-0067	MSX 5.5-IMS NDRs Outbound
<b>EXSPI-55 Lotus Notes Connector</b>		
	EXSPI-55-0094	Lotus Notes Inbound Queued Messages Length
	EXSPI-55-0095	Lotus Notes Outbound Queued Messages Length
	EXSPI-55-0096	Exchange NDRs sent to Lotus Notes
	EXSPI-55-0097	Lotus Notes NDRs sent to Microsoft Exchange

**Table 2 Summary of Exchange 5.5 Monitor Policies**

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
<b>EXSPI-55 News Service</b>		
	EXSPI-55-0080	Newsfeed Rejected Inbound Messages
	EXSPI-55-0081	Newsfeed Rejected Outbound Messages
<b>EXSPI-55 Advanced</b>		
<b>EXSPI-55 End to End Message Ping</b>		
	EXSPI-55-1002	
<b>EXSPI-55 Evt Log Warnings &amp; Info</b>		
<b>EXSPI-55 Reporter Collection</b>		
<b>EXSPI-55 Quick Start</b>		
<b>EXSPI-55 Directory Service</b>		
	EXSPI-60-0110	DS Pending Synchronizations
	EXSPI-60-0111	DS Remaining Updates
<b>EXSPI-55 Information Store</b>		
	EXSPI-55-0030	IS Public Average Delivery Time
	EXSPI-55-0031	IS Public Average Local Delivery Time
	EXSPI-55-0032	IS Public Replication Queue Size
	EXSPI-55-0033	IS Public Receive Queue Size
	EXSPI-55-0034	IS Public Send Queue Size
	EXSPI-55-0040	IS Mailbox Average Delivery Time
	EXSPI-55-0041	S Mailbox Average Local Delivery Time
	EXSPI-55-0042	S Mailbox Receive Queue Size
	EXSPI-55-0043	IS Mailbox Send Queue Size
	EXSPI-55-0100	IS User Connection Count Low
<b>EXSPI-55 Message Transfer Agent</b>		
	EXSPI-55-0010	MTA Message Delay
	EXSPI-55-0011	MTA Work Queue Length
	EXSPI-55-0012	MTA Failed Conversions
	EXSPI-55-0013	MTA Connection Message Delay
	EXSPI-55-0014	MTA Connection Queue Lengths
	EXSPI-55-0015	MTA Failed Outbound Associations
	EXSPI-55-0016	MTA Rejected Inbound Associations



**Table 2 Summary of Exchange 5.5 Monitor Policies**

<b>Policy group</b>	<b>Policy</b>	<b>Description</b>
	EXSPI-55-0017	MTA Rejected Inbound Associations
<b>EXSPI-55 Services and Processes</b>		
	EXSPI-55-0001	Monitors CPU time used by Exchange processes)
	EXSPI-55-0002	
<b>EXSPI-55 Transaction Log</b>		
	EXSPI-55-0005	Low Log File Disk Space
	EXSPI-55-0006	Transaction Log File Disk Space

**Table 3 Exchange 5.5 Schedule Data Collection Policies**

CAT	Policy Group	Policy	Description	Collection type	Schedule	Table	Report
QS	EXSPI-55 Information Store	EXSPI-55-D C-IS Msg Del Time	581 : MExchangeIS Mailbox.Average Local Delivery Time 582 : MExchangeIS Mailbox.Average Delivery Time 583 : MExchangeIS Public.Average Local Delivery Time 584 : MExchangeIS Public.Average Delivery Time	Average/h	6:00-18:00 every 10min, M-F	EXSPI_MULTI (for each Database instance) EXSPI_SINGLE (total over all Databases)	
QS	EXSPI-55 Information Store	EXSPI-55-D C-IS Mailbox Msg Vol	540 : MExchangeIS Mailbox.Local deliveries 541 : MExchangeIS Mailbox.Messages Delivered 542 : MExchangeIS Mailbox.Messages Sent 543 : MExchangeIS Mailbox.Messages Submitted 544 : MExchangeIS Mailbox.Message Recipients Delivered	Delta/h	6:00-18:00 hourly, M-F	EXSPI_MULTI (for each Database instance) EXSPI_SINGLE (total over all Databases)	S: Exchange Messaging Trends for all Servers D: Exchange Messaging Trends

**Table 3 Exchange 5.5 Schedule Data Collection Policies**

CAT	Policy Group	Policy	Description	Collection type	Schedule	Table	Report
QS	EXSPI-55 Information Store	EXSPI-55-D C-IS Public Msg Vol	550 : MExchangeIS Public.Messages Delivered  551 : MExchangeIS Public.Messages Sent  552 : MExchangeIS Public.Messages Submitted  553 : MExchangeIS Public.Message Recipients Delivered	Delta/h	6:00-18:00 hourly, M-F	EXSPI_MULTI (for each Database instance) EXSPI_SINGLE (total over all Databases)	S: Exchange Messaging Trends for all Servers  D: Exchange Messaging Trends
QS	EXSPI-55 Message Transfer Agent	EXSPI-55-D C-MTA & IS Queue Lengths	570 : MExchangeMTA.Work Queue Length - MExchangeMTA.Deferred Delivery Msgs  571 : MExchangeIS Mailbox.Send Queue Size  572 : MExchangeIS Mailbox.Receive Queue Size  573 : MExchangeIS Public.Send Queue Size  574 : MExchangeIS Public.Receive Queue Size	Value	6:00-18:00 every 10min, M-F	EXSPI_MULTI (for each Database instance) EXSPI_SINGLE (total over all Databases)	

**Table 3 Exchange 5.5 Schedule Data Collection Policies**

<b>CAT</b>	<b>Policy Group</b>	<b>Policy</b>	<b>Description</b>	<b>Collection type</b>	<b>Schedule</b>	<b>Table</b>	<b>Report</b>
QS	EXSPI-55 Message Transfer Agent	EXSPI-55-D C-MTA Message Volume	530 : MSExchangeMT A.Inbound Messages Total  531 : MSExchangeMT A.Outbound Messages Total  532 : MSExchangeMT A.Total Recipients Inbound  533 : MSExchangeMT A.Total Recipients Outbound  534 : MSExchangeMT A.Inbound Bytes Total  535 : MSExchangeMT A.Outbound Bytes Total	Average/ h	6:00-18:00 hourly, M-F	EXSPI_SINGL E	S: Exchange Messaging Trends for all Servers  D: Exchange Messaging Trends
QS	EXSPI-55 Services and Processes	EXSPI-55-D C-User Connections	520 : MSExchangeIS. Active User Count  521 : MSExchangeIS. User Count	Delta/h	7:00-18:00 hourly, M-F	EXSPI_SINGL E	D: Exchange User Connection

**Table 3 Exchange 5.5 Schedule Data Collection Policies**

<b>CAT</b>	<b>Policy Group</b>	<b>Policy</b>	<b>Description</b>	<b>Collection type</b>	<b>Schedule</b>	<b>Table</b>	<b>Report</b>
QS	EXSPI-55 Internet Mail Services	EXSPI-55-D C-IMS Message Volume	590 : MSEExchangeIM C.Inbound Messages Total  591 : MSEExchangeIM C.Outbound Messages Total  592 : MSEExchangeIM C.Total Inbound Kilobytes  593 : MSEExchangeIM C.Total Outbound Kilobytes  594 : MSEExchangeIM C.Total Inbound Recipients  595 : MSEExchangeIM C.Total Outbound Recipients	Delta/h	6:00-18:00 hourly, M-F	EXSPI_SINGL E	S: Exchange Messaging Trends for all Servers  D: Exchange IMS Messaging Trends
AO	EXSPI-55 Internet Mail Services	EXSPI-55-D C-IMS Queue Length	600 : MSEExchangeIM C.Total Messages Queued	Average/ h	6:00-18:00 10min, M-F	EXSPI_SINGL E	

