High Availability service in AVEVA PI Sytem

PIPER

PIPER Solutions is a company that helps transform operational data from sensors, actuators, equipment, DCS and control systems into information. Connecting people, processes and assets with knowledge that allows them to analyze and make timely decisions, optimizing processes and operating costs.

AVEVA

We also provide services related to the management, improvement, implementation, updating and solutions related to AVEVA PI System. This suite of AVEVA solutions enables digital transformation through high-quality and reliable operations data. Collect, enhance, and deliver real-time data at any location. Give more knowledge to engineers and operators. Speed up the work of analysts and data scientists. Support new business opportunities.

Keep your information reliable, available and secure at all times:

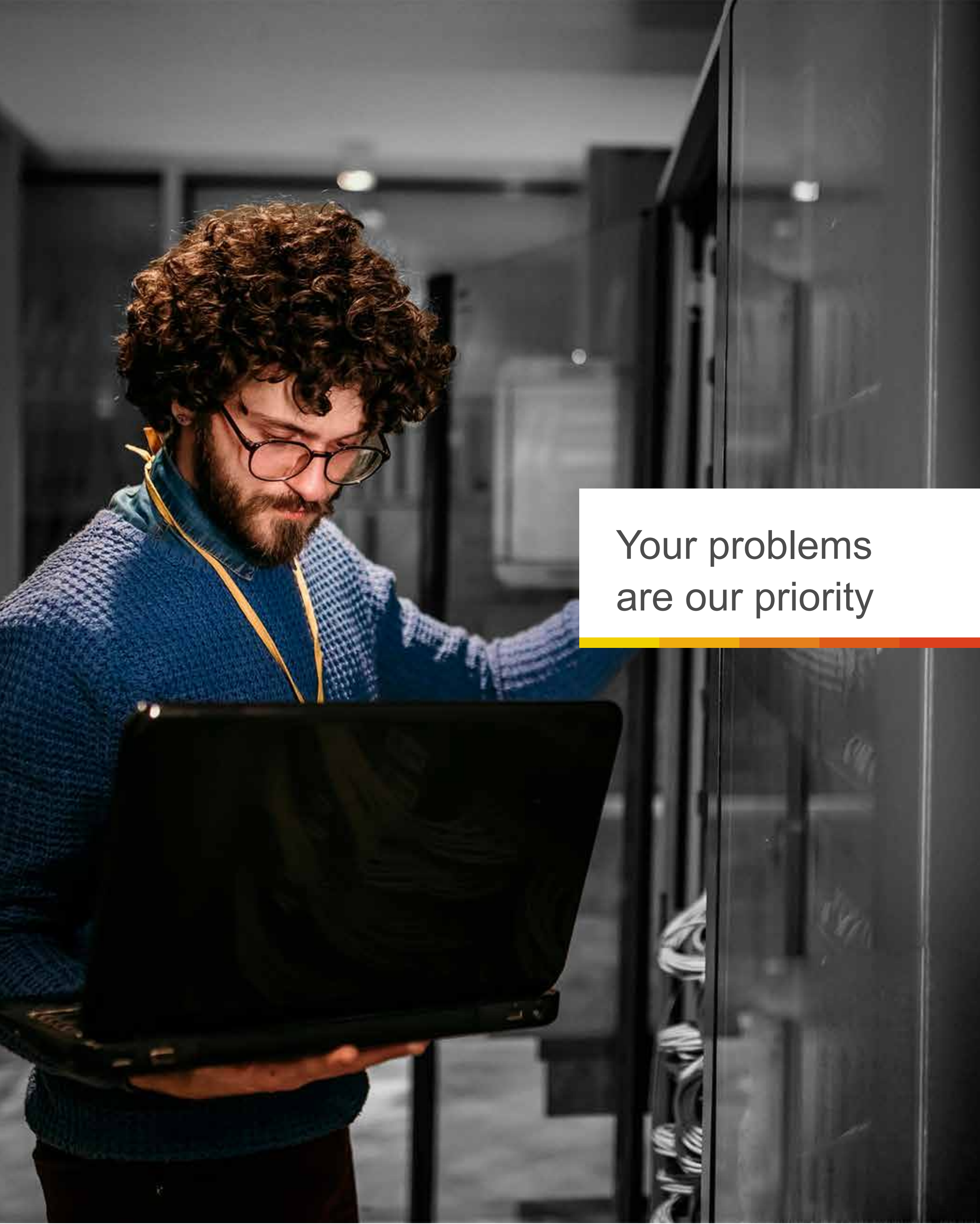
High availability can also offer greater scalability, allowing you to add additional resources as needed without compromising system availability or performance, protect your data and always have it on hand.

