

OFFICE OF
INFORMATION
AND TECHNOLOGY

SWF Utilities



Utility Owner Guide v 1.0

February 7, 2025

FOR INTERNAL USE ONLY

DRAFT

<i>Utility Owner Guide v 1.0</i>	1
<i>Purpose</i>	5
<i>Understanding Utilities</i>	6
SWF Utilities History	8
Utility Categories	8
Utility Owners	10
Tiers	10
Basic Utility.....	10
Advanced Utility.....	10
Comprehensive Utility	11
Understanding Tiers	11
Criteria	14
<i>Key Goals, Objectives, and Tactics</i>	16
<i>Getting Started as a Utility Owner</i>	17
Online Utilities Starter Guide	17
Utility Owner Training	17
Adding a Utility	17
Utility Documentation	17
Providing Documentation.....	17
Linking to Existing Documentation	18
Documentation Templates	18
Support	18
Support Model Documentation	18
Existing Support.....	19
Collecting Metrics	19
<i>Criteria for Basic/Advanced/Comprehensive Tiers</i>	20
Utility Criteria Definitions	20
<i>Utility Tiers and Criteria Matrix</i>	23
Interpreting the Criteria	26
Consider the End User	27
Criteria with Multiple Requirements	27

No Requirements 28

Utility Working Group..... 30

DRAFT

DOCUMENT VERSION HISTORY

Version	Updated By	Description of Changes
0.9	M. Kovnesky	Initial Draft
1.0	M. Kovnesky	Final draft sent to review
1.0	Utility Working Group	Implemented input from Steve, Sam, and E1 Comms team; final document will live on CODE VA. Applied new OIT template

Overview

The Software Factory Model (SWF) Utilities are foundational to VA's approach to software development and delivery, embodying the VA Way of providing technology solutions that are better, faster, and safer, and providing developer teams with common, expert tools to accomplish their tasks.

Developers across the VA organization will have full access to SWF Utilities, which are categorized by the type of technology supported by the Utility, i.e., the Secrets Management category will contain utilities that assist developers that need secrets management tools within their project.

Utilities are also placed in one of three maturity tiers: Basic, Advanced, and Comprehensive. Maturity is evaluated on the level of support, documentation, and alignment to the VA Way. Criteria for utilities is explained in the [Understanding Utilities](#) section of this guide.

The Document Version History table is updated each time changes are made to this guide.

Purpose

This document explains Utility Owner responsibilities and expectations. f

Developers and engineers within the VA who accept the role of Utility Owner become the point of contact for that utility and must provide a basic level of support and documentation for that utility.

The Utility Owner serves as the VA expert for their given utility as well as the centralized, primary point of contact for developers and teams and other key stakeholders such as Product Line Managers (PLMs) and Office of Information and Technology (OIT) Executive Leadership. They provide structure and support within the shared, centrally available Utility repository.

While detailed technical documentation and how-to guides are hosted on CODE VA, this document provides additional context for the Utilities effort. It expands on the major

aspects of Utilities concepts. The CODE VA site, along with this document, provides a complete set of answers and guidance for Utility Owners.

Information that is frequently updated or modified is hosted only at CODE VA and linked to from this document or from within the CODE VA site itself.

Utilities are shared, selected technologies that are categorized into technology areas that contribute to one or more phases of the software development process, such as Planning, Development, and Testing. Utilities help development teams deliver exceptional technology experiences for Veterans via the VA Way: *Better, Faster, and Safer*.

This plan details the expectations and responsibilities of Utility Owners assigned to one or more SWF Utilities. Utility Owners play an important role by encouraging the adoption of their utility as a select tool available for development teams, and by acting as a champion for the Software Factory Model and CODE VA.

Understanding Utilities

SWF Utilities provide essential and common IT capabilities for application teams. They provide clearly articulated services with a standardized unit of measure at a reasonable cost and are easily accessible to the software factories. SWF Utilities are standard, cross-platform, cross-portfolio tools that promote enterprise standards and reuse for VA developers' application teams. Utilities:

Provide an essential and common feature to teams in any factory at a lower cost than building or acquiring their own unique solution.

Provide a streamlined experience to customers, i.e., prioritizing self-service, automated engagement.

Utilities are centrally documented and discoverable but are not owned by the SWF Utilities initiative.

Utilities must meet a basic set of criteria to be listed on the CODE VA site, where they are sorted into descriptive categories. Any VA stakeholder can suggest adding a utility;

the process for this is listed on the site. The Utility Working Group will work with the stakeholders to determine whether the utility meets the aforementioned criteria and also to determine the best category under which to list it.

