GRP 2 Managing Projects & Users in XNAT

PURPOSE OF THE PROCEDURE

To outline the steps required to manage projects and users in XNAT.

APPLICABITLITY

This procedure applies to people performing XNAT project management for a trial supported by the Australian Centre for Quantitative Imaging/Australian Imaging Service being hosted in XNAT.

RELATED PROCEDURES

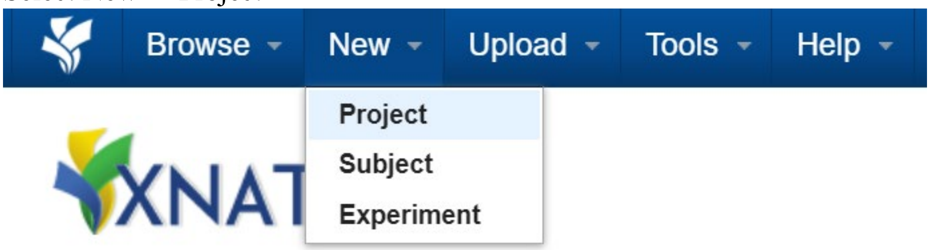
Procedure Number	Scope
GRP1	Gaining Access to XNAT
GRP3	Preparing Data for Upload to XNAT
GRP4	Uploading Data to XNAT
GRP5	Performing Data Review
GRP6	Analysing project data

PROCEDURES

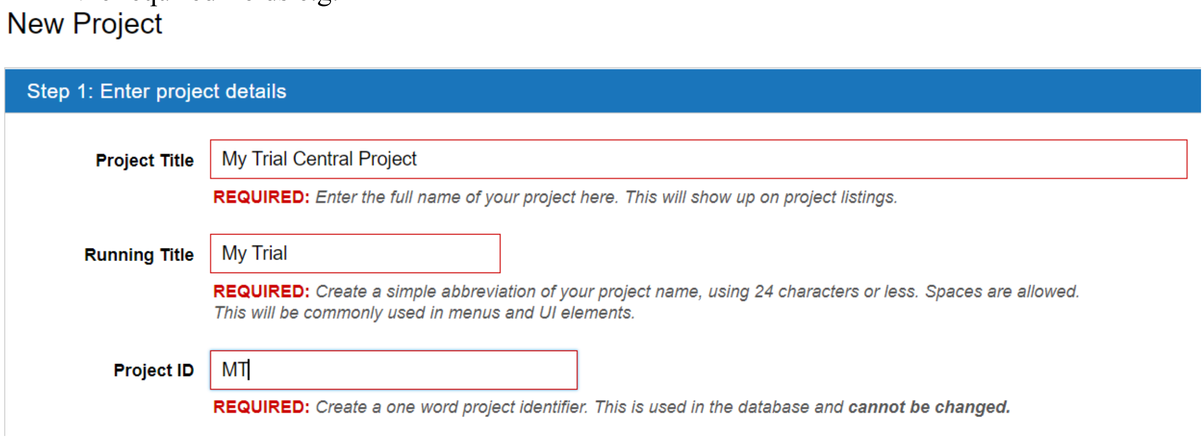
Creating a project

XNAT documentation is available here [XNAT Documentation: Creating and Managing Projects]

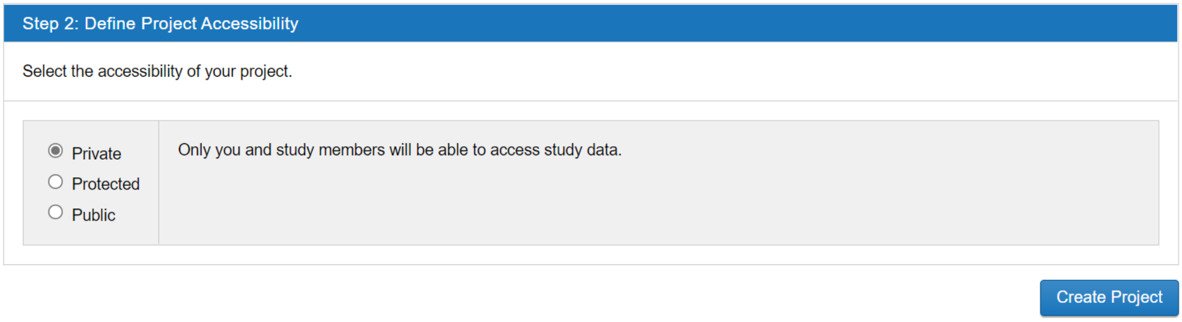
- Log into [XNAT]
- Select New -> Project