High availability ensures that your PI System is always accessible, even in the event of hardware or software failures, minimizing downtime and maximizing system availability.

Trained team: OSIsoft trained and certified engineers will guide you to get the most out of your PI System.

Experience: With more than 6 years of experience handling incidents, we even know what issues can cause you difficulties.

Global: This service is available to you anywhere in the world.


Your problems
are our priority

1

Business Continuity: The High Availability service ensures the continuity of critical business operations by minimizing unplanned downtime. In the event of system failures or outages, High Availability provides a solution to maintain uninterrupted access to PI System data and applications. This is achieved by configuring redundant systems that allow for fast, automatic switching between primary and secondary servers in the event of a failure.

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Fault Tolerance: PI System High Availability offers fault tolerance, which means that even if one component of the system stops functioning properly, other components automatically take over the functions and prevent service interruption. This ensures continuous availability of critical data and applications.

3

Improved performance: By using high-availability configurations, it is possible to distribute the workload across multiple servers, which improves overall system performance. This enables faster access to data and greater capacity to handle intensive workloads.

4

Scalability: PI System High Availability allows additional servers to be added horizontally as needed. This allows the system to adapt to growing data volumes and changing organizational needs without compromising performance or availability.

5

Data protection: High availability generally involves real-time data replication between primary and secondary servers. This provides immediate data backup in the event of a system failure. Data protection is further strengthened by implementing backup and recovery practices in conjunction with High Availability.

6

Uninterrupted maintenance: With PI System High Availability, it is possible to perform maintenance tasks and system upgrades without interrupting ongoing operations. This is achieved by redirecting user requests to the secondary server while maintenance is being performed on the primary server, ensuring continuous, uninterrupted service.

Objectives and Deliverables

Objectives

Part I

Before starting the High Availability service, the list of pre-installation requirements will be verified, as well as the validation of the appropriate architecture by identifying potential problems for High Availability. This validation process should be performed at least one week before starting the service. Then verify that the Data Archive hardware and operating system are suitable for the new software release.

Part II

We will perform a verification that a proper backup of the Data Archive has been performed prior to the upgrade. After upgrading to the latest released version (including patches) and installing the Data Archive on a secondary node, we will proceed to configure the Data Archive Collective and transfer the configuration from the primary server to the secondary server, including the last three files. Then finally test a PI Client connection and a client reconnection to primary and secondary data archives.

Part III

We will provide a number of functionalities to ensure continuity and optimal system performance: Perform data archive failover tests, inspect and modify the PI timeout table according to OSIsoft best practices, configure daily AVEVA PI System backups on both Data Archive servers, review the site backup and recovery procedure, enable the PI interface for Performance Monitor and PI Interface for Ping to monitor the Data Archive performance (up to 50 tags and two AVEVA PI Processbook ™ screens). These functionalities are seamlessly integrated into the high availability service, ensuring that data is always accessible, performance is optimal and AVEVA recommended best practices are followed.

Part IV

We will upgrade the acquisition node to the latest PI communication libraries, buffering and PI Interfaces or PI Connectors (up to 3 PI Interfaces or PI Connectors). To then verify and test PI Buffering on acquisition nodes, PI Interface ™ configuration and PI Connector log files on acquisition.

Part VI

There will be an inspection of the PI interface and PI connector I/O speeds and data flow. Finally we will proceed to install the latest version of the System Management Tools (SMT) on both servers and on a management station.

High Availability Service Requirements

Hardware and operating systems of all AVEVA PI System nodes must be installed and operational before starting the service. A PIPER specialist will confirm if they meet the hardware requirements during the preparation stage. Therefore the hardware of the acquisition node (API Node) and its operating system must be installed and functional.

TCP/IP communication must be enabled and operational between all AVEVA PI System nodes and the necessary ports must be open. Data Archive communicates through port 5450, AF communicates through port 5457 and 5459, PI analysis service communicates through port 5463, PI notifications communicate through port 5468.

Third Party Hardware and Software: Most PI interfaces and connectors require third party hardware and software to be installed and operational. Specific requirements will be validated during the pre-installation checklist review.

Valid Account: The customer must have a valid account on the AVEVA technical support website with permissions to download all required software. This account will also be required to generate a license file for the Data File.

Estimated Time of High Availability Service

Implementation dates will be mutually agreed upon after formal acceptance of the service. The implementation process, from request to completion, normally takes 2-4 weeks.

On-site or remote upgrade by PIPER (up to 5 days).

Upgrade Limitations

Modification of custom applications or third party products, including VBA code in AVEVA PI Processbook or PI DataLink, is not included in this package. This package does not include Asset Framework High Availability configuration.

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