

Article

[Yuri Marx](#) · Sep 13, 2022 3m read

[Open Exchange](#)

Create, List, Upload and Download network files and folders Using SMB Protocol and IRIS Interoperability

Samba is the standard for file services interoperability across Linux, Unix, DOS, Windows, OS/2 and other OS. Since 1992, Samba has provided secure, stable and fast file services for all clients (OS and programs) using the SMB/CIFS protocol. Network administrators have used SAMBA to create shared network folders to allow company employees to create, edit and view corporate files as if they were on their computers locally, when these files are physically located on a network file server. It is possible to create a network folder in Linux and see it as a shared folder in Windows, for example.

Currently IRIS connectors do not support accessing and writing to remote files and folders using SMB protocol. So it is necessary to use FTP. But, now we have Python, which has the smbprotocol library (<https://pypi.org/project/smbprotocol>). Based on this library, an interoperability application (production) was created for listing, recording and deleting files and folders using the SMB protocol. Now, your IRIS applications can write or access network files easily. The application is called samba-iris-adapter (<https://openexchange.intersystems.com/package/samba-iris-adapter>).

Application installation

Installation: ZPM

1. Open IRIS Namespace with Interoperability Enabled. Open Terminal and call:

```
USER>zpm "install samba-iris-adapter"
```

Installation: Docker

1. Clone/git pull the repo into any local directory

```
$ git clone https://github.com/yurimarx/samba-iris-adapter.git
```

