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Insights from the updated AVEVA™ System Platform deployment guide

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Agenda

- Where to access the latest Deployment Guide
- Planning Your Project
- Identifying Topology
- Working with Templates
- Architecting Security
- Implementing Redundancy
- Maintenance / Diagnostics
- Virtualization
- 21 CFR Part 11

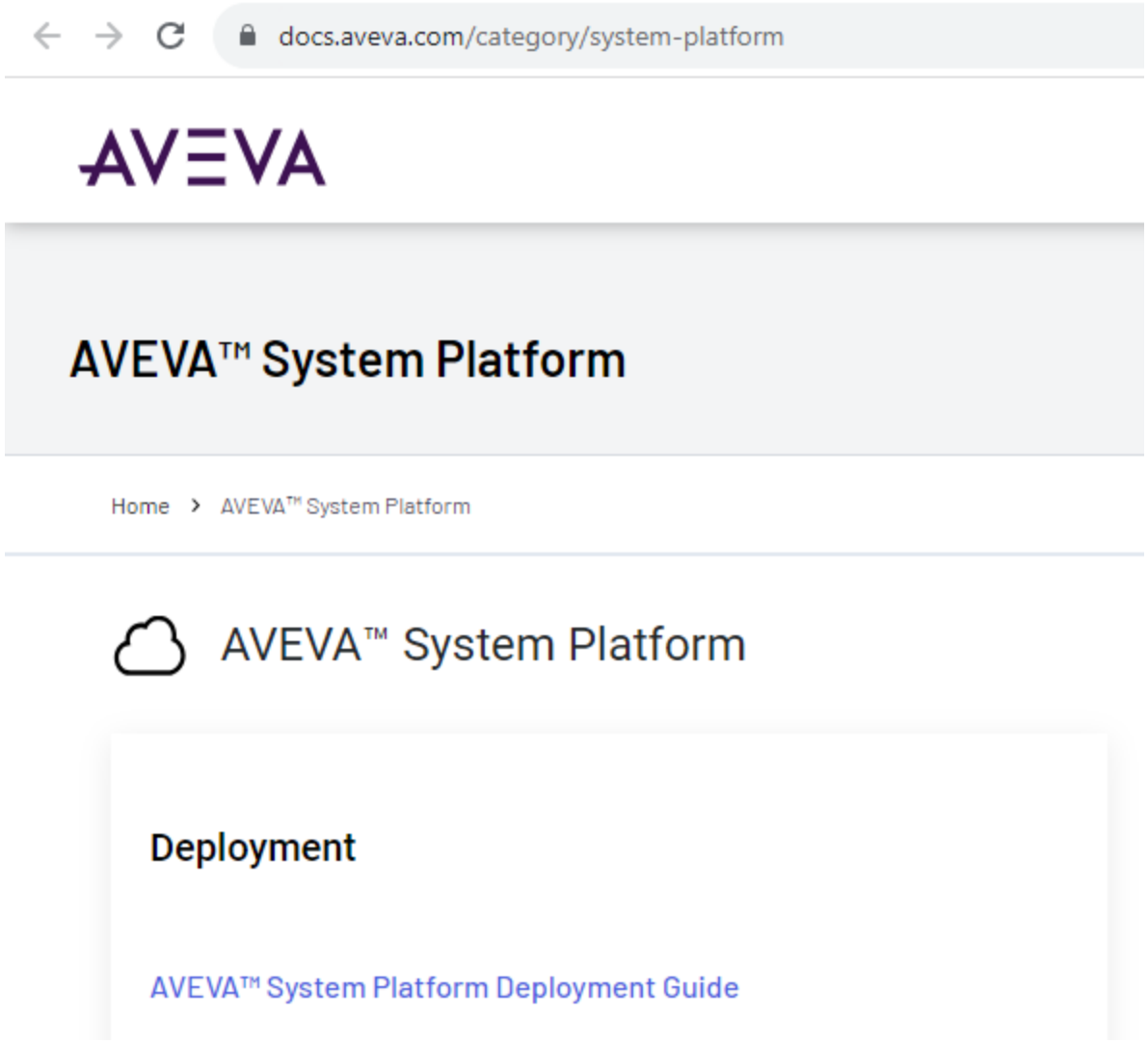
Deployment Guide – Where to access it ?

Where to access the latest Deployment Guide ?

URL :

https://docs.aveva.com/category/system-platform

Where to access the latest Deployment Guide ?



