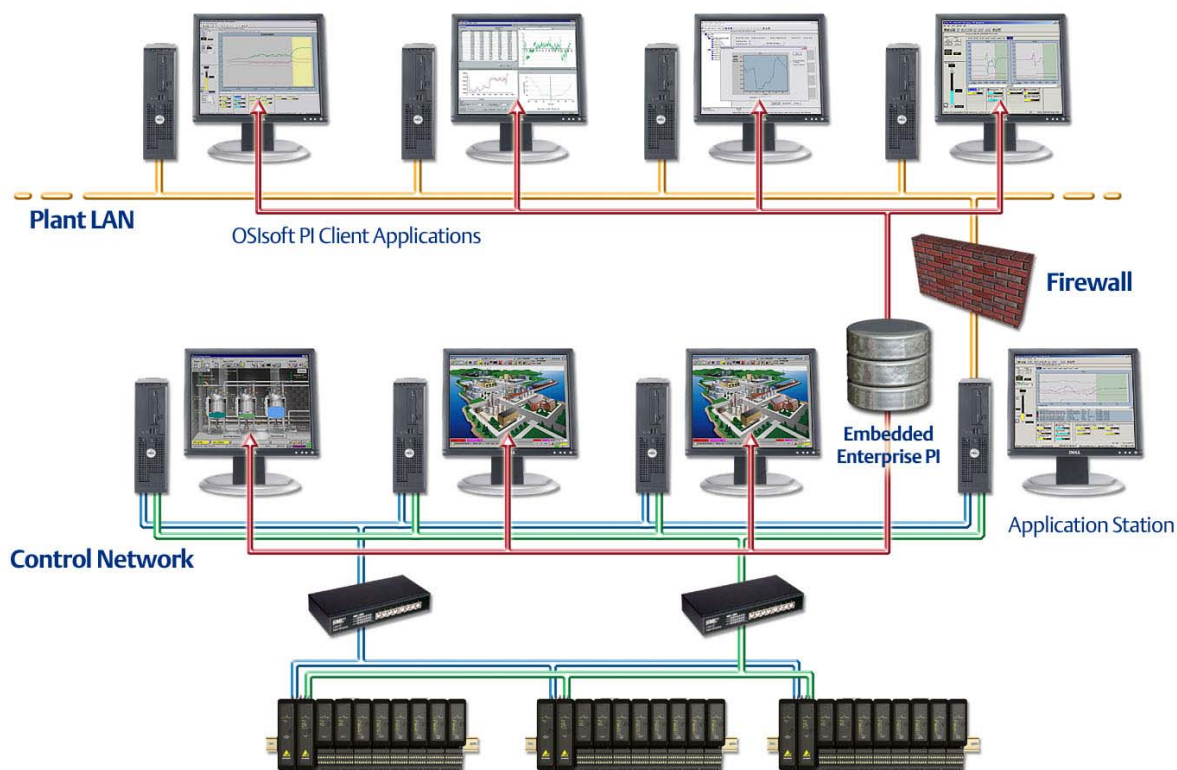




Embedded Enterprise PI Historian FAQs

This document answers questions about the integration of an OSIsoft Enterprise PI Server with the DeltaV system.



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1 Introduction

1.1. What is the embedded Enterprise PI historian?

The embedded Enterprise PI historian is a DeltaV v10.3 deliverable that provides the option to add an Enterprise PI Server to the DeltaV system to function as the DeltaV system historian. This project also includes the ability to easily build the DeltaV system equipment hierarchy in the embedded Enterprise PI historian. The integrated Enterprise PI Server will be referred to in this document as the embedded Enterprise PI historian.

1.2. Why was the embedded Enterprise PI historian project developed?

DeltaV v7.3 was the last available release that included PI functionality in the form of the legacy historian ("embedded PI"). All new DeltaV systems sold after v7.3 (v7.4 and later) include the DeltaV Continuous Historian. Many customers that have large investments in PI software have asked if they could continue using PI functionality on new DeltaV systems. This project addresses the need to have PI Server functionality in a control system historian. The intent of the embedded Enterprise PI historian is to replace the functionality of the legacy historian and not necessarily function as a standalone enterprise historian.

1.3. Who developed the embedded Enterprise PI historian?

The embedded Enterprise PI historian is a standard Enterprise PI Server developed by OSIsoft. The integration of the Enterprise PI Server with the DeltaV system was a joint development project between Emerson Process Management (Emerson) and OSIsoft.

1.4. Does the embedded Enterprise PI historian replace the DeltaV Continuous Historian?

No. The DeltaV Continuous Historian will remain the preferred continuous historian in the DeltaV system and will continue to be installed on each DeltaV workstation. The embedded Enterprise PI historian is an option which may be used in place of the DeltaV Continuous Historian on a DeltaV Application Station and allows DeltaV client applications to use the history data directly.