**Table 3 Exchange 5.5 Schedule Data Collection Policies**

CAT	Policy Group	Policy	Description	Collection type	Schedule	Table	Report
Ad	EXSPI-55 News Service	EXSPI-55-D C-News Message Volume	560: MExchangeIS. Newsfeed Messages Sent 561: MExchangeIS. Newsfeed Messages Received 562: MExchangeIS. NNTP Messages Read 563: MExchangeIS. NNTP Messages Posted	Delta/h	6:00-18:00 hourly, M-F	EXSPI_SINGLE	
Ad	EXSPI-55 End to End Message Ping	EXSPI-55-End to End Message Ping		Value	every 30min, daily	EXSPI_M1002	S: Exchange SLA Message Delivery
Ad	EXSPI-55 Reporter Collection	EXSPI-55-D C-Exchange Info	655: Server 656: Site 657: Organization	Value	23:00, daily	EXSPI_MU	S: Exchange System Information Summary
Ad	EXSPI-55 Reporter Collection	EXSPI-55-D C-Mailbox Data	630: Mailbox size (MB) 631: Number of messages 632: Storage limit 634: Last Logon Date 815: Database Instance	Value	1:00 every Saturday	EXSPI_MU	S: Exchange Top 100 Mailboxes D: Exchange Mailbox Details D: Exchange Mailbox Summary

**Table 3 Exchange 5.5 Schedule Data Collection Policies**

CAT	Policy Group	Policy	Description	Collection type	Schedule	Table	Report
Ad	EXSPI-55 Reporter Collection	EXSPI-55-D C-Private IS Sum. Data	610: Physical DB size (EDB) 611: Number of Mailboxes 612: Number of Messages 613: Logical Size 614: MExchangeIS Mailbox.Single Instance Ratio	Value	23:00, M-S	EXSPI_SINGLE	S: Exchange System Information Summary D: Exchange Mailbox Summary D: Exchange Mailbox Usage Trends
Ad	EXSPI-55 Reporter Collection	EXSPI-55-D C-Public Folder Data	640: Folder Size 641: Number of Messages	Value	4:00 every Saturday	EXSPI_MULTI	S: Exchange Top 100 Public Folders D: Exchange Folder Summary
Ad	EXSPI-55 Reporter Collection	EXSPI-55-D C-Public IS Sum. Data	620: Physical DB size (EDB) 621: Number of Folders 622: Number of Messages 623: Logical Size 624: MExchangeIS Public.Single Instance Ratio	Value	22:00, M-S	EXSPI_SINGLE	S: Exchange System Information Summary D: Exchange Folder Summary D: Exchange Folder Usage Trends
Ad	EXSPI-55 Reporter Collection	EXSPI-55-D C-TrackLog Data	660: Email Senders 661: Email Recipients 662: Email Destinations 663: Email Sources	Value	19:00 every Saturday	EXSPI_M0660 EXSPI_M0661 EXSPI_M0662 EXSPI_M0663	D: Exchange Top Destinations D: Exchange Top Recipients D: Exchange Top Senders D: Exchange Top Sources

## Exchange 5.5 Monitor Policy Specifications

### EXSPI-55-0001 (Process Monitor)

<b>Policy:</b>	EXSPI-55-0001
<b>Name:</b>	Process Monitor
<b>Description:</b>	Monitors CPU time used by Exchange processes
<b>Type:</b>	With reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> Process.% Processor Time</p> <p><b>Probable cause(s):</b> High CPU use could indicate an overloaded system. An Exchange process consuming a lot of CPU but processing few messages could indicate a problem with the process.</p> <p><b>Potential impact:</b> Failure, Performance</p> <p><b>Suggested action(s):</b> (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the service. (2) Monitor Exchange processes with NT Performance Monitor (Process.% Processor Time) and verify CPU consumption over a period of time. Constantly high value may indicate a scalability problem. (3) Stop and re-start the Exchange service. Use the NT Administrative Tool 'Service Manager'.</p> <p>NOTE: By default only Exchange processes are monitored. The 'Catch All' suppress condition prevents messages about other busy processes. If you would like to receive messages about other busy processes, simply add conditions before the 'Catch All'.</p>



<b>Condition:</b>	<b>EXSPI-55-0001 Process - msexcimc.1</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange INTERNET MAIL CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0001 Process - msexcimc.2</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange INTERNET MAIL CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - store.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange INFORMATION STORE service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\ ><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - store.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange INFORMATION STORE service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\ ><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - emsmta.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange MESSAGE TRANSFER AGENT service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - emsmta.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange MESSAGE TRANSFER AGENT service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - mad.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange SYSTEM ATTENDENT service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\ ><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - mad.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange SYSTEM ATTENDENT service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\ ><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - dsamain.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange DIRECTORY service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - dsamain.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange DIRECTORY service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - inetinfo.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange IIS service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - inetinfo.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange IIS service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - srsmain.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange DIRECTORY REPLICATION service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - srsmain.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange DIRECTORY REPLICATION service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - adc.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange ACTIVE DIRECTORY CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - adc.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange ACTIVE DIRECTORY CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)



<b>Condition:</b>	EXSPI-55-0001 Process - lsmexim.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - lsmexim.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0001 Process - lsmexout.1</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0001 Process - lsmexout.2</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - lsmexnts.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - lsmexnts.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - lsmexdxa.1
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	EXSPI-55-0001 Process - lsmexdxa.2
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\\><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0001 Process - lsntsmex.1</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	99.0
<b>Reset Value:</b>	85.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.1: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0001 Process - lsntsmex.2</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	80.0
<b>Reset Value:</b>	75.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0001.2: Exchange LOTUS NOTES CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too high (\><\$THRESHOLD>)

## EXSPI-55-0002 (Inactive Process Monitor)

<b>Policy:</b>	EXSPI-0002
<b>Name:</b>	Inactive Process Monitor
<b>Description:</b>	Monitors the core MS Exchange processes to check that they are using some CPU cycles. A process consistently at 0% could indicate a problem.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 10min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Low CPU use during the day on an active system could indicate a problem with the process.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b> (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the service. (2) Monitor Exchange processes with NT Performance Monitor (Process.% Processor Time) and verify CPU consumption over a period of time. Constantly high value may indicate a scalability problem. (3) Stop and re-start the Exchange service. Use the NT Administrative Tool 'Service Manager'.</p>

<b>Condition:</b>	<b>EXSPI-55-0002 Process - msexcime</b>
<b>Severity:</b>	n/a
<b>Threshold:</b>	0.01
<b>Reset Value:</b>	n/a
<b>Duration:</b>	12h
<b>Message Text:</b>	EXSPI-55-0002: Exchange INTERNET MAIL CONNECTOR service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too low (\<<\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0002 Process - store</b>
<b>Severity:</b>	n/a
<b>Threshold:</b>	0.01
<b>Reset Value:</b>	n/a
<b>Duration:</b>	12h
<b>Message Text:</b>	EXSPI-55-0002: Exchange INFORMATION STORE service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too low (\<<\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0002 Process - emsmta</b>
<b>Severity:</b>	n/a
<b>Threshold:</b>	0.01
<b>Reset Value:</b>	n/a
<b>Duration:</b>	12h
<b>Message Text:</b>	EXSPI-55-0002: Exchange MESSAGE TRANSFER AGENT service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too low (\<<\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0002 Process - mad</b>
<b>Severity:</b>	n/a
<b>Threshold:</b>	0.01
<b>Reset Value:</b>	n/a
<b>Duration:</b>	12h
<b>Message Text:</b>	EXSPI-55-0002: Exchange SYSTEM ATTENDENT service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too low (\<<\$THRESHOLD>)



<b>Condition:</b>	<b>EXSPI-55-0002 Process - dsamain</b>
<b>Severity:</b>	n/a
<b>Threshold:</b>	0.01
<b>Reset Value:</b>	n/a
<b>Duration:</b>	12h
<b>Message Text:</b>	EXSPI-55-0002: Exchange DIRECTORY service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too low (\<<\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0002 Process - inetinfo</b>
<b>Severity:</b>	n/a
<b>Threshold:</b>	0.01
<b>Reset Value:</b>	n/a
<b>Duration:</b>	12h
<b>Message Text:</b>	EXSPI-55-0002: Exchange IIS service (pid=<pid>) CPU processor time consumption (<\$VALUE>) too low (\<<\$THRESHOLD>)