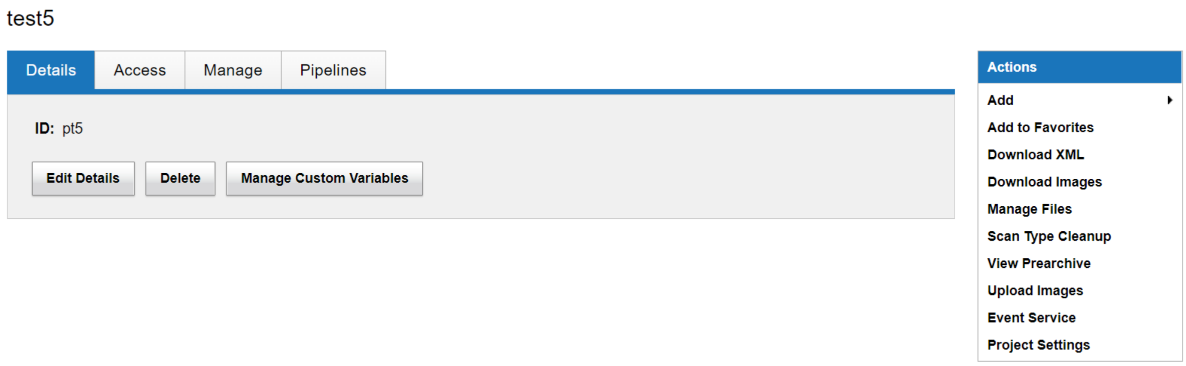
- Fill in the required fields e.g.



- Fill in any additional fields as desired
- Ensure your project is set to private and click “Create Project”



- Once your project is created you will be taken to a screen for the project like this

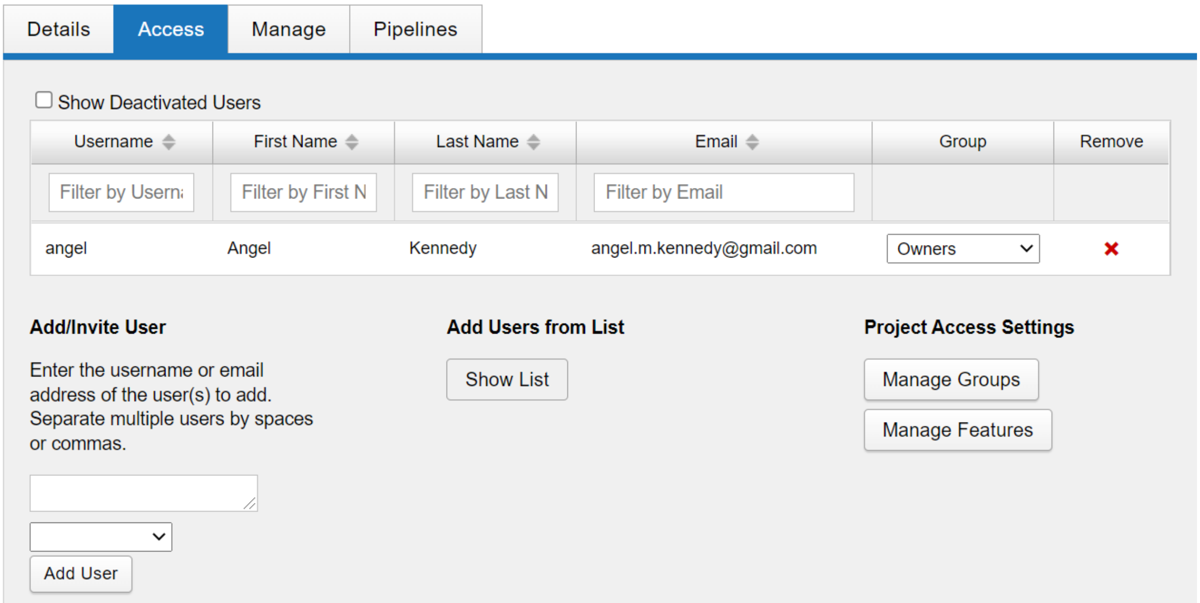


Managing Users

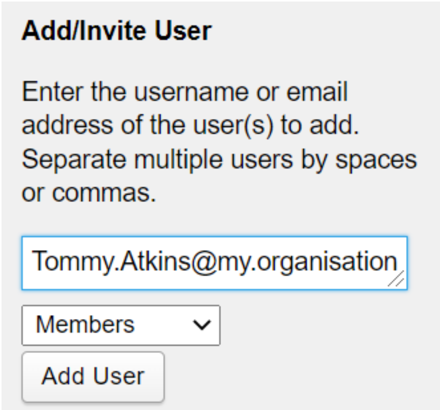
As an owner you can add or remove users to/from your project or change their role in your project. If a user does not have an XNAT account yet you can choose to invite them to your project. If their account is created this way, then their account will be automatically activated, and they can start using XNAT. If they create the account by visiting XNAT and applying then a site administrator will need to activate their account.