1.5. How is the embedded Enterprise PI historian different from using an Enterprise PI Server in my system today?

In DeltaV v10.3, the embedded Enterprise PI historian is integrated into the DeltaV system; in much the same way as the DeltaV Continuous Historian (or the legacy historian before it) is integrated into the DeltaV system today. This means the embedded Enterprise PI historian functions as a full featured, embedded control system historian. Once the embedded Enterprise PI historian is installed, it is configured using the DeltaV engineering tools and used by the DeltaV historian client applications. If you are using an Enterprise PI Server in your system today, you have to configure Enterprise PI using OSIsoft configuration tools and maintain separate interfaces to collect data from the DeltaV system. The DeltaV historian client applications may or may not be able to view history data in the Enterprise PI Server depending upon the PI tag syntax and the Enterprise PI Server licenses available. The embedded Enterprise PI historian eliminates the need to use non-native DeltaV engineering tools to configure history collection and ensures that the DeltaV historian client applications can view history data.



1.6. How many tags can I collect in the embedded Enterprise PI historian?

In the recommended architecture, the tag count of the embedded Enterprise PI historian is limited to 30,000 tags, which represents the OPC item limit of the DeltaV OPC Data Access (DA) Server that is serving data to the embedded Enterprise PI historian.

1.7. Does the embedded Enterprise PI historian provide all the functionality of the legacy historian?

Yes. The embedded Enterprise PI historian provides all of the functionality of the legacy historian. More details on the embedded Enterprise PI historian functionality may be found later in this document.

1.8. Which DeltaV versions support the embedded Enterprise PI historian?

The embedded Enterprise PI is supported with the DeltaV v10.3 and later releases.

1.9. Which versions of the Enterprise PI Server are supported?

For the DeltaV v10.3 release, Enterprise PI Server version 3.4.375.80 is the supported version for the embedded Enterprise PI historian.

1.10. What licenses are required for the embedded Enterprise PI historian?

The embedded Enterprise PI historian requires a DeltaV OPC DA Server license and the Enterprise Historian Configuration Interface license from Emerson. The DeltaV OPC DA Server license should be sized to include at least as many OPC items as DeltaV parameters configured for history collection in the embedded Enterprise PI historian. The Enterprise Historian Configuration Interface license will work with any size embedded Enterprise PI historian (i.e. there is no size component to this license). Also required are the Enterprise PI Server license and the DeltaV Smart Connector license available from OSIsoft or Emerson reseller. The Enterprise PI Server license should be sized to include at least as many tags as DeltaV parameters configured for history collection. The DeltaV Smart Connector license will work with any size embedded Enterprise PI historian (i.e. there is no size component to this license).

1.11. Do I need a DeltaV Continuous Historian or legacy historian license to use the embedded Enterprise PI historian?

No. The DeltaV Continuous Historian license is required for the DeltaV Continuous Historian and the legacy continuous historian license is required for the legacy continuous historian. The corresponding "tag count" license for the embedded Enterprise PI historian is purchased from OSIsoft.

1.12. How do I get the Enterprise PI historian software?

The Enterprise PI historian and the DeltaV Smart Connector software are available for purchase from OSIsoft directly or from Emerson via Emerson's Value Added Reseller agreement with OSIsoft. The Enterprise PI historian and DeltaV Smart Connector software are not available as standard DeltaV products.



1.13. What is the total cost of the embedded Enterprise PI historian option?

The total cost of the embedded Enterprise PI historian option depends on the size of the Enterprise PI Server and the size of the DeltaV OPC DA Server. For more information on license costs, contact your local OSIsoft and/or Emerson sales office.

1.14. Who can I speak with to get more information on the embedded Enterprise PI historian option?

If you need to speak with someone regarding the embedded Enterprise PI historian option, you can find the appropriate Emerson sales and/or support contacts for your world area at this Web site: <http://www.emersonprocess.com/systems/support/ratecard.htm> or the appropriate OSI sales and/or support contacts at this Web site: <http://www.osisoft.com/ContactUs/KeyContacts>. In addition, you can email OSIsoft with technical questions at PI_TechSupport@OSIsoft.com or commercial questions at Emerson@OSIsoft.com.

2 Architecture

2.1. Where does the embedded Enterprise PI historian reside?

The embedded Enterprise PI historian may be installed on any DeltaV Application Station supported in DeltaV v10.3. The recommended system architecture is to run all necessary components for the embedded Enterprise PI historian on a single Application Station. The minimum components required for the embedded Enterprise PI historian are the Enterprise PI historian, the DeltaV Smart Connector and the DeltaV OPC DA server.

2.2. How does the embedded Enterprise PI historian collect data from the DeltaV system?

The embedded Enterprise PI historian is configured from DeltaV Explorer or DeltaV Control Studio just like history collection is configured for the DeltaV Continuous Historian or legacy historian. When the Continuous Historian subsystem is downloaded, the DeltaV historian configuration information is read by the DeltaV Asset Connector. The DeltaV Asset Connector creates the appropriate tags in the embedded Enterprise PI historian and configures the PI OPC DA interface to retrieve data from the DeltaV OPC DA Server at the appropriate scan rate. The PI OPC DA interface then populates the embedded Enterprise PI historian with this data.

