Mail Server

Configuring Failover Clustering with IMail Server

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CHAPTER 1

IMail Server using Failover Clustering

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Overview

High Availability Failover Clustering is a system which allows a server to maintain as much uptime as possible while avoiding downtime due to maintenance or hardware failures. This can be achieved by utilizing Microsoft's Failover Cluster service in Windows Server 2008 which uses two or more identical servers in a cluster formation that switches services and IP addresses between the servers in the Failover Cluster.

Requirements

1 Active Directory

- Microsoft's Failover Cluster requires Active Directory. If an Active Directory server is not running on your network then one will be necessary to configure as part of this process.
- It is highly recommended that your Active Directory services are fault tolerant to prevent an Active Directory failure which will disrupt the failover cluster.

Note: Running Active Directory Services on one of the clustering nodes is not recommended.

2 Cluster Servers

- Two or more servers are needed to host each node of the failover cluster.
- Three Network Interface Cards for each server.

Note: Microsoft suggests using identical hardware on the nodes of the cluster as the Failover Cluster service is only available on Windows 2008 Enterprise or 2008 R2 Enterprise Server editions.

3 Microsoft SQL Server 2008

Microsoft SQL Server to store collaboration data.

Configuring Failover Clustering

 It is highly recommended this server be fault tolerant to prevent a failure on the SQL Server that will bring down the IMail Services.

4 Network Storage

- Some type of Storage Area Network (SAN) is needed to hold the quorum disk for the cluster, and shared storage for IMail Server files, such as the spool, logs, and user mailbox storage.
- The quorum disk and IMail Server storage must be located on separate volumes.

See Microsoft's recommendations: http://technet.microsoft.com/en-us/library/cc770620%28v=ws.10%29.aspx#BKMK_re quirements.

Important: It is highly recommended that your network storage be fault tolerant.

- 5 Three Separate IP Networks to utilize the three required network cards.
 - **Public** handles normal network traffic and email traffic on your publicly available network or DMZ.
 - **Shared Storage** for shared remote storage traffic to and from the active failover node and the SAN.
 - Heartbeat handles node-to-node communication in the cluster.
 - a) This must be on its own uninterrupted network.
 - b) The simplest configuration of the heartbeat network is to use a crossover cable between the two servers and use a local, non-routable IP range (10.0.0.0 for example).

Network Diagram (IP addresses shown are for example)



CHAPTER 2

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IIS

Installing Roles and Features

- Configure each node in the failover cluster with the roles and features listed in this section.
- Each node must have the same features and updates installed to avoid possible cluster verification reporting errors.

Tip: If machines are cloned, do not add the Failover Cluster feature until the machines have been individually set up, to avoid the cluster configuration from failing.

Note: These steps assume a new installation of Windows Server; if the roles or features are already installed then just verify they are installed as outlined below.

Step 1. Install the Web-Server (IIS) role with the following features installed.

Role	Service	Status
5	Web Server	Installed
2	Common HTTP Features	Installed
2	Static Content	Installed
۵.	Default Document	Installed
t.	Directory Browsing	Installed
÷.	HTTP Errors	Installed
2	HTTP Redirection	Installed
	WebDAV Publishing	Not installed
۵.	Application Development	Installed
2	ASP.NET	Installed
2	.NET Extensibility	Installed
	ASP	Not installed
	CGI	Not installed
2	ISAPI Extensions	Installed
1	ISAPI Filters	Installed
	Server Side Includes	Not installed
۵.	Health and Diagnostics	Installed
6	HTTP Logging	Installed
2	Logging Tools	Installed
4	Request Monitor	Installed
2	Tracing	Installed
	Custom Logging	Not installed
	ODBC Logging	Not installed
5	Security	Installed
۵.	Basic Authentication	Installed
5	Windows Authentication	Installed
-	Digest Authentication	Installed
5	Client Certificate Mapping Authentication	Installed
2.	IIS Client Certificate Mapping Authentication	Installed
5	URL Authorization	Installed
2	Request Filtering	Installed
-	IP and Domain Restrictions	Installed
-	Performance	Installed
2.	Static Content Compression	Installed
-	Dynamic Content Compression	Installed
-	Management Tools	Installed
-	IIS Management Console	Installed
2	IIS Management Scripts and Tools	Installed
-	Management Service	Installed
2	IIS 6 Management Compatibility	Not installed
2	IIS 6 Metabase Compatibility	Not installed
	IIS 6 WMI Compatibility	Not installed
	IIS 6 Scripting Tools	Not installed
	IIS 6 Management Console	Not installed

Configuring Failover Clustering

Step 2. Install the Failover Clustering Feature.

