Setup Guide: Server-side synchronization for CRM Online

Version 8.0

Microsoft Dynamics CRM 2016

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Contents

Server-side synchronization for CRM Online and Exchange Server

Server-side synchronization is a component in Microsoft Dynamics CRM that is used to integrate CRM with Microsoft Exchange email servers. Server-side synchronization is the preferred option for organizations with users who run CRM in a web browser or on a mobile device, such as a tablet or smartphone.

CRM 2015 supports two configurations of CRM and Exchange:

- CRM Online with Exchange Online

- CRM on-premises with Exchange on-premises

In addition, Microsoft Dynamics CRM supports connections to POP3/SMTP servers. This document focuses on connecting to Microsoft Exchange Server.

In CRM Online 2016 Update, we have added a **hybrid server-side synchronization** capability: the support of CRM Online with Exchange Server (on-premises).
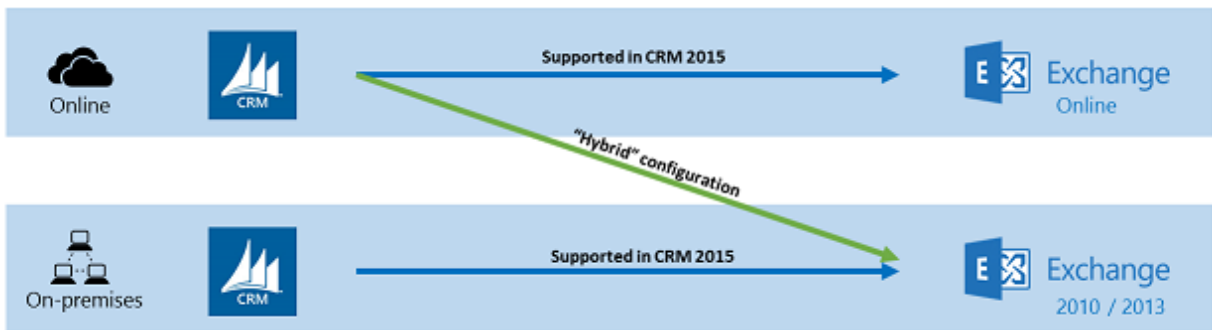
Supported CRM and Exchange versions

Hybrid server-side synchronization is supported in the following versions.

CRM version	Exchange version
CRM Online 2016 Update	Exchange Server 2010 SP3
	Exchange Server 2013 SP1
	Exchange Server 2016

☑ **Note**

This table displays only the new hybrid server-side synchronization support. For CRM and Exchange versions of existing server-side synchronization, see Configure server-side synchronization.

Supported Exchange configurations

Hybrid server-side synchronization supports the following Exchange configurations:

- Exchange Server
- Exchange hybrid deployment

☑ Note

When using an Exchange hybrid deployment, we recommend you configure the Exchange domain as authoritative and Autodiscover is configured in order for a single email server profile in CRM to work properly. If this is configured differently, you may need to create two separate email server profiles in CRM. One for pointing to CRM on-premises and the other pointing to Exchange Online.

For more information on Exchange hybrid deployments, see:
- [Understanding Hybrid Deployments with Exchange 2010 SP3](#)
- [Exchange Server 2013 Hybrid Deployments](#)

For more information on Exchange accepted domains, see:
- [Accepted domains in Exchange](#)

Prerequisites and Recommendations

Hybrid server-side synchronization is a connection between CRM Online and Exchange Server (on-premises). The connection is made by Exchange Web Services (EWS). This configuration requires some prerequisites and specific settings in Exchange.

Connecting CRM Online to Exchange Server

Since CRM Online is in the cloud and Exchange Server is likely behind a corporate firewall, you must make sure the two can connect and that the firewall does not block the connection. One way to allow this connection is to use a reverse proxy.

For more information on using a proxy, see:
- [Part 1: Reverse Proxy for Exchange Server 2013 using IIS ARR](#)
- [How to provide secure remote access to on-premises applications](#)

For the list of IP address ranges, see:
- [Microsoft Dynamics CRM Online IP Address Ranges](#)

Enable Basic authentication

During installation, Exchange configures Internet Information Services (IIS). To connect CRM Online with Exchange Server, Basic authentication must be enabled in Exchange Server.

☑ Note

Basic authentication is not the default for EWS, so you need to make sure this authentication is enabled.

