Intrallect intraLibrary 3.7: Configuration Guide

Revision: 8
Created: 4th August 2005
Last Revised: 22nd August 2012
Contact: support@intrallect.com
Company: Intrallect Ltd
Product: intraLibrary, Digital Repository
Copyright: © Intrallect Ltd 2003-2012. All rights reserved.

This document is made available to support Intrallect's customers and users of Intrallect's software. The text of these documents and the design of the intraLibrary software are both the intellectual property of Intrallect Ltd. Intrallect does not provide this document for any other purpose, and offers no warranty nor accept any liability for its use in any other context.

Intrallect intraLibrary 3.7: Configuration Guide

Table Of Contents

1. Introduction

The purpose of this guide is to introduce the configuration options that should be considered before intraLibrary is installed. The level of understanding required is that of an intraLibrary administrator.

IntraLibrary is very flexible and has various configuration options. In some cases intraLibrary has default settings which many people will find suitable, at least initially. In other cases a decision is required on configuration at the time of setting up intraLibrary, although it may be changed later.

The configuration issues covered in this document are:

- Classification systems (or taxonomies).
- Metadata application profiles.
- Submission workflows.
- Collections.
- Community licensing.

Each section of this guide has sub-sections discussing:

- points to consider;
- information to gather;
- decisions to make;
- how to implement these decisions;
- future implications.

This guide contains an overview in the last section. If you prefer to read an overview first then please read the last section first. However, it is included at the end because the terms used are introduced gradually throughout the guide and reading the overview last should show how the various parts are all related.

2. Classification Systems

Resources within intraLibrary may be discovered by users through searching or browsing. Browsing the library is enabled through the use of classification schemes, or taxonomies, which appear in the left-hand screen in the *Browse* view. Resources are associated with nodes on these classification systems via the *Classification* fields in the resources' metadata. IntraLibrary can support multiple classification systems for classifying resources,

and any resource may be classified at any number of nodes in a system or systems.

- For more information on how to browse intraLibrary, see **_Getting Started- Finding and Using Resources_**.
- For more information about classifying resources in intraLibrary, see **_Getting Started- Uploading and Cataloguing Resources_**.
- For more information about implementing classification systems in intraLibrary, see the intraLibrary **_Librarian's Guide_**.

Classification systems are presented in intraLibrary as a browsable interface so that a user can navigate through a hierarchy of terms, narrowing the focus gradually until a specific topic is identified. At that stage all resources in that topic area will be revealed in the right-hand screen.

IntraLibrary supports the IEEE Learning Object Metadata (LOM) standard, and the IMS Learning Resource Meta-data specification that it is based on. In the LOM, classification schemes or taxonomies can be used to classify resources for various purposes, e.g. by discipline (subject), accessibility, educational level, competency or prerequisite. This means that an installation of intraLibrary can support browsing of its resources in a number of different ways, e.g. through a common subject-specific classification (e.g. MeSH for medical resources); a general or universal subject scheme, (e.g. the Dewey Decimal Classification); a local taxonomy based on local curricula, competencies or prerequisites, etc.

2.1. Points to Consider

When choosing which classification systems to include, it is important to consider what the purpose of browsing is, in contrast to searching. Searching by keyword or other characteristic tends to happen when the searcher is looking for something specific, whether it is a particular title or topic, or resources that meet specific criteria such as technical format or accessibility options. How to effectively support searching should be considered when developing a metadata application profile, metadata workflow, and quality assurance processes for metadata; see the later sections of this guide for more information.

Browsing tends to be used when a more broad sweep is required, e.g. when someone wants to get an overview of what is available within a particular repository, subject area or educational level. Browsing is often carried out in the early, developmental stages of developing a lecture or course; searches are more targeted to filling specific needs.

For browsing to be effective, the terms in a classification system and their location in the hierarchy need to be intuitive, or at least familiar from repeated use. Developing a classification system from scratch can be very resource intensive and requires some expertise.

It is worth considering the following points:

- Establish who your community of users are. You will need to consider their specific browsing needs, e.g. the subject areas or educational levels they use in their day-to-day work. At least one subject classification is usually necessary.
- Establish whether you will be sharing resources or metadata outwith your own repository. You will need to consider whether to use a widely implemented classification system to ensure interoperability with other services, e.g. if your metadata is being harvested by a national portal, what classification systems do they use? You may require a general or universal subject scheme, such as JACS or the Dewey Decimal Classification, perhaps alongside a national educational level scheme such as UK Educational Levels (UKEL).
- If classification systems already exist then it is better to use these rather than invent new classifications, because of both the resource needed to create and maintain a classification system, and for the sake of ensuring interoperability with other resource provision services.
- As well as being developed for the needs of specific communities, classification systems should ideally be well-maintained by a named group or body; stable; and responsive to community needs.
- In addition to subject and educational level classifications, it may be useful to include classifications for other purposes, for example competency.

