

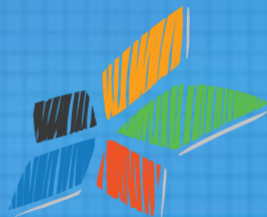
Microsoft Exchange Server 2010

Routing and Transport

Part 1: Transport Queues

Jevgenijus Vinochodovas
MCT

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Transport Pipeline

SMTP Send/Receive Connectors

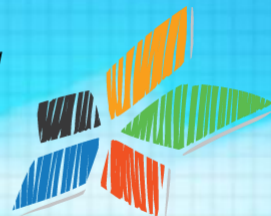
Pickup/Replay directories

Store Driver

Transport Agents

Transport Queues

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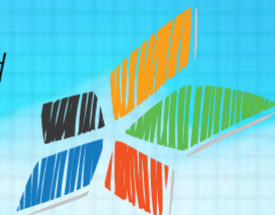
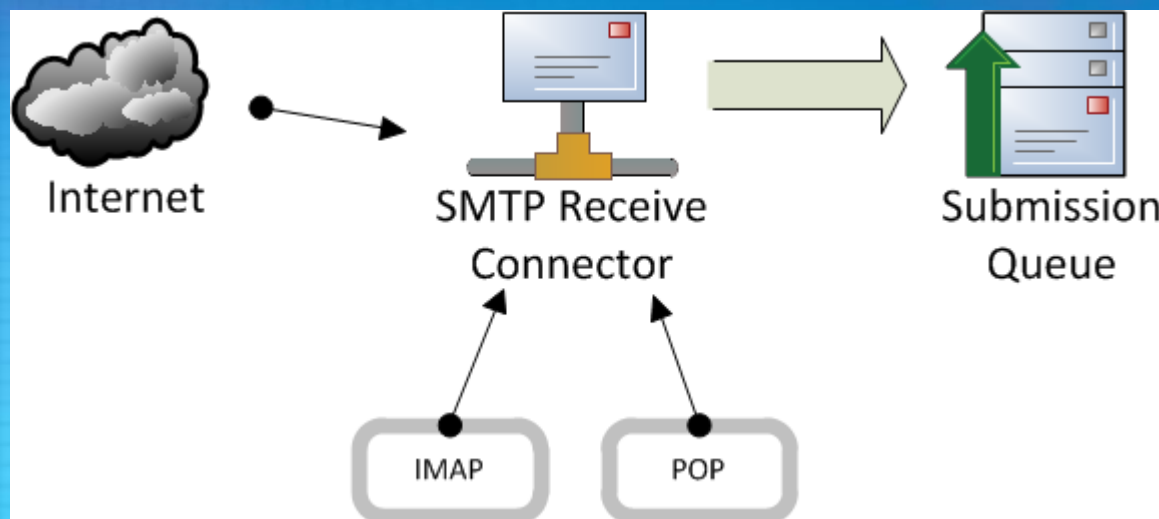


SMTP Receive Connector

```
Machine: mail.queue.local
[PS] C:\Users\admin\Desktop>Get-ReceiveConnector -Server Mail

Identity          Bindings          Enabled
-----
MAIL\Default MAIL <:::25, 0.0.0.0:25> True
MAIL\Client MAIL <:::587, 0.0.0.0:587> True

[PS] C:\Users\admin\Desktop>
```



Pickup/Replay directories

C:\Program Files\Microsoft\ExchangeServer\V14\TransportRoles\Pickup

C:\Program Files\Microsoft\Exchange Server\V14\TransportRoles\Replay

<filename>.eml

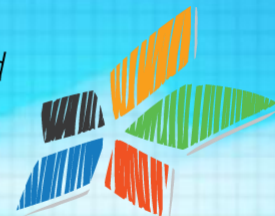
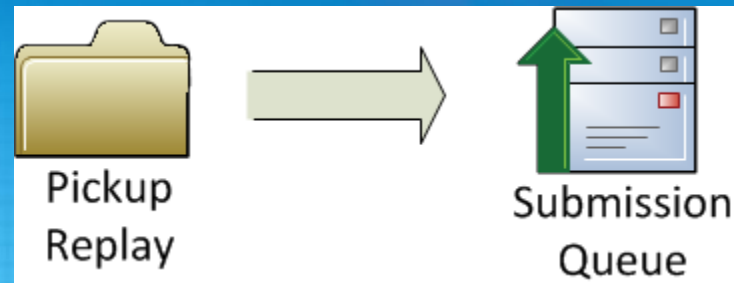
To:

From:

Subject:

-----blank line-----

message



Pickup/Replay directories

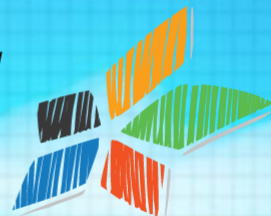
```
Set-TransportServer -Identity Mail -PickupDirectoryPath "C:\Pickup"
```

```
Set-TransportServer -Identity Mail -PickupDirectoryMaxHeaderSize 96KB
```

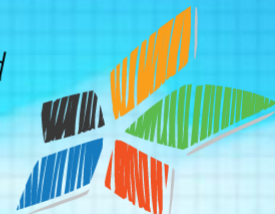
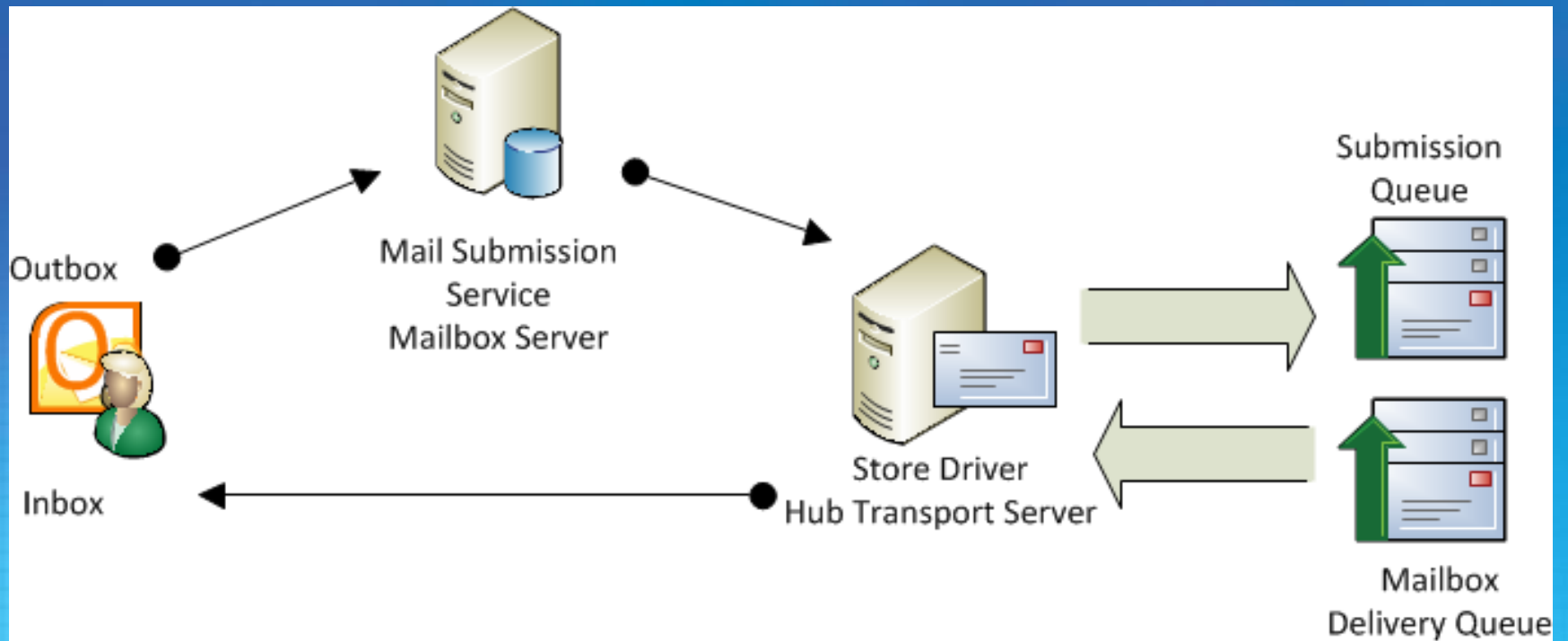
```
Set-TransportServer -Identity Mail -PickupDirectoryMaxRecipientsPerMessage  
200
```

```
Set-TransportServer -Identity Mail -PickupDirectoryMaxMessagesPerMinute  
200
```

