# Set Up External Storage on Azure

> Starting with V10.0, Cora SeQuence has been renamed to Cora Orchestration.

V10.9.1

## Overview

To set up a default attachments file storage location except the Active Directory Synchronization Service (ADSS) application, outside of the Cora SeQuence database, or to reset the default location back to the Cora SeQuence database, you need to run a PowerShell function. This is a one-time procedure that distributes the configuration to the applications deployed on the server.

The following procedures demonstrate how to set up the external file location except ADSS on an Azure storage service.

## Obtain the required Azure account properties

Before you configure the connection to the file storage on Cora SeQuence, you need to access the Azure account to obtain the properties required to run the PowerShell functions.

### Prerequisites

- Make sure that the that the Azure Storage subscription and configuration is ready.
- Coordinate with your IT Admin to get to get access to the relevant Azure Storage account.

### Procedure

1. Sign in to https://portal.azure.com/, and go to **Storage Accounts**.
2. Copy the following properties:
   a. Properties: Primary blob service endpoint
   b. Access key:
      - Account name
      - Account key
      - Connection string
   c. Container name
      If the container does not exist, create one.

## Configure the connection to the file storage

You can configure the file storage location in the following two ways:

- Manually with app config files
- By running PowerShell functions

### Manually configuring the app config files

For configuration of external storage and external secret tool, add the following secrets:

- sequence--externalStorage--accountKey
- sequence--externalStorage--fileConnection

For example, in the Azure Key Vault:

```
sequence--externalStorage-- fileConnection
ExternalSecret=True;BlobEndpoint=https://********.blob.core.windows.net/tester;DefaultEndpointsProtocol=https;Ac
countName=myaccount;AccountKey=sequence:externalStorage:accountKey;EndpointSuffix=core.windows.net
sequence--externalStorage--accountKey:
wtv**********g==
```

In the application config files (Admin, Portal, WebAPI, JES, BRS), set the following default configuration:

```
<configuration>
...
<sequence.engine>
...
<filesStorage configSource="Configuration\ExternalStorage.config" />
...
</sequence.engine>
</configuration>
```

In the `~\Configuration\ExternalStorage.config` file, following is the default:

```
<filesStorage defaultStorageName="CoraSeQuence.Default">
    <storageProviders />
</filesStorage>
```

Update in all the app config files the following:

```
<filesStorage defaultStorageName="myExternalStorage">
    <storageProviders>
        <add name=" myExternalStorage " connectionType="AzureBlobStorage" relativePath="myBlobs" connectio
n="%%sequence:externalStorage:fileConnection%%" />
    </storageProviders>
</filesStorage>
```

If you are not using an external secret tool to store the connection and account key, then use the
following template as the connection in the config file:

```
<filesStorage defaultStorageName="myExternalStorage">
    <storageProviders>
        <add name="myExternalStorage" connectionType="AzureBlobStorage" relativePath="myBlob" connection
="BlobEndpoint=https://********.blob.core.windows.net/tester;DefaultEndpointsProtocol=https;AccountName=myac
count;AccountKey=*****;EndpointSuffix=core.windows.net" />
    </storageProviders>
</filesStorage>
```

Running PowerShell functions

You run two PowerShell functions to configure the storage location:

- Add-CoraSeQuenceFilesStorageConfiguration: Sets the connection to Azure.
- Set-CoraSeQuenceDefaultFilesStorageConfiguration: Sets the Azure service as the default file
  storage location.

Prerequisites

Before you run the PowerShell functions, make sure that you have the following properties at hand:

- Account name
- Account key (encrypted)

> **IMPORTANT**
> To encrypt the account key, run it through the Cora SeQuence Toolkit Encryption Tool.

- Primary blob service endpoint
- Connection string
- Container name
- Connection type: Depends on the storage service provider.
  - For Blob, enter AzureBlobStorage.
  - For File, enter AzureFileStorage.

Procedure

1. To configure the connection to the new file storage location, run this PowerShell function: Add-CoraSeQuenceFilesStorageConfiguration.