For more information on Basic authentication, see:

- Exchange Server 2010: [Configure Basic Authentication](#)
- Exchange Server 2010: [Default Authentication Settings for Exchange-related Virtual Directories](#)
- Exchange Server 2013: [Authentication and EWS in Exchange](#)
- Exchange Server 2013: [Default settings for Exchange virtual directories](#)

Create a Service account with an impersonation role

The authentication mechanism is Basic authentication. For that, CRM requires that you set up a service account in Exchange with an impersonation role.

For more information on enabling Basic authentication, see:

- Exchange Server 2010: [Configure Exchange Server 2010 Impersonation](#)
- Exchange Server 2013: [Impersonation and EWS in Exchange](#)

Enable Exchange Web Services (EWS) with SSL

The connection between CRM Online and Exchange Server is made by Exchange Web Services (EWS). To make sure the information is secure, you need to configure EWS with Transport Layer Security (TLS) or Secure Sockets Layer (SSL) enabled.

For more information on enabling EWS with SSL, see:

- [Enable or Disable SSL on Exchange Web Services Virtual Directories](#)

Create a certificate

Exchange Server needs to present a valid certificate to CRM Online each time CRM Online makes a call to Exchange Server. Since SSL is required, you need to obtain a valid certificate from a trusted certification authority for the Exchange Server.

✎ Note

Your Exchange environment might contain multiple domains. In this case the certificate needs to include these domain names to avoid certificate name mismatch.

For example, Exchange Server may have the following domains and the corresponding Exchange endpoints for autodiscover and EWS:

- **Domain**: <ExchangeServerName>.<ExchangeServerDomain>.com

  Endpoint: https://<ExchangeServerName>.<ExchangeServerDomain>.com/EWS/exchange.asmx

- **Domain**: <AutoDiscover>.<ExchangeServerDomain>.com

  Endpoint: https://AutoDiscover.<ExchangeServerDomain>.com/AutoDiscover/autodiscover.svc

- **Domain**: <ExchangeServerDomain>.com

  Endpoint:
  https://<ExchangeServerName>.<ExchangeServerDomain>.com/AutoDiscover/autodiscover.svc

When CRM Online calls these endpoints, Exchange Server needs to present a certificate with a name that matches the endpoint's name. This means the certificate needs to include the above domain names to avoid name mismatch issues.

Enable Autodiscover (recommended)

The Exchange Autodiscover service provides an easy way for client applications to configure themselves with minimal user input. For EWS clients, Autodiscover is typically used to find the EWS endpoint URL. We recommend you use Autodiscover to avoid multiple email server profiles. This is explained in the **Set Exchange Autodiscover option** section below.

For more information on enabling Autodiscover, see:

- Exchange Server 2010: Managing the Autodiscover Service

- Exchange Server 2013: Autodiscover service

Test the connection

Before connecting CRM Online to Exchange Server, you need to make sure all prerequisites are met.

Run Microsoft Remote Connectivity Analyzer and perform Microsoft Exchange Web Services Connectivity Tests to make sure everything is set up correctly.

Set up the email server profile

When Exchange is ready, it's time to connect CRM Online to Exchange Server.

1. Create a new email server profile

The email server profile is the connection between CRM and Exchange.

