Documentation for
EXCHANGE TROUBLESHOOTING

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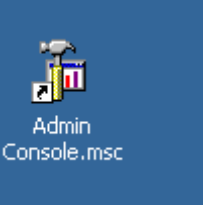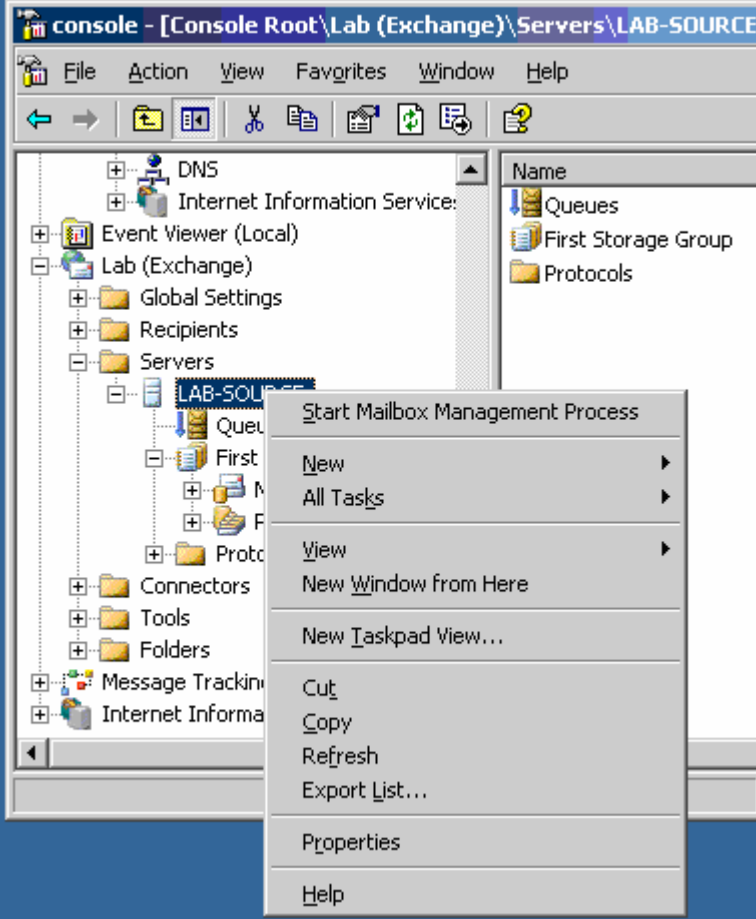
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LAB 0.

In this lab we are going to send an email using Outlook Web Access. This email will be restored later.

We will also configure Message Tracking for use later.

	We are not going to enable message tracking so messages will be logged.
On the desktop of the VM launch "Admin Console"	Admin Console.msc
Expand "LAB (Exchange)" Expand Servers Right click on "LAB-SOURCE" Select Properties.	console - [Console Root\Lab (Exchange)\Servers\LAB-SOURCE File Action View Favorites Window Help DNS Internet Information Service: Event Viewer (Local) Lab (Exchange) Global Settings Recipients Servers LAB-SOURCE Queu First Proto Connectors Tools Folders Message Trackin Internet Informa Name Queues First Storage Group Protocols Start Mailbox Management Process New All Tasks View New Window from Here New Taskpad View... Cut Copy Refresh Export List... Properties Help

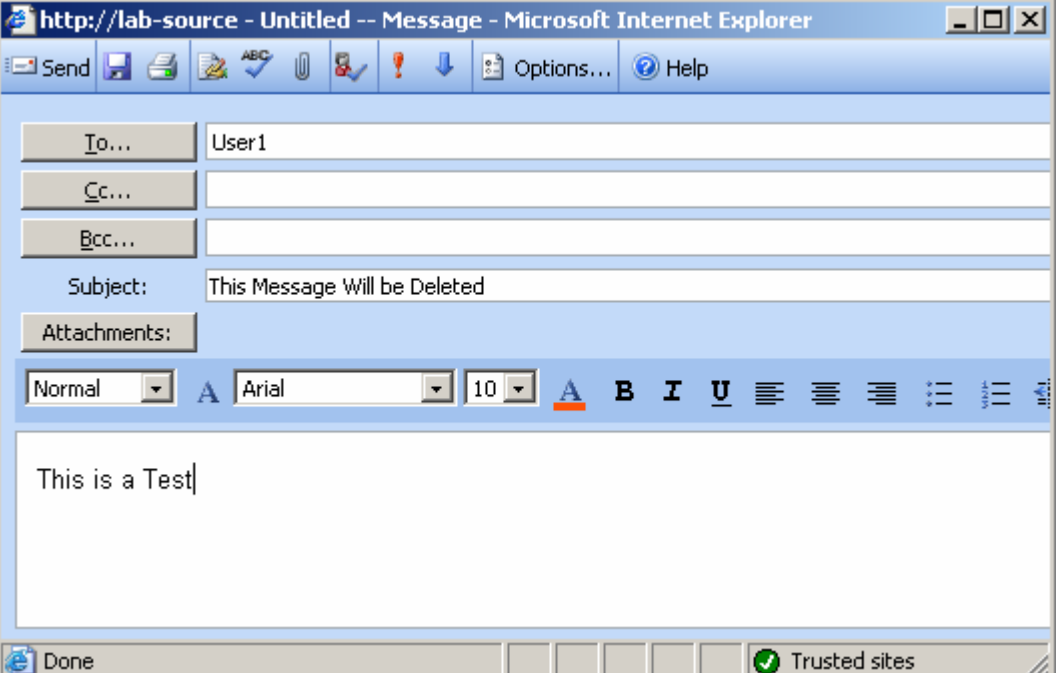|	

Check the boxes for "Enable Subject Logging and Display"
 	
"Enable message tracking"
 	
"Remove Log Files"
 	
Set it to 45 days
 	
Click OK.
	LAB-SOURCE Properties `? X`
	
	Diagnostics Logging | Public Folder Referrals | Details | Directory Access
	RPC-HTTP | Policies | Security | Full-Text Indexing | Monitoring
	General | Locales | Mailbox Management
	
	LAB-SOURCE
	
	Version 6.5 (Build 7638.2: Service Pack 2)
	
	☑ Enable subject logging and display
	
	☑ Enable message tracking
	    ☑ Remove log files
	    Remove files older than (days): `45`
	    Log file directory:
	    `C:\Program Files\Exchsrvr\LAB-SOURCE.log` [Change]
	
	☐ This is a front-end server
	    Clients connect here, and commands are relayed to a back-end server.
	
	☐ Automatically send fatal service error information to Microsoft.
	
	[OK] [Cancel] [Apply] [Help]

