Amazon WorkMail

Administrator Guide

Version 1.0

Amazon WorkMail: Administrator Guide

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What Is Amazon WorkMail?

Amazon WorkMail is a secure, managed business email and calendaring service with support for existing desktop and mobile email clients. You can access your email, contacts, and calendars using Microsoft Outlook, your browser, or their native iOS and Android email applications. You can integrate Amazon WorkMail with your existing corporate directory and control both the keys that encrypt your data and the location in which your data is stored.

Topics

Amazon WorkMail Concepts

The terminology and concepts that are central to your understanding and use of Amazon WorkMail are described below.

Organization
A tenant setup for Amazon WorkMail.

Alias
A globally unique name to identify your organization. The alias is used to access the Amazon WorkMail web application (https://**`youralias`**.awsapps.com/mail).

Test mail domain
A domain is automatically configured during setup that can be used for testing Amazon WorkMail.

Domain
The web address that comes after the @ symbol in an email address. You can add a domain that receives mail and delivers it to mailboxes in your organization.

directory
A Simple AD directory or AD Connector directory created in AWS Directory Service.

user
A user created in the AWS Directory Service and enabled for Amazon WorkMail.

group
A group used in AWS Directory Service used as distribution list or security group in Amazon WorkMail.

mobile device policy
Various IT policy rules that control the security features and behavior of a mobile device.

Accessing Amazon WorkMail

Amazon WorkMail works with all major mobile devices and operating systems that support the Exchange ActiveSync protocol, including the Apple iPad, Apple iPhone, Amazon Kindle Fire, Android, Windows Phone, and BlackBerry 10.

You can access Amazon WorkMail from Microsoft Outlook on Windows. You must have a valid Microsoft Outlook license to use it with Amazon WorkMail, which offers native support for the following versions:

- Microsoft Outlook 2007, 2010, 2013, and 2016
- Microsoft Outlook 2010 and 2013 Click-to-Run
- Microsoft Outlook for Mac 2011

Note
Amazon WorkMail currently does not support POP3 or IMAP clients.

You can access Amazon WorkMail using the web application: https://**`alias`**.awsapps.com/mail.

Amazon WorkMail Pricing

With Amazon WorkMail, there are no upfront fees or commitments. You pay only for active user accounts. For more specific information about pricing, see Pricing.

Regions and Endpoints

For a list of supported regions and endpoints, see AWS Regions and Endpoints.

Amazon WorkMail Limits

Amazon WorkMail has the following limits, which cannot be increased:

- Add up to 25 users for a 30-day free trial. After this period ends, you are charged for all active users unless you remove them or close your Amazon WorkMail account.
- The maximum size for a mailbox is 50 GB per user.
- The maximum size of an outgoing or incoming email message is 25 MB.
- You can add up to 100 domains to an organization in Amazon WorkMail.

In addition, Amazon WorkMail requires one directory (you're limited to two AWS Directory Service directories per region) and one VPC (you're limited to a total of 5 VPCs per AWS region). For more information about AWS Directory Service or Amazon Virtual Private Cloud (Amazon VPC) limits, see AWS Service Limits.

Related AWS Services

The following services are used in conjunction with Amazon WorkMail:

- **AWS Directory Service**—You can integrate Amazon WorkMail with an existing Simple AD directory or AD Connector by creating a directory in the AWS Directory Service and enabling Amazon WorkMail for this directory. After you've configured this integration, you can choose which users you would like to enable for Amazon WorkMail from a list of users in your existing directory, and users can log in using their existing Active Directory credentials. For more information, see AWS Directory Service Administration Guide.
- **Amazon Simple Email Service**—Amazon WorkMail uses Amazon SES to send all outgoing email. The test mail domain and your domains are available for management in the Amazon SES console. There is no cost for outgoing email sent from Amazon WorkMail. For more information, see Amazon Simple Email Service Developer Guide.
- **AWS Identity and Access Management**—The AWS Management Console requires your username and password so that any service you use can determine whether you have permission to access its resources. We recommend that you avoid using root account credentials to access AWS because root account credentials cannot be revoked or limited in any way. Instead, we recommend that you create an IAM user and add the user to an IAM group with administrative permissions. You can then access the console using the IAM user credentials.

  If you signed up for AWS but have not created an IAM user for yourself, you can create one using the IAM console. For more information, see Create Individual IAM Users in the *IAM User Guide*.
- **AWS Key Management Service**—Amazon WorkMail is integrated with AWS KMS to ensure the encryption of customer data. Key management can be performed from the AWS KMS console. For more information, see What is the AWS Key Management Service in the *AWS Key Management Service Developer Guide*.

Amazon WorkMail Resources

The following related resources can help you as you work with this service.

- **Classes & Workshops** – Links to role-based and specialty courses as well as self-paced labs to help sharpen your AWS skills and gain practical experience.
- **AWS Developer Tools** – Links to developer tools, SDKs, IDE toolkits, and command line tools for developing and managing AWS applications.
- **AWS Whitepapers** – Links to a comprehensive list of technical AWS whitepapers, covering topics such as architecture, security, and economics and authored by AWS Solutions Architects or other technical experts.
- **AWS Support Center** – The hub for creating and managing your AWS Support cases. Also includes links to other helpful resources, such as forums, technical FAQs, service health status, and AWS Trusted Advisor.
- **AWS Support** – The primary web page for information about AWS Support, a one-on-one, fast-response support channel to help you build and run applications in the cloud.
- **Contact Us** – A central contact point for inquiries concerning AWS billing, account, events, abuse, and other issues.
- **AWS Site Terms** – Detailed information about our copyright and trademark; your account, license, and site access; and other topics.

Getting Set Up

To use Amazon WorkMail you'll need an AWS account. If you haven't signed up for AWS yet, complete the following tasks to get set up.

Topics

Get an AWS Account and Your AWS Credentials

To access AWS, you will need to sign up for an AWS account.

To sign up for an AWS account

1. Open http://aws.amazon.com/, and then choose **Create an AWS Account**.
2. Follow the online instructions.

   Part of the sign-up procedure involves receiving a phone call and entering a PIN using the phone keypad.

AWS sends you a confirmation e-mail after the sign-up process is complete. At any time, you can view your current account activity and manage your account by going to http://aws.amazon.com/ and clicking **My Account/Console**.

To get your access key ID and secret access key

Access keys consist of an access key ID and secret access key, which are used to sign programmatic requests that you make to AWS. If you don't have access keys, you can create them by using the AWS Management Console. We recommend that you use IAM access keys instead of AWS root account access keys. IAM lets you securely control access to AWS services and resources in your AWS account.

> **Note**
> To create access keys, you must have permissions to perform the required IAM actions. For more information, see Granting IAM User Permission to Manage Password Policy and Credentials in the *IAM User Guide*.

1. Open the IAM console.
2. In the navigation pane, choose **Users**.

3. Choose your IAM user name (not the check box).
4. Choose the **Security Credentials** tab and then choose **Create Access Key**.
5. To see your access key, choose **Show User Security Credentials**. Your credentials will look something like this:

   - Access Key ID: AKIAIOSFODNN7EXAMPLE
   - Secret Access Key: wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY
6. Choose **Download Credentials**, and store the keys in a secure location.

   Your secret key will no longer be available through the AWS Management Console; you will have the only copy. Keep it confidential in order to protect your account, and never email it. Do not share it outside your organization, even if an inquiry appears to come from AWS or Amazon.com. No one who legitimately represents Amazon will ever ask you for your secret key.