   ```
   Add-CoraSeQuenceFilesStorageConfiguration -ConfigurationName "Provider name" -ConnectionType "AzureBlobStorage or AzureFileStorage" -RelativePath "Container name" -Connection "Primary blob service; encrypted account key;"
   ```

   Example

   ```
   Add-CoraSeQuenceFilesStorageConfiguration -ConfigurationName "Blob(emaillistener)Storage" -ConnectionType "AzureBlobStorage" -RelativePath "emaillistener" -Connection "BlobEndpoint=https://xxxxxxxxxxx.blob.core.windows.net/;BasePath=;DefaultEndpointsProtocol=https;AccountName=xxxxxxx;AccountKey=XXXXXXX"
   ```

2. To set the connection as the default file storage location, run this function: Set-CoraSeQuenceDefaultFilesStorageConfiguration.

   To set a *new* location as default:

   ```
   Set-CoraSeQuenceDefaultFilesStorageConfiguration -ConfigurationName "Provider name"
   ```

   To reset to the Cora SeQuence database:

   ```
   Set-CoraSeQuenceDefaultFilesStorageConfiguration -ConfigurationName "CoraSeQuence.Default"
   ```

   Example

   ```
   Set-CoraSeQuenceDefaultFilesStorageConfiguration -ConfigurationName "Blob(emaillistener)Storage"
   ```

V9.2

Overview

To set up a default attachments file storage location except the Active Directory Synchronization Service

(ADSS) application, outside of the Cora SeQuence database, or to reset the default location back to the Cora SeQuence database, you need to run a PowerShell function. This is a one-time procedure that distributes the configuration to the applications deployed on the server.

The following procedures demonstrate how to set up the external file location except ADSS on an Azure storage service.

## Obtain the required Azure account properties

Before you configure the connection to the file storage on Cora SeQuence, you need to access the Azure account to obtain the properties required to run the PowerShell functions.

### Prerequisites

- Make sure that the that the Azure Storage subscription and configuration is ready.
- Coordinate with your IT Admin to get to get access to the relevant Azure Storage account.

### Procedure

1. Sign in to https://portal.azure.com/, and go to **Storage Accounts**.
2. Copy the following properties:
   a. Properties: Primary blob service endpoint
   b. Access key:
      - Account name
      - Account key
      - Connection string
   c. Container name
      If the container does not exist, create one.

## Configure the connection to the file storage

You run two PowerShell functions to configure the storage location: the first sets the connection to Azure and the second sets the Azure service as the default file storage location.

### Prerequisites

Before you run the PowerShell functions, make sure that you have the following properties at hand:

- Account name
- Account key (encrypted)

> **IMPORTANT**
> To encrypt the account key, run it through the Cora SeQuence Toolkit Encryption Tool.

- Primary blob service endpoint
- Connection string
- Container name
- Connection type: Depends on the storage service provider.
  - For Blob, enter AzureBlobStorage.
  - For File, enter AzureFileStorage.

Procedure

1. To configure the connection to the new file storage location, run this PowerShell function: Add-CoraSeQuenceFilesStorageConfiguration.

   Function structure

   ```
   Add-CoraSeQuenceFilesStorageConfiguration -ConfigurationName "Provider name" -ConnectionType "AzureBlobStorage or AzureFileStorage" -RelativePath "Container name" -Connection "Primary blob service; encrypted account key;"
   ```

   Example

   ```
   Add-CoraSeQuenceFilesStorageConfiguration -ConfigurationName "Blob(emaillistener)Storage" -ConnectionType "AzureBlobStorage" -RelativePath "emaillistener" -Connection "BlobEndpoint=https://xxxxxxxxxxx.blob.core.windows.net/;BasePath=;DefaultEndpointsProtocol=https;AccountName=xxxxxxx;AccountKey=XXXXXXX"
   ```

2. To set the connection as the default file storage location, run this function: Set-CoraSeQuenceDefaultFilesStorageConfiguration.

   Function structure

   To set a *new* location as default:

   ```
   Set-CoraSeQuenceDefaultFilesStorageConfiguration -ConfigurationName "Provider name"
   ```

   To reset to the Cora SeQuence database:

   ```
   Set-CoraSeQuenceDefaultFilesStorageConfiguration -ConfigurationName "CoraSeQuence.Default"
   ```

   Example

   ```
   Set-CoraSeQuenceDefaultFilesStorageConfiguration -ConfigurationName "Blob(emaillistener)Storage"
   ```