Contents

I. Introduction .......................................................................................................................................... 3

II. Configure Microsoft Online for your Organization ............................................................................. 3
    1. Add your Organization’s SMTP domains as accepted domains ................................................... 3

III. Establish Email Coexistence with Microsoft Online (Optional) ...................................................... 10
    1. Configure TLS between your on premise Exchange server and Microsoft Online .................... 10
    2. Create an SMTP connector ........................................................................................................ 19

IV. Create/Update the SPF record for your domain.............................................................................. 22

V. Create a CNAME record for Autodiscover ....................................................................................... 22

VI. Create a Test Mailbox in Microsoft Online ..................................................................................... 23

VII. Verify Mailflow with Microsoft Online ............................................................................................ 28

VIII. Enable Directory Synchronization .................................................................................................. 28
    1. Enable Directory Synchronization within Microsoft Online ...................................................... 28
    2. Install the Directory Synchronization Agent .............................................................................. 30
    3. Configure the Directory Synchronization Agent ........................................................................ 34
    4. Verify Directory Synchronization ............................................................................................ 37

IX. Migrate Mailboxes ............................................................................................................................ 39
    1. Install the Microsoft Online Services Migration Tool ............................................................... 39
    2. Activate Accounts you want to Migrate within Microsoft Online ............................................. 42
    3. Migrate Mailbox Data ............................................................................................................... 46

X. Decommission existing Exchange Environment ................................................................................ 52
    1. Configure Microsoft Online to accept inbound mail for your domain ...................................... 52
    2. Update your Organization’s MX record .................................................................................... 57

©2009 MessageOps, LLC. All Rights Reserved.  2
I. Introduction

The purpose of this document is to provide a step by step guide to migrate your organization from your existing on premise Exchange 2000 Organization to Microsoft Online. It assumes that your Microsoft Online account is active and that your environment meets the requirements for Microsoft Online. If you are unsure that your environment meets the prerequisites, please review the MessageOps Exchange 2000 Migration Requirements Checklist, or speak with your MessageOps migration Consultant.

II. Configure Microsoft Online for your Organization

1. Add your Organization’s SMTP domains as accepted domains

Adding your existing domains to Microsoft will allow users on Microsoft Online to send messages with a reply-to address of your existing SMTP domains.

*Note: Adding domains to Microsoft Online will have no impact how mail currently flows into and out of your environment.*

1. Log into [https://admin.microsoftonline.com](https://admin.microsoftonline.com) using the admin account for your Microsoft Online Account
2. Click on the Users tab (see figure below)
3. Click on Domains (see figure below)

The All Domains area shows you which domains your Microsoft Online account can use. In the example below, the domain MessageOpsDemo.microsoftonline.com is the domain that was created automatically.
4. Click on **New** (see figure below)

5. In the dialog box that appears, **enter your existing domain name** currently used by the on-premise Exchange Server, select type **External Relay** and **Click Create** (see figure below)

By selecting the domain type of External Relay, Exchange Online will first check to see if the recipient exists locally within Microsoft Online, and if it doesn’t find a match, it will query the MX record for the domain, and send it to the MX found.
6. After clicking Create, the domain will be created and a summary displayed. In the window that appears, **Check the box to “Start the Verification wizard when this window is closed”** and **Click Finish** (see figure below)
7. After clicking finish the **Verify your Domain** window will appear. (see figure below)

The CNAME information provided must now be created on the DNS server that hosts your Organization’s public DNS records. In this example a CNAME record must be created in the messageopsdemo.com domain with a name of ms70674012. The CNAME should be configured to point to red001.mail.microsoftonline.com.

*Note: This CNAME is only created so that Microsoft can verify you own the domain you are trying to add. It will have no impact on mailflow.*

*If you are unsure who hosts your public DNS, please contact MessageOps for assistance.*
In this example, the domain MessageOpsDemo.com is hosted by GoDaddy. The screen below shows how to create the record using GoDaddy’s Domain Manager. For more information about creating CNAME records at other providers, visit:

8. Once you have created the CNAME record, **Click Verify**. If verification is successful, you will see the screen below:

If you received an error, you should verify that the CNAME was created correctly and wait 30 minutes before trying again. To start the verification wizard later you will need to go to the Domains area and click on the **Verify Now** link next to the domain (see figure below) to begin the verification wizard again. If you continue to have problems verifying the domain, contact MessageOps for assistance.