Related topics

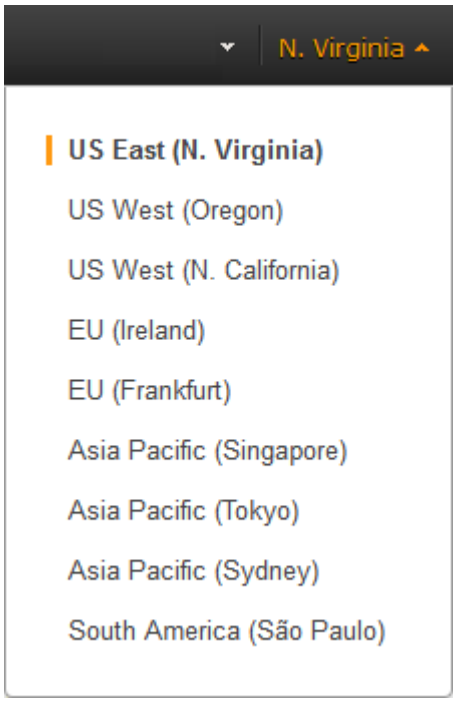
- What Is IAM? in the *IAM User Guide*
- AWS Security Credentials in *AWS General Reference*

Sign in to the Amazon WorkMail Console

You must sign in to the Amazon WorkMail console before you can add users and manage accounts and mailboxes.

To sign in to the Amazon WorkMail console

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.



AWS Identity and Access Management Users and Groups

The AWS Management Console requires your username and password so that the service can determine whether you have permission to access its resources. We recommend that you avoid using root account credentials to access AWS because root account credentials cannot be revoked or limited in any way. Instead, use AWS Identity and Access Management (IAM) to create an IAM user and add the user to an IAM group with administrative permissions. You can then access the console using the credentials for the IAM user.

If you signed up for AWS but have not created an IAM user for yourself, you can create one using the IAM console. For more information, see Create Individual IAM Users in *IAM User Guide*.

AWS Identity and Access Management Policies for Amazon WorkMail

By default, IAM users don't have permissions to manage Amazon WorkMail resources; you must attach an AWS managed policy (**AmazonWorkMailFullAccess** or **AmazonWorkMailReadOnlyAccess**) or create a customer managed policy that explicitly grants IAM users those permissions, and attach the policy to the specific IAM users or groups that require those permissions. For more information, see Managing Managed Policies Using the AWS Management Console in *IAM User Guide*. For more information, see Permissions and Policies in *IAM User Guide*.

The following customer managed policy statement grants an IAM user full access to Amazon WorkMail resources. This customer managed policy gives the same level of access as the AWS managed policy **AmazonWorkMailFullAccess**. Either policy gives the user access to all Amazon WorkMail, AWS Key Management Service, Amazon Simple Email Service, and AWS Directory Service operations, as well as several Amazon EC2 operations that Amazon WorkMail needs to be able to perform on your behalf.

```
"amazonWorkMailFullAccess": {
  "name": "Amazon WorkMail Full Access",
  "description": "Provides full access to WorkMail, Directory Service, SES,
 EC2 and read access to KMS metadata.",
  "policyDocument": {
        "Version": "2012-10-17",
        "Statement": [
                        {
                          "Effect": "Allow",
                          "Action": [
                                     "workmail:*",
                                     "ds:AuthorizeApplication",
                                     "ds:CheckAlias",
                                     "ds:CreateAlias",
                                     "ds:CreateDirectory",
                                     "ds:CreateDomain",
                                     "ds:DeleteAlias",
                                     "ds:DeleteDirectory",
                                     "ds:DescribeDirectories",
                                     "ds:ExtendDirectory",
                                     "ds:GetDirectoryLimits",
                                     "ds:ListAuthorizedApplications",
                                     "ds:UnauthorizeApplication",
                                     "ses:*",
                                     "ec2:AuthorizeSecurityGroupEgress",
                                     "ec2:AuthorizeSecurityGroupIngress",
```

```
                                    "ec2:CreateNetworkInterface",
                                    "ec2:CreateSecurityGroup",
                                    "ec2:DeleteSecurityGroup",
                                    "ec2:CreateSubnet",
                                    "ec2:DeleteSubnet",
                                    "ec2:CreateVpc",
                                    "ec2:DeleteVpc",
                                    "ec2:DescribeRouteTables",
                                    "ec2:DescribeSubnets",
                                    "ec2:DescribeVpcs",
                                    "ec2:DescribeAvailabilityZones",
                                    "ec2:CreateTags",
                                    "ec2:RevokeSecurityGroupEgress",
                                    "ec2:RevokeSecurityGroupIngress",
                                    "kms:DescribeKey",
                                    "kms:ListAliases"
                                    ],
                        "Resource": "*"
                    }
                ]
  }
}
```

The following customer managed policy statement grants an IAM user read-only access to Amazon WorkMail resources. This customer managed policy gives the same level of access as the AWS managed policy **AmazonWorkMailReadOnlyAccess**. Either policy gives the user access to all of the Amazon WorkMail Describe operations. Access to the two Amazon EC2 operations are necessary so Amazon WorkMail can obtain a list of your VPCs and subnets. Access to the AWS Directory Service `DescribeDirectories` operation is needed to obtain information about your AWS Directory Service directories. Access to the Amazon SES service is needed to obtain information about the configured domains and access to AWS Key Management Service is needed to obtain information about the used encryption keys.

```
"amazonWorkMailROAccess": {
  "name": "Amazon WorkMail Read Only Access",
  "description": "Provides read only access to WorkMail and SES.",
  "policyDocument": {
        "Version": "2012-10-17",
        "Statement": [
                        {
                         "Effect": "Allow",
                         "Action": [
                                    "workmail:Get*",
                                    "workmail:List*",
                                    "workmail:Describe*",
                                    "workmail:Search*",
                                    "ses:Get*",
                                    "ses:Describe*"
                                   ],
                         "Resource": "*"
                        }
                ]
  }
}
```

Getting Started With Amazon WorkMail

Whether you are a new Amazon WorkMail user or an existing user of Amazon WorkDocs or Amazon WorkSpaces, you can get started with Amazon WorkMail by completing the following steps.

1. After you log in to your AWS account, the first step is set up your organization. For more information, see Add an Organization (p. 9).
2. After successfully adding your organization, you can add your domain to Amazon WorkMail. For more information, see Add a Domain (p. 22).
3. Create new users or enable your existing directory users for Amazon WorkMail. For more information, see Create New Users (p. 14).
4. Migrate your existing Microsoft Exchange mailboxes to Amazon WorkMail. For more information, see Migrating to Amazon WorkMail (p. 31).
5. To use Amazon WorkMail from your existing desktop client, set up your Microsoft Outlook client. For more information, see Connect Microsoft Outlook to Your Amazon WorkMail Account.
6. To use Amazon WorkMail from anywhere on a mobile device, set up Amazon WorkMail on your Kindle, Android, iPad, iPhone, or Windows Phone. For more information, see Connect Your iOS Device and Connect Your Android Device.

Working with Organizations

In Amazon WorkMail, your organization represents the users in your company. In the Amazon WorkMail console, you see a list of your available organizations. If you don't have any available, you must create one in order to use Amazon WorkMail. After you create an organization, it can have one of the following states.

State	Description
Active	Your organization is healthy and ready for use.
Creating	A workflow is running to create your organization.
Failed	Your organization could not be created.
Impaired	Your organization is malfunctioning or an issue has been detected.
Inactive	Your organization is inactive.
Requested	Your organization creation request is in the queue and waiting to be created.
Validating	All settings for the organization are being health-checked.

Topics

Add an Organization

To use Amazon WorkMail, you must first add an organization; one AWS account can have multiple Amazon WorkMail organizations. You can then add users, groups, and domains.