2.2. Information to Gather

Gather as much information about existing classification systems as possible. If you do not have a librarian or other information professional on your team, consider asking advice from one in your institution or subject area. In the UK, organisations such as the JISC-CETIS Metadata and Digital Repositories SIG and Becta's Vocabulary Bank (now no longer funded) may also have useful information. In Europe projects such as ASPECT have developed extensive vocabulary trees including multilingual versions. In the US Academic Benchmarks offer US Common Core and State curriculum standards as web services. Other sources include:

Universal

Universal classification systems aim to cover the entire possible spectrum of subjects or disciplines. The most commonly used universal systems in libraries are the Library of Congress Classification Scheme, the Universal Decimal Classification and the Dewey Decimal Classification. Within your community of users, institutional libraries will have preferences which are worth considering. Increasingly, repositories of teaching and learning resources are using universal schemes based on national curricula. In the UK, this includes JACS for universities.

Subject

Often, professional organisations establish and maintain classifications. Sometimes these are subject-based but increasingly they may also be competency-based. If your use of intraLibrary has an international perspective then remember that professional organisations are usually national and may differ significantly from one country to another. Examples of subject classifications include Medical Subject Headings (or MeSH), used internationally for classifying medical resources, and the Scottish Framework for Social Work Education in Scotland which is both national and competency / learning objective based.

Educational

It is possible that your use of intraLibrary will span several educational levels and a classification to discriminate between these levels will be useful. Sometimes educational level is considered to be synonymous with qualification. In some simple cases this may be useful but in general it is best to try to aim for a set of educational levels onto which different qualification frameworks can be mapped. Several national qualification authorities have begun to establish such frameworks, such as UK Educational Levels (UKEL).

2.3. Decisions to Make

Decisions to make on classification systems include:

- For what purpose or purposes do you wish to support browsing in your repository?
- Do you need any classification systems to support current or future interoperability with other services?
- Do classification systems already exist that meet your needs, or will you need to develop your own?

These decisions are not irrevocable and it is often advisable to keep things simple at the start; you can learn from your user community and revisit your classification system decisions later. However, once a large number of resources are classified, there will be

some work involved in changing your classification systems.

2.4. Implementation

There are two ways to implement classification systems in intraLibrary: you can add and edit them manually using the classification system editing tools, or you can import them as ZThes files. The intraLibrary *Librarian's Guide* describes the process of implementing and maintaining classification systems.

2.5. Future Implications

Once a classification system is in place and people have started to use it they will have an expectation that it will persist. They may have set up RSS feeds from classification nodes that interest them, or they may just assume they will always be able to find certain things at certain nodes. In addition, removing or changing a classification system that has been used to classify resources requires decisions about how the classified resources should be handled. Once a large number of resources are classified, there will be some work involved in changing your classification systems, so it is best to find a balance between what you need now and what you anticipate needing in the future. For specific details on adding, editing and deleting classification systems, see the intraLibrary *Librarian's Guide*.

3. Metadata Application Profiles

IntraLibrary supports the IEEE Learning resource Metadata (LOM) standard, and the IMS Learning Resource Meta-data specification that it is based on. This standard is extensive and complex and it is possible to use any subset of it and still conform to the standard. In practice, many organisations and communities choose to use only a part of the whole metadata set; this is known as an *application profile*. Application profiles can define what metadata you use within your repository; they are also necessary for interoperability. Different organisations and communities can see, via application profiles, how other people are using the standard. In addition, an application profile can include fields or properties from other metadata standards where the LOM isn't sufficient for a particular purpose in your repository. For example, intraLibrary supports extending the LOM with sub-sets of other specialised metadata specifications, e.g. the NISO z39.87 metadata standard (also known as MIX) for describing technical information about digital images and the XCRI specification for describing course information.

IntraLibrary comes with some widely used application profiles already built in (see the intraLibrary **Administrator's Guide**). If one of these suits your needs then you can set it to be the default and ignore the remainder of this section.

3.1. Points to Consider

The main purpose of metadata is to describe the resources stored in your repository to make it easy for people to search for and discover them. This is dealt with in more detail below.

Other key aspects you need to consider for your application profile are:

- cardinality;
- visibility;
- editability;
- optionality;
- vocabularies.

Cardinality allows you to set the number of times a metadata field may be used. In some cases this is limited by the LOM standard. However, in some cases you can decide, for instance, the maximum number of keywords that can be added to a resource's metadata.

Visibility allows you to set whether or not a metadata field is visible to users in the *Metadata Editor*. Sometimes fields will be filled automatically using a *metadata template* so there is no reason for people entering metadata to see the field.

