

How To Download Files via the XNAT REST API

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For the purposes of this instruction we will assume a stored session with the following structure.

```
Project:TEST
Subject:1
  Experiment:MR1
    Scan:1 (TYPE:T1)
      resource:DICOM
        file:1.dcm
        file:2.dcm
      resource:SNAPSHOTS
        file:snap.jpg
    Scan:2 (TYPE:T1)
      resource:DICOM
        file:1.dcm
        file:2.dcm
      resource:SNAPSHOTS
        file:snap.jpg
    Scan:3 (TYPE:T2)
      resource:DICOM
        file:1.dcm
        file:2.dcm
      resource:SNAPSHOTS
        file:snap.jpg
    Scan:4 (TYPE:T2)
      resource:DICOM
        file:1.dcm
        file:2.dcm
      resource:SNAPSHOTS
        file:snap.jpg
  Assessment:ASSESS1
    out resource: TEST
      file:something.img
      file:something.hdr
```

Within the scan, reconstruction, assessment, and resource levels of the URIs, you can use a few special tools to assist in the downloading of data.



- Multiple IDs can be separated by commas.
- Types can be substituted for scan IDs and reconstruction IDs.

Download Scan Data

How do I download a single scan's DICOM data?

You can download the files for a single scan using the relevant scan ID.

```
/data/projects/TEST/subjects/1/experiments/MR1/scans/1/resources/DICOM/files
```

This will return a list of the DICOM files for scan 1.

Do I have to download the files one by one?

No. You can use the query string parameter **format=zip** to return the actual files in a compressed archive instead of returning the list of files.

```
/data/projects/TEST/subjects/1/experiments/MR1/scans/1/resources/DICOM/files?format=zip
```

How can I download all of the files for the scan (DICOM and SNAPSHOTS)?

You can download all of the files for the scan by leaving off the **resource** description.

```
/data/projects/TEST/subjects/1/experiments/MR1/scans/1/files?format=zip
```

How can I download files for multiple scans?

If you know the relevant scan IDs, you can include multiple scan IDs in the URI separated by a comma.

```
/data/projects/TEST/subjects/1/experiments/MR1/scans/1,2/files?format=zip
```

How can I download all of the scans for the session?

You can also use the **ALL** keyword at the scan identification level.

```
/data/projects/TEST/subjects/1/experiments/MR1/scans/ALL/files?format=zip
```

How can I download all of the T1 scans for the session?

Instead of specifying one or more scan IDs, you can substitute the scan **TYPE** in the URI at the scan identification level.

```
/data/projects/TEST/subjects/1/experiments/MR1/scans/T1/files?format=zip
```

You can also provide a comma delimited list of scan types.

```
/data/projects/TEST/subjects/1/experiments/MR1/scans/T1,T2/files?format=zip
```

Downloading Image Assessor Data

Similar to scan access, you can use the **ALL** keyword and comma-separated lists of assessor IDs in your URIs. However, instead of allowing the substitution of the **TYPE** attribute, you can use the **XSI:TYPE** of the data you are interested in.

```
/data/projects/{PROJECT_ID}/subjects/{SUBJECT_ID}/experiments/{EXPT_ID}/assessors/{ASSESSOR_ID or xsi:type or ALL}/resources/{TYPE or ID}/files
```