Invite a new user

- Select the Access tab from your project home page

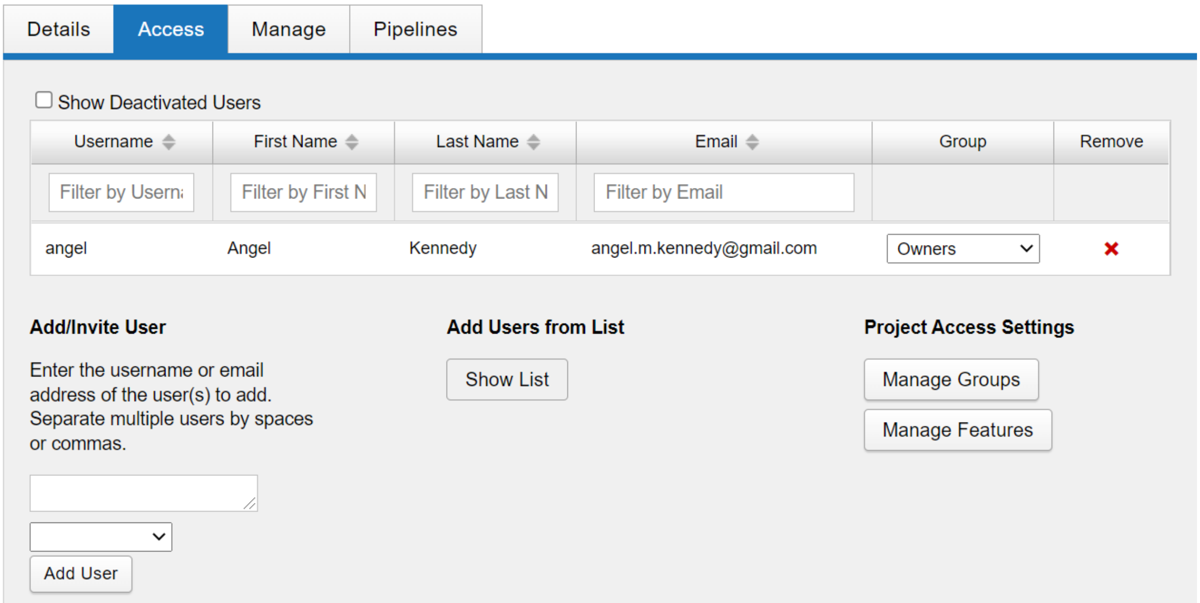


- Fill in the user’s email address and role and then click “Add User”. An invitation will be sent and the user account should be automatically activated.

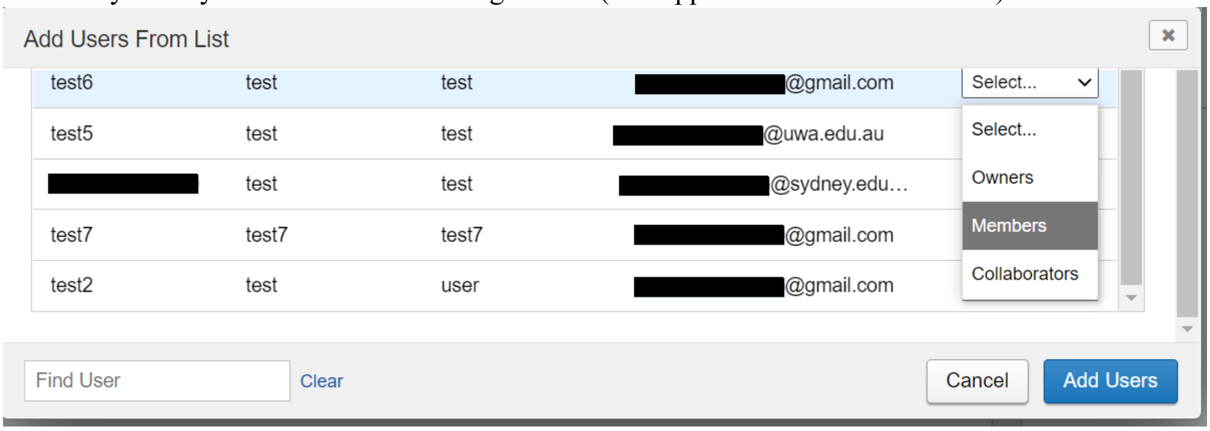


Add an existing user to you project

- Select the “Access” tab and click “Show List”



- Select any users you want to add and assign a role (see Appendix D for info on roles)



Enabling additional functionality for your project

A couple of possible automations or features have been added to this XNAT. They need to be specifically enabled for your project and automation can be set up so that they are triggered by particular events. Appendix C lists the currently available features. Please contact the Site Administrator at official.xnat.acqi@gmail.com to enable this functionality.