## EXSPI-55-0005 (Low Log File Disk Space)

<b>Policy:</b>	EXSPI-55-0005
<b>Name:</b>	Low Log File Disk Space
<b>Description:</b>	Monitors the free disk space remaining on the logical disk drive where the transaction log files for the IS public and private databases reside.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The amount of free disk space on the disk drive where the Exchange transaction log files reside is getting low.</p> <p><b>Potential impact:</b> Failure. Exchange will shutdown processing if there is no disk space for additional transaction log files.</p> <p><b>Suggested action(s):</b> (1) Free up disk space on this drive. (2) If this drive is filling up because of many Exchange transaction log files, verify that Exchange backups are completing successfully (log files are removed when the i backup completes) and that backups are being done frequently enough.</p>

<b>Condition:</b>	<b>EXSPI-55-0005.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	10.0
<b>Reset Value:</b>	55.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0005.1: Free disk space (<\$VALUE>MB) on the disk drive where the Exchange transaction log files reside is getting low (\\<<\$THRESHOLD>MB)

<b>Condition:</b>	<b>EXSPI-55-0005.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	20.0
<b>Reset Value:</b>	25.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0005.2: Free disk space (<\$VALUE>MB) on the disk drive where the Exchange transaction log files reside is getting low (\\<<\$THRESHOLD>MB)

## EXSPI-55-0006 (Transaction Log File Disc Space)

<b>Policy:</b>	EXSPI-55-0006
<b>Name:</b>	Transaction Log File Disc Space
<b>Description:</b>	Monitors the disk space used by the Exchange transaction and reserved transaction log files.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every day
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> The amount of disk space being used by the Exchange transaction log files is getting large (disk space being used by edb*.log and res*.log files in the mdbdata and dsadata directories).</p> <p>A large amount of used disk space could indicate a possible problem with backups.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b> (1) Verify that Exchange backups are completing successfully (log files are removed when the backup completes). (2) Verify that backups are being done frequently enough. If they are, the conditions can be edited to increase the threshold values so this message is not generated as often.</p>

<b>Condition:</b>	<b>EXSPI-55-0006.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	200.0
<b>Reset Value:</b>	180.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0006.1: The amount of disk space (<\$VALUE>MB) being used by the Exchange transaction log files is getting large (\><\$THRESHOLD>MB)

<b>Condition:</b>	<b>EXSPI-55-0006.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	100.0
<b>Reset Value:</b>	90.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0006.2: The amount of disk space (<\$VALUE>MB) being used by the Exchange transaction log files is getting large (\><\$THRESHOLD>MB)

## EXSPI-55-0010 (MTA Message Delay)

<b>Policy:</b>	EXSPI-55-0010
<b>Name:</b>	MTA Message Delay
<b>Description:</b>	Monitors the rate of delayed messages being processed in the MTA.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA.Work Queue Length  MExchangeMTA.Deferred Delivery Msgs  MExchangeMTA.Messages/Sec</p> <p><b>Probable cause(s):</b>  Delay of messages being processed could indicate problems with system load, the MTA, connectors, or the network.</p> <p><b>Potential impact:</b>  Performance</p> <p><b>Suggested action(s):</b>  (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.  (2) Run Exchange Administrator and check for 'stuck' messages in the MTA queue.  (3) Verify that there are no network problems.</p>

<b>Condition:</b>	<b>EXSPI-55-0010.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	300.0
<b>Reset Value:</b>	250.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0010.1: Delivery of messages to other Exchange servers may be delayed (<\$VALUE> secs) by the MTA (\\><\$THRESHOLD> secs)

<b>Condition:</b>	<b>EXSPI-55-0010.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	60.0
<b>Reset Value:</b>	50.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0010.2: Delivery of messages to other Exchange servers may be delayed (<\$VALUE> secs) by the MTA (\\><\$THRESHOLD> secs)

## EXSPI-55-0011 (MTA Work Queue Length)

<b>Policy:</b>	EXSPI-55-0011
<b>Name:</b>	MTA Work Queue Length
<b>Description:</b>	Monitors the number of delayed messages being processed in the MTA
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeMTA.Work Queue Length MSExchangeMTA.Deferred Delivery Msgs</p> <p><b>Probable cause(s):</b> Delay of messages being processed could indicate problems with system load, the MTA, connectors, or the network.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Run Exchange Administrator and check for 'stuck' messages in the MTA queue. (3) Verify that there are no network problems.</p>



<b>Condition:</b>	<b>EXSPI-55-0011.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	100.0
<b>Reset Value:</b>	80.0
<b>Duration:</b>	10min
<b>Message Text:</b>	EXSPI-55-0011.1: MTA Work Queue Length (<\$VALUE>) too high (>=<\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0011.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	50.0
<b>Reset Value:</b>	40.0
<b>Duration:</b>	10min
<b>Message Text:</b>	EXSPI-55-0011.2: MTA Work Queue Length (<\$VALUE>) too high (>=<\$THRESHOLD>)"

## EXSPI-55-0012 (MTA Failed Conversions)

<b>Policy:</b>	EXSPI-55-0012
<b>Name:</b>	MTA Failed Conversions
<b>Description:</b>	Monitors the ratio of failed and successful conversion of messages from one form to another.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeMTA.Total Failed Conversions  MSExchangeMTA.Total Successful Conversions</p> <p><b>Probable cause(s):</b>  There may be problems with the MTA converting messages from one format to another.</p> <p><b>Potential impact:</b>  Performance/Failure. A high failure rate could indicate problems with the MTA or how messages being received are formatted.</p> <p><b>Suggested action(s):</b>  (1) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems converting messages.  (2) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

<b>Condition:</b>	<b>EXSPI-55-0012.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4.0
<b>Reset Value:</b>	3.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0012.1: The rate of Failed MTA Conversions is <\$VALUE>% which has been higher than the set threshold (\\><\$THRESHOLD>%)

<b>Condition:</b>	<b>EXSPI-55-0012.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2.0
<b>Reset Value:</b>	1.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0012.2: The rate of Failed MTA Conversions is <\$VALUE>% which has been higher than the set threshold (\\><\$THRESHOLD>%)

## EXSPI-55-0013 (MTA Connection Message Delay)

<b>Policy:</b>	EXSPI-55-0013
<b>Name:</b>	MTA Connection Message Delay
<b>Description:</b>	Monitors the time (secs) since the oldest message in this entity's queue was placed in the queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Oldest Message Queued.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>            Delivery of messages to another Exchange server may be delayed by the MTA because of possible problems with a connection.</p> <p>A long delay time could indicate problems with connectors, system load, the MTA, or the network.</p> <p><b>Potential impact:</b>            Performance/Failure.</p> <p><b>Suggested action(s):</b>            (1) Monitor queue length for the specific connection with NT Performance Monitor:            MExchangeMTA Connections.Oldest Message Queued.&lt;CONNECTION&gt;</p> <p>(2) If queue lengths for multiple connections are large, that could indicate performance or network problems. Also check that the MTA process (emsmta) is running.</p> <p>(3) Run Exchange Administrator and check for 'stuck' messages in the MTA queue.</p> <p>(4) Verify that there are no network problems.</p>

<b>Condition:</b>	<b>EXSPI-55-0013.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	600
<b>Reset Value:</b>	500
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0013.1: The oldest message queued for connection <con> has been in the queue for <\$VALUE> secs (\ ><\$THRESHOLD> secs)

<b>Condition:</b>	<b>EXSPI-55-0013.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	300
<b>Reset Value:</b>	250
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0013.2: The oldest message queued for connection <con> has been in the queue for <\$VALUE> secs (\ ><\$THRESHOLD> secs)