To add an organization

1. Open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.

2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. Choose **Get started**, **Organizations**, **Add organization**.
4. Choose one of the following setup options:

   - **Quick Setup**: To get started with Amazon WorkMail in 10 minutes, choose this option. We recommend this setup if you want to use Amazon WorkMail for a small organization or for evaluation purposes. Amazon WorkMail sets up all of the following AWS resources for you:
     - VPC
     - Simple AD directory for storing your users and groups
     - Test mail domain
     - Default master key for encrypting your mailbox data

     These AWS resources are created in your AWS account. No charges apply to these resources as long as you are using Amazon WorkMail.
   - **Custom Setup**: To integrate Amazon WorkMail with your on-premises Active Directory, or to use your existing Amazon Workspaces or Amazon WorkDocs directory, choose this option.

     By integrating Amazon WorkMail with your on-premises directory, you can reuse your existing users and groups in Amazon WorkMail and users can log in with their existing credentials.

     You also have the ability to select a specific master key that Amazon WorkMail uses to encrypt the mailbox content. You can either select the default master key for Amazon WorkMail or create a customer master key in AWS KMS to use with Amazon WorkMail.

Topics

Set up Amazon WorkMail for a small business or evaluation purposes (Quick Setup)

If you want to use Amazon WorkMail for a small organization or for evaluation purposes, choose **Quick Setup.**

To perform a Quick Setup

1. On the **Set up your organization** screen, under **Quick setup**, choose **Quick setup**.
2. On the **Quick setup** screen, for **Alias**, enter a unique alias to be used as your mail domain, and then choose **Create**.

   After your organization is created, you can add domains, users, and groups.

   Note
   If you exceed the number of AWS Directory Service directories or VPCs in your region, you might see one of the following error messages:

   - InitializeDirectoryException: directory limit reached
   - InitializeDirectoryException: VPC limit reached

Integrate Amazon WorkMail with your on-premises directory (Custom Setup)

You can integrate Amazon WorkMail with your corporate Active Directory.

Before setting up Amazon WorkMail, you must first set up an AD Connector in AWS Directory Service. The AD Connector is used to synchronize your users and groups to the Amazon WorkMail address book and perform user authentication requests.

For information about setting up an AD Connector, see Create Your Directory in the *AWS Directory Service Administration Guide*.

To perform a custom setup

1. On the **Custom setup** screen, for **Available Directories**, select your existing directory.

   Note
   For more information about integrating with a corporate Active Directory, see Connecting to Your Existing Directory with AD Connector in the *AWS Directory Service Administration Guide*.

2. On the **Custom setup** screen, for **Master Key**, select a master key. You can either select the default master key or create a customer master key in AWS Key Management Service.

   Note
   For information about creating a new master key, see Creating Keys in the *AWS Key Management Service Developer Guide*.
   If you are logged on as an IAM user, make yourself a key administrator on the master key. For more information, see Enabling and Disabling Keys in the *AWS Key Management Service Developer Guide*.

Integrate Amazon WorkMail with an existing Amazon WorkSpaces or Amazon WorkDocs directory (Custom Setup)

To integrate Amazon WorkMail with your corporate Active Directory so that you can easily enable existing users and groups for Amazon WorkMail, choose **Custom Setup**.

To perform a custom setup

1. On the **Custom setup** screen, for **Available Directories**, select your existing directory used for Amazon WorkDocs or Amazon WorkSpaces, and choose **Create**.
2. On the **Custom setup** screen, for **Master Key**, select a master key. If no master keys are available, you can access AWS KMS to create a new master key.

   Note
   For information about creating a new master key, see Creating Keys in the *AWS Key Management Service Developer Guide*.
   If you are logged on as an IAM user, make yourself a key administrator on the master key. For more information, see Enabling and Disabling Keys in the *AWS Key Management Service Developer Guide*.

Remove an Organization

If you no longer want to use Amazon WorkMail for your organization's email, you can delete your organization from Amazon WorkMail. When you delete your organization, Amazon WorkMail retains your organization's mailbox data for approximately 30 days after the organization is deleted.

To remove an organization

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select the organization to remove, and then choose **Remove**.
4. In the **Remove organization** dialog box, enter the name of the organization, and then choose **Remove**.

   Note
   Deleting your organization does not automatically delete the user directory. To delete the directory, it cannot have any other AWS applications enabled. For more information, see Deleting a Simple AD Directory or Deleting an AD Connector Directory in the *AWS Directory Service Administration Guide*. If your directory is no longer used by Amazon WorkMail, Amazon WorkDocs, or Amazon WorkSpaces, you will be charged for this directory.

Edit Your Organization's Mobile Device Policy

You can edit your organization's mobile device policy to change the way that mobile devices interact with Amazon WorkMail.

To edit your organization's mobile device policy

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the **Alias** column, select the organization to edit.
4. In the navigation pane, choose **Mobile Policies**, and then on the **Default mobile policy** screen, choose **Edit**.
5. Update any of the following as necessary:

   a. **Password required**: Require a password to lock a mobile device.
   b. **Allow simple password**: Use the PIN on the device as the password.
   c. **Minimal password length**: Set the number of characters required in a valid password.
   d. **Require alphanumeric password:** Require that passwords are made up of letters and numbers.
   e. **Minimum number of character sets**: Specify the number of character sets required in a password such as lowercase and uppercase letters, symbols, and numbers.
   f. **Number of failed attempts allowed**: Specify the number of failed login attempts that are allowed before the user is locked out of their account.

g. **Password expiration**: Specify the number of days before a password expires and must be changed.
h. **Enable screen lock**: Specify the number of seconds that must elapse without user input to lock the user's screen.
i. **Enforce password history**: Specify the number of passwords that can be entered before repeating the same password.
j. **Require encryption on device**: Encrypt email data on the mobile device.
k. **Require encryption on storage card**: Encrypt email data on the mobile device's removable storage.

6. Choose **Save**.

Working with Users

You can create and remove users from Amazon WorkMail. In addition, you can reset their email passwords and wipe the data from their mobile devices.

Topics

Create New Users

When you create a new user, Amazon WorkMail creates a mailbox for them. The user can log in and access their mail from the Amazon WorkMail web application, mobile device, or Microsoft Outlook on their Mac or PC.

To create a new user

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane on the left, choose **Users** to see a list of all users in the directory, including enabled, disabled, and system users.
5. To create a new user, choose **Create User**.

6. On the **Add the details for your new user** screen, enter the user's first and last name, username, and display name and then choose **Next**.
7. On the **Set up email address and password** screen, enter the user's email address and password, and choose **Add user**.

Edit User Email Addresses

You can assign multiple email addresses to a single user and the default email address is always used as the sending address for outgoing email.

You can also add one or more email aliases, which can be used to receive email from a different address or from a different domain. Email aliases can't be used as the from address when sending email.

To edit a user's email addresses

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, choose **Users**, and then in the list of users, select the name of the user to edit.
5. On the **General** tab, choose **Edit**, **Add email address**, and then type the email address to add to this user.
6. To set the new email address as the default, choose **Set as default**.

Enable Existing Users

If you are a member of a directory in Amazon WorkDocs or Amazon WorkSpaces, you can enable existing users from either of these services to access email in Amazon WorkMail.

To enable an existing user

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, choose **Users** to see a list of all the users in the directory, including enabled, disabled, and system users.
5. From the list of disabled users, select the users that you want to enable and choose **Enable user**.
6. In the **Enable user(s)** dialog box, review the primary email address and choose **Enable**.

Edit User Details

You can edit a user's first and last name, email address, display name, address, phone number, and company details.

Note
If you are integrating Amazon WorkMail with an AD Connector directory, you can't edit these details from the AWS Management Console. Instead, you must edit them using your Active Directory management tools.