Open up Internet Explorer and goto Local-Source/ Exchange When prompted enter Administrator	**http://lab-source/exchange - Microsoft Internet Explorer** `_ □ X` File Edit View Favorites Tools Help Back ▾ ⬤ ▾ 🗷 🗷 🏠 🔍 Search ⭐ Favorites ⬤ 🖾 ▾ 🖼 🖻 Address 🔲 http://lab-source/exchange ▾ → Go Links » Error: Access is Denied. **Connect to lab-source.Lab.Local** `? X` Connecting to lab-source.Lab.Local User name: 👤 Administrator ▾ Password: ●●●●●●●● ☐ Remember my password [OK] [Cancel]
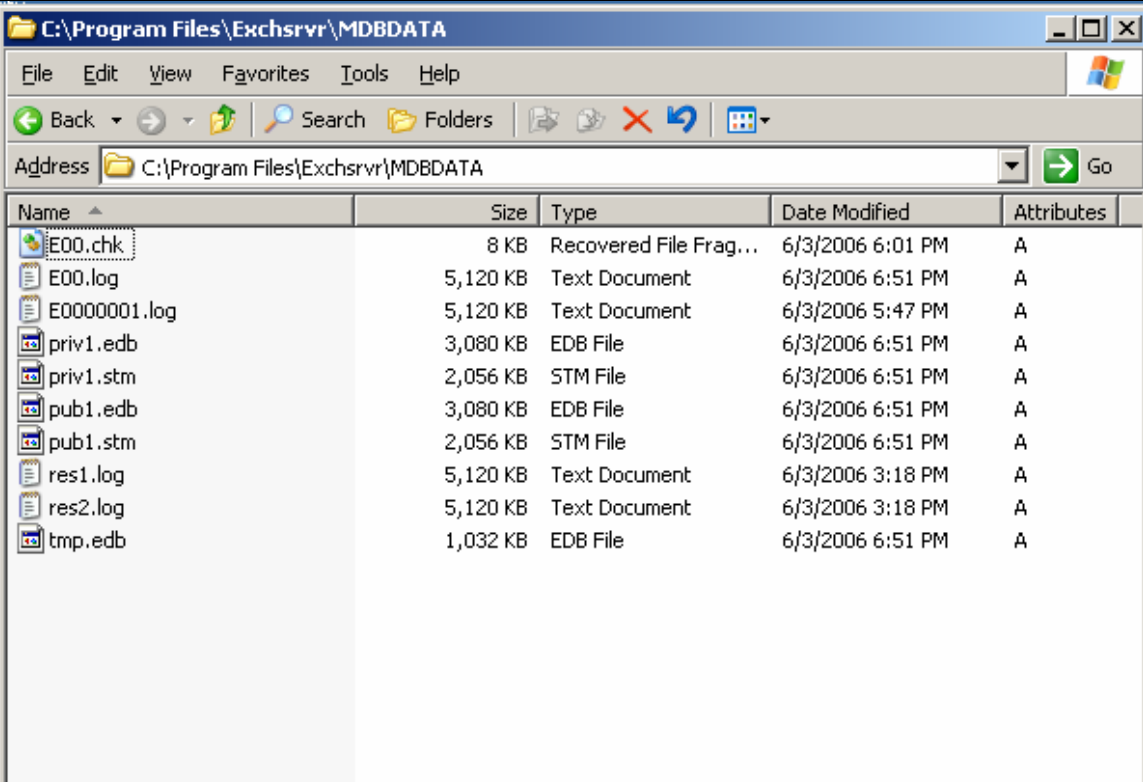
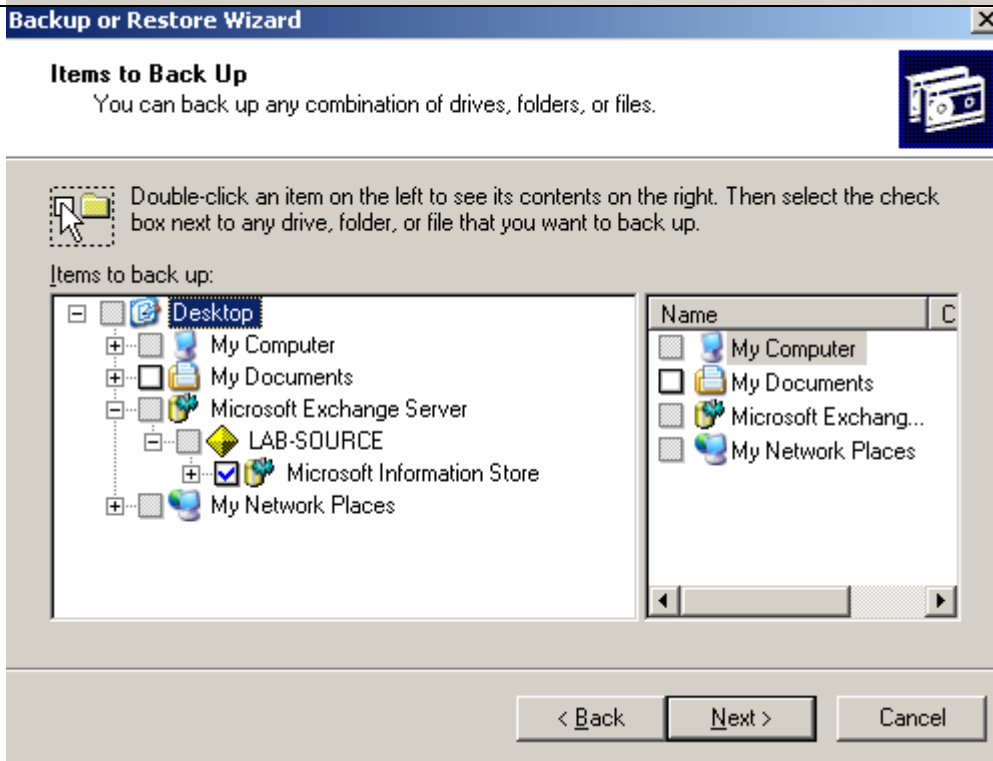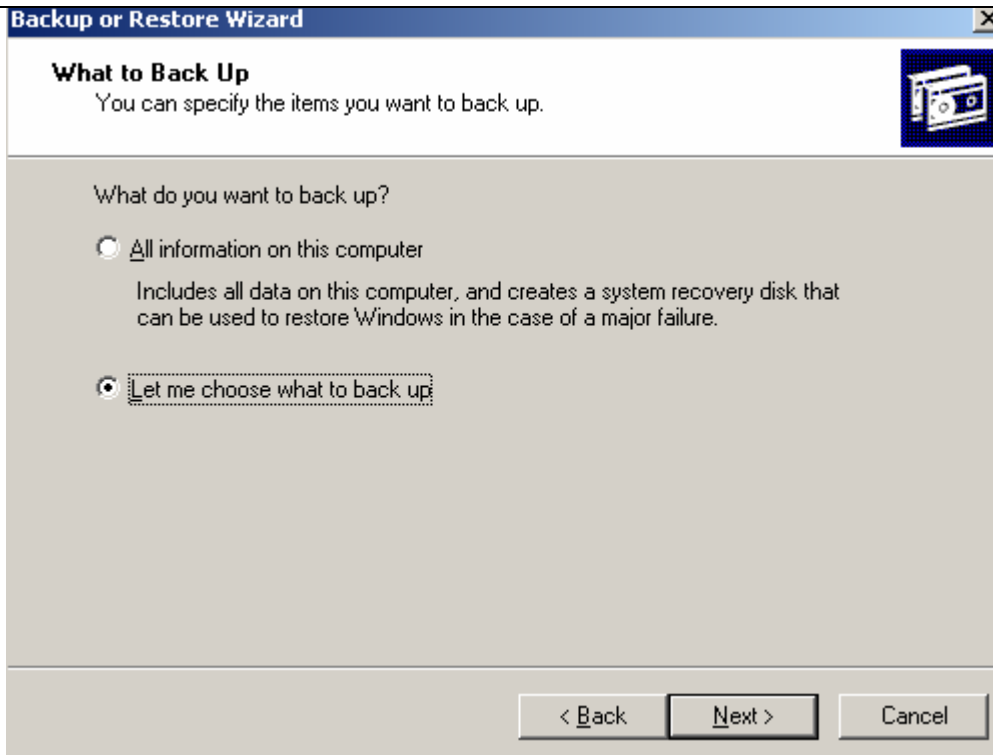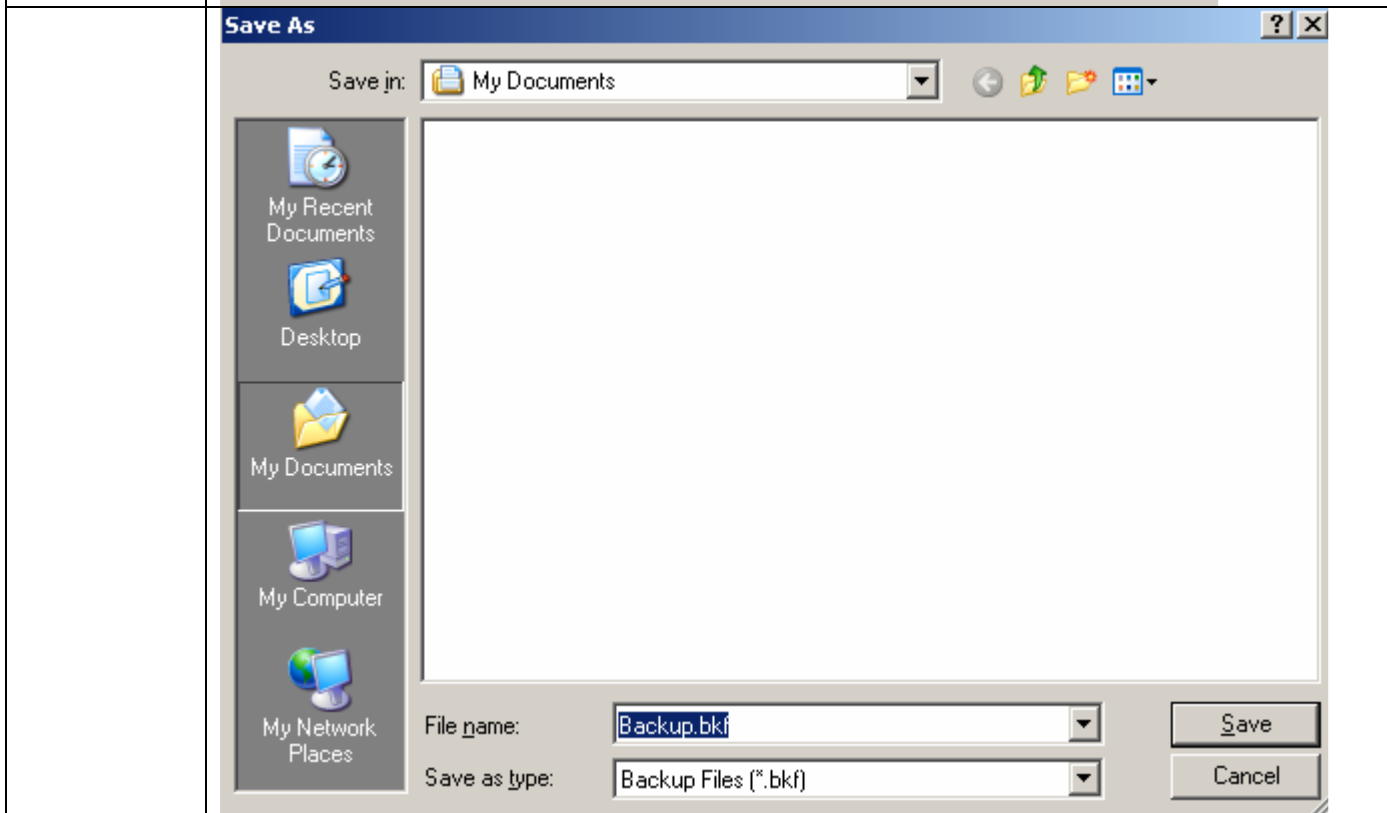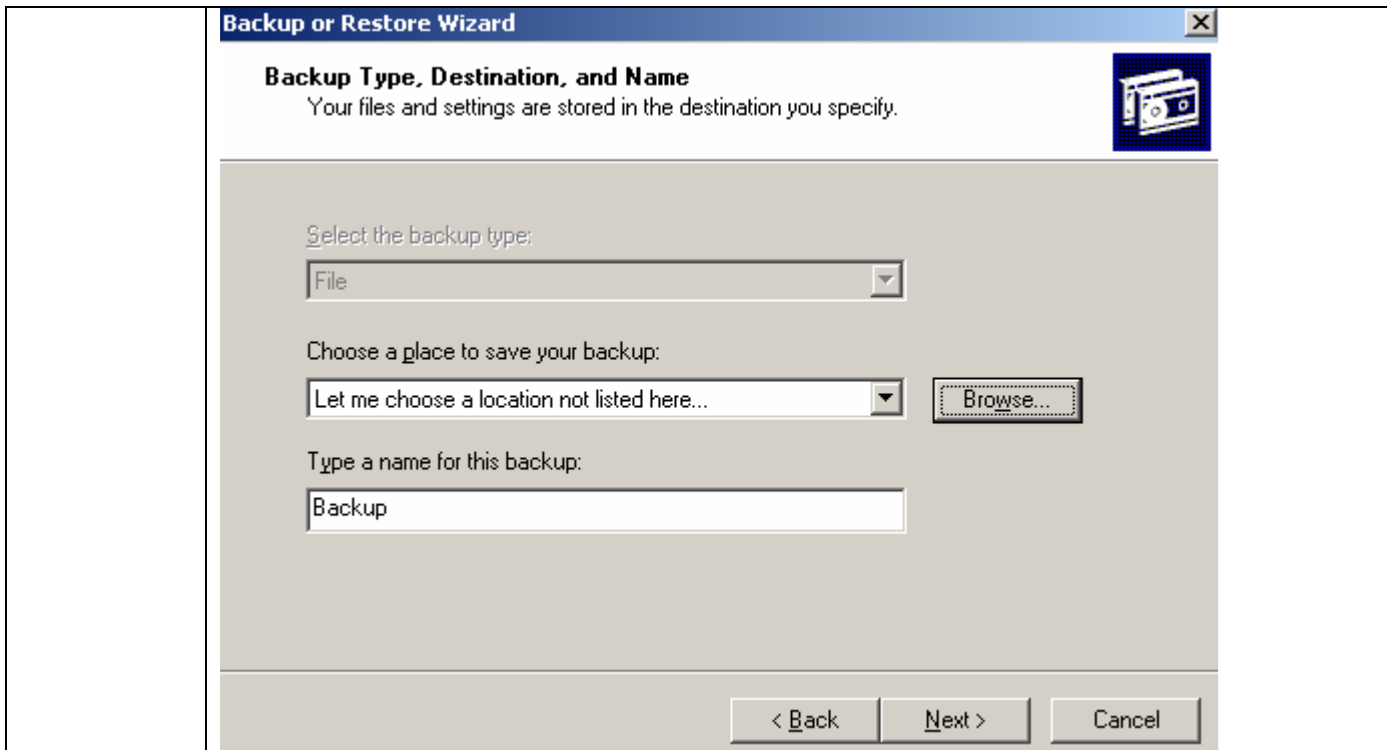|	
Click on "New"	
Enter User1 in the "To" field.	http://lab-source - Untitled -- Message - Microsoft Internet Explorer Send | Options... | Help To... User1 Cc... Bcc... Subject: This Message Will be Deleted Attachments: Normal | A | Arial | 10 | A **B** *I* U This is a Test Done — Trusted sites
Give message a Creative Subject	
Also Enter "User2" in the "To" field.	
Also Enter "User3" in the "To" field.	
Enter a Message body if you want	
Click Send	
Now Minimize OWA.	

LAB 1. Components of Exchange

In this lab we will learn what the different components are of an Exchange Information Store and how to back them up and restore them.
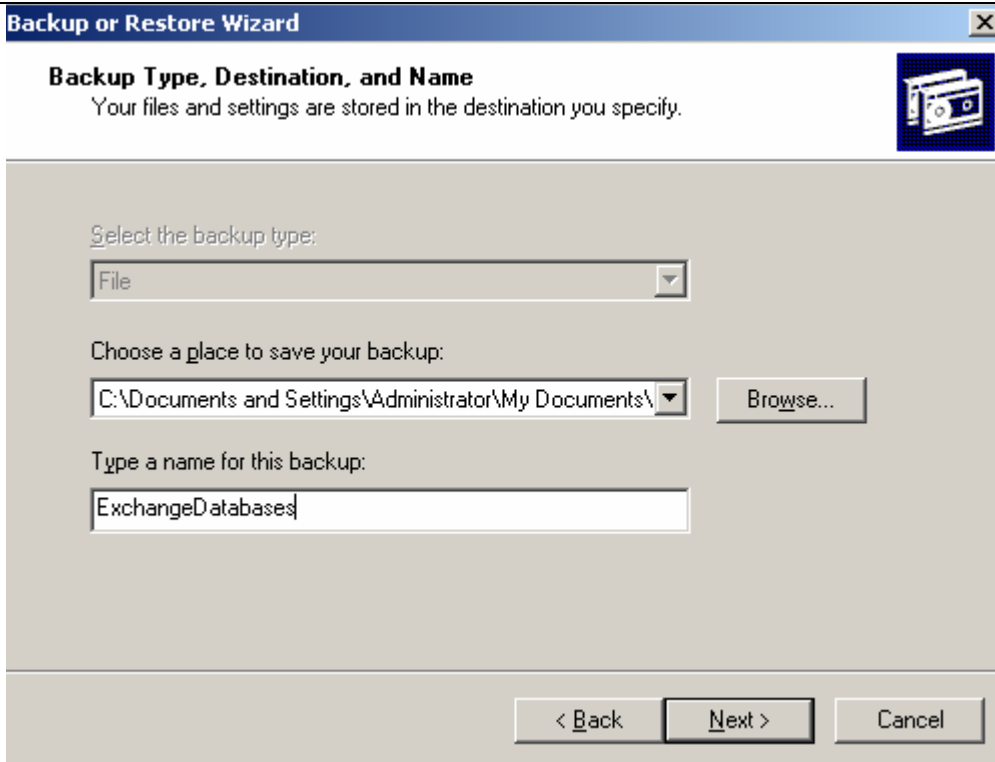
Browse to C:\program files \Exchsrvr \MDBDATA	**C:\Program Files\Exchsrvr\MDBDATA** File Edit View Favorites Tools Help Back • • Search Folders Address C:\Program Files\Exchsrvr\MDBDATA Go Name ▲ Size Type Date Modified Attributes E00.chk 8 KB Recovered File Frag… 6/3/2006 6:01 PM A E00.log 5,120 KB Text Document 6/3/2006 6:51 PM A E0000001.log 5,120 KB Text Document 6/3/2006 5:47 PM A priv1.edb 3,080 KB EDB File 6/3/2006 6:51 PM A priv1.stm 2,056 KB STM File 6/3/2006 6:51 PM A pub1.edb 3,080 KB EDB File 6/3/2006 6:51 PM A pub1.stm 2,056 KB STM File 6/3/2006 6:51 PM A res1.log 5,120 KB Text Document 6/3/2006 3:18 PM A res2.log 5,120 KB Text Document 6/3/2006 3:18 PM A tmp.edb 1,032 KB EDB File 6/3/2006 6:51 PM A
In this directory are 4 different types of files	*.chk *.log *.edb *.stm

*.EDB and *.STM	EDB – Normal Mail Content
	STM – Streaming Media. Keeps Internet Mime content in here.
	