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Store Driver



Transport Agents

```
Machine: mail.queue.local
[PS] C:\Windows\system32>Get-TransportAgent

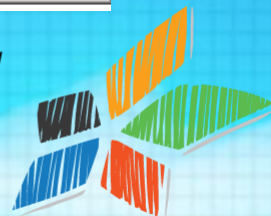
Identity                Enabled  Priority
-----
Transport Rule Agent    True    1
Text Messaging Routing Agent True    2
Text Messaging Delivery Agent True    3

[PS] C:\Windows\system32>

Machine: mail.queue.local
[PS] C:\Windows\system32>Get-TransportPipeline

Event                TransportAgents
-----
OnSubmittedMessage  {Text Messaging Routing Agent}
OnResolvedMessage   {}
OnRoutedMessage     {Transport Rule Agent}
OnCategorizedMessage {}

[PS] C:\Windows\system32>
```



Transport Queues

Submission queue

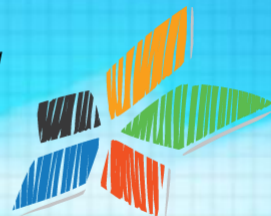
Mailbox delivery queue (Local delivery)

Remote delivery queue

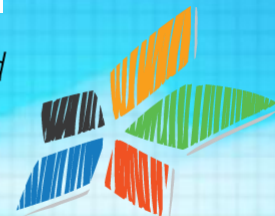
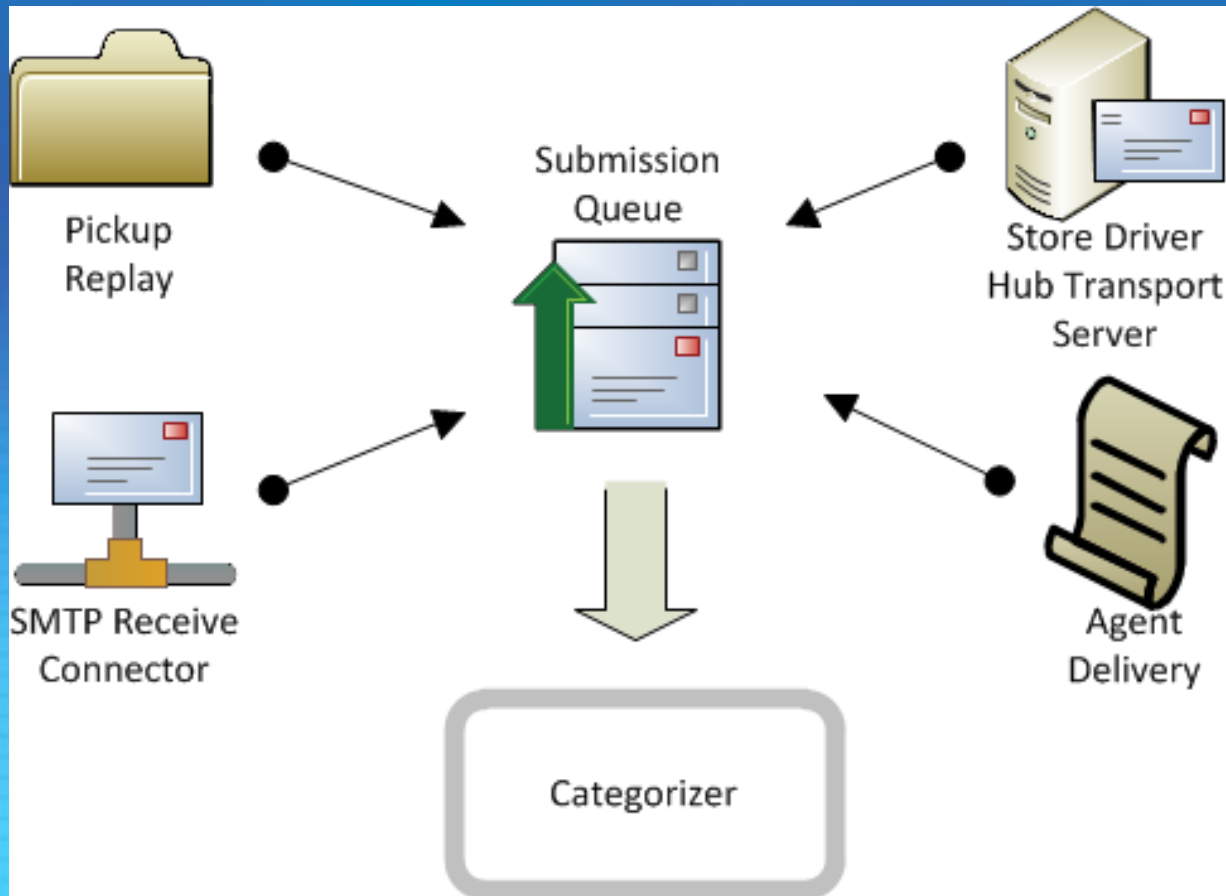
Poison message queue