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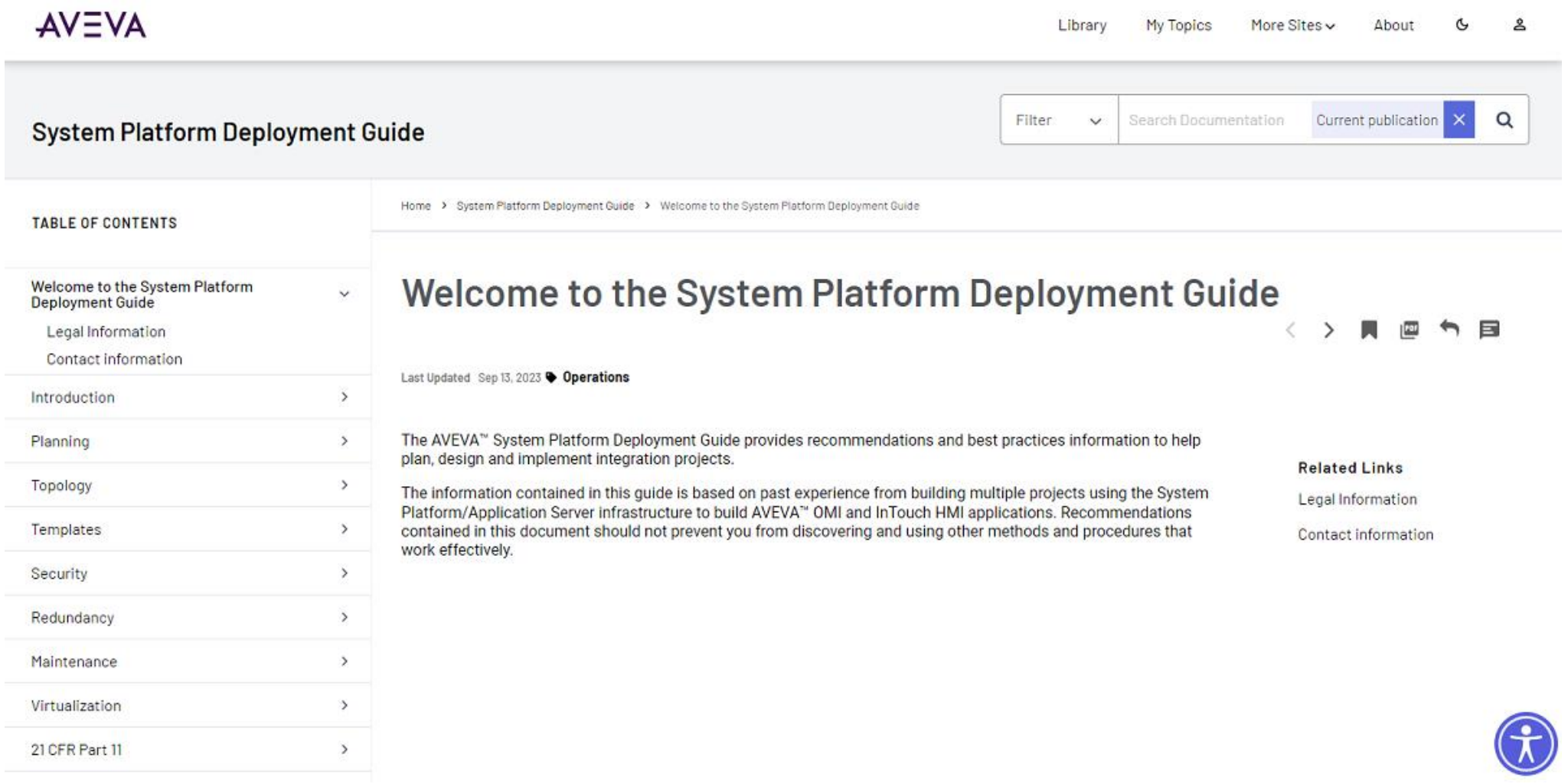

Planning Your Project

Planning Your Project

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Planning

Last Updated Sep 13, 2023 **Operations**

Your AVEVA™ System Platform project begins with a thorough planning phase.

This section explains the System Platform project workflow, with Application Server and its Integrated Development Environment (IDE) as the development environment. The workflow is designed to make engineering efforts more efficient by completing specific tasks in a logical and consistent (repeatable) sequence.