To edit a user's details

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, choose **Users**.
5. In the list of users, select the name of the user to edit.
6. On the **General** tab, choose **Edit**, and then update any of the fields as appropriate.

Reset User Passwords

If a user forgot their password or is having trouble signing in to Amazon WorkMail, you can reset the user's password. If you are integrating Amazon WorkMail with an AD Connector AD, you have to reset the user's password in Active Directory.

To reset a user's password

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, choose **Users**.
5. In the list of users, select the name of the user to edit, and then choose **Reset password**.
6. In the **Reset Password** dialog box, enter the new password, and then choose **Reset**.

Disable User Mailboxes

You can disable user mailboxes when they are no longer needed. Amazon WorkMail keeps mailboxes for 30 days before they're permanently removed.

To disable a user's mailbox

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, select **Users**.
5. In the list of users, select the name of the user to disable, and choose **Disable User**.
6. In the **Disable user(s)** dialog box, choose **Disable**.

Restore Disabled Mailboxes

Amazon WorkMail retains disabled mailboxes for 30 days before permanently removing them. To restore a mailbox, use the same steps as to enable an existing user.

Note
Mailboxes cannot be restored if the organization containing them has been deleted.

Important
To restore a user's disabled mailbox, the user must be still in the directory. If the user isn't in the directory or if you've re-created them, the mailbox cannot be restored because each mailbox is linked to a unique user ID.

To restore a deleted mailbox

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, choose **Users** to see a list of enabled, disabled, and system users.
5. From the list of disabled users, select the users that you want to enable and choose **Enable user**.
6. In the **Enable user(s)** dialog box, review the primary email address of the user and choose **Enable**.

Remotely Wipe Mobile Devices

You can only remotely wipe user devices when they are connected to Amazon WorkMail. If a device is disconnected from the network, this procedure won't work.

Caution
For most mobile devices, a remote wipe resets the device to factory defaults. All data, including personal files, can be removed when you perform this procedure.

To remotely wipe a user's mobile device

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, choose **Users**.
5. In the list of users, select the user with the device to view.
6. Choose the **Mobile** tab.
7. In the list of devices, select the device to wipe, and then choose **Wipe device**.
8. Check the status in overview to see whether the wipe is requested.
9. After the device is wiped, you can remove the device from the list.

   Important
   To re-add a device, make sure the device is removed from the list. Otherwise, the device will be wiped again.

Remove a User's Mobile Devices from the Devices List

If a user is no longer using a certain mobile device or the device is remote wiped, you can remove it from the list. When the user configures the device again it will show up in the list again.

To remove a user's mobile devices from the devices list

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, choose **Users**.
5. In the list of users, select the user with the device to view.
6. Choose the **Mobile** tab.
7. In the list of devices, select the device to remove, and then choose **Remove device**.

View Mobile Device Details

You can view the details of a user's mobile device.

> **Note**
> Some devices don't send all of their details to the server, so you may not see all available device details.

To view device details

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the list of organizations, select your organization's alias.
4. In the navigation pane, choose **Users**.
5. In the list of users, select the user with device to view.
6. Choose the **Mobile** tab.
7. In the list of devices, select the device whose details you want to view. Device status codes are listed in the following table.

Status	Description
Provisioning Required	A user or administrator has requested that the device be provisioned for use with Amazon WorkMail. Devices are also set to this status if the current policy for that device is modified in the Amazon WorkMail console.

Status	Description
Provisioning Succeeded	The device has been successfully provisioned or wiped. In the case of provisioning, the device has enforced the given policy.
Wipe Required	An administrator requested a wipe in the Amazon WorkMail console.
Wipe Succeeded	The device has been successfully wiped.

Working with Groups

Groups can be used as distribution lists in Amazon WorkMail for receiving emails for generic email addresses like sales@example.com or support@example.com. You can also use them as security groups to share a mailbox or calendar with a certain team. It can take up to 2 hours before newly added groups appear in your Microsoft Outlook offline address book.

Topics

Create a Group

To create a group

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the **Alias** column, select the name of the organization to which to add a group.
4. In the navigation pane, choose **Groups** to see a list of enabled, disabled, and system groups.
5. To create a new group, choose **Create group**.
6. On the **Add group details** screen, enter the group name and email address, and then choose **Add group members**.
7. On the **Add members to group** screen, for **Search**, enter the user's first name, last name, user name, or group name and press **Enter**.
8. In the list of directory users and groups, select the user or groups to add as a member.
9. Choose the right arrow button to add them to the list of selected users/groups and then choose **Finish**.

Enable an Existing Group

When Amazon WorkMail is integrated with your corporate Active Directory or you already have groups available in your Simple AD directory, you can use these groups as security groups or distribution lists in Amazon WorkMail.

To enable an existing group

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the **Alias** column, select the name of the organization to which to add a group.
4. In the navigation pane, choose **Groups** to see a list of enabled, disabled, and system groups.
5. From the list of disabled groups, select the groups that you want to enable and choose **Enable Group**.
6. On the **Enable existing group** screen, for **Search**, enter the name of the group to add, and then press **Enter**.
7. In the list of groups, select the group to add, choose the right arrow button to add them to the list of selected users, and then choose **Next Step**.
8. On the **Set up email address** screen, enter the group's email address, and then choose **Add group**.

Disable a Group

When you no longer need a group, you can disable it.

To disable a group

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the **Alias** column, select the name of the organization from which to remove a group.
4. In the navigation pane, choose **Groups**.
5. In the list of groups, select the group to disable, and then choose **Disable group**.
6. In the **Disable group(s)** dialog box, choose **Disable**.

Working with Domains

You can add or remove email domains or make them the default.

Topics

Add a Domain

You can add up to 100 domains to your organization. When you add a new domain, an Amazon SES sending authorization policy is automatically added to the domain identity policy. This provides Amazon WorkMail with access to all Amazon SES sending actions for your domain and allows you to redirect email to your domain as well as external domains.

> **Important**
> Some DNS providers automatically append the domain name to the end of DNS records. Adding a record that already contains the domain name (such as _amazonses.example.com) might result in the duplication of the domain name (such as _amazonses.example.com.example.com). To avoid duplication of the domain name, add a period to the end of the domain name in the DNS record. This will indicate to your DNS provider that the record name is fully qualified (that is, no longer relative to the domain name), and prevent the DNS provider from appending an additional domain name.

> **Note**
> As a best practice, you should add aliases for postmaster@ and abuse@. You can create distribution groups for these aliases if you want certain users in your organization to receive mail sent to these aliases.

To add a domain

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the **Alias** column, select the name of the organization to which to add a domain.

4. In the navigation pane, choose **Domains**, **Add domain**.
5. On the **Add domain** screen, enter the domain name to add,and choose **Add domain**.
6. On the next screen, in the **Step 1: verify domain ownership** section, the TXT record verifies your ownership of the domain.

   After all your users and distribution groups are created, and mailboxes are successfully migrated, you can switch the MX record to start delivering email to Amazon WorkMail. Updates to the DNS record can take up to 72 hours to be processed and made active, however updates are often processed and made active sooner than this.
7. In the **Step 2: Finalize domain setup** section, the following records are listed:

   - The MX record to deliver incoming email to Amazon WorkMail.
   - The CNAME autodiscover record that allows users to easily configure their Microsoft Outlook or mobile device knowing only their email address and password.
   - The CNAME records for DKIM signing. For more information about DKIM signing, see Authenticating Email with DKIM in the *Amazon Simple Email Service Developer Guide*.

   We recommend that you set the Time to Live (TTL) to 3600 of the MX and autodiscover CNAME record. Reducing the TTL ensures that your mail servers don't use outdated or invalid MX records after updating your MX records or migrating your mailboxes.