Categories can be added to the list if a proper and descriptive category does not yet exist. There is no limit to the number of categories, as there may be as many categories as there are types of tools and resources involved in software and application development.

Categories may be broad and inclusive (Planning, Design, Monitoring) or more specific and niche (Geospatial Intelligence Mapping/Analysis).

Utilities are further sorted into a tier structure of **Basic**, **Advanced**, and **Comprehensive** tiers.

The tier levels of Basic, Advanced, and Comprehensive do not refer to the functionality, price, or type of technology; instead, the tiers reflect the maturity of the utility in terms of available documentation, support, and adherence to a set of criteria. The criteria set was developed alongside the tier structure and is designed to ensure that CODE VA utilities are secure, centralized, and platform-agnostic, to name a few requirements a utility must meet.

Utility owners use the criteria to guide their utilities from the Basic tier to the Advanced, then the Comprehensive tier. Each tier builds upon the last, serving as a checklist to improve the utility. Improved utilities result in an improved developer experience.

The result of this process is a Gold Standard, best-of-breed collection of resources, tools, templates, and documentation ready and available for VA engineers, developers, and delivery teams.

SWF Utilities History

The list of available and approved development tools at VA continued to grow as technology changed and expanded through time.

Disparate development teams and various projects continued to add resources to the list. Developers and engineers found it a challenge to wade through the available assets. When these teams were unable to find the right tool, they brought their own or built their own, then worked to get their new software onto the “approved” list, which continued to expand.

Eventually, the list of approved developer tools numbered well over ten thousand.

Technical experts and experienced engineers voiced their frustrations. Many teams held many discussions over the years, and the results were always the same: a critical, pressing need to standardize and improve developer resources.

The SWF Utilities initiative was implemented in 2024 on the CODE VA platform to provide developers and engineers a place to find the best tools and resources available. Work continues to refine the processes and available utilities and includes plans to develop a standard set of technical terminology, ensure self-service of fully funded software, and more.

As part of the Utilities effort, hundreds of existing, approved technologies were reviewed and whittled down to a list of the very best tools available, with more being added every month.

Utility Categories

The SWF Utilities List is a canonical list that currently consists of 14 categories*, all of which have at least one entry. This list will be updated and added to as needed. These Utilities ensure that daily development needs are met. Additionally, utilities reduce complexity and diminish the accumulation of technical debt.

The current utility categories are as follows:

Category	Description
Certificate Management	Provision and manage TLS/SSL certificates
Communications	Facilitate external communications to provide updates, notifications, or other information to Veterans, their families, or other VA customers
Dashboarding	Visualize application or system data in a consumable fashion
Design	Create consistent, accessible user interfaces
Event Management	Provide a common tool for incorporating event streaming into products
Geospatial and Mapping Analysis	Location-based tools and software to support mapping
Identity and Access Management (IAM)	Identify and manage access controls to authenticate users and grant or deny access rights to data and applications
IT Service Management	Facilitate incident, configuration, and change management across VA
Monitoring	Gather data on real-time application or system health
Planning	Support planning and workflow for project teams; track progress metrics
Secrets Management	Store sensitive configuration and credentials safely
Source Code Management	Store source code in a securely managed, centralized repository
Static Application Security Testing (SAST)	Analyze computer or application code without executing

**As of February 2025; see the CODE VA site for current information*

Utility Owners

Utility Owners are stakeholders throughout the VA who are responsible for acting as a point of contact and CODE VA utility page manager for a given utility. Each utility listed at CODE VA is required to have an assigned utility owner (distributed ownership). Utility Owners also guide the maturation of a utility over time, by ensuring basic criteria are met.

Every utility must meet a set of initial criteria to appear on the CODE VA site. Meeting the minimum criteria places a utility in a Basic tier.

Three tier levels, Basic, Advanced, and Comprehensive, correspond to additional criteria that further describe each utility. The tier levels exist to illustrate additional information about the utility which can assist a development team in practice. Additional information such as configuration manuals or diagrams, user support via e-mail and chat, and an automated intake process for the utility will propel the utility into a higher tier.

Utility Owners can upgrade their utilities to a higher tier by ensuring that the utility meets the right criteria for that tier. There are fourteen criteria designed to ensure that as utilities mature over time, they remain useable, secure, supported, and meet attributes of the VA Way.

Tiers

Basic Utility

A utility in the Basic tier offers basic documentation, is secure, and has minimal support available. A basic utility needs to meet only four of the fourteen criteria, including basic security and compliance, minimal integration capability, and cost savings.