Planning Your Project

- System Platform project workflow
- Identify field devices and functional requirements
- Define object naming conventions
- Define the area model
- Plan templates
- Define the security model
- Define the deployment model

Planning Your Project

- Document the planning results
- Supported operating systems
- System sizing guidelines
- Supported and recommended node hardware types
- Windows network configuration
- System Platform Ports
- FDA compliance

Identifying Topology

Identifying Topology

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Topology

Last Updated Sep 13, 2023 **Operations**

System and information requirements are unique to each manufacturing domain. To control equipment, computers must provide real-time response to interrupts. To plan production, scheduling systems must consider sales commitments, routing costs, equipment downtime, and numerous other variables.

Enterprise system and information requirements are satisfied by designing effective network topologies and implementing software to leverage the topology.

The topology configurations include descriptions and "best practice" recommendations for specific components and functionality.

Note: For information on system requirements, see the user guides or readme files in the installation directory of the appropriate installation media. The most up-to-date information is available online from the AVEVA Global Customer Support (Knowledge and Support Center) website: https://gcsresource.aveva.com/TechnologyMatrix. Pay particular attention to the requirements regarding the version and Service Pack level of the operating system and other application components.

Identifying Topology

- System Platform component descriptions
- System Platform and Application Server
- Common node configurations
- Topology categories

Working with Templates

Working with Templates

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Templates

Last Updated Jul 10, 2023 **Operations**

A template object represents common functional requirements of a field device (valves, pumps), a group of field devices (skids, stations), or a user function (algorithms). These requirements reflect information such as number of Inputs and Outputs, alarm conditions, history needs, and security.

An Object Wizard can be added to any derived template, and provides a simple choice-drive interface for configuring instances (assets) from the template. Object wizards allow a single template to provide the basis for a variety similar objects, such as single speed vs multi-speed motors or 2,- 3-, or 4-way valves, without requiring a template for each object subtype.

A template-centric development practice that leverages object wizards enables re-use of existing engineering and allows you to implement standards at both the enterprise and local levels.

Working with Templates

- Before Creating Templates
- Creating a Template Model
- Using Attributes and Features
- Deriving Templates and Instances
- Re-Using Templates in Different Galaxies
- Export/Import Templates and Instances
- Scripting at the Template Level

Architecting Security

Architecting Security

Security

Last Updated Jul 10, 2023 **Operations**

AVEVA works closely with Microsoft and industry standards organizations like the OPC Foundation to involve multiple vendors in an industry-wide approach to solving security problems.

The success of a security solution is enhanced by pooling IT expertise and SCADA operations groups during the implementation and integration phases of a System Platform project.

This section provides a high-level security perspective, and specific recommendations within the System Platform environment.

For additional information about implementing security for System Platform, see the *AVEVA Cybersecurity Deployment Guide*.

Architecting Security

- AVEVA Security Perspective
- Securing System Platform
- Securing Visualization
- Securing the Configuration Environment
- Distributed COM (DCOM)
- Security Recommendations Summary

Implementing Redundancy

Implementing Redundancy

Redundancy

Last Updated Jul 10, 2023 **Operations**

Redundancy within Application Server is achieved by deploying combinations of AppEngines and DI client objects on separate nodes (platforms). In its most basic configuration and and the one most generally used, there is one primary and one secondary node. This two-node primary and secondary configuration is natively supported by an device integration object dedicated to the task, the RedundantDIObject. Each node of the redundant pair has dual, dedicated NICs. At run time, the nodes will function as either active and standby. Note both the primary and secondary platforms can function as either active or standby. Active and standby status is set by the RedundantDIObject that links to the primary and secondary DI client objects running on the redundant platforms. If there is a failure that affects communication with the primary DI client object, the RedundantDIObject performs an automatic failover to the secondary object.

Implementing redundancy ensures continuous operation by providing an AppEngine that remains active in the event of a single system component failure. This configuration operates on the premise that one engine is in an Active State while the other is in a Standby State waiting to take control.

The following information describes redundancy in the context of Application Server.

Implementing Redundancy

- Redundant System Requirements
- Redundancy Configuration
- NIC Configuration: Redundant Message Channel (RMC)
- Redundant DIObjects
- Redundant Configuration Combinations
- Failover Causes in Redundant AppEngines
- Redundant System Checklist
- Tuning Recommendations for Redundancy in Large Systems

Maintenance

Maintenance / Diagnostics

Maintenance

Last Updated Jul 19, 2023 **Operations**

System Platform allows users to develop applications that have built-in diagnostics and maintenance functionality. For example, an Application Server platform in can provide information about system resources such as CPU load, memory, network traffic, or disk usage. System operators and supervisors can access both process data and system health information from the alarm and event database, Historian Server, OMI ViewApp, or InTouch HMI windows with links to various attributes in galaxy objects.