	Each Exchange database is made up of these two files. There are two databases.
	  ■ Private Information Store (Mailbox Database) (Priv1.*)
	  ■ Public Information Store (Public Folders) (Pub1.*)
	
	These files automatically grow but do not shrink unless you compress them. Event ID 1221 will tell you how much space you will get back by compressing them

*.LOG	Everything written to the Exchange Database is also written to a log file for performance and recovery purposes. (explain this more later) As data comes into an Exchange Server it is written to the Log file first and then when there is a period of low system usage it writes the data into the Exchange Database.
*.CHK	This stores which log file information has been written into the database.

Now we are going to send a lot of email to the server and see how the files change size.	
We are going to send 10 MBs of email to the server.	On the desktop double click on the icon "Send 10MB"
When the Executable finishes..	Open up the directory: Browse to C:\programs Files\Exchsrvr\MDBDATA Compare the picture above the directory now. What has changed?
	Now we are going to backup Exchange
Browse to C:\programs files \Exchsrvr \MDBDATA	
Notice the existence of the log files	
Launch NT Backup	Start, All Programs, Accessories, System Tools

Backup or Restore Wizard

Welcome to the Backup or Restore Wizard

This wizard helps you back up or restore the files and settings on your computer.

If you prefer, you can switch to Advanced Mode to change the settings used for backup or restore. This option is recommended for advanced users only.

☑ Always start in wizard mode

To continue, click Next.

< Back   Next >   Cancel

Backup or Restore Wizard

Backup or Restore
You can back up files and settings, or restore them from a previous backup.

What do you want to do?

● Back up files and settings

○ Restore files and settings

< Back   Next >   Cancel

Backup or Restore Wizard

What to Back Up
You can specify the items you want to back up.

What do you want to back up?

○ All information on this computer

Includes all data on this computer, and creates a system recovery disk that can be used to restore Windows in the case of a major failure.

◉ Let me choose what to back up

[< Back] [Next >] [Cancel]

Backup or Restore Wizard

Items to Back Up
You can back up any combination of drives, folders, or files.

Double-click an item on the left to see its contents on the right. Then select the check box next to any drive, folder, or file that you want to back up.

Items to back up:

☐ 🔵 Desktop
  ☐ 💻 My Computer
  ☐ 📁 My Documents
  ☐ 🔧 Microsoft Exchange Server
    ☐ ◆ LAB-SOURCE
      ☑ 🔧 Microsoft Information Store
  ☐ 🖥 My Network Places

Name	C
☐ 💻 My Computer	
☐ 📁 My Documents	
☐ 🔧 Microsoft Exchang...	
☐ 🖥 My Network Places	

[< Back] [Next >] [Cancel]

Backup or Restore Wizard

Backup Type, Destination, and Name
Your files and settings are stored in the destination you specify.

Select the backup type:

File

Choose a place to save your backup:

Let me choose a location not listed here...   Browse...

Type a name for this backup:

Backup

< Back   Next >   Cancel

Save As

Save in: My Documents

My Recent Documents

Desktop

My Documents

My Computer

My Network Places

File name: Backup.bkf   Save

Save as type: Backup Files (*.bkf)   Cancel

Backup or Restore Wizard

Backup Type, Destination, and Name
Your files and settings are stored in the destination you specify.

Select the backup type:

File

Choose a place to save your backup:

C:\Documents and Settings\Administrator\My Documents\ ▼   Browse...

Type a name for this backup:

ExchangeDatabases

< Back   Next >   Cancel

Backup or Restore Wizard

Completing the Backup or Restore Wizard

You have created the following backup settings:

Name: C:\...y Documents\ExchangeDatabases.bkf

Description: Set created 6/7/2006 at 6:28 PM

Contents: Selected files and folders

Location: File

To close this wizard and start the backup, click Finish.

To specify additional backup options, click Advanced.   Advanced...

< Back   Finish   Cancel

Backup Progress

The backup is complete.   [Close]

To see detailed information, click Report.   [Report...]

Drive:	LAB-SOURCE\Microsoft Information Store\First
Label:	ExchangeDatabases.bkf created 6/7/2006 at 6
Status:	Completed

	Elapsed:	
Time:		54 sec.

	Processed:	
Files:		5
Bytes:		28,353,326

C:\Program Files\Exchsrvr\MDBDATA

File Edit View Favorites Tools Help

Back ▼ ▼ ▼ | Search | Folders | | × | ▼

Address C:\Program Files\Exchsrvr\MDBDATA   Go

Name ▲	Size	Type	Date Modified	Attributes
E00.chk	8 KB	Recovered File Frag...	6/3/2006 8:55 PM	A
priv1.edb	3,080 KB	EDB File	6/7/2006 6:22 PM	A
priv1.stm	14,344 KB	STM File	6/7/2006 6:22 PM	A
pub1.edb	3,080 KB	EDB File	6/7/2006 6:22 PM	A
pub1.stm	2,056 KB	STM File	6/7/2006 6:22 PM	A
res1.log	5,120 KB	Text Document	6/3/2006 3:18 PM	A
res2.log	5,120 KB	Text Document	6/3/2006 3:18 PM	A
tmp.edb	1,032 KB	EDB File	6/7/2006 6:22 PM	A
E0000004.log	5,120 KB	Text Document	6/7/2006 6:30 PM	A
E00tmp.log	1,024 KB	Text Document	6/7/2006 6:30 PM	A
E00.log	5,120 KB	Text Document	6/7/2006 6:30 PM	A

LAB 2. Restoring Exchange

Now we Are Going to Restore All of Exchange database.

In this section we are going to create an email and send it to one of the users.
We are going to simulate an emergency by deleting the databases but not the log files. (It is assumed you keep the log files on a different Physical Partition.)
The we will open up a users mailbox and see the mail is still there.

Open up Internet Explorer and goto Local-Source/ Exchange When prompted enter User2	**http://lab-source/exchange - Microsoft Internet Explorer** File Edit View Favorites Tools Help Back • • • Search Favorites Address http://lab-source/exchange Go Links » Error: Access is Denied. **Connect to lab-source.Lab.Local** ? X Connecting to lab-source.Lab.Local User name: Administrator Password: •••••••• Remember my password OK Cancel
Find message in inbox and do a reply to all.	
Add something to the body so you will recognize the message later.	
Click Send	
Now close OWA.	

Now we are going to delete the Exchange Databases.

Open the Admin Console	
Expand "Computer Managenet." Expand "Services and applications" Expand "Services" Click on "Standard" Click on "Microsoft Exchange Information Store" Right click and choose "Stop"	
Explore to C:\Program Files\ Exchsrvr\	(We are going to make a flat file backup of Exchange databases at this time) Right click on "MDBDATA" and choose "Edit" "Copy" Now chose "Edit" "Paste" It will create a folder called "Copy of MDBDATA"
HARD DISK FAILURE	(Note this simulates a failure when you have the log files and database on separate physical partitions.)

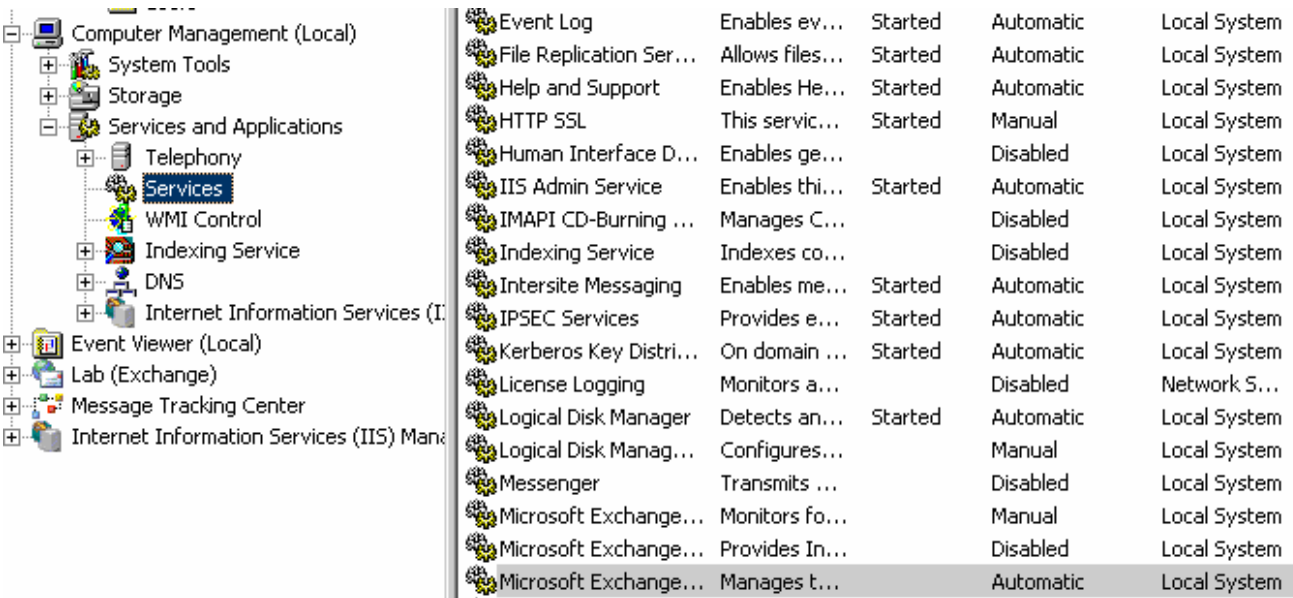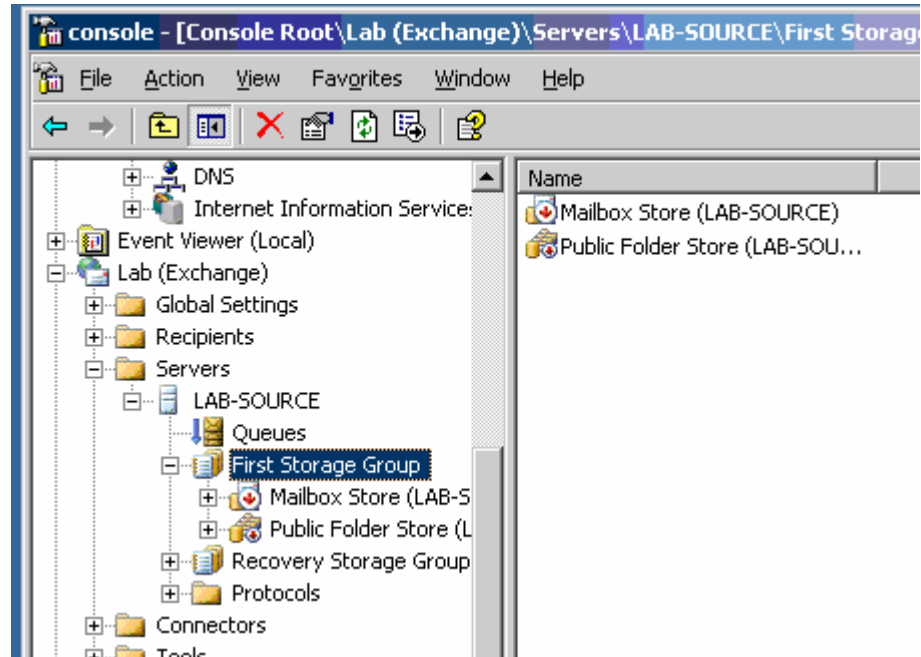|	
Explore to C:\Program Files\ Exchsrvr\ MDBDATA Delete the following files Priv1.edb Priv1.stm Pub1.edb Pub1.stm Temp.edb	**C:\Program Files\Exchsrvr\MDBDATA** File Edit View Favorites Tools Help Back ▾ ▾ Search Folders Address C:\Program Files\Exchsrvr\MDBDATA ▾ Go Name ▲ · Size · Type · Date Modified · Attributes E00.chk · 8 KB · Recovered File Frag… · 6/9/2006 12:25 PM · A E00.log · 5,120 KB · Text Document · 6/9/2006 12:25 PM · A E0000005.log · 5,120 KB · Text Document · 6/7/2006 11:10 PM · A priv1.edb · 4,104 KB · EDB File · 6/9/2006 12:25 PM · A priv1.stm · 16,392 KB · STM File · 6/9/2006 12:25 PM · A pub1.edb · 3,080 KB · EDB File · 6/9/2006 12:25 PM · A pub1.stm · 2,056 KB · STM File · 6/9/2006 12:25 PM · A res1.log · 5,120 KB · Text Document · 6/3/2006 3:18 PM · A res2.log · 5,120 KB · Text Document · 6/3/2006 3:18 PM · A tmp.edb · 1,032 KB · EDB File · 6/9/2006 12:25 PM · A
This is what the directory will look like When you are done.	**C:\Program Files\Exchsrvr\MDBDATA** File Edit View Favorites Tools Help Back ▾ ▾ Search Folders Address C:\Program Files\Exchsrvr\MDBDATA ▾ G Name ▲ · Size · Type · Date Modified · Attributes E00.chk · 8 KB · Recovered File Frag… · 6/9/2006 12:49 PM · A E00.log · 5,120 KB · Text Document · 6/9/2006 12:49 PM · A E0000005.log · 5,120 KB · Text Document · 6/7/2006 11:10 PM · A res1.log · 5,120 KB · Text Document · 6/3/2006 3:18 PM · A res2.log · 5,120 KB · Text Document · 6/3/2006 3:18 PM · A
Go back to the "Admin Console"	

Expand "Computer Managenet."
 	