Editability allows you to set whether a metadata field may be edited by a user in the *Metadata Editor*. This may be important if you have set the system to assign unique identifiers in your *metadata template*; you may want cataloguers to be able to see the identifier, but not to be able to change it.

Optionality allows you to select one of five categories for each metadata field: mandatory; recommended; optional; not recommended; not used. For instance, setting certain fields as *mandatory* defines the minimum metadata that must be completed before a resource is published. Setting *Optionality* also allows the *Metadata Editor* to be configured to show different levels of metadata. For instance, some users who are contributing resources may only see the *mandatory* metadata fields when they upload a resource; cataloguers

completing the metadata may see *mandatory*, *recommended* and *optional* metadata; while administrators may be able to see all levels of metadata, including fields which are *not used* in the library. This may be useful if they are checking metadata that has been imported with a resource, rather than created within the library. Users can select for themselves which optionality they see in the *Metadata Editor* using a drop-down menu. For this reason, you can over-ride the terms *mandatory*, *optional*, etc. to whatever makes sense for your users. For instance you may like to call *not used* metadata something like *all available fields*; you may like to call *optional* fields *fill in as defined in cataloguing guidelines*.

Vocabularies in the application profile define terms for those LOM fields that are populated by standard vocabularies, rather than by free text, identifiers or dates/times. In the *Metadata Editor* and in the *Advanced Search* screen, these vocabularies are available to users in drop-down menus. Each vocabulary may be defined separately. You can select which vocabulary you wish to use in which metadata field in the *Application Profile Editor*. You may also add user-friendly terms or labels to standard vocabulary terms. For instance, in the LOM, some vocabularies are numerical values that are not easily understood by users. You can assign local terms explaining these; the standard LOM terms will still be in the metadata record, but your users will be able to add, see and search by terms they can understand. It is also possible to set whether or not users see the source of a vocabulary you are using in your repository; for instance whether it is a LOM-defined vocabulary, or one defined by a local community for use in a particular field. See the intraLibrary *Administrator's Guide* for more information on defining and editing vocabularies and adding labels.

3.2. Information to Gather

The purposes of metadata include:

- supporting accurate, flexible searching;
- enabling users to find out more about a resource before viewing, downloading or using it;
- uniquely identifying resources;
- making statements about the authorship, rights and licensing of a resource;
- allowing other systems to understand how to deliver or process the resource.

With this in mind, defining an application profile also has both an internal and an external function. The internal function is to find a suitable balance between creating high quality metadata to fulfil these purposes adequately, and minimising the effort and resource expended in creating that metadata. The external function is to ensure that, if metadata and

resources are to be shared with a wider community, the metadata and the vocabularies used are consistent with, or at least understandable by, those used in that wider community.

For your internal needs, the information to gather is the minimum metadata that would meet the needs of the users of intraLibrary. In addition it is necessary to consider the process by which this metadata will be produced: who will create the metadata; what skills do they have; how much time do they have; how will quality assurance of the metadata be carried out? There is no point setting a field to be mandatory if no-one has the skill or time to create good quality metadata for that field. Equally, there is no point defining such minimal metadata that the resource is impossible to find in the library, or that leaves your organisation open to problems with mis-attributing resources or violating licensing conditions.

For your external needs, it is necessary to identify the wider communities you may wish to share resources with, and find out if what application profiles are already in use. Some application profiles are defined by the subject domain while others are defined by the geographic region. For example, national application profiles have been agreed in the Canada and the UK by entire educational communities. These application profiles, CanCore and the UK LOM Core, are already included out of the box in intraLibrary.

3.3. Decisions to Make

The first decision to make is: can you use one of the existing application profiles in intraLibrary? If so then you have no further decisions to make.

If you decide that you need to change a small number of parameters then you can do this easily by editing, or copying then editing, one of the existing application profiles. This makes it simple to change the optionality, cardinality, editability, visibility or vocabularies for each metadata field.

If you decide that you would like a new, named application profile designed for your specific needs then you can use the copy function in the *Application Profile Editor* to copy an existing application profile and edit any or all of its attributes. You can also create an application profile from scratch.

If you decide to create your own application profile a useful guide is often to think of metadata as having five main purposes:
- discovery: the terms that people use to search (e.g. title, keyword)
- filtering: the terms that people use to reduce the number of results (e.g. star rating, file format)
- information: details about a resource that help to decide if it is useful or not (e.g users comments, author's name, date of publication, copyright conditions)
- browsing: ability to move from broad to narrow search criteria (e.g classification, user tags)
- administration: need to help manage the system (e.g. unique identifiers, version numbers)

You can then decide which metadata fields you need to meet these purposes.

3.4. Implementation

To use an existing application profile simply set the desired application profile to be the default in the *Metadata* section of the *Admin* tools. You can also make any number of application profiles *active* in your repository. This means that they will be available for selection for specific groups or collections; they will then be presented with their specific application profile rather than the repository default. This can be useful if, for example, one group or user is working with a type of resource that has specific metadata needs, e.g. an image collection.