Advanced Utility

A utility reaches the Advanced tier when they meet eight of the fourteen criteria, including upgrades to the initial four criteria met in the Basic tier. Advanced utilities offer some aspect of self-service. They are highly-available (HA), support current integration protocols, and include cost planning and issue remediation support.

Comprehensive Utility

Utilities in the Comprehensive tier meet aspects of all fourteen criteria, including upgrades to the eight criteria in the Advanced tier.

Comprehensive utilities are managed at the highest level; documentation and support are continuously updated, short-term and long-term planning is involved in terms of cost, support, disaster recovery, and scalability.

At this level, the utility may have automated features and be managed remotely. They may have documented integration capabilities involving machine learning and artificial intelligence.

Understanding Tiers

The **presence** of a utility at CODE VA indicates that it is a vetted, approved resource that is immediately available. The use of these utilities is highly encouraged – regardless of tier level.

The VA does not endorse or place a preference on any tool, utility or other software resource.

The Basic, Advanced, and Comprehensive tiers describe the maturity, availability of associated resources (support and documentation), and adherence to selected criteria for any given utility listed on CODE VA.

The tiers **do not indicate a selection preference** or “favored development tool.”

The goal for Utility Owners is to bring their utilities to the Comprehensive tier over time, by improving their planning, support, documentation, and processes, and meeting any other applicable criteria.

IMPORTANT:

There are endless types of software with different purposes and formats. Thus, there are numerous utility categories with multiple types and builds of utilities within.

To apply a standard evaluation and rating process to all utilities, Utility Owners must understand that:

All listed criteria must be **considered** when evaluating a utility.

A listed criterion ***may or may not apply*** to a given utility.

If a criterion cannot be applied to a utility, the criterion is ***removed***, for that utility.

The following scenarios may help illustrate this concept.

Scenario 1

Q: "Why is Utility 'Alpha' considered to be a Comprehensive utility? It only does one small thing."

A: In some cases, the simpler a utility is, the easier it will be for it to reach the Comprehensive level.

A simple tool may do one job; let's say Utility 'Alpha' can search through a set of code, seeking and then highlighting comments within the code. It doesn't connect to the network or internet; it doesn't require updates. Therefore, this simple utility is exempt from criteria such as "Integration" and "Scalability."

Though it is a simple tool, the Utility Owner provided the documentation and other requirements necessary. If all applicable criteria are met, this Utility may rocket to the Comprehensive tier simply because it is the most "comprehensive" tool in its category by meeting all the requirements that it could. The purpose of the utility may be "basic," but its tier ranking meets the Comprehensive expectations.

Scenario 2

Q: “My utility is ‘future-forward’ and has a ton of features. It even has an integration with OpenAI. Why is it so hard to move to the Comprehensive level?”

A: Great power requires great responsibility! It may take longer for a Utility Owner to take a complex utility to the Comprehensive level because there is more to document, more to consider and understand in terms of configuration, security, integration, and other applicable criteria.

Utility owners should strive to bring their utilities to the highest level possible. The Utility Working Group may be able to assist you with determining whether you have met the criteria for a tier.

DRAFT

Objective	Activities	Tactics
Technology Ownership Perform the basic duties of a Software Factory Model Utility Owner.	• Provide clear and concise developer-focused documentation for the utility. • Work to elevate your utility to the highest available tier, from Basic, to Advanced, to Comprehensive. • Serve as a Subject Matter Expert (SME) and a general point of contact (POC), offering guidance, support, and answers about the utility. • Represent the technology at Utility Owner meetings and trainings. • Ensure that utility stakeholders are equipped to use the tool(s) effectively.	• Documentation Templates: Use document templates with clear formatting and complete sections. Remove extraneous wording. Provide clean and specific images and/or steps to follow. • Clarify Availability: Ensure that your Utility Page includes details on what developers can expect from you in terms of availability, support, training, and communication. • Emphasize Self-Service: Provide the means for developers to use the utility without your hands-on guidance; recorded trainings, frequently asked questions, excellent documentation, offer pre-scheduled office hours. • Attend Utility Events: RSVP to Utility Working Group kickoff sessions, quarterly meetings, or ad-hoc meetings. • Keep Current: Set reminders to periodically refresh your utility knowledge. Read version/update notes.
Active Engagement Participate in the VA Developer Community as a Utility Owner.	• Regular communication with fellow Utility Owners in utility-focused meetings or other events. • Timely participation in threads, forums, Teams conversations, etc. regarding the utility. • Develop team processes that ensure utility resources remain up-to-date, relevant, and aligned with VA's evolving needs. • Train and mentor a new utility owner prior to leaving the role to protect intellectual capital and provide	• Attend Utility Events: RSVP to Utility Working Group kickoff sessions, quarterly meetings, or ad-hoc meetings. • Represent Utilities: Seek opportunities to show and talk about your Utility during Tech Tuesdays, in newsletters, and other OIT events to discuss its practical application or demonstrate its use. • Training Sessions: Offer training sessions or workshops focused on sharing knowledge about the utility. • Team Participation: Delegate the ownership and utility responsibilities throughout your team. Identify and train a deputy Utility Owner well before your term ends. Allow qualified team members to help "carry the torch" for the utility. • Site Participation: Encourage utility users and team members to participate on forums and

