

# AtlasX Agile Self-serve Learning Paths (ASLP) Tool: Technical Administration Guide Version 1.0

Richard G. Turner

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## Executive Summary

This Technical Administration Guide provides technical information needed to maintain, modify and extend the AtlasX Agile Self-serve Learning Paths (ASLP) as implemented on milWiki. ASLP, created by the AtlasX Agile Resource Center, provides the Space Systems Center workforce with access to self-directed, efficient, and user focused training and education opportunities in the areas of lean, agile and DevSecOps leadership, acquisition and development.

This document provides:

- A brief introduction to the rationale and concept behind the ASLP tool
- A description of the information architecture, contents, and the relationships that are maintained
- A brief discussion of the architecture and general principles of the semantic mediaWiki environment used in milSuite/milWiki
- How to perform typical administrative activities (e.g., add, change or delete ASLP material)
- Access links to semantic media wiki and milWiki tutorial information and ways to contact milSuite technical advisors
- Examples of the various ways that information is displayed and the underlying scripts and features used

This guide is not intended to provide complete information on the tool. Given its “living” nature, changes are expected to occur to content as well as to the user interface, display formats and functions. Such changes are evaluated and negotiated within the ARC as the ASLP curation authority. Information on the history, general philosophy and principles for curation of the ASLP assets is provided in the companion *AgileX Agile Self-serve Learning Paths Tool: Curation Guide*.

---

# 1 Introduction

The Agile Self-serve Learning Paths (ASLP) tool is an evolving training catalog created and curated by the AtlasX Agile Readiness Center (ARC) at the Space Systems Center (SSC).

It is designed to help individuals develop the initial competencies needed to participate in evolving Agile/Lean/DevSecOps environments, and how those competencies apply to the various roles played in these organizations.

Hosted on milSuite's milWiki, it provides web-based learning assets that are:

- drawn from diverse resources on related subject areas
- evolving to bring new, applicable information to the people who can best use it
- associated with a standard set of specific competencies
- easily accessible to the learner
- organized and made available via a variety of search, browse and relationship functions.

## 1.1 ASLP Rationale

The ARC, leveraging work done at the Defense Acquisition University and other DoD components, has identified competencies required to successfully adopt and productively apply agile, lean and DevSecOps approaches. Traditional group training courses are valuable, but are often difficult to schedule and expensive to conduct. There are also limited resources for team members who are new to the concepts or wish to delve deeper into the concepts and activities.

While there are numerous application-based training opportunities (e.g., Atlassian, Scrum or SAFe certifications), there is a need for on-demand, just in time training that can be:

- Based on individual needs
- Available without scheduling
- That can be rapidly updated to provide the latest information
- That can evolve and grow based on contributions by a broad variety of contributors and feedback from learners
- In a form that is accessible on mobile devices

## 1.2 ASLP Overview

“**milWiki**, or Military Wiki, is a Knowledge Management tool used by the DOD community. From the Hawaiian word for ‘fast,’ a wiki is a Web site that is editable by anyone who can access it. It is a powerful tool and a living knowledge bank where experts are encouraged to contribute their experience and update information as it happens. It allows users to integrate and interlink knowledge into topical-based articles and collaborate on issues up to and including

UNCLASSIFIED/FOUO documentation. milWiki's mission is to capture the knowledge and information of the DOD community and allow users to easily locate and impact that knowledge through community updates." [from <https://www.milsuite.mil/wiki/MilWiki>]

The ASLP site helps individuals (learners) to find web-accessible agile/lean/DevSecOps acquisition and technical educational material. Deployed on milSuite/milWiki, ASLP is available to anyone with an active Common Access Card (CAC) and a milSuite account (automatically generated at the first access of milSuite).

The ASLP wiki site is accessible at:

[https://www.milsuite.mil/wiki/Portal:AtlasX\\_Agile\\_Self-serve\\_Learning\\_Paths](https://www.milsuite.mil/wiki/Portal:AtlasX_Agile_Self-serve_Learning_Paths)

The site is essentially a catalog of an evolving set of learning opportunities (e.g., self-paced training videos, instructor-led courses available from the government and industry, presentations, documents, blogs, podcasts). In general, the site contains:

- A set of agile/lean/DevSecOps **Competencies**, defined for the AtlasX Agile Readiness Center (ARC) and their clients, provide the core classification scheme.
- **Learning Assets** are the primary data items and capture information, access, competency and role-related information for a particular learning opportunity.
- **Learning Paths** provide access to curated, ordered sets of learning assets organized according to specific training needs. The types of paths available include general study paths, role-based and event-based paths.

The site is a wiki, so there is opportunity for a broad spectrum of users and providers to interact with and evolve the catalog. Learning assets may be added or removed, additional functionality can be provided, and there is a means for feedback through user rating (star system), a suggestions link, and "Talk" articles provided for each learning asset. As of this writing, the ASLR contains around 200 learning assets.

Curation of the content is needed and acquired through a variety of activities. There are several reasons that curation is desired. While milSuite is limited to CAC-holders, there are necessary content and security features that are in place to protect users from information that may be incorrect, damaged, or possibly malicious. Because the site is intentionally available to a large set of people, some coordination is expected to enable and energize self-monitoring activities like rating, comments and talk pages for article feedback. Finally, a curation function will regularly monitor changes (maintained by milWiki and easily tracked by user-id), evaluate proposed additions, maintain a lookout for new ideas and materials, and handle removal of inappropriate, out-of-date, or poorly rated learning assets.

Beyond the ASLP, milWiki provides a wide variety of other capabilities, including the semantic media wiki engine functionality, help desk support, and the ability to access the full scope of its more than half a million articles. Additional materials are also available through milBook and milTube.

As illustrated in Figure 1, competencies, paths and learning assets are accessed through a set of tabs that also include a home article and a search function. The organization of the catalog will be addressed in Section 2.



Figure 1. ASLP Home

### 1.3 ASLP Roles and Responsibilities

The ASLP provides an organized access to a large number of self-service learning assets. The assets need to be valuable to the user and their content accurately described through their attributes

(e.g. relationships to competencies, roles and topics, level of understanding,). Maintaining and evolving ASLP requires two areas of expertise: curation and administration.

### **1.3.1 Curation**

Curation addresses the content of the ASLP and monitors content changed or proposed by users. In general, curation responsibilities are:

- Maintaining and evolving the competencies, browse categories, and balance of subject matter and levels across the database
- Creating, finding, evaluating, adding and removing learning assets for inclusion in the database
- Reviewing changes requested or made by users
- Responding to specific comments or suggestions and providing rationale for editing or rejections when appropriate
- Defining specific requirements and content associated with changes to administration for implementation
- Increasing utilization of ASLP through advocating its use, building visibility

### **1.3.2 Administration**

Administration addresses the technical aspects of the database and the wiki itself. In general, administration responsibilities are:

- Implementing changes identified by curation
- Maintaining the infrastructure and working to improve efficiency and user experience
- Monitoring the talk pages, ratings, comments, and suggestions that users provide to correct issues and providing curation information relative to their responsibilities and decision making.
- Maintaining a relationship with the milSuite/milWiki administration group; they supply answer implementation questions and help ASLP adapt to changes from new releases/ of the underlying milWiki system and employ new features.

## **1.4 milWiki Basics**

**2 The milWiki environment, built on Wikipedia’s mediaWiki, is a highly adaptable interactive information-sharing environment for the military as part of the “one-stop” milSuite. It includes the open source Semantic MediaWiki platform as well as a set of specific extensions developed by MilSuite. Like any other significant web-based activity this results in a complicated set of interacting functions that are sometimes less than obvious in their use and interactions. This section will provide an overview of the milWiki functionality used to implement ASLP. Information on specific activities will be covered in Section 2 ASLP Architecture**

As discussed in the overview, the site is organized around competencies, but also provides access through searching and learning paths. Figure 6 provides a graphical overview of the conceptual architecture.

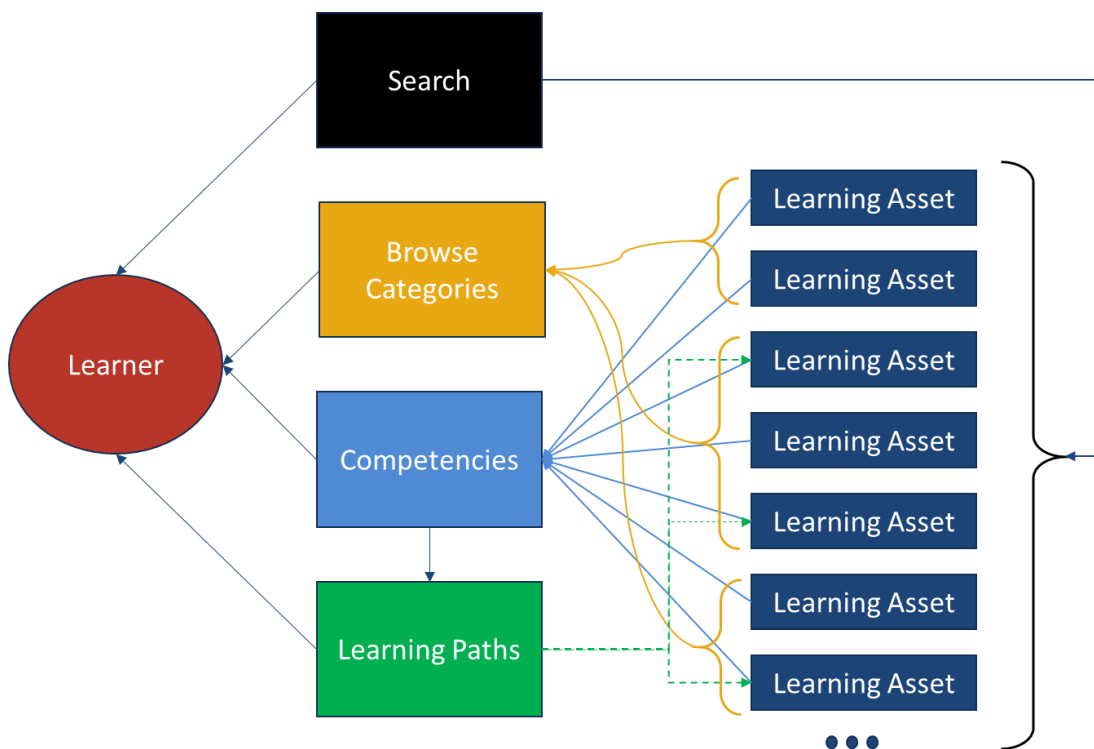


Figure 6. Overview of architecture

As you can see, the competencies are the central organizing principle, browse provides a broader set of topics, and search functions can access all the learning assets directly; certain types of learning paths (e.g. event-based, foundations) may also directly access learning assets. However, we will see that direct access may reduce maintainability.

## 2.1 Article Types and Content

There are four article-types for the ASLP: Portal articles, Learning asset articles, Intermediary articles, and Mechanism articles.

### 2.1.1 Portal articles

Portals are a milWiki construct that allow a collection point for a set of related articles. There are some annoying restrictions on Portal format, but the format is well-defined and provides a reasonable structural framework. In ASLP, the Portal articles are represented as the set of tabs and the articles they include. For example, the Competencies tab is a single article that defines the competencies and provides links to the Learning Assets associated with each of the competencies.

### 2.1.2 Learning asset articles

Learning Assets are the fundamental data items. They are formatted, form-driven articles that describe cogent factors of a specific training opportunity and allow the user to access and evaluate it. They provide information on the name, medium and contents as well as relationships to competencies, roles and browsing topics. The Learning Asset articles also include the knowledge level of the material, the approximate time required to use the material, the source, access point (URL) and additional information about the use of the material if necessary.