2.3. How many embedded Enterprise PI historians may I have in one DeltaV system?

You may have as many embedded Enterprise PI historians in your DeltaV system as you have DeltaV Application Stations, up to the maximum number of supported Application Stations (which for DeltaV v10.3 has been increased from 10 to 20).

2.4. Can I have a DeltaV Continuous Historian and an embedded Enterprise PI historian in the same DeltaV system?

Yes. You may have one or more DeltaV Continuous Historians and one or more embedded Enterprise PI historians in your DeltaV system as long as they reside on separate DeltaV workstations. You may not have multiple historians on any one DeltaV workstation.

2.5. If I use an embedded Enterprise PI historian, do I also need to have a DeltaV Continuous Historian in the same system?

No. Use of the embedded Enterprise PI historian does not require a DeltaV Continuous Historian. When the embedded Enterprise PI historian is used in the DeltaV system, it is integrated into the Continuous Historian subsystem on the Application Station.

2.6. What is the DeltaV Smart Connector?

The DeltaV Smart Connector is a term used to relate all of the components needed to integrate an Enterprise PI Server with the DeltaV system. The DeltaV Smart Connector includes the DeltaV Asset Connector and the PI OPC DA interface. These two components are installed with the DeltaV Smart Connector. The main tasks of the DeltaV Smart Connector are to automatically create PI Points in the embedded Enterprise PI historian, collect real-time data from the DeltaV system and send it to the embedded Enterprise PI historian and automatically create PI AF objects (if selected). For more details on the DeltaV Smart Connector, including details on the PI AF components, refer to the "DeltaV 10.3 Smart Connector to the PI System" manual provided by OSIsoft.



2.7. What is the DeltaV Asset Connector?

The DeltaV Asset Connector is an OSIsoft software component that automatically configures the embedded Enterprise PI historian and the PI OPC DA interface for collection of DeltaV data. The DeltaV Asset Connector may also create PI AF objects in the embedded Enterprise PI historian to represent the DeltaV equipment hierarchy, if this option is selected. When the Continuous Historian subsystem is downloaded, the DeltaV system generates an enterprise historian configuration file which is consumed by the DeltaV Asset Connector. The DeltaV Asset Connector uses the enterprise historian configuration file to create the appropriate tags in the embedded Enterprise PI historian and configure the PI OPC DA interface to retrieve data from the DeltaV OPC DA Server. Once the DeltaV Asset Connector has configured Enterprise PI and the PI OPC DA interface, it monitors the DeltaV system waiting for an update to the enterprise historian configuration file. For more details on the DeltaV Asset Connector, refer to the “DeltaV 10.3 Asset Connector to the PI System” manual provided by OSIsoft.

2.8. What is the PI OPC DA interface?

The PI OPC DA interface is an OPC client application that connects to the DeltaV OPC DA Server and retrieves real-time data from the DeltaV system. The PI OPC DA interface then writes this data to the embedded Enterprise PI historian. For more details on the PI OPC DA interface, refer to the “OPC Interface to the PI System” manual provided by OSIsoft.

2.9. What is PI AF?

PI AF is a component of the Enterprise PI Server that enables you to define a representation of your plant assets and use these assets to easily view and analyze your plant data. In the context of the embedded Enterprise PI historian project, you can recreate the DeltaV equipment hierarchy in PI AF to provide the same data structure in the embedded Enterprise PI historian as exists in the DeltaV system. Thus, the DeltaV historical data collected in the embedded Enterprise PI historian is related to its corresponding objects in the DeltaV system (e.g. control modules, units, areas). PI client applications can use PI AF to navigate and find data in the embedded Enterprise PI historian in the same manner as DeltaV client applications. For more details on PI AF, refer to the “AF 2.0 User’s Guide” provided by OSIsoft.

2.10. What information is contained in the enterprise historian configuration file?

The enterprise historian configuration file contains a list of all the DeltaV parameters that are configured for history collection along with all of the applicable parameter attributes required to configure the embedded Enterprise PI historian and the PI OPC DA interface.

2.11. Does the embedded Enterprise PI historian collect DeltaV parameter status information?

The embedded Enterprise PI historian can be configured to collect DeltaV parameter status information, but the status parameter must be configured for history collection separately from the parameter value. The embedded Enterprise PI historian does not have the capability to automatically store the parameter status like the DeltaV Continuous Historian.