Expand "Services and applications"
 	
Expand "Services"
 	
Click on "Standard"
 	
Click on "Microsoft Exchange Information
	Computer Management (Local)
	  System Tools
	  Storage
	  Services and Applications
	    Telephony
	    Services
	    WMI Control
	    Indexing Service
	    DNS
	    Internet Information Services (I
	  Event Viewer (Local)
	  Lab (Exchange)
	  Message Tracking Center
	  Internet Information Services (IIS) Mana
	
	Event Log · Enables ev… · Started · Automatic · Local System
	File Replication Ser… · Allows files… · Started · Automatic · Local System
	Help and Support · Enables He… · Started · Automatic · Local System
	HTTP SSL · This servic… · Started · Manual · Local System
	Human Interface D… · Enables ge… · · Disabled · Local System
	IIS Admin Service · Enables thi… · Started · Automatic · Local System
	IMAPI CD-Burning … · Manages C… · · Disabled · Local System
	Indexing Service · Indexes co… · · Disabled · Local System
	Intersite Messaging · Enables me… · Started · Automatic · Local System
	IPSEC Services · Provides e… · Started · Automatic · Local System
	Kerberos Key Distri… · On domain … · Started · Automatic · Local System
	License Logging · Monitors a… · · Disabled · Network S…
	Logical Disk Manager · Detects an… · Started · Automatic · Local System
	Logical Disk Manag… · Configures… · · Manual · Local System
	Messenger · Transmits … · · Disabled · Local System
	Microsoft Exchange… · Monitors fo… · · Manual · Local System
	Microsoft Exchange… · Provides In… · · Disabled · Local System
	Microsoft Exchange… · Manages t… · · Automatic · Local System

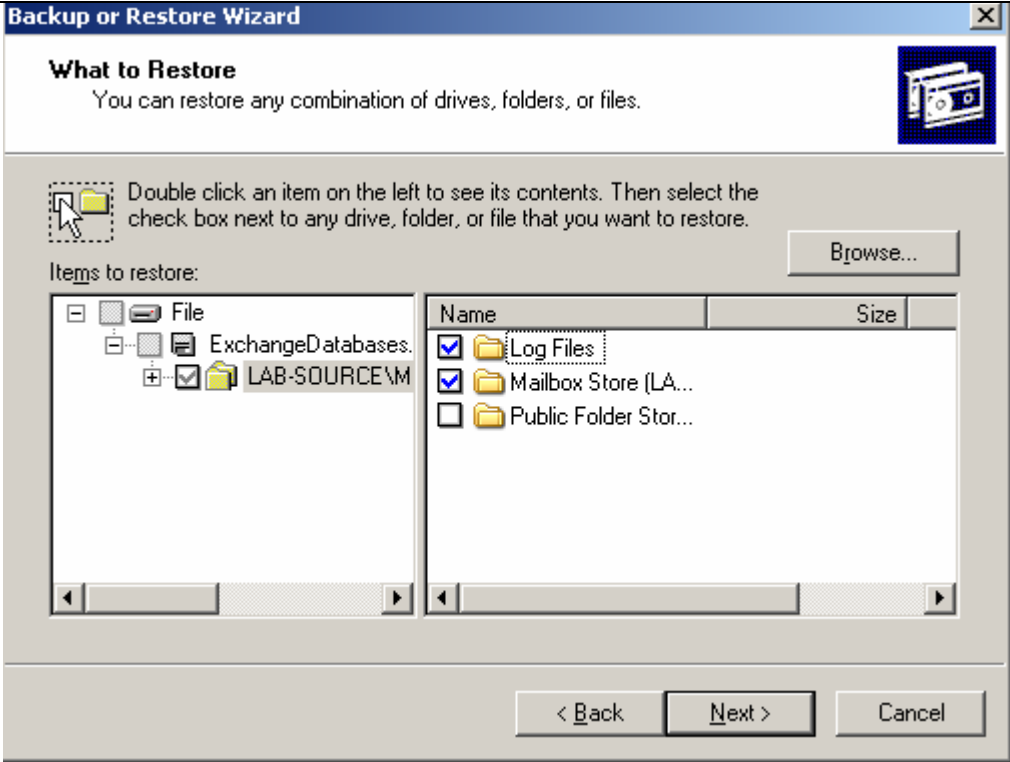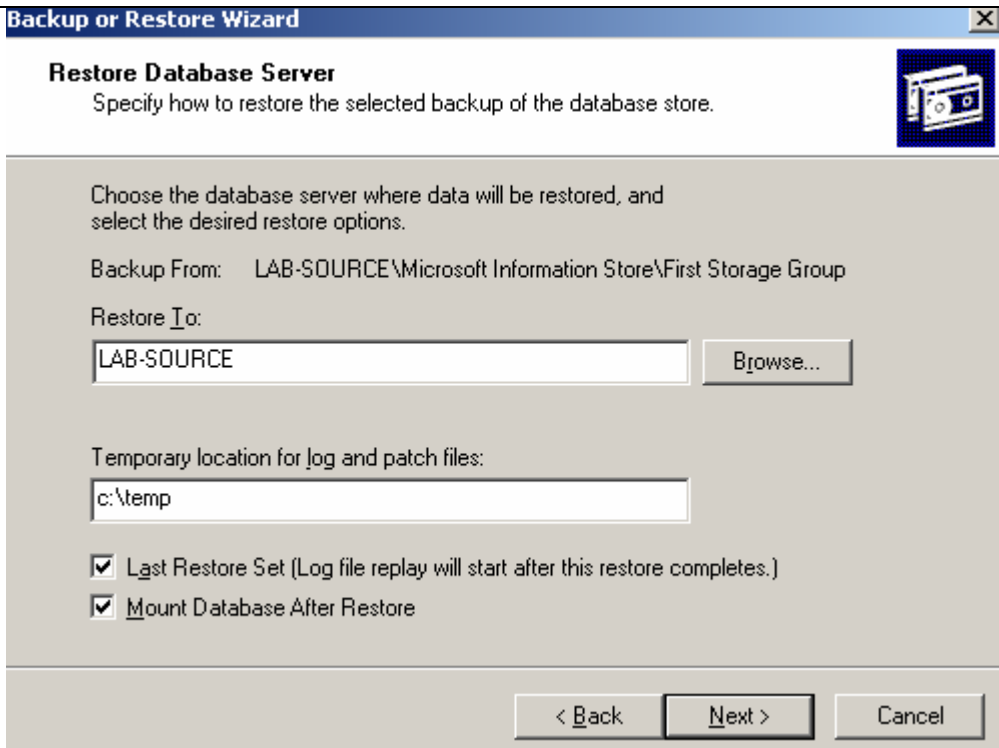|	
Store" Right click and choose "Start"	
On the desktop of the VM launch "Admin Console"	
Expand "LAB (Exchange)" Expand Servers Right click on "LAB-SOURCE" If there is a "Recovery Storage Group" Right click on it and delete it. Expand "First Storage Group" You will notice the two databases are not mounted.	
Launch NT Backup	Start, All Programs, Accessories, System Tools

Click Next	**Backup or Restore Wizard** ⊠ **Welcome to the Backup or Restore Wizard** This wizard helps you back up or restore the files and settings on your computer. If you prefer, you can switch to <u>Advanced Mode</u> to change the settings used for backup or restore. This option is recommended for advanced users only. ☑ Always start in <u>w</u>izard mode To continue, click Next. < <u>B</u>ack <u>N</u>ext > Cancel
Select "Restore Files and Settings" and Next	

Expand File-ExchangeDat…
 	
Expand "Lab-Sourc…"
 	
Then on the right hand side select:
"Log Files"
And
"Mailbox Store"
 	
Click Next.
	Backup or Restore Wizard ⊠
	
	What to Restore
	You can restore any combination of drives, folders, or files.
	
	Double click an item on the left to see its contents. Then select the check box next to any drive, folder, or file that you want to restore.
	
	Browse...
	
	It<u>e</u>ms to restore:
	
	⊟ ☐ 🖳 File
	   ⊟ ☐ 🗗 ExchangeDatabases.
	     ⊞ ☑ 📁 LAB-SOURCE\M
	
	Name Size
	☑ 📁 Log Files
	☑ 📁 Mailbox Store (LA…
	☐ 📁 Public Folder Stor…
	
	< <u>B</u>ack <u>N</u>ext > Cancel

Select "Last Restore Set" and "Mount Database After Restore" Click "Next"	**Backup or Restore Wizard** ✕ **Restore Database Server** Specify how to restore the selected backup of the database store. Choose the database server where data will be restored, and select the desired restore options. Backup From: LAB-SOURCE\Microsoft Information Store\First Storage Group Restore To: `LAB-SOURCE` Browse... Temporary location for log and patch files: `c:\temp` ☑ Last Restore Set (Log file replay will start after this restore completes.) ☑ Mount Database After Restore < Back Next > Cancel
Then Click "Finish"	**Backup or Restore Wizard** ✕ **Completing the Backup or Restore Wizard** You have created the following restore settings: Restore from: ExchangeDatabases.bkf created 6/7/2006 Type: File Restore to: Original locations Existing files: Do not replace To close this wizard and start the restore, click Finish. To specify additional restore options, click Advanced. Advanced... < Back Finish Cancel
	Now we are going to look at the directory while the restore occurs.

Explore to C:\Program Files\ Exchsrvr\ MDBDATA This is what the directory looked like before the restore,	**C:\Program Files\Exchsrvr\MDBDATA** File Edit View Favorites Tools Help Back ▾ ▾ Search Folders Address C:\Program Files\Exchsrvr\MDBDATA ▾ Go | Name △	Size	Type	Date Modified	Attributes
---	---	---	---	---
E00.chk	8 KB	Recovered File Frag...	6/9/2006 12:49 PM	A
E00.log	5,120 KB	Text Document	6/9/2006 12:49 PM	A
E0000005.log	5,120 KB	Text Document	6/7/2006 11:10 PM	A
res1.log	5,120 KB	Text Document	6/3/2006 3:18 PM	A
res2.log	5,120 KB	Text Document	6/3/2006 3:18 PM	A	
Compare the above picture to what it looks like now.	
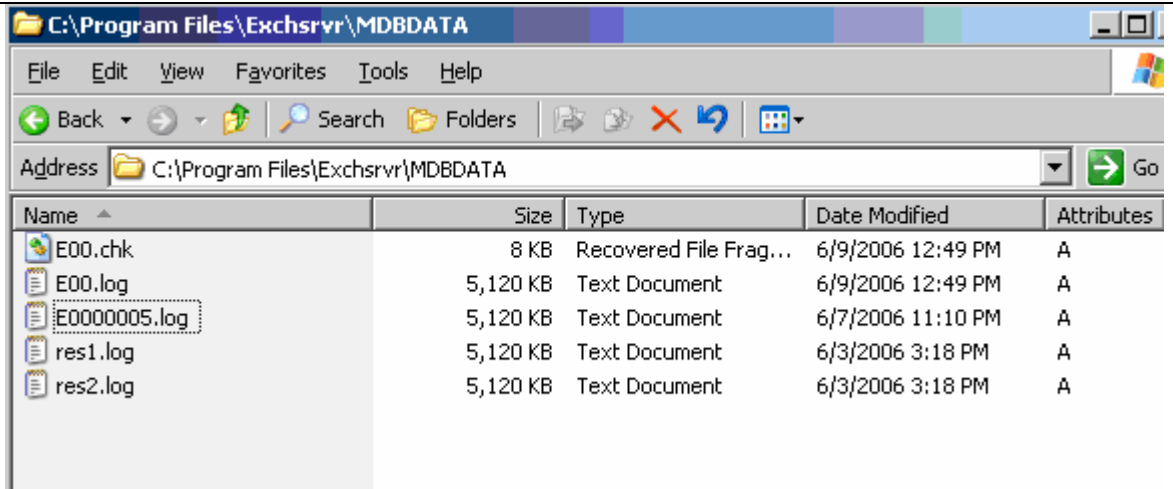
LAB 3: Exchange Best Practice Analyzer

In this lab we will use the Exchange Best practice analyzer to look at the Exchange environment and look for problems.