AET Framework 3.5.1 Features (Installed) Background Intelligent Transfer Service (BITS) BitLocker Drive Encryption BranchCache Connection Manager Administration Kit Desktop Experience (Installed) DirectAccess Management Console Veature Encryption Group Policy Management BitLocker Drive Encryption Group Policy Management BitLocker Drive Encryption Internet Printing Client Internet Storage Name Server LPR Port Monitor Multipath I/O Network Load Balancing Peer Name Resolution Protocol Quality Windows Audio Video Experience Remote Assistance	Failoreer Clustering allows multiple servers to work together to provide high availability of services and applications. Failorer Clustering is often used for file and print services, database and mail applications.
	ART Framework 3.5.1 Features (Installed) Background Intelligent Transfer Service (BITS) BRLocker Drive Encryption BranchCache Connection Manager Administration Kit Desktop Experience (Installed) DirectAccess Management Console Falover Clustering (Installed) Group Policy Management And Handwriting Services (Installed) Internet Printing Client Internet Printing Client Internet Storage Name Server LPR Port Monitor Message Queuing Multipath I/O Network Load Balancing Peer Name Resolution Protocol Quality Windows Audio Video Experience Remote Assistance Remote Differential Compression



See the following link:

.Net 4 Framework Link (http://www.microsoft.com/download/en/details.aspx?id=17718).

Step 4. Download and install all service packs and critical/important updates.

CHAPTER 3

Configuring Storage Area Network

In This Chapter

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Requirements

Note: Due to all the many possible technologies which can be used for cluster storage, the following specifications will be configuring the cluster storage using an iSCSI target. For all other setups please refer to the documentation for all other solutions.

Two volumes are needed:

- One for the Quorum Cluster Disk and the
- Second for IMail Mailboxes and Log files.

Recommended size for the Quorum Disk is 5GB. Choose an appropriate size based on your needs for the volume that will store the mailboxes and log files.

Connecting iSCSI Targets to Operating System

Configure each node in the failover cluster with the steps shown in this section.

Step 5. Open the "iSCSI initiator", located under "Administrative Tools".

Step 6. Go to the "Discovery" tab and click on "Discover Portal".

he system w	ill look for Targets o	n following portals:	Refresh
Address	Port	Adapter	IP address
o add a targ	et portal, click Disco	wer Portal.	Discover Portal
Enterthe	ID address or DAIE	name and not number of I	the portal you
want to a	add.	name and porchanizer or	
			and the second se
To change the Advar	e the default setting nced button.	gs of the discovery of the t	arget portal, click
To change the Advar	e the default settin nced button. ss or DNS name:	gs of the discovery of the t Port: (Defa	arget portal, click
To change the Advar	e the default settin nced button. ss or DNS name: 254.4	ps of the discovery of the t Port: (Defa 3260	arget portal, dick
To change the Advar	e the default setting need button. ss or DN5 name: 254.4	gs of the discovery of the t Port: (Defa 3260 OK	arget portal, click wit is 3260.)
To change the Advar IP addres 172-17-3 Advance o remove an hen dick Rem	e the default settin need button. ss or DNS name: 254.4 ed ISNS server, select nove.	ps of the discovery of the t Port: (Defa 3260 OK the server above and	arget portal, click wit is 3260.) Cancel

Step 7. Enter the IP address or DNS name of the iSCSI SAN and the port to be used, and click **"OK"**.

Step 8. Click on the **"Targets"** tab, select the target that will host the Quorum disk and click connect.

	Stand and Alexand
Discovered targets	
	Refresh
Name	Status
gatest.istgt:imail.files	Inactive
gatest.istgt:guorum	Connected
To connect using advanced options, selec	t a target and then Connect
To connect using advanced options, selec dick Connect.	t a target and thenConnect
To connect using advanced options, selec dick Connect. To completely disconnect a target, select then click Disconnect.	t a target and then Connect the target and Disconnect
To connect using advanced options, selec dick Connect. To completely disconnect a target, select then click Disconnect. For target properties, including configural select the target and click Properties.	t a target and then Connect the target and Disconnect tion of sessions, Properties
To connect using advanced options, selec dick Connect. To completely disconnect a target, select then circk Disconnect. For target properties, including configural elect the target and click Properties. For configuration of devices associated w the target and then click Devices.	the target and then Connect the target and Disconnect tion of sessions, Properties ith a target, select Devices

Tip: Leave this window open, as at a later point you will need to connect the target for the IMail Server Files.

Note: Only connect to the target for the Quorum disk at this point. Connecting to both the Quorum and the Drive for IMail Files, the Custer configuration may incorrectly choose the wrong target as the Quorum disk.

Important: Steps 9 and 10 must be performed on the first cluster node only. Skip these steps for the remaining cluster nodes.

Step 9. Open Disk Management and bring the new drive online.