9. Repeat Steps 4 – 8 for all domains you wish to add to Microsoft Online.
Note: Only domains added to Microsoft Online will be available to assign to users.
Note: You do not need to add sub domains of verified parent domains. All domains must be added before you begin directory synchronization.

In this example, MessageOps.net and MessageOps.org have been added as additional domains.

10. After you have entered your domains, you should select which domain will be the default domain. The default domain will the domain assigned to new users.

11. Click the Domain you want to make the default domain, to bring up the Domain Properties window. Check the box to make the selected domain the default user account domain.
III. Establish Email Coexistence with Microsoft Online (Optional)

By default, basic email coexistence is available between your Organization and Microsoft Online after you verify your domains. New mail will continue to come into your on premise Exchange server and if the user has been migrated, that mail will be forwarded to their microsoftonline.com address. In the case of MessageOpsDemo.com the Microsoft Online routing address is MessageOpsDemo.MicrosoftOnline.com. When the routing domain is created, Microsoft Online automatically creates an MX record for the domain, so anyone, including your on premise Exchange server, can send mail to it. In the case of MessageOpsDemo.MicrosoftOnline.com the MX record is:

messageopsdemo.microsoftonline.com  MX preference = 0, mail exchanger = mail.global.frontbridge.com

The steps below are only necessary if you want email communications with Microsoft Online encrypted. If that is not a requirement, skip to section IV of this document.

1. Configure TLS between your on premise Exchange server and Microsoft Online

Configuring TLS on the Exchange server will allow you to encrypt messages sent to Microsoft Online. This could be important for some organizations due to the fact that during the co-existence period some people will be using mailboxes on the on premise Exchange server, while the migrated users will be logging into mailboxes on Exchange Online. Without TLS, messages sent between on premise and Exchange Online users will be transmitted over the Internet in plain text.

The downside to implementing TLS is that you’ll have to purchase a certificate from a trusted Authority, such as GoDaddy or VeriSign. At time of this writing, a basic GoDaddy SSL cert is $30. Additionally, depending on your current environment, it could be difficult to implement. For example, if your organization relies on an external relay service or a non-Exchange bridgehead, the certificate will have to installed on that device. Given the additional complexity to setup TLS, some organizations may decide to not implement TLS, especially if they are planning on a short coexistence period.

The steps below will demonstrate how to install a certificate to be used with TLS on Exchange 2000.
1. Open Exchange System Manager, Expand Servers, Expand the Bridgehead Server in your Organization, Expand Protocols, Expand SMTP, Right Click on Default SMTP Virtual and choose Properties. (see figure below)

2. In the Properties box that appears click the **Access Tab** and then click the **Certificate button** (see figure below)
3. On the Welcome Screen that appears, click **Next**

4. On the Delayed or Immediate request window, choose **Prepare the request now, but send it later.** Click **Next**.

5. On the Name and Security Settings window, **enter a name for the certificate** and **change the bit length to 2048**. Click **Next**.
6. Enter your Organization information and click **Next**.

7. In the Your Site’s Common Name window enter the DNS name of the server on the Internet. For example, mail.messageopsdemo.com. Do not leave it as the default, which is the NETBIOS name of the server. Click **Next**.
8. Enter your Geographical Information and click **Next**.

9. Enter a file name to save the Certificate Request as. Click **Next**.
10. Review the Request File Summary and click **Next**

   ![Image of IIS Certificate Wizard: Request File Summary]

   - **File name**: `c:\certreq.txt`
   - **Your request contains the following information:**
     - **Issued To**: mail.messageopsdemo.com
     - **Friendly Name**: Default SMTP Virtual Server
     - **Country / Region**: US
     - **State / Province**: NC
     - **City**: Charlotte
     - **Organization**: MessageOps
     - **Organizational Unit**: MessageOps

11. Click **Finish** to complete the certificate wizard

   ![Image of IIS Certificate Wizard: Completing the Web Server Certificate Wizard]

   - **You have successfully completed the Web Server Certificate wizard. A certificate request was created and saved to the file:**
     `c:\certreq.txt`
   - **Send or e-mail this file to your certification authority, who will send you a response file containing your new certificate.**
   - **Restart this wizard to attach the new certificate to your server.**

   - **Click here** for a list of certification authorities who offer services for Microsoft products.
   - **To close this wizard, click Finish.**

©2009 MessageOps, LLC. All Rights Reserved.
12. At this point you must submit the certificate request file to a certificate authority such as GoDaddy or Verisign. When complete, you will receive a .cer file which will be imported.