Unreachable queue

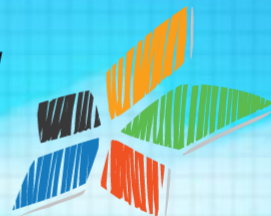
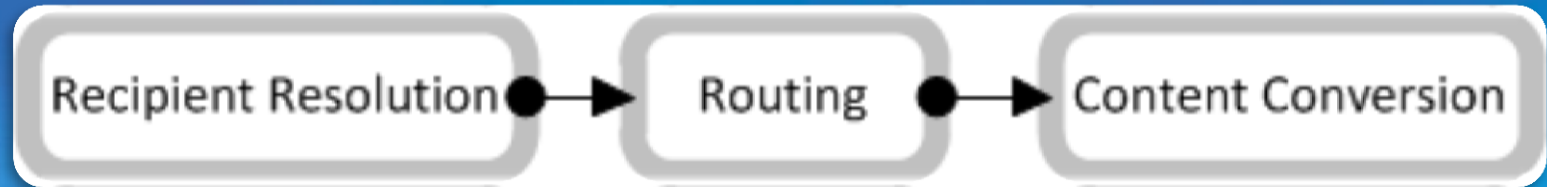
Shadow queue



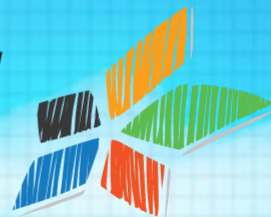
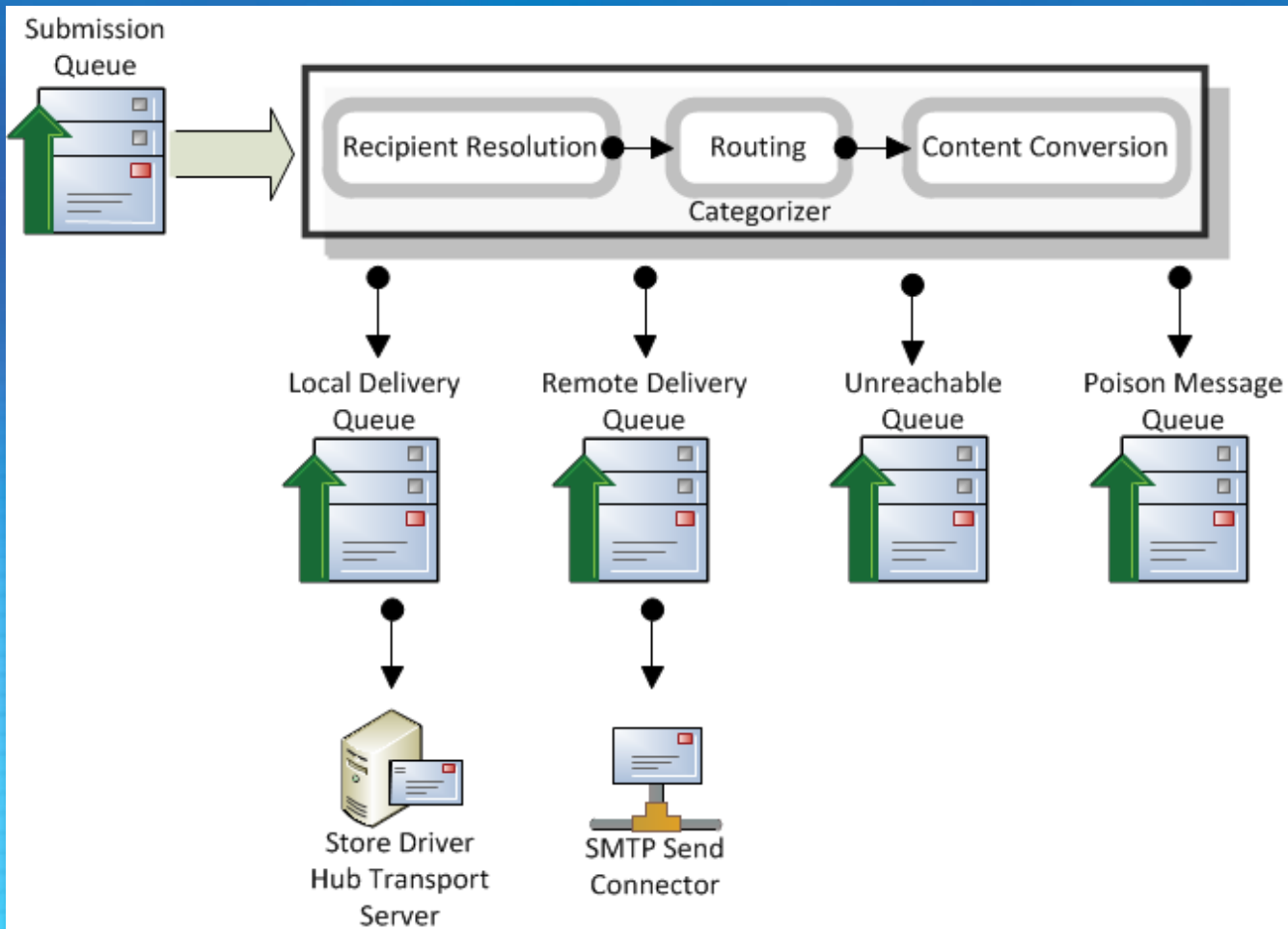
Submission queue



