Containers

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Introduction

The most important concept to understand when using the Containers tool is the idea of the “Top Container.”

**A Top Container is typically the physical container in which your material would circulate to the reading room.** It is important to remember ArchivesSpace manages Locations, barcodes, and ILS tracking functions through Top Containers, since they are the units that circulate.

ArchivesSpace uses the top containers to display and track the physical boxes, folders, and other containers within which your archival materials are housed. **Top containers** can be linked to archival components at whichever level of your collections is most useful to you (e.g. at the Collection, Series, or File level) through the “Instances” section of a record. Instances can have up to 3 nested levels, the first of which MUST be the Top Container.

**Locations** is an optional tool in ArchiveSpace which allows you to manage the physical location of the top containers in your collection. This additional process when combined with the optional Location Profiles and optional Container Profiles may be beneficial for tracking space and the volume of material in a collection. Please refer to Implementation Choices video (164 MB) documentation for more information on these optional space management tools, and the Attaching Locations and Space Calculator sections below for more information.

**Locations** may also be used to track collection/box level material as appropriate for your institution without using Location Profiles.

Use of Containers and Locations is optional, but advantages include:

- **Box-and-Folder Lists**
  When used on the Series or File level, instances with linked Containers can create a Box-and-Folder list in your finding aid. This allows your staff and users to easily identify which boxes/folders/etc. they need to consult within a collection (this also creates the container lists that appear in Archives West).

- **Advanced Shelf Management**
  If you use Containers and Locations in tandem, AS allows precise tracking of the locations of your collections. You could, for example, track that a certain document is in Building A, Room B, Range 10, Shelf 3. In addition, by strictly implementing the optional Container Profiles /Location Profiles models that track container sizes and shelf sizes (functions available in v. 1.5+), you can
identify exactly where there is room for a certain box to be shelved in a remote storage facility, how much total space remains in a particular range of storage, or precisely what linear footage has been consumed within a specific storage location.

- **Barcodes/Circulation/ILS Functions**
  Optionally, you can enter barcodes and ILS-related holdings notes for top-level containers. Though AS itself does not have circulation functions built in, including barcodes here can facilitate interactions of your data with other systems.

**About Top Containers**

The most important concept to understand when using Containers is the idea of the “Top Container.”

*A Top Container is typically the physical container in which your material would circulate to the reading room. It is important to remember ArchivesSpace manages Locations, barcodes, and ILS tracking functions through Top Containers, since they are the units that circulate.*

Remember that a container is not a level of description--it’s just where you store the things you are describing.

Changing the Location of a Top Container also changes the locations of all its contents or “Children” and “Grandchildren.” In most cases, Top Containers are Boxes. However, there are cases where your Top Container may be something else. For example, if you had an oversized poster stored within a folder which was housed in a drawer, the Top Container would be the *folder.* Note that it would NOT be the drawer; the drawer does not circulate, and is thus considered a “Location” analogous to a fixed place rather than a moveable container. You may also have items that are shelved without an actual container, such as oversized art objects. In this case, you can call the “Top Container” an “Object” -- meaning that the object itself is its own Container.

**Adding Top Containers to your Records**

Top Containers can be linked to Accession and Resource Records through the “Instances” section of the descriptive record. It is necessary to use Top Containers if you want to track and display your material in a hierarchical schema or track Locations through ArchivesSpace. Top Containers that are linked to the component sections of a Multi-Level Resource Record can generate a Box-and-Folder list in your finished EAD finding aid.

If you do not describe collections beyond the collection level and/or do not use AS to track locations, you do not need to use containers.
Institutions have developed a wide variety of local standards for how they number boxes, folders, and other containers within collections. Though many different approaches are valid, the principles outlined below will help you to (a) comply with the technical Container Model used by ArchivesSpace; and (b) create consistent exports that can be used in a variety of systems.

*Step-by-Step Instructions*

Create a Top Container (credential dependent)

1. To get started; sign into ArchivesSpace
2. Find the resource record you wish to add a top container to
3. Navigate to the Archival Object where you wish to add the container (the collection, the series, the folder, etc.; see below for more on this)
4. See Instances; click on “Add Container Instance”

   ![Instances](image)

5. Select the Type of the material in the container
6. To the right of “Top Container,” click on the down arrow and choose Create, a box will pop-up on the screen

   ![Top Container](image)

7. Choose the appropriate “Container Type”
8. In the “Indicator” field, type the container indicator (box number, folder number, etc.)
9. If your institution uses barcodes, type it into the provided field
10. Click “Create and Link to Top Container”
Choosing which Component Level to add Instances / Containers

To make your box-and-folder list display as cleanly as possible in the finished finding aid, add instances to a consistent component level within the hierarchy of the collection. For example, add instances to the Series or the File-level elements, but not both. A good rule of thumb is to add instances to the lowest-level elements in your collection -- for example, at the File level.

