Create a cloud storage connection

Making a connection to a STAC API allows you to search for data assets and use them directly in ArcGIS Pro. One of the key elements when setting up the connection to a STAC API is the inclusion of ArcGIS Cloud Storage (.acs) connection files. When the datasets discovered through a STAC API are secured in their storage location, these .acs files are needed for authentification when accessing the datasets in ArcGIS Pro. Some STAC APIs (or collections referenced within them) present datasets that are stored in publicly accessible storage. These do not require ACS files to use the data in ArcGIS Pro.

Connections to cloud stores are stored on the file system as files with the extension .acs. You can create a cloud storage connection using either the New Cloud Storage Connection dialog box or the Create Cloud Storage Connection File geoprocessing tool.

See Create Cloud Storage Connection File for more information about how to create an .acs file. See Connect to a cloud store for more information about how to connect to cloud stores.

Note:

You cannot use data from private or protected buckets if the required authentication credentials are not specified in the .acs file. In this case, you can only browse the data on the Parameters and Results tabs in the Explore STAC pane.

In many cases, the STAC API endpoint for conducting the search is open to the public and does not require authentication. This allows you to freely search and discover what assets are available. However, access to read or download the asset data could be secured and requires authentication. Creating .acs files requires certain parameters depending on the type of datastore the collection datasets reside in. For example, the Microsoft Planetary Computer (MPC) STAC requires Azure Storage Shared Access Signature (SAS) tokens.

Create an .acs file to access the Landsat Collection 2 level-2 collection on the MPC STAC

The following workflow provides the steps on creating a cloud storage connection file using the Create Cloud Storage Connection File geoprocessing tool to access the Landsat collection on the MPC STAC. To work with collections in the MPC STAC, verify that you have an ACS file that contains the following parameters:

- Storage Account Name—Name of the account to access this storage

- Container Name—Name of the bucket or container
- ARC_TOKEN_SERVICE_API—URL of the token vendor
- ARC_TOKEN_OPTION_NAME—Type of token from the service provider

1. Retrieve the Account Name and Container names from the MPC site.
    1. Click the link to the Microsoft Planetary Computer Data Catalog. Search and select the dataset collection you want to access.

       The following steps use the Landsat collection as an example.

    2. Click the Landsat Collection dataset.

       The Landsat Collection 2 Level-2 products page opens.