Volume Layout	Type File System	Status	Capacity	Free Space	% Free	F
Simple Simple Gr(C:) Simple Gr(C:) Simple Gr(C:) Simple	Basic Basic NTFS Basic FAT32	Healthy (OEM Partition) Healthy (Boot, Page File, Crash Dump, Primary Partition) Healthy (System, Active, Primary Partition)	39 MB 230.79 GB 1.99 GB	39 MB 206.62 GB 1.98 GB	100 % 90 % 99 %	N N N
Lai Disk 0 Basic 232.83 GB Online	39 MB Healthy (OEM Pa	05 2.00 GB FAT32 Healthy (System, Active, Primary Partition)	(C:) 230.79 GB I Healthy (Bo	VITPS ot, Page File,	Crash Dun	np,
Gibisk 1 Basic 5.00 GB Offline	Online Properties					

Step 10. Now format the disk:

- No Drive Letter or Path
- Use NTFS
- Set "Quorum" as the volume label.

Step 11. Make sure to repeat steps 1 through 4 on the remaining cluster nodes.

CHAPTER 4

I

SQL Server Database

In This Chapter

Cre	atin	g SQ	LS	erve	er Data	abase.	•••••	•••••	•••••	•••••	•••••	•••••	 9	9
-		_												

Setting Security Logins......10

The IMail Collaboration database should be located on an external SQL Server that is a member of same Active Directory Domain as the Failover Servers. This is very important for permissions between the servers to work correctly.

Creating SQL Server Database

The IMail Collaboration database must be located on an external SQL Server that is a member of the same Active Directory Domain as the Failover Servers. This is very important for permissions between the servers to work correctly.

Note: Be sure to log in to the server as an Administrator on the domain.

In the SQL Server Management Studio:

Step 12. Create a blank database with the name WorkgroupShare.

E Data		New Database					
	New Database	Select a page	📓 Script 🔹 🚺 Help				
Security Security Security	Attach Restore Database	Cotions	Database name:	Workgroup	Share		
🕑 🥁 Kepi	Restore Files and Filegroups		Owner:	<pre>cdefault></pre>	(default>		
	Start PowerShell		🔽 Use full text indexin	į			
	Reports +		Database files:				
	Refer	-	Logical Name File	Type Filegroup	Initial Size (MB)	Autogrowth	
	Refresh		WorkgroupS Row	IS PRIMARY	2	By 1 MB, unrestricted gro	
			Workgroup S., Loo	Not Applicable	1	By 10 percent, unrestrict	

Setting Security Logins

For each node in the cluster configuration repeat these steps

Step 13. Right Click on Logins under Security and select New Login...

🗉 🐻 IPSTEST-MBARBE	R\IMAILSERVER (SQL Server 10
🕀 🚞 Databases	
🖃 🚞 Security	
🛨 🧰 Logins	
F C Server	New Login

Step 14. Enter the account name using the format of "ADDomain\MachineName\$" in the Server Security Logins. Set the default database to WorkgroupShare.

elect a page	Script + 🚺 Help					
Server Roles	Login name:	gatest\imailcluster01\$	Search			
Securables	Windows authentication					
_ saus	 SQL Server authentication Pessword: 		_			
	Confirm password					
	F Specify old password					
	Old password:	1				
	France password police	/				
	Friorce password expin	alion				
	User must change pass	word at next login				
	C Mapped to certificate		<u>×</u>			
	C Mapped to asymmetric key	J	*			
	Map to Credential		Add			
Connection	Mapped Credentials	Credential Provider				
Server: IPSTEST-MBARBER\JMAILSER\						
Connection: IPSTEST_MRARRER\Administrate						
Vew connection properties						
Progress			Remove			
Ready	Default database:	Workgroup Share	-			
345	Default language:	<default></default>	-			

Step 15. Select "User Mapping" group and check WorkgroupShare. Select the following database roles: "db_datareader", "db_datawriter", and "db_owner".



Step 16. Click "OK" and continue on to the next user for the remaining cluster nodes.

Step 17. When all machine accounts have been added, close SQL Server management and continue on to the next section.

CHAPTER 5

IMail Server will need to be installed on each node of the cluster and configured identically.

Installation and Configuration

Note: Make sure you are logged in to the node as a Administrator on the domain.

Step 18. On the Installation Directory dialog install IMail Server to the same directory on each node. Do **not** install IMail Server to the shared drive.

Step 19. On the Database Selection dialog "Use Existing Local SQL Server" option and point it to the SQL Server configured in the previous steps using Windows Authentication.

Note: The Install dialogs indicate this should be a local SQL server. Due to the configuration steps performed earlier, this can ignore this.

Step 20. "Setup Type" must be identical on each node.

9

Tip: If "Custom" is chosen, the features installed must be identical on each node.

Step 21. Make sure the IIS Web Site selected is configured identically on each node.

Step 22. Upon completion of installing IMail Server move on to the next node and repeat.

CHAPTER 6

Failover Cluster

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Creating the Failover Cluster

Important: The following section should only be performed on **one** of the Cluster Nodes.

Step 23. Open the **Server Manager** and under **Features** > **Failover Cluster Manager** click "Validate a Configuration...".



Step 24. Review the information on the 'Before You Begin' dialog before clicking Next.