13. Once you have received the .cer file from the certificate authority, return to properties of the Default SMTP virtual server and go to the Access tab and click the Certificates button.

14. Click Next on the Welcome screen

15. Choose the option to “Process the pending request and install the certificate” and click Next
16. Browse to the location of the certificate file provided to you by the certificate authority and click **Next**

17. Review the Certificate summary and click **Next** to install the certificate.
18. Click Finish to exit the wizard

At this point the certificate is installed on the server and your server is now able to use TLS to receive mail. By default Microsoft Online servers will try TLS first and fail back to plain text if TLS fails. In the next section we will show how to configure TLS on the outbound connection to Microsoft Online.
2. Create an SMTP connector

Creating an SMTP connector with Microsoft Online will allow you to force your on premise Exchange server to use TLS when sending to your Microsoft Online domain. You could also create an SMTP connector to Microsoft Online if you want messages destined for Microsoft Online to take a different path than normal Internet email traffic.

1. Open Exchange System Manager, right click on connectors, select New -> SMTP Connector

2. In the Properties window, on the General tab name the connector Microsoft Online (see figure below)

3. Choose the option to Forward all mail through this connector to the following smart hosts and enter: mail.global.frontbridge.com (see figure below)
4. Click the Add button and select the bridgehead server for your organization.

5. Click the Address Space tab and enter the name of your Microsoft Online routing domain. In this case, messageopsdemo.microsoftonline.com.
6. Click the **Advanced** tab
7. Click the **Outbound Security** button
8. In the Outbound Security window select **TLS Encryption**

*Note: If you do not have a certificate installed, skip this step*

9. Click OK to return to Exchange System Manager
IV. Create/Update the SPF record for your domain

In most cases this will be another optional, but recommend step. If you are unfamiliar with Sender Policy Framework (SPF), it is simply a system designed to prevent email source address spoofing. SPF allows domain owners to specify which Internet hosts are allowed to send e-mail claiming to originate from that domain, by creating a specific DNS TXT record. If you or your ISP have implemented SPF you will need to update the record, so that people who have been migrated to Microsoft Online can continue to send using the primary SMTP domain.

To create the SPF record, you will need to access the administration page for your Organization’s Internet DNS server. You will then need to create the SPF (txt) record. Depending on what is already in place, your record may look different than the one added in this example, shown below:

```
v=spf1 mx include:spf.microsoftonline.com ~all
```

The above is interpreted:

- `v=spf1` – The Version of SPF
- `mx` – The sending server(s) whose IP addresses match the IP address of the MX record for the domain are allowed
- `include:spf.microsoftonline.com` – This specifies the domain spf.microsoftonline.com should be searched for matches. This record would include all the Frontbridge servers which mail is sent out of Microsoft online through
- `~all` – if the previous mechanisms did not match, the message should be rejected

V. Create a CNAME record for Autodiscover

Creating an Autodiscover record will allow Outlook 2007 profiles to be configured automatically. To create the record you will need to access the administration page for your Organization’s Internet DNS server and enter the following CNAME record:

**Name:** Autodiscover.domain.com

**Points to:** AutodiscoverRedirect-Red001.Mail.MicrosoftOnline.com
VI. Create a Test Mailbox in Microsoft Online

To verify mailflow to Microsoft Online you must first create a mailbox within Microsoft Online. If you already have a mailbox created, you can skip this section.