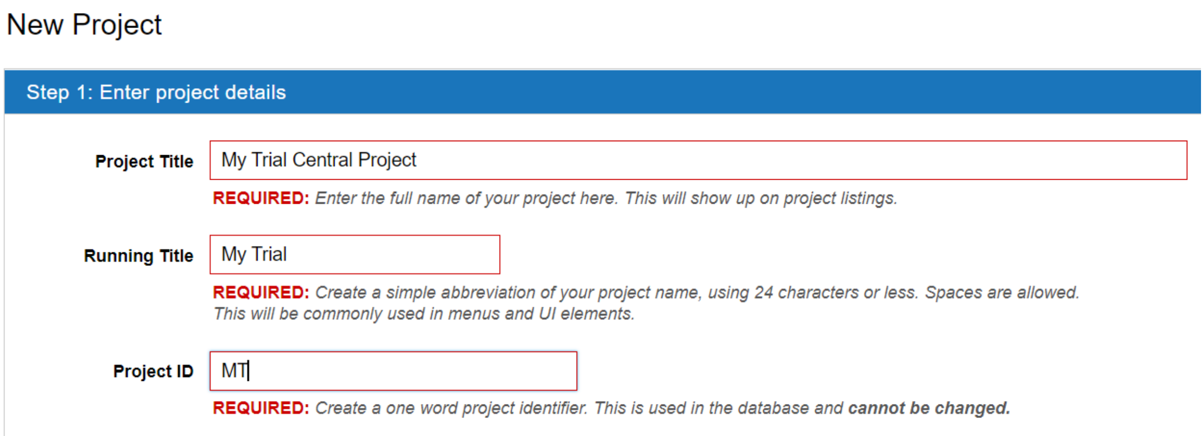
Appendix A: Project structures for trials

There are several project structures that we've previously used to manage data for different trials. These are

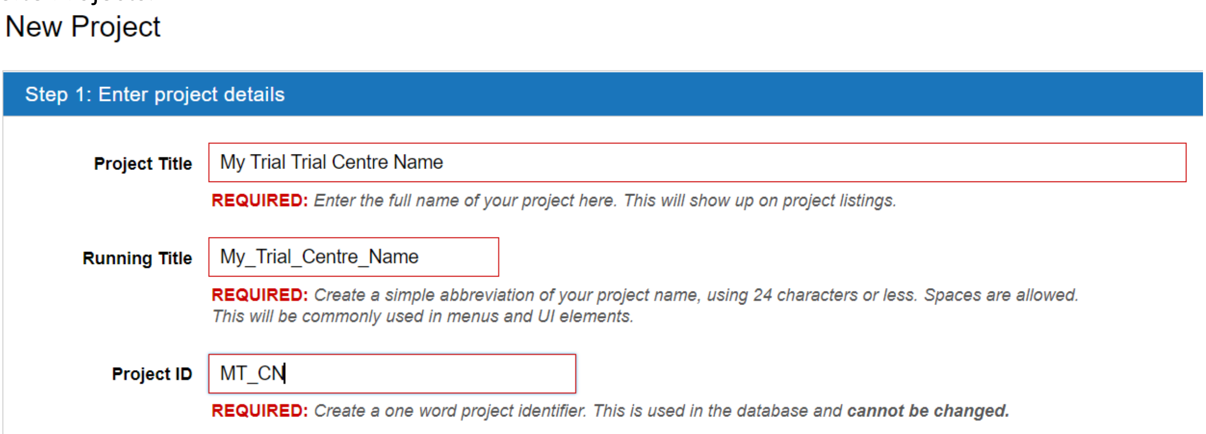
1. A single project. All data is uploaded to this project. Users get permissions to this project and can see all the data in it.
2. A Central project and a site project for each site that contributes data. In this case trial data is uploaded to a site and then shared into the central project either automatically (see Appendix C1) or by a central reviewer after they have reviewed the data. This makes it possible to ensure that people from one centre do not have access to data from another centre.
3. As with 2 except that each site gets a trial data project and a site initiation project in order to keep site initiation data separate from trial data.

Appendix B: Naming conventions for projects

Central Projects



Site Projects:



Site Initiation Projects:

New Project

Step 1: Enter project details

Project Title My Trial Trial Centre Name site initiation project

REQUIRED: *Enter the full name of your project here. This will show up on project listings.*

Running Title My_Trial_Centre_Name_SI

REQUIRED: *Create a simple abbreviation of your project name, using 24 characters or less. Spaces are allowed. This will be commonly used in menus and UI elements.*

Project ID MT_CN_SI

REQUIRED: *Create a one word project identifier. This is used in the database and **cannot be changed.***

Appendix C: Automations or Commands available for projects

XNAT Command Label	Container	Enabled	Actions
Enable / Disable All Commands			
Share session from satellite project into central project	randomid0987/perth_xnat:auto_share		Set Defaults
Send scans to a storable PACS	randomid0987/perth_xnat:sendToPacs		Set Defaults
Record session review and send notification to evaluators when all required reviews are complete.	randomid0987/perth_xnat:record_review		Set Defaults
Run dcm2niix on a Scan	xnat/dcm2niix:latest		Set Defaults
Notify users of the selected role that a new session has been created	randomid0987/perth_xnat:email_notification		Set Defaults