🖏 Validate a Configu	ration Wizard 🗙
Before Y	ou Begin
Before You Begin Select Servers or a Cluster Testing Options Confirmation Validating Summary	This wizard runs validation tests to determine whether this configuration of servers and attached storage is set up correctly to support failover. A cluster solution is supported by Microsoft only if the complete configuration (servers, network, and storage) passes all tests in this wizard. In addition, all hardware components in the cluster solution must be "Certified for Windows Server 2008 R2". If you want to validate a set of unclustered servers, you need to know the names of the servers. Important: the storage connected to the selected servers will be unavailable during validation tests. If you want to validate an existing failover cluster, you need to know the name of the cluster or one of its nodes. You must be a local administrator on each of the servers you want to validate. To continue, click Next.
	More about preparing your hardware for validation More about cluster validation tests Do not show this page again Next > Cancel

Step 25. Specify all the servers that will be a part of the failover cluster and click "Next".

Validate a Configu	iration Wizard ervers or a Cluste	er	×
Before You Begin Select Servers or a Chater Testing Options Confirmation Validating Summary	To validate a set of se To test an existing clu Enter name: Selected servers:	ervers, add the name of all the servers. Ister, add the name of the cluster or one of its nodes. Imailcluster01.qatest.local Imailcluster02.qatest.local www.www.additionality.com www.additionality.com www.additionality.com <a a="" href="https://www.additionality.com" www.additionality.com"="" www.additionality.com<=""> <a <="" additionality.com<="" href="https://www.additionality.com" th="" www.additionality.com"="" www.additionality.com<=""><th>Browse Add Remove</th>	Browse Add Remove

Step 26. Testing Options dialog, click "Next".

🖏 Validate a Configu	ration Wizard 🔀
Testing C	Options
Before You Begin	Choose between running all tests or running selected tests.
Select Servers or a Cluster	The tests include Inventory tasks, Network tests, Storage tests, and System Configuration tests.
Testing Options Confirmation	Microsoft supports a cluster solution only if the complete configuration (servers, network, and storage) can pass all tests in this wizard. In addition, all hardware components in the cluster solution must be "Certified for Windows Server 2008 R2".
Validating	
Summary	
	 Run all tests (recommended)
	C Run only tests I select
	More about cluster validation tests
	< Previous Next > Cancel

Step 27. Review the information on the Confirmation dialog and click "Next".

🦞 Validate a Config	uration Wizard ation		X
Before You Begin Select Servers or a Cluster	You are ready to start validation. Please confirm that the following settings are correct:	:	
Testing Options	Servers to Test		^
Confirmation	im ailcluster01.qatest.local		
Validating	imailcluster02.qatest.local		
Summary	Tasts Salastad by the User	Catagony	- 15
	List BIOS Information	Inventory	_
	List Environment Variables	Inventory	
	List Fibre Channel Host Bus Adapters	Inventory	*
	To continue, click Next. More about cluster validation tests		
		< Previous Next >	Cancel

Step 28. The validation process will begin and take several minutes to complete.

Step 29. Review the **Failover Cluster Validation Report** and correct any issues found. Repeating the validation steps if necessary.

Step 30. Once all validation steps have passed, click **"Create the cluster now using the validated nodes...**".



Step 31. Review the information on the Before You Begin dialog and click "Next".



Step 32. Specify a **Cluster Name** and **IP address** to create an Access Point for administering the Cluster.

🙀 Create Cluster Wiz	ard				×
Access P	oint for A	Admir	nistering the Clust	er	
Before You Begin	Type the	e name y	ou want to use when admi	nistering the cluster.	
Access Point for Administering the	Cluster N	lame:	IMaiServer		
Cluster	One or m sure the r	ore IPv4 network	addresses could not be co is selected, and then type	onfigured automatically. For each network to be used, make an address.	
Creating New Cluster	Г				
Summary			Networks	Address	
			192.168.6.0/24	192.168.6.237	
		_			
	More ab	out the	administrative Access Poin	t for a cluster	
				< Previous Next > Cancel	

Step 33. Verify the information displayed in the Confirmation dialog and click "Next".

Create Cluster W	izard		×
Before You Begin Access Point for Administering the	You are ready to create a The wizard will create yo	a cluster. ur cluster with the following settings:	
Cluster Confirmation Creating New Cluster Summary	Cluster: Node: Node: IP Address:	IMailServer imailcluster01.qatest.local imailcluster02.qatest.local 192.168.6.237	*
	To continue, click Next.		*
		< Previous Next >	Cancel

Step 34. Review the information before clicking **"Finish"** to create the Cluster.

🍄 Create Cluster Wiz	ard		×
Summary			
Before You Begin Access Point for Administering the Cluster	You have suc	ccessfully completed the Create Cluster Wizard.	
Confirmation Creating New Cluster Summary	Cluster: Node:	IMailServer imailcluster01.qatest.local	
	Quorum: To view the report cre To close this wizard, c	Node and Disk Majority (Cluster Disk 1) ated by the wizard, click View Report. lick Finish.	▼ View Report
			Finish

Shared Storage

Shared Storage - Connect the target for IMail Server Files

Now that the cluster is created, connection to the iSCSI target can be made for the IMail Server files.