## EXSPI-55-0014 (MTA Connection Queue Lengths)

<b>Policy:</b>	EXSPI-55-0014
<b>Name:</b>	MTA Connection Queue Lengths
<b>Description:</b>	Monitors the number of outstanding messages queued for transfer to another Exchange Server.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Queue Length.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>            Delivery of messages to another Exchange server may be delayed by the MTA because of possible problems with a connection.</p> <p>A large queue length could indicate problems with connectors, system load, the MTA, or the network.</p> <p><b>Potential impact:</b>            Performance/Failure.</p> <p><b>Suggested action(s):</b>            (1) Monitor queue length for the specific connection with NT Performance Monitor:            MExchangeMTA Connections.Queue Length.&lt;CONNECTION&gt;</p> <p>(2) If queue lengths for multiple connections are large, that could indicate performance or network problems. Also check that the MTA process (emsmta) is running.</p> <p>(3) Run Exchange Administrator and check for 'stuck' messages in the MTA queue.</p> <p>(4) Verify that there are no network problems.</p>

<b>Condition:</b>	<b>EXSPI-55-0014.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	40.0
<b>Reset Value:</b>	30.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0014.1: The MTA queue length (<\$VALUE> messages) for connection <con> is too high (>><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0014.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	20.0
<b>Reset Value:</b>	15.0
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0014.2: The MTA queue length (<\$VALUE> messages) for connection <con> is too high (>><\$THRESHOLD> messages)

## EXSPI-55-0015 (MTA Failed Outbound Associations)

<b>Policy:</b>	EXSPI-55-0015
<b>Name:</b>	MTA Failed Outbound Associations
<b>Description:</b>	Monitors the percentage of failed outbound associations from the MTA.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeMTA Connections.Failed Outbound Associations.&lt;instance&gt;  MSExchangeMTA Connections.Cumulative Outbound Associations.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>  There may be problems with the MTA making connections to another system. A high failure rate could indicate problems with the local or remote MTA, the connector, or the network.</p> <p><b>Potential impact:</b>  Performance</p> <p><b>Suggested action(s):</b>  (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.  (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.  (3) Verify that there are no network problems.  (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>





## EXSPI-55-0016 (MTA Rejected Inbound Associations)

<b>Policy:</b>	EXSPI-55-0016
<b>Name:</b>	MTA Rejected Inbound Associations
<b>Description:</b>	Monitors the percentage of rejected inbound remote associations to the MTA.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeMTA Connections.Rejected Inbound Associations.&lt;instance&gt;  MSExchangeMTA Connections.Cumulative Inbound Associations.&lt;instance&gt;</p> <p><b>Probable cause(s):</b>  There may be problems with the MTA on a remote system making connections to this system.  A high rejection rate could indicate problems with the local or remote MTA, the connector, or system load.</p> <p><b>Potential impact:</b>  Performance</p> <p><b>Suggested action(s):</b>  (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.  (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.  (3) Verify that there are no network problems.  (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

<b>Condition:</b>	<b>EXSPI-55-0016.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	10
<b>Reset Value:</b>	8
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0016.1: The rate (<\$VALUE>%) of Rejected MTA Inbound Associations for connection <con> is too high (>><\$THRESHOLD>%)

<b>Condition:</b>	<b>EXSPI-55-0016.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	3
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0016.2: The rate (<\$VALUE>%) of Rejected MTA Inbound Associations for connection <con> is too high (>><\$THRESHOLD>%)

## EXSPI-55-0017 (MTA Rejected Inbound Messages)

<b>Policy:</b>	EXSPI-55-0017
<b>Name:</b>	MTA Rejected Inbound Messages
<b>Description:</b>	Monitors the percentage of Messages submitted to the MTA that are rejected.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeMTA Connections.Inbound rejected Total.&lt;instance&gt; MExchangeMTA Connections.Inbound Messages Total.&lt;instance&gt;</p> <p><b>Probable cause(s):</b> There may be problems with the MTA on a remote system sending messages to this system. A high rate of rejected messages could indicate problems with the remote or local MTA or the connector.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system. (3) Verify that there are no network problems. (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

<b>Condition:</b>	<b>EXSPI-55-0017.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	3
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0017.1: The rate (<\$VALUE>%) of Rejected MTA Inbound Messages for connection <con> is too high (><\$THRESHOLD>%)

<b>Condition:</b>	<b>EXSPI-55-0017.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0017.2: The rate (<\$VALUE>%) of Rejected MTA Inbound Messages for connection <con> is too high (><\$THRESHOLD>%)

## EXSPI-55-0030 (IS Public Average Time for Delivery)

<b>Policy:</b>	EXSPI-55-0030
<b>Name:</b>	IS Public Average Time for Delivery
<b>Description:</b>	Monitors the average time between the submission of a message to the public information store and submission to the MTA for the last 10 messages
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Public.Average Time for Delivery</p> <p><b>Probable cause(s):</b>            Delivery of public folder messages to other Exchange servers may be delayed by the MTA.</p> <p>Delay of messages being processed could indicate problems with system load, the Information Store, or the MTA.</p> <p><b>Potential impact:</b>            Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(3) Verify that there are no network problems.</li> <li>(4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0030.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	10
<b>Reset Value:</b>	7
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0030.1: The IS Public Average Time for Delivery (<\$VALUE> secs) for last 10 messages is too high (>=<\$THRESHOLD> secs)

<b>Condition:</b>	<b>EXSPI-55-0030.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	5
<b>Reset Value:</b>	3
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0030.2: The IS Public Average Time for Delivery (<\$VALUE> secs) for last 10 messages is too high (>=<\$THRESHOLD> secs)

## EXSPI-55-0031 (IS Public Average Time for Local Delivery)

<b>Policy:</b>	EXSPI-55-0031
<b>Name:</b>	IS Public Average Time for Local Delivery
<b>Description:</b>	Monitors the average time between submission of a message to the public information store and the delivery to all local recipients (recipients on the same server) for the last 10 messages.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Public.Average Time for Local Delivery</p> <p><b>Probable cause(s):</b>            Delivery of public folder messages to local recipients may be delayed by the Information Store.</p> <p>Delay of messages being processed could indicate problems with system load or the Information Store.</p> <p><b>Potential impact:</b>            Performance</p> <p><b>Suggested action(s):</b>            (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (msmta) is running.            (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.            (3) Verify that there are no network problems.            (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>



<b>Condition:</b>	<b>EXSPI-55-0031.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	10
<b>Reset Value:</b>	7
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0031.1: The IS Public Average Time for Local Delivery (<\$VALUE> secs) for last 10 messages is too high (>=<\$THRESHOLD> secs)

<b>Condition:</b>	<b>EXSPI-55-0031.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	5
<b>Reset Value:</b>	3
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0031.2: The IS Public Average Time for Local Delivery (<\$VALUE> secs) for last 10 messages is too high (>=<\$THRESHOLD> secs)

## EXSPI-55-0032 (IS Public Replication Queue Size)

<b>Policy:</b>	EXSPI-55-0032
<b>Name:</b>	IS Public Replication Queue Size
<b>Description:</b>	Monitors the number of replication messages in the public information store's replication receive queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIS Public.Replication Receive Queue Size</p> <p><b>Probable cause(s):</b> Delivery of replication messages to public folders may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system. (3) Verify that there are no network problems. (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

<b>Condition:</b>	<b>EXSPI-55-0032.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	30
<b>Reset Value:</b>	20
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0032.1: The IS Public Replication Receive Queue length (<\$VALUE> messages) is too high (<\><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0032.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	15
<b>Reset Value:</b>	10
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0032.2: The IS Public Replication Receive Queue length (<\$VALUE> messages) is too high (<\><\$THRESHOLD> messages)

## EXSPI-55-0033 (IS Public Receive Queue Size)

<b>Policy:</b>	EXSPI-55-0033
<b>Name:</b>	IS Public Receive Queue Size
<b>Description:</b>	Monitors the number of messages in the public information store's receive queue
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX-Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeIS Public.Receive Queue Size  Probable cause(s):  Delivery of replication messages to public folders may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process.</p> <p><b>Potential impact:</b>  Performance</p> <p><b>Suggested action(s):</b>  (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.  (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.  (3) Verify that there are no network problems.  (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