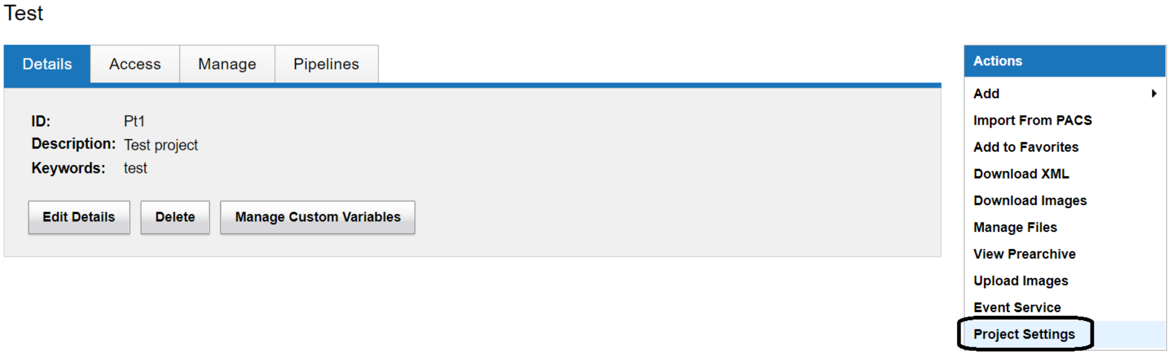
1) Share data from a site/satellite project to a central project once new data is archived in XNAT
2) Send scans to a storable (one that has CSTORE enabled) PACS
3) Record a session review result and once all reviews are complete (number of reviews required can be set) a notification email will be sent to users of the named role (default: evaluators).
4) Convert from DICOM to .nii format
5) Send an email notification to the named role (default: Reviewers) that a session has been added.

All of these, except number 4, can be automated so that they occur whenever a new session is archived. For number 4 it can be automated to occur whenever a new scan is archived.

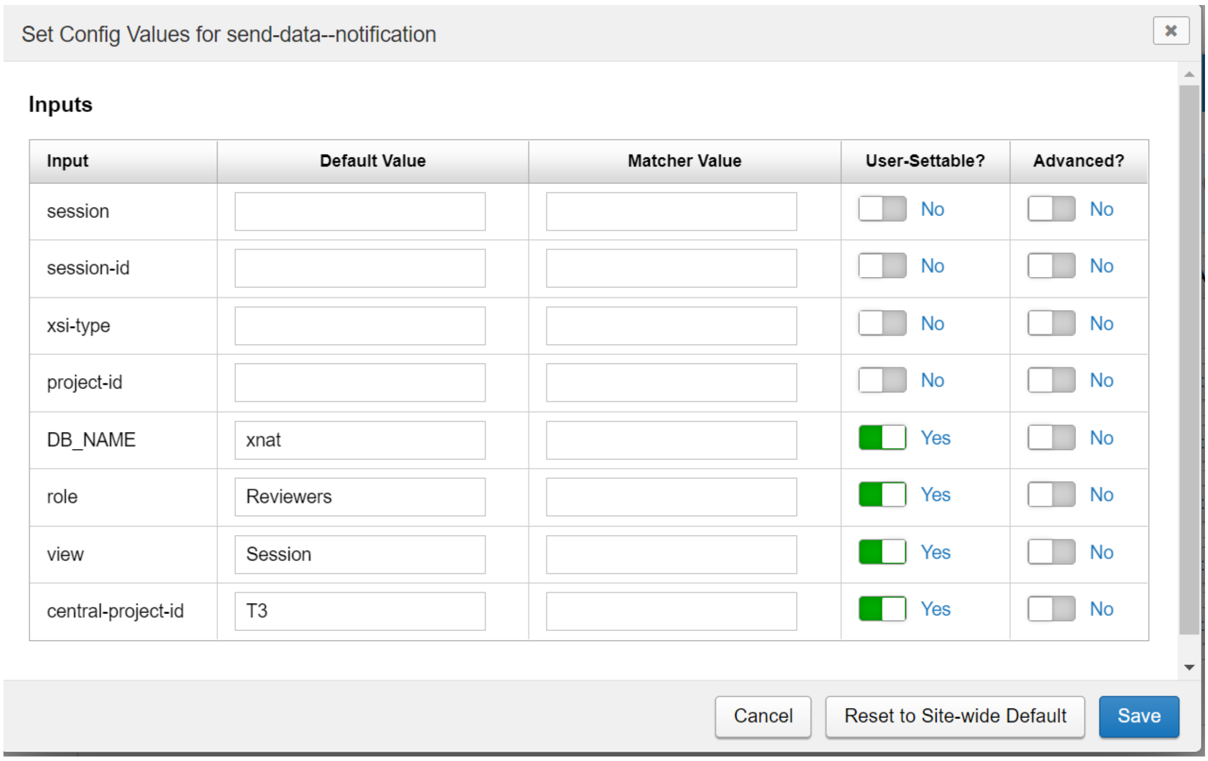
Below are the instructions for how to set up automatic email notification for reviewers when new sessions are archived.

- Create a user role for reviewers. The default for the container is to use the name “Reviewers” so if you create a role with this name the default will work.
- Add one or more users to this role. If you use a Central project and the same reviewers should be used regardless of which site the session is uploaded to, you can do this in only the central project and it will work if you provide the central project ID as a container argument.