2.12. Can I collect more than 30,000 tags in the embedded Enterprise PI historian?

The recommended system architecture is to have a one to one relationship between the DeltaV OPC DA server and the DeltaV Smart Connector. The DeltaV OPC DA server is limited to 30,000 OPC items per DeltaV Application



Station. Thus, in the recommended system architecture, the embedded Enterprise PI historian can only collect up to 30,000 tags. However, it is technically possible to install a second DeltaV Smart Connector on Application Station “2” and configure the second DeltaV Smart Connector to communicate with the embedded Enterprise PI historian on Application Station “1”. Thus, the DeltaV Smart Connector on Application Station 1 could collect up to 30,000 tags from the DeltaV OPC DA server on Application Station 1 and the DeltaV Smart Connector on Application Station 2 could collect up to 30,000 tags from the DeltaV OPC DA server on Application Station 2. In this architecture, the embedded Enterprise PI historian could collect up to 60,000 tags. Since this is not the recommend architecture, the technical and commercial details and the feasibility of this alternative architecture must be discussed with your Emerson and OSIsoft project personnel. Application Station 1 will require the DeltaV Smart Connector license, the DeltaV OPC DA server license and the Enterprise Historian Configuration Interface license. Application Station 2 will require the Enterprise PI Server license, the DeltaV Smart Connector license, the DeltaV OPC DA server license and the Enterprise Historian Configuration Interface license.

2.13. Can I consolidate data from more than one DeltaV system into one embedded Enterprise Historian?

The recommended system architecture is to have a one to one relationship between the DeltaV system and the embedded Enterprise PI historian. However, it is technically possible to install a second DeltaV Smart Connector on another Application Station in DeltaV system “B” and configure the Smart Connector in system B to communicate with the embedded Enterprise PI historian on DeltaV system “A”. Since this is not the recommend architecture, the technical and commercial details and the feasibility of this alternative architecture must be discussed with your Emerson and OSIsoft project personnel. The Application Station in system B will require the DeltaV Smart Connector license, the DeltaV OPC DA server license and the Enterprise Historian Configuration Interface license. The Application Station in system A will require the Enterprise PI Server license, the DeltaV Smart Connector license, the DeltaV OPC DA server license and the Enterprise Historian Configuration Interface license.

2.14. Can the DeltaV Smart Connector connect to a backup DeltaV OPC DA Server?

The recommended system architecture is to have a one to one relationship between the DeltaV OPC DA server and the DeltaV Smart Connector. However, it is technically possible to configure the DeltaV Smart Connector to use a backup DeltaV OPC DA server on another DeltaV workstation in addition to the primary DeltaV OPC DA server on the embedded Enterprise PI historian workstation. This architecture can provide a measure of redundant data collection. Since this is not the recommend architecture, the technical and commercial details and the feasibility of this alternative architecture must be discussed with your Emerson and OSIsoft project personnel. Any DeltaV OPC DA server that DeltaV Smart Connector communicates with, including a backup DeltaV OPC DA server, must have the appropriate DeltaV OPC DA server license.

2.15. I have an existing legacy historian in my DeltaV system. Can I continue to use the legacy historian or do I have to upgrade to the embedded Enterprise PI historian?

In DeltaV v10.3, you can continue to use the legacy historian. You may upgrade to the embedded Enterprise PI historian or the DeltaV Continuous Historian, if desired, but there are no system requirements for you to do so. It is expected that in DeltaV v11, the option to retain the legacy historian will be removed. Thus, in DeltaV v11, the only option for PI functionality is with the embedded Enterprise PI historian.



2.16. I have an Enterprise PI Server on my plant LAN. Can I use the DeltaV Smart Connector to integrate this historian into my DeltaV system?

No. The embedded Enterprise PI historian must reside on a DeltaV v10.3 Application Station. We do not support using the DeltaV Smart Connector with an Enterprise PI Server that resides outside of the DeltaV system.

2.17. I have an Enterprise PI Server on my plant LAN. Can I use this historian as my embedded Enterprise PI historian?

If the Enterprise PI historian is version 3.4.375.80 or later, it may be possible for you to move this historian to a DeltaV v10.3 Application Station for use as the embedded Enterprise PI historian. Contact your local Emerson or OSIsoft representative (as detailed in Section 1) to discuss this possibility.

2.18. I have an Enterprise PI Server on my plant LAN. Can I continue to collect my DeltaV system data in this historian?

Yes. The existing options for sending data from a DeltaV system to an Enterprise PI Server remain the same in DeltaV v10.3. There is no reason you need to change this architecture if you are happy with it.

2.19. What are my options for sending DeltaV data to an Enterprise PI Server on my plant LAN?

There are three existing options for sending DeltaV data to an Enterprise PI Server: (1) Use the PI OPC DA interface with the DeltaV OPC DA Server to send real-time data from DeltaV to PI; (2) Use the PI OPC HDA interface with the DeltaV OPC HDA Server (and corresponding DeltaV Continuous Historian) to send historical data from DeltaV to PI; (3) Use the PI to PI interface with the legacy historian to send historical data from DeltaV to PI. The embedded Enterprise PI historian project adds a fourth option to send data in real-time from the DeltaV OPC DA Server to the embedded Enterprise PI historian on the DeltaV Application Station.