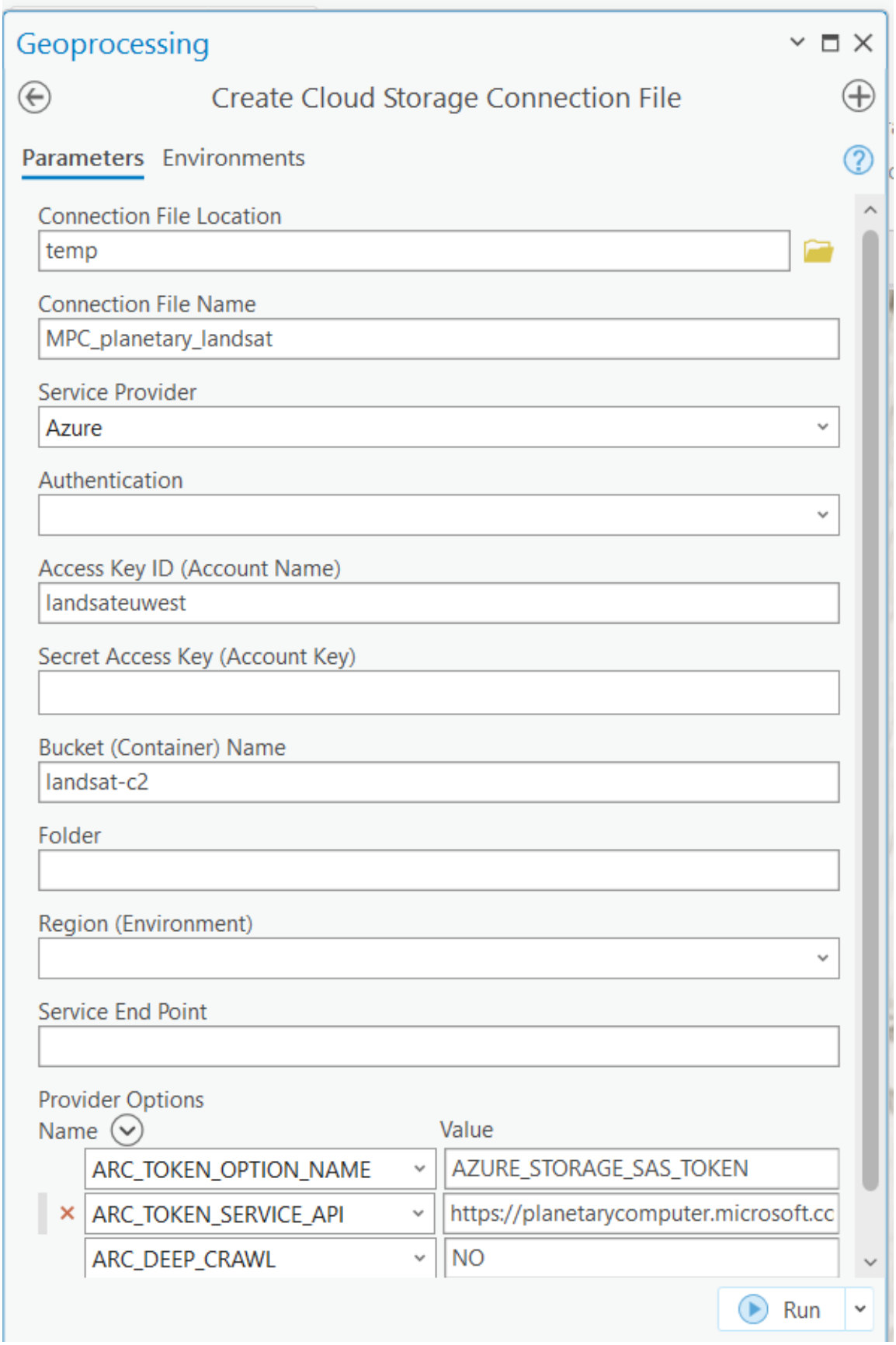
    3. Click the STAC Collection link and view the contents on your browser or on a JSON viewer.
    4. Search for the metadata "msft:storage_account" and "msft:container" information. Search by clicking the page and pressing Ctrl + F, which displays a search field at the bottom of the page. Type (or cut and paste) one of the metadata search terms.

       The values of these two parameters are the Account Name and Container Name values for the Landsat Collection 2 Level - 2 collection. For this example, the Storage Account Name text is landsateuwest and Container is landsat-c2.

2. Apply the account name and container name in the ARC_TOKEN_SERVICE_API. In the request URL template https://planetarycomputer.microsoft.com/api/sas/v1/token/{storage_account}/{container} , replace storage_account with landsateuwest and container with landsat-c2.

   For the Landsat Collection 2 Level-2 collection, the request URL will be .

3. Create the required cloud storage connection file. Open the Create Cloud Storage Connection File tool and set the parameters with the values obtained in previous steps.


Geoprocessing
Create Cloud Storage Connection File
Parameters
Environments
Connection File Location
temp
Connection File Name
MPC_planetary_landsat
Service Provider
Azure
Authentication
Access Key ID (Account Name)
landsateuwest
Secret Access Key (Account Key)
Bucket (Container) Name
landsat-c2
Folder
Region (Environment)
Service End Point
Provider Options
Name
Value
ARC_TOKEN_OPTION_NAME
AZURE_STORAGE_SAS_TOKEN
ARC_TOKEN_SERVICE_API
https://planetarycomputer.microsoft.cc
ARC_DEEP_CRAWL
NO
Run

4. Click Run.

   The cloud storage connection file is created for the Landsat dataset.