### 2.1.3 Intermediate articles

Intermediate articles are articles that provide standalone information articles (like statistics or the Orbit mini-series information and archive), or are transcluded (a wiki term meaning “A special process which allows you to include the contents of one article on a different article, without actually duplicating content.”) Most of the Portal articles make use of transcluded articles for easier editing.

### 2.1.4 Mechanism articles

These articles are the utility articles that provide things like templates, forms, searches, headers and other common functions. These articles can be edited, but are tricky to deal with. Some will be addressed in the Advanced Activities of Section 4.

## 2.2 ASLP scaffolding

The ASLP is built on a structure of relationships between articles. The Portal articles provide a common collective of the various views in to the Learning Assets. Figure 7 illustrates this scaffolding.

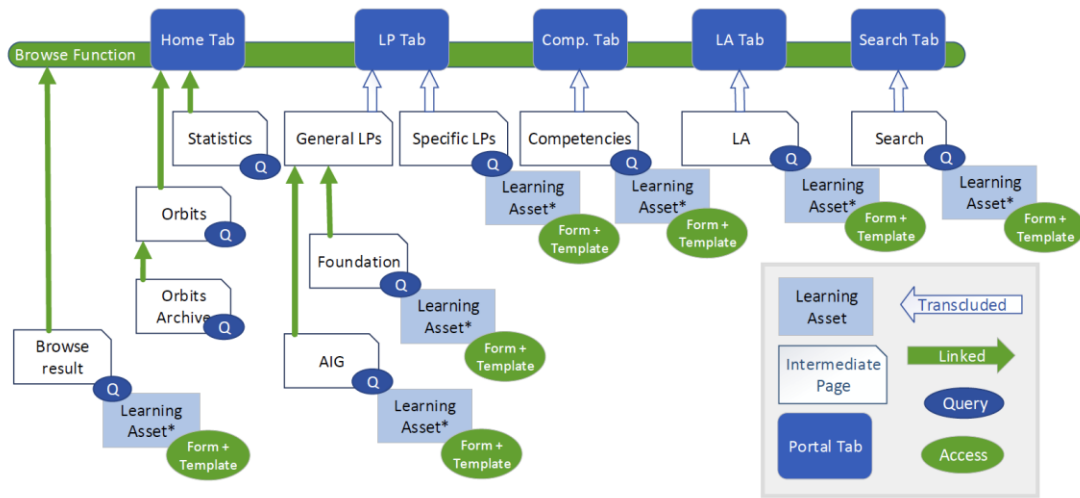


Figure 7. ASLP Scaffolding

Common ASLP Maintenance Activities.

There are extensive how-to articles available on milWiki. The ones referenced most often in this guide are:

[milWiki Tutorial](#) - an all-encompassing tutorial that is quite easy to follow.

[milWiki Library](#) - a milBook collection of articles related to milWiki use.

[Support Forum Semantic Project Guidance](#) - a set of blogs and videos that goes through the concept, benefits and then step-by-step of creating a semantic MediaWiki project. This is a more advanced tutorial.

You can find a full list of recommended resources, including complete URLs, in Appendix A.

### 2.3 Articles

Like most wikis, milWiki is based on the concept of articles that are user created and maintained. Pages can be linked to other articles (similar to web linking), they can be included (in milWiki speech this is called “transcluded” and has a very specific meaning) into other articles, collected in Portals, and annotated/collected with categories (tags) and properties.

As shown in Figure 2. Typical ASLP Asset Description article, a typical ASLP article has a common set of functions or links associated with it. These are either across the top of the article, or listed in a left-hand list of links. Typical ASLP article

The most commonly used are:

- **View** (top) – default article rendered fully
- **Edit** (top) – enter edit mode

- **History** (top) – Maintains and displays a track of all changes made to the article since its creation
- **More** (top) – includes **Move** and **Refresh** activities. Move literally moves the article to a new place and creates a temporary pointer from the old place to the new. Refresh reloads the article and supports the updating process (more on this in Section 4.3).
- **Search** (top) – Straightforward search bar that searches the entire milWiki.
- **Contributions** (top) – a link to an article with all your contributions (e.g., new articles, files, edits) from the time your account was created (you can also specify another account to see what others are contributing).
- **Browse properties** (left) – This is a useful article to help speed “updating”. It provides a list of all the properties that are included in the article and some additional semantic-wiki functionality that will be discussed later

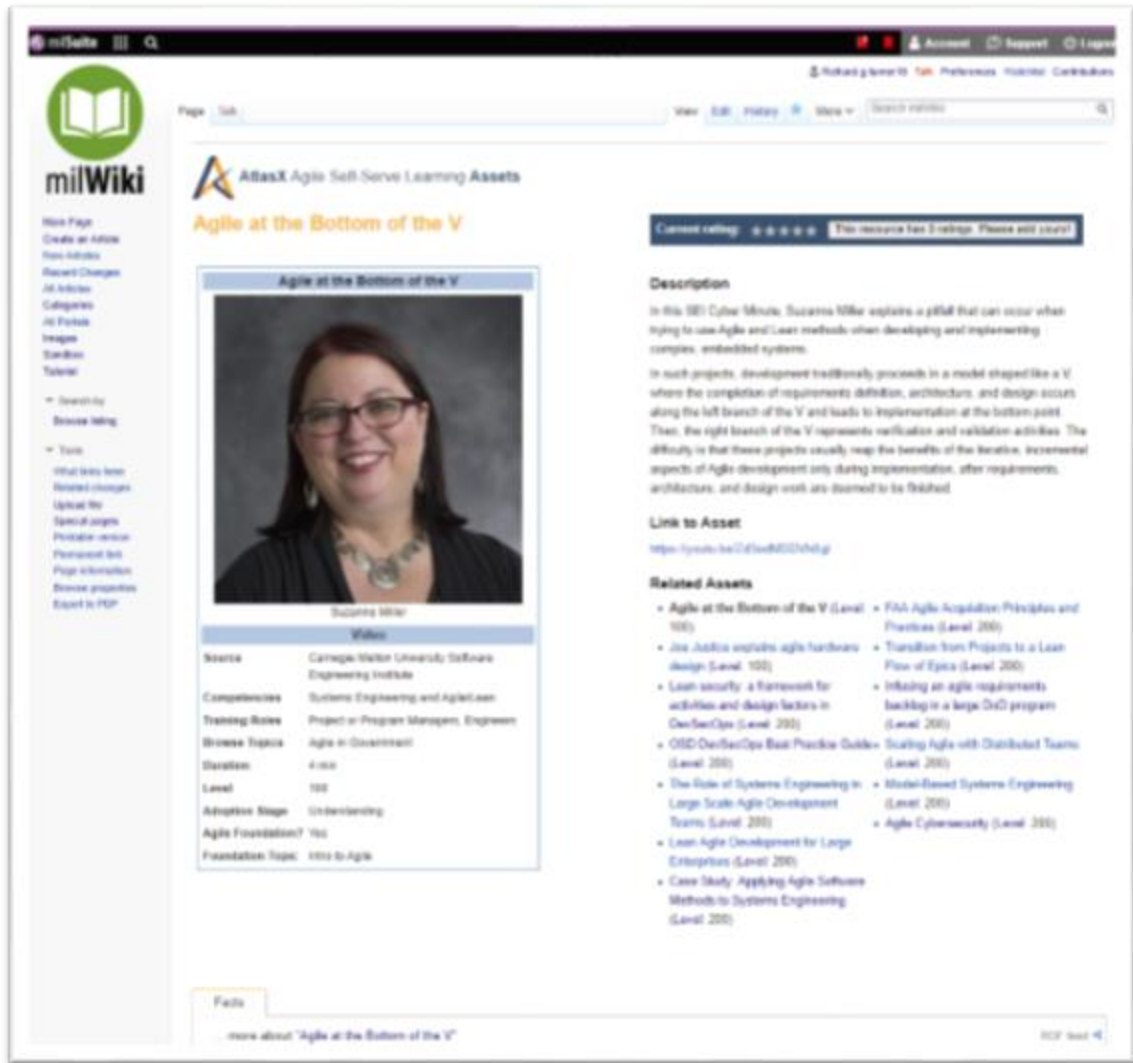


Figure 2. Typical ASLP Asset Description article

Less often used activities available for an article include:

- **Create an article** (left) – Takes you to a list of possible types of articles to create; this is only necessary when creating non-learning asset articles.
- **★** (top) – toggles whether this article is included in your watchlist; filled in means it is included
- **Talk** (top) – This is a comment article associated with each article that allows anyone viewing the article to make a comment or suggestion or begin a discussion about the content of the article. The first person to comment creates the actual talk article. This and the rating system are the primary means of discussing the assets and their effectiveness, content, and applicability to specific organizations.
- **Images** (left) – a means to search all of the images that have been uploaded to the wiki; not particularly useful, but occasionally provides something that fits a need.
- **Sandbox** (left) – This provides information on how to create a personal sandbox where you can test out any features of the Wiki.
- **Upload file** (left) – Allows you to upload files of type: png, gif, jpg, jpeg, svg. File resolution should not exceed 2,500 x 2,500 pixels. (See Section 0)
- **Page information** (left) – Provides listing of certain basic information (e.g., title, article length, article ID), current protection status, history and templates involved.
- **Export as PDF** (left) – creates a pdf file that captures the entire article. *Warning: this does have some bugs. It often loses a line when it paginates.*
- **Account information** (top) – Takes you to your account home article
- **Link to your user article** (top) – This is your username and acts as a link to your user home article.
- **Preferences function** (top) – Provides access to your user profile options.
- **Watchlist** (top) – Provides a list of all the articles you are currently watching (have clicked the star and “favorited”). Pages you create are automatically added to your watchlist unless specifically told not to.
- **Browse bar** - Toward the bottom of some articles, you will see a browse bar to browse specific topics.
- **Facts box** - At the bottom of the articles, there is a Facts box that provides additional semantic wiki tools and links. These will be more fully addressed in Section 5.

## 2.4 Basic editing

**3 To edit a milWiki article simply click the “Edit” tab in the article header. Most articles in the ASLP (like Learning Assets and Portal articles) are constrained by forms that only allow editing of the value of various properties associated with the article. Editing those articles looks something like Figure 3. More about forms and how they are used are covered in the ASLP Architecture**

As discussed in the overview, the site is organized around competencies, but also provides access through searching and learning paths. Figure 6 provides a graphical overview of the conceptual architecture.