- Select “Project Settings” from the “Actions” menu

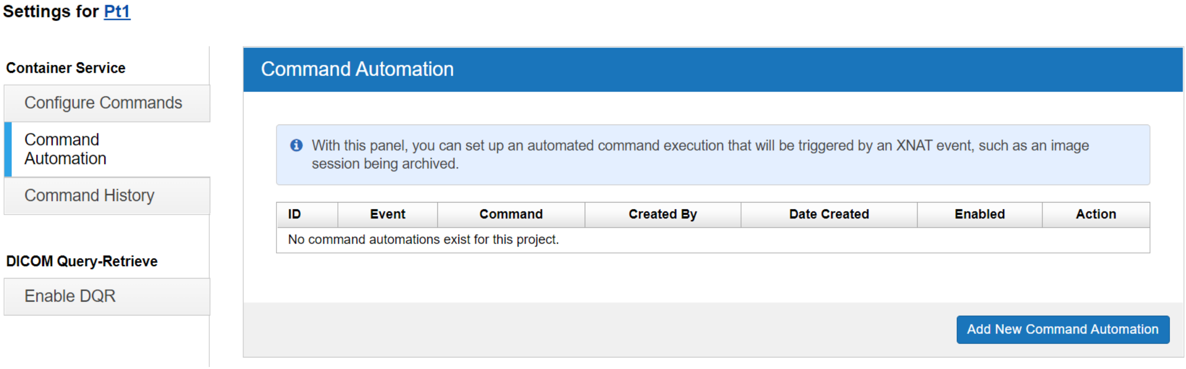


- Enable the container randomid0987/perth_xnat:email_notification
- Select “Set Defaults” then set appropriate default. Generally the only ones you need to set or modify are the central-project-id if you are using a central project (eg options 2 and 3 in Appendix A) and the role if you aren’t using “Reviewers” as the custom role for users to be notified.

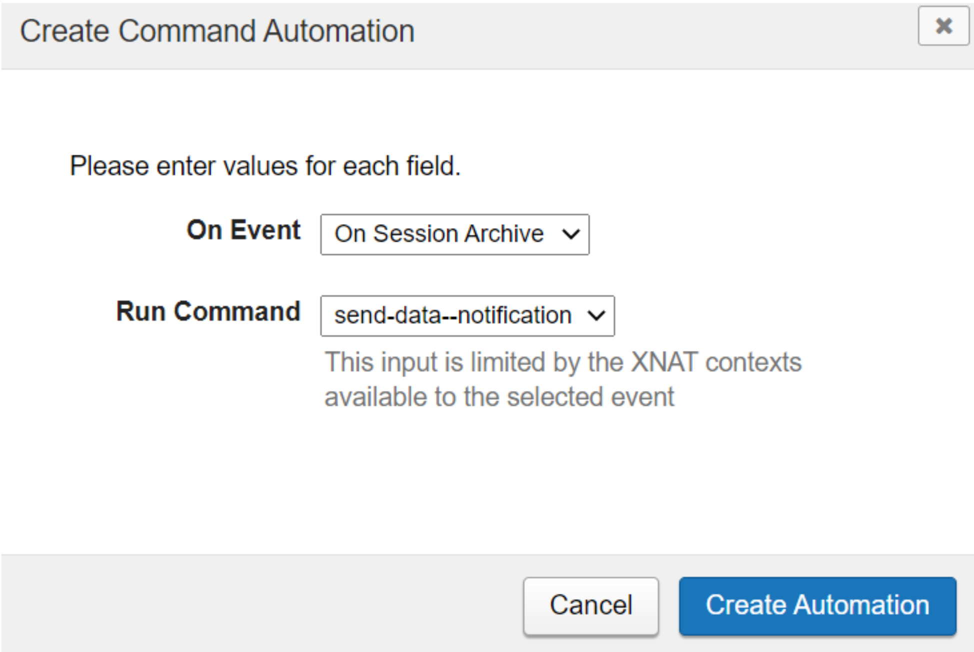


- Click “Save”. This command will now be available for all sessions in this project. If you have multiple projects you will need to do this for all of them.

- To automate this so that it happens whenever a new session is archive select the “Command Automation” tab on the left then click “Add New Command Automation”



- Set the values as below and click “Create Automation”



- Now whenever a session is archived to this project users assigned to the “Reviewers” role (or whatever you’ve chosen to name it) in the Central project if you’re using one or just this project if not will receive an email notification with the details of the newly archived session.

Appendix D: User roles and permissions

An explanation is available from XNAT here [XNAT Documentation: Understanding User Roles and Permissions](). Here is a screenshot of the permissions matrix.