2.20. Can I use the embedded Enterprise PI historian with DeltaV Zones?

Yes. You can use the embedded Enterprise PI historian on any DeltaV system, even if the DeltaV system is part of a DeltaV Zone. However, use of the embedded Enterprise PI historian in a DeltaV system that is part of a DeltaV Zone does not offer any additional history collection or history viewing features over using a DeltaV Continuous Historian. That is, the continuous historian in a DeltaV system that is part of a DeltaV Zone is intended to collect history for just the DeltaV system where the historian is located and viewing of history data between DeltaV systems in a DeltaV Zone is accomplished using a direct network connection between the history client workstation and the historian workstation.



3 Installation

3.1. Where do I install the embedded Enterprise PI historian?

The embedded Enterprise PI historian may be installed on the DeltaV Application Station, v10.3 or later.

3.2. Where do I install the DeltaV Smart Connector?

The DeltaV Smart Connector should be installed on the same DeltaV Application Station as the embedded Enterprise PI historian. The DeltaV Smart Connector installation includes the DeltaV Asset Connector and the PI OPC DA interface.

3.3. Where do I install the DeltaV OPC DA Server?

The DeltaV OPC DA Server is installed with the DeltaV system software and is available on the DeltaV Application Station where the DeltaV Smart Connector is installed.

3.4. Are the embedded Enterprise PI historian and DeltaV Smart Connector installed with the DeltaV system software?

No. The DeltaV system software installation does not install the Enterprise PI Server or the DeltaV Smart Connector. The embedded Enterprise PI historian and DeltaV Smart Connector must be installed separately using installation media provided by OSIsoft. If you need assistance installing the Enterprise PI Server or DeltaV Smart Connector software, contact your local OSIsoft or Emerson sales office.

3.5. When should I install the embedded Enterprise PI historian and DeltaV Smart Connector?

The embedded Enterprise PI historian and DeltaV Smart Connector may be installed either before the DeltaV system software installation or after the DeltaV system installation, whichever is more convenient.

3.6. What DeltaV PC hardware is required for the embedded Enterprise PI historian?

The embedded Enterprise PI historian may be installed on any DeltaV Application Station that is supported with the DeltaV v10.3 release. A server class computer is recommended with at least a 2.13 GHz dual core CPU, 4 GHz RAM and 160 GB hard disc drive. As with all software applications, greater application performance will be achieved with greater computer hardware components.

3.7. What operating systems does the embedded Enterprise PI historian support?

The Embedded Enterprise PI historian supports Windows XP Professional, Windows Server 2003, Windows Vista and Windows Server 2008.

3.8. Can I run other DeltaV or OSIsoft applications on the same DeltaV Application Station that is running the embedded Enterprise PI historian?

Yes. It is technically possible to run other applications on the same Application Station that is running the embedded Enterprise PI historian. The decision whether or not to run other applications on the same Application Station



depend on how loaded the Application Station is when running just the embedded Enterprise PI historian. It is recommended that initially no other applications are run on the Application Station until the embedded Enterprise PI historian is running and collecting data and the Application Station loading is known.

3.9. Is the embedded Enterprise PI historian option only available for installation on new DeltaV systems?

No. The embedded Enterprise PI historian may be installed on new or upgraded DeltaV systems. If the embedded Enterprise PI historian is installed on an upgraded system, ensure that the upgraded Application Station meets the PC hardware requirements for a DeltaV v10.3 system and the appropriate licenses are obtained from Emerson and OSIsoft.

3.10. If I migrate to the embedded Enterprise PI historian from the legacy historian or the DeltaV Continuous Historian, can I do this without losing data collection during the DeltaV v10.3 system upgrade?

No. When you upgrade your existing DeltaV system to v10.3, there will be a period of time when history collection is suspended during the upgrade of the DeltaV Application Station and the migration of the existing historian to the embedded Enterprise PI historian. The length of time when history is not being collected depends upon how quickly you can upgrade the DeltaV Application Station and install the appropriate embedded Enterprise PI historian components.



4 Configuration and Operation

4.1. How do I configure the DeltaV system to use the embedded Enterprise PI historian?

The Continuous Historian Properties dialog (launched by right-clicking the Continuous Historian subsystem on the DeltaV Application Station) contains a new configuration option to enable use of an embedded Enterprise Historian. Once this option is selected, you configure the embedded Enterprise PI historian just like you configure the DeltaV Continuous Historian - drag the desired areas to the Continuous Historian subsystem and configure DeltaV parameters for history collection and download.

4.2. How many DeltaV parameters can I configure for history collection in the embedded Enterprise PI historian?

You can configure up to 30,000 DeltaV parameters for history collection in a single embedded Enterprise PI historian in the standard system architecture where the DeltaV OPC DA server and embedded Enterprise PI historian are resident on the same DeltaV Application Station. The 30,000 parameter limit is imposed by the local DeltaV OPC DA Server which can only be licensed for up to 30,000 OPC items.

4.3. What is the maximum number of samples per second I can configure for collection in the embedded Enterprise PI historian?

The recommended limit is 3,000 samples per second. For example, if you have a historian configuration that contains 3,000 or less DeltaV parameters, you can configure all parameters for 1 second history collection (note 1 second is the fastest history collection rate configurable from the DeltaV system). If you have a historian configuration that contains more than 3,000 parameters, you must balance the history collection rate for all parameters to average 3,000 samples per second to stay within the recommended limit.