I am going to assume you can download it from Microsoft's site and install it.
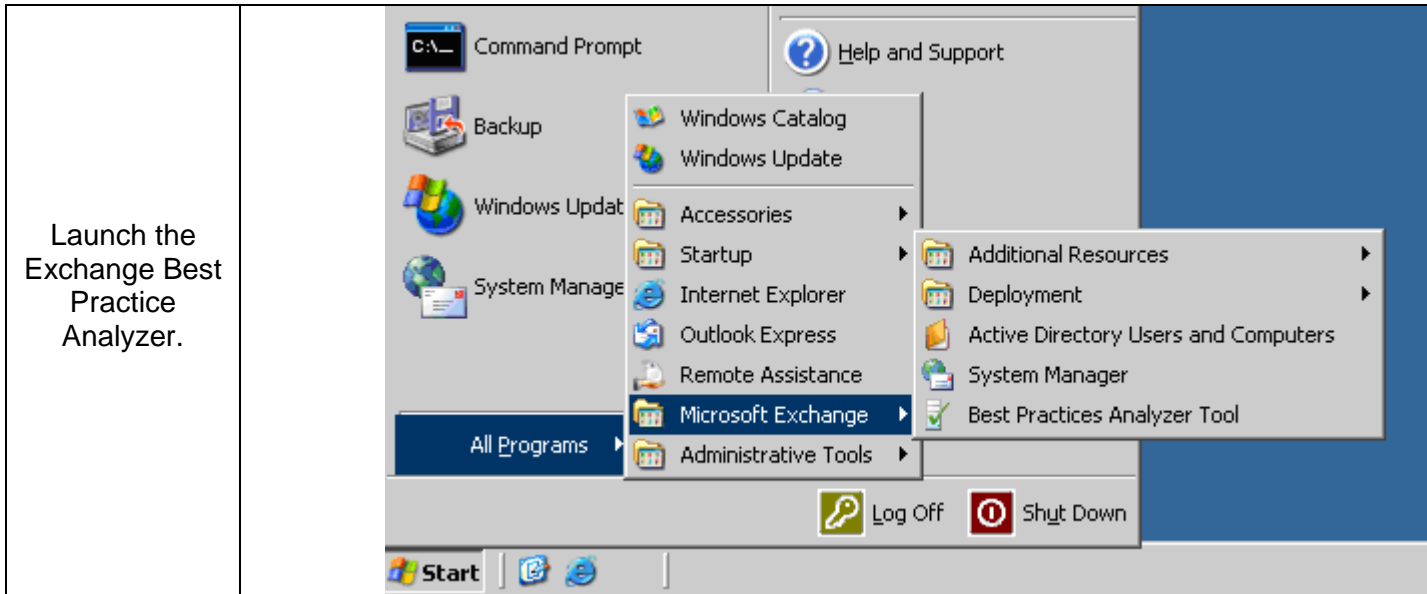
Launch the Exchange Best Practice Analyzer.	
Normally we select check for updates, but we will not do it now. Select "Do not Check…" And "Go to Welcome Screen"	

Click "Select Options for a new scan"	**Welcome to the Exchange Server Best Practices Analyzer** This tool will examine a single Exchange server, all servers in an Administration Group, or all servers in a deployment. Configuration information will then be gathered and examined from several sources (for example, Active Directory, WI registry, and the metabase) and verified for correctness. When the gathering and analysis process is complete, a list of issues will be presented, arranged by severity. For eac the tool provides descriptions of what the problem is and how it can be fixed. You can either begin a new scan at this point or examine a report of a scan already run. ➡ Select options for a new scan ➡ Select a Best Practices scan to view
Select "Connect to the active …"	**Connect to Active Directory** The Exchange Server Best Practices Analyzer must have read access to Active Directory. By default the tool will use the currently logged-on account, and will automatically find and connect to a suitable global catalog server. The account tha you are logged on with will also need administrator or equivalent access to each Exchange server. If you are running the Exchange Server Best Practices Analyzer in a different domain or want to specify a different global catalog server for the tool to connect to, enter the fully qualified domain name (FQDN) of the global catalog server here: Active Directory Server: `LAB-SOURCE` To run the Exchange Server Best Practices Analyzer under different accounts, click "Show advanced login options." ⌄ Show advanced login options ➡ Connect to the Active Directory server

Enter a name for this scan. Scroll down and click "Start Scanning"	**Start a New Best Practices scan** Enter an identifying label for this scan: ICCM-HealthCheck Specify the scope for this scan: ☑ Lab ☑ First Administrative Group ☑ LAB-SOURCE Summary: Scope is set to 1 server(s), 1 administration group(s), and the organization. → Select all → Unselect all Select the type of scan to perform: ⊙ Health Check ○ Permission Structure Check ○ Connectivity Test ○ Baseline Health Check options: ☐ Performance Baseline (2 hours)
Click "View a report…"	**Scanning Completed** Scanning has completed successfully. → View a report of this Best Practices scan Server scanning summary: Total servers: 1 completed **First Administrative Group** LAB-SOURCE ✔ Completed

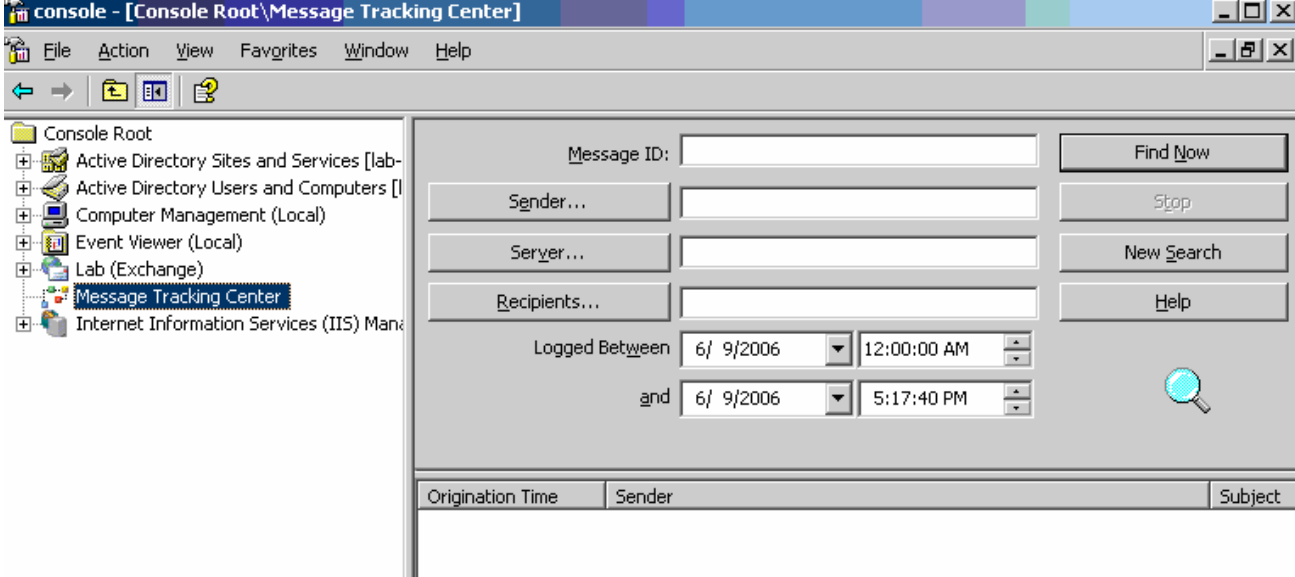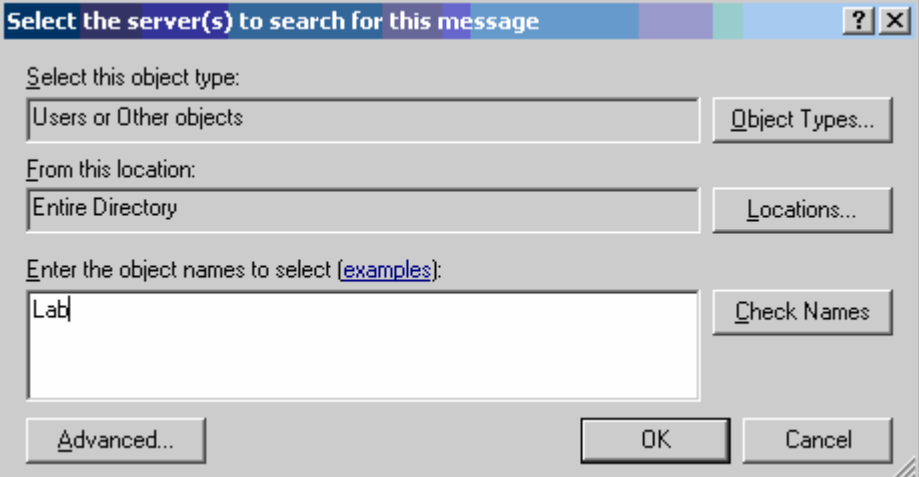|	

This shows the critical alerts in the organization.
 	
Click one of the alerts for more information.
	View Best Practices Report
	ICCM-HealthCheck
	
	Select Report Type: ⊙ 📋 List Reports ○ 📂 Tree Reports ○ 📄 Other Reports
	
	| Critical Issues | All Issues | Non-Default Settings | Recent Changes | Baseline | Informational Items |
	
	Critical Issues (2 items)
	
	🖨 Print report ⊙ Export report 🔍 Find Arrange by: \[Class ▼\]
	
	⊟ **Organization: Lab**
	
	  ⊟ **Admin Group: First Administrative Group**
	
	    ⊟ **Server: LAB-SOURCE**
	
	      ❌ VMware detected Server: LA…
	
	      ❌ Database backup critical Server: LA…

After you have read the information click "all Issues"	

Click on one of the alerts and read what it says.	**View Best Practices Report**
	ICCM-HealthCheck
	
	Select Report Type: ⊙ 📋 List Reports ○ 📂 Tree Reports ○ 📄 Other Reports
	
	| Critical Issues | All Issues | Non-Default Settings | Recent Changes | Baseline | Informational Items |
	
	All Issues (12 items)
	
	🖨 Print report ⊙ Export report 🔍 Find Arrange by: \[Class ▼\]
	
	ℹ Intelligent Message Filter recommendation
	
	⊟ **Organization: Lab**
	
	  ⚠ RUS appears to be stalled Organization: Lab
	
	  ⚠ RUS appears to be stalled Organization: Lab
	
	  ⊟ **Admin Group: First Administrative Group**
	
	    ⊟ **Server: LAB-SOURCE**
	
	      ❌ VMware detected Server: L…
	
	      ❌ Database backup critical Server: L…
	
	      ⚠ SMTP performance warning Server: L…

	The Exchange Best practice analyzer is a great tool to look at your exchange environment. You can also do baselines.

LAB 4: Troubleshooting

In this lab we will use the Message Tracking to follow messages to see where they pass through the system.

Message Tracking	
Enter "Lab" and click "Check Name" Click "OK"	

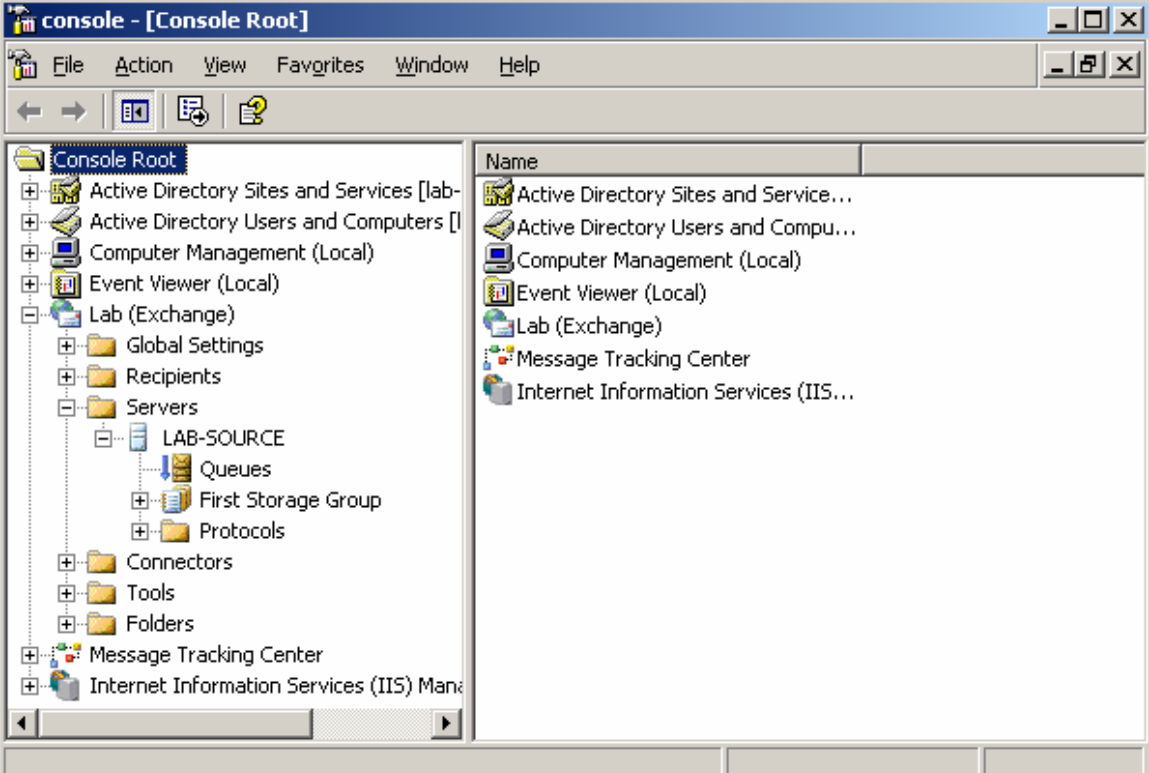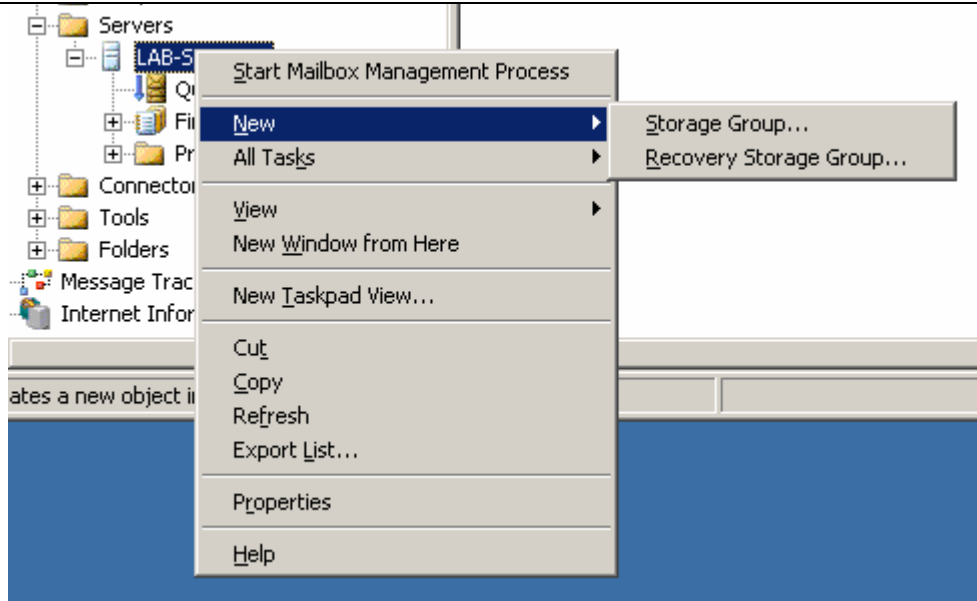|	
Click "Find Now"	Message ID: [ ] **Find Now** Sender... [ ] Stop Server... [lab-source.lab.local] New Search Recipients... [ ] Help Logged Between 6/ 9/2006 ▼ 12:00:00 AM and 6/ 9/2006 ▼ 5:17:40 PM Origination Time Sender Subject
Double click on a message.	Message ID: [ ] Find Now Sender... [ ] Stop Server... [lab-source.lab.local] New Search Recipients... [ ] Help Logged Between 6/ 9/2006 ▼ 12:00:00 AM and 6/ 9/2006 ▼ 5:17:40 PM Origination Time Sender Subject 6/9/2006 1:12 PM User1 I need an Extra Day 6/9/2006 1:13 PM User1 test 6/9/2006 1:08 PM User1@Lab.Local Will Stay in Queue

SMTP Protocol Log.