1. Go to **Settings** -> **Email Configuration** -> **Email Server Profiles**.

2. Click **New** -> **Exchange Server**. A new email server profile window opens.

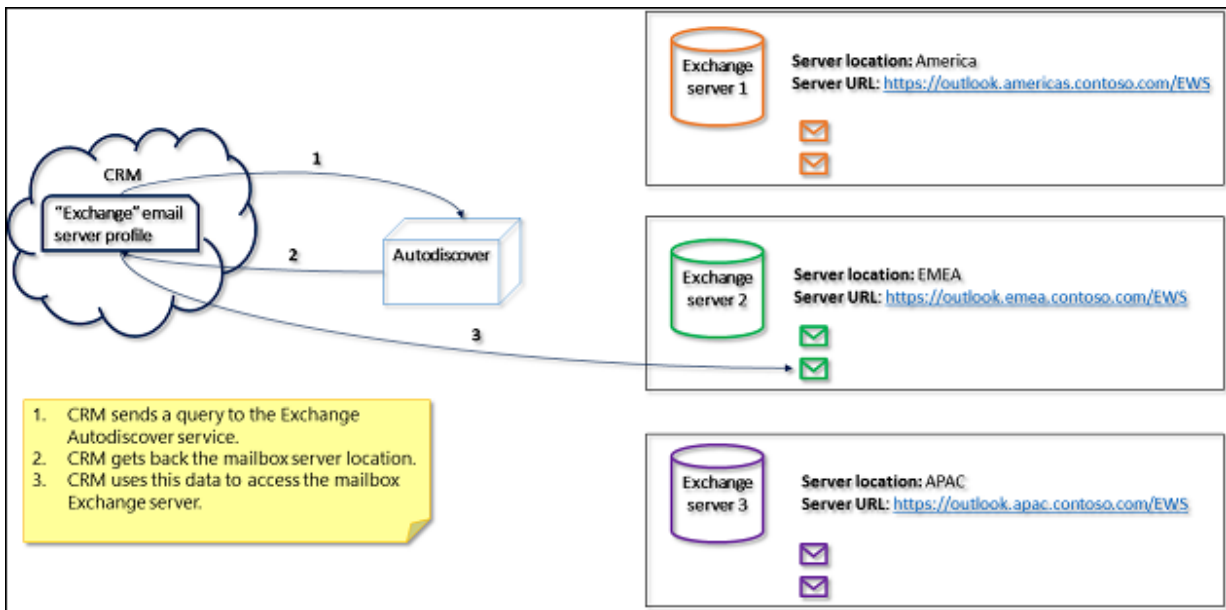3. Enter the email server profile name in the **Name** field.
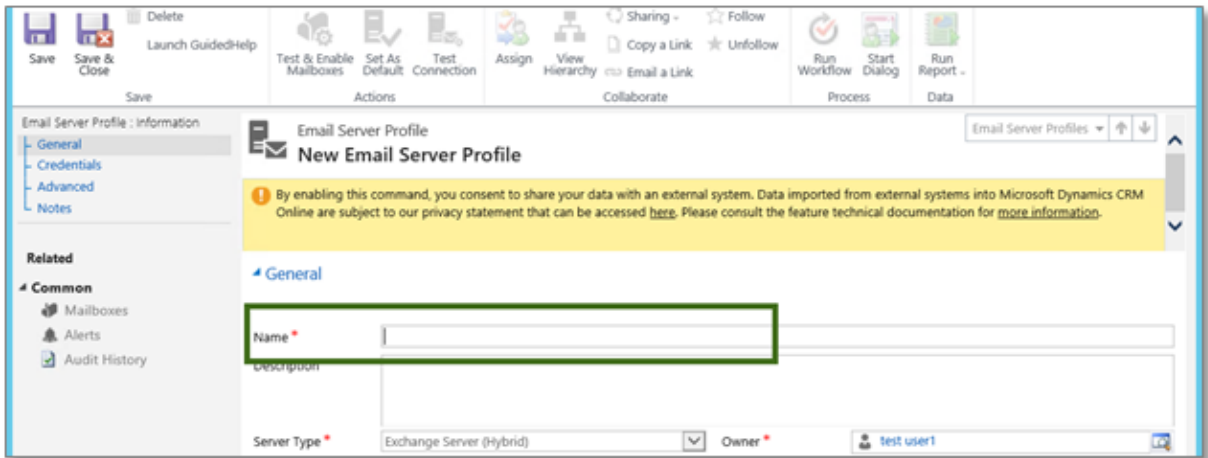
2. Set the Exchange Autodiscover option

The Exchange Autodiscover service provides an easy way for client applications to configure themselves with minimal user input. With Autodiscover, when you click **Test & Enable Mailboxes**, CRM sends a query and gets back the mailbox server location and caches this information in CRM. If for some reason the cached server isn't correct anymore (for example, if the mailbox moved to a different server), CRM will then use Autodiscover again to find the new server location.
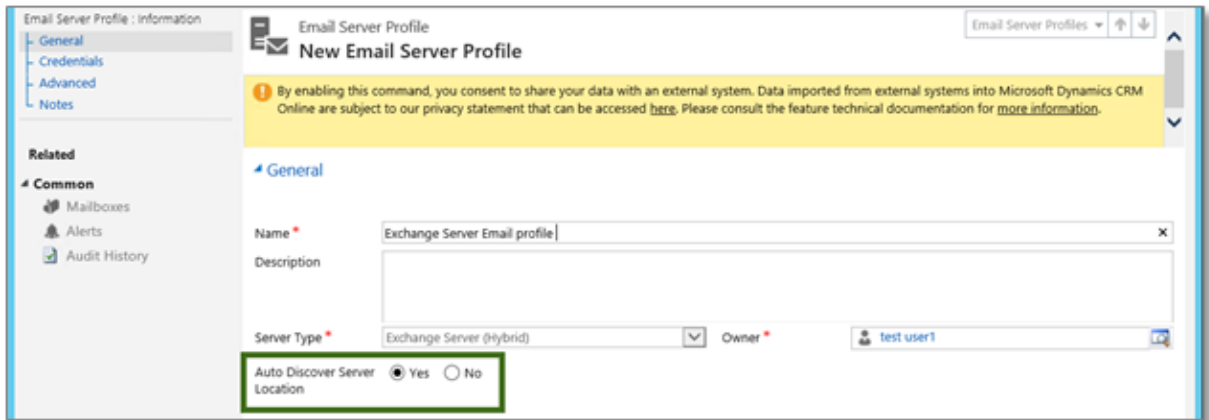
Auto Discover Server Location set to "Yes"