It is also important to note that you only need to create a top container once. In the example below, ArchivesSpace would suggest the container record for “Box 1” after you typed it into the top container field in the instance. Creating top containers multiple times for different instances will cause problems, particularly if you use locations.

![Instances tool](https://example.com/instances.png)

Example of the Instances tool showing three typical levels of collection hierarchy. This example shows an extreme item level instance analogous to 1.1.1. In most cases you would probably only have material processed and described to the Box or Box/Folder level.

**Important:** Currently ArchivesWest only has the ability to display two levels of “instance” arrangement (Top Container/Child, eg. Box/Folder or Folder/Item.) If you choose to process to the 1.1.1 (Box/Folder/Item or Top/Child/Grandchild) level, ArchivesWest will only show the highest two arrangements.

**Number Sequences for Boxes within Resource Records**

**Important:** Your Top Containers -- usually these are Boxes -- should be numbered in one continuous sequence across all the series in a collection. In other words, if you began Series A with Box 1, do not start over numbering Series B with Box 1. The only exception would be if Series A: Box 1 is, in actual fact, within the same physical box as Series B: Box 1. **Different physical top-level containers should have different Container numbers in AS.**
DO THIS
1 continuous sequence

NOT THIS
Multiple parallel sequences

| Series A | Series A |
| Box 1    | Box 1    |
| Box 2    | Box 2    |
| Series B | Series B |
| Box 3    | Box 1    |
| Box 4    | Box 2    |

Explanation:
In versions 1.5+ of AS, the application’s Container Model was revised in order to support many improved functions for handling of containers/locations. A downside to the upgrade is that in the absence of any other unique identifier (like a barcode) AS assumes that all instances of “Box 1” within a particular collection refer to the same physical Box 1. If there are two different Box 1’s -- one in Series A and one in Series B -- these appear to AS to be the same physical box. This can cause many problems in how the Containers are accounted for and displayed by the application.

Solutions for Legacy Data
If you already have many collections in your repository where the series have been numbered in multiple parallel sequences, and you don’t want to relabel the physical boxes, a possible workaround is to use decimal enumerations for your box numbers. For example, in Series A, Box 1 would be entered into ArchivesSpace as: Box 1.1; Series B, Box 1 would be entered as Box 2.1. To deal with legacy records from Archivists’ Toolkit during migration to AS, you can run a script in AT which will apply numbers to the barcode field for your containers (this is a standard part of the migration process for institutions using LibraryHost migration and hosting). Having unique “barcodes” (even if the barcode numbers do not actually pertain to real barcodes on your physical boxes) will allow AS to ignore duplicative box sequences. See AT Cleanup/Migration Preparation Guidelines.

Adding Sets of Boxes
The default expectation in ArchivesSpace is that your Top Containers will have separate Instance records. For example, if you had 12 boxes in one series, you would create individual Top Container records for Box 1, 2, 3, 4, 5 [etc.]. However, this approach is sometimes cumbersome. It would be much faster to create one Top Container Instance with the indicator: “Boxes 1-12” than it would be to create 12 separate Top Containers. It is technically possible to use number ranges in the indicator field. However, you’ll need to keep in mind that ArchivesSpace sees a Top Container labelled “1-12” as a single Top-Level Container. This is not compatible with the optional “Container Profiles” tool, which tracks dimensions of containers. It may not mesh well with using the Locations tool either, as you will likely need to add multiple Locations to the Container record to account for the fact that the boxes are shelved across multiple rows or ranges. **If you choose to use this shortcut, be aware of these possible implications.**

Do note, this problem only comes into play with Top Containers. Creating sets of folders as “Child” Containers, e.g. Folders 5-10, should not cause similar problems.

| Preferred: Multiple Instances | Possible, but not advised |
Material Types

When adding Instances to a record, ArchivesSpace requires you to enter the “Type” of material within that instance. For example, if you were to add a folder that contained letters and photographs, you could enter the Type for that folder as “Mixed Materials.”