System Platform also accommodates system administrators, who require the ability to back up system files periodically, and to perform more in-depth diagnostics if problems occur.

This section presents diagnostic and maintenance tools available to System Platform users. For information on other resources, refer to the AVEVA Global Customer Support web site.

Maintenance / Diagnostics

- System Platform Diagnostic and Maintenance Tools
- OS Diagnostic Tools

Virtualization

Virtualization

Virtualization

Last Updated Jul 13, 2023 **Operations**

This section describes the implementation of System Platform in a virtualized environment that utilizes VMware, Microsoft Hyper-V, and SIOS DataKeeper clustering software.

Also discussed are strategies for creating High Availability, Disaster Recovery, and High Availability configurations with Disaster Recovery capabilities that leverage the virtualized environment.

Virtualization

- Getting Started with Virtualization
- Implementing High Availability Using Hyper-V
- Implementing High Availability Using vSphere
- Implementing Disaster Recovery Using Hyper-V
- Implementing Disaster Recovery Using vSphere
- Implementing High Availability and Disaster Recovery Using Virtualization
- Working with Windows Server
- Planning Storage in a Virtualized Environment
- Implementing Backup Strategies in a Virtualized Environment

21 CFR Part 11

21 CFR Part 11

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21 CFR Part 11

Last Updated Jun 01, 2023 **Operations**

This section describes how AVEVA System Platform and its software components adhere to the 21 CFR Part 11 requirements of the U.S. Food and Drug Administration (FDA).

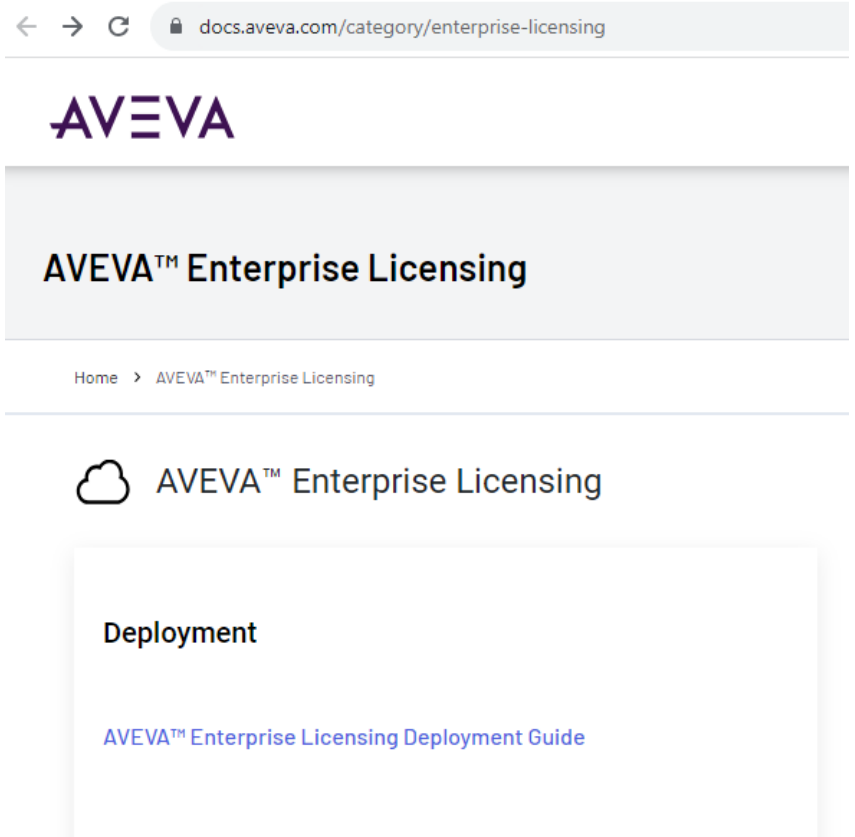
21 CFR Part 11

- About This Guide
- References and Documentation
- Other References & Documentation
- The 21 CFR Part 11 Regulation
- Procedural Controls
- Technological Control
- Other Technical Products

Bonus Info

AVEVA Enterprise Licensing Guide

https://docs.aveva.com/category/enterprise-licensing



Questions?

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State your name and company.

Please remember to…

Navigate to this session in the mobile app to complete the survey.

Thank you!

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