To modify the optionality, cardinality, editability, visibility or assigned vocabularies of an existing application profile to make it fit your needs you can edit one of the existing application profiles using the *edit* or *copy* functions in the *Metadata* section of the *Admin* tools.

You may also define a new application profile by clicking the *Add application profile* button in the *Metadata* section of the *Admin* tools.

3.5. Future Implications

There are few long-term implications of your initial choice of application profile. It is important to realise that the application profile only affects the *Metadata Editor*, not the metadata itself. Once a resource has been published in intraLibrary there is no record of

which application profile was used to create the metadata, unless you choose to name your application profile in the LOM format field. This means that if you choose to change your application profile at any time you can. All subsequent metadata will conform to the new application profile (ensuring that, for example, a set of fields now defined as mandatory will always be present).

The other implication of application profiles relates to subsequent exposure or sharing of your metadata. If you are exposing metadata for harvesting or external searching, you may like to consider ensuring that you expose your application profile so that external services and systems understand what to expect from your metadata records. In this case, good version control on your application profiles and ensuring that you do declare what application profile you have used within your metadata records may be helpful.

4. Submission Workflows

A submission workflow is the process through which a resource is uploaded into intraLibrary, metadata created, classification, checking, reviewing and other quality assurance steps are carried out, and the resource is published (made available to all intraLibrary users). The default workflow allows a single individual to carry out all these actions in a single stage. If that workflow is suitable then no configuration decisions need to be made and this section is not relevant.

On the other hand, intraLibrary supports much more complex workflows and these workflows are very configurable. In addition, different workflows can be used by different groups of users, and individuals can belong to multiple groups, and they can play different roles in each different group. The remainder of this section describes configuration for these more complex submission workflows. The details of allocating users to groups, roles to users, and workflows to groups is dealt with in the intraLibrary *Administrator's Guide*. This section discusses how to design and configure a workflow - a prerequisite before the stages described in the intraLibrary *Administrator's Guide*.

4.1. Points to Consider

A workflow is normally split into a sequence of stages (though a single stage workflow is also possible). Each stage may include one or more processes. Each process has one or more user roles associated with it and a set of permitted actions. At the transition between one stage and another a resource may have its published state changed, i.e., it may

become published (so that it is viewable by all users of intraLibrary) or unpublished (so that it is hidden from all users except the group engaged in the workflow). At any of these transitions, email alerts can be sent to each of the users with a role in the next stage.

A useful place to start when considering submission workflows is to identify who will be involved in the entire submission process. There is little to be gained by creating five different stages if only two people will carry out the work - although one option is to use this approach to differentiate the different roles that a single person might have to take on.

Another point to consider is the process of decision-making through the submission workflow. A decision is a point at which a choice must be made. Some typical questions demanding choices might be:

- How much metadata might it be reasonable to expect the resource contributor to create?
- What metadata fields would you like people in different user roles to be able to see and/or edit?
- What is the minimum amount of metadata required before a resource could be published (made available to all users)?
- Who has the authority to create rights metadata?
- Who has the authority to publish a resource?
- What action needs to be taken if a resource fails at a review stage?
- How much metadata should be expected when the full submission process is completed?
- Might it be necessary to overwrite a resource with a new version during submission?

4.2. Information to Gather

As submission workflows are exclusively an internal consideration there is no requirement to consult more widely than the team involved in the workflow.

4.3. Decisions to Make

To design a workflow it is necessary to decide on stages, processes, actions and roles and combine them, for example in a simple sketch. Starting from the widest viewpoint decide how many stages you want and name them. Narrowing the view slightly, decide if each stage should contain one or more processes. Limiting a stage to a single process keeps it

simple and easy to follow the progress of a resource through the workflow. On the other hand, when there are many processes to be carried out, each taking some time to be completed, the entire workflow will be completed sooner if some of the processes can be carried out in parallel during a single stage.

For each process, decide on the roles that should be used to undertake the task. You are free to give titles to these roles.

Then decide which actions someone in that role needs to be able to carry out. The set of possible actions is limited to those listed in the table below.