Using Exchange Autodiscover is recommended not only for simplicity, but it also allows you to maintain a single email server profile instead of a separate email server profile for each server location.

Consider the following example. Let's assume you have Exchange servers in three different regions with three different endpoints. If you use Exchange Autodiscover, then you can use a single email server profile for all three Exchange servers.

1. CRM sends a query to the Exchange Autodiscover service.
2. CRM gets back the mailbox server location.
3. CRM uses this data to access the mailbox Exchange server.

Set **Auto Discover Server Location** to **Yes**.

Auto Discover Server Location set to "No"

If you don't use Exchange Autodiscover, you need to create an email server profile for each server location and make sure the mailboxes are associated with the email server profile that holds the connection to their server.
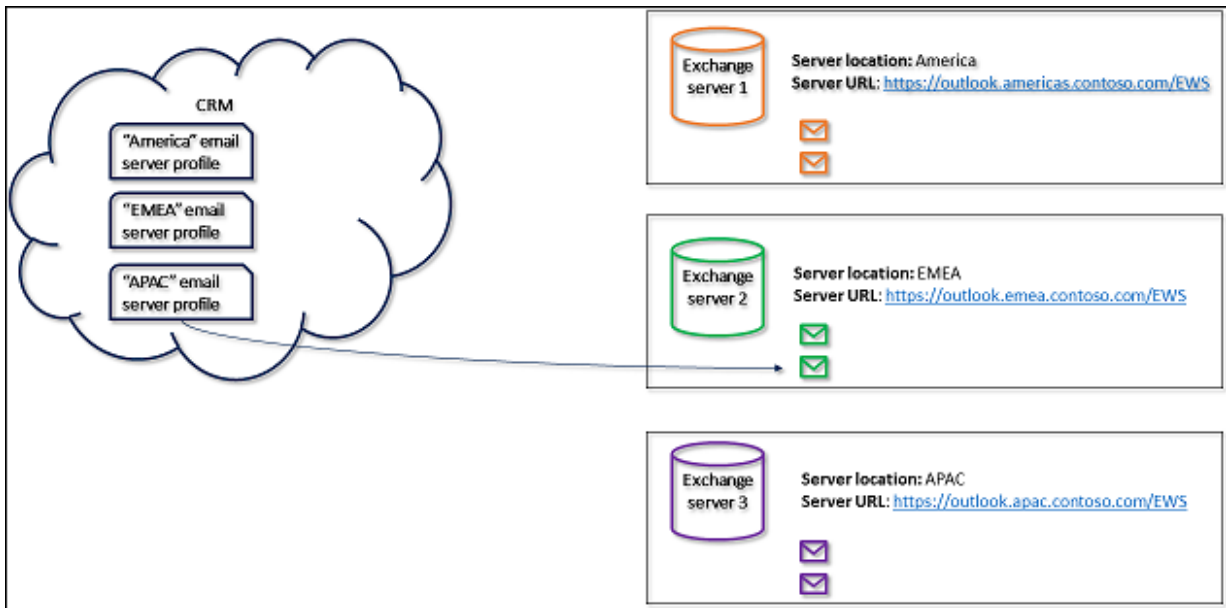
If you set **Auto Discover Server Location** to **No**, you will need to provide the server location.

⬛ **Note**

Because SSL is mandatory, CRM Online will not let you save the email server profile if the URL does not start with **https**.

Exchange hybrid deployment

Exchange Server hybrid deployment offers organizations the ability to extend the experience and administrative control they have with their existing on-premises Exchange to the cloud. This configuration is supported, but due to the way Autodiscover is configured in this deployment, you might need to create an email server profile for each server location. To do this, set **Auto Discover Server Location** to **No**, and create an email server profile for each Exchange Server location and another email server profile for Exchange Online.