<b>Condition:</b>	<b>EXSPI-55-0033.1: Critical threshold</b>
Severity:	Critical
Threshold:	30
Reset Value:	20
Duration:	n/a
Message Text:	EXSPI-55-0033.1: The IS Public Receive Queue Size (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0033.2: Warning threshold</b>
Severity:	Warning
Threshold:	15
Reset Value:	10
Duration:	n/a
Message Text:	EXSPI-55-0033.2: The IS Public Receive Queue Size (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

## EXSPI-55-0034 (IS Public Send Queue Size)

<b>Policy:</b>	EXSPI-55-0034
<b>Name:</b>	IS Public Send Queue Size
<b>Description:</b>	Monitors the number of messages in the public information store's send queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIS.Public.Send Queue Size</p> <p><b>Probable cause(s):</b> Delivery of replication messages to public folders may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system. (3) Verify that there are no network problems. (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

<b>Condition:</b>	<b>EXSPI-55-0034.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	30
<b>Reset Value:</b>	20
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0034.1: The IS Public Send Queue Size (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0034.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	15
<b>Reset Value:</b>	10
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0034.2: The IS Public Send Queue size (<\$VALUE> messages) is too high (>><\$THRESHOLD> messages)

## EXSPI-55-0040 (IS Private Average Delivery Time)

<b>Policy:</b>	EXSPI-55-0040
<b>Name:</b>	IS Private Average Delivery Time
<b>Description:</b>	Monitors the average time between submission of a message to the mailbox information store and submission to the MTA for the last 10 messages
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Private.Average Delivery Time</p> <p><b>Probable cause(s):</b>            Delivery of messages to other Exchange servers may be delayed by the MTA.</p> <p>Delay of messages being processed could indicate problems with system load, the Information Store, or the MTA.</p> <p><b>Potential impact:</b>            Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(3) Verify that there are no network problems.</li> <li>(4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> </ol>



<b>Condition:</b>	<b>EXSPI-55-0040.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	10
<b>Reset Value:</b>	7
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0040.1: The IS Private Average Delivery Time (<\$VALUE> secs) for last 10 messages is too high (>=<\$THRESHOLD> secs)

<b>Condition:</b>	<b>EXSPI-55-0040.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	5
<b>Reset Value:</b>	3
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0040.2: The IS Private Average Delivery Time (<\$VALUE> secs) for last 10 messages is too high (>=<\$THRESHOLD> secs)

## EXSPI-55-0041 (IS Private Average Local Delivery Time)

<b>Policy:</b>	EXSPI-55-0041
<b>Name:</b>	IS Private Average Local Delivery Time
<b>Description:</b>	Monitors the average time between submission of a message to the mailbox information store and the delivery to all local recipients (recipients on the same server) for the last 10 messages.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIS Private.Average Local Delivery Time</p> <p><b>Probable cause(s):</b> Delivery of messages to local recipients may be delayed by the Information Store.</p> <p>Delay of messages being processed could indicate problems with system load or the Information Store.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b> (1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running. (2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system. (3) Verify that there are no network problems. (4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</p>

<b>Condition:</b>	<b>EXSPI-55-0041.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	10
<b>Reset Value:</b>	7
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0041.1: The IS Private Average Local Delivery Time (<\$VALUE> secs) for last 10 messages is too high (>=<\$THRESHOLD> secs)

<b>Condition:</b>	<b>EXSPI-55-0041.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	5
<b>Reset Value:</b>	3
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0041.2: The IS Private Average Local Delivery Time (<\$VALUE> secs) for last 10 messages is too high (>=<\$THRESHOLD> secs)

## EXSPI-55-0042 (IS Private Receive Queue Size)

<b>Policy:</b>	EXSPI-55-0042
<b>Name:</b>	IS Private Receive Queue Size
<b>Description:</b>	Monitors the number of messages in the mailbox information store's receive queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Private.Receive Queue Size</p> <p><b>Probable cause(s):</b> Delivery of messages to mailboxes may be delayed.</p> <p>A large queue length could indicate problems with system load or the Information Store process</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (msmta) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(3) Verify that there are no network problems.</li> <li>(4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0042.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	30
<b>Reset Value:</b>	20
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0042.1: The IS Private Receive Queue Size (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0042.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	15
<b>Reset Value:</b>	10
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0042.2: The IS Private Receive Queue Size (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

## EXSPI-55-0043 (IS Private Send Queue Size)

<b>Policy:</b>	EXSPI-55-0043
<b>Name:</b>	IS Private Send Queue Size
<b>Description:</b>	Monitors the number of messages in the mailbox information store's send queue.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS Private.Send Queue Size</p> <p><b>Probable cause(s):</b>            Delivery of messages to other Exchange servers may be delayed by the MTA.</p> <p>A large queue length could indicate that the MTA is not processing messages being sent by the Information Store at all or quickly enough so they are backing up in the queue.</p> <p>There could be a problem with system load or the MTA process.</p> <p><b>Potential impact:</b>            Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded. Also check that the MTA process (emsmta) is running.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the MTA service on either the problem system or the remote system.</li> <li>(3) Verify that there are no network problems.</li> <li>(4) Enable Diagnostics Logging for the MTA (using Exchange Administrator) to help in troubleshooting.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0043.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	30
<b>Reset Value:</b>	20
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0043.1: The IS Private Send Queue Size (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0043.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	15
<b>Reset Value:</b>	10
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0043.2: The IS Private Send Queue Size (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

## EXSPI-55-0060 (IMS Failed Connections)

<b>Policy:</b>	EXSPI-55-0060
<b>Name:</b>	IMS Failed Connections
<b>Description:</b>	Monitors the rate at which SMTP connections to other hosts are failing for the Internet Mail Service.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeIMC.Connections Total Failed  MSExchangeIMC.Connections Total Outbound  Failure rate = number failed / total connections made since last checked.</p> <p><b>Probable cause(s):</b> There may be problems with the Internet Mail Service making connections to remote systems. A high rate of failures could indicate problems with the network, remote systems, or the IMS configuration.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Verify that there are no network problems.</li> <li>(2) Check the IMS configuration using Exchange Administration. If all Internet mail is being forwarded to a specific host, check if that system is having problems.</li> <li>(3) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the IMS.</li> <li>(4) Enable diagnostics Logging for the IMS (using Exchange Administrator) to help in troubleshooting.</li> </ol>



<b>Condition:</b>	<b>EXSPI-55-0060.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	5
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0060.1: The rate of Failed IMS Outbound Connections (<\$VALUE> messages) is too high (>>\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0060.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0060.2: The rate of Failed IMS Outbound Connections (<\$VALUE> messages) is too high (>>\$THRESHOLD> messages)

## EXSPI-55-0061 (IMS Rejected Connections)

<b>Policy:</b>	EXSPI-55-0061
<b>Name:</b>	IMS Rejected Connections
<b>Description:</b>	Monitors the rate at which SMTP connections to the Internet Mail Services from other hosts are being rejected.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeIMC.Connections Total Rejected  MSExchangeIMC.Connections Total Inbound  Failure rate = number rejected / total connections made since last checked.</p> <p><b>Probable cause(s):</b> There may be problems with the Internet Mail Service making connections to remote systems. A high rate of rejections could indicate problems with the network, remote systems, or the IMS configuration.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Verify that there are no network problems.</li> <li>(2) Check the IMS configuration using Exchange Administration. If all Internet mail is being forwarded to a specific host, check if that system is having problems.</li> <li>(3) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the IMS.</li> <li>(4) Enable diagnostics Logging for the IMS (using Exchange Administrator) to help in troubleshooting.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0061.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	5
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0061.1: The rate of Rejected IMS Inbound Connections (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0061.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0061.2: The rate of Rejected IMS Inbound Connections (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