Categorizer



Transport Queues



Transport Queues

C:\Program Files\Microsoft\Exchange Server\V14\TransportRoles\data\Queue

Mail.que - Queue database

Tmp.edb - Temporary database file

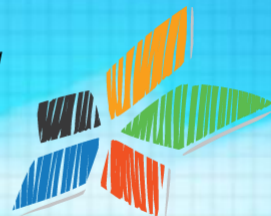
Trn*.log - Transaction log

Trn.chk - Checkpoint file

Trnres0001.jrs - Reserve transaction logs

Trnres0002.jrs

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Transport Queues

C:\Program Files\Microsoft\Exchange Server\V14\Bin

EdgeTransport.exe.config

QueueDatabasePath

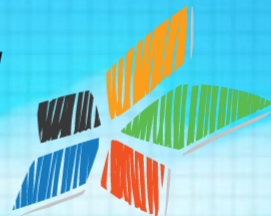
QueueDatabaseLoggingPath

C:\Program Files\Microsoft\Exchange Server\V14\Scripts

Move-TransportDatabase.ps1

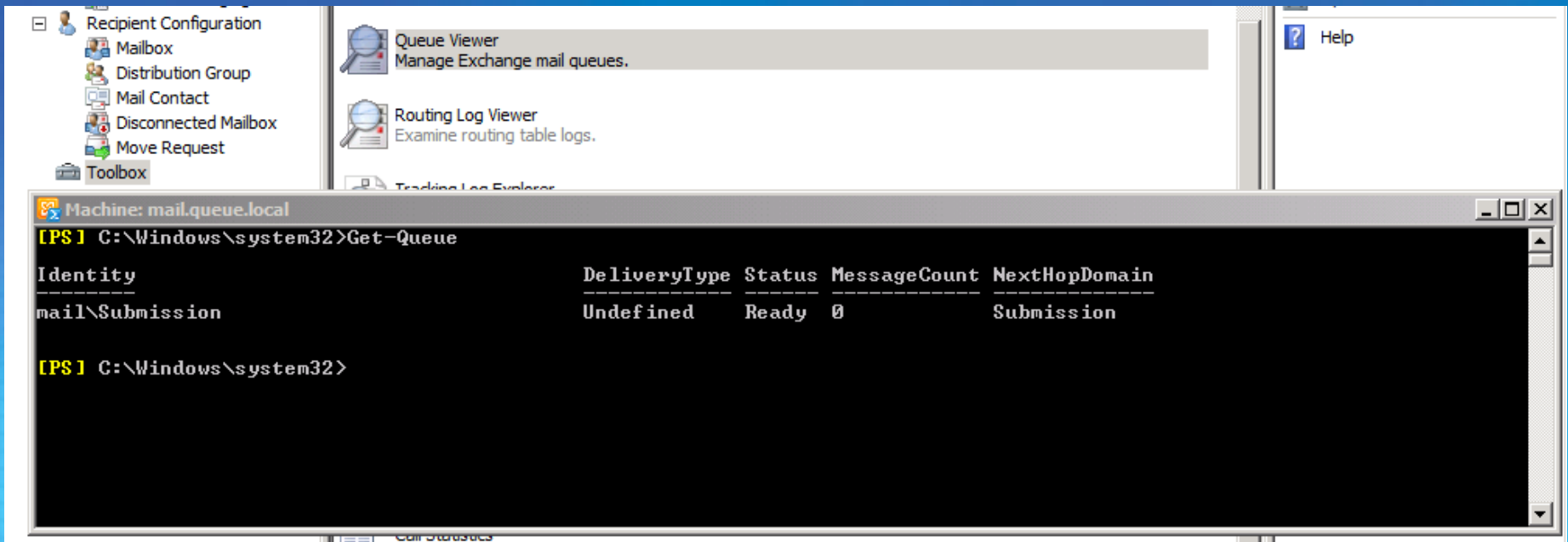
.\Move-TransportDatabase.ps1 -QueueDatabasePath D:\Queue