Action	Description	Additional Parameters
Assign quality mark	Assign one of the previously defined quality marks to the current resource.	Quality mark
Change collections	Modify which collections the resource is a member of. User can put the resource in any collections they have contribute access to.	
Delete	Remove a resource completely from the system.	
Edit metadata	Metadata / classification editor configured by the chosen Application Profile, and an optional metadata subset.	Metadata Subset.
Edit rights	Licence (rights management) editor.	
Export	Package export functions.	
Import from filesystem	Import a file or content package from the group's folder on the server filesystem.	
Import from harvest	Import metadata records from another repository by harvesting.	
Link related objects	Link a resource to any other resource by populating the LOM Relation fields for both resources. All resources must have the correct LOM field and vocabulary assigned in the relevant application profile, and must have title and LOM identifier fields	

	populated.	
Move resource	Send the resource to another stage of the workflow, with comments attached. Typically used at review stages.	Stage ID
Overwrite resource	Upload a new version of a resource to the system. New version has same metadata as old resource. The exception is if a new title has been entered at upload or imported in a content package.	
Preview	Package/file preview.	
Review	Comment on the resource as a reviewer.	
Save manifest to filesystem	Write a package manifest to a folder on the server filesystem. Folder location is a property of the workflow process.	Path of folder on server filesystem.
Save to filesystem	Write a content package to a folder on the server filesystem.	Path of folder on server filesystem.
Transfer	Move the resource into a different workflow stage or different group. User can move the resource to any group/stage they have access to.	
Upload	Upload or add a new resource to the system.	
View Metadata	Metadata preview.	
View Reviews	Read all the review comments written by reviewers using the Review action.	

This table shows the standard intraLibrary workflow actions. If a system has third party tools integrated it may have additional workflow actions. For example, if Kaltura is being used as a video streaming and transcoding service then there will also be a *Kaltura Upload* action.

Once all decisions have been made you can implement the design.
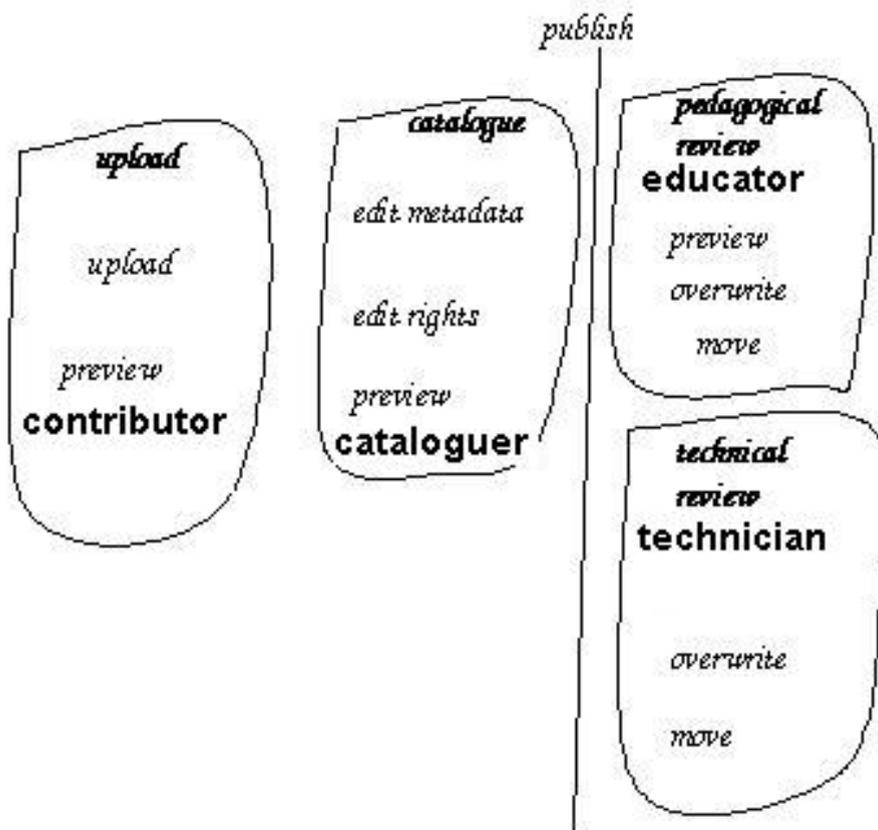
4.4. Implementation

To implement a workflow design the conceptual design needs to be turned into a workflow in intraLibrary. IntraLibrary includes an easy-to-use workflow editor as part of the administrator's interface. A step-by-step guide on creating workflows is included in the *Administrator's Guide* which also includes a number of example workflows.

4.5. Future Implications

In general, workflows have no impact on resources and metadata in the repository. You can replace an existing workflow with a new version easily. Once you have a workflow in place, and there are resources in your repository being worked on within the workflow, you will need to move any resources already in the workflow being changed into the new workflow. A Librarian or Administrator user can move resources between workflows in bulk

using their Basket, so, while there are resource implications, this will not be too resource intensive.

5. Collections

Collections are used to define sets of resources with common attributes such as those provided by particular publishers or institutions, resources of a particular media type, or resources with particular usage restrictions. However, the most important property of a collection is that it is used to control access to the resources in that collection. The repository can have many collections which can have different levels of access for different people. It is also possible to set various properties for collections; this will be discussed in the following section. If you intend to have all the repository's resources visible to all users then this section may not be relevant. Consult the intraLibrary *Administrator's Guide* for more detail on collections and groups.