## EXSPI-55-0062 (IMS MTS-IN Queue Length)

<b>Policy:</b>	EXSPI-55-0062
<b>Name:</b>	IMS MTS-IN Queue Length
<b>Description:</b>	Monitors the number of messages awaiting final delivery in MS Exchange Server.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIMC.Queued MTS-IN</p> <p><b>Probable cause(s):</b> Delivery of messages from the Internet may be delayed. A large queue length could indicate that the Information Store process is not processing incoming messages quickly enough or at all so they are backing up in the queue. There could be problems with system load or the Information Store process.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Verify that there are no network problems.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the IMS.</li> <li>(3) Enable diagnostics Logging for the IMS (using Exchange Administrator) to help in troubleshooting.</li> <li>(4) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0062.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	30
<b>Reset Value:</b>	20
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0062.1: The IMS MTS-IN Queue length (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0062.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	15
<b>Reset Value:</b>	10
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0062.2: The IMS MTS-IN Queue length (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

## EXSPI-55-0063 (IMS MTS-OUT Queue Length)

<b>Policy:</b>	EXSPI-55-0063
<b>Name:</b>	IMS MTS-OUT Queue Length
<b>Description:</b>	Monitors the number of messages waiting to be converted to Internet Mail format.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIMC.Queued MTS-OUT</p> <p><b>Probable cause(s):</b> Delivery of messages from the Internet may be delayed. A large queue length could indicate that the Internet Mail Service process is not processing outgoing messages quickly enough or at all, so they are backing up in the queue. There could be problems with system load or the Internet Mail Service.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Verify that there are no network problems.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the IMS.</li> <li>(3) Enable diagnostics Logging for the IMS (using Exchange Administrator) to help in troubleshooting.</li> <li>(4) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0063.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	30
<b>Reset Value:</b>	20
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0063.1: The IMS MTS-OUT Queue length (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0063.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	15
<b>Reset Value:</b>	10
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0063.2: The IMS MTS-OUT Queue length (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

## EXSPI-55-0064 (IMS Queued Inbound)

<b>Policy:</b>	EXSPI-55-0064
<b>Name:</b>	IMS Queued Inbound
<b>Description:</b>	Monitors the number of messages from the Internet queued for delivery to the MS Exchange Server.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIMC.Queued Inbound</p> <p><b>Probable cause(s):</b> Delivery of messages from the Internet may be delayed. A large queue length could indicate that the Internet Mail Service process is not processing incoming messages quickly enough or at all so they are backing up in the queue. There could be problems with system load or the Internet Mail Service.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Verify that there are no network problems.</li> <li>(2) Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the IMS.</li> <li>(3) Enable diagnostics Logging for the IMS (using Exchange Administrator) to help in troubleshooting.</li> <li>(4) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</li> </ol>



<b>Condition:</b>	<b>EXSPI-55-0064.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	30
<b>Reset Value:</b>	20
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0064.1: The IMS Inbound Queue length (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0064.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	15
<b>Reset Value:</b>	10
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0064.2: The IMS Inbound Queue length (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

## EXSPI-55-0065 (IMS Queued Outbound)

<b>Policy:</b>	EXSPI-55-0065
<b>Name:</b>	IMS Queued Outbound
<b>Description:</b>	Monitors the number of messages from MS Exchange Server that are queued for delivery to the Internet.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeIMC.Queued Outbound</p> <p><b>Probable cause(s):</b> Delivery of messages from the Internet may be delayed. A large queue length could indicate that the Internet Mail Service process is not processing outgoing messages quickly enough or at all, so they are backing up in the queue. The maximum number of outbound connections may be too low. There could be problems with system load or the Internet Mail Service.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Verify that there are no network problems.</li> <li>(2) Run Exchange Administrator and check for 'stuck' messages in the IMS Outbound queue.</li> <li>(3) For systems processing large volumes of Internet Mail, the maximum number of outbound connections and number of messages sent in a connection may need to be increased. Use Exchange Administrator to increase these values if needed (using the Advanced button on the Connections tab of the Internet Mail Service Connection Properties).</li> <li>(4) If the queue length continues to increase and the system is not overloaded, there could be a problem with the Internet Mail Service. Check other messages in the 'Message Browser' to see if Exchange has been reporting problems with the IMS service. Try stopping and re-starting the IMS service.</li> <li>(4) Enable Diagnostics Logging for the IMS (using Exchange Administrator) to help in troubleshooting.</li> <li>(5) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0065.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	30
<b>Reset Value:</b>	20
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0065.1: The IMS Outbound Queue length (<\$VALUE> messages) is too high (\ ><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0065.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	15
<b>Reset Value:</b>	10
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0065.2: The IMS Outbound Queue length (<\$VALUE> messages) is too high (\ ><\$THRESHOLD> messages)

## EXSPI-55-0066 (IMS NDRs Inbound)

<b>Policy:</b>	EXSPI-55-0066
<b>Name:</b>	IMS NDRs Inbound
<b>Description:</b>	Monitors the rate at which non-delivery reports are being generated for inbound mail.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeIMC.NDRs Total Inbound  MSExchangeIMC.Inbound Message Total  Non-delivery rate = number NDRs / total messages sent since last checked.</p> <p><b>Probable cause(s):</b> There may be problems with addressing of mail being received from the Internet. A high rate of non-delivery reports could indicate problems with the IMS configuration or how mail is being addressed.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) If the IMS has been configured to send notification of NDRs, check the Administrator's mailbox for the system to get information about the NDRs. Otherwise, configure the IMS to send notifications for NDRs to help in troubleshooting.</li> <li>(2) Check other problems in the Message Browser to see if Exchange has been reporting problems with IMS.</li> <li>(3) Enable diagnostics logging for IMS (using Exchange Administrator) to help in troubleshooting.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0066.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	3
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0066.1: The rate of IMS Inbound Non-delivery Reports (<\$VALUE>) is too high (\\><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0066.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0066.2: The rate of IMS Inbound Non-delivery Reports (<\$VALUE>) is too high (\\><\$THRESHOLD>)

## EXSPI-55-0067 (IMS NDRs Outbound)

<b>Policy:</b>	EXSPI-55-0067
<b>Name:</b>	IMS NDRs Outbound
<b>Description:</b>	Monitors the rate at which non-delivery reports are being generated for outbound mail
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeIMC.NDRs Total Outbound  MSExchangeIMC.Outbound Messages Total</p> <p>Non-delivery rate = number NDRs / total messages sent since last checked.</p> <p><b>Probable cause(s):</b> There may be problems with addressing of mail being received from the Internet. A high rate of non-delivery reports could indicate problems with the IMS configuration or how mail is being addressed.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) If the IMS has been configured to send notification of NDRs, check the Administrator's mailbox for the system to get information about the NDRs. Otherwise, configure the IMS to send notifications for NDRs to help in troubleshooting.</li> <li>(2) Verify that there are no network problems.</li> <li>(3) Check other problems in the Message Browser to see if Exchange has been reporting problems with IMS.</li> <li>(4) Enable diagnostics logging for IMS (using Exchange Administrator) to help in troubleshooting.</li> </ol>

<b>Condition:</b>	<b>EXSPI-55-0067.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0067.1: The rate of IMS Outbound Non-delivery Reports (<\$VALUE>) is too high (\\><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0067.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0067.2: The rate of IMS Outbound Non-delivery Reports (<\$VALUE>) is too high (\\><\$THRESHOLD>)

## EXSPI-55-0080 (Newsfeed Rejected Inbound Messages)

<b>Policy:</b>	EXSPI-55-0080
<b>Name:</b>	Newsfeed Rejected Inbound Messages
<b>Description:</b>	Monitors the rate at which inbound newsfeed messages are being rejected because of duplicates or due to errors.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<b>Counter(s):</b> MSExchangeIS.Newsfeed Inbound Rejected Messages MSExchangeIS.Newsfeed Messages Received <b>Potential impact:</b> Performance



<b>Condition:</b>	<b>EXSPI-55-0080.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0080.1: The rate of Newsfeed Rejected Inbound Messages (<\$VALUE>) is too high (\ ><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0080.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0080.2: The rate of Newsfeed Rejected Inbound Messages (<\$VALUE>) is too high (\ ><\$THRESHOLD>)