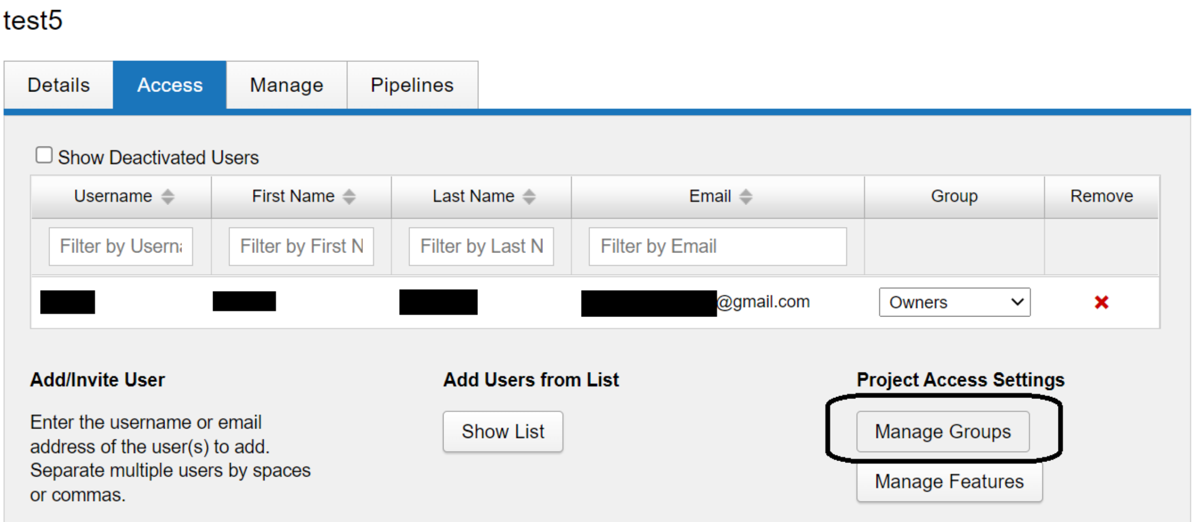
Role/Activity	Project Owners	Project Members	Project Collaborators
Create Data	C	C	
Read/Download Data	R	R	R
Update Data	U	U	
Delete Data	D		

These roles can be customised to an extent by selecting “Manage Features” from the “Access” tab in your project. You will get a form such as the one below.

pt5

Project	Group	Configurable Resource Uploader	File Manager	MR Tagged Upload	Quarantine Review	Resource Quarantine	Upload Additional Scans
pt5	Owners	⊟	⊟	☐	☐	☐	☐
pt5	Members	⊟	⊟	☐	☐	☐	☐
pt5	Collaborators	⊟	⊟	☐	☐	☐	☐

Any Roles not listed here are custom roles. Custom roles can be created in the Manage Groups form. After clicking “Manage Groups” click “Create Custom Group”, name it and set the desired permissions.



User Group Configuration

Display Name:

Display Name is required. It is the value that will be displayed to users on the Project Access tab.

Group Permissions

	Read	Create/Edit	Delete
Project	☑		
Subjects	☑	☐	☐
Imaging Sessions	**Read**	**Create/Edit**	**Delete**
CR Sessions	☐	☐	☐
MR Sessions	☐	☐	☐
PET Sessions	☐	☐	☐
CT Sessions	☐	☐	☐
PET MR Sessions	☐	☐	☐
NM Sessions	☐	☐	☐
Image Assessments	**Read**	**Create/Edit**	**Delete**
Protocol Validations	☐	☐	☐
Manual QCs	☐	☐	☐
Auto QCs	☐	☐	☐
ROI Collections	☐	☐	☐
Non-imaging Subject Assessors	**Read**	**Create/Edit**	**Delete**
(none)	–	–	–
Project-level Assessors	**Read**	**Create/Edit**	**Delete**
(none)	–	–	–