Objective	Activities	Tactics
	consistency to development teams.	comment threads where utility discussion occurs.
Champion Best Practices Set the example for new and junior developers by following tried and true repeatable practices	- Communicate complete information about a utility to the developer audience via documentation and training material, if applicable. - Set the example for developers by using disciplined processes, such as providing regular updates of utility code/documentation, using standard naming conventions, and recording training sessions for future information sharing.	Adoption Guidelines: Create and distribute clear guidelines on how to adopt and integrate your utility into a project. Onboarding Materials: Include information about your utility into onboarding materials for new developers and teams, so they are immediately aware of the technology. Peer-Led Sessions: Experienced and senior-level Utility Owners should conduct periodic "brown bag sessions" or "lunch and learns" to share best practices and discuss industry information about the utility and alternative technologies. It Takes a Village: Take every opportunity to reinforce intellectual capital, best practices, and VA Way attributes with developers and teams to foster and mature the VA technology culture and development community. Feedback Loops: Participate in regular feedback mechanisms (e.g., surveys, pools, ad-hoc e-mails), communicate your experiences with Utilities, point out areas for improvement, and ensure the Utility Working Group is aware of needs and gaps in the process. Positive Feedback: Offer positive feedback to developers and teams who are implementing your utility and/or training with your utility.
Continuous Improvement - Contribute to Utility processes via feedback; report improvements to efficiency; work to	- Work with Utility Owner stakeholders to understand current frustrations and future development needs. - Regularly report needs and frustrations and	Quarterly Meetings: Attend quarterly meetings; bring detailed usage reports, feedback, and other pertinent information to the discussion. Process Reviews: Periodically plan for and review your utility, documentation, and processes – seek to streamline and improve

Objective	Activities	Tactics
foster teamwork and future success.	methods to improve them to the Utility Working Group who will integrate the information into future Utility goals and plans. Identify new utility and utility category candidates when the opportunity arises.	based on collected feedback and current development needs. User Feedback: Seek and collect feedback from the users of your utility. Feedback and Improvement Cycles: Create structured feedback cycles where Utility Owners can provide input on the performance of their Utilities and suggest enhancements or new features. - Note potential utilities in your day-to-day work; if there is no applicable category, propose a new one.

Criteria

Criteria are designed with the VA Way attributes in mind. As utilities move from Basic to Advanced and from Advanced to Comprehensive, more of the VA Way attributes will be encompassed by simply meeting the requirements. There are fourteen (14) criteria that comprise the SWF Utility Tier Matrix. Each criterion has requirements that build upon themselves in the next tier level.

Key Goals, Objectives, and Tactics

This guide outlines the role of a Utility Owner with one or more technologies listed as a utility on the CODE VA portal. This strategy is built on **four key goals**: Increase Awareness, Demonstrate Value, Encourage Adoption, and Continuous Engagement. Each goal is essential to promoting the SWF Utilities within VA OIT and ensuring effective integration across all relevant projects.

The strategic objectives aim to enhance the understanding, adoption, and ongoing use of certified SWF Utilities, driving better outcomes for Veterans and aligning with The VA Way principles. The following table outlines the specific goals and the targeted activities to guide the responsibilities of a Utility Owner and associated communication efforts.

Getting Started as a Utility Owner

Online Utilities Starter Guide

The online [Utilities Starter Guide](#) aims to provide a comprehensive overview of how to document Utilities that VA developers and product teams can leverage as part of the OIT Software Factory (SWF). It is the home page for SWF Utilities and lists all utilities by category, serving as a one-stop shop for VA developers.

Utility Owner Training

The recommended training for Utility Owner resources can be found here: [Training Resources](#).

Adding a Utility

As technologies and developer needs evolve and change, it is expected that utilities will be added or modified over time. Any OIT stakeholder can suggest a utility to be included on the CODE VA platform.