5.1. Points to Consider

It is important to note the strength of the relationship between groups and collections. For the user, access to collections is determined by which groups the user is in. In addition, contribution features can be controlled for resources entering a collection. In particular the application profile, licence model and classification systems used can be set based on what collection a resource is in. The classification systems seen by a user will also depend on which collections the user has access to.

The relationships between collections and groups are defined through the following permissions:

Permission	Description
Find	Allow users in the group to find resources in the collection using search and browse
Preview	Allow users in the group to preview resources in the collection. NB: for individual files (rather than content packages) this permission effectively allows users to download the resource
Export	Allow users in the group to download the resource, metadata and public URL of the resource
Contribute	Allow Contributor users in the group to add resources and edit metadata in accordance with their role in the group

Comment	Allow users in the group to add comments and tags to resources in the collection. NB: even if this permission is switched off, the users will still be able to view comments for resources in the collection
Star rating	Allow users in the group to add star ratings to resources in the collection. NB: even if this permission is switched off, the users will still be able to view star ratings for resources in the collection

The figure below clarifies what relationships can be made between groups and collections. Note that the user type and group role takes precedence over the collection permission. For example: A *contributor* in group B would have permission to find, preview, export and contribute to collection B and a *user* in group B would be able to find, preview and export published resources in collection B. However a contributor in group C would only be able to find and preview resources in collection B.
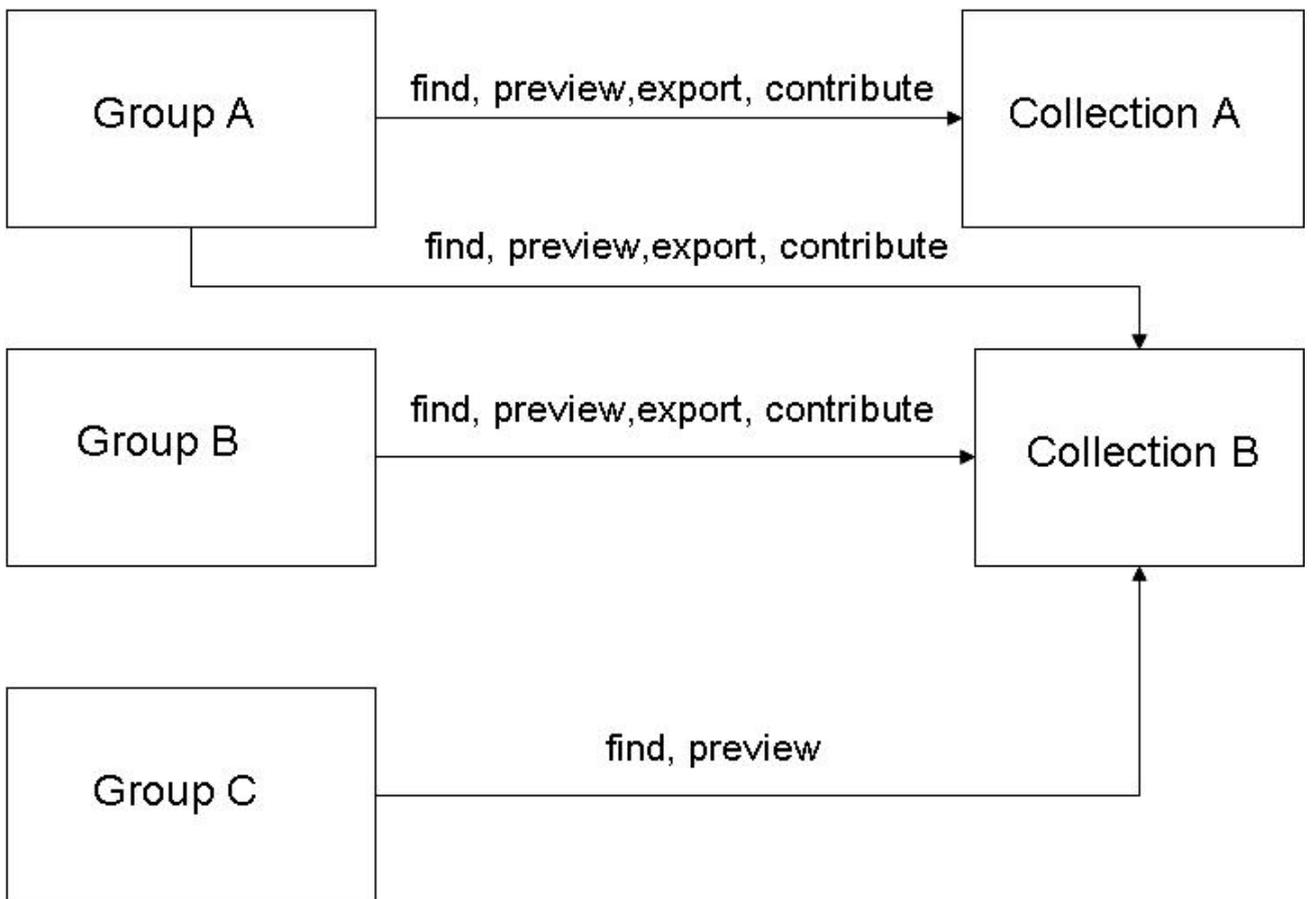
5.2. Information to Gather