3. Provide Service account credentials

The next step is to type the Service account that has the impersonation role in Exchange. Type the user name and password in the **Authentication Using Impersonation** fields.

4. Set advanced options

Set advanced options to match your email configuration.

Incoming and Outgoing Connection

This section will appear only when **Auto Discover Server Location** is set to **No**.

- **Incoming Port:** This field shows the port on the email server for accessing incoming email.
- **Outgoing Port:** This field shows the port on the email server for accessing outgoing email.

These fields are automatically populated when you save the email server profile.

Additional Settings

These settings are optional.

- **Process Email From:** Email received after the date and time will be processed by server-side synchronization for all mailboxes associated with this profile.
- **Minimum Polling Intervals in Minutes:** The polling interval determines how often server-side synchronization polls your mailboxes for new email messages. The recommended value for this field is 0.
- **Maximum Concurrent Connections:** The maximum number of simultaneous connections that can be made by CRM Online to the corresponding Exchange Server per mailbox. Increase the value to allow more parallel calls to Exchange Server to improve performance or reduce the value if there are errors on Exchange due to a large number of calls from CRM. The default value for this field is 27.
- **Move Failed Emails to Undeliverable Folder:** If there's an error in tracking email messages in CRM as email activities, and if this option is set to **Yes**, the email message will be moved to the Undeliverable folder at the user's inbox. If this folder does not exist, it will be created when the first email failed.

Email Notifications

This option lets the owner of the email server profile (as shown on the General tab) get email notifications if more than 50% of the mailboxes that are associated with this email server profile failed in the last hour. A mailbox is considered failed if CRM tried and failed to sync it completely in the last hour.

✏ Note

The percentage of mailboxes that triggers an email is not configurable.

If this option is set to **Yes**, the maximum number of emails you will get is one email per hour, and only the owner of the email server profile will get these emails.


The following table gives some examples of when the email notification is sent.

| Hour	Mailboxes processed in this hour	Failed mailboxes	Successful mailboxes	Send email?
09:00 – 10:00	15	10	5	Yes (66%of the mailboxes failed)
10:00 - 11:00	40	30	10	Yes (75% of the mailboxes failed)
11:00 – 12:00	1000	300	700	No (only 30% of the mailboxes failed)

5. Test the connection

After you finish configuring and saving the email server profile, you can test the connection to Exchange. **Test Connection** will help verify if you configured the email server profile correctly, and if the connection to the Exchange server is successful.
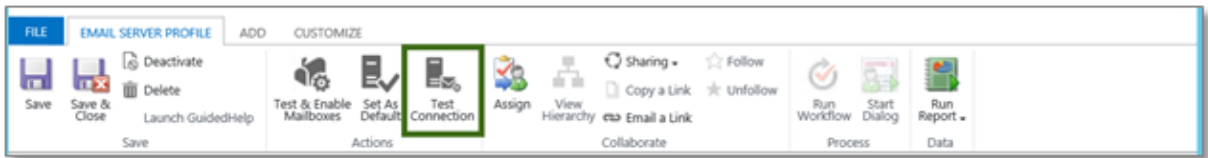
Test successful