The process to add a new utility can be found here: [Adding a New Utility](#).

The Utility Working group will work to determine the proper category in which to place a new utility or create a new category if required.

Utility Documentation

Providing Documentation

If a utility does not have existing documentation, the Utility Owner must provide adequate documentation on their utility page hosted at CODE VA. Documentation must be sufficient for a developer to understand how to find and install the utility. This is sufficient for the documentation criteria to meet the Basic tier.

Complexities such as configuring and integrating the utility should be documented. Helpful diagrams or step-by-step tutorial-style training may suffice.

Web documentation for SWF Utilities is written using Markdown language and stored in GitHub as 'Docs as Code.'

Utility Owners will need access to GitHub and a basic understanding of [Markdown syntax](#) to create and maintain their documentation for CODE VA. Each utility will be assigned a repository on GitHub, with edit access granted to the Utility Owner(s) and the Utility Working Group.

Documentation updates can be made by the Utility Owner on-demand whenever there may be changes/additions to their documentation.

Linking to Existing Documentation

Many utilities are third-party software that already have a complete set of documentation that exists at the software manufacturer's website. If such documentation exists, the Utility Owner should not "re-invent the wheel."

It is not recommended to "copy and paste" or otherwise duplicate the information in Markdown language on the utility page. This action introduces the risk of missing crucial updates from the original website.

A simple paragraph explaining the utility and its purpose at VA with a working URL pointing to the documentation will meet the criteria for the utility. This method ensures that no documentation or software updates are missed.

The Utility Owner should periodically check the URL(s) to ensure there are no broken links.

Documentation Templates

Templates for documentation can be found here: [Structuring Documentation](#).

Support

Support Model Documentation

A utility owner is the point of contact for their utility across the VA development community. Support is required at the Basic tier for all utilities, with increasing requirements for support at the Advanced and Comprehensive tiers.

The support model must be documented on the utility's page within CODE VA.

The support documentation should describe the following, if applicable to the utility:

- Service Level Agreement (SLA)
- Release Cycle
 - How often is the utility updated?
 - What role does the end user play in updates?
- Maintenance Schedule
 - Planned Outages
 - Patches and hotfixes
- Notifications
 - How are users notified if there's an update, outage, or security issue?
- Monitoring tool(s) used by the utility.
- How to report and resolve a defect
- Access requests
- Any other relevant support information

The Utility Working Group can assist Utility Owners with questions and clarifications about providing a support model.

Existing Support

Third-party utilities often offer some level of support on their websites. A utility owner should provide URLs for support and training on their CODE VA utility pages.

Collecting Metrics

Utility Owners are responsible for identifying and reporting baseline usage data for each utility they represent.

Usage data will be requested on a regular basis to feed a utility usage dashboard that will be made available for review on the CODE VA site.

Depending on the specifics of each utility, usage metrics may be set up based on licensing/usage by individuals or be based on how many VA-developed systems are using the utility.

Details and methods regarding metrics and data is found here:

TBD

Criteria for Basic/Advanced/Comprehensive Tiers

This section introduces and describes the purpose of each of the criteria and describes the requirements for a utility to meet the Basic, Advanced, or Comprehensive tier within that criterion. When enough of the Advanced criteria are met for a utility, that utility will be displayed as an Advanced utility within CODE VA. When the Advanced Utility meets enough criteria in the Comprehensive tier level, the utility will be displayed as a Comprehensive utility.

Utility Owners should work toward ensuring their utility is on track to eventually become a Comprehensive utility.

IMPORTANT:

When evaluating a utility, remember that the criteria are designed to cover as many resources as possible under a single, usable construct.

If a utility owner cannot relate a criterion to their utility, it is quite possible that the criterion can be waived for the utility. Utility Owners should contact the Utility Working Group with questions and assistance in determining whether a criterion applies to their utility, or if it can be waived.

Utility Criteria Definitions

The Utility Criteria are defined below followed by the Utility Tiers and Criteria Matrix.

- **Cost Source:** Cost Source refers to the method used to pay for the license, usage, or other costs of the utility. Ideally, utilities will be available for use by end-users with no additional cost to those users. Regardless of whether the utility is free and open source, or is covered by an enterprise license, the cost source should be noted.
- **Integration:** The Integration criterion applies to any utility that contains components that can be integrated with other software/code. The criteria ensure that if any type of integration capability is present, documentation exists for end-users. At the Comprehensive tier, the documentation exists, conforms to CODE VA standards, and includes a plan for reviewing and updating the documentation

on a regular basis.