Although you can put each resource into one or more collections it is useful to think about collections as a way of dividing up your repository into different sections. Reasons why you might want to divide up the repository include:

- You may want to have some resources that can not be seen by all users of the repository.
- You may wish to allow some users to be aware of the existence of resources but not to be able to use them unless they belong to a particular group of users.
- You may wish to have different types of metadata and classification systems for certain types of resources.
- You may wish to make some (but not all) resources in a repository available to be used by external systems for metadata harvesting or through federated searching.
- You may wish to make some (but not all) resources in a repository externally accessible via an RSS feed.

These can all be implemented using intralibrary. As an initial step, it is useful to consider all the users of the repository, what resources you would like each of them to see and what actions you would like them to be able to perform. Then you need to consider how this can be achieved by putting these users into groups and relating them to collections.

5.3. Decisions to Make

The administrator needs to decide upon the best way to link groups and collections. The example shown above is one way in which groups could be related to collections. In practice, for a given situation it may be possible to implement a solution in different ways using a different combination of groups and collections. The simplest way to relate groups to collections is on a one-to-one basis as shown in the diagram below. Using this strategy, you could choose which collections a user has access to by making them members of the appropriate groups.
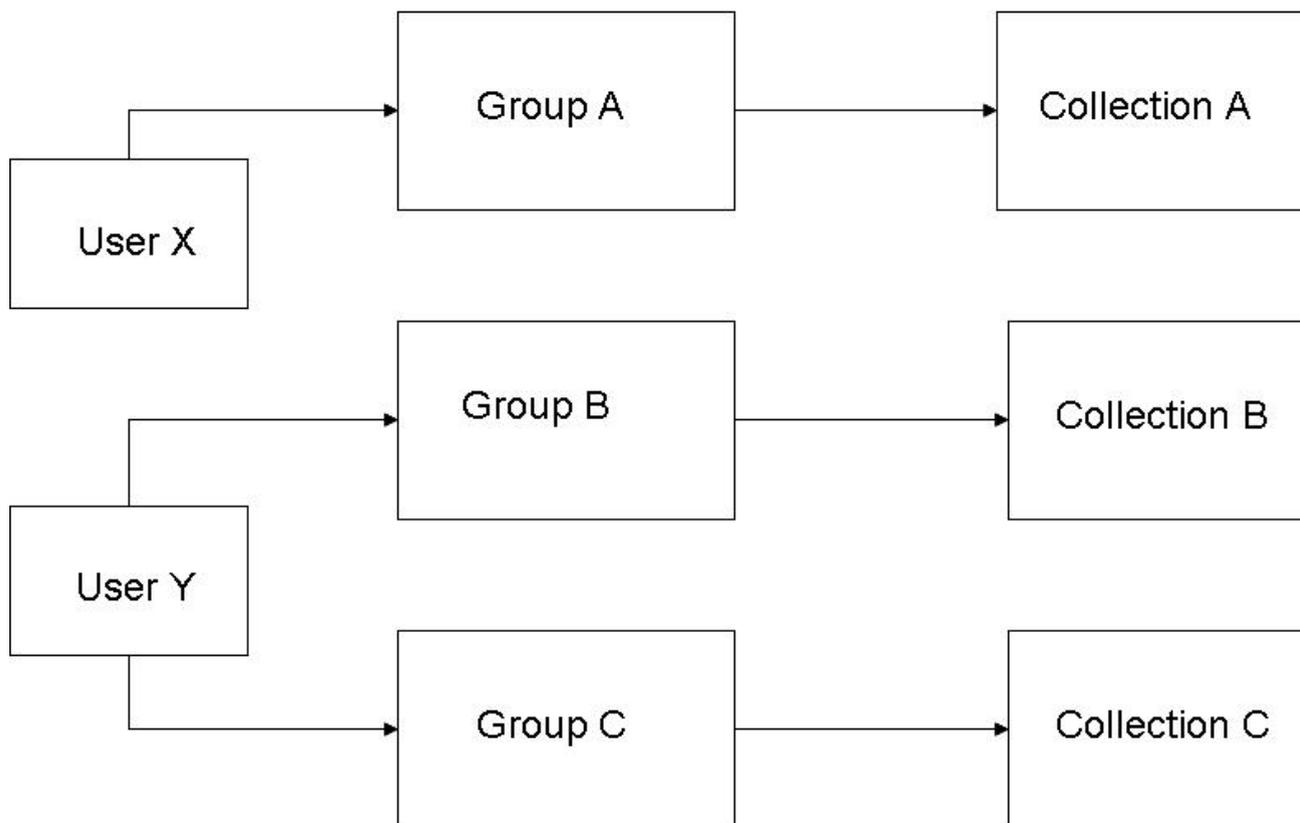
5.4. Implementation