This field does not display in EAD finding aids. It corresponds, however, to the “Type” field that is commonly required by many other metadata standards, such as in DCMI and MARC records. Filling out this field correctly may help you to migrate metadata records about collection components to other platforms. “Mixed Materials” is suggested as a default value for this field because it can be crosswalked to MARC records as “MIX - Mixed Materials” (item type p). This type commonly renders as an “Archival Collection” in public interfaces. See external documentation on DCMI Type and MARC Type for more information on possible values for this field.

See Using Containers: Examples and Exercises at the end of this document for variations on using top containers.

About Container Profiles

“Container Profiles,” which was introduced in AS v. 1.5, is an optional tool that is useful for tracking space usage in your repository. It allows Systems Administrators to create “Profiles” defining the dimensions of each box, case, or other Top Container that your institution uses. When staff attach Container records to collections, they will then also be prompted to select the type of Top Container that they are adding. For example, you could choose to attach a 2.5” legal width Hollinger Box, a standard Record Box, an oversized flat box, and so on.
Example of a Container Profile for a 2.5” wide, legal-size Hollinger Box

This tool allows you to track the precise linear footage that you are using, as well as providing a numerical count of the types of boxes that you are using. If you use Container Profiles in combination with Location Profiles, you will be able to track the exact amount of shelf space you have used and how much space is still available on a per-shelf basis, for every shelf in your storage facilities. This can be very useful for large repositories that maintain large, off-site storage facilities, but it is probably unnecessary for smaller institutions where it is easy to check your shelves in person on an as-needed basis. The difference between “Containers” versus “Container Profiles” is illustrated by this figure:

**Extent Calculator**

If you have implemented Container Profiles, ArchivesSpace can supply automated extent calculations based on the dimensions of your containers. You can choose whether to calculate extent based on width (recommended in most cases), height or depth, using the unit of measurement you specified in the
Container Profiles. A related tool, the Space Calculator, is described below under Locations. To use the Extent Calculator:

1. Log in as a user with appropriate permissions
2. Browse to a Resource, Accession, or Digital Object Record, or one of their lower-level components such as Series or File, and select “Edit”
3. Select “Calculate Extent” from the menu at the top of the record
4. A report pane will open (example below).

**Calculated Extent Report**

<table>
<thead>
<tr>
<th>Container Profile</th>
<th>Count</th>
<th>Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Records</td>
<td>17</td>
<td>204.0</td>
</tr>
<tr>
<td>Box [15d, 10h, 12w inches] extent measured by width</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Containers</td>
<td>17</td>
<td>204.0 linear inches</td>
</tr>
</tbody>
</table>

Bulk Management of Top Containers

Beginning in AS v. 1.5, the “Manage Top Containers” tool allows you to change the Locations, Container Profiles, Barcodes, and ILS Holding IDs of multiple containers at once. This is useful for tasks such as moving a collection to a new shelving area, barcoding after processing is completed, etc. It is also an excellent way to see all the Top Containers attached to a resource record on a single screen. To use this tool:

1. Log in as a user with higher-level permissions.
2. Select “Manage Top Containers” from the gear symbol dropdown menu.
3. Search for the appropriate Top Container records. There are multiple search boxes in Manage Top Containers. With the exception of Resources and Accessions (which must be searched independently), entering a search term into multiple boxes will perform a boolean AND search.
4. Select the relevant Top Containers from the results by checking the boxes on the left side of the results. There is a select all box in the top left hand corner.
5. Choose a task from the “Bulk Operations” menu (the Bulk operations menu can only be opened if at least one Top Container is selected).

Manage Top Containers: Bulk operations and what they do

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update ILS Holding IDs</td>
<td>If your records are linked to a holding in your ILS, you can update all selected Top Containers to a single holding ID.</td>
</tr>
<tr>
<td>Update Container Profiles</td>
<td>Updates all selected Top Containers to a single selected container profile.</td>
</tr>
<tr>
<td>Update Locations: Single Location</td>
<td>Updates a batch of Top Containers to a single selected location.</td>
</tr>
</tbody>
</table>

WARNING: For all bulk operations, if an input field is left blank, the existing value for the field WILL BE DELETED (i.e. made blank) when you update.
Update Locations: Multiple Locations

Creates a form which can be used to update locations for multiple top containers.

Rapid Barcode Entry

This operation will change the barcode value in all selected Top Containers.

Delete Top Containers

Deletes all selected Top Containers. Be aware that if the selected Top Containers are currently linked with any instances, this will also delete the associated instance records.

