

XNAT Power Users

Tim Olsen (olsent@wustl.edu)

Audience: Focus on heavy users of XNAT, but useful information for site administrators

Goals: Present some topics of interest to active users of XNAT, including Batch Upload options, Batch Download options, and Searching options.

Batch Uploading

- Manual Creation
- REST API
- DICOM Send
- XNAT Desktop
- Auto-creation (via auto-archiving)
- Spreadsheet Upload
 - We'll walkthrough this process
 - Currently considered an experimental feature because the user interface needs a lot of work

Batch Downloading

- Individual download
- REST API
- Download Applet
 - We'll walkthrough this process
 - Can be a convenient way to download large amounts of image session data
 - A few limitations:
 - No support for project files
 - No support for subject files
 - No support for generic resources

Traditional Search engine

- XML based
- Robust, Customizable
- Used in web interface
- Built to use fields defined in the display documents
- Can query columns defined in customized SQL Views
- Also supports XML Path references
- We'll walk through an example search

Enhanced REST Listings

- Available on any listing in the standard REST hierarchy
 - **/REST/projects**
returns a list of projects

- **/REST/projects/ID/subjects**
returns a list of subjects for the given project
- **/REST/projects/ID/subjects/ID/experiments**
returns a list of experiments for a given subject
- **/REST/projects/ID/experiments**
returns a list of experiments for a project
- **/REST/experiments**
returns a list of all experiments
- **/REST/subjects**
returns a list of all subjects
- **/REST/experiments/ID/scans**
returns a list of scans for an imaging session
- **/REST/experiments/ID/reconstructions**
returns a list of reconstructions for an imaging session
- **/REST/experiments/ID/assessments**
returns a list of assessments for an imaging session
- XSI type: Use xsiType to fine tune results to specific data types.
 - `/REST/experiments?format=xml&xsiType=xnat:mrSessionData`
- Columns
 - Returned columns are customizable and standard from XNAT to XNAT
 - Can use XML Path shortcuts to identify fields from the schema
 - Can return unbounded elements
 - Cannot match XML Path with []
- Filters
 - Limit rows returned
 - Can use =, >, <
 - Use * wildcard in String data for LIKE matching

Future

- Increased support for custom join logic and [] in XML path
- More efficient SQL query design