Implementing collections in intraLibrary is achieved using the collections section in the admin tools. Using this page it is possible to create collections, edit properties of a collection and set access permissions for a collection.

5.5. Future Implications

The use of collections allows the administrator to have a lot of control over who has access to a collection and the features of resources which are added to the collection. It is possible to change which collections a resource is in, and Librarian and Adminisitrator users can move resources between collections in bulk using their Basket. The main consideration is with the choice of classification systems, application profiles and licences for a collection and the long term issues with these are discussed in other parts of the manual.

6. Overview
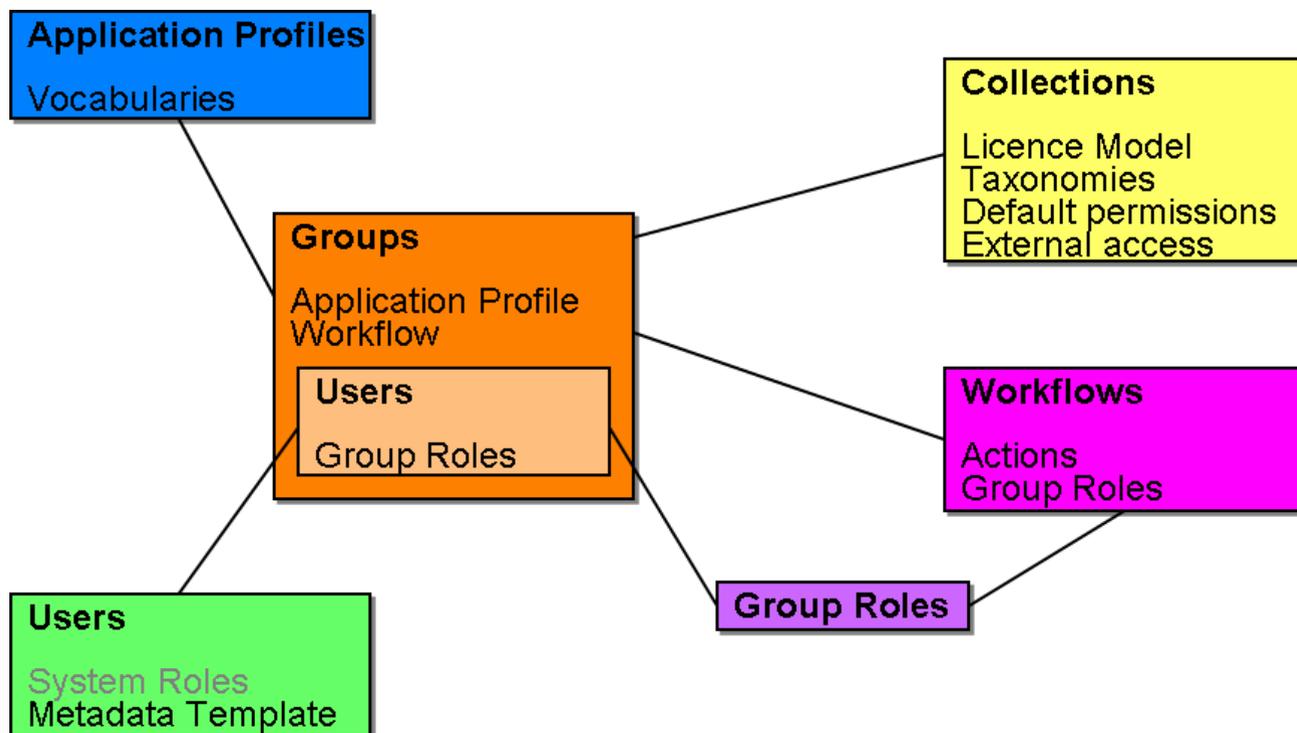
The diagram above shows how the various parts of the configuration are related to each other. In particular, it highlights the central role played by groups. Groups of users are described in much more detail in the ***Administrator's Guide.*** This diagram is also useful to illustrate the lack of dependence of some parts of the configuration on other parts. In general, most parts of the configuration described in this guide are independent of each other except for their relationship to groups. So, for example, *Group Roles* have no relevance to *Collections* or *Application Profiles*.