

SmartPlant Fusion

Release Bulletin



Version 2016 R1 (4.1)

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Contents

Preface.....	5
SmartPlant Fusion Product Documentation.....	5
Customer Support.....	6
Intergraph® Smart Support Online.....	7
Software compatibility matrix	7
Knowledge Base	7
SmartPlant Fusion 2016 R1 Updates	8
SmartPlant Fusion Administrator	8
SmartPlant Fusion Reviewer	9
SmartPlant Fusion Document Controller	9
SmartPlant Fusion Viewer	10
SmartPlant Fusion Pre-processor Utility	11
Known Issues	13
Training.....	14
SmartPlant Fusion Hardware and Software Recommendations	15
SmartPlant Fusion Database Server	15
SmartPlant Fusion Application Server	15
SmartPlant Fusion Workstation	16
Licensing	17
Internationalization.....	18
Index	21

Preface

The SmartPlant Fusion Release Bulletin contains high-level information about the compatibility, new functionality, and explanations of product terminology.

This document is intended for managers, administrators, and integration specialists who support SmartPlant® Fusion.

For more detailed information about the new features highlighted in this document, see the product documentation.

SmartPlant Fusion Product Documentation

SmartPlant Fusion documentation is available as Help and as Adobe® PDF files. To view printable guides for SmartPlant Fusion, click **Help > Printable Guides** in the software.

Intergraph gives its customers permission to print as many copies of the delivered PDF files as they need for their non-commercial use. Do not print the PDF files for resale or redistribution.

Installation and Overviews

- *SmartPlant Fusion Release Bulletin* - Provides information on the SmartPlant Fusion features for the current release.
- *SmartPlant Fusion Installation and Configuration Guide* – Provides installation, set up, and configuration information. It also provides information about troubleshooting the software.
- *SmartPlant Fusion Getting Started Guide* - Provides overview information to help users start working in SmartPlant Fusion.

Administrative Guide

- *SmartPlant Fusion Administrator's Guide* - Provides information such as general conceptual information, procedures, and vocabulary necessary to use the SmartPlant Fusion Data Capture Administration module.

User's Guides

- *SmartPlant Fusion Reviewer's Guide* - Provides information such as general conceptual information, procedures, and vocabulary necessary for the reviewer to use the SmartPlant Fusion Quality Control module.
- *SmartPlant Fusion Document Controller's Guide* - Provides information such as general conceptual information, procedures, and vocabulary necessary for the document controller to use the SmartPlant Fusion commands available in the SmartPlant Foundation Desktop Client and SmartPlant Fusion Data Capture Task Manager module.
- *SmartPlant Fusion Viewer's Guide* - Provides information such as general conceptual information, procedures, and vocabulary necessary for the viewer to use the SmartPlant Fusion commands and functionality available in the SmartPlant Fusion Data Capture Task Manager module, SmartPlant Fusion Web Portal and SmartPlant Foundation Desktop Client.
- *SmartPlant Fusion Pre-Processor Utility Guide* – Provides information such as general conceptual information, procedures, and vocabulary necessary for the administrator and

document controller to use the SmartPlant Fusion commands available in the SmartPlant Fusion Pre-Processor Utilities module.

Customer Support

For the latest support information for this product, use a World Wide Web browser to connect to <http://support.intergraph.com> (*http://support.intergraph.com*). Also, you can submit any documentation comments or suggestions you might have on the Intergraph support site.

SECTION 1

Intergraph® Smart Support Online

Access the Intergraph® Smart Support Web site for the most up-to-date information about all PPM products. To access the Smart Support Web site, browse to the following site, and type your Smart Support user name and password:

<https://smartsupport.intergraph.com> (<https://smartsupport.intergraph.com>)

Customers with appropriate Smart Support privileges can perform the following actions:

- See what's new
- Search the knowledge base for answers to support questions
- Submit, review, and update service requests
- Check product release and support end dates
- Find and download solutions, fixes, service packs, and upgrade information
- Download product documentation or read it online
- View the compatibility matrix of products, databases, and operating systems

Software compatibility matrix

For more information about version interoperability between SmartPlant products, see the *Intergraph PPM Compatibility Matrix - Product Report* at Intergraph Smart Support. To view this matrix, browse to the following Web address, and type your Intergraph Smart Support user name and password: <https://smartsupport.intergraph.com>. Click **View Downloads** at the top of the page, and then click the **Product Compatibility** link on the right side of the page. Select a product from the **Select the Product Name** list, and then choose the version of the product from the **Version** list.

Knowledge Base

To search the knowledge base on the Intergraph Smart Support Web site, click **Search Answers** and type a topic name. Then type **SmartPlant Fusion** and select the product short name under **Product**. Click **Search**.