Extra Items

Section 1 Using Recovery Storage Groups to recover an individual message. (Warning the restrictions for this are very specific.)
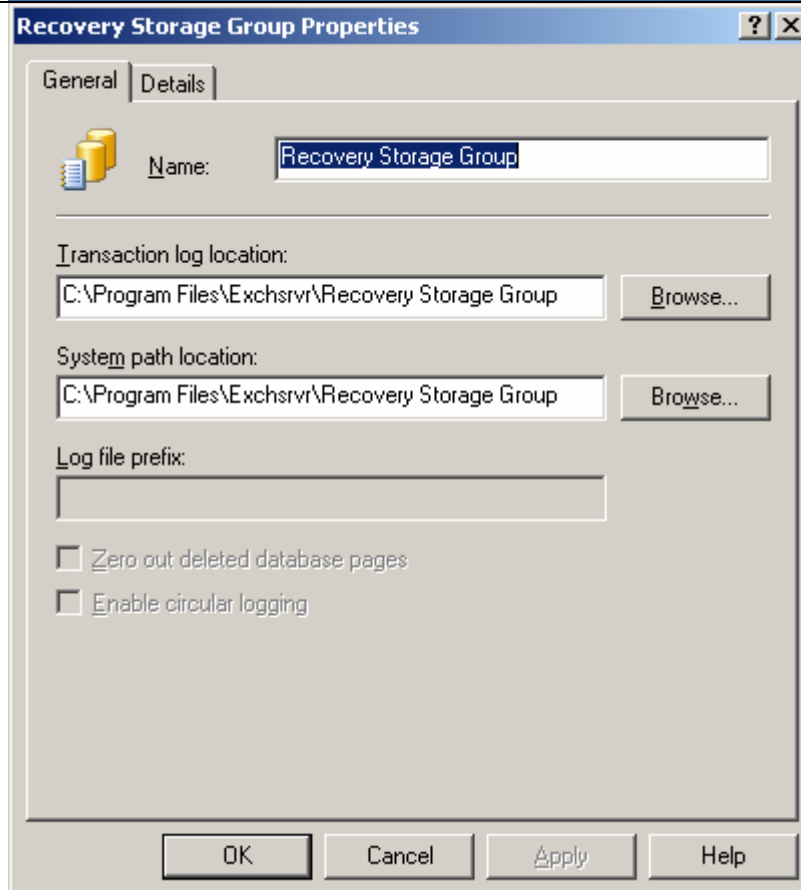
SKIP down to Page 28. START HERE!!!

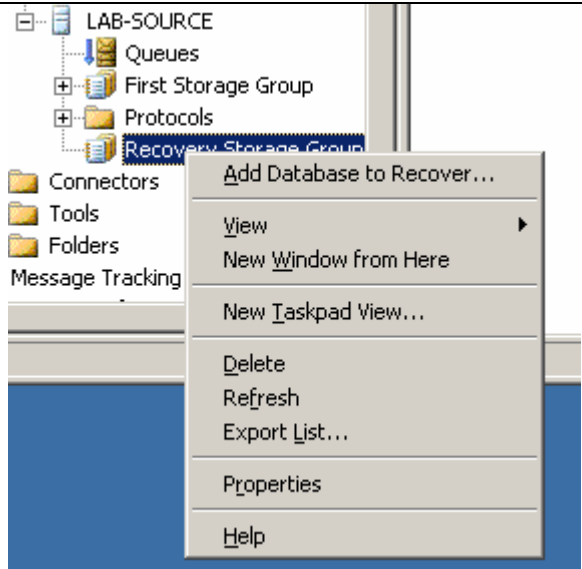|	
Open the Admin console from the desktop.	
Minimize OWA	
On the desktop Launch "Admin Console.MSC"	
Expand "Lab (Exchange)" Expand Servers Expand Lab-Source	

Right Click on Server name and Chose "New" = "Recovery Storage Group"	
Accept the Defaults and select "OK"	
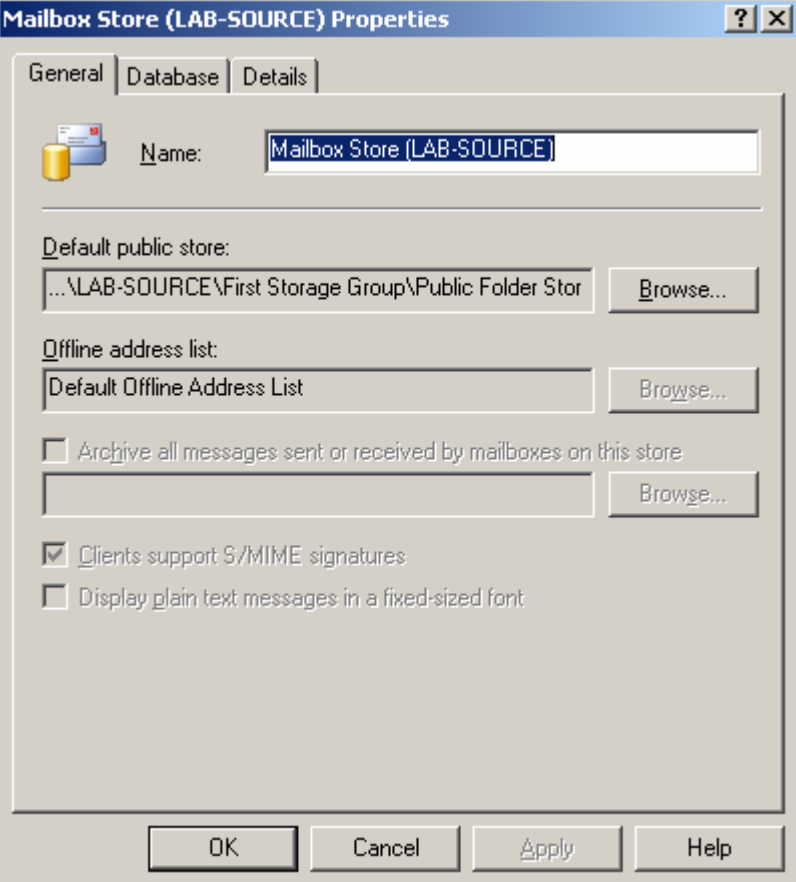
Right Click on "Recovery Storage Group" and select "Add Database to Recover"	LAB-SOURCE
	   Queues
	   First Storage Group
	   Protocols
	   Recovery Storage Group
	Connectors
	Tools
	Folders
	Message Tracking
	
	Add Database to Recover...
	View ▶
	New Window from Here
	New Taskpad View...
	Delete
	Refresh
	Export List...
	Properties
	Help

Select Mailbox Store and click "OK"	**Select database to recover** _ □ × General Your Exchange Server is version 7638. Databases from later versions of Exchange, as well as databases from versions of Exchange 2000 previous to SP3 will not be shown. Find Now Stop Clear All OK Search results: | Name	X500 Distinguished Name
Mailbox Store (LA...	CN=Mailbox Store (LAB-SOURCE),C...	
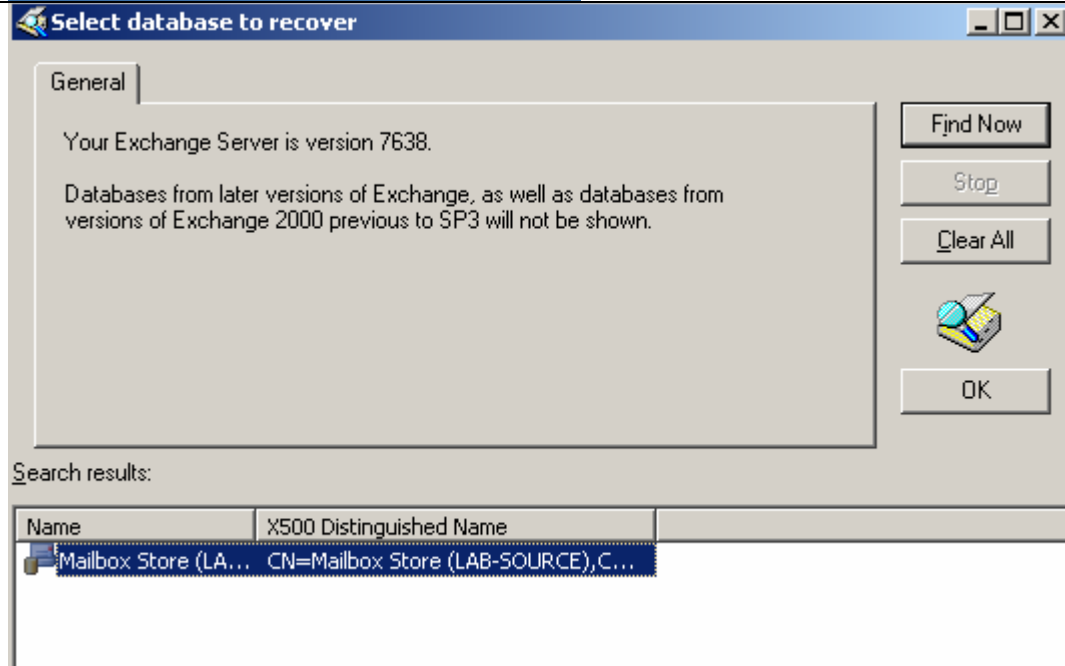
Accept Defaults and Click "OK"	
Launch NT Backup	Start, All Programs, Accessories, System Tools
Click Next	
Select "Restore Files and	

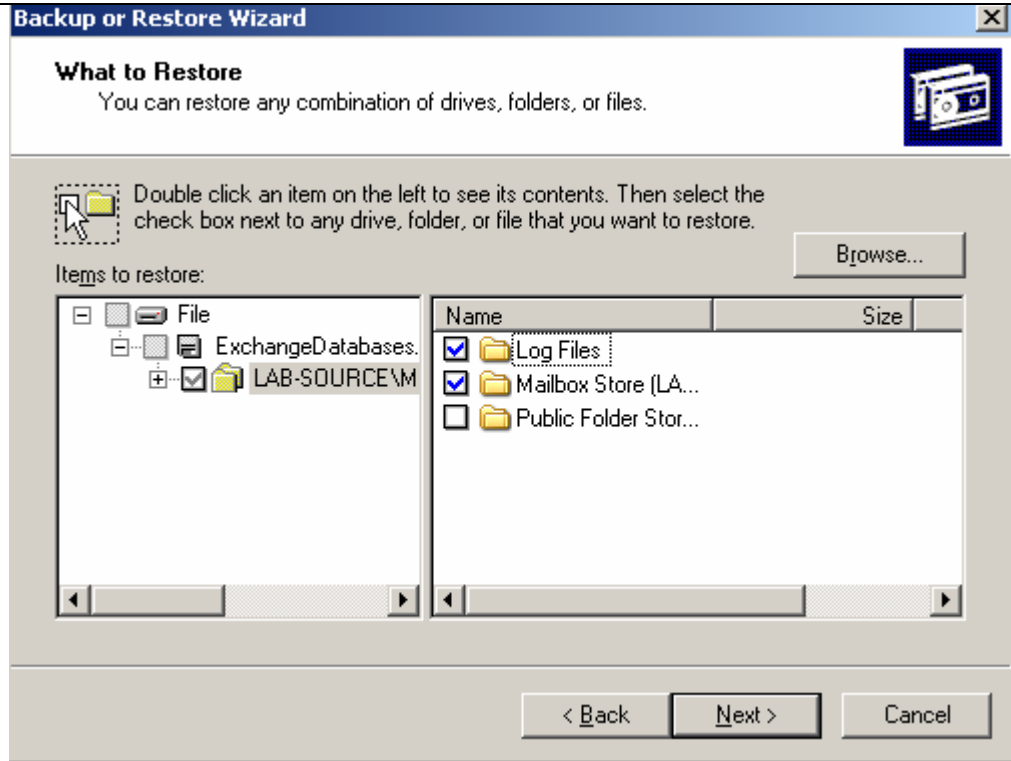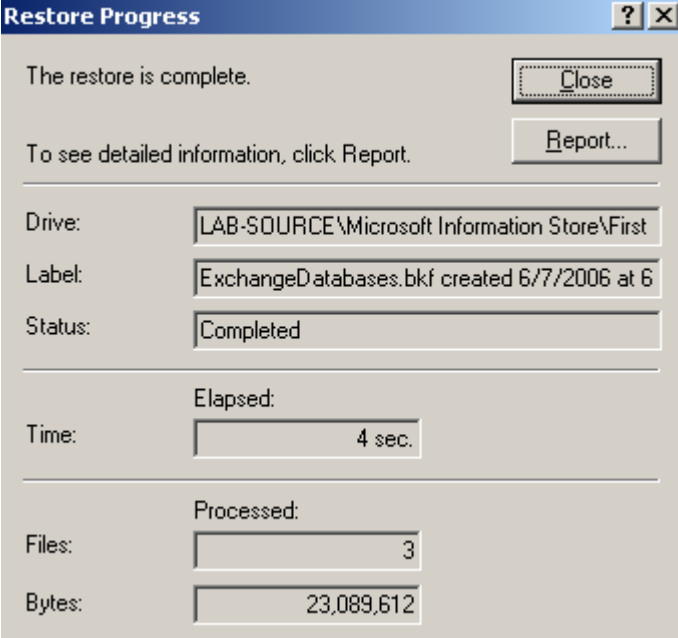|	
Settings" and Next	