1. Log into https://admin.microsoftonline.com using the admin account for your Microsoft Online Account
2. Click on the Users tab (see figure below)
3. Click on User List (see figure below)
4. Click on Add New User (see figure below)
5. In the New User window that appears, enter the required information. Ensure the domain is the microsoftonline.com routing domain. Click **Next** (see figure below)

6. On the Settings screen, write down the user’s password. Leave all other options as the defaults and click **Next**

©2009 MessageOps, LLC. All Rights Reserved.
7. On the Services screen, you can reduce the size of the mailbox and click **Create**

8. On the Confirmation screen, click **Finish**
9. Before the test account can sign in, you must change its password.
10. Go to https://home.microsoftonline.com
11. Click on **Go Directly to My Company Portal**

12. Enter the test user’s username and password (see figure below)

13. You will then be prompted to change the user’s password. Enter the requested information and click **Save**
14. You should then see a screen indicating the password was changed successfully.

15. Browse to Outlook Web Access via [https://mail.microsoftonline.com](https://mail.microsoftonline.com)

16. Enter the test user’s username and new password and click Log On (see figure below)

17. Select your Language and Time Zone and click OK

18. You are now logged into the test user’s mailbox where you can send and receive mail.
VII. Verify Mailflow with Microsoft Online

To verify mailflow you simply need to make sure an on premise user can send to a Microsoft online user and vice versa.

1. Log into Microsoft Online’s Outlook Web Access, https://mail.microsoftonline.com, using the test account
2. From Outlook Web Access send a message to user who is located on the on premise Exchange server. For example, in this case the on premise domain is messageopsdemo.com, so you would send a piece of mail to joe@messageopsdemo.com.
3. Verify that Joe received the message
4. Have Joe reply to the message. The reply-to address should be: testuser@messageopsdemo.microsoftonline.com
5. Verify the reply is received in the test user’s Microsoft Online mailbox

VIII. Enable Directory Synchronization

Enabling Directory Synchronization allows you to continue to manage users in your local Active Directory and have the changes you make replicate to Microsoft Online. Examples include user attributes such as names, addresses, phone numbers as well as group membership. Although Directory Synchronization is not required, it is recommended.

Before beginning Directory Synchronization, you should consult with your MessageOps consultant to ensure that your environment is ready. You should also review the MessageOps Exchange 2000 Migration Requirements Checklist, to ensure all the prerequisites have been met.

1. Enable Directory Synchronization within Microsoft Online

   Enabling Directory Synchronization within Microsoft Online will allow Microsoft Online to accept updates from your local Active Directory Domain.

   1. Log into https://admin.microsoftonline.com using the admin account for your Microsoft Online Account
   2. Click on the Migration tab (see figure below)
   3. Click on Directory Synchronization (see figure below)
   4. Click the box “I have read the planning document” (see figure below)
   5. Click the Enable button (see figure below)
6. In the window that appears, click Enable (see figure below)

7. You should now see that Directory Synchronization is enabled (see figure below)

8. Click the Download button to download the Directory Synchronization Agent (see figure below)
2. Install the Directory Synchronization Agent

Before installing the Directory Synchronization Agent, ensure you have read the *MessageOps Exchange 2000 Migration Requirements Checklist*, and have a system that is capable of running the agent as well as permissions to the environment. Also if you have more than 20,000 objects in your Active Directory contact MessageOps before installing the agent in your environment.

1. On the server you want to install the Directory Synchronization agent, run dirsync.exe.

2. After the files have been extracted, a Welcome screen will appear. Click Next.
3. Review the license terms, and if acceptable, choose “I accept the Microsoft Software License terms” and click Next.

4. Choose an installation folder and click Next. After clicking next, installation will begin immediately.
5. The actual installation may take 10-15 minutes. Please wait while it completes.

6. When the installation has completed you will be notified and will be able to click the Next button. Click Next.
7. You will now have the option to start the Directory Synchronization Configuration Wizard. Ensure the Start Configuration Wizard now box is selected and click **Finish**.
3. **Configure the Directory Synchronization Agent**
   
   1. If you are not already at the Configuration Wizard Welcome Screen, click the Directory Sync Configuration shortcut on your desktop to launch the wizard.

   ![Directory Sync Configuration Wizard](image)

   2. At the Welcome screen, click **Next**.
3. On the Microsoft Online Service Credentials window, enter your Microsoft Online admin credentials and click Next.

4. On the Active Directory Credentials screen, enter the credentials used to access the local Active Directory. Click Next.

Please refer to the MessageOps Exchange 2000 Migration Requirements Checklist, for the requirements for this account.
5. On the Configuration Complete screen, click **Next**.

