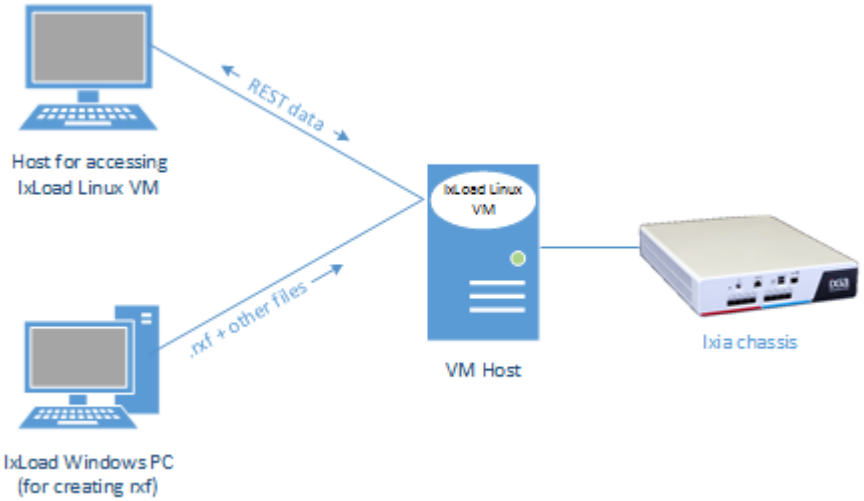
Using IxLoad on Linux

IxLoad can be used on Linux through the IxLoad REST API. Most, but not all, of the features supported from the REST API on Windows are also supported on Linux. See *IxLoad Features not Supported from REST on Linux* on page 3 for details.

To use IxLoad on Linux, Ixia supplies an OVA with the following software pre-installed:

- IxLoad middleware (infrastructure software only, no UI support)
- IxLoad REST gateway service



For the IxLoad 8.20 release, you can only run existing repository (.rxf) files, you cannot create them from Linux.

The workflow for running repository files is:

1. Create a test in the IxLoad GUI, and save the .rxf file.
2. Deploy the OVA and start the VM.
3. Connect to the IxLoad REST gateway service on the VM.
4. Upload the rxf and supporting files to the VM.
5. Use the REST API to issue commands to start and run the test.

This document describes this workflow.

Create the Test

1. On a Windows PC with the IxLoad client installed, create the test that you want to run.
2. Save the test repository (.rxf) file, along with any supporting files (sample audio files, traffic capture files, etc.) that the test requires in a location that can be accessed from the VM.

Deploy the OVA

1. Use the hypervisor of your choice to deploy the OVA, and start the VM.
2. Use the hypervisor's console to find the IP address of the VM.

Connect to the VM and Upload the Test

1. Using a browser extension or application (such as PuTTY), establish an SCP connection to the VM.

When you connect to the VM, the default path is automatically set to a shared folder intended for transferring test files to and from the VM.

2. Upload the .rxf file and any supporting files to the VM. The maximum size of a file you can upload is 1GB.

   There are two ways to upload files:

   - Though a script
   - Through a remote file browser

   Script method

   To upload files from a script, the IxLoad REST API includes the `uploadFile` operation. You must create a script that includes `uploadFile`. You can use any scripting language that has libraries capable of HTTP file upload requests (such as `httplib` on Python). You cannot use a GUI REST client to upload files.

   IxLoad includes a sample Python REST script, `IxLoadUtils.py`, that demonstrates the use of `uploadFile`. `IxLoadUtils.py` and other sample REST scripts are stored on the IxLoad client installation path, in a subfolder named `RestScripts`.

   To upload a file, the script executes a POST request on the following URL:
   `http://127.0.0.1:8080/api/v0/resources`

   The `uploadFile` operation in the script takes three parameters:

`filename`	represents the path of the local file to be uploaded to remote location

`uploadPath`	represents the path relative to the shared folder (`/mnt/ixload_share`) on the Linux VM.
	For example, if the upload path is:
	`uploads/SimpleRun.rxf`
	the file will be uploaded to:
	`/mnt/ixload_share/uploads/SimpleRun.rxf`

`overwrite`	determines whether or not an existing file on the remote location with the same name as the uploaded file is overwritten. The default value is `true`.

   The image below shows an example of a script that uses the uploadFile operation.

```
import os
import requests

url = 'http://127.0.0.1:8080/api/v0/resources/'
headers = {'Content-Type': 'multipart/form-data'}


def uploadFile(fileName, uploadPath, overwrite=True):
    params = {'overwrite': overwrite, 'uploadPath': uploadPath}

    print 'Uploading...'
    try:
        with open(fileName, 'rb') as f:
            resp = requests.post(url, data=f, params=params, headers=headers)
    except requests.exceptions.ConnectionError as e:
        print (
            'Upload file failed. Received connection error. One common cause for this error is the size of the file to be uploaded.'
            ' The web server sets a limit of 1GB for the uploaded file size. Received the following error: %s' % str(e)
        )
    except IOError as e:
        print 'Upload file failed. Received IO error: %s' % str(e)
    except Exception:
        print 'Upload file failed. Received the following error: %s' % str(e)
    else:
        print 'Upload file finished.'
        print 'Response status code %s' % resp.status_code
        print 'Response text %s' % resp.text


fileNamePath = 'SimpleRun.rxf'
relativeUploadPath = 'uploads/' + os.path.split(fileNamePath)[1]
overwrite = True

uploadFile(fileNamePath, relativeUploadPath, overwrite)
```

   For full information on `uploadFile` and the other IxLoad REST commands, see the *IxLoad REST API Guide* (available from the Ixia website: https://support.ixiacom.com/user-guide).

Remote file browser method

You can upload files using a remote file browser. To use this method, connect to /mnt/ixload_share and pass the following credentials:

Username:	`ixload`
Password:	`ixia123`

Run the Test

1. Start the REST client you want to use for the test.
2. Issue the REST commands to start and run the test. For information on the REST commands, see the *IxLoad REST API Guide* (available from the Ixia website: https://support.ixiacom.com/user-guide).

When used on Windows, REST API calls that operate on files (such as the .rxf file) require the full path to the file. The same is true on Linux -- you must use the full path to the file. The file path on the VM always begins with `/mnt/ixload-share`. Uploading programatically (i.e., from a script) or from a remote file browser must be done from this location.

For example, the `loadTest` operation loads the rxf file.

On Windows, the path might be:

```
{"fullPath":"C:\\path\\to\\files\\myTest.rxf"}
```

On Linux, the path might be:

```
{"fullPath":"/mnt/ixload-share/myTest.rxf"}
```

If the .rxf file includes references to any other files, make sure these files are also uploaded in the shared location on the VM. If the files referenced from the .rxf have absolute paths, you must modify them (for example, by doing a PATCH request) to point to their new location on `/mnt/ixload-share`.

IxLoad Features not Supported from REST on Linux

- AppLibrary protocols
- Resource Manager
- Profiles (e.g. Real files)
- IxReporter