ACEMID Data Uploader – User Manual

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Overview

The ACEMID Data Uploader is a series of Bash scripts designed to automate the upload of dermatological image data to a secure XNAT server using rest API calls. It ensures data is transferred efficiently and securely, following the ACEMID project's data handling protocols.

Prerequisites

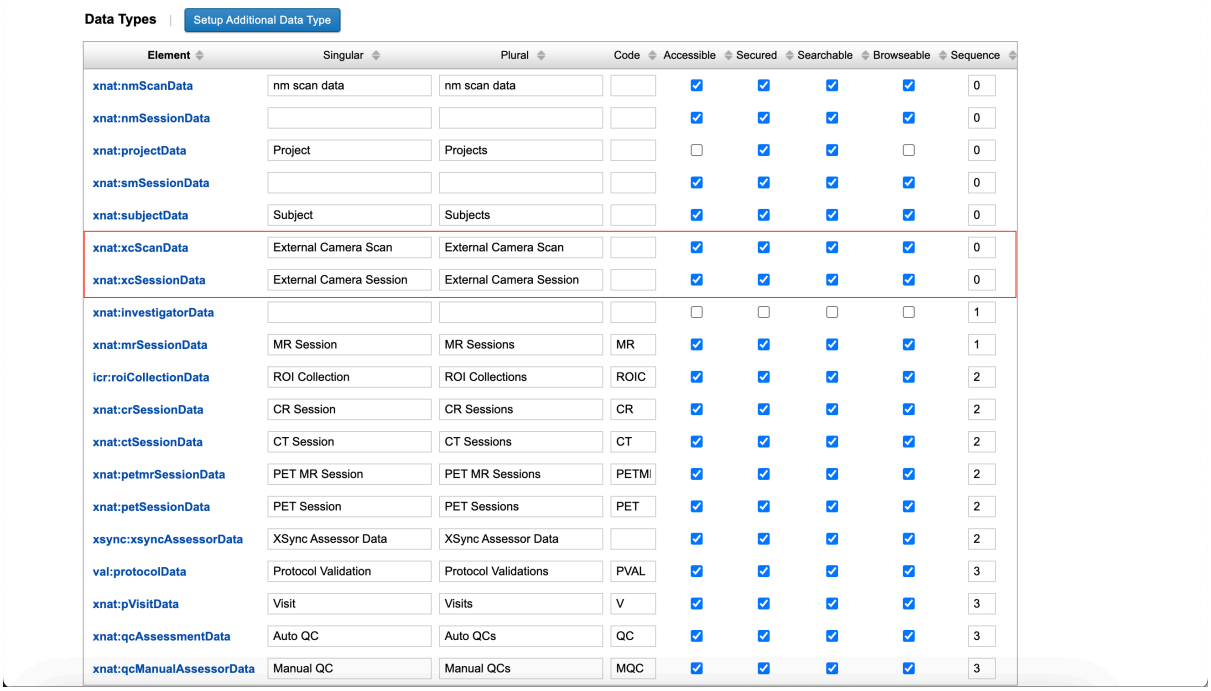
Before running the script, ensure the following:

1. System Requirements

- Unix-like OS (Linux/macOS)
- Bash shell

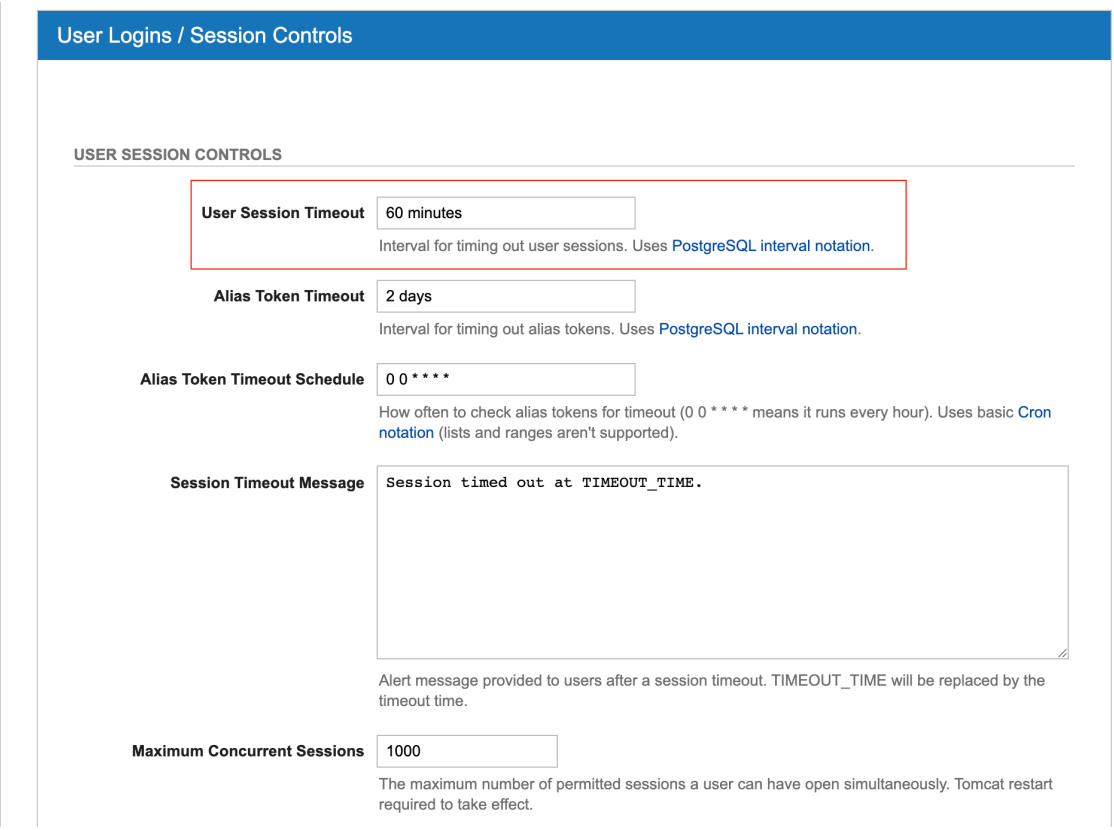
2. XNAT Requirements

- Turn on the External Camera Session (xnat:xcSessionData) and External Camera Scan (xnat:xcScanData) data types (see below).



Element	Singular	Plural	Code	Accessible	Secured	Searchable	Browseable	Sequence
xnat:nmScanData	nm scan data	nm scan data		☑	☑	☑	☑	0
xnat:nmSessionData				☑	☑	☑	☑	0
xnat:projectData	Project	Projects		☐	☑	☑	☐	0
xnat:smSessionData				☑	☑	☑	☑	0
xnat:subjectData	Subject	Subjects		☑	☑	☑	☑	0
xnat:xcScanData	External Camera Scan	External Camera Scan		☑	☑	☑	☑	0
xnat:xcSessionData	External Camera Session	External Camera Session		☑	☑	☑	☑	0
xnat:investigatorData				☐	☐	☐	☐	1
xnat:mrSessionData	MR Session	MR Sessions	MR	☑	☑	☑	☑	1
icr:roiCollectionData	ROI Collection	ROI Collections	ROIC	☑	☑	☑	☑	2
xnat:crSessionData	CR Session	CR Sessions	CR	☑	☑	☑	☑	2
xnat:ctSessionData	CT Session	CT Sessions	CT	☑	☑	☑	☑	2
xnat:petmrSessionData	PET MR Session	PET MR Sessions	PETMI	☑	☑	☑	☑	2
xnat:petSessionData	PET Session	PET Sessions	PET	☑	☑	☑	☑	2
xsync:xsyncAssessorData	XSync Assessor Data	XSync Assessor Data		☑	☑	☑	☑	2
val:protocolData	Protocol Validation	Protocol Validations	PVAL	☑	☑	☑	☑	3
xnat:pVisitData	Visit	Visits	V	☑	☑	☑	☑	3
xnat:qcAssessmentData	Auto QC	Auto QCs	QC	☑	☑	☑	☑	3
xnat:qcManualAssessorData	Manual QC	Manual QCs	MQC	☑	☑	☑	☑	3

- Suggested to Set the User Session Timeout to be 60 minutes (see below).



3. Installed Required Software Packages

Install the following dependencies using your package manager. For example, on Ubuntu: run

```
sudo apt update
sudo apt install csvkit pdftotext inotify-tools
```

- `curl` (for calling XNAT Restful APIs)
- `csvkit` (for processing the csv files)
- `pdftotext` (for converting PDF files to text files)
- `enscript` (for converting text files back to PDF files)
- `inotify-tools` (for monitoring changes to files and directories in real time)

4. Explanations of each bash script

(1) ACEMID_uploader.sh The main ACEMID bash script to upload the cleaned Vectra exported data files to your XNAT instance using JSESSIONID.

(2) dermoscopy_data_upload.sh The Bash script to upload the dermoscopy images (mainly in jpg or png) to your XNAT instance.

(3) stage_server_monitor.sh The bash script to monitor the exported data from Vectra system to your specified network drive to detect if there is any file or folder changes in real time and then it will trigger the upload script.

(4) remove_phi_report.sh The bash script used to remove the PHI info in the pdf reports.

(5) Dockerfile The Dockerfile used to build the docker image of the above bash scripts to run on different platforms.

5. Setup Instructions

(1) Clone the Repository

```
git clone https://github.com/Australian-Imaging-Service/acemid-uploader.git
cd acemid-uploader
```

(2) Configure Environment Variables

Export the following variables in your shell:

```
export XNAT_URL="your_xnat_url"
export USERNAME="your_xnat_username"
export PASSWORD="your_xnat_password"
export PROJECT_ID="your_xnat_project_id"
```

You can also modify the script directly to hardcode these values if preferred.

(3) Running the script

- For ACEMID_uploader.sh script, place this script in the folder of the cleaned export data file folder containing .db files and then run *./ACEMID_uploader.sh*
- For dermoscopy_data_upload.sh script, place this script in the dermoscopy data file folder containing .csv files and then run *./dermoscopy_data_upload.sh input_csv_file_name*
- For remove_phi_report.sh script, place this script in the folder containing the pdf files you want to process and then run *./remove_phi_report.sh*
- For stage_server_monitor.sh, please this script into the specified network drive folder you want to monitor and then run *./stage_server_monitor.sh*