If the test is successful then the connection to Exchange is configured correctly. You can also see the latency in the **Elapsed Time** field.
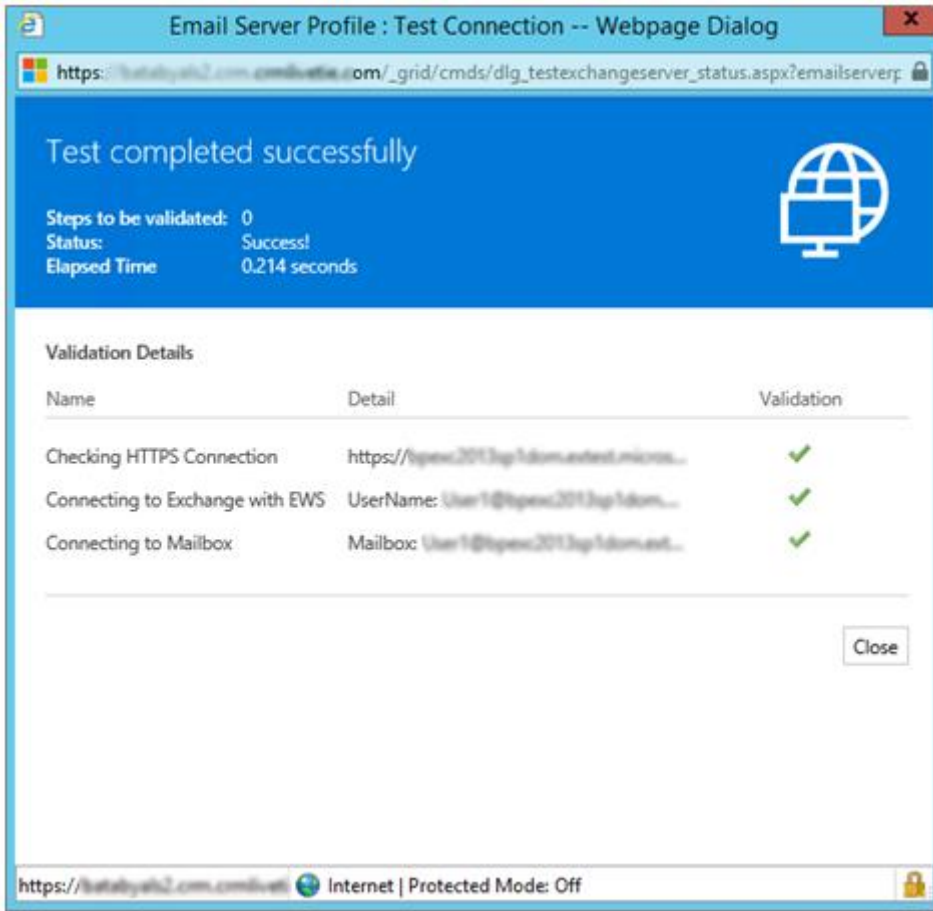

Test failed

The test can fail in one of three steps:

1. Autodiscover / HTTPS connection
2. EWS connection
3. Mailbox connection

The test results provide you the response from Exchange, so you have a starting point to troubleshoot the issue. If the test failed, the first step is always to run Microsoft Remote Connectivity Analyzer from outside your company's firewall with the same values as in the email server profile.
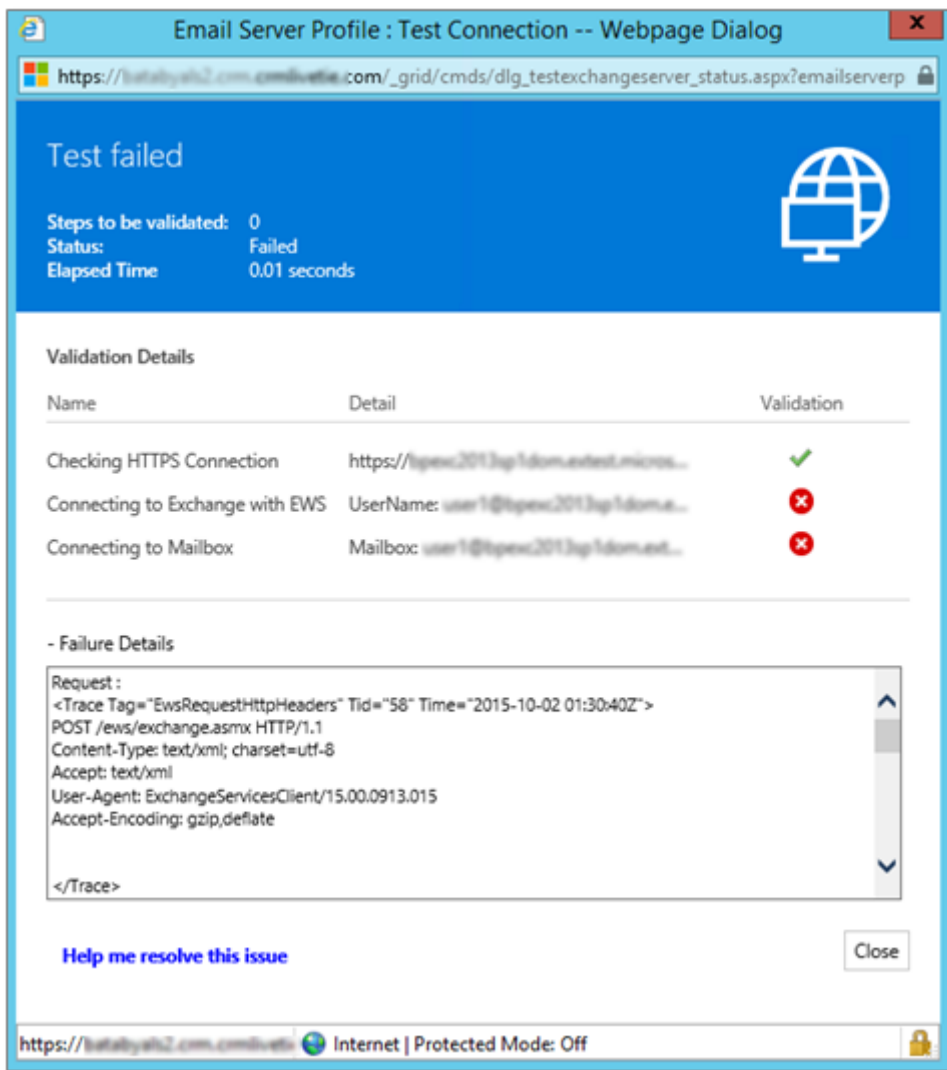