6. You are now ready to synchronize the directory. Ensure the Synchronize directories now box is checked and click **Finish**.
7. Click OK to the dialog box that appears

4. Verify Directory Synchronization

The Directory Synchronization agent runs in the background. There are several items to check to ensure the directory synchronization has completed.


   ![Event Properties]

   This event indicates directory synchronization has completed.

©2009 MessageOps, LLC. All Rights Reserved. 37
2. Log into [https://admin.microsoftonline.com](https://admin.microsoftonline.com) using the admin account for your Microsoft Online Account

3. Click on the **Users** tab (see figure below)

4. Click on **Users List** (see figure below)

5. Click on **Disabled Users** (see figure below)

You should see your Active Directory user accounts in the disabled users list.

6. The final item to check is the mailbox of the technical contact on the Microsoft Online account.
   If errors are encountered with specific accounts, an email will be sent to this address listing the accounts which have problems.
IX. Migrate Mailboxes

The mailbox migration allows you to copy data from a user’s on premise Exchange 2000 mailbox to Exchange Online. It will also setup forwarding so that any new mail that comes into the user’s on premise mailbox after the user has been migrated, is automatically forwarded to Microsoft Online.

Before beginning Mailbox Migrations, you should consult with your MessageOps consultant to ensure that your environment is ready. You should also review the MessageOps Exchange 2000 Migration Requirements Checklist, to ensure all the prerequisites have been met.

1. Install the Microsoft Online Services Migration Tool

   1. Log into https://admin.microsoftonline.com using the admin account for your Microsoft Online Account
   2. Click on the Migration tab (see figure below)
   3. Click on Mailbox Migration (see figure below)
   4. Check the box “I have read the planning document”
   5. Click the appropriate version, based on the migration workstation.
6. After the Migration Tools have been downloaded, launch the Transporter MSI install file on the Migration Workstation.

7. At the Welcome screen, click **Next**

8. Review the license terms, and if acceptable, choose “I accept..” and click **Next**
9. Choose an install path and click **Install**

![Image of Install Location window]

Enter a new location or click Browse to browse to one.

```
C:\Program Files\Microsoft Transporter Tools
```

![Image of Install wizard buttons]

10. When the installation is complete, click **Finish** to exit the install wizard

![Image of Finish button]

**The Setup Wizard for Microsoft Online Services Migration Tools has completed**

Click the Finish button to exit the Setup Wizard.
2. Activate Accounts you want to Migrate within Microsoft Online

Prior to actually migrating accounts, you must activate them within Microsoft Online. Activating the account makes it accessible to the user. It also removes the forwarding back to the on-premise environment, so you should only activate users when you are ready to migrate them. Once you activate a user, if another user already migrated to Exchange online sends mail to the user, the message is only delivered to their Exchange Online mailbox, it is not forwarded back to the on-premise Exchange server.

1. Log into [https://admin.microsoftonline.com](https://admin.microsoftonline.com) using the admin account for your Microsoft Online Account
2. Click on the Users tab (see figure below)
3. Click on Users List (see figure below)
4. Click on Disabled Users (see figure below)
5. Select the User(s) you want to Activate and click Activate User Accounts (see figure below)
6. In the Activate User Accounts window, select whether you would like passwords emailed. If yes is selected you can specify multiple email address by separating them with a comma. Click **Next**.

   *Note: If activating more than a single user, the email will contain the passwords for all the users being activated*

7. Select where the users are located and click **Next**
8. Select a mailbox size for the user(s) and click **Activate**

9. After the users have been Activated, a confirmation page will appear which lists the user’s temporary password. If you did not choose the option to have the passwords email to yourself, record the password(s) and click **Finish**.
10. To verify the user is active click, Click all Enabled users and find the activated user(s)

11. The mailbox is now ready to be migrated.
3. Migrate Mailbox Data

1. On the server that you previously installed the Microsoft Online Migration Tools, click Start->All Programs->Microsoft Online Services->Migration->Migration Console

2. When the Migration Console starts, it will ask for your Microsoft Online password. Enter the information and click Sign In.
3. After you have signed in, expand Microsoft Exchange (see figure below)

4. Click Mailboxes Ready to Migrate (see figure below)

5. Right click the user you want to migrate and choose Migrate Mailboxes (see figure below)

   *Note: Only accounts that have been activated with Microsoft Online will appear in this list.*

   *If you want to migrate multiple users at the same time, use Ctrl or Shift to select multiple mailboxes*

6. On the Welcome screen, click Next
7. On the Migrate Mailbox Options screen select the appropriate options and click **Next**

**Copy the local mailbox content** – Select this option if you want to migrate data.

**Do Copy the local mailbox content** – Select this option if you only want to setup mail forwarding on the selected account. No data will be copied if this option is selected.