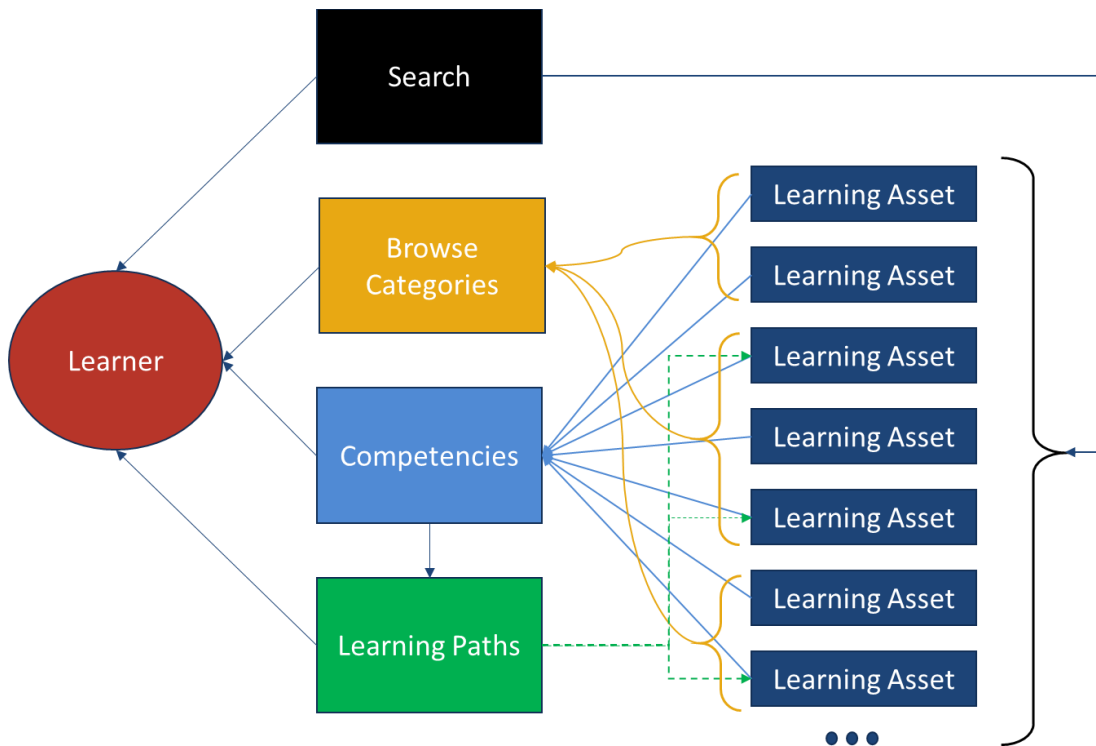


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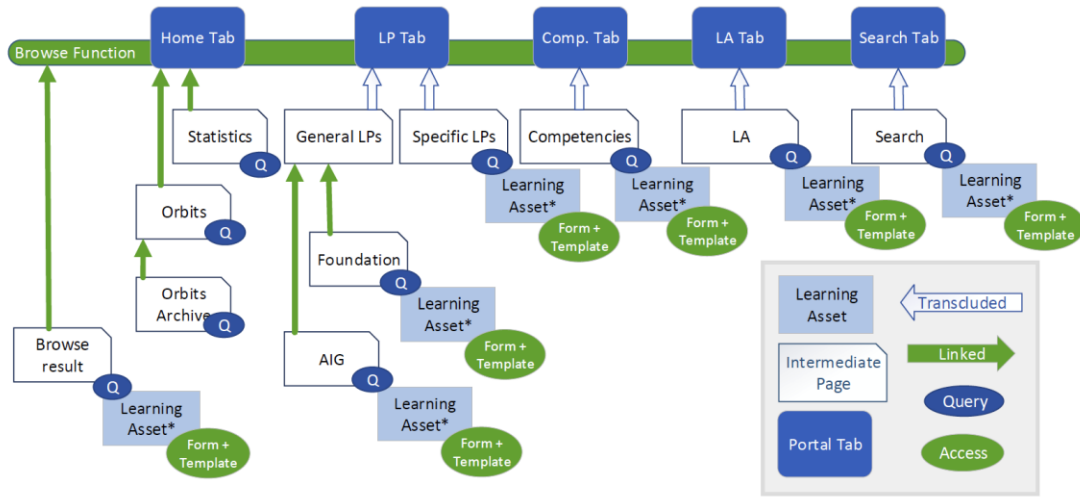


Figure 7. ASLP Scaffolding

Common ASLP Maintenance Activities and Advanced Activities sections.

**Edit Ax-template-training-asset: Agile at the Bottom of the V**

Ax-template-training-asset

**Learning Asset Name:** Agile at the Bottom of the V

**Short abstract:**  
 In this SEI Cyber Minute, Suzanne Miller explains a pitfall that can occur when trying to use Agile and Lean methods when developing and implementing complex, embedded systems.

**Body:**  
 In such projects, development traditionally proceeds in a model shaped like a V, where the completion of requirements definition, architecture, and design occurs along the left branch of the V and leads to implementation at the bottom point. Then, the right branch of the V represents verification and validation activities. The difficulty is that these projects usually reap the benefits of the iterative, incremental aspects of Agile development only during implementation, after requirements, architecture, and design work are deemed to be finished.

**Infobox image:** Thumb mid Su-miller blog authors 380x380.jpg Upload file

**Optional caption:** Suzanne Miller

**Duration:** 4 min

**Source:** Carnegie Mellon University Software Engineering Institute

**Access:** https://youtu.be/ZzSodMDDVh8

**Level:** 100

**Adoption Stage:** Understanding

**Hidden?:** Yes

**Agile Foundation?:** Yes

**Foundation Topic:**  
 None  Intro to Agile  Agile Culture  Intro to Jira-Confluence  
 Intro to DevOps  Introduction to Data Centers-Cloud-Agile CM  Executive Intro to Agile

**Medium:**  
 Video  Blog  Document  Website  
 In-Person Course  On-line Course  Webpage  Article  
 PDF  Podcast  In-Person Training  Webinar  
 Classroom

**Browse Topic:**  
 Agile in Government  Agile EVM  Orbits  Agile Adoption Readiness  
 Contracting for Agile  Agile Measures  Agile-Scrum-Lean Practices  Agile Configuration Management  
 Introduction to Agile and Lean  Using Confluence and JIRA  Scaled Agile Framework  Enabling Architectures  
 Tools  Leadership and Management  DevOps-DevSecOps  Scrum  
 Kanban  PI Planning  Requirements  Tools and Technology  
 Automated Testing  Security

**Training Competencies:**  
 Agile/Lean Concepts  Agile/Lean Approaches  Agile/Lean Leadership  Agile/Lean Infrastructure  
 Planning and Execution for Agile/Lean  Requirements and Agile/Lean  Testing and Agile/Lean  Agile/Lean Architecture and Modeling  
 Systems Engineering and Agile/Lean  Contracting for Agile/Lean  Oversight/Insight of Agile/Lean organizations  Agile/Lean Coaching  
 Agile/Lean Adoption Management

**Training Roles:**  
 Agile/Lean Measurement  Project or Program Managers  Engineers  Contract Managers  
 Senior Leadership  Toolsmith  Coaches  Testers and Certifiers  
 Financial Managers  Agile Team Facilitator  Agile Team Product Owner

**Tags:**  Use a comma to separate multiple values

Figure 3. Form-based edit article

If the article is not constrained by a form, then the editing article opens displaying an editable listing of the article code similar to Figure 4. There are two sections – the editing window, and the actions bar. The editing window provides the editing taskbar and the article text. The action bar allows you to save your changes (the article goes live), look at a preview of the article as changed but not live, and exit editing without changes.

### 3.2.1 History and Sandbox Pages

Don't worry about making a change that doesn't work. The preview function will generally provide you with feedback before you actually save the article. However, if for some reason you do change the article and there was an issue, one of the marvelous things about the milWiki is that it maintains a complete record of every saved article. You can always roll back to the previous or some earlier version of the article with the "history" tab on the article header. Clicking on it will show something like Figure 5. You can compare previous versions and select the one to make live (more at [milWiki Tutorial \(History\)](#)).



Figure 4. Edit article without form

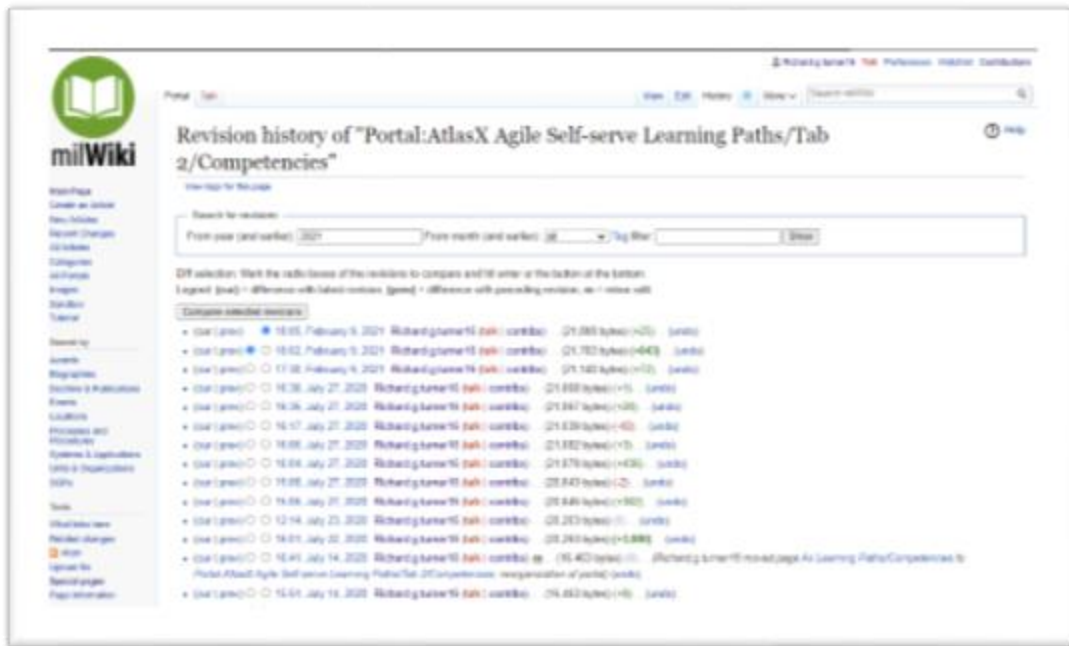


Figure 5. History article

To try out significant changes, it is useful to have a sandbox associated with your account. A sandbox is a special article on the wiki used just for editing practice. Good for new users who are trying to learn how to use the wiki. Your sandbox is not easily accessed by other articles, but provides complete access to the ASLP (and other) articles. Here are instructions for [creating a personal sandbox article](#).

### 3.2.2 Formatting Text

The basic formatting functionality in milWiki is fairly simplistic. However, it does provide sufficient access to HTML and CSS to produce fairly complex formatting. A quick start description is available at [milWiki \(Editor QS\)](#). A full description of the editing functions can be found at [milWiki Tutorial \(Edit\)](#). The remaining parts of this section provide some specific comments on HTML and CSS usage. They primarily apply to editing long text values, templates, or non-templated articles.

#### 3.2.2.1 HTML

Using HTML is fairly straightforward and well described in the [milWiki Tutorial \(HTML\)](#). It is possible to mix and match the wiki editor formatting and the HTML formatting. For example, the HTML `<h1>...</h1>` notation provides the same function as the wiki editor toolbar “Heading” dropdown menu. However, there can be issues if the formatting areas overlap, and unexpected consequences can happen.

### 3.2.2.2 Cascading Style Sheets (CSS)

CSS is generally used for more complex formatting. The default (and locked) style sheet is provided automatically to every article to utilize as described in the [milWiki Tutorial \(CSS\)](#). However, you can use the “style=” parameter within HTML <div>, <span>, and <p> sections. This allows for a wide variety of options. Useful examples are included in the [milWiki Tutorial \(CSS\)](#).

### 3.2.3 milWiki Extensions

milWiki provides a number of extensions that can help in designing and formatting articles. A list of extensions with links to documentation for each is provided in [milWiki Extensions](#). Some extensions are used in the ASLP; specifics are included in Section 6 Advanced Activities.