SECTION 2

SmartPlant Fusion 2016 R1 Updates

SmartPlant Fusion Administrator

- You can now work with SmartPlant Fusion data in the desired project by setting the Create/Update scope to required project. For more information on setting Create/Update scope, see *Concurrent Engineering* in the *SmartPlant Foundation Desktop Client User's Guide* delivered with SmartPlant Foundation software. (CR-AM-104476)
- Central Fusion Settings is renamed to Central Settings. (CR-AM-104577)
- You can now select a folder to store the ignored files, in the **General Settings** page of the **Central Settings** module. For more information, see *Central Settings* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-103448)
- You can now configure the associated column sets for each of the available business objects in the **Property Lists** module. For more information, see *Add a business object* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-96823, CR-AM-96849, CR-AM-103049, CR-AM-98916)
- You can now use an existing data reader pattern to create a new one using **Copy Data Reader Pattern**. For more information, see *Data Reader Patterns* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-97859)
- You can now create SDV Job Definition in the **Central Settings** module, and select SDV Job Definition in the **Data Reader Patterns** module to generate a csv file so that the same can be imported into the target system. For more information, see *Central Fusion Settings* and *Create a data reader pattern* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-98288, CR-AM-96847)
- You can now create a new relationship between domain tag and business object if a specific interface realizes the business object. For more information, see *Map selected fields* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-97861)
- You can now click **Refresh** to update the columns those were added in the database and to remove any columns that no longer exist in the database. For more information, see *Define the data reader pattern* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-97860)
- The PDF files generated using the Document Discovery Task are now placed in a folder called PreProcessedAlternateRenditions. For more information, see *Central Settings* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-96925)
- The Database Tag Discovery Task is renamed to Database Domain Discovery Task. For more information, see *Database Domain Discovery Task* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-96824)
- You can now specify a folder path while creating a document discovery task. For more information, see *Create a new document discovery pattern* in the *SmartPlant Fusion Administrator's Guide*. (CR-AM-96848, CR-AM-10078)

SmartPlant Fusion Reviewer

- You can now use the GraphicsMap file for hotspotting in the Document Workbench if you have already created an alternate rendition for that file in the **Central Settings** module. For more information, see *View relationships in the Document Workbench* in the *SmartPlant Fusion Reviewer's Guide*. (CR-AM-96801)
- When you select a single document to view in the document workbench, then the **Documents** pane is not displayed in the **Document Workbench** page. For more information, see *View relationships in the Document Workbench* in the *SmartPlant Fusion Reviewer's Guide*. (CR-AM-93767)
- You can now search for scattered text in the **Document Workbench** page. For more information, see *Create Document Tag relationship* in the *SmartPlant Fusion Reviewer's Guide*. (CR-AM-96822)

SmartPlant Fusion Document Controller

- You can now check a document in to the SmartPlant Foundation Desktop Client using content extraction by right-clicking the document, and clicking **Edit > CheckIn with Content Extraction**. For more information, see *Using the SmartPlant Desktop Client to manage documents* in the *SmartPlant Fusion Document Controller's Guide*. (CR-AM-96802)
- You can now view the log information for the loaded and processed files in **SmartPlant Fusion Data Capture Task Manager** module. For more information, see *Create a new document discovery task*, *Create a new content discovery task*, and *Create a new database domain discovery task* in the *SmartPlant Fusion Document Controller's Guide*. (CR-AM-105067, CR-AM-103727)
- You can now use the **Managed Data Tasks** module to transfer existing documents from the staging domain (SmartPlant Fusion or Smart Data Validator) to the approval domain (Facility Data Warehouse). You can also create a new managed data task and the associate documents in the **Managed Data Tasks** module. For more information, see *Managed data task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-105012, CR-AM-100080)
- You can now use the Data Capture Task Manager Scheduler to start or stop the SmartPlant Fusion schedulers when they are running scheduled tasks in the document discovery task, content discovery task, and the database domain discovery task in the **SmartPlant Fusion Data Capture Task Manager**. For more information, see *Start or stop the SmartPlant Fusion scheduler* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-103446)
- You can now view the native files on the **Progress** tab for a document processed through a document discovery task. For more information, see *Create a new document discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96932)
- You can now view the relationship details for a document processed through a content discovery task in the **Relationship Details** page. For more information, see *Create a new content discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96927, CR-AM-96804, CR-AM-96930)
- You can now create a relationship between two business objects if an attribute has a relationship configured on it. For more information, see *Create a new content discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-101698)

- You can now click the **Progress** tab to view the progress of each and every individual database pattern. You can view the time taken to process the database task and the corresponding items processed. For more information, see *Create a database domain discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96832)
- You can now import the SDV Job Definition to validate, and export data to one or more target systems. For more information, see *Database domain discovery tasks* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-98288)
- The content discovery task now uses the Content and GraphicsMap file present in the PreProcessedAlternateRenditions\PreProcessedContentFiles folder for content extraction. For more information, see *Create a new content discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96801)
- You can now create a content discovery task for selected documents from the **Document Discovery Task** page. For more information, see *Create a new document discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96931)
- You can now update the Fusion database once the initial load of data has occurred and can extract the data that has been updated from a set point in time. For more information, see *Create a new content discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96673)
- You can now view all the tags related to the selected document by clicking **View Document Relations**. For more information, see *Create a new document discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96928)
- The Database Tag Discovery Task is renamed to Database Domain Discovery Task. For more information, see *Database Tag Discovery Task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96824)
- You can now view the details about a Document Discovery Task, Content Discovery Task, and Database Domain Discovery Task in the **Progress** tab. For more information, see *Create a new document discovery task* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96833)
- You can now view the tag properties and documents in the **SmartPlant Fusion Data Capture Task Manager** module. For more information, see *SmartPlant Data Capture Task Manager* in the *SmartPlant Fusion Document Controller Guide*. (CR-AM-96834)

SmartPlant Fusion Viewer

- You can now view the 2D and 3D documents in the SmartPlant Fusion Web Portal. For more information, see *Working with the SmartPlant Fusion Web Portal* in the *SmartPlant Fusion Viewer's Guide*. (TR-AM-96559)

SmartPlant Fusion Pre-processor Utility

- You can now concatenate ExtractDataFromText rule along with the RelatedText rule while configuring the Concatenate rule. For more information, see *Configure Concatenate rule in the SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-105361