2. Open the terminal in this directory and run:

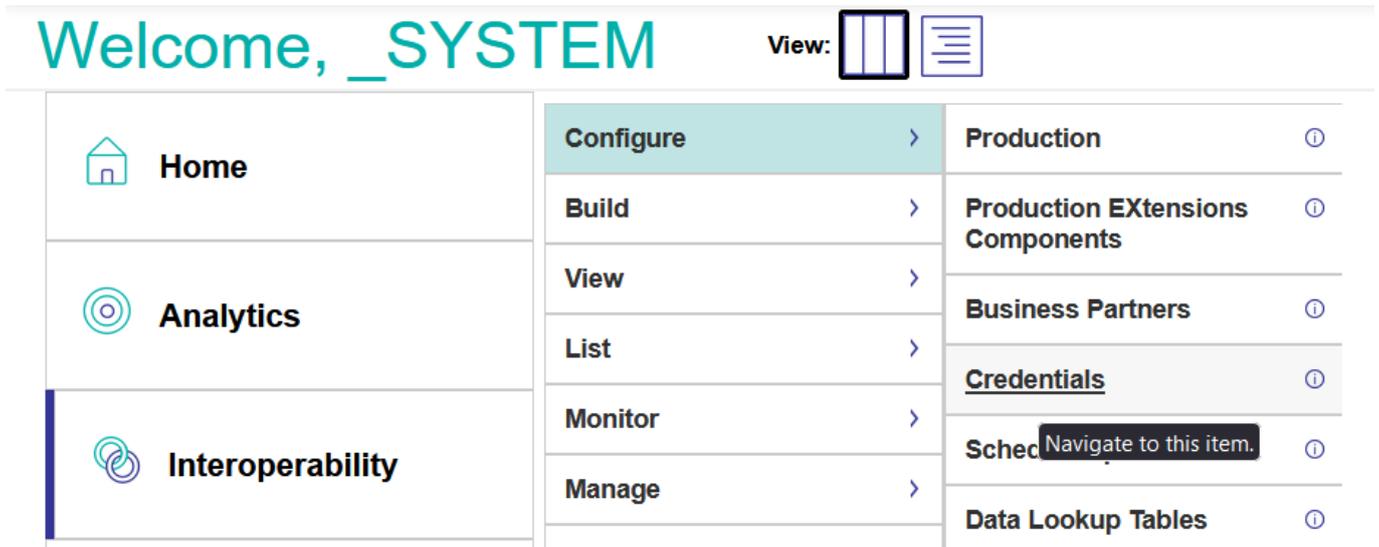
```
$ docker-compose build
```

3. Run the IRIS container with your project:

```
$ docker-compose up -d
```

How to Run the App

1. Go to the Interoperability > Configure > Credentials:



2. Set credentials and save with these values:

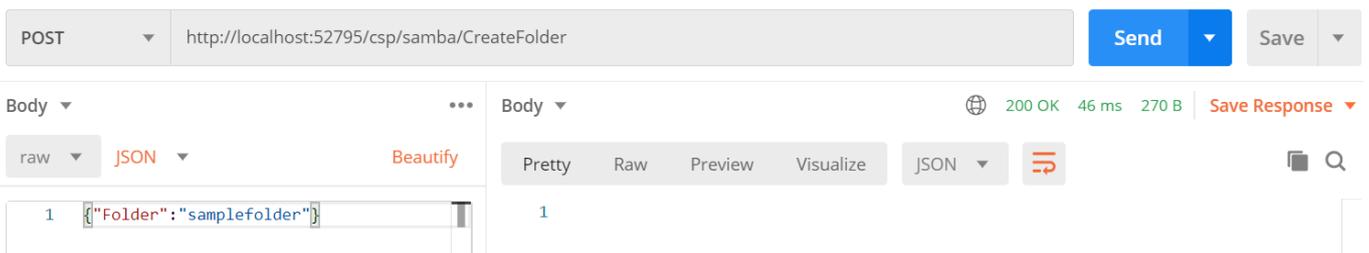
ID: SambaCredentials	
User name: bob	
Password: bobspasswd	

3. Open the production

<http://localhost:52795/csp/user/EnsPortal.ProductionConfig.zen?PRODUCTION=dc.samba.SambaProduction> and start it.

4. Go to your REST client app and use these REST operations (with basic auth and credentials SYSTEM/SYS):

5. Create a new Remote Folder: POST <http://localhost:52795/csp/samba/CreateFolder> with JSON Body: {"Folder":"samplefolder"}



6. To Send a File to a Remote Folder: POST <http://localhost:52795/csp/samba/CreateFile/samplefolder> with form-data selected to send multipart file. The name of the multipart file is file and in value select any file from your computer, check this image with a example using postman:

POST <http://localhost:52795/csp/samba/CreateFile/samplefolder> Send Save

Params Auth Headers (10) **Body** Pre-req. Tests Settings Cookies Code

form-data

KEY	VALUE	CONTENT TYPE	DESCRIPTION
<input checked="" type="checkbox"/> file	<input type="text" value="cat.jpg"/>	Auto	
Key	Value	Auto	Description

Body 200 OK 66 ms 327 B

Pretty JSON

```
1 {
2   "message": "File saved"
3 }
```

7. List files inside a Remote Folder: GET <http://localhost:52795/csp/samba/ListFilesIntoFolder/samplefolder>:

GET <http://localhost:52795/csp/samba/ListFilesIntoFolder/samplefolder> Send Save

Params Auth Headers (10) Body Pre-req. Tests Settings Cookies Code

Query Params

KEY	VALUE	DESCRIPTION
Key	Value	Description

Body 200 OK 105 ms 314 B

Pretty JSON

```
1 [
2   "cat.jpg"
3 ]
```

8. Download the File: POST <http://localhost:52795/csp/samba/DownloadFile> with JSON Body: {"Folder":"samplefolder", "Filename":"cat.jpg"}:

POST <http://localhost:52795/csp/samba/DownloadFile> Send Save

Params Auth Headers (10) **Body** Pre-req. Tests Settings Cookies Code

raw JSON Beautify

```
1 {"Folder":"samplefolder", "Filename":"cat.jpg"}
```



Body 200 OK 44 ms 7.77 KB

9. See productions messages into [http://localhost:52795/csp/user/EnsPortal.ProductionConfig.zen?\\${NAMESPACE}=USER&\\${NAMESPACE}=USER](http://localhost:52795/csp/user/EnsPortal.ProductionConfig.zen?${NAMESPACE}=USER&${NAMESPACE}=USER) > Messages tab > click the Session:

Session ID: 31 Legend Printable Version Go to items 1 - 2 Items per page 40 Show events Show internal items Apply Filter None Previous Page Next Page

