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Utilities

Starter Guide

Introduction

This 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).

What is a Utility?

Software Factory (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.

Software Factory Utilities are standard, cross-platform, cross-portfolio tools that promote enterprise standards and reuse for VA

developers application teams.

Utilities:

1. Provide an *essential and common* feature to teams in any factory at a *lower cost* than building or acquiring their own unique solution
2. Provide a *streamlined experience* to customers, i.e., prioritizing *self-service, automated engagement*
3. Utilities are *centrally documented* and *discoverable*, but are not owned by the SWF Utilities initiative

 See the [Submitting new utilities for approval](#) section of the [Getting Started Guide for Utility Owners](#) for information on what constitutes a utility.

In conjunction with or in lieu of SWF Utilities, VA developers may also want to explore [SWF Enterprise Technology Platforms](#) which represent the underlying infrastructure comprised of different types of technology environments for developing and deploying applications with common business capabilities.

Available Utilities by Category

SWF Utilities are sorted into logical categories that describe the purpose of the utility. A utility can exist in more than one category. Categories will be updated and added to as needed. These Utilities ensure that daily development needs are met, reducing complexity and diminishing the accumulation of technical debt.

[Utility Documentation Tiers](#) are indicated by:

- Basic Tier ●
- Advanced Tier ●
- Comprehensive Tier ●

Accessibility Testing

Deploy software that is compliant with Section 508 of the Rehabilitation Act Amendments of 1998

- [Assistive Technology Tools](#) ●

API Management

Oversee the entire lifecycle of Application Programming Interfaces (APIs)

- *Utility recommendation is in progress.*

Application Performance Monitoring (APM)

Gather data on real-time application or system health

- [Dynatrace](#)  - Enables continuous APM and health monitoring for your teams.

Background Processing

Supports asynchronous workloads such as notifications, data processing, and scheduled jobs

- *Documentation for Sidekiq is in progress.*

Certificate Management

Provision and manage TLS/SSL certificates

- [VA PKI \(Venafi\)](#) 

Communications

An enterprise Communications capability enables secure, actionable, and timely digital communications via email, SMS, and push notification channels to Veterans, their families, or other VA customers.

- [VA Notify](#) 

Configuration Management

Use this **service** to create a manageable framework for any kind of product release development: enhancement, patch, or sustainment

- [Configuration Management Department-Software Product Automation \(CMD-SPA\)](#) 

Containerization

Deploy software that bundles an application's code with all the files and libraries it needs to run on any infrastructure

Utility recommendation is in progress.

Dashboarding

Visualize application or system data in a consumable fashion

- [Power BI](#) ●
- [Pyramid Analytics](#) ●

Development and Testing

Identify Test Users to validate development and test cases for VA applications

- [Test User Portal](#) ●

Distributed Tracing

Distributed tracing provides end-to-end visibility across distributed and microservices-based systems and is a foundational capability for observability, troubleshooting, and performance analysis in modern architectures. As VA's software ecosystem increasingly adopts microservices, hybrid cloud, and DevSecOps practices, traditional monitoring tools alone are insufficient to trace request flows,

diagnose latency issues, or perform root-cause analysis across service boundaries.

- [Zipkin & X-VA](#) ●
- [Jaeger](#) ●

Design

A unified design system reduces duplication of effort, accelerates time to market, and supports VA's mission to deliver reliable, accessible, and user-friendly digital services. Open source, free-to-use libraries support continuous improvement and innovation.

- [Design Systems \(design.VA.gov\)](#) ●

Event Management

Provide a common tool for incorporating event streaming into products

- [VA Enterprise Event Bus \(Apache Kafka\)](#) ●

Geospatial and Mapping Analysis

Location-based tools and software to support mapping

- [Arc Geographic Information System \(ArcGIS\)](#) ●

Identity and Access Management (IAM)

Identify and manage access controls to authenticate users and grant or deny access rights to data and applications

- [Internal SSO/External SSO](#) ● - Enable teams to authenticate internal and external users
- [VA MPI](#) ● - Enable teams to uniquely identify VA persons of interest

Logging and Vulnerability Management

Offerings designed to collect, store, analyze and report on machine-generated logs and data gathered from IT systems to seek out security vulnerabilities, test systems and generate reports for threat assessment and remediation teams

- [Splunk](#) ●

Planning

Support planning and workflow for project teams; track progress metrics

- [Jira](#) ●

Secrets Management

Store sensitive configuration and credentials safely

- [AWS Key Management Service \(KMS\)](#) ● - Optimal for organizations deeply integrated with AWS, needing automatic secrets management and rotation.
- [Azure Key Vault](#) ● - Recommended for Azure-centric enterprises needing integrated, secure secrets management.
- [Privileged Access Security Solution \(PAS\)](#) ● - Recommended for solutions hosted at VA's Information Technology Centers (ITC).

Software Testing Automation

Automate the execution a test case suite

- [Automation Tool Interface \(ATI\)](#) ●

Source Code Management

Store source code in a securely managed, centralized repository

- [GitHub](#) ●

Static Application Security Testing (SAST)

Analyze computer or application code without executing

- [CodeQL](#) ●

Utilities Owners: Getting Started

If you are the owner of a shared resource and would like that resource to be included as a Software Factory Utility, please see our [Getting Started Guide](#).

Utilities Initiative Leadership Team

To propose a new category and/or utility, please contact the [Utilities Initiative Leadership Team](#).