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Transport Queues

Exchange Management Console Queue Viewer VS Exchange Management Shell



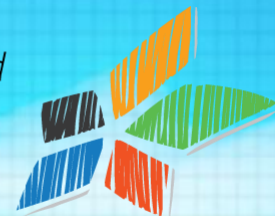
The screenshot displays the Exchange Management Console (EMC) Queue Viewer and the Exchange Management Shell (EMS). The Queue Viewer shows a table with the following data:

Identity	DeliveryType	Status	MessageCount	NextHopDomain
mail\Submission	Undefined	Ready	0	Submission

The Exchange Management Shell (EMS) shows the command `Get-Queue` and its output:

```
[PS] C:\Windows\system32>Get-Queue  
Identity DeliveryType Status MessageCount NextHopDomain  
-----  
mail\Submission Undefined Ready 0 Submission  
[PS] C:\Windows\system32>
```

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Transport Queues

```
[PS] C:\Users\admin>Get-Queue
```

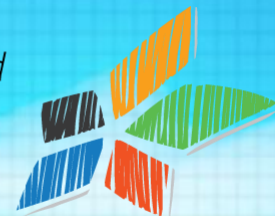
Identity	DeliveryType	Status	MessageCount	NextHopDomain
mail\8	MapiDelivery	Ready	0	mbx1
mail\9	MapiDelivery	Con...	1	mbx2
mail\Submission	Undefined	Ready	0	Submission

DeliveryType:

- DNSConnectorDelivery
- SmartHostConnectorDelivery
- MapiDelivery
- SmtprelaytoTIRg
- Undefined
- Unreachable

NextHopDomain:

The next hop domain of the queue, specified as a remote SMTP domain, a server name, the name of an Active Directory site, or a message database (MDB) identifier.



Transport Queues

Queue Management Tasks:

Suspend queue Suspend-Queue -Filter {Status -eq "Retry"}

Resume queue Resume-Queue -Filter {status -eq "Suspended"}

Retry queue (*Resubmit*)

Retry-Queue -Identity Server\Queue

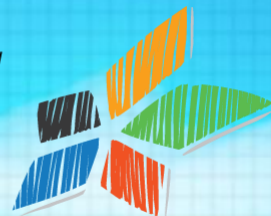
Retry-Queue -Filter {Status -eq "Retry"} -Server "Mail" -Resubmit \$true

Suspend message Suspend-Message -Filter {FromAddress -eq "*mcpclub.lt"}

Resume message Resume-Message -Filter {FromAddress -eq "*mcpclub.lt"}

Remove message Remove-Message -Filter {Subject -eq "Vagra"} -WithNDR \$false

Export message Export-Message -Identity Mail\mcpclub.lt\1234 -Path
"C:\mcpclub\mail.eml"



Transport Queues

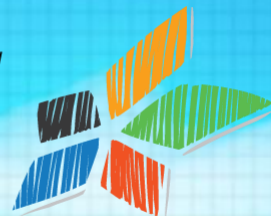
Queue Management Examples:

Get-Queue

```
Get-TransportServer | Get-Queue -Filter {Status -eq 'Retry'} | Get-Message
```

```
Get-TransportServer | Get-Message -Filter {FromAddress -like '*mcpclub.lt'}
```

```
Get-TransportServer |  
  Get-Queue -Filter {DeliveryType -eq 'DnsConnectorDelivery'} |  
  Get-Message |  
    Remove-Message -Confirm:$false
```



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