4.4. When I add/delete/modify a history tag in the DeltaV system, are the changes updated in the embedded Enterprise PI historian?

Yes. The process for modifying history tags is the same with the embedded Enterprise PI historian as it is with the DeltaV Continuous Historian. When you add/delete/modify a history tag from DeltaV Explorer or Control Studio, you simply download the changes to the Continuous Historian. The download generates a new enterprise historian configuration file that the DeltaV Asset Connector consumes and uses to update the embedded Enterprise PI historian.

4.5. Is there somewhere I can see more details on what points have been added/deleted/modified in the embedded Enterprise PI historian?

Yes. OSIsoft provides a log file (pipc.log) that records all transactions with the embedded Enterprise PI historian. The pipc.log file can be found in the C:\Program Files\pipc\dat directory on the embedded Enterprise PI historian workstation.

4.6. How do I configure PI AF?

During installation of the DeltaV Smart Connector, you will be prompted to add the location of the PI AF Server and PI AF database. (If you are not planning to use PI AF, you will leave these fields blank.) You will also define the directory location where the DeltaV equipment hierarchy file will be located. The DeltaV equipment hierarchy file is



created by selecting Export | Equipment Hierarchy from the DeltaV Explorer file menu. When you export the DeltaV equipment hierarchy file, you will be prompted for a file location. Ensure this file location is consistent with the file location identified during the DeltaV Smart Connector installation. When the DeltaV equipment hierarchy file is placed in the appropriate file location, the DeltaV Asset Connector will automatically update PI AF with the DeltaV equipment hierarchy information. Subsequent changes to the DeltaV equipment hierarchy will require the equipment hierarchy file to be exported again. The DeltaV Asset Connector will automatically pick up any changes in the equipment hierarchy file and update PI AF.

4.7. Which DeltaV historian client applications work with the embedded Enterprise PI historian?

The DeltaV historian client applications that were developed during the time the legacy historian served as the Continuous Historian will work with the embedded Enterprise PI historian. The DeltaV historian client applications that will work with the embedded Enterprise PI historian include the DeltaV operator applications Process History View (with the exception of the parameter status handling features implemented in DeltaV v9.3), MPC Operate and MPC Operate Pro and the advanced control applications DeltaV Neural, DeltaV Predict and DeltaV Predict Pro (with the exception of the parameter status handling features implemented in DeltaV v9.3). The DeltaV historian client applications that were developed after the DeltaV Continuous Historian was released in the DeltaV v7.4 release will not work with the embedded Enterprise PI historian. The DeltaV historian client applications that will not work with the embedded Enterprise PI historian include the DeltaV Reporter (released in DeltaV v7.4), the historical trend control in DeltaV Operate (released in DeltaV v8.4) and the Web based History Analysis application (released in DeltaV v10.3).

4.8. When I use the DeltaV historian client applications with the embedded Enterprise PI historian, is there extra work involved to make this work?

No. Once the DeltaV historian client application is connected to a specific workstation, the application will automatically detect and connect to the installed historian without user intervention. Thus, any DeltaV historian client application that is compatible with the embedded Enterprise PI historian will automatically connect to the embedded Enterprise PI historian. In a system with a legacy historian, a DeltaV Continuous Historian and/or an embedded Enterprise PI historian, the same DeltaV historian client application can be used to view data from all historian databases (although data can only be viewed from one historian at a time).

4.9. What should I do if I want historical data trends in my operator graphics and PI Server functionality in my DeltaV system?

To have both historical data trends in your operator displays and PI historian functionality in your DeltaV system, you will need to have both the DeltaV Continuous Historian and the embedded Enterprise PI historian available in your system, as the historical trend control in DeltaV Operate will only read data from the DeltaV Continuous Historian. The DeltaV Continuous Historian is available on the Professional Plus, Operator Station or Application Station, whereas the embedded Enterprise PI historian is only available on the Application Station. Thus, you could configure the historical data trends in your operator displays to use the DeltaV Continuous Historian on your Professional Plus or Operator Stations and install the embedded Enterprise PI historian on an Application Station. In addition, you could use the DeltaV Continuous Historian on a second Application Station, which gives you the ability to increase the historian tag count above 250 tag limit of the Professional Plus and Operator Station. Note that in addition to historical trends in DeltaV Operate, any time you want to use DeltaV Reporter, the parameter status viewing and analysis enhancements available in Process History View, Predict and Neural or the Web based History



Analysis application and also want PI Server functionality, you will need to have both a DeltaV Continuous Historian and embedded Enterprise PI historian in your system.