Services	Operations
SambaDownloadFileService	SambaBusinessOperation

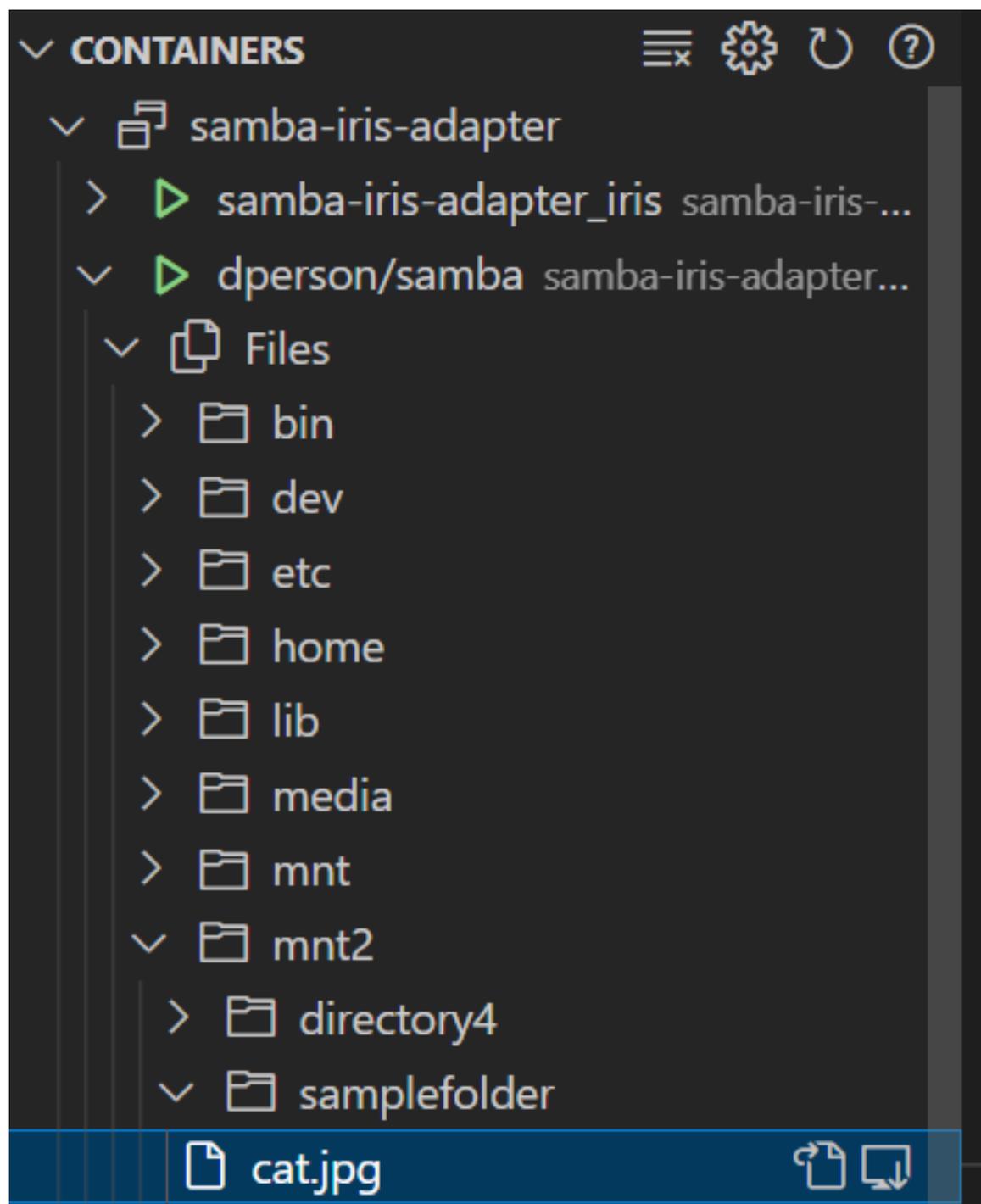
View Full Contents

Expand All

NOTE: XML namespace information not available in your browser. XML namespace declarations will not be displayed in output.

```
<?xml version="1.0" ?>
<!-- type: dc.samba.DownloadFileMessage id: 18 -->
<DownloadFileMessage>
  <Folder>samplefolder</Folder>
  <Filename>cat.jpg</Filename>
</DownloadFileMessage>
```

10. Check the new folder and file inside /mnt2 folder inside samba docker instance:



Enjoy!

[#Interoperability](#) [#Python](#) [#InterSystems](#) [IRIS](#)
[Check the related application on InterSystems Open Exchange](#)

Source

URL:<https://community.intersystems.com/post/create-list-upload-and-download-network-files-and-folders-using-smb-protocol-and-iris>