## EXSPI-55-0081 (Newsfeed Rejected Outbound Messages)

<b>Policy:</b>	EXSPI-55-0081
<b>Name:</b>	Newsfeed Rejected Outbound Messages
<b>Description:</b>	Monitors the rate at which outbound newsfeed messages are being rejected because of duplicates or due to errors.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<b>Counter(s):</b> MSExchangeIS.Newsfeed Outbound Rejected Messages MSExchangeIS.Newsfeed Messages Sent <b>Potential impact:</b> Performance

<b>Condition:</b>	<b>EXSPI-55-0081.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0081.1: The rate of Newsfeed Rejected Outbound messages (<\$VALUE>) is too high (\\><\$THRESHOLD>)

<b>Condition:</b>	<b>EXSPI-55-0081.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0081.2: The rate of Newsfeed Rejected Outbound messages (<\$VALUE>) is too high (\\><\$THRESHOLD>)

## EXSPI-55-0090 (cc:Mail MTS-IN Queue Length)

<b>Policy:</b>	<b>EXSPI-55-0090</b>
<b>Name:</b>	cc:Mail MTS-IN Queue Length
<b>Description:</b>	Monitors the number of messages awaiting delivery to Exchange from Lotus ccMail.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<b>Counter(s):</b> MSExchangeCCMC.Microsoft Exchange MTS-IN <b>Potential impact:</b> Performance

<b>Condition:</b>	<b>EXSPI-0090.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	50
<b>Reset Value:</b>	40
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0090.1: The cc:Mail MTS-IN Queue Length (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0090.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	20
<b>Reset Value:</b>	15
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0090.1: The cc:Mail MTS-IN Queue Length (<\$VALUE> messages) is too high (\\><\$THRESHOLD> messages)

## EXSPI-55-0091 (cc:Mail MTS-OUT Queue Length)

<b>Policy:</b>	<b>EXSPI-55-0091</b>
<b>Name:</b>	cc:Mail MTS-OUT Queue Length
<b>Description:</b>	Monitors the number of messages awaiting delivery to Lotus ccMail.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<b>Counter(s):</b> MSExchangeCCMC.Microsoft Exchange MTS-OUT <b>Potential impact:</b> Performance

<b>Condition:</b>	<b>EXSPI-55-0091.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	50
<b>Reset Value:</b>	40
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0091.1: The cc:Mail MTS-OUT Queue Length (<\$VALUE> messages) is too high (\ ><\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0091.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	20
<b>Reset Value:</b>	15
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0091.2: The cc:Mail MTS-OUT Queue Length (<\$VALUE> messages) is too high (\ ><\$THRESHOLD> messages)

## EXSPI-55-0092 (Exchange NDRs to cc:Mail)

<b>Policy:</b>	<b>EXSPI-0092</b>
<b>Name:</b>	cc:Mail NDRs to cc:Mail
<b>Description:</b>	Monitors the rate at which non-delivery reports are being sent to Lotus cc:Mail from MS Exchange.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeCCMC.NDRs to Lotus cc:Mail  MSExchangeCCMC.Messages Sent to Lotus cc:Mail</p> <p><b>Potential impact:</b> Performance</p>

<b>Condition:</b>	<b>EXSPI-55-0092.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0092.1: The rate of Exchange NDRs to cc:Mail (<\$VALUE>%) is too high (\\><\$THRESHOLD>%)

<b>Condition:</b>	<b>EXSPI-55-0092.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0092.2: The rate of cc:Mail NDRs to cc:Mail (<\$VALUE>%) is too high (\\><\$THRESHOLD>%)

## EXSPI-55-0093 (cc:Mail NDRs to Exchange)

<b>Policy:</b>	<b>EXSPI-0093</b>
<b>Name:</b>	cc:Mail NDRs to Exchange
<b>Description:</b>	Monitors the rate at which non-delivery reports are sent to MS Exchange from Lotus cc:Mail.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSExchangeCCMC.NDRs to Microsoft Exchange  MSExchangeCCMC.Messages sent to Microsoft Exchange</p> <p><b>Potential impact:</b> Performance</p>

<b>Condition:</b>	<b>EXSPI-55-0093.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0093.1: The rate of cc:Mail NDRs to Exchange (<\$VALUE>%) is too high (\> <\$THRESHOLD>%)

<b>Condition:</b>	<b>EXSPI-55-0093.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0093.2: The rate of cc:Mail NDRs to Exchange (<\$VALUE>%) is too high (\\> <\$THRESHOLD>%)



## EXSPI-55-0094 (Lotus Notes Inbound Queued Messages Length)

<b>Policy:</b>	EXSPI-55-0094
<b>Name:</b>	Lotus Notes Inbound Queued Messages Length
<b>Description:</b>	Monitors the number of messages awaiting delivery to Exchange from Lotus Notes.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeNOTES.Inbound Queued Messages</p> <p><b>Probable cause(s):</b> The Lotus Notes Connector service has stopped or stalled and is not processing messages.</p> <p><b>Potential impact:</b> Performance</p> <p><b>Suggested action(s):</b></p> <ol style="list-style-type: none"> <li>(1) Verify that the Network is not experiencing any problems.</li> <li>(2) Check for 'stuck' messages in the Connector for Lotus Notes queue.</li> <li>(3) Verify that the Services - Microsoft Exchange Connectivity Controller and Microsoft Exchange Connector for Lotus notes are still active.</li> <li>(4) Verify that the Connector Processes are active</li> <li>(5) Check the 'Event Viewer' to see if Exchange has been reporting problems with the Lotus Notes connector.</li> <li>(6) Verify the Notes client can access the mailbox assigned to the Notes connector.</li> <li>(7) Stop and re-start the Exchange services from Step (3).</li> </ol>

<b>Condition:</b>	EXSPI-55-0094.1: Critical threshold
<b>Severity:</b>	Critical
<b>Threshold:</b>	50
<b>Reset Value:</b>	40
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0094.1: The Lotus Notes Inbound Queued Messages Length (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0094.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	20
<b>Reset Value:</b>	15
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0094.2: The Lotus Notes Inbound Queued Messages Length (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

## EXSPI-55-0095 (Lotus Notes Outbound Queued Messages Length)

<b>Policy:</b>	EXSPI-55-0095
<b>Name:</b>	Lotus Notes Outbound Queued Messages Length.
<b>Description:</b>	Monitors the number of messages awaiting delivery to Lotus Notes.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter:</b> MExchangeNOTES.Outbound Queued Messages</p> <p><b>Probable cause(s):</b> The Lotus Notes Connector service has stopped or stalled and is not processing messages.</p> <p><b>Potential impact:</b> Performance</p> <p>Suggested action(s):</p> <ol style="list-style-type: none"> <li>(1) Verify that the Network is not experiencing any problems.</li> <li>(2) Check for 'stuck' messages in the Connector for Lotus Notes queue.</li> <li>(3) Verify that the Services - Microsoft Exchange Connectivity Controller and Microsoft Exchange Connector for Lotus notes are still active.</li> <li>(4) Verify that the Connector Processes are active</li> <li>(5) Check the 'Event Viewer' to see if Exchange has been reporting problems with the Lotus Notes connector.</li> <li>(6) Verify the Notes client can access the mailbox assigned to the Notes connector.</li> <li>(7) Stop and re-start the Exchange services from Step (3)</li> </ol>

<b>Condition:</b>	EXSPI-55-0095.1: Critical threshold
<b>Severity:</b>	Critical
<b>Threshold:</b>	50
<b>Reset Value:</b>	40
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0095.1: The Lotus Notes Outbound Queued Messages Length (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

<b>Condition:</b>	<b>EXSPI-55-0095.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	20
<b>Reset Value:</b>	15
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0095.2: The Lotus Notes Outbound Queued Messages Length (<\$VALUE> messages) is too high (>=<\$THRESHOLD> messages)

## EXSPI-55-0096 (Exchange NDRs sent to Lotus Notes)

<b>Policy:</b>	<b>EXSPI-55-0096</b>
<b>Name:</b>	Exchange NDRs sent to Lotus Notes
<b>Description:</b>	Monitors the rate at which non-delivery reports are being sent to Lotus Notes from MS Exchange.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSEXchangeNOTES.NDRs sent to Lotus Notes  MSEXchangeNOTES.Messages Sent to Lotus Notes</p> <p><b>Potential impact:</b> Performance</p>