Step 35. Refer to **Step 8** and connect the target for IMail Server Files on each node in the cluster.

Note: Be sure this is completed for **ALL** nodes in the cluster.

Step 36. Refer to Step 9 and 10 and bring the specified disk online to format.

Warning: Be sure this is only done on **ONE** node in the cluster.

Assign any drive letter to the disk. However, all subsequent steps in this document will reference this drive as the **"I:\ Drive"**.

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Cluster Management - Add the new disk to the Cluster

Step 37. Go back to the **Failover Cluster Manager**, "right click" on "**Storage**" under the Cluster created and select "**Add a disk**".



Step 38. Make sure the new drive is selected in the list and click "OK".

Resource Name	Disk Info	Capacity	Signature/GUID
Cluster Di	Disk 2 on node I	20 GB	1545341886

Note: If any errors are encountered during this process, double check the **"iSCSI Initiator Properties"** window and verify all nodes have the new target connected.

Creating Failover Service

Cluster Service Creation

Step 39. Right click on "Services and applications" and click "Configure a Service or Application...".



Step 40. Review the information displayed on the Before You Begin dialog and click "Next".



Step 41. Select Generic Service and click "Next".

afore You Begin elect Service or	Select the service or application that you want to configure I	for high availability:
alect Service	DHCP Server	Description:
and Access Point	Distributed Transaction Coordinator (DTC)	You can configure high availability for
elect Storage	File Server	some services that were not originally designed to run on a cluster. For more
eplicate Redistry	Generic Application	Applications and Generic Services for
eltings	Generic Service	high availability.
politisation	Finternet Storage Name Service (ISNS) Server	
arligure High vailability	Message Queung	-
ummary		_
railability .mmary		





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Step 43. Enter a Name and IP Address for the IMailServices Failover Cluster.

Note: This IP address must to be specified for your MX records (including all Clients) to access all E-Mail services in DNS.

High Availability	Wizard ccess Point		
Before You Begin Select Service or Application Select Service Client Access Point	Type the nar Name: One or more I the network in	ne that clients will use when ac IMailServices Pv4 addresses could not be co selected, and then type an ac	ccessing this service or application: onfigured automatically. For each network to be used, make sure ddress.
Select Storage Replicate Registry Settings Confirmation Configure High Availability Summary		Networks 192.168.6.0/24	Address 192.168.6.224
	More about H	iow clients access a clustered	<u>I service or application</u> < Previous Next > Cancel

Step 44. Select the disk for IMail Server Files and click "Next".

and you complete the model.	ge to day service or applica	rou can assign additional store	
<i>h</i> .			Select Service or Application
	Status	Name	Select Service
	Online	🗹 🗉 🖙 Cluster Disk 2	Client Access Point
			Select Storage
			Replicate Registry Settings
			Confirmation
			Configure High Availability
			Summary
			Conligure High Availability Summary

mm

Step 45. Add the following registry keys to Registry Replication List and click "Next".

```
SOFTWARE\Wow6432Node\Ipswitch
SOFTWARE\Wow6432Node\Softalk
SYSTEM\CurrentControlSet\Services\IMAP4D32
SYSTEM\CurrentControlSet\Services\IMServer
SYSTEM\CurrentControlSet\Services\QueueMgr
SYSTEM\CurrentControlSet\Services\SMTPD32
SYSTEM\CurrentControlSet\Services\SMTPD32
```

Replicati	Wizard e Registry Settings	
Before You Begin Select Service or Application Select Service Client Access Point	Programs or services may store data in the registry. Therefore, it is important to have this data available on the node on which they are running. Specify the registry keys under HKEY_LOCAL_MACHINE that should be replicated to all nodes in the cluster.	
Select Storage Replicate Registry Settings Confirmation Configure High	SYSTEM/CurrentControlSet/Services/IMA94032 SYSTEM/CurrentControlSet/Services/POP032 SYSTEM/CurrentControlSet/Services/QueueMgr SYSTEM/CurrentControlSet/Services/SMTP032 SYSTEM/CurrentControlSet/Services/SMTP032	
Availability Summary	Add Modify Remove	
	< Previous Next > Cancel	1

Note: When configuring on 32 bit hardware, remove the "Wow6432Node" registry key paths specified above.

Step 46. Review the settings in the Confirmation Dialog and click "Next".