Locations

Introduction

The “Locations” tool allows you to track where your Top Containers are on the shelf. The tool tracks both the timing of when boxes got put on the shelf, and their exact “address” — that is, what building, room, range, section, shelf or drawer, etc. the boxes are in. By using the optional advanced features of Location Profiles and Container Profiles, you can also use Locations to manage your shelving space, tracking how much empty space is available and other tasks.

Locations can only be attached to Top Container records. You cannot attach a Location directly to a Resource or Accession record; you must first add a Top Container through the “Add Instances” section of the record. Changing the Location of a Top Container will automatically change the Location of all its Child elements.

Model for how Locations, Top Containers, and Resource Records relate
Creating Locations

If you wish to use Locations in ArchivesSpace, it is recommended that you set up all of your normal shelving locations in advance, rather than creating locations one-by-one during processing. To create multiple Locations:

1. First, survey all of your shelving space:
   a. Note the address of each shelf/drawer/etc.’s Building, Floor, Room, Area, Row, Range, Section, etc., as appropriate.
   b. Optionally, if you wish to implement Location Profiles, measure the interior dimensions of each shelving space.
   c. Divide your shelving spaces into batches that share common Building/Floor/Room/Area addresses. For example, Batch 1 may include all of your compact shelving within a particular room; Batch 2 may include all of your fixed shelving in another room; etc.

2. Log into AS as a user with appropriate permissions.

3. Go to Create > Location > Create Batch Location

4. The Batch Locations pane will open. First fill out the “Base Location” section.
   a. Enter the location information that is in common for all of the Locations in this batch. For example, if all of the Locations will be in the same Building and Room, fill out those fields.
   b. Optionally, create a Location Profile for this batch. Location Profiles define the dimensions of each storage shelf/drawer. See About Location Profiles for details.
   c. Optionally, select a Repository that may use this shelving Location.

5. Next fill out the “Coordinate Ranges” section.
   This section will automatically create multiple Locations based on your labels and coordinates. For example:

<table>
<thead>
<tr>
<th>Coordinate Range</th>
<th>Label</th>
<th>Prefix</th>
<th>Range Start</th>
<th>Range End</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Row</td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Section</td>
<td>A</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Shelf</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   If you had a room with rows of shelving numbered 1-4; and each row had 3 sections labelled A-C; and each section had shelves numbered 1-5; then the above table would create one Location for each Shelf: 60 in all. That is: 4 rows x 3 sections x 5 shelves = 60 locations. You may enter whichever label is most appropriate, e.g. Drawer, Bay, Cubicle, etc., for each coordinate.

6. Preview the Locations, then Create them. NOTE: A maximum of 1000 locations can be created with this tool.

About Location Profiles

“Location Profiles,” which was introduced in AS v. 1.5, is an optional tool that is useful for tracking space usage in your repository. It allows Systems Administrators to define the dimensions of each shelf, drawer, or other storage space present in your facility. For example, you could define a particular shelf as being 16” deep, 12” high, and 40” wide. If you are also using the Container Profiles tool, ArchivesSpace can then
calculate exactly how much space is left to store more containers on those shelves (see Space Calculator, below). This functionality was developed to support very large repositories that maintain huge storage facilities, where it is not practical for staff to manage shelving space by visiting the shelves in person. For this reason, it may not be worthwhile for smaller repositories to use this tool. To access Location Profiles, log in as a user with high-level permissions, and then select “Manage Location Profiles” from the “System” menu.

**Attaching Locations to Containers**

As noted above, Locations cannot be attached directly to descriptive records: they must be attached to Top Containers. There are two ways to attach Locations: you can either attach them to Containers one at a time while working on an individual Accession or Resource Record; or you can assign Locations in bulk to multiple Containers. The latter method is often most efficient when working with collections made up of multiple boxes.

*To Attach a Location to a Specific Container*

Locations may be added to Top Containers one at a time while you are working on individual Accessions or Resource Records. To add a Location, go to the Instances section of the record; Create a Top Container; then within the Create Top Container pane, add a Location. For step-by-step instructions, see the documentation on Resource Records.

*To Attach Locations to Containers in Bulk*

Beginning in AS v. 1.5, the “Manage Top Containers” tool allows you to change the Locations, Container Profiles, Barcodes, and ILS Holding IDs of multiple containers at once. This is useful for tasks such as moving a collection to a new shelving area, barcoding after processing is completed, etc. See Bulk Management of Top Containers, above.