Expand File-ExchangeDat…
 	
Expand "Lab-Sourc…"
 	
Then on the right hand side select:
"Log Files"
And
"Mailbox Store"
 	
Click Next.
	Backup or Restore Wizard ☒
	
	What to Restore
	You can restore any combination of drives, folders, or files.
	
	Double click an item on the left to see its contents. Then select the check box next to any drive, folder, or file that you want to restore.
	
	Browse…
	
	Items to restore:
	
	☐ 💾 File
	  ☐ 🖪 ExchangeDatabases.
	    ☑ 📁 LAB-SOURCE\M
	
	Name
		Size
		☑ 📁 Log Files
		☑ 📁 Mailbox Store (LA…
		☐ 📁 Public Folder Stor…
		
		< Back Next > Cancel

Select "Last Restore Set" and "Mount Database After Restore" Click "Next"	**Backup or Restore Wizard** ☒ **Restore Database Server** Specify how to restore the selected backup of the database store. Choose the database server where data will be restored, and select the desired restore options. Backup From: LAB-SOURCE\Microsoft Information Store\First Storage Group Restore To: LAB-SOURCE Browse… Temporary location for log and patch files: c:\temp ☑ Last Restore Set (Log file replay will start after this restore completes.) ☑ Mount Database After Restore < Back Next > Cancel

Then Click "Finish"	**Backup or Restore Wizard** ✕ **Completing the Backup or Restore Wizard** You have created the following restore settings: Restore from: ExchangeDatabases.bkf created 6/7/2006 Type: File Restore to: Original locations Existing files: Do not replace To close this wizard and start the restore, click Finish. To specify additional restore options, click Advanced. [Advanced...] [< Back] [Finish] [Cancel]
When it is done it will display this message. Click Close	**Restore Progress** ? ✕ The restore is complete. [Close] To see detailed information, click Report. [Report...] Drive: LAB-SOURCE\Microsoft Information Store\First Label: ExchangeDatabases.bkf created 6/7/2006 at 6 Status: Completed Time: Elapsed: 4 sec. Files: Processed: 3 Bytes: 23,089,612
Setting Permissions for Exmerge	We are about to use ExMerge to recover the mailbox. The issue is we have to have the correct permissions for ExMerge to work. By default the Administrators and Domain Admins are "Denied" the "Send As" and "Receive As" right. We need to give this right back so ExMerge will work.

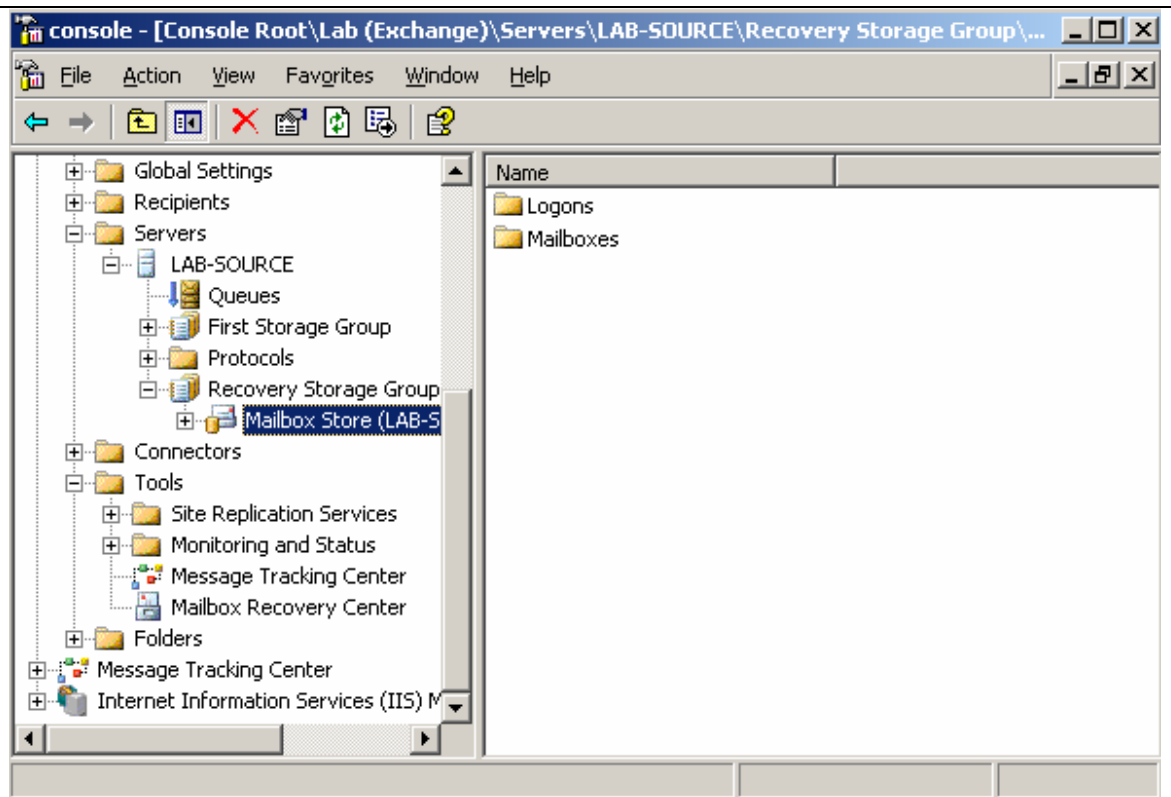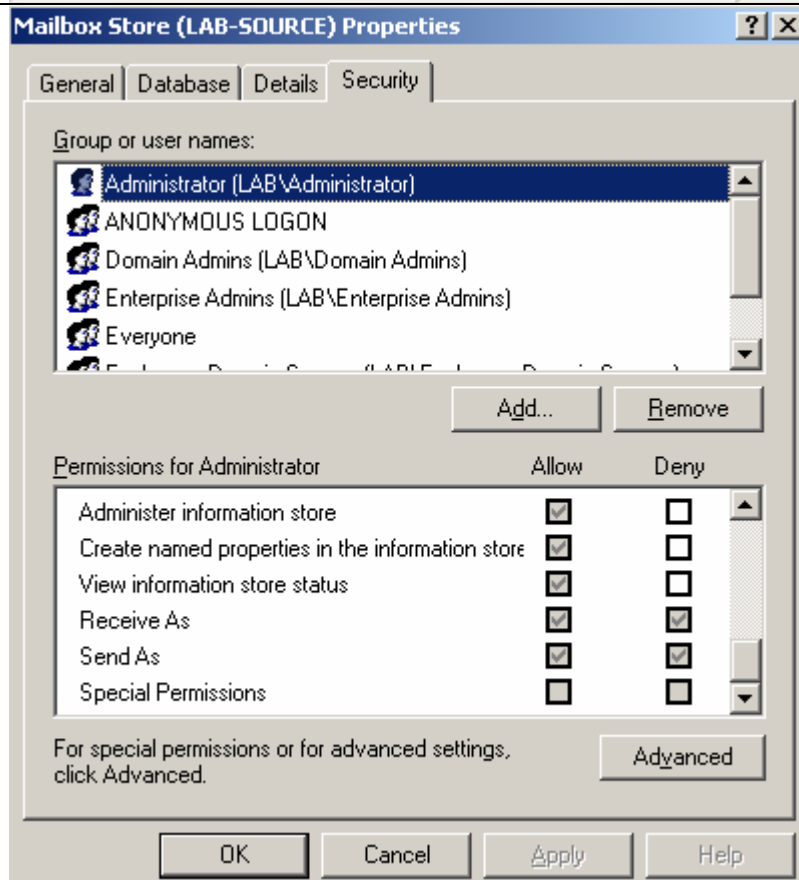|	
Go Back to the "Admin Console" Expand "Lab (Exchange)" Expand Servers Expand Lab-Source Expand "First Storage Group" Right Click on "Mailbox Store" and select Properties	**console - [Console Root\Lab (Exchange)\Servers\LAB-SOURCE\Recovery Storage Group\...** File Action View Favorites Window Help ⊞ Global Settings ⊞ Recipients ⊟ Servers 　⊟ LAB-SOURCE 　　Queues 　　⊞ First Storage Group 　　⊞ Protocols 　　⊟ Recovery Storage Group 　　　⊞ Mailbox Store (LAB-S ⊞ Connectors ⊟ Tools 　⊞ Site Replication Services 　⊞ Monitoring and Status 　　Message Tracking Center 　　Mailbox Recovery Center ⊞ Folders ⊞ Message Tracking Center ⊞ Internet Information Services (IIS) M Name Logons Mailboxes
Go to the Security Tab. Click on "Administrator" and in the window on the bottom scroll all the way to the end. You will notice "Send As" and "Receive As" have an inherited Deny. This must be overridden for Exmerge to work. So Click "Advanced"	**Mailbox Store (LAB-SOURCE) Properties** General	Database	Details	Security Group or user names: Administrator (LAB\Administrator) ANONYMOUS LOGON Domain Admins (LAB\Domain Admins) Enterprise Admins (LAB\Enterprise Admins) Everyone Add...　　Remove Permissions for Administrator　　Allow　Deny Administer information store　　☑　☐ Create named properties in the information store　☑　☐ View information store status　☑　☐ Receive As　　☑　☑ Send As　　☑　☑ Special Permissions　　☐　☐ For special permissions or for advanced settings, click Advanced.　　Advanced OK　Cancel　Apply　Help

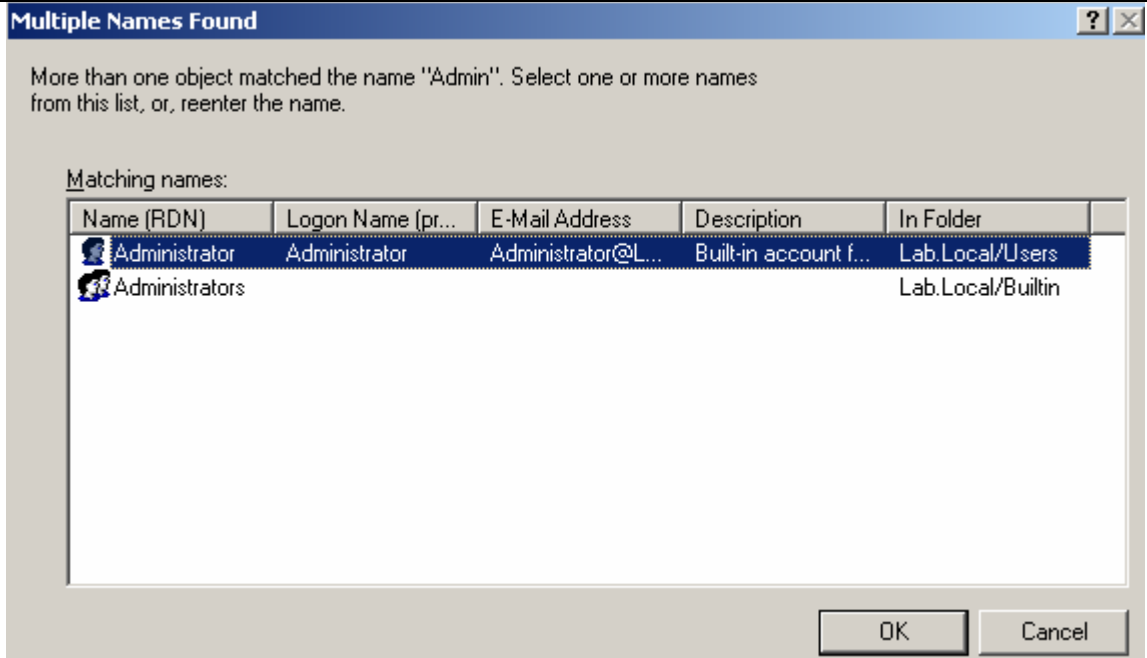|	
Click "Add"	**Advanced Security Settings for Mailbox Store (LAB-SOURCE)** ? X Permissions | Auditing | Owner To view more information about special permissions, select a permission entry, and then click Edit. Permission entries: | Type	Name	Permission	Inherited From	Apply To
---	---	---	---	---
Allow	LAB-SOURCE$ (LA...	Full control	Parent Object	This object and subc...
Deny	Exchange Domain S...	Receive As	Parent Object	This object and subc...
Deny	Domain Admins (LAB...	Receive As	Parent Object	This object and subc...
Deny	Domain Admins (LAB...	Send As	Parent Object	This object and subc...
Deny	Enterprise Admins (L...	Receive As	Parent Object	This object and subc...
Deny	Enterprise Admins (L...	Send As	Parent Object	This object and subc...
Deny	Administrator (LAB\A...	Receive As	Parent Object	This object and subc...
Deny	Administrator (LAB\A...	Send As	Parent Object	This object and subc...	 [Add...] [Edit...] [Remove] ☑ Allow inheritable permissions from the parent to propagate to this object and all child objects. Include these with entries explicitly defined here.
Type in "Exmerge" and "Check Names" NOTE!!!! Use ExMerge instead of Administrator	**Select Users, Computers, or Groups** ? X Select this object type: [Users, Groups, or Built-in security principals] [Object Types...] From this location: [Lab.Local] [Locations...] Enter the object names to select (examples): [Admin] [Check Names] [Advanced...] [OK] [Cancel]