   For more information about adding these DNS records to Amazon Route 53, see Routing Queries to Amazon WorkMail (Public Hosted Zones Only) in the *Amazon Route 53 Developer Guide*.

Remove a Domain

When you no longer need a domain, you can delete it.

Note
You can't delete a domain when there are users or groups using the domain as their email address.

To remove a domain

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the **Alias** column, select the name of the organization from which to remove the domain.
4. In the list of domains, select the check box next to the domain name and choose **Remove**.
5. In the **Remove domain** dialog box, type the name of the domain to remove and choose **Remove**.

Choose the Default Domain

To use a domain as default in the email address of your users and groups, you can choose a default domain. Making a domain the default does not change existing email addresses.

To make a domain the default

1. Sign in to the AWS Management Console and open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.

2. If necessary, change the region. From the navigation bar, select the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** screen, in the **Alias** column, select the name of the organization to which to add a default domain.
4. In the list of domains, select the check box next to the domain name and choose **Set as default**.

Verifying Domains

To verify a domain with Amazon WorkMail, you initiate the process using the Amazon WorkMail console, and then publish a TXT record to your DNS server as described in Verifying Domains in Amazon SES in the *Amazon Simple Email Service Developer Guide*. This section contains the following topics that might help you if you encounter problems:

- To verify that the TXT record is correctly published to your DNS server, see How to Check Domain Verification Settings (p. 24).
- For some common problems you may encounter when you attempt to verify your domain with Amazon WorkMail, see Common Domain Verification Problems (p. 26).

How to Check Domain Verification Settings

You can check that your Amazon WorkMail domain verification TXT record is published correctly to your DNS server by using the following procedure. This procedure uses the nslookup tool, which is available for Windows and Linux. On Linux, you can also use dig.

The commands in these instructions were executed on Windows 7, and the example domain we use is *example.com*.

In this procedure, you first find the DNS servers that serve your domain, and then query those servers to view the TXT records. You query the DNS servers that serve your domain because those servers contain the most up-to-date information for your domain, which can take time to propagate to other DNS servers.

To verify that your domain verification TXT record is published to your DNS server

1. Find the name servers for your domain:
   a. Open a command prompt. To open a command prompt on Windows 7, choose **Start** and type **cmd**. On Linux-based operating systems, open a terminal window.
   b. At the command prompt, type the following, where <*domain*> is your domain. This lists all of the name servers that serve your domain.

      ```
      nslookup -type=NS <domain>
      ```

      If your domain was *example.com*, this command would look like:

      ```
      nslookup -type=NS example.com
      ```

      The command's output list the name servers that serve your domain. You query one of these servers in the next step.
2. Verify that the TXT record is correctly published:

a. At the command prompt, type the following, where <*domain*> is your domain, and <*name server*> is one of the name servers you found in step 1.

```
nslookup -type=TXT  _amazonses.<domain> <name server>
```

In this *example.com* example, if the name server in step 1 was called *ns1.name-server.net*, you would type the following:

```
nslookup -type=TXT  _amazonses.example.com ns1.name-server.net
```

b. In the output of the command, verify that the string that follows `text =` matches the TXT value you see when you select the domain in the Verified Senders list of the Amazon WorkMail console.

In the example, you are looking for a TXT record under *_amazonses.example.com* with a value of `fmxqxT/icOYx4aA/bEUrDPMeax9/s3frblS+niixmqk=`. If the record is correctly published, the command should have the following output:

```
_amazonses.example.com text = "fmxqxT/icOYx4aA/bEUrDPMeax9/s3frblS
+niixmqk="
```

To verify that your domain verification MX record is published to your DNS server

1. Find the name servers for your domain:

   a. Open a command prompt. To open a command prompt on Windows 7, choose **Start** and type **cmd**. On Linux-based operating systems, open a terminal window.

   b. At the command prompt, type the following, where <*domain*> is your domain. This lists all of the name servers that serve your domain.

   ```
   nslookup -type=NS <domain>
   ```

   If your domain was *example.com*, this command would look like:

   ```
   nslookup -type=NS example.com
   ```

   The command's output lists the name servers that serve your domain. You query one of these servers in the next step.

2. Verify that the MX record is correctly published:

   a. At the command prompt, type the following, where <*domain*> is your domain, and <*name server*> is one of the name servers you found in step 1.

   ```
   nslookup -type=MX <domain> <name server>
   ```

   In the *example.com* example, if the name server in step 1 is called *ns1.name-server.net*, you would type the following:

   ```
   nslookup -type=MX example.com ns1.name-server.net
   ```

   b. In the output of the command, verify that the string that follows `mail exchange =` matches one of the following values:

For the US East (N. Virginia) Region, the record must be: `10 inbound-smtp.us-east-1.amazonaws.com`

For the EU (Ireland) Region, the record must be: `10 inbound-smtp.eu-west-1.amazonaws.com`

Common Domain Verification Problems

If you have any issues with domain verification, see the list below for possible solutions.

- **Your DNS provider does not allow underscores in TXT record names** — You can omit `_amazonses` from the TXT record name.
- **You want to verify the same domain multiple times and you can't have multiple TXT records with the same name** — You might need to verify your domain more than one time because you're sending in different regions or you're sending from multiple AWS accounts from the same domain in the same region. If your DNS provider does not allow you to have multiple TXT records with the same name, there are two workarounds. The first workaround, if your DNS provider allows it, is to assign multiple values to the TXT record. For example, if your DNS is managed by Amazon Route 53, you can set up multiple values for the same TXT record as follows:

  1. In the Amazon Route 53 console, choose the `_amazonses` TXT record that you added when you verified your domain in the first region.
  2. For **Value**, press **Enter** after the first value.
  3. Add the value for the additional region, and save the record set.

  If you only need to verify your domain twiceAnother workaround you can try , is to, you could verify it one time with `_amazonses` in the TXT record name and then omit _amazonses from the record name entirely. We recommend the multiple value solution as a best practice.
- **Amazon WorkMail reports that domain verification failed**— The domain displays a status of "failed" in the **Domains** tab of the Amazon WorkMail console. This means that Amazon WorkMail cannot find the necessary TXT record on your DNS server. Verify that the required TXT record is correctly published to your DNS server by using the procedure in How to Check Domain Verification Settings (p. 24), and look for the following possible error.
- **Your DNS provider appended the domain name to the end of the TXT record**—Adding a TXT record that already contains the domain name (such as _amazonses.example.com) may result in the duplication of the domain name (such as _amazonses.example.com.example.com). To avoid duplication of the domain name, add a period to the end of the domain name in the TXT record. This indicates to your DNS provider that the record name is fully qualified (that is, no longer relative to the domain name), and prevents the DNS provider from appending an additional domain name.

Editing Domain Identity Policies

Domain identity policies specify permissions for email actions (such as redirecting emails). You can redirect email to any email address of your choosing; however, if your domain was added prior to October 13, 2016, you need to update the sending authorization policy manually to support that.

The update is the addition of a new action: `ses:*`. Domains added after October 13, 2016 have this added by default.

Note
Exercise caution when editing other sections of the `ses` policy, as incorrect settings can have an adverse effect on Amazon WorkMail functionality.

To update the domain identity policy

1. Sign in to the AWS Management Console and open the Amazon SES console at https://console.aws.amazon.com/ses/home.
2. In the **Navigation** pane of the Amazon SES console, under **Identity Management**, choose **Domains**.
3. In the list of domains, select the domain to edit.
4. In the **Details** pane, expand **Identity Policies**, find the policy to edit, and then choose **Edit Policy**.
5. In the **Edit Policy** pane, under `"Action"`, add `ses:*,`.
6. Choose **Apply Policy**.