- **Support Model:** The Support Model criterion exists to ensure that developers and other end users of the utility have assistance with installation, usage, and configuration. Basic support is designed at the utility owner's discretion, ability, and availability. At the Advanced and Comprehensive levels, a support model must have issue remediation and an intake process.
- **Security:** Security is critical for all utilities, systems, environments, and networks within the VA. The Security criteria are designed to ensure that all VA requirements and guidelines are met at the highest level.
- **Reliability:** The Reliability criterion are introduced at the Advanced tier; the purpose of this mandate is to ensure that end users have continual access to the utility. At the advanced tier, the utility must be part of a disaster recovery plan.
- **Cross-Platform:** The Cross-Platform criterion applies to the Advanced tier. This criterion is designed to ensure that the use of a given utility does not tie the end user, project, team, or organization to any particular platform or operating system. Cross-platform utilities should work for the vast majority of end users, with the ability to integrate with more than one available method.
- **Future-Forward:** Future-forward reflects the VA attributes that guide the organization to cutting-edge technology and attract top-level talent. It ensures VA systems continue to progress and operate with modern, safe and secure technologies to support the veteran to the highest possible degree.
- **Self-Service:** Self-service refers to a utility that offers some level of automation with onboarding and usage for the developers and engineers that use it. The more self-service a utility is, the higher it will progress in this criterion.
- **Duplication of Function:** The Duplication of Function criterion exists as a check to consider whether a given utility is necessary to add to the CODE VA site. If a utility is introduced that has functionality that is already available in another existing utility, there needs to be justification to add a second utility. The final

determination of whether to add a utility with duplicate functionality lies with the Utility Working Group. The criteria ensure that the list of approved software does not grow into unmanageable proportions; a lesson that has already been learned.

- **Cost Effectiveness:** This criterion exists at the Comprehensive tier. At this stage, the total costs of the utility are fully understood, measured, and reviewed. This criterion is tangentially related to Cost Source, in terms of providing a transparent cost model and being able to predict future expenditures related to the utility.
- **Configuration Management:** This criterion is at the Comprehensive tier and encourages the use of utilities that can be managed in a remote and automated fashion through its own technology or through specific management software. While it may not apply to every utility, Configuration Management criteria are designed to support a VA workforce to remain efficient and productive no matter where they are located.
- **Necessity:** While simple, utilities are evaluated against the Necessity criterion to ensure that each resource is needed at the VA. It prevents unnecessary work and expenditure of supporting a tool that is not used. Necessity is designed to maintain the number of tools and resources at a manageable and reasonable level, while reducing unnecessary resources in the VA software inventory.
- **Proprietary Lock-In:** This criterion applies to the Comprehensive tier and ensures that approved utilities will not hold the VA delivery teams to any tools or software via contracts, unfair and unnecessary fees designed to maximize third-party profits, or other restrictions typically found in the fine print. This criterion is designed to reduce waste, save money, and allow developers and delivery teams to choose an alternative when needed, rather than continue using a lesser or defective resource simply because "they have to" contractually. Utilities that are tied to such contracts or vendor lock-in will not advance to the Comprehensive tier.
- **Scalability:** This criterion is meant to ensure that scalability – expanding the use of a utility in terms of licensing, end user numbers, or digital footprint – is considered when evaluating a utility. If a utility owner is unsure whether their

utility is scalable, they can work with the Utility Working Group to determine if this criterion applies.

Utility Tiers and Criteria Matrix

The Utility Tiers and Criteria Matrix displays the criteria for Basic, Advanced, and Comprehensive tiers laid out in a grid. The fourteen criteria are displayed in the first column; each row lists the criteria needed for a utility to reach the Basic, Advanced, and Comprehensive tier levels.

Criteria	Basic	Advanced	Comprehensive
Cost Source	Provides capability at a lower cost than customized solutions or in-house tools	Has a cost model that allows teams to plan for the initial setup as well as recurring and maintenance costs.	Provides capability at a lower cost than customized solutions or in-house tools AND Has a transparent cost model that allows teams to plan for the initial setup as well as recurring and maintenance costs.
Integration	Integration requires minimal configuration or customization OR Does not have integration capabilities	Documentation for integration exists for developers; if it is not based on code.va standards, a plan is in place to update the documentation to follow code.va standards OR Does not have integration capabilities	[Clear and detailed documentation for integration exists, follows code.va standards AND A plan is in place to ensure that the documentation remains updated as the technology matures/updates.] OR Does not have integration capabilities
Support Model	Some level of support for the technology exists.	A support model is in place, including issue remediation.	A strong support model exists, including an intake process issue remediation. AND A long term plan for ongoing support operations exists.