🤯 High Availability V	Vizard		×
tonfirma 📷	tion		
Before You Begin Select Service or Application	You are ready to configure	high availability for a Generic Service.	
Select Service Client Access Point Select Storage Replicate Registry Settings Confirmation Configure High Availability Summary	Service: Network Name: IP Address: Registry Key: Registry Key: Registry Key: Registry Key: Registry Key: Registry Key: Registry Key: To continue, click Next.	IMail SMTP Service (SMTPServer) IMailServices 192.168.6.224 SOFTWARE\Wow6432Node\Ipswitch SOFTWARE\Wow6432Node\Softalk SYSTEM\CurrentControlSet\Services\IMAP4D32 SYSTEM\CurrentControlSet\Services\IMServer SYSTEM\CurrentControlSet\Services\POPD32 SYSTEM\CurrentControlSet\Services\QueueMgr SYSTEM\CurrentControlSet\Services\SMTPD32	•
		< Previous Next >	Cancel

Step 47. Review the information displayed on the Summary dialog and click "Finish".



Configuring Failover Service

Step 48. In **Server Manager** (as shown below), right click on **"IMailServices"** (or whatever the chosen name) and select **Add a resource > 4 – Generic Service**.

Server Manager						
File Action View Help						
🔶 🔿 🙋 🖬 📓 🖬						
Server Manager (IMAILCLU	STER01)	IMailServices				
Roles And Features		IMailServices				
E K Failover Cluster Ma E K IMailServer.qat E Services an	nager est.local d applications	Summary of IMailS	ervice	5		
	Bring this ser Take this ser Move this ser	vice or application online vice or application offline rvice or application to another node		Au		
Networks	Manage shares and storage					
Cluster Ev Diagnostics Configuration Storage	Add a shared	l folder				
	Show the crit	ical events for this application	2	Status		
	Add storage					
	Add a resource 🔸		1 - Client Access Point 2 - Generic Application 3 - Generic Script			
	Disable auto start					
	Show Depend	pendency Report 4 - Ger		eric Service		
	View	•	More re	sources >		

Step 49. Select IMail IMAP Service and click "Next".

Name	Description
IKE and AuthIP IPsec Keying Modules	The IKEEXT service hosts the Internet Key Exc
IMail Commtouch	
IMail Commtouch IP Reputation	
IMail IMAP Service	
IMai LDAP Service	
IMail POP Service	
IMail Queue Manager Service	
IMail Sys Logger	
Interactive Services Detection	Enables user notification of user input for interac
Internet Connection Sharing (ICS)	Provides network address translation, addressin
	Name IKE and AuthIP IPsec Keying Modules IMail Commouch IMail Commouch IP Reputation IMail IMAP Service IMail IDAP Service IMail Queue Manager Service IMail Queue Manager Service IMail Sys Logger Interactive Services Detection Internet Connection Sharing (ICS)

Step 50. Click **"Next"** on the Confirmation dialog.

New Resource Wiz	zard		×
Confirma	tion		
Select Service Confirmation	You are ready to make a 0	Generic Service.	
Configure Generic Service Summary	Service: Parameters:	IMail IMAP Service (IMAP4D32) Files (x86)\Ipswitch\IMail\IMAP4d32.exe"	*
	To continue, click Next.		¥
		< Previous Next > Cance	8

Step 51. Review the Summary dialog and click "Finish".

New Resource Wize	ard		×
C Summary			
Select Service Confirmation Configure Generic	The new resource	ce as was successfully created and configured.	
Service Summary	Service: Resource: Parameters:	IMail IMAP Service (IMAP4D32) Generic Service Files (x86)\Ipswitch\IMail\IMAP4d32.exe"	
	To view the report create To close this wizard, click	ed by the wizard, click View Report. k Finish.	View Report
			Finish

Step 52. Right click on the new Service and select "Properties".

🐉 IMail SMTP Serv	ice 💿 Online	
Hail MAP Ser	Bring this resource online Take this resource offline	
1	Show the critical events for this resource	
	Show Dependency Report	
	More Actions	,
	Delete	
1	Properties	1
1	Help	

Step 53. Select the **Dependencies** tab. Click **Insert** and select **IMail SMTP Service** from the list, and click **"OK**".

Step 54. Repeat Steps 48 through 53 adding the following IMail Services:

- IMail POP Service
- IMail Queue Manager Service
- Ipswitch Instant Messaging Server
- WorkgroupShare

Step 55. Right click on each of the services that were just added and click bring **Online**.



Setting the Preferred Owner and Failover Settings

This will describe how to set control for a server to run the IMail Services, under normal circumstances.

Step 56. Right click on the Cluster Services (IMailServices) and select Properties.