## 4 ASLP Architecture

As discussed in the overview, the site is organized around competencies, but also provides access through searching and learning paths. Figure 6 provides a graphical overview of the conceptual architecture.

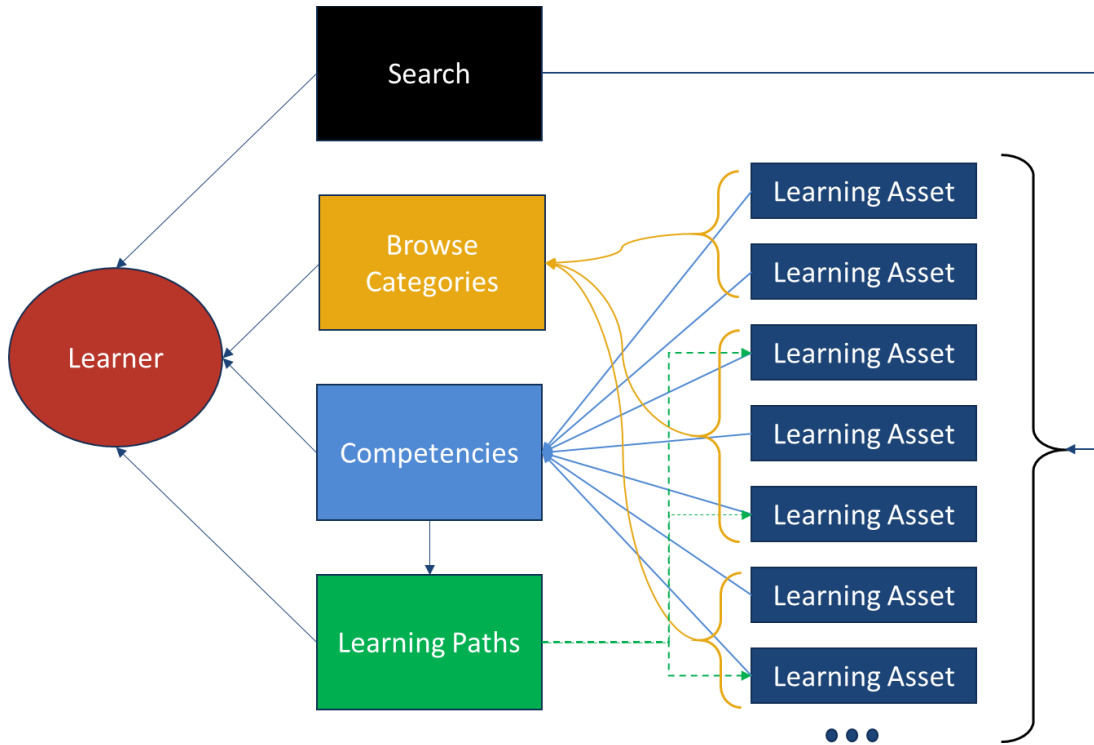


Figure 6. Overview of architecture

As you can see, the competencies are the central organizing principle, browse provides a broader set of topics, and search functions can access all the learning assets directly; certain types of learning paths (e.g. event-based, foundations) may also directly access learning assets. However, we will see that direct access may reduce maintainability.

### 4.1 Article Types and Content

There are four article-types for the ASLP: Portal articles, Learning asset articles, Intermediary articles, and Mechanism articles.

#### 4.1.1 Portal articles

Portals are a milWiki construct that allow a collection point for a set of related articles. There are some annoying restrictions on Portal format, but the format is well-defined and provides a reasonable structural framework. In ASLP, the Portal articles are represented as the set of tabs and the

articles they include. For example, the Competencies tab is a single article that defines the competencies and provides links to the Learning Assets associated with each of the competencies.

#### 4.1.2 Learning asset articles

Learning Assets are the fundamental data items. They are formatted, form-driven articles that describe cogent factors of a specific training opportunity and allow the user to access and evaluate it. They provide information on the name, medium and contents as well as relationships to competencies, roles and browsing topics. The Learning Asset articles also include the knowledge level of the material, the approximate time required to use the material, the source, access point (URL) and additional information about the use of the material if necessary.

#### 4.1.3 Intermediate articles

Intermediate articles are articles that provide standalone information articles (like statistics or the Orbit mini-series information and archive), or are transcluded (a wiki term meaning “A special process which allows you to include the contents of one article on a different article, without actually duplicating content.” Most of the Portal articles make use of transcluded articles for easier editing.

#### 4.1.4 Mechanism articles

These articles are the utility articles that provide things like templates, forms, searches, headers and other common functions. These articles can be edited, but are tricky to deal with. Some will be addressed in the Advanced Activities of Section 4.

### 4.2 ASLP scaffolding

The ASLP is built on a structure of relationships between articles. The Portal articles provide a common collective of the various views in to the Learning Assets. Figure 7 illustrates this scaffolding.

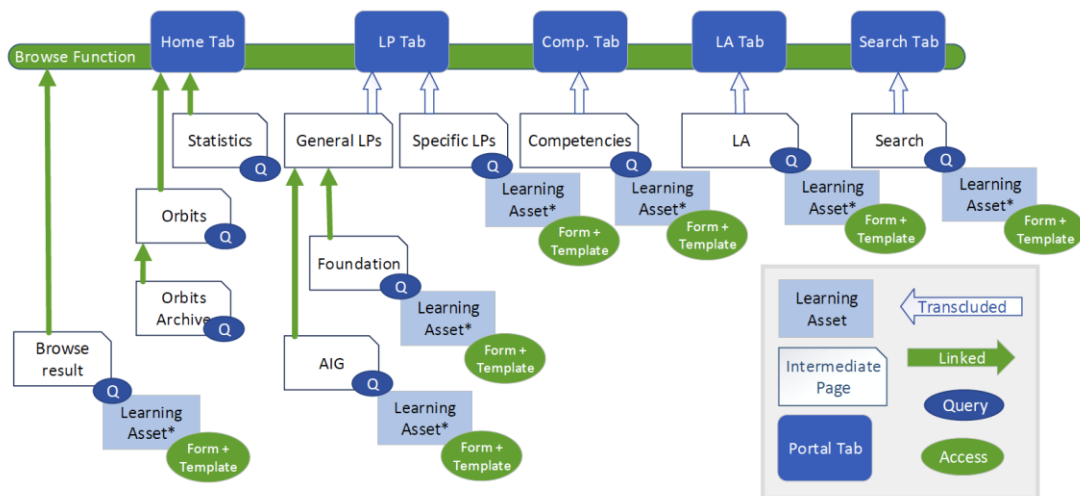


Figure 7. ASLP Scaffolding

---

## 5 Common ASLP Maintenance Activities

The following sections provide step-by-step instructions for most of the activities involved in maintaining the learning assets. You can refer to the image and list in section 2.3 as a reminder of the locations of the various functions on a typical article.

The primary maintenance activities are editing a Learning Asset article, adding a new Learning Asset article, Removing a Learning Asset article

**Note:** The milWiki contains (at last count) 563,273 articles, and all of those articles can be changing at any time. The queues used to preserve continuity in propagating those changes are often large, so it can take time for changes you make to ripple through the system and be applied to all the ancillary material (like queries, templates, and so forth). So, don't panic if your changes aren't immediately represented in searches or on other articles. It can take up to 24 hours for the change to take effect everywhere. More about this issue in Section 5.3 Removing a Learning Asset.

### 5.1 Editing an Existing Learning Asset

The ASLP is a living, evolving information source. As such the learning assets and their characterization will change, requiring updates. Because there is a form provided, editing an existing asset is straightforward

#### Step-By-Step Instructions:

1. Navigate to the article to be changed. This can be accomplished by clicking on the [Learning Assets](#) tab which lists the full set of learning assets alphabetically by title.
2. Click on the “edit” tab.
3. The learning asset is displayed in a template form.
4. Make whatever changes are necessary.
5. Find and click on the “Show preview” button at the bottom of the template.

The article will reload with a preview at the top and template below it.

6. If there are errors or issues with the display, you can navigate down to the template and make corrections or additions. You can then click on “Show preview” again.
7. When you are satisfied with the changes, click the “Save article” button and the article will be redisplayed live.
8. Should there be more changes to make, or errors that slipped by, just return to step 2.
9. Click the “More” button at the top of the article and select “refresh.”

## 5.2 Adding a Learning Asset

Adding an asset is also relatively easy. You need a good deal of information to add a new Learning Asset, but the curator role described in the Curation Guide identifies, evaluates and categorizes new material. Table 1 briefly describes the information maintained in a learning asset description. Browsing through existing learning assets can provide examples. Complete definitions for the information are provided in the Curation Guide.

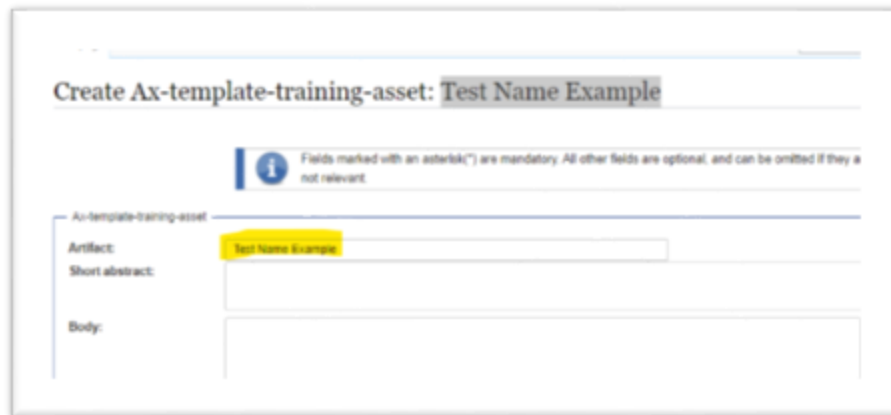
Table 1. Information needed for a new learning asset.

| Label          | Type        | Description                                                                              |
|----------------|-------------|------------------------------------------------------------------------------------------|
| Artifact       | Page name   | This is a unique title for the asset. It is used as the primary reference for the asset. |
| Short Abstract | Text        | Brief, one or two sentences that describe the asset.                                     |
| Body           | Text        | A longer description of the asset. May be written in a separate document.                |
| Image          | Image file  | An image to be used. The template will adjust it to fit the article.                     |
| Caption        | Text        | Optional text to display under the picture.                                              |
| Duration       | Text + drop | An amount and a unit of measure the learning time required.                              |
| Source         | Text        | The author, company, institution, or other source.                                       |
| Access         | Link        | The URL for the asset.                                                                   |
| Level          | Drop        | The educational level of the material.                                                   |
| Adoption Stage | Drop        | When in the adoption is this most useful.                                                |

|                  |              |                                                                          |
|------------------|--------------|--------------------------------------------------------------------------|
| Hidden           | Yes, No      | Provides a way to remove a learning asset from queries (delete an asset) |
| Foundation       | Drop         | The asset is included in the minimal set of training required by all.    |
| Foundation Topic | Radio Button | The topic within the Foundation learning path (if included)              |
| Medium           | Checkbox     | The types of media used in the asset.                                    |
| Browse Topic     | Checkbox     | Classification based on the contents of the asset.                       |
| Competencies     | Checkbox     | The competency addressed in the material.                                |
| Roles            | Checkbox     | The roles that would find this asset useful.                             |

**Step-by Step Instructions:**

1. Navigate to the [Learning Asset Creation](#) article.
2. Enter the article name into the box.” You will see similar names displayed as you type. This should help you create a unique name. Click “Create” and the form will be displayed.
  - a. If the fields are already filled in, then the name you entered was NOT unique. Go to the bottom of the template and click “Cancel.” Create a new name and try again from step 1.
  - b. If the fields are all blank, the name was unique, and you can proceed.
3. Copy the name from the last element of the article name. This should be what you typed in in step 2. It is critical that these two items are identical.