Criteria	Basic	Advanced	Comprehensive
Security	Meets basic security and compliance requirements per VA guidelines OR Functions in a way that it cannot introduce security or compliance risks.	Has defined controls in place to meet security/compliance requirements. OR Functions in a way that it cannot introduce security or compliance risks.	The defined security and compliance controls include a plan to review and maintain security/compliance throughout the life of the technology OR Functions in a way that it cannot introduce security or compliance risks.
Reliability	No Requirements	Is Highly-Available (HA), 99.5% uptime, with the ability to withstand minor/moderate outages.	Is Highly-Available (HA), 99.9% uptime, with the ability to withstand the vast majority of outages; AND Has a detailed disaster recovery plan, or is part of a larger disaster recovery plan AND Is fault-tolerant, if architecture permits
Cross-Platform	No Requirements	Supports current integration methods (e.g. API REST/SOAP, OAuth, OpenID) where applicable	Is not restricted to a single platform, software stack (e.g. LAMP, MEAN), or operating system (iOS, UNIX, Windows); is cross-platform
Future-Forward	No Requirements	The utility represents the latest 'cutting-edge' technology that is available for its category AND Includes or is compatible with Artificial Intelligence (AI) and machine learning capabilities, if applicable	The utility represents the latest 'cutting-edge' technology that is available for its category AND Includes or is compatible with Artificial Intelligence (AI) and machine learning capabilities, if applicable

Criteria	Basic	Advanced	Comprehensive
Self-Service	No Requirements	Online/automated registration allows developers/teams to onboard; processing is completed manually on the back end by the UWG.	Online/automated registration allows developers/teams to onboard; processing is automated on the back end.
Duplication of Function	No Requirements	No Requirements	Offers differentiators when compared to other utilities in the same category; utilities that offer identical functionality should be avoided OR Justification to propose a utility with similar functionality as an existing SWF utility has been reviewed and approved by the UWG
Cost Effectiveness	No Requirements	No Requirements	The costs of the utility are fully understood; the total cost of ownership per system can be determined for use in metrics and comparison purposes.
Configuration Management	No Requirements	No Requirements	Automated environment management to configure and manage the technology is supported OR Can be configured/managed remotely through native processes or through other approved environment management software
Necessity	No Requirements	No Requirements	Provides a solution to common use cases and/or enterprise service needs that development teams can use in their work.
Proprietary Lock-In	No Requirements	No Requirements	Not subject to vendor lock-in; there are no contractual obligations, licensing details, early-out fees, or any other restrictions that would prevent developers/teams from using an alternative technology
Scalability	No Requirements	No Requirements	The utility is capable of scaling based on usage and VA needs.

Interpreting the Criteria

Common sense must be applied when reviewing a utility against the criteria. Elements of the criteria may not apply to all utilities; if a criteria or part of a criteria does not apply to the utility under review, disregard it. For example, the Integration criteria can only apply to a utility that has integration capability.

Integration, Basic Tier: If the utility is integrated, it requires minimal customization or configuration.

OR

The utility does not have integration capabilities.

A Utility Owner of a utility that does not have integration capabilities can disregard the Integration criteria. Because the criteria do not apply in this case, the utility meets the Comprehensive Tier for Integration by default.

INTEGRATION CRITERIA

Basic Tier	Advanced Tier	Preferred Tier
Integration requires minimal configuration or customization OR Does not have integration capabilities	Documentation for integration exists for developers; if it is not based on code.va standards, a plan is in place to update the documentation to follow code.va standards OR Does not have integration capabilities	[Clear and detailed documentation for integration exists, follows code.va standards AND A plan is in place to ensure that the documentation remains updated as the technology matures/updates.] OR Does not have integration capabilities

Utilities that do not integrate meet the Integration Comprehensive tier by default.

Some criteria will not apply to a utility at all, such as Future Forward or Duplication of Function.

Criteria	Basic Tier	Advanced Tier	Preferred Tier
Future-Forward	No requirements	Can receive online updates, and plans exist to ensure the technology remains up to date. OR Is not cloud based/does not require online updating.	The utility represents the latest 'cutting-edge' technology that is available for its category AND Includes or is compatible with Artificial Intelligence (AI) and machine learning capabilities, if applicable
Duplication of Function	No requirements	No requirements	Offers differentiators when compared to other utilities in the same category; utilities that offer identical functionality should be avoided OR Justification to propose a utility with similar functionality as an existing SWF utility has been reviewed and approved by the UWG

If a criterion does not seem to make sense when evaluating a utility, there is a chance that it is because the criteria do not apply to that utility. For example, consider a simple utility, a free spellchecker that undergoes a one-time client install.