Select Administrator and "OK" Click OK Again to get to the Permissions screen again.	**Multiple Names Found** ? X More than one object matched the name "Admin". Select one or more names from this list, or, reenter the name. Matching names: | Name (RDN)	Logon Name (pr...	E-Mail Address	Description	In Folder
---	---	---	---	---
Administrator	Administrator	Administrator@L...	Built-in account f...	Lab.Local/Users
Administrators				Lab.Local/Builtin	 OK Cancel
Scroll all the way to the bottom. Select "Receive As" And "Send As" **Scroll to the top and select "Administer Information Store"** Click "OK" Twice	**Permission Entry for Mailbox Store (LAB-SOURCE)** ? X Object Name: Administrator (LAB\Administrator) Change... Apply onto: This object, subcontainers and children objects ▼ Permissions: Allow Deny Delete children ☐ ☐ List contents ☐ ☐ Add/remove self ☐ ☐ Read properties ☐ ☐ Write properties ☐ ☐ Delete tree ☐ ☐ List object ☐ ☐ Open mail send queue ☐ ☐ Administer information store ☐ ☐ Create named properties in the informati ☐ ☐ View information store status ☐ ☐ Receive As ☑ ☐ Send As ☑ ☐ ☐ Apply these permissions to objects and/or containers within this container only Clear All OK Cancel
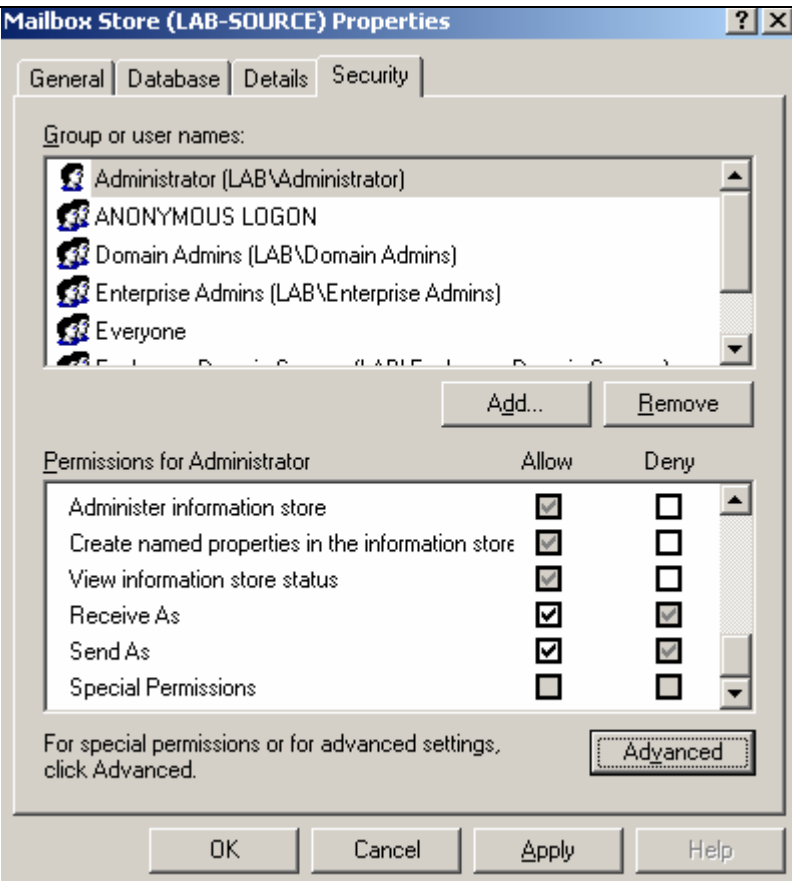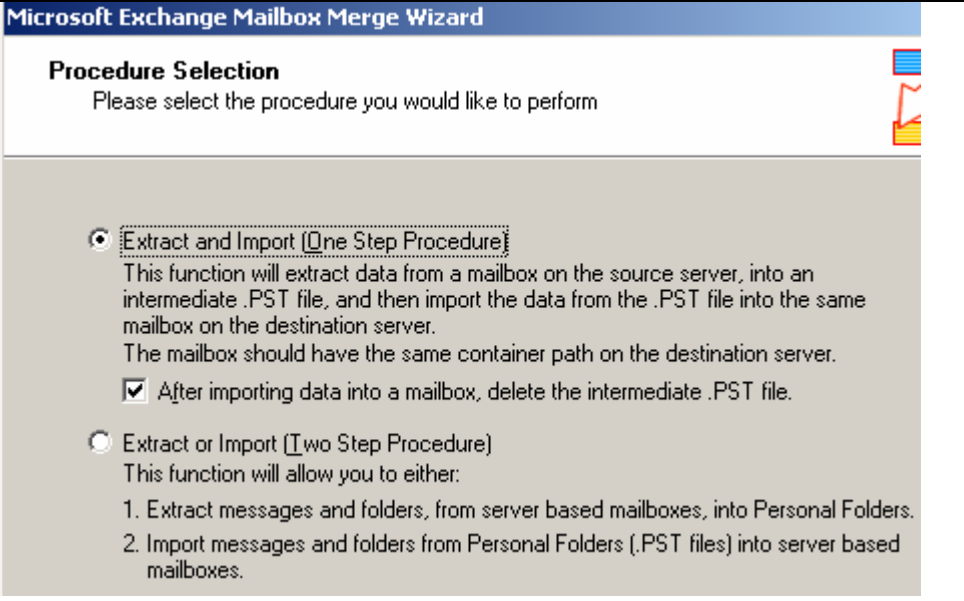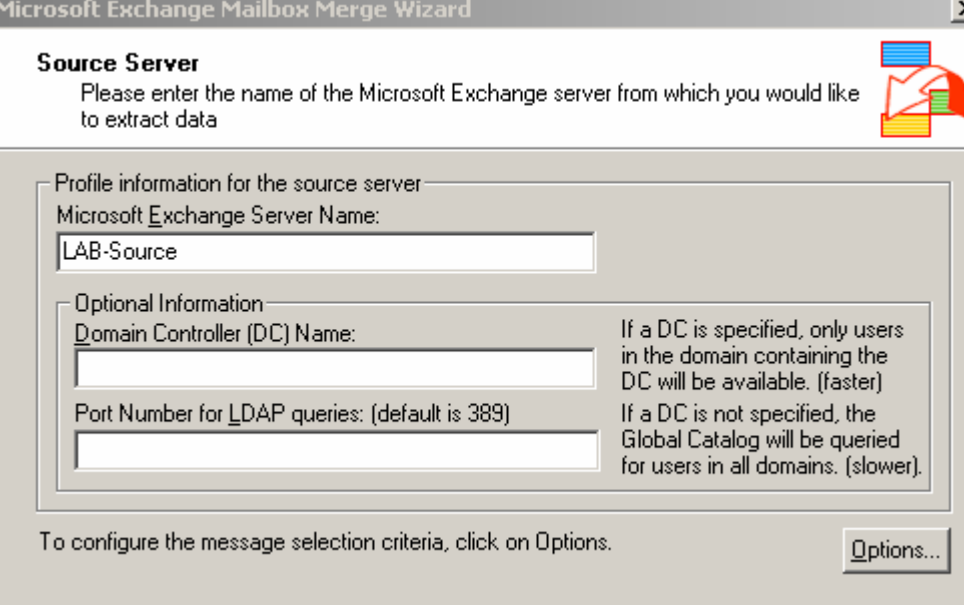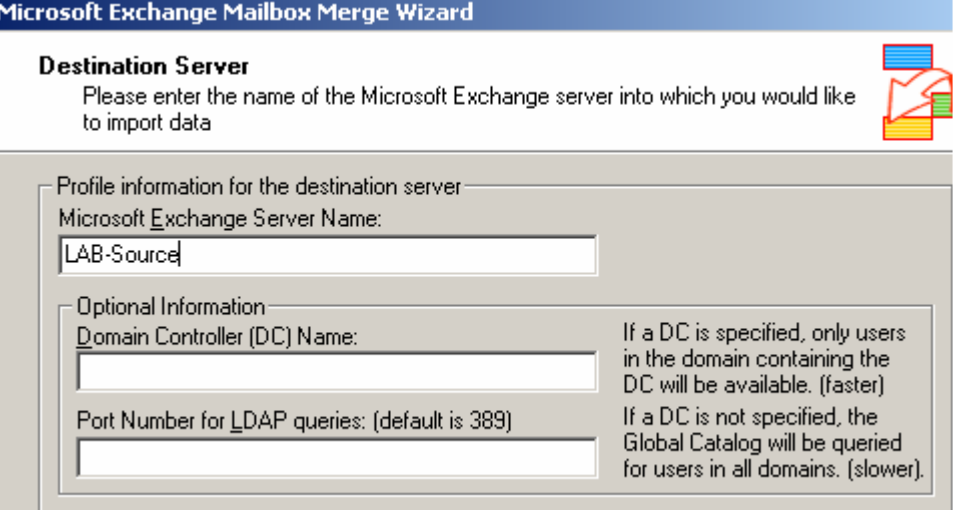
You will notice now there are "Explicit" permissions for the "Send As" and "Receive As" Click "OK"	
Copy ExMerge Files to the Exchange Directory	To get Exmerge to run you have to copy it to the same directory where the Exchange BIN files are located. 1. Copy the contents of C:\ExMerge to C:\ProgramFiles\EXCHSRV\BIN
Logout of the window	
Log back in as ExMerge Same password	
Start ExMerge by double clicking on exmerge.exe from the BIN directory	to C:\ProgramFiles\EXCHSRV\BIN\ExMerge.exe

Click Next For Time purposes we are going to do a "One Step Procedure" Where the data will be extracted and imported in a single step. Usually you do the "Two Step Procedure" Click Next	**Microsoft Exchange Mailbox Merge Wizard** **Procedure Selection** Please select the procedure you would like to perform ⦿ Extract and Import (One Step Procedure) This function will extract data from a mailbox on the source server, into an intermediate .PST file, and then import the data from the .PST file into the same mailbox on the destination server. The mailbox should have the same container path on the destination server. ☑ After importing data into a mailbox, delete the intermediate .PST file. ○ Extract or Import (Two Step Procedure) This function will allow you to either: 1. Extract messages and folders, from server based mailboxes, into Personal Folders. 2. Import messages and folders from Personal Folders (.PST files) into server based mailboxes.
Enter "LAB-Source" into the Exchange Server Name Field Click Next.	**Microsoft Exchange Mailbox Merge Wizard** **Source Server** Please enter the name of the Microsoft Exchange server from which you would like to extract data Profile information for the source server Microsoft Exchange Server Name: LAB-Source Optional Information Domain Controller (DC) Name: Port Number for LDAP queries: (default is 389) If a DC is specified, only users in the domain containing the DC will be available. (faster) If a DC is not specified, the Global Catalog will be queried for users in all domains. (slower). To configure the message selection criteria, click on Options. Options...
To set the Destination Server. Enter "LAB-Source" into the Exchange Server Name Field Click Next.	**Microsoft Exchange Mailbox Merge Wizard** **Destination Server** Please enter the name of the Microsoft Exchange server into which you would like to import data Profile information for the destination server Microsoft Exchange Server Name: LAB-Source Optional Information Domain Controller (DC) Name: Port Number for LDAP queries: (default is 389) If a DC is specified, only users in the domain containing the DC will be available. (faster) If a DC is not specified, the Global Catalog will be queried for users in all domains. (slower).

To Set the database to be used as the source select "Recovery…." Click Next.	