4.10. Are all the Enterprise PI Server features available for use in the embedded Enterprise PI historian?

Yes. When you purchase the Enterprise PI Server license from OSIsoft (or Emerson reseller), you are purchasing a full featured, Enterprise PI Server. We are not limiting the functionality available in the Enterprise PI Server. We have not tested the operation of all Enterprise PI Server features that are outside the scope of the embedded Enterprise PI historian (i.e. we have only tested those features necessary for use as an embedded control system historian), but whatever features licensed for use with the Enterprise PI Server are available for use with the embedded Enterprise PI historian.

4.11. Are the PI client applications like PI DataLink, PI ProcessBook and PI to PI available for use with the embedded Enterprise PI historian?

Yes. Any PI client application, interface, or feature purchased and/or licensed for use with the Enterprise PI historian is available for use with the embedded Enterprise PI historian. This includes PI DataLink, PI ProcessBook, PI to PI and any other PI client application that is compatible with Enterprise PI version 3.4.375.80.

4.12. Do I need the PI Protocol Converter to use the PI client applications with the embedded Enterprise PI historian?

No. You may use any of the appropriately licensed PI client applications directly with the embedded Enterprise PI historian. The PI Protocol Converter is only required if you want to connect a PI client application to the DeltaV Continuous Historian.

4.13. Are the PI client applications like PI DataLink, PI ProcessBook supported for use on DeltaV Operator Stations?

No. We have not tested the use of the PI client applications on a DeltaV Operator Stations and thus do not support the use of these applications on an Operator Station. The PI client applications can be used on a DeltaV Application Station. Support for these applications on an Application Station is the same as it has been in the past for any 3rd party applications – these applications may be installed and used on an Application Station but support for the application is provided by OSIsoft.

4.14. Can I bring 3rd party data directly into the embedded Enterprise PI historian?

Yes. With the appropriate interface licenses from OSIsoft, you may bring in as much 3rd party data directly into the embedded Enterprise PI historian as your license allows. The DeltaV system does not place any restrictions on how much non-DeltaV data can reside in the embedded Enterprise PI historian.

4.15. Can I use other OPC DA client applications with the DeltaV OPC DA server on the embedded Enterprise PI historian Application Station?

Yes. The DeltaV OPC DA server on the embedded Enterprise PI historian Application Station may be licensed for up to 30,000 OPC items. If the embedded Enterprise PI historian is configured to collect less than 30,000 DeltaV



parameters, then the remainder of the 30,000 OPC items available on the DeltaV OPC DA server may be used by other OPC DA client applications. You must ensure that the DeltaV OPC DA server is licensed with enough OPC items to accommodate all OPC client applications, including the PI OPC DA interface, used to collect data for the embedded Enterprise PI historian. In addition, you should determine if the Application Station hardware can handle the load applied by the PI OPC DA interfaces and any additional OPC client applications.

4.16. How do I backup and restore the embedded Enterprise PI historian data?

The embedded Enterprise PI historian may be backed up and restored using the data management utilities provided by OSIsoft. For example, the embedded Enterprise PI historian may be backed up using backup scripts, similar to the backup scripts used with the legacy historian. Note the DeltaV Continuous Historian Administration utility cannot be used to backup or restore the embedded Enterprise PI historian; the Historian Administrator utility is only available for use with the DeltaV Continuous Historian and will not be available on the embedded Enterprise PI historian workstation.

4.17. Who provides support for the embedded Enterprise PI historian?

The DeltaV OPC DA Server and historian configuration interface file are supported by Emerson. The Enterprise PI Server, DeltaV Asset Connector and PI OPC DA interface is supported by OSIsoft. If you have a technical support question about the embedded Enterprise PI historian, call DeltaV Tech Support. If the question is related to the operation of the Enterprise PI Server, DeltaV Asset Connector and/or PI OPC DA interface, your question may be transferred to OSIsoft Tech Support. You must have an OSIsoft Software Reliance Program ("SRP") agreement in place for the PI components to receive technical support for your PI products.

5 Migration

5.1. Can I upgrade my existing legacy historian to an embedded Enterprise PI historian?

Yes. If you have a legacy historian running on a DeltaV Application Station you can upgrade the legacy historian to an embedded Enterprise PI historian. You will need to purchase the Enterprise PI historian version 3.4.375.80 from OSIsoft (or Emerson reseller) and then manually upgrade the legacy historian using the upgrade procedure provided by OSIsoft. You will also need to reconfigure the Continuous Historian subsystem to use the embedded Enterprise PI historian instead of the legacy historian.

5.2. If I upgrade my existing legacy historian to an embedded Enterprise PI historian, will I lose my existing historical data?

No. If you want to upgrade the legacy historian to an embedded Enterprise PI historian and preserve your historical data, you will need to run an archive upgrade script file provided by OSIsoft which will convert the archive files in the legacy historian to an archive file format accessible by the embedded Enterprise PI historian.

5.3. If I upgrade my existing legacy historian to an embedded Enterprise PI historian, will I need to reconfigure the DeltaV parameters for history collection?

No. In terms of historian configuration, when you upgrade the legacy historian to an embedded Enterprise PI historian you will only need to reconfigure the Continuous Historian subsystem on the DeltaV Application Station to use the embedded Enterprise PI historian instead of the legacy historian and download the subsystem. Your existing history collection will be “transferred” to the embedded Enterprise PI historian via the DeltaV Asset Connector.