**Space Calculator**

If you have implemented both Container Profiles and Location Profiles, ArchivesSpace provides another tool called the “Space Calculator.” This tool compares your available shelving dimensions from your Locations against all of your shelved Containers, and lets you know where you have space available to shelve more boxes. Please note that in order for this tool to work correctly, all of your relevant shelving and containers must be recorded accurately. There are two ways to access the Space Calculator:

*To Find Space for a Specific Box*

1. Log in as a user with suitable permissions
2. Create or Edit any Top Container record
   For example, go to a Resource Record, then Instances, then Create Top Container
3. Under the “Locations” section of the Top Container record, go to the “Location” field. Select “Find with Space Calculator” from the dropdown menu.

4. The Space Calculator pane will pop up. Select a Building or Location to search for space.

5. The resulting table will provide a list of places where your box can fit, along with how many additional spots for the same Top Container type are available. Example:

   To Find Space for Multiple Boxes of the Same Type
   1. Log in as a user with suitable permissions
   2. Under the “System” menu, select “Manage Container Profiles”
   3. Create or Edit a Container Profile, for example, “Standard Records Box”
4. Click on the “Space Calculator” button.

5. The Space Calculator pane will pop up. Select a Building or Location to search for space.
6. The resulting table will provide a list of places where your box can fit, along with how many additional spots for the same Container type are available.

Using Containers: Scenarios and Exercises

Containers in AS can be quite confusing. The following scenarios should increase understanding of the outputs that result from each approach.

It can be very enlightening to conduct some experiments and look at the EAD exported, and we encourage you to do so!

**Scenario 1: The Harry Bridges Papers**

This collection has three very different structures within the collection:

- Series 1: Personal Correspondence and Series 2: Union Correspondence each contain a list of folders. Each folder in Series 1 has a title and a date. In Series 2, folder titles repeat and need to be presented as a range of folder numbers.
- Series 3: Business Records has no folder listing, and the entire series fills one box.
- Series 4: Photographs contains a single photograph, in a folder, that for the present comprises the entire series. The repository also holds a large unprocessed addition to the Bridges papers and knows that most of that addition is photographs.

*Where would you apply top containers in this collection? This will vary according to the three structures employed in arrangement and description!*

**Series 1 and 2: Box as top container, folders as child elements**

The box is what circulates to the reading room and should be your Top Container. There may be a personal or repository preference for including box numbers in file numbers.

In ArchivesSpace, add an Instance attached to the archival object at the file level of description. Remember that if Box 1 was already created as a Top Container linked to this record, ArchivesSpace will suggest it. If the Top Container was not yet created, you will need to create it:
Series 2: Box as top container, folders as child elements, but apply a range of folder numbers at the child level.
In ArchivesSpace, as an Instance attached at the file level of description:

EAD output for container information at the file level of description:
<container label="Mixed Materials" type="box">1</container>
<container type="folder">1-16</container>

Series 3: Box as top container, no folder listing
In ArchivesSpace, as an Instance attached at the series level of description:

EAD output for container information at the file level of description:
<container label="Mixed Materials" type="box">2</container>
<container type="folder">1-16</container>
EAD output for container information at the series level of description:
<container label="Mixed Materials" type="box">3</container>

**Series 4: Level of description is item, top container is folder.**
In ArchivesSpace, as an Instance attached to an item-level description:

EAD output for container information at the item level of description:
<container label="Mixed Materials" type="folder">4</container>

**Scenario 2: The XYZ Family Photographs are a folder-level list with one photograph per folder and no series hierarchy. Folders are housed in 3 boxes. Where would you apply top containers?**

Link Top Containers (boxes) and folders at the file level of description.
Step 1: In ArchivesSpace, at the file-level description, add an Instance.
Step 2: Create the Top Container (i.e. box) or link to a previously created Top Container.
   Type: “Mixed Materials” is frequently used for mixed archival materials. “Graphic Materials” is an option for strictly photograph collections.
Step 3: Add the Folder number as the Child.

In ArchivesSpace, at the item level:
Scenario 3: The Records of the Office of Z is an overview with series descriptions only. Each series has many boxes in it; there is no further detail. However, you want to know where all of the boxes are located. How would you apply top containers?

In ArchivesSpace, apply Instances at the series level of description. Remember that if the boxes were already created as Top Containers linked to this record, ArchivesSpace will suggest them. If the Top Containers were not yet created, you will need to create them:
EAD output at the series level:

<container label="Mixed Materials" type="box">1</container>
<container label="Mixed Materials" type="box">2</container>