The updated actions of the policy should look like the following:

```
"Action": [
    "ses:*",
    "ses:SendBounce",
    "ses:SendRawEmail"
],
```

Working with Resources

Amazon WorkMail can help your users reserve resources, such as meeting rooms or equipment (projectors, phones, cars, and so on). To book a resource, the user adds the resource to the meeting invite.

Topics

Create a Resource

You can add a new resource to your organization, and allow it to be reserved.

To add a resource

1. Open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, choose the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** page, select your organization.
4. In the navigation pane, choose **Resources** and **Add resource**.
5. On the **Add resource details** page, enter values for the **Resource name**, **Description**, **Resource type**, and **Email address** fields.
6. Choose **Create**.

Edit a Resource

You can edit a resource's general details (name, description, type, and email address), booking options, and delegates.

To edit general resource details

1. Open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, choose the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** page, select your organization.
4. In the navigation pane, choose **Resources**, and select the resource to edit.
5. On the **General** tab, update the details to change: **Resource name**, **Description**, **Resource Type**, or **Email address**.
6. Choose **Save**.

You can configure a resource to accept or decline booking requests automatically.

To enable or disable automatic processing of booking requests

1. Open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, choose the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** page, select your organization.
4. In the navigation pane, choose **Resources**, and then select the resource to edit.
5. On the **Booking Options** tab, choose **Edit**.
6. To accept all resource requests automatically, select **Automatically accept all resource requests**.
7. To decline recurring resource requests automatically, select **Automatically decline recurring resource requests**.
8. To decline conflicting resource requests automatically, select **Automatically decline conflicting resource requests**.
9. Choose **Save**.

You can add a delegate to control booking requests for a resource. Resource delegates automatically receive copies of all booking requests and have full access to the resource calendar. In addition, they must accept all booking requests for a resource.

To add a resource delegate

> **Note**
> Before you proceed, follow the process above to clear the **Automatically accept all resource requests** option.

1. Open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, choose the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** page, select your organization.
4. In the navigation pane, choose **Resources**, and select the name of the resource to edit.
5. On the **Delegates** tab, choose **Edit**.
6. Select the users or groups to add as delegates, and then use the right arrow to add them to the delegate list.
7. Choose **Save**.

Remove a Resource

When you no longer need a resource, you can remove it.

To remove a resource

1. Open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. If necessary, change the region. From the navigation bar, choose the region that meets your needs. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
3. On the **Organizations** page, select the organization.
4. In the navigation pane, choose **Resources**.
5. In the list of resources, select the resource to remove, and choose **Remove**.
6. In the **Remove resource(s)** dialog box, choose **Remove**.

Migrating to Amazon WorkMail

You can migrate to Amazon WorkMail from Microsoft Exchange, Microsoft Office 365, G Suite Basic (formerly Google Apps for Work), and many other platforms by working with one of our partners. For more information about our partners, see Migrate to Amazon WorkMail for Free.

Topics

Step 1: Create or Enable Users in Amazon WorkMail

Before you can migrate your users, you must add the users in Amazon WorkMail to provision the mailbox. For more information, see Create New Users (p. 14).

Step 2: Migrate to Amazon WorkMail

You can work with any of our migration partners to migrate to Amazon WorkMail. For information about about these providers, see Amazon WorkMail.

In order to migrate your mailboxes, you can assign an Amazon WorkMail user as the migration administrator. You can specify the migration administrator in the following ways:

- Add the new user **migration_admin** in the Amazon WorkMail console or create the user **migration_admin** in your Active Directory and enable this user for Amazon WorkMail.
- In the Amazon WorkMail console, on the **Organizations settings** screen, under **Migration settings**, choose **Edit**, and then specify a user that you've designated as the migration administrator for the **migration_admin** field.

Step 3: Complete the Migration to Amazon WorkMail

After you have migrated your email accounts to Amazon WorkMail, you need to verify your DNS records and configure your desktop and mobile clients.

To complete migration to Amazon WorkMail

1. Verify that all DNS records are updated and that they point to Amazon WorkMail. For more information about the required DNS records, see Add a Domain (p. 22).

   Note
   The DNS record update process may take several hours. If any new items appear in a source mailbox while the MX records are being changed, you can re-run the migration tool to migrate new items after the DNS records are updated.
2. Configure your desktop and mobile clients to use Amazon WorkMail. For more information about configuring your desktop or mobile clients, see Connect Microsoft Outlook to Your Amazon WorkMail Account in the *Amazon WorkMail User Guide*.

Interoperability Between Amazon WorkMail and Microsoft Exchange

Interoperability allows you to minimize disruption to your users as you migrate mailboxes to Amazon WorkMail, or use Amazon WorkMail for a subset of your corporate mailboxes.

Interoperability between Amazon WorkMail and Microsoft Exchange Server allows you to use the same corporate domain for mailboxes across both environments so your users can seamlessly schedule meetings with bi-directional sharing of calendar free/busy information.

Prerequisites

Before you enable interoperability with Microsoft Exchange, complete the following tasks.

- Set up an Active Directory (AD) Connector—Setting up an AD Connector with your on-premises directory allows users to continue using their existing corporate credentials. For more information, Set up AD Connector and Integrate Amazon WorkMail with your on-premises directory.
- Set up your Amazon WorkMail organization—Create an Amazon WorkMail organization that uses the AD Connector referenced above.
- Add domains to your Amazon WorkMail organization—Add your corporate domains to Amazon WorkMail. Ensure that your domain has been verified in the AWS Management Console, otherwise emails sent to this alias will bounce. For more information, see Working with Domains.
- Migrate mailboxes—Enable users to provision and migrate mailboxes from your on-premise environment to Amazon WorkMail. For more information, see Enable Existing Users and see Migrating to Amazon WorkMail.

  Note
  DNS records must not be updated to point to Amazon WorkMail. This ensures that Microsoft Exchange remains the primary server for incoming email as long as you would like to have interoperability between the two environments.

Amazon WorkMail makes HTTPS requests to the EWS URL on Microsoft Exchange to obtain users' calendar free/busy information.

- Ensure that the relevant firewall settings are set up to allow access from the internet. The default port for HTTPS requests is port 443.

- Amazon WorkMail can only make successful HTTPS requests to the Exchange Web Services (EWS) URL on Microsoft Exchange when a certificate signed by a valid Certificate Authority (CA) is available on your Microsoft Exchange environment. For more information, see V-Exchange. For more information about importing a certificate, see Importing Certificates. For a list of certificates that can be used, see Mozilla Included CA Certificate List.
- You need to enable **Basic Authentication** for EWS on your Microsoft Exchange. For more information, see Basic Authentication.

Create Service Accounts in Microsoft Exchange and Amazon WorkMail

To access calendar free/busy information you need to create a service account on both Microsoft Exchange and Amazon WorkMail. The Microsoft Exchange service account is any user on Microsoft Exchange that has access to the calendar free-busy information of other users on the environment. Access is granted by default; no special permissions are needed.

Similarly, the Amazon WorkMail service account is any user on Amazon WorkMail that has access to calendar free/busy information of other users on Amazon WorkMail (which is granted by default by Amazon WorkMail).

Using an Amazon WorkMail organization which leverages an AD Connector integrated with your on-premises directory, means that the Amazon WorkMail service account user must be created in your on-premises directory and then enabled for Amazon WorkMail.

Enable Email Routing Between Microsoft Exchange and Amazon WorkMail

When you enable email routing between Microsoft Exchange and Amazon WorkMail, users that are migrated to Amazon WorkMail can continue using their existing email addresses to send and receive email on Amazon WorkMail. When email routing is enabled, your Microsoft Exchange server remains the primary SMTP server for incoming email.

As a best practice, we recommend that you first carry out the following steps for test users, before applying the change to your organization.