Associate mailboxes with the email server profile

After you finish creating the email server profile, you need to associate mailboxes with the email server profile.

📝 **Note**

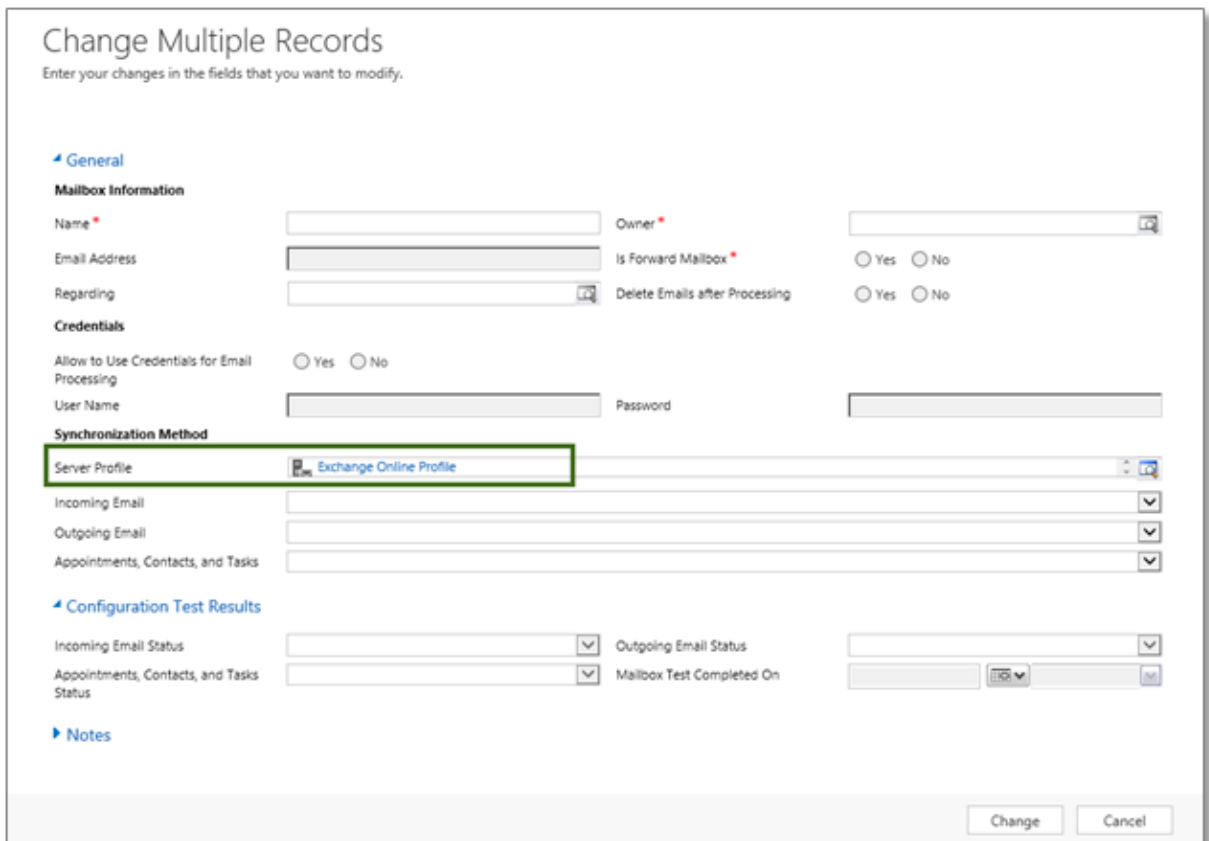If you created several email server profiles, make sure you associate the mailboxes with the correct email server profile.