5.4. If I upgrade my existing legacy historian to an embedded Enterprise PI historian, will I still have to purchase an Enterprise PI historian license?

Yes. The current Enterprise PI historian has significantly more features and capability than the legacy historian and thus provides more value. However, if you upgrade your legacy historian to an embedded Enterprise PI historian, OSIsoft will provide a discount off the cost of the Enterprise PI historian license. You will also require the DeltaV OPC DA Server license, the Enterprise Historian Configuration Interface license and the DeltaV Smart Connector license as discussed in Section 1.

5.5. Are there additional costs associated with migrating data from my existing legacy historian to an embedded Enterprise PI historian?

No. When you purchase the Enterprise PI Server for use as the embedded Enterprise PI historian, you will be able to upgrade your legacy historian and convert the data at no additional cost. If you require assistance to perform the legacy historian upgrade, support can be provided by Emerson and/or OSIsoft at additional cost.

5.6. Can I replace my existing DeltaV Continuous Historian with an embedded Enterprise PI historian?

Yes. If you have a DeltaV Continuous Historian running on a DeltaV Application Station you can replace it with an embedded Enterprise PI historian if you need PI functionality. You will need to purchase the Enterprise PI historian version 3.4.375.80 from OSIsoft (or Emerson reseller) and then reconfigure the Continuous Historian subsystem to use the embedded Enterprise PI historian instead of the DeltaV Continuous Historian.



5.7. If I replace my existing DeltaV Continuous Historian with an embedded Enterprise PI historian, will I lose my existing historical data?

No. If you want to replace the DeltaV Continuous Historian with an embedded Enterprise PI historian and preserve your historical data, you will need to use the PI OPC HDA interface to move the historical data from the DeltaV Continuous Historian (via the DeltaV OPC HDA Server) to the embedded Enterprise PI historian.

5.8. If I replace my existing DeltaV Continuous Historian with an embedded Enterprise PI historian, will I need to reconfigure the DeltaV parameters for history collection?

No. In terms of historian configuration, when you replace the DeltaV Continuous Historian with an embedded Enterprise PI historian you will only need to reconfigure the Continuous Historian subsystem on the DeltaV Application Station to use the embedded Enterprise PI historian instead of the DeltaV Continuous Historian and download the subsystem. Your existing history collection will be “transferred” to the embedded Enterprise PI historian via the DeltaV Asset Connector. Note that once you have reconfigured and downloaded the Continuous Historian subsystem to use the embedded Enterprise PI historian, the DeltaV Continuous Historian processes continue to run but are no longer collecting data. On the next reboot of the Application Station, the DeltaV Continuous Historian processes will not start.

5.9. If I replace my existing DeltaV Continuous Historian with an embedded Enterprise PI historian, will I still have to purchase an Enterprise PI historian license?

Yes. You will still need to purchase an Enterprise PI historian license from OSIsoft. You will also require the DeltaV OPC DA Server license, the Enterprise Historian Configuration Interface license and the DeltaV Smart Connector license as discussed in Section 1.

5.10. Are there additional costs associated with migrating data from my existing DeltaV Continuous Historian to an embedded Enterprise PI historian?

Yes. Migration of your DeltaV Continuous Historian data to the embedded Enterprise PI historian requires the DeltaV OPC HDA Server and the PI OPC HDA interface. Both of these components require a license. However, the first concurrent connection to the DeltaV OPC HDA Server may be used without a license, so it is possible if the PI OPC HDA interface is the only connection to the DeltaV OPC HDA Server, then you will not require a license for the DeltaV OPC HDA Server. You will still need a license for the PI OPC HDA interface. The PI OPC HDA interface may be purchased from OSIsoft or Emerson reseller. Contact your local OSIsoft or Emerson sales office for more details. If you require assistance to perform the legacy historian upgrade, support can be provided by Emerson and/or OSIsoft at additional cost.

5.11. If I replace my existing DeltaV Continuous Historian with an embedded Enterprise PI historian, can I switch back to the DeltaV Continuous Historian?

Yes. If you replace your existing DeltaV Continuous Historian with an embedded Enterprise PI historian (or install the embedded Enterprise PI historian on a new DeltaV v10.3 system), and you want to revert back to the DeltaV Continuous Historian, you can do this by simply reconfiguring the Application Station to use the DeltaV Continuous Historian and downloading the Continuous Historian subsystem. The DeltaV Continuous Historian will be configured and the historian data collection processes will begin collecting data. To collect more than 250 parameters, the



Application Station will need a DeltaV Continuous Historian scale up license. The embedded Enterprise PI historian will stop collecting data but will remain on the Application Station and remain available for use by PI client applications. The DeltaV historian client applications, like Process History View, will start using the DeltaV Continuous Historian. If the embedded Enterprise PI historian is no longer needed, it must be manually uninstalled.