Step 57. Select the Node or Nodes to be the preferred server.

	failServices	
Vame:		
Select the buttons to preferred a Preferred IMai	preferred owners for this service list them in order from most prefe t the bottom. where: Cluster01 Cluster02	e or application. Use the erred at the top to least
□ Enab	e persistent mode tart	Down
Status:	Online IMailCluster02	

Step 58. Click on the **Failover** tab and configure behavior of the Cluster should failure occur.

	ices Properties			
General	Failover			
Failow	ver			
Spec fail o	ify the number of times the Clust ver the service or application in	ter servic the spec	e will attempt to r fied period.	restart or
If the spec	service or application fails more ified period, it will be left in the fa	than the	maximum in the s.	
Mao peni	imum failures in the specified od:	h	*	
Peri	od (hours):	6		
Failba Spec	ick ify whether the service or applic	ation will	automatically fai	I back to
Failba Spec the n	ick ify whether the service or applic nost preferred owner (which is se Prevent failback Allow failback	ation will at on the	automatically fai General tab).	il back to
Failba Spec the n	ick ify whether the service or applic nost preferred owner (which is se Prevent failback Allow failback	ation will at on the	automatically fai General tab)	i back to
Failba Spec the n	ick ify whether the service or applic nost preferred owner (which is se Prevent failback Allow failback Immediately Failback between:	ation will at on the	automatically fai General tab)	I back to
Failba Spec the n	ick ify whether the service or applic nost preferred owner (which is se Prevent failback Allow failback Immediately Failback between: about failover and failback	ation will at on the	automatically fai General tab).	I back to
Faiba Spec the n	ack ity whether the service or applic nost preferred owner (which is se Prevent failback Allow failback Immediately Failback between: about failover and failback	ation will t on the	automatically fai General tab).	I back to

CHAPTER 7

IMail Server Configurations

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When making changes to IMail Server Settings be sure it is the Active node in the cluster. Changes made on an inactive node will be lost when the cluster fails-over to that node.

IP Address Changes

Step 59. All traffic (SMTP / MX, POP, IMAP, IIM, Web) should be pointing to the IP address configured for the cluster (In this example it was 192.168.6.224).

Configuration of SMTP Service and WorkgroupShare are necessary to listen on the Address of the cluster. Failing to do this configuration will result in these services failing to start when the cluster attempts to failover.

IP Address Changes for IMail Server

Step 60. IMail Server Address Change, requires manually editing the registry in IMail.

- Be sure the Console Admin is not open and open REGEDIT.
- Goto "HKEY_LOCAL_MACHINE\Software\Wow6432Node\Ipswitch\IMail\Domains\".
- Under the "Domains" key rename the IP address Key to the IP address of the cluster.
- Under the domain name key modify the "Address" value to be the IP address of the cluster.
- Restart the IMail Services after changes are complete.

ile Edit View Favorites Help			
E-	 Name 	Туре	Data
🖲 👍 Carnegie Mellon	ab (Default)	REG 57	(value not set)
🕀 🍌 Classes	ab Address	REG_SZ	192.168.6.224
🗈 🗼 Clients	# AllowedLoginAtte	e REG_DWORD	0x0000003 (3
Description	AllowedLoginLoci	k REG_DWORD	0x0000003 (3
E j Ipswitch	Allow/WebSetAut	REG_DWORD	0×000000000 (0
E IMai	AllowWebSetDel	e REG_DWORD	0x00000000 (0
MAIL	AllowWebSetFor	REG_DWORD	0x00000000 (0
domains	Allow/WebSetVac	REG_DWORD	0x00000000 (0
192.100.0.224	2 DefaultUserAcce	REG_DWORD	0x00000001 (1
	2 DefaultUserAcce	REG_DWORD	0x00000001 (1
Clobal	-1 DefaultUserAdd	REG DWORD	0×00000001 (1

IP Address Changes for WorkgroupShare

Step 61. WorkgroupShare Address Change.

- Open **Collaboration Administration** (WorkgroupShare) console application.
- Double click on **Settings**.
- Select the Server tab and select " [All Interfaces] " from the drop down menu and click "OK".

Charlands	Group JNew Public Folder	Grank Access
Shortcuts	tungs	
	Groups	IMail Collaboration Settings
	Public Folders Access Levels Settings Codrait Windows	This page shows the general settings for IMail Collabora the settings titles below or press the Settings button in
Users		Updates
Groups	Updates Server .ogging	Synchronization Security
Gioups Public Folders	Update Server ogging Specify the interfact on which the server	Synchronization Security es on which IMail Collaboration will listen. Also specify the port listens.
Gioups Public Folders	Update: Server Logging Specify the interface on which the server Interface A	Synchronization Security es on which IMail Collaboration will listen. Also specify the port listens.
Gioups Public Folders Access Levets	Update Server ogging Specify the interface on which the server Interface	Synchronization Security es on which IMail Collaboration will listen. Also specify the port listens. Interfaces Listen on standard port only
Gioupa Public Folders Access Levels	Update Server ogging Specify the interface on which the server	Synchronization Security es on which IMail Collaboration will listen. Also specify the port listens. Interfaces] Listen on standard port only Listen on secure (SSL) port only Listen on both secure and standard ports

Step 62. Restart the WorkgroupShare Service.

Configuring IMail Server to use the I:\ Drive

Step 63. Recommended Directory Structure is as follows

```
I:

\IMail

\Domains\

\Directory for each IMail Domain

\Logs\

\Spool\

\IIM Logs
```

Step 64. IMail Domain Top Directory

Set the top directory for the domain to the I: drive path.