Go to **Settings** -> **Email Configuration** -> **Mailboxes**, and then select the mailboxes you want to associate with the email server profile.
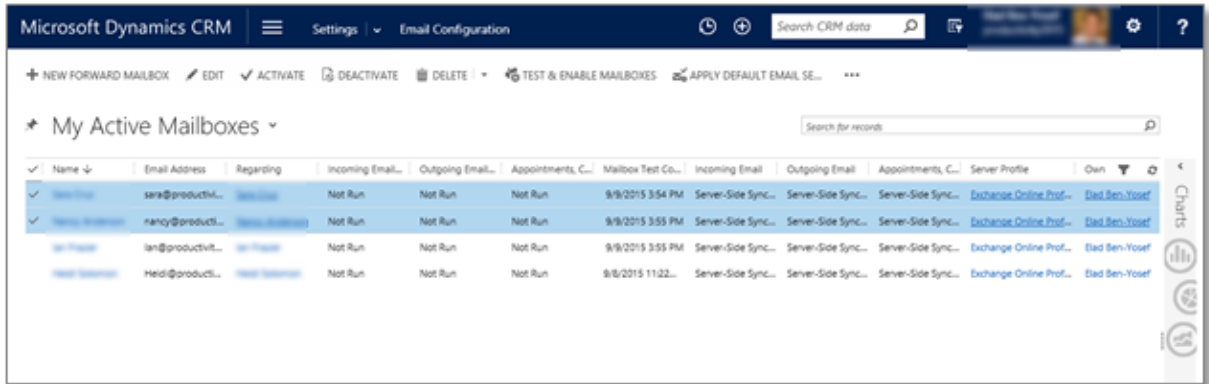
Click **Edit** and, in the **Server Profile** field, select the email server profile you configured, then click **Change**.

Test and enable mailboxes

Every user in CRM gets a CRM mailbox by default. After you configure the email server profile and make sure the connection is successful, you need to test and enable the mailboxes.

When you click **Test & Enable Mailbox**, CRM verifies that the mailbox is configured correctly. For example, CRM verifies that:

- The mailbox email address is correct.

- The connection to the email server is working.

- You have the correct privileges to access the mailbox.

If the test is successful, the mailbox is enabled for server-side synchronization.

For more information on testing and enabling mailboxes, see: Test and Enable Mailboxes in Microsoft Dynamics CRM 2015.

Checklist for a hybrid deployment

Review the following steps you need to do to configure CRM Online with Exchange Server.

Prerequisites in Exchange

☐	Allow the connection between CRM and Exchange (by reverse proxy, for example).
☐	Enable Basic authentication.
☐	Create a Service account with an impersonation role.
☐	Enable EWS with SSL.
☐	Create a certificate.
☐	Enable Autodiscover (recommended).
☐	Run Microsoft Remote Connectivity Analyzer.

CRM Online – email server profile

☐	Create a new email server profile.
☐	Set the Autodiscover option.
☐	If Autodiscover is set to **No**, provide the server location.
☐	Type the Service account username and password.
☐	Keep default values for advanced options or change them.

☐	Choose whether to get email notifications (no more than one email per hour).
☐	Test the connection.

CRM Online - mailboxes

☐	Associate the mailboxes with their email server profile.
☐	Approve the mailboxes.
☐	Test and enable the mailboxes.

Troubleshooting a hybrid deployment

The following table provides guidance specific to CRM Online and Exchange Server configuration.

What you see	Potential cause	Potential solution
Test Connection failed.	There are many potential causes.	Run Microsoft Remote Connectivity Analyzer with the same values as in the email server profile.
Test Connection was successful but some of the mailboxes failed with **Test and Enable**.	Autodiscover is in use, and some Exchange servers are not accessible.	Run Microsoft Remote Connectivity Analyzer with the server URL of the failed mailboxes (don't use Autodiscover). If this test is successful, create a new email server profile, set **Autodiscover** to **No**, type the server URL, and run **Test Connection**.
Test Connection fails, and in **Test Connection** -> **Failure Details**, the following error appears: … WWW-Authenticate: …	Basic authentication is not enabled in Exchange.	Enable Basic authentication in Exchange.

The following articles provide guidance for hybrid and other configurations:

- Troubleshooting server-side synchronization
- Test and Enable Mailboxes in Microsoft Dynamics CRM 2015

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