For each user migrated to Amazon WorkMail, ensure that there are at least two email addresses associated with them:

- **`workmailuser@orgname.awsapps.com`** (this is the default address, and is added automatically)
- **`workmailuser@yourdomain.com`**

For more information, see Edit User Email Addresses.

1. Set the default email address to the address mapped to your domain (**`workmailuser@yourdomain.com`**). This ensures that all outgoing emails from Amazon WorkMail are sent using the address mapped to your domain.
2. Disable the mailbox for the user on Microsoft Exchange and create a mail user (or mail-enabled user) that has the external SMTP address pointed to Amazon WorkMail. This can be achieved using the following PowerShell command:

```
Disable-Mailbox -Identity exchangeuser
```

```
Enable-MailUser -Identity exchangeuser -
ExternalEmailAddress workmailuser@orgname.awsapps.com
```

In the above commands, **orgname** represents the name of the Amazon WorkMail organization. For more information, see Disabling Mailbox and Enabling Mail Users.

3. Send a test email to the user (as per the example above, **workmailuser@yourdomain.com**). If email routing has been enabled correctly, the user should be able to log in to their Amazon WorkMail mailbox and receive the email.

Configure Availability Settings on Amazon WorkMail

You need to configure availability settings on Amazon WorkMail and Microsoft Exchange to enable bi-directional sharing of calendar free/busy information.

To configure the settings in the console

Open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.

1. In the navigation panel, choose **Organization settings**, **Interoperability Settings**.
2. Choose **Configure availability settings** and provide the following information:

- **Domain**—The domain for which you would like to set interoperability between Amazon WorkMail and Microsoft Exchange.
- **Exchange Web Services (EWS) URL**—The URL to which Amazon WorkMail will send HTTPS requests to access calendar free/busy information of users on Microsoft Exchange. The EWS URL usually looks like the following : **https://servername.com/EWS/Exchange.asmx**. You can obtain the EWS URL in one of the following ways:
  - **Using Microsoft Outlook**
    1. Log in to Microsoft Outlook on Windows for any user on your Exchange environment.
    2. Hold the **Ctrl** key and open the context menu (right-click) on the Microsoft Outlook icon in the task bar.
    3. Select **Test E-mail AutoConfiguration**.
    4. Enter the Microsoft Exchange user's email address and password, and choose **Test**.
    5. From the Results window, copy the value for the **Availability Service URL**.
  - **Using PowerShell**
    - ```
      Get-WebServicesVirtualDirectory |Select name, *url* | fl
      ```

    The external URL returned by the above command is the EWS URL.
- **User email address and password**—These are the credentials of the Microsoft Exchange service account and are encrypted and securely stored by Amazon WorkMail. The email address of the Microsoft Exchange service account should use the Fully Qualified Domain Name (FQDN). For more information, see Create Service Accounts in Microsoft Exchange and Amazon WorkMail (p. 34).

  If your Active Directory domain is not the same as your Microsoft Exchange domain, use the Universal Principal Name (UPN) of the Microsoft Exchange Service account. This can be obtained with the following PowerShell command:
      ```

```
Get-ADUser exchange_service_account_username | select UserPrincipalName
```

In the above example, **exchange_service_account_username** is the username of the Microsoft Exchange Service account.

Configure Availability Settings in Microsoft Exchange

Note
Before completing these steps, ensure that email routing is enabled. For more information, see Enable Email Routing Between Microsoft Exchange and Amazon WorkMail (p. 34).

In order to redirect all calendar free/busy information requests for enabled Amazon WorkMail users to the Amazon WorkMail service, you need to set up an availability address space on Microsoft Exchange using the following PowerShell commands:

```
$credentials = Get-Credential
```

At the prompt, enter the credentials of the Amazon WorkMail service account. The username should be entered as **domain\username** (i.e., **orgname.awsapps.com\workmail_service_account_username**. Here **orgname** represents the name of the Amazon WorkMail organization. (For more information, see Create Service Accounts in Microsoft Exchange and Amazon WorkMail (p. 34).)

```
Add-AvailabilityAddressSpace -ForestName orgname.awsapps.com -AccessMethod
 OrgWideFB -Credentials $credentials
```

In the above command, **orgname** represents the name of the Amazon WorkMail organization.

For more information, see Add-AvailabilityAddressSpace.

Troubleshooting

Exchange Web Service URL is invalid or unreachable—Check that you have the correct Exchange Web Service URL. For more information, see Configure Availability Settings on Amazon WorkMail (p. 35).

Connection failure during Exchange Web Services validation—This is a general error, and can be caused by:

- No internet connection in Microsoft Exchange.
- Your firewall is not configured setup to allow access from the internet.

If you've confirmed the internet connection and firewall settings but the error persists, contact AWS Support.

Using Email Journaling with Amazon WorkMail

You can set up journaling to record your email communication, using integrated third-party archiving and eDiscovery tools. This ensures that email storage compliance regulations for privacy protection, data storage, and information protection are met.

Using Journaling

Amazon WorkMail journals all emails that are sent to any user in the specified organization, as well as all emails sent by users in that organization. A copy of all emails is sent to an address specified by the system administrator, in a format called `journal record`. This format is compatible with Microsoft email programs. There is no additional charge for email journaling.

Two email addresses are used for email journaling—a journaling email address and a report email address. The journaling email address is the address of a dedicated mailbox or third-party device that is integrated with your account, where journal reports are sent. The report email address is the address of your system administrator, where notifications of failed journal reports are sent.

All journal records are sent from an email address that is automatically added to your domain and looks like the following:

```
amazonjournaling@yourorganization.awsapps.com
```

There is no mailbox associated with this address, and you will not be able to create one using this name or address.

Note
Do not delete the following domain record from the Amazon SES console, or email journaling stops functioning:

```
yourorganization.awsapps.com
```

Every incoming or outgoing email generates one journal record, regardless of the number of recipients or user groups. Email that fails to generate a journal record generates an error notification, which is sent to the report email address.

To enable email journaling

1. Open the Amazon WorkMail console at https://console.aws.amazon.com/workmail/.
2. On the **Organization settings** screen, choose **Journaling Settings**, **Edit**, **On**.
3. For **Journaling email address**, enter the email address provided by your email journaling provider.
4. For **Report email address**, enter the email administrator's address.
5. Choose **Save**. The changes are applied immediately.

Best Practices

Take advantage of these best practices to maximize your experience with Amazon WorkMail.

Topics

Use AutoDiscover to Configure Endpoints

AutoDiscover enables you to easily configure Microsoft Outlook and mobile clients with only your email address and password. The service also maintains a connection to Amazon WorkMail and updates local settings whenever endpoint or settings changes are made. In addition, AutoDiscover enables your client to use additional Amazon WorkMail features, such as the Offline Address Book, Out-of-Office Assistant, and the ability to view free/busy time in Calendar.

The client performs the following AutoDiscover phases to detect the server endpoint URLs:

- Phase 1: The client performs a SCP lookup against the local Active Directory. If your client isn't domain-joined, AutoDiscover skips this step.
- Phase 2: The client sends a request to the following URLs and validates the results. These endpoints are only available using HTTPS.
  - https://company.tld/autodiscover/autodiscover.xml
  - https://autodiscover.company.tld/autodiscover/autodiscover.xml
- Phase 3: The client performs a DNS lookup and sends an unauthenticated GET request to the derived endpoint from the user's email address. If the server returns a 302 redirect, the client resends the AutoDiscover request against the returned HTTPS endpoint.

If all of these phases fail, the client can't be configured automatically, and you must set up the client manually. For information about manually configuring mobile devices, see Manually Connect Your Device.