**Allowed unsecured connection with source server** – By default this is not selected. In most cases it will probably be necessary to check this box due to the fact mailbox servers often to not have SSL certificates installed on them. You can try it unchecked first, and if errors are encountered, try the migration again with the box checked.
8. Review the size of the mailboxes you have selected for migration. Click **Next**.

9. Select the types of content you wish to migrate as well as date of the content. The default is to migrate all content. Click **Next**.
10. Review the mailboxes selected and click **Migrate** to begin the migration.

11. While the mailbox is migrating a progress bar will be displayed for each mailbox that is actively migrating.
12. When the migration is complete, click **Finish** to exit the wizard.

13. After the migration the user should appear in the Mailboxes Already Migrated list.

14. Continue Activating and Migrating users until all users have been migrated.
X. Decommission existing Exchange Environment

After all users and services have been migrated, the final step to the migration is to shutdown the on-premise Exchange Server. Before you power off the Exchange Server, there are several tasks you must complete to ensure mail flow is not interrupted. Again it is recommended that you consult with your MessageOps consultant prior to making these changes, as they can have an adverse impact on your environment if done improperly.

1. Configure Microsoft Online to accept inbound mail for your domain

   1. Log into https://admin.microsoftonline.com using the admin account for your Microsoft Online Account
   2. Click on the Users tab (see figure below)
   3. Click on Domains (see figure below)
   4. Click on the domain you want to enable inbound mail flow on (see figure below)
5. In the Domain Properties window for the selected domain, set **Type = Authoritative** and click **Save** (see figure below)

![Domain Properties Window](image)

6. The domain type should now appear as Authoritative

![All Domains Table](image)

7. Click on the domain again, and in Domain Properties windows click the **Inbound Messaging** tab (see figure below)
8. Click the **Enable** button to launch the inbound messaging wizard (see figure below)

9. In the new window that appears, click **Enable**
10. The confirmation page appears and instructs you to change your MX, click **Finish**

   **Note:** You must click Finish, or the Microsoft Online servers won’t be updated.

   **It is recommend you verify that the Microsoft Online servers are able to accept mail for your domain, before switching the MX. Read below for more information.**
11. After you have enabled inbound mail flow, there may be a delay before Microsoft Online is able to accept mail for your domain. To verify that Microsoft Online is able to accept mail for your domain, open a command prompt and type:

```
telnet mail.global.frontbridge.com 25
```

You should see a banner similar to:

```
220 mail151-tx2.bigfish.com ESMTP Postfix EGGS and Butter
```

Type:

```
helo hotmail.com
```

The server should reply with - 250 mail136-tx2.bigfish.com

Type:

```
mail from:messageopsdemo@hotmail.com
```

The server should reply with - 250 Ok

Type:

```
rcpt to:chad.demo@messageopsdemo.com
```

In the above command replace the address with an email address at your domain.

If the server responds with:

```
554 <chad.demo@messageopsdemo.com>: Relay access denied
```

The Microsoft Online servers have not been updated. Type Quit.

Every 5-10 minutes, repeat the process until the server responds to the rcpt to command with:

```
rcpt to:chad.demo@messageopsdemo.com
```

```
250 Ok
```

12. After you have verified that Microsoft Online is able to accept mail for your domain, you should update your organization’s MX record.
2. Update your Organization’s MX record

The process for updating an organization’s MX record varies greatly depending who hosts DNS and therefore this document offers only basic guidance. If you are unsure what needs to be done, please contact MessageOps.

1. In your DNS administration program, remove the existing name from the MX record and enter: mail.global.frontbridge.com

   *Note: It may take several hours for this change to take effect. It is therefore recommended that you keep the on premise Exchange server online for a couple days.*