<b>Condition:</b>	<b>EXSPI-55-0096.1: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0096.1: The rate of Exchange NDRs to Lotus Notes (<\$VALUE>%) is too high (>=<\$THRESHOLD>%)

<b>Condition:</b>	<b>EXSPI-55-0096.2: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0096.2: The rate of Lotus Notes NDRs to Lotus Notes (<\$VALUE>%) is too high (>=<\$THRESHOLD>%)

## EXSPI-55-0097 (Lotus Notes NDRs sent to MS Exchange)

<b>Policy:</b>	EXSPI-55-0097
<b>Name:</b>	Lotus Notes NDRs sent to Microsoft Exchange
<b>Description:</b>	Monitors the rate at which non-delivery reports are sent to MS Exchange from Lotus Notes.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b>  MSEXchangeNOTES.NDRs sent to Microsoft Exchange  MSEXchangeNOTES.Messages sent to Microsoft Exchange</p> <p><b>Potential impact:</b> Performance</p>

<b>Condition:</b>	EXSPI-55-0097.1: Critical threshold
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0097.1: The rate of Lotus Notes NDRs to Exchange (<\$VALUE>%) is too high (>= <\$THRESHOLD>%)"

<b>Condition:</b>	EXSPI-55-0097.2: Warning threshold
<b>Severity:</b>	Warning
<b>Threshold:</b>	2
<b>Reset Value:</b>	1
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0097.2: The rate of Lotus Notes NDRs to Exchange (<\$VALUE>%) is too high (>= <\$THRESHOLD>%)"

## EXSPI-55-0100 (IS User Connection Count Low)

<b>Policy:</b>	<b>EXSPI-55-0100</b>
<b>Name:</b>	IS User Connection Count Low
<b>Description:</b>	Monitors the number of client processes connected to the information store.
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 15min
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MExchangeIS.User Count</p> <p><b>Probable cause(s):</b> The number of client processes logged on to the Information Store is low.</p> <p>A low user logon count during the day could indicate problems with the Information Store process or network connectivity.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Verify that this system has active mailboxes. If it does not, this Policy should be removed from this system. (2) Using a test mailbox account, verify that you can connect to the server without problems. (3) Verify that there are no network problems.</p>

<b>Condition:</b>	<b>EXSPI-55-0100: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	1
<b>Reset Value:</b>	2
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-0100: The IS User Count (<\$VALUE>) is too low (\\< <\$THRESHOLD> connections)

## EXSPI-55-0110 (DS Pending Synchronizations)

<b>Policy:</b>	<b>EXSPI-55-0110</b>
<b>Name:</b>	DS Pending Synchronizations
<b>Description:</b>	Monitor directory replication to verify that synchronization updates are being processed efficiently.
<b>Type:</b>	With Reset
<b>Schedule:</b>	n/a
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeDS.Pending Replication Synchronizations</p> <p><b>Probable cause(s):</b> Replication of directory information may be delayed. A delay in processing replication updates could indicate problems with system load or the Directory Service process.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Check that the Directory process (dsamain) is running. (2) Verify that there are no network problems. (3) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</p>



<b>Condition:</b>	<b>EXSPI-55-0110: Critical threshold</b>
<b>Severity:</b>	Critical
<b>Threshold:</b>	4
<b>Reset Value:</b>	2
<b>Duration:</b>	30min
<b>Message Text:</b>	EXSPI-55-0110: The DS Pending Replication Synchronizations value (<\$VALUE>) is too high (\> <\$THRESHOLD>)

## EXSPI-55-0111 (DS Remaining Updates)

<b>Policy:</b>	EXSPI-55-0111
<b>Name:</b>	DS Remaining Updates
<b>Description:</b>	Monitor directory replication to verify that synchronization updates are being processed efficiently.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Counter(s):</b> MSExchangeDS.Remaining Replication Updates</p> <p><b>Probable cause(s):</b> Replication of directory information may be delayed. A delay in processing replication updates could indicate problems with system load or the Directory Service process.</p> <p><b>Potential impact:</b> Performance, Fault</p> <p><b>Suggested action(s):</b> (1) Check that the Directory process (dsamain) is running. (2) Verify that there are no network problems. (3) Monitor system with Windows Task Manager or NT Performance Monitor to determine if the system is overloaded.</p>

<b>Condition:</b>	EXSPI-55-0111 Critical threshold
<b>Severity:</b>	Critical
<b>Threshold:</b>	0.5
<b>Reset Value:</b>	n/a
<b>Duration:</b>	30min
<b>Message Text:</b>	EXSPI-55-0111: The DS Remaining Replication Updates value (<\$VALUE>) is too high (\> <\$THRESHOLD>)

## EXSPI-55-1001 (Services Monitor)

<b>Policy:</b>	<b>EXSPI-1001</b>
<b>Name:</b>	MSExchange Services Monitor
<b>Description:</b>	Monitors Exchange Server process. Generates event if an Exchange service is currently stopped but configured startup automatic.
<b>Type:</b>	Without Reset
<b>Schedule:</b>	Every 5min
<b>Message Group:</b>	EX_Fault
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> A service marked for automatic start-up is not running.</p> <p><b>Potential impact:</b> Failure</p> <p><b>Suggested action(s):</b></p> <p>(1) Unless the service is known to be down for maintenance, use the Services tool in the Control Panel to re-start the service.</p> <p>NOTE: By default only Exchange related series are monitored. If you would like to receive messages about other stopped services, simply add conditions. A value of 0.0 is sent for running services and 1.0 for stopped services.</p>

<b>Condition:</b>	<b>EXSPI-55-1001.1: Major threshold</b>
<b>Severity:</b>	Major
<b>Threshold:</b>	1.000000
<b>Reset Value:</b>	n/a
<b>Message Text:</b>	EXSPI-55-1001: Service <prefix> <rest>is currently not running (startup config automatic)

## EXSPI-55-1002 (End to End Message Ping)

<b>Policy:</b>	EXSPI-55-1002
<b>Name:</b>	End to End Message Ping Monitor
<b>Description:</b>	Monitors the round trip time for a message
<b>Type:</b>	With Reset
<b>Schedule:</b>	Every 1h
<b>Message Group:</b>	EX_Perf
<b>Instruction Text:</b>	<p><b>Probable cause(s):</b> Slow or non-reply of messages could indicate problems with system load, the MTA, connectors, or the network. The threshold could be too low. For the most accurate alarming, separate thresholds should be set for each ping system pair.</p> <p><b>Potential impact:</b> Failure or Performance</p> <p><b>Suggested action(s):</b></p> <p>If the threshold is too low, make it bigger. See the User's Guide for information on how to set the threshold differently for each system pair.</p> <p>If the threshold is accurate, then evaluate the following suggestions on the source and destination servers:</p> <p>Select the Performance Monitor 'MS Exchange Server Health' to determine if the source system is overloaded. Also check that the MTA process (emsmta) is running. (If it is not running, it will not be shown on the graph.) Re-start it if needed.</p> <p>Select the Performance Monitor 'MS Exchange Server Health' to determine if the message queue to the destination system is large or growing.</p> <p>If the queues on either side are large or growing and the systems are not overloaded, run Exchange Administrator and check for 'stuck' messages in the MTA queue.</p> <p>If there are no stuck messages, check if there are network problems between the two systems.</p> <p>If the connection between the source and destination system is not direct (e.g., the message travels through bridgehead servers), check the connector queue lengths and system load on those systems as well.</p>

<b>Condition:</b>	<b>EXSPI-55-1002.1: Warning threshold</b>
<b>Severity:</b>	Warning
<b>Threshold:</b>	300
<b>Reset Value:</b>	240
<b>Duration:</b>	n/a
<b>Message Text:</b>	EXSPI-55-1002.1: End to End Message Ping round trip time (<\$VALUE> seconds) is too high (>=<\$THRESHOLD>) for systems <From system, To system>.