When you set up your domain in Amazon WorkMail, you are prompted to add the AutoDiscover DNS record. This enables the client to perform phase 3 of the AutoDiscover process. However, these steps don't work for all mobile devices, such as the stock Android email app, and you may need to set up AutoDiscover phase 2 manually.

There are two ways you can set up AutoDiscover phase 2 for your domain:

- By using Amazon Route 53 and Amazon CloudFront (recommended)

- By setting up an Apache web server with a reverse proxy

To enable AutoDiscover with Amazon Route 53 and CloudFront

Note
The following steps show how to proxy https://autodiscover.company.tld/autodiscover/autodiscover.xml. To proxy https://company.tld/autodiscover/autodiscover.xml, remove the "autodiscover." prefix from the domains in the following steps.

1. Get an SSL certificate for autodiscover.company.tld and upload it to IAM. For more information, see Working with Server Certificates.
2. Create a new CloudFront distribution.
    1. Open the CloudFront console at https://console.aws.amazon.com/cloudfront/.
    2. Choose **Create Distribution**, **Web** and **Get Started**.
    3. Fill in the following values for **Origin Settings**:
        - **Origin Domain Name**: autodiscover-service.mail.us-east-1.awsapps.com, autodiscover-service.mail.eu-west-1.awsapps.com, or autodiscover-service.mail.us-west-2.awsapps.com
        - **Origin path**: Empty
        - **Origin ID**: Empty
        - **Origin Protocol Policy**: Match Viewer
    4. Fill in the following values for **Default Cache Behavior Settings**:
        - **Viewer Protocol Policy**: HTTPS Only
        - **Allowed HTTP Methods**: GET, HEAD, OPTIONS, PUT, POST, PATCH, DELETE
        - **Forward Headers**: Whitelist
        - **Whitelist Headers**:
            - Pick from pre-defined list "Authorization"
            - Add custom header "Content-Type"
            - Add custom header "User-Agent"

          Forward Cookies: All
        - **Forward Query Strings**: No
        - **Smooth Streaming**: No
        - **Restrict Viewer Access**: No
    5. Fill in the following values for **Distribution Settings**:
        - **Price Class**: Use only US and Europe
        - **Alternate Domain Names (CNAMEs)**: autodiscover.company.tld (or company.tld)
        - **SSL Certificate**: Custom SSL Certificate (stored in IAM)
        - **Custom SSL Client Support**: All Clients
        - **Default Root Object**: Empty
        - **Logging**: Optional
        - **Comment**: AutoDiscover type2 for autodiscover.company.tld.
        - **Distribution State**: Enabled
3. In Amazon Route 53, connect the CloudFront distribution to DNS:

    Note
    These steps assume that the DNS record for company.tld is hosted in Amazon Route 53.

    1. In the Amazon Route 53 console, choose **Hosted Zones** and **company.tld**.
    2. Choose **Create Record Set**, and then fill in the following fields:
        - **Name**: autodiscover.company.tld
        - **Type**: A - IPv4 address

- **Alias**: Yes
- **Alias Target**: The CloudFront distribution created above

  Note
  If the CloudFront distribution created above is not present, wait a while and try again later. Change propagation for new CloudFront endpoints in Amazon Route 53 might take up to 1 hour.
- **Evaluate Target Health**: No

3. Choose **Create**.

To enable AutoDiscover with an Apache web server

1. Configure the following two directives on an SSL-enabled Apache server:

   ```
   SSLProxyEngine on ProxyPass /autodiscover/autodiscover.xml https://
   autodiscover- service.mail.REGION.awsapps.com/autodiscover/
   autodiscover.xml
   ```
2. If they are not already enabled, enable the following Apache modules:
   - proxy
   - proxy_http
   - socache_shmcb
   - ssl
3. Confirm that the endpoint is SSL-enabled and configured correctly.

AutoDiscover Troubleshooting

To make a basic unauthorized request, create an unauthenticated POST request to the AutoDiscover endpoint and see if it returns a “401 unauthorized” message:

```
$ curl -X POST -v https://autodiscover.''company.tld''/autodiscover/
autodiscover.xml
...
HTTP/1.1 401 Unauthorized
```

If the basic request is unsuccessful and returns a “401 unauthorized” message, run a real request that a mobile device would issue.

To do this, first create a request.xml file with the following XML content:

```
<?xml version="1.0" encoding="utf-8"?>
<Autodiscover xmlns="http://schemas.microsoft.com/exchange/autodiscover/
mobilesync/requestschema/2006">
     <Request>
            <EMailAddress>testuser@company.tld</EMailAddress>
            <AcceptableResponseSchema>
             http://schemas.microsoft.com/exchange/autodiscover/mobilesync/
             responseschema/2006
            </AcceptableResponseSchema>
     </Request>
</Autodiscover>
```

Second, make the request.

```
$ curl -d @request.xml -u testuser@company.tld -v https://
autodiscover.company.tld/autodiscover/autodiscover.xml
Enter host password for user 'testuser@company.tld':
<?xml version="1.0" encoding="UTF-8"?>
<Autodiscover xmlns="http://schemas.microsoft.com/exchange/autodiscover/
responseschema/2006" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<Response xmlns="http://schemas.microsoft.com/exchange/autodiscover/
mobilesync/responseschema/2006">
    <Culture>en:us</Culture>
    <User>
        <DisplayName>User1</DisplayName>
        <EMailAddress>user1@company.tld</EMailAddress>
    </User>
    <Action>
        <Settings>
            <Server>
                <Type>MobileSync</Type>
                <Url>https://mobile.mail.us-east-1.awsapps.com/Microsoft-
Server-ActiveSync</Url>
                <Name>https://mobile.mail.us-east-1.awsapps.com/Microsoft-
Server-ActiveSync</Name>
            </Server>
        </Settings>
    </Action>
</Response>
```

If the response output is similar, your AutoDiscover endpoint is configured correctly.

Unsupported Attachment Types

You can send messages with attachments through Amazon WorkMail by using the Multipurpose Internet Mail Extensions (MIME) standard. Amazon WorkMail accepts all file attachment types except for attachments with the file extensions in the following list.

> **Note**
> Some ISPs have further limitations (such as archived attachments), so we recommend sending a test email through major ISPs before you send your production email.

The following attachment types aren't supported:

Unsupported Attachment Types

.ade	.fxp	.mag	.msc	.prg	.url
.adp	.gadget	.mam	.msh	.reg	.vb
.app	.hlp	.maq	.msh1	.scf	.vbe
.asp	.hta	.mar	.msh2	.scr	.vbs
.bas	.inf	.mas	.mshxml	.sct	.vps
.bat	.ins	.mat	.msh1xml	.shb	.vsmacros
.cer	.isp	.mau	.msh2xml	.shs	.vss
.chm	.its	.mav	.msi	.sys	.vst
.cmd	.js	.maw	.msp	.ps1	.vsw
.com	.jse	.mda	.mst	.ps1xml	.vxd
.cpl	.ksh	.mdb	.ops	.ps2	.ws
.crt	.lib	.mde	.pcd	.ps2xml	.wsc
.csh	.lnk	.mdt	.pif	.psc1	.wsf
.der	.mad	.mdw	.plg	.psc2	.wsh
.exe	.maf	.mdz	.prf	.tmp	.xnk

Document History

The following table describes the important changes to the Amazon WorkMail Administrator Guide. This guide was last updated on January 4, 2016.

Change	Description	Release Date
General Availability	The general availability release of Amazon WorkMail.	January 4, 2016
Support for reserving resources	Support for reserving resources, such as meeting rooms and equipment. For more information, see Working with Resources (p. 28).	October 19, 2015
Support for the email migration tool	Support for the email migration tool. For more information, see Migrating to Amazon WorkMail (p. 31).	August 16, 2015
Preview	The preview release of Amazon WorkMail.	January 28, 2015