When evaluating the Future-Forward criteria, none of the requirements in the Advanced or Comprehensive tiers seem to apply to our simple spell-checking utility. This entire criterion does not apply and, therefore, is ignored when considering the tier rating of the utility. In other words, it's automatically at the "Comprehensive" level for Future-Forward criteria.

It is easy to see why a simple Utility may reach the Comprehensive Tier quickly – there are fewer requirements to meet.

Conversely, the more complicated a utility is, the more the criteria will apply to it. While this means it may take longer to meet the requirements for the Comprehensive tier, that is by design. A complicated utility should be evaluated against a more complex set of requirements to be included on the CODE VA portal and to embody the attributes of the VA Way.

Consider the End User

Utilities need to be accessible and useful to developers across the VA.

Consider a new junior developer located in a remote office with very few resources. They need the right utility, and they browse the list of utilities at CODE VA. The developer finds two potential utilities that would serve their Certificate Management development needs; both seem challenging to implement.

One of these utilities is at the Basic Tier, while one is more mature at the Comprehensive Tier. In this case, the developer may opt for the Comprehensive tier utility. The Comprehensive tier indicates that the utility will have thorough documentation, and any configuration or integration needed will be outlined within. This is perfect for a developer who may need the complete resources to implement their assigned project.

A more senior developer might find the Basic utility just as acceptable, because their years of experience and ample number of teammates will likely be able to fill in for any documentation or support that is still undergoing the necessary work to become an Advanced, and eventually Comprehensive, utility.

Criteria with Multiple Requirements

Criteria may also have multiple requirements as the tiers advance. In the case of a utility that has integration properties, there are two requirements necessary to reach the Comprehensive tier, indicated with **AND**:

Integration, Comprehensive Tier:

[Clear and detailed documentation for integration exists, follows code.va standards.

AND

A plan is in place to ensure that the documentation remains updated as the technology matures/updates.]

OR

Does not have integration capabilities.

Note that the Integration criteria have an **OR**, indicating the option for utilities that do not have integration capabilities. The **AND** requirements are within brackets ([]), indicating that they are separate from the **OR**.

No Requirements

The Basic Tier has four criteria that a utility must meet.

The Advanced Tier requires the four basic criteria, plus an additional four, for a total of eight.

The Comprehensive Tier requires all fourteen criteria to be considered when reviewing the utility.

A selection from the Tiers and Criteria matrix is shown here:

Criteria	Basic Tier	Advanced Tier	Preferred Tier
Reliability	No requirements	Is Highly-Available (HA), 99.5% uptime, with the ability to withstand minor/moderate outages.	Is Highly-Available (HA), 99.9% uptime, with the ability to withstand the vast majority of outages; AND Has a detailed disaster recovery plan, or is part of a larger disaster recovery plan
Cross-Platform	No requirements	Supports current integration methods (e.g. API REST/SOAP, OAuth, OpenID) where applicable	Is not restricted to a single platform, software stack (e.g. LAMP, MEAN), or operating system (iOS, UNIX, Windows); is cross-platform
Duplication of Function	No requirements	No requirements	Offers differentiators when compared to other utilities in the same category; utilities that offer identical functionality should be avoided OR Justification to propose a utility with similar functionality as an existing SWF utility has been reviewed and approved by the UWG
Cost Effectiveness	No requirements	No requirements	The costs of the utility are fully understood; the total cost of ownership per system can be determined for use in metrics and comparison purposes.

Four criteria are shown: Reliability and Cross-Platform are the first two shown. There are no requirements for a utility to meet these two criteria in the Basic tier. For these criteria, the requirements begin in the Advanced Tier. Note that the Basic section is greyed out and states "no requirements."

The second two shown, Duplication of Function and Cost Effectiveness, have no requirements to meet in the Basic or the Advanced tiers; these criteria apply to Comprehensive Tier utilities only.

Contact the Utility Working Group with any questions about interpreting the criteria for each tier.

Utility Working Group

The Utility Working Group (UWG) is a team that manages Utilities and Platforms at CODE VA. The UWG does not manage individual utilities; that responsibility falls to Utility Owners. The UWG can assist Utility Owners with clarification about the processes in this document. Additionally, the UWG welcomes feedback and wants to hear from Utility Owners about their experiences with the process, in the spirit of continuous optimization and improvement.

Report any issues, typos, or broken processes and links to the UWG.

The current UWG and contact information can be found here:

[Utility Working Group](#)

DRAFT