Properties	General Settings	
Users	Domain Name:	mail.example.local
DomainKeys / DKIM Sign	TCP/IP Address	192.168.6.224
- & Sutbound Rules	Top Directory:	[I:\domains\example.local]
- 🐁 Inbound Rules	Domain Aliases:	example.local

Step 65. System Directories

Change the **Spool and Log directory** to their paths on the I:\Drive.

🚺 Wa

Warning: DO NOT CHANGE the Top Directory path!

-	System Archiving System Tr	ailer DomainKeys / DKIM Realtime Blacklists Realtime Whitelin
Domains	System Settings	1
Domain Name (OHN):	mail.example.local	
	Gateway Host	
tem	Default Host. Top Directory:	mail.example.local
		C-VM-ail
	Spool Directory:	I:\Spool
18	Log Directory.	I:\Log\$
	Log Server:	127.0.0.1
<u> </u>	Include Rule Headers	

Step 66. Setting SMTP to listen on All IP Addresses.

- Open the IMail Console Administrator.
- Click on **Services** on the left navigation bar.
- Double click on IMail SMTP Service and click on Advanced under SMTP navigation bar.



• Enable SMTP to Listen on All IP's and click "Apply".

Step 67. Restart All IMail and IIM Services for the above changes to take effect.

Step 68. If a custom SSL certificate is in use, make sure the Certificate ".crt" and ".key" files are stored on the **"I:\ Drive"** so all the cluster nodes have access to the certificate.

Step 69. From a command window navigate to the IMail Server Installation directory and run the following utility to configure the necessary permissions on the new directories.

"InstallUtilityConsole.exe"

Step 70. Test "Moving the Failover" service to each node.

Right click on IMail Services and select **Move this service or application to another node**, then select one of the cluster nodes.

IMailServer.gatest.loc		
Services and appl	ations Summary	of IMailServices
Nodes Storage	Bring this service or application Take this service or application	offine
Networks	Move this service or application	to another node I - Move to node IMalCluster01
Uster Events	Manage shares and storage	
	Add a shared folder	
	Show the critical events for this	application

- Verify all services start and all services respond correctly on the IMailServices Failover Cluster IP address.
- Login to the Web Client and send a few test messages to verify email is being processed correctly.

Step 71. Configuration for the Failover Cluster is now complete. The IMail Server is ready for use.

Configurations that will not automatically move on failover

There are several settings in the IMail Server that will not also update between the failover nodes. The following settings will require performing changes on each node in the Failover Cluster.

- IP Control Access lists for the following services:
 - a) POP3
 - b) IMAP
 - c) Syslog
 - d) SMTP
- SMTP Relay for Addresses List
- SMTP Domain Forwarding List
- CYREN Anti-spam service settings. (ctasd.conf and ctipd.conf)
- Accept List
- Kill File
- White List

Upgrading IMail Server

Upgrading Failover Cluster Process

To upgrade IMail Server with a Failover Cluster in place, will require performing the following steps:

m

Note: Make sure to log in to the cluster nodes as a Administrator on the domain.

- 1 Open the Failover Cluster Manager.
- 2 Right click on the Failover Service and select "Take this service or application offline".



3 Click **"Take IMailServices offline"** (Text will differ depending on the failover service name).



4 Determine which cluster node currently owns the service and connect to that node. Open the **Failover Cluster Manager**.



m

5 Right click on the **Cluster Disk** and select "**Bring this resource online**".



Note: IMail Server installation will not successfully complete, if mailboxes and other configuration files are not accessible.

- **6** Install the new version of IMail Server on the node, making sure each node has the same features installed.
- 7 When the installation is complete go back to the Failover Cluster Manager and right click on the **Cluster Disk** and select **"Take this resource offline"**.

Summa	iry of imaliServices
Status: Offine	
Alerts: (none)	
Preferred Owne	ers: IMaiCluster01
Current Owner:	IMailCluster02
Name	
Name Server Name	
Name Server Name 19 1 Name: IMa	alServices
Name Server Name E 📆 Name: IMa	alServices
Name Serves Name I 👫 Name: IMa Disk Drives	alServices
Name Serves Name I Mame: IMa Disk Drives I Custer Dis	allServices

8 Right click on the **Failover Service** and select "**Move this service or application to another node**". From there select one of the remaining nodes where IMail Server has not yet been updated. **9** Click **"Move IMailServices to #name of node#"** and then login to that node to perform the install.



- **10** Repeat steps 5 through 9 on each node until all nodes have been updated.
- 11 Right click on the Failover Service and select "Bring this service or application online".

Server Manager (IMAILCLUSTER01)		IMailServices
B Protes		IMailServices
Alover Cluster Manager MalServer .qatest.local Services and applications MalService MalService Bing th		Summary of IMailServices
		s service or application online
Storage	Move th	s service or application to another node
Cluster Events	Manage	shares and storage

12 Upgrade procedures are complete.