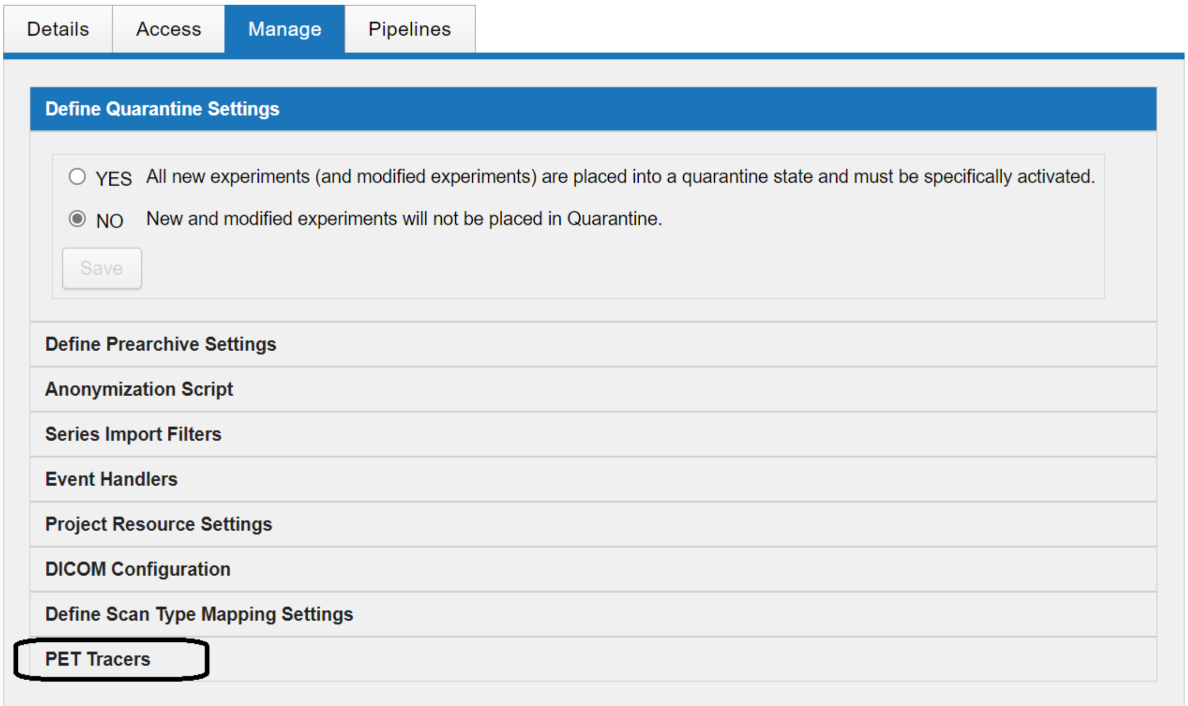
Cancel Submit

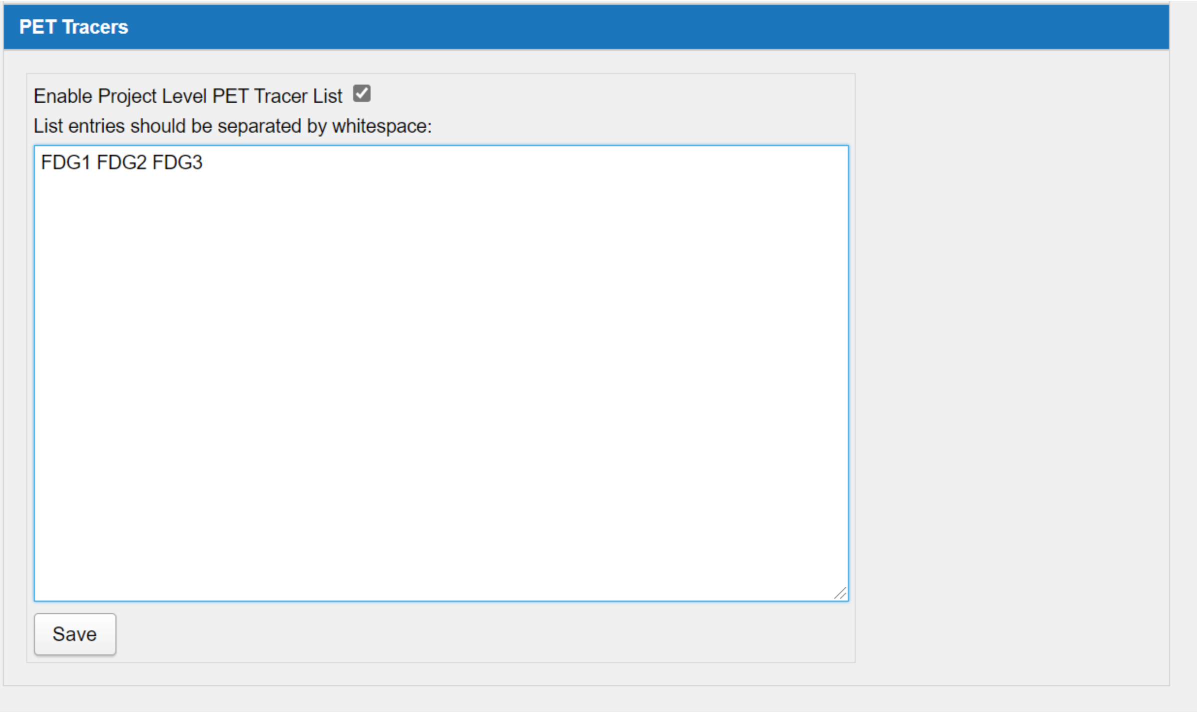
Appendix E: Using PET tracers to automate session names for particular visits

For PET images, if you can set a list of tracers in you XNAT project as per the screen shots below. Just list them with a space in between. Once you've done this then in the XNAT Desktop Client when you upload a dataset that contains a pet image there will be a drop down list for you to select a tracer. This will be then used to generate a session label.

If you want this to apply to all types of session not just those with PET then you can download this alternative version of the Desktop Client (https://bitbucket.org/khairreddin/xnat-desktop-client/downloads/XNAT-Desktop-Client-Setup-3.0.0.exe) and it will allow you to use the PET tracer list for any session.

- Select you project home page.
- Click the Manage tab
- Click on PET tracers and then fill them in
- Click save





TESTS OF PROCEDURES

Test description	Test completed	Pass/Fail	Comments

DOCUMENT HISTORY

Author	Version	Effective Date	Changes
Angel Kennedy	1	22/07/2022	Initial release
Christel Norman	2	14/02/23	Reviewed and updated document, added ACQI logo,