4. Fill in the short abstract and the body. You must use the formatting techniques as discussed in and refrain from using quote marks and certain other special characters. Not following these will be evident when you preview the asset. It is best to stick with the standard formatting types as described in [milWiki Tutorial \(Formatting\)](#)
5. If there is an image provided, click the “Upload File” button next to the box (NOTE: not the one on the far left of the article under the milWiki logo). Fill in the material as described in 5.3. Add the caption if provided.

6. Medium - Simply check the boxes that apply.
7. Duration is a bit tricky. As noted in Table 1, different media require different measures of “size”. The numbers are entered in to the left-hand box and the type of measure is in a dropdown box.
8. Fill in the source. Common sources will show up in a dropdown as you type, but you can check the source distribution table on the [statistics article](#) to see how different sources are defined.
9. Access is always a URL. See the sections below for dealing with different kinds of media.
10. Select the appropriate level from the dropdown menu.
11. Select the appropriate adoption stage from the dropdown menu.
12. Check the boxes for Browse Topic(s)
13. Check the boxes for Training Competencies
14. Unless specifically indicated by curation, leave the Agile Foundation as “No.”
15. Check the boxes for Training Roles
16. Check the “Show Preview” button and check the content is correct.
17. Click the S article button

### 5.3 Removing a Learning Asset

milWiki is a community-based wiki and because it is intended that anyone be able to change any article in the wiki, and that there are numerous links between articles in the wiki lattice, removal of article is not a straightforward activity (such as deleting an article). Removing a Learning Asset is done through making it hidden from Learning Asset queries. In that way, Learning Assets can be “turned on and off” by changing a single data item in the form. To list the hidden articles go to the Portal Home, click on the “statistics” link and scroll to the bottom under the “Maintenance” heading. Click on the “Show hidden articles” link.

#### Step-by-Step Instructions:

1. Navigate to the learning asset article and click the “Edit” tab.
2. Change the “Hidden?” dropdown value to “Yes”
3. Click the “Save article” button to save the change.
4. Click the “More” tab and select “Refresh” if it is in bold type.

|                    |                 |
|--------------------|-----------------|
| Level:             | 200 ▾           |
| Adoption Stage:    | Understanding ▾ |
| Agile Foundation?: | No ▾            |
| Hidden?:           | Yes ▾           |



## 5.4 Working with Media

The first three activities described above often require the handling of media files (images, videos and PDF files). milWiki's security controls make this somewhat more complicated.

### 5.4.1 Images

All images used must be uploaded using the milWiki image functionality. Inserting images into articles is fairly straightforward once it is "in the system." For Learning Assets, image upload is handled through the template. For other uses, clicking on the "Images" link on the left-hand side

— Source file —

Source filename:  No file chosen

Maximum file size: 100 MB (your chosen file from your computer)

Permitted file types: png, gif, jpg, jpeg, svg. File resolution should not exceed 2,500 x 2,500 pixels.

— File description —

Destination filename:

Summary:

Licensing:

Source:   
The source of this image or work if it is not original

Author:   
Richard.g.turner16

Location:   
Where was this image taken? or where did it originate?

Organization:

Team:

Tags:   
Use a comma (,) to separate multiple tags

Categories:   
Use a semicolon (;) to separate multiple categories

— Upload options —

Watch this file

Ignore any warnings



of the article brings up the images utility so that you can search the large set of images already available, or upload your own image. The upload template looks like this:

Click the “Choose File” button at the top of the form. This will bring up a file list from your computer and you can navigate to the picture you want to upload. Double click on the file or click on the “Open” button. The filename will show up beside the “Choose File” button on the form. You can fill in the other information as warranted. Then press the “Upload file” button. The filename will now appear in the asset template article. There is more specific information on images in [mil-Wiki Tutorial \(Images\)](#).

#### 5.4.2 Videos

Most of the videos associated with the ASLP site are simply links outside the site to YouTube, Vimeo, or other sources. To actually include a video physically in the wiki it is necessary to utilize the milTube application in milSuite. If this is unavoidable, there are instructions on this process at [milTube basics](#)

#### 5.4.3 PDFs, PPT, and other files

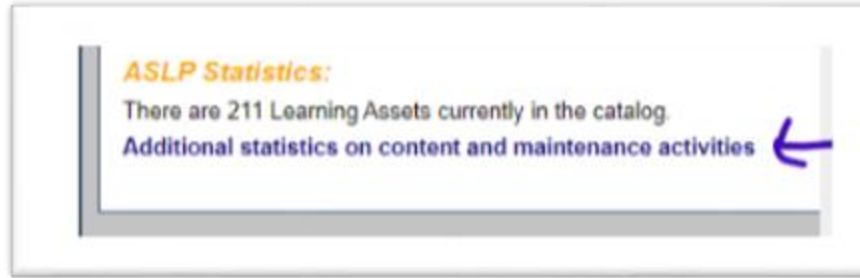
Files are not attached to milWiki articles but are linked. Links can be to an external (to milWiki) site, or to a document in the milWiki milBooks application. In the ASLP, access is essentially via external links to files resident on some other platform (websites and so forth). This is similar to images and videos, but is less structured. The current pdf and powerpoint files are kept in the [ASLP milBook documents](#) area. To add a PDF or other file, simply click on the “Actions” link at top right of the article, select “File.” The upload template will appear. First, “click to select files” or simply drag the file into the block. Once you have the file(s) entered (description is optional), click in the “tags” block at the bottom and type “ax-document” into the block. You can now click the Publish button to make them available for milWiki. The easiest way to reference them on an article is via a link to the individual document article’s URL. The group article should list all the documents available for the ASLP, including the one you just uploaded. Click on the link and the article will be displayed.

### 5.5 Creating a spreadsheet of all learning assets and properties

It may be necessary to generate a version of the learning asset database to support analysis outside of milWiki, provide information to those without milSuite access (for example no CAC) or possibly share/rehost the data on another system. You can generate an MS Excel version of the database that can then be massaged and analyzed as required or transferred to other applications.

Step-by-Step Instructions:

1. From the Portal Home article, toward the bottom, to the right of the number of current assets, click on the “Statistics” link.



2. At the very bottom of the article, click on the “csv” link. This will download a comma-separated value file named results.csv that can be opened with Excel. You should save it as a normal Excel workbook with the name of your choice.



## 6 Advanced Activities

The following sections provide information on activities that should be needed rarely and require more extensive understanding of the milWiki and the ASLP Portal. **Remember that whatever you change on “live” articles will change the articles for everyone.** Your best friends will be a sandbox article and the history tab. Sandbox articles allow you to try out new things, with live data, but aren’t easily reachable by others. This gives you a place to try new queries, forms and templates. In general, dealing with these issues should be rare.

### 6.1 Using milWiki-supplied tutorials and help resources

The milWiki is complex and even the help desk people often find out new things. Read these sections and familiarize yourself with the tutorials and other references. If you still feel uncomfortable, do not hesitate to contact the milSuite help desk. A full list of references is provided in Appendix A. It is probably worthwhile to work your way through the Main Tutorial before you attempt any of the Advanced activities.

#### 6.1.1 Main tutorial

milWiki provides an overview tutorial that runs from basics through using the Semantic Mediawiki. You can start it from any of the milWiki articles by clicking on the “Tutorial” link on the standard milWiki left hand panel links.



At the bottom of each Tutorial article there is a navigation panel to help you find specifics. The Appendix and Cheatsheet links are of particular value as “reminders.”

| milWiki Tutorial    |                                                                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stage 1:            | Introduction • Searching • Navigating Links • Managing a Watchlist                                                                                    |
| Stage 2:            | Starting Articles • Editing Articles and Sections • The Wiki Editor • Basic Formatting • Creating Links • Images • Symbols • Talk Pages • History     |
| Stage 3:            | Renaming and Redirection • Categories • Citations • Tables • Image Galleries & Maps • Disambiguation • Transclusion • Using Templates • Special Pages |
| Stage 4:            | HTML • CSS Styling • Button Classes • Creating Portals                                                                                                |
| Template Creation:  | The Basics • The Template Page • Magic Words & Meta Templates • Parser Functions • Code Flow                                                          |
| Semantic Mediawiki: | Introduction • Usage in Articles • Types • Properties • Queries • Search • Forms • Concats                                                            |
| Appendix:           | Glossary • Checklist                                                                                                                                  |

### 6.1.2 milUniversity

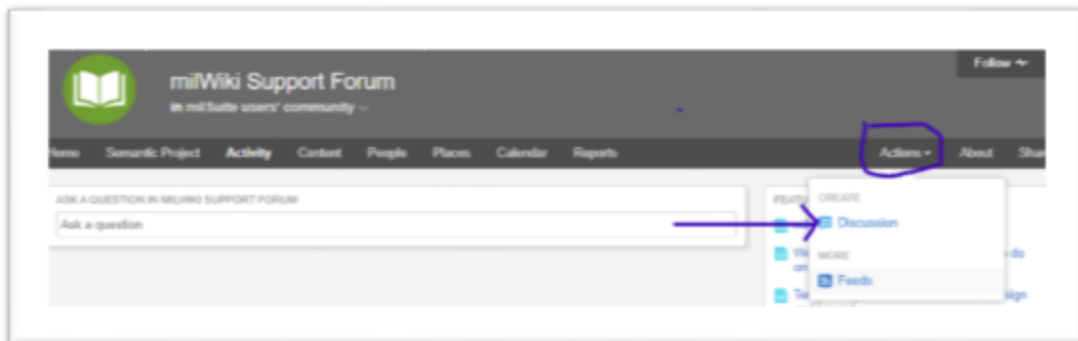
The [milSuite Library \(milWiki\)](#) also provides tutorials, videos and other resources for using milWiki.

### 6.1.3 Semantic Mediawiki and milWiki Extensions

Semantic Wiki (based on the Semantic Wikimedia engine) provides significant enhancements to using the wiki articles as a powerful database-driven information network. It uses “properties” defined by the author (or built into the system) relate, query and organize the material with built in functionality. There is a very good tutorial article that works from the fundamentals to application at [Semantic Wiki Overview](#). An additional reference that would be useful if you are considering some major changes, uses an example to illustrate conceiving and implementing a [Semantic MediaWiki Effort](#).

### 6.1.4 Forum and Helpdesk

The help desk personnel have been extremely helpful in developing the ASLP. The [milWiki Support Forum](#) provides a general portal for milWiki use. There is an FAQ section, a library, courses and most useful a message [forum](#) that provides access to a large set of discussions with various milWiki users and the help desk staff. On the forum you can look through previous discussions, ask a question or start up a discussion using the “action” menu and clicking “discussion.” Responses to your question will generally show up in your inbox, reachable via the milBook “notifications” bell icon.



## 6.2 milWiki Scripting Basic Editing

We have already discussed text formatting and the use of HTML and CSS in Section 2.4 Basic Editing. In this section we will discuss how the scripting language uses those notations as well as a number of functions that provide various capabilities. Scripting can be challenging because it crosses so many sources of functionality. The wiki structure and built in functions, the various semantic media abilities to query and display information on the asset description articles, and the existing functionality and extensions all create a confusing polyglot language which is both difficult to read and extremely error prone due to various syntax differences. Very small changes can have significant consequences, so be careful and use the sandbox for scripting creation and changes.

### 6.2.1 Basics of scripting

Wikis are essentially a large evolving collection of articles that are linked together in a way that they can provide communication among groups of information users. At the simplest, articles are connected by links that specify the name of another article. There can be hierarchies of articles (represented by portals or an article-to-subarticle connection), but these are generally frowned upon as they tend to be less flexible. Links can also collect articles by using transclusion – that is, having the content of an article be displayed as part of another article. For example, transclusion is used in the portal tab articles.

Navigation through the wiki is via links. Browsing and exploring are generally not hierarchical as they are in file systems. A form of hierarchy can be provided by creating links to operate the same way as web/file system breadcrumb or breadcrumb trail, but an explicit hierarchy is not essential to the wiki structure.

Scripting enables the administrator and, in general, all wiki users a variety of functions that can display information gathered within the wiki (across many articles) using links, tags, queries, forms, templates and transclusion. Scripting is well covered in the [MilWiki:Tutorial](#).

### 6.2.2 Example of scripting

The following script comes from the beginning of the Statistics article to illustrate scripting.

| Script code              | Explanation                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>{{notitle}}</code> | Double braces <code>{{</code> and <code>}}</code> generally enclose a link or a function. <code>{{notitle}}</code> is a “Magic Word” - a function that accesses a built-in system value with a specific format or instructions pertaining to a default action. This function keeps the actual URL from being printed at the top of the article. |

|                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>{{Portal:AtlasX Agile Self-serve Learning Paths/header}}</pre>                                                                                                                                                             | <p>This transcludes an article with one of the standard headers for the ASLP</p>                                                                                                                                                                                                                                                                                                                                                                                                         |
| <pre>'''&lt;span style="font-size:30px; color:#FFA500"&gt;Learning Asset Statistical Data&lt;/span&gt;'''</pre>                                                                                                                 | <p>Formats the title of the article. ''' encloses text that will be bold and is added via the wiki editor. <code>&lt;span&gt; ... &lt;/span&gt;</code> is HTML and the <code>style= "..."</code> contains CSS information. And yes, the style could have added bold, but this exemplifies the mixing and matching of the various languages that can occur.</p>                                                                                                                           |
| <p><b>Result of above:</b></p>                                                                                                                | <p>The Table of Contents (TOC) is automatically generated for the article. The magic word <code>{{__NOTOC__}}</code> would prevent the ToC being provided. The TOC automatically generates the <code>[hide]</code> toggle by “Contents.”</p>                                                                                                                                                                                                                                             |
| <pre>&lt;h1&gt;Detailed Activity (Past 30 days)&lt;/h1&gt;</pre>                                                                                                                                                                | <p>HTML code for a top level header paragraph</p>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <pre>{{#vardefine: querydate30  {{#time: m/d/Y  -1 month}} }} {{#vardefine: querydatethismonth  {{CURRENTMONTH}}/1/{{CURRENTYEAR}} }} {{#vardefine: querydatelastmonth  {{#time:M -1 months}}/1/{{#time: Y -1 months}} }}</pre> | <p><code>#vardefine:</code> defines a variable, in the 1st case named <code>querydate30</code>, and assigns it an initial value. In this case, it uses the <code>#time</code> function to return the month, day and year of a day one month prior to the current date. <code>CURRENTMONTH</code> and <code>CURRENTYEAR</code> are magic words The <code>#time</code> function handles cases where calculated dates cross a year boundary and deals with months of different lengths.</p> |
| <pre>{  class="wikitable" ! width="120pt" Measure ! width="30pt" Value ! Assets</pre>                                                                                                                                           | <p>This creates a table of the built-in class <code>wikitable</code>, with 3 columns titled Measure, Value and Assets. Note CSS is used to define a width for the first 2 columns. Because these are parameters to the</p>                                                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>wikitable class, they don't require the use of the style format like the earlier HTML code segment.</p>                                                                                                                                                                                                                                           |
| <pre>  -   NEW assets     {{#ask: [[Ax artifact::+]] [[Creation Date::&gt;{{#var:querydate30}}]]  format=count}}    {{#ask: [[Ax artifact::+]] [[Creation date::&gt;{{#var:querydate30}}]]  format=listwidget  sep= •  widget=alphabet limit=30}}  -   Assets UPDATED     {{#ask: [[Ax artifact::+]] [[Modification date::&gt;{{#var:querydate30}}]]  format=count}}     {{#ask: [[Ax artifact::+]] [[Modification date::&gt;{{#var:querydate30}}]]  format=listwidget  sep= •  widget=alphabet limit=30}}  -   Infrastructure UPDATED     {{#ask: {{Category AxSSPortal}} [[Modification date::&gt;{{#var:querydate30}}]]  format=count}}     {{#ask: {{Category AxSSPortal}} [[Modification date::&gt;{{#var:querydate30}}]]  format=listwidget  sep= •  widget=alphabet limit=30}}  -  } </pre> | <p>This is a continuation of the wikitable definition. The   indicates a parameter, the  - indicates a row beginning, and the    indicates a column entry.</p> <p>#ask: is a query function; using queries is discussed in the Using Semantic MediaWiki (SMW) section.</p> <p>The remainder of the wikitable is filled in and closed with the  }</p> |

**Result of above:**

Detailed Activity (Past 30 days)

| Measure                | Value | Assets                                                                                                                                                                                                                                                                        |
|------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NEW assets             | 0     |                                                                                                                                                                                                                                                                               |
| Assets UPDATED         | 0     |                                                                                                                                                                                                                                                                               |
| Infrastructure UPDATED | 1     | <div style="border: 1px solid #ccc; padding: 2px;"> <span style="font-size: 0.8em;">0-9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z ...</span> <ul style="list-style-type: none"> <li>• Portal:AtlasX Agile Self-serve Learning Paths/Ax Statistics</li> </ul> </div> |

### 6.3 Templates

Templates are a similar concept to transclusion. When you make a call to a template in an article, it outputs the template's contents. However, the difference between templates and transclusion is that templates allow you to specify certain parameters so that you can customize the output. Templates also provide a way to have repeatable “functions” because they can accept parameters. The use of templates are discussed in the basic [MilWiki:Tutorial\(Templates\)](#) and template construction and use related to SMW is found in [MilWiki:Tutorial\(Template Creation\)](#).

### 6.3.1 Commonly used templates

There are a number of already defined templates which can be used as is or serve as patterns for constructing your own. In the following snippet the “Anchor” and “Navbox” templates helped create an internal navigation system for a very long article, when the default ToC did not work quite the way as was wanted.

| Script code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> __NOTOC__ {{Anchor top}}The following are core competencies ... levels of Competencies are addressed in the assignment of Competencies to Roles and Learning Assets to Competencies. </pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p> __NOTOC__ is a magic word that eliminates the default Table of Contents from the article.</p> <p> The {{Anchor top}} creates a target on the article called top that can be referenced as a link. The text following is an introduction to the the confluence article.</p>                                                                                                                                                                                                                                                                                                                                                             |
| <pre> {{Navbox  name = Internal  title = '''Table of Competencies'''  titlestyle = background-color:#BDBDBD;  liststyle = font-size:12px; color: #3CB371;  below =  state=uncollapsed  list1 = [[#Agile/Lean Concepts Agile/Lean Concepts]] • [[#Agile/Lean Approaches Agile/Lean Approaches]] • [[#Agile/Lean Leadership Agile/Lean Leadership]] • [[#Agile/Lean Infrastructure Agile/Lean Infrastructure]] • [[#Planning and Execution for Agile/Lean Planning and Execution for Agile/Lean]] • [[#Requirements and Agile/Lean Requirements and Agile/Lean]] • [[#Testing and Agile/Lean Testing and Agile/Lean]] • [[#Agile/Lean Architecture and Modeling Agile/Lean Architecture and Modeling]] • [[#Systems Engineering and Agile/Lean Systems Engineering and Agile/Lean]] • [[#Contracting for Agile/Lean Contracting for Agile/Lean]] • [[#Oversight/Insight of Agile/Lean Organizations Oversight/Insight of Agile/Lean Organizations]] • [[#Lean Coaching Lean Coaching]] • [[#Agile/Lean Adoption Management Agile/Lean Adoption Management]] • [[#Agile/Lean Measurement Agile/Lean Measurement]] }} </pre> | <p> The Navbox template is commonly used for navigation for collections of related articles. For example, it is used at the bottom of the milWiki tutorial articles. It builds a box with a number of links to other articles. In this case, it is used as an internal article navigation function. The first parameters are generally self-evident. The one of primary interest to this subject is the list1 parameter that provides the active part of the Navbox template. Each item in the list is an internal link to an Anchor definition (as denoted by the # appended to the beginning). The parameter for each is the name to be displayed in the Navbox.</p> |

|                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> {{Anchor Agile/Lean Concepts}}  &lt;Code for displaying the Agile/Lean Concepts list&gt;  [[#top 'top']] • [[#browse 'browse']]  {{Anchor Agile/Lean Approaches}}         </pre> | <p>The Anchors in the Navbox list are included before each of the competency sections as the targets for the list in the Navbox. At the end of each section there is text with links to the <code>top</code> anchor and to the <code>browse</code> box at the bottom of the article.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 6.4 Using Semantic MediaWiki (SMW)

While links of any type between articles are useful, having powerful search tools and consistent data is important. SMW provides such tools. For ASLP administration, the key features to understand are the SMW concept, properties, queries and results formats. A more in-depth resource for SMW and its use in developing and scripting articles may be found in a milBook project-based tutorial [Executing a semantic mediawiki effort](#). These materials are a combination of original training content developed by the milSuite team, along with external training material and resources from the open source Semantic MediaWiki community.

### 6.4.1 SMW Concept

**Semantic MediaWiki (SMW)** is an extension of [MediaWiki](#) – the wiki application beArcst known for powering Wikipedia – that helps to search, organize, tag, browse, evaluate, and share the wiki's content. While traditional wikis contain only text which computers can neither understand nor evaluate, SMW adds *semantic annotations* that allow a wiki to function as a collaborative database. Semantic MediaWiki was first released in 2005, has dedicated developers, and is in use on hundreds of sites. In addition, a large number of [related extensions](#) have been created that extend the ability to edit, display and browse through the data stored by SMW. Many of these are available to the milWiki users.

*Semantic MediaWiki (SMW) is an extension to [MediaWiki](#) that allows for annotating [semantic data](#) within wiki articles, thus turning a wiki that incorporates the extension into a [semantic wiki](#). Data that has been [encoded](#) can be used in [semantic searches](#), used for aggregation of articles, displayed in formats like [maps](#), [calendars](#) and [graphs](#), and exported to the outside world via formats like [RDF](#) and [CSV](#). [[Wikipedia](#)]*

SMW is currently in use on [over 1,800 active public wikis](#).

### 6.4.2 Properties

Properties are data or categories associated with a wiki article. They can be words, phrases, links, and other specific content within an article. There are a number of properties that are associated with the ASLP. These include:

- Ax artifacts – this property is the name of the learning asset and is a way to specifically address its description article
- Learning asset description properties (as shown in Table 1)

- System-provided properties

Properties are front and center on the learning asset description articles. They provide the data displayed. They also appear at the bottom of the article in the section labeled **Facts**, under **... more about [the learning asset name]**. Figure 8 shows an example. The Properties are on the left, and the value or values associated with them are on the right. The icons next to the values are actually functions. The “eye” icon will show additional information about the value. The “looking glass” icon performs a query and provides a listing of all the learning assets that have that particular value. The square and arrow will open a new tab with a simple [browsing interface](#) for finding entities described by a property and a named value.

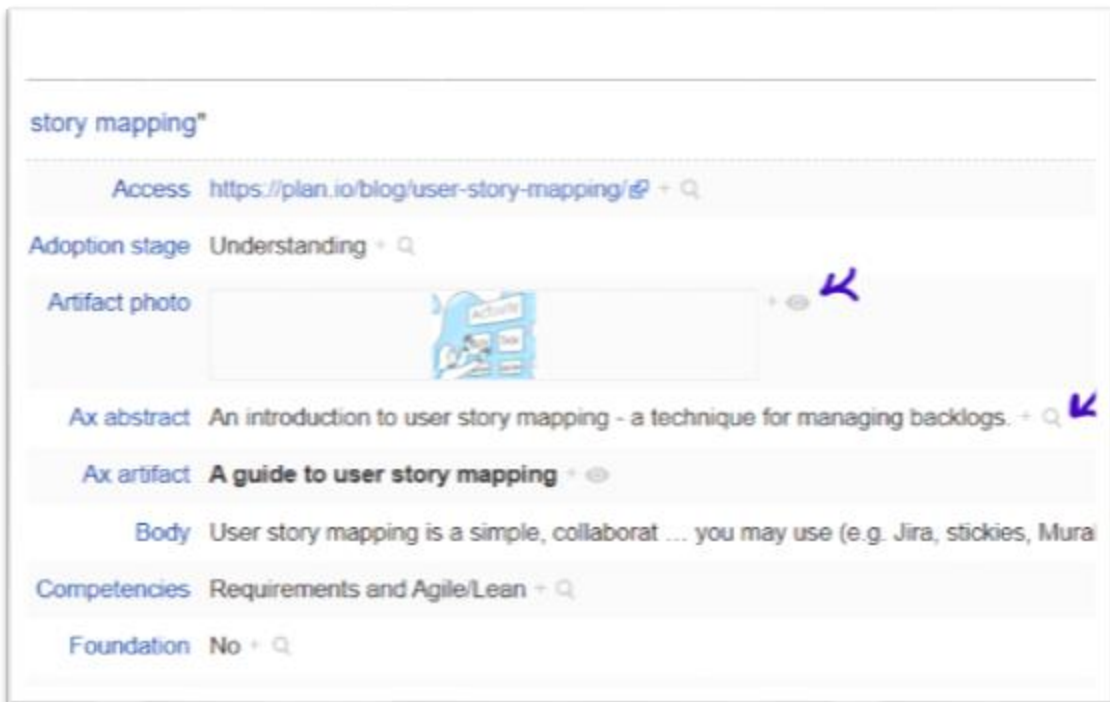


Figure 8. Facts display

You can get the same information from any article in the wiki by clicking on the “Browse properties link in the milWiki sidebar. You can find a listing of all the available Properties currently on the Wiki [here](#).

There are also special properties that the system maintains for each article. These are illustrated in Figure 9. Page information. These properties are generally accessed through Magic Words.

### Basic information

|                                  |                                  |
|----------------------------------|----------------------------------|
| Display title                    |                                  |
| Default sort key                 | A guide to user story mapping    |
| Page length (in bytes)           | 1,288                            |
| Page ID                          | 544350                           |
| Page content language            | en - English                     |
| Page content model               | wikitext (change)                |
| Indexing by robots               | Allowed                          |
| Number of redirects to this page | 0                                |
| Counted as a content page        | Yes                              |
| Number of subpages of this page  | 6 (0 redirects, 6 non-redirects) |

### Page protection

|      |                            |
|------|----------------------------|
| Edit | Allow all users (infinite) |
| Move | Allow all users (infinite) |

### Edit history

|                                                                                            |                                      |
|--------------------------------------------------------------------------------------------|--------------------------------------|
| Page creator                                                                               | Richard g turner16 (talk   contribs) |
| Date of page creation                                                                      | 01 27, March 29, 2020                |
| Latest editor                                                                              | Richard g turner16 (talk   contribs) |
| Date of latest edit                                                                        | 16 38, May 21, 2021                  |
| Total number of edits                                                                      | 11                                   |
| Total number of distinct authors                                                           | 1                                    |
| Recent number of edits (within past 1 year, 364 days, 18 hours, 10 minutes and 48 seconds) | 11                                   |
| Recent number of distinct authors                                                          | 1                                    |

### Page properties

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Magic words (2)            | <ul style="list-style-type: none"> <li>• <a href="#">__NOEDITSECTION__</a></li> <li>• <a href="#">__NOTOC__</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Hidden category (1)        | <ul style="list-style-type: none"> <li>• <a href="#">Category:Ax-training-asset</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Transcluded templates (20) | <ul style="list-style-type: none"> <li>• <a href="#">Template:Ax Page Rating</a> (edit)</li> <li>• <a href="#">Template:Ax-template-training-asset</a> (edit)</li> <li>• <a href="#">Template:Category</a> (view source) (protected)</li> <li>• <a href="#">Template:Category List</a> (edit)</li> <li>• <a href="#">Template:Forms/Category</a> (view source) (protected)</li> <li>• <a href="#">Template:Forms/External Link/Header</a> (edit)</li> <li>• <a href="#">Template:Forms/Footer</a> (view source) (protected)</li> <li>• <a href="#">Template:Full protection</a> (edit)</li> <li>• <a href="#">Template:Infobox</a> (edit)</li> <li>• <a href="#">Template:Infobox/row</a> (edit)</li> <li>• <a href="#">Template:LinkStrip</a> (edit)</li> <li>• <a href="#">Template:Multicol</a> (edit)</li> <li>• <a href="#">Template:Multicol-break</a> (edit)</li> <li>• <a href="#">Template:Multicol-end</a> (edit)</li> <li>• <a href="#">Template:Notitle</a> (edit)</li> <li>• <a href="#">Template:SMVLstTag</a> (edit)</li> <li>• <a href="#">Template:SMWTag</a> (edit)</li> <li>• <a href="#">Template:Semantic List</a> (edit)</li> <li>• <a href="#">Template:Spos</a> (edit)</li> <li>• <a href="#">Portal:AtlasX Agile Self-serve Learning Paths/asset-header2</a> (edit)</li> </ul> |

Figure 9. Page information

### 6.4.3 Queries

Having the data available is only half the challenge. You need to be able to find it and perform simple logical functions. SMW has two methods to access Properties in articles. Both require a Query component to identify the articles, a property to display display. We'll deal with the query part here and the display format in the next section.

**#show** is used to display a single property value from a specific article, and output the results. Its format is: `{{#show: QUERY | ?PROPERTY}}`

**#ask** is used to display many property values from various locations, and output them in a specified format (table, list, etc). Its format is:

```
{{#ask: QUERY
|?PROPERTY
|?PROPERTY
|? (... etc ...)
| LISTING OPTIONS
}}
```

A query is a list of statements which let SMW know where you want to look for data, and what data you want to look for. It is broken up into two parts; the **location**, and the **conditions**.

The **location** is a single statement which shows which articles SMW should look through when searching for applicable data. In the ASLP, the location is generally omitted and all query conditions depend on property values.

The meat of the query is in the specification of **conditions**. Conditions are pairs of properties and values immediately following the location. They specify the specific data an article must contain to be eligible to be displayed in the outputted data. In general, conditions are formatted

```
[[PROPERTY::<operator>VALUE]]
```

The logical operators represent the relationship to be compared (e.g., equal, not equal, greater than, exists). The symbols used for the operators may differ from those you are used to. For example, “equal” is represented by no operator `[[PROPERTY::VALUE]]` and “not equal” by an exclamation point `[[PROPERTY::!VALUE]]`. The most used operators are provided in Table 2. Common operators for conditions For all the operators, see [MilWiki:Tutorial\(SMW\\_Queries\)](#)

Table 2. Common operators for conditions

|                               |                                          |
|-------------------------------|------------------------------------------|
| Equals                        | <code>[[PROPERTY::VALUE]]</code>         |
| Not Equal                     | <code>[[PROPERTY::!VALUE]]</code>        |
| Greater than                  | <code>[[PROPERTY::&gt;VALUE]]</code>     |
| Greater than or Equal         | <code>[[PROPERTY::&gt;&gt;VALUE]]</code> |
| Less than                     | <code>[[PROPERTY::&lt;VALUE]]</code>     |
| Less than or Equal            | <code>[[PROPERTY::&lt;&lt;VALUE]]</code> |
| Any Value                     | <code>[[PROPERTY::+]]</code>             |
| String includes Value         | <code>[[PROPERTY::~~*VALUE*]]</code>     |
| String does not include Value | <code>[[PROPERTY::~!~*VALUE*]]</code>    |

In general, multiple conditions are considered to be connected with AND. OR may be inserted between conditions to represent a union of the conditions. Complex queries can be created, but the milSuite milWiki team and their in depth tutorials (such as the project-based tutorial [Executing a semantic mediawiki effort](#)) should be referred to.

[NOTE: As of this writing, a more capable parser function to enable more elegant complex queries is being prepared for the underlying milWiki system.]

### 6.4.1 Results formats

Queries return a list of articles that meet the conditions described. That information is usually output in some way, although there are some instances where it may represent an intermediate part of a more complex process. Output is determined by parameters that include identifying the property values from the articles returned and the format for display.

The first set of parameters in the #ask method that follow the conditions identify the article properties to actually display. The first condition property is included by default (in the ALSP this is usually `Ax artifact`). Additional values are identified in the form of `?PROPERTY`. The additional parameters may specify specific units of measure or a name for display to be used rather than the property name. There are many Listing Options and Formatting options available. These are discussed in great detail in [MilWiki:Tutorial\(SMW\\_Queries\)](#).

For a simple example of a query, consider the following snippet of scripting code from the article that provides the content for the “Competencies” tab:

| Script code                                                                                                                                                                           | Explanation                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>{#ask:[Ax artifact::+] [[Competencies::Agile/Lean Leadership]] [[Is hidden::!Yes]] [[:+]]</pre>                                                                                  | <p>The first condition ensures that only articles that have a value in the property Ax artifact will be found. The second condition will be true if the article has the property Competencies and it is equal to Agile/Lean Leadership. The third condition ensures that the article is not hidden.</p> |
| <pre> ?Ax artifact =  ?Has level = Level  format=ul  sort = Has level  order=asc  mainlabel=-  class=threecolumns  default=No current assets associated with this competency }}</pre> | <p>Then starts a list of parameters separated by   that describe the information from the article to be displayed and in what format to display them.</p>                                                                                                                                               |

## 6.4.2 Forms

Forms provide a way of standardizing a set of properties and making sure the information is captured in a similar way. In the ASLP they are used primarily for entering the information in learning asset descriptions. A guide to creating forms is here [MilWiki:Tutorial\(SMW\\_Forms\)](#).

## 6.5 Modifying a Learning Path

### 6.5.1 Learning path structure

Learning paths are currently provided for overall coverage (General) and for specific Roles and Events. The general paths are organized by subject matter as might be seen in a curriculum of courses. Specific Role paths include:

- Core learning assets: a set of up to 9 assets that represent the next level of learning for each role above the Foundation assets
- Competency assets: all of the assets associated with the role categorized by competency

Specific Event paths are currently Program Increment Planning and Retrospectives.

### 6.5.2 Revising a role “core” path

Except for Senior Leadership, every role has a “core path” defined to provide a common, ordered set of up to 9 learning assets that together address the core knowledge and skills associated with the role. These build on the Fundamentals information. The Curator guide describes the identification and selection of core path learning assets. The core path is identified in the role’s display article. It is defined in a set of variable definitions at the top of the article as shown in this script:

```
{{#vardefine: rolename| Project or Program Managers}}
<h1>''<span style="color: #f5b041;font-size: 28px;">{{#var:rolename}}
Learning Path</span>''</h1>
These training artifacts have been identified as being useful for
{{#var:rolename}}. A core set of learning assets is provided as an ordered
Learning Path. All {{#var:rolename}}-related learning assets are provided
below the core list, organized by competency.
{{#vardefine: LA-1| Cyber Minute: Getting Your Agile Program Started}}
{{#vardefine: LA-2| Agile in Government: Go insight, not just oversight }}
{{#vardefine: LA-3| Infusing an agile requirements backlog in a large DoD
program}}
{{#vardefine: LA-4| Mission-Based Prioritization: A New Method to Sequence
Features, Capabilities, and Epics}}
{{#vardefine: LA-5| Software Acquisition and Practices (SWAP) Study}}
{{#vardefine: LA-6| Practical Considerations in adopting Agile/Lean in
government settings}}
{{#vardefine: LA-7| Why Do PI Planning?}}
{{#vardefine: LA-8| Summary of The Lean Machine}}
{{#vardefine: LA-9| Improving product development flow}}
```

The right-hand side of the variable definitions is the Ax Artifact name for the learning assets that make up the core. They are listed in a table in the order of those variables (LA1 through LA9). If there are fewer than nine core learning assets, the remaining definitions should be deleted,

[NOTE: We are considering changing the current structure to provide a template to simplify identifying and displaying core learning assets.]

### 6.5.3 Revising the Agile Foundations learning path

Adding or removing a learning asset from the Agile Foundations path is relatively simple. Every asset has a yes/no entry for its membership in the Foundation path. Along with that entry is a radio button list of the possible topics.

The screenshot shows a form with the following fields and options:

- Hidden?:** A dropdown menu with "No" selected.
- Agile Foundation?:** A dropdown menu with "Yes" selected.
- Foundation Topic:** A group of radio buttons:
  - None
  - Agile Culture
  - Intro to DevOps
  - Intro to Agile
  - Intro to Jira-Confluence
  - Introduction to Data Centers-Cloud-Agile

If the asset is in the Foundation path, the fields are “Yes” and one of the topic radio buttons is selected. If it is not, the Foundations value is “No” (or blank) and the “None” radio button is selected. To add or remove the asset from the Foundation path, simply change these two entries.

## 6.6 Adding or Removing a Browse Category

### 6.6.1 Understanding the browse system

The ALSP browse system is a simple way to display learning assets with the same “browse topics.” The system uses the browse topic entries in the asset description article to list learning assets with a particular topic checked. The mechanism is a form of the Navbox template as shown in the script below from [https://www.milsuite.mil/w/index.php?title=AX\\_Browse\\_test](https://www.milsuite.mil/w/index.php?title=AX_Browse_test).

```
<noinclude>{{Portal:AtlasX_Agile_Self-serve_Learning_Paths/asset-
header2}}</noinclude>
{{Navbox
|name = AXbrowse
|title = '''Browse Topics'''
|titlestyle = background-color:#BDBDBD;
|groupstyle = background-color:#DCDCDC;
|group1 = Concepts and Approaches
|list1 = [[AX Browse test/Agile in Government|Agile in Government]] {{dot}}
[[AX Browse test/Agile Adoption Readiness|Agile Adoption Readiness]] {{dot}}
[[AX Browse test/Orbits|Orbits]] {{dot}} [[AX Browse test/Scrum|Scrum]]
{{dot}} [[AX Browse test/Kanban|Kanban]] {{dot}} [[AX Browse test/DevOps-
CMU/SEI-2021-TN-XXX|SOFTWARE ENGINEERING INSTITUTE|CARNEGIE MELLON UNIVERSITY
[Distribution Statement A] Approved for public release and unlimited distribution.
```

```
DevSecOps|DevOps-DevSecOps]] {{dot}} [[AX Browse test/Leadership and Management|Leadership and Management]] {{dot}} [[AX Browse test/Scaled Agile Framework|Scaled Agile Framework]]
```

```
|group2 = Practices  
|list2 = [[AX Browse test/Agile EVM|Agile EVM]]{{dot}} [[AX Browse test/Contracting for Agile|Contracting for Agile]] {{dot}} [[AX Browse test/Agile Measures|Agile Measures]] {{dot}} [[AX Browse test/Agile-Scrum-Learn Practices|Agile-Scrum-Learn Practices]] {{dot}} [[AX Browse test/Enabling Architectures|Enabling Architectures]] {{dot}} [[AX Browse test/Tools|Tools]] {{dot}} [[AX Browse test/Automated Testing|Automated Testing]] {{dot}} [[AX Browse test/Security|Security]]
```

```
|below =  
|state=uncollapsed  
}}
```

More on available templates and their use can be found at [https://www.milsuite.mil/wiki/Mil-Wiki:Tutorial\(Templates\)](https://www.milsuite.mil/wiki/Mil-Wiki:Tutorial(Templates)).

### 6.6.2 Modifying the learning asset schema

It may be necessary to add new information about or change what data is provided in the learning asset database. This is not an easy task, and should be considered carefully before taking any action. If there is to be an addition or modification to the database content, a notice of the change should be provided to the users on the Portal Home tab.

The Learning Asset articles maintain the specific data associated with each learning asset. However, two mechanism articles define the information, how it is entered/edited and displayed to the user:

1. <https://www.milsuite.mil/wiki/Template:Ax-template-training-asset> – This template defines how the learning asset articles are displayed to ASLP users.
2. <https://www.milsuite.mil/w/index.php?title=Form:Ax-template-training-asset&action=edit> – This form provides the data entry and editing layout.

These mechanisms must align with each other. A change in either can have a significant impact on ASLP information. Changes to either should be coordinated with the other, particularly in the naming and definitions of the fields.

Specifically, the form order and spelling of the field options must be exactly the same as used in the template SMWListTag and SMSTag functions.

For example, look at how the Role data is currently defined:

Form:

```
! Training Roles:
```

```
| {{{field|Role|input type=checkboxes|values=Senior Leadership, Project or
Program Managers, Engineers, Contract Managers, Financial Managers,
Toolsmith, Coaches, Testers and Certifiers, Measurement and Analytics
Specialists, Agile Team Facilitator, Agile Team Product Owner}}}
|-
```

Template:

```
|label10 = Training Roles
|data10 = {{SMWListTag|{{{Role|}}}|Training role}}
```

If the two terms in *red* don't match, nothing happens. Adding an additional field to the Form will not be displayed unless a corresponding SMW function is added to the table as defined in the template. Removing or changing the order of the values in the form may cause the database to lose data or misalign it. Tests in the sandbox with test data should be used before accessing the live database with a new form.

## 6.7 Miscellaneous Considerations

### 6.7.1 Conventions

There are a few conventions that milWiki uses. Most don't require any actions, but are informative

- **Links:** Pages usually display links as medium blue. If you have followed the link, it turns darker blue. If the link is to an undefined anchor or missing article, the link is red. Clicking on a red link provides an opportunity to create the article (or check your spelling).
- **Naming:** Names (other than URLs) are always case-sensitive. In general, names of functions, templates and forms have initial caps; variables are not capitalized. Page names are case-sensitive, can be in any format. The system will at occasionally replace spaces with underscores, but both forms are recognized as equivalent. Names of system-defined Magic Words are usually all caps and often have underscores to begin and end.
- **Extensions:** milWiki, while based on SMW, provides extension capabilities official beyond the pure mediaWiki deployments. You can find information about the extensions at [milWiki Extensions](#).

### 6.7.2 Intellectual Property

In general, using links to the WWW is not an issue with respect to intellectual property. As long as the material remains associated with its creator, it is considered available to the public. In terms of materials uploaded to the wiki, there are standing considerations for classification (as shown in the "Highest Possible Sensitivity of Information is CONTROLLED UNCLASSIFIED INFORMATION" banner) and care should be taken not to include information marked "proprietary" without permission from the associated author or organization.

### **6.7.3 Protecting and Curating Content**

Because ASLP is a database of self-service training assets, it is important for the material to be continuously monitored and curated. In general, milWiki assumes the good will of all authors; however, there may be times when changes are made that are not supportive of the aims of the SSC, AtlasX and ARC, are incorrect, unclear, or have other defects that need to be addressed.

The Curator is responsible for evaluating changes and the curation process is being documented in a Curation Guide. The nature of a wiki is to be inclusive and capture experiences and knowledge from a wide range of sources, so evaluations of changes should be timely, fair, and a rationale provided to the user who made the change in question for editing or removing their changes. Collaboration between technical administration and curation is important; technical administration supports curation by helping identify changes made to ASLP content and by implementing new content and changes identified by the curator.

---

## Appendix A—Technical Administration Resources

**[MilWiki](https://www.milsuite.mil/wiki/MilWiki)** – The online introduction to milWiki with the complete rationale for the development and its history. <https://www.milsuite.mil/wiki/MilWiki>

**[milWiki Tutorial](https://www.milsuite.mil/wiki/milWiki:Tutorial)** – an all-encompassing tutorial that is quite easy to follow. <https://www.milsuite.mil/wiki/milWiki:Tutorial>

**[milWiki Library](https://www.milsuite.mil/university/milsuite-lib/capability/milwiki)** – a milBook collection of articles related to milWiki use. <https://www.milsuite.mil/university/milsuite-lib/capability/milwiki>

**[Support Forum Semantic Project Guidance](https://www.milsuite.mil/book/community/milsuite/milwiki/articles/semantic-projectmil)** – a set of blogs and videos that goes through the concept, benefits and then step-by-step of creating a Semantic MediaWiki project. This is a more advanced tutorial. <https://www.milsuite.mil/book/community/milsuite/milwiki/articles/semantic-projectmil>

**[milWiki Support Forum](https://www.milsuite.mil/book/community/milsuite/milwiki)** – a collection of resources and information and a community of milWiki users moderated by the milSuite staff. <https://www.milsuite.mil/book/community/milsuite/milwiki>

**[Semantic MediaWiki](https://www.semantic-mediawiki.org/wiki/Semantic_MediaWiki)** – As an open source platform, there is an international Semantic MediaWiki community of users and developers that holds conferences and capabilities. [https://www.semantic-mediawiki.org/wiki/Semantic\\_MediaWiki](https://www.semantic-mediawiki.org/wiki/Semantic_MediaWiki)

**[milWiki Extensions](https://www.milsuite.mil/wiki/MilWiki:Extensions)** – There are milWiki-specific extensions to SMW that may change some of the content described in the SMW website, and there may be differences in the actual features available in milWiki. The best resource for questions and information about those differences is the milWiki Support Forum. However, this article provides a list of the extensions to the semantic media wiki that have been added by milSuite developers. <https://www.milsuite.mil/wiki/MilWiki:Extensions>

**[All milWiki articles](#)** – The best reference is the milWiki site in its totality. Most articles are editable, some that are heavily used have specific warnings and controls, but you can nearly always find something that is similar to what you want to create. Obviously changes need to be monitored so as to not cause user issues, and developing new capabilities should be a well-controlled activity, but the evolution and improvement of the ASLP is expected and valued.

| <b>REPORT DOCUMENTATION PAGE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                             |                                                                 | <i>Form Approved<br/>OMB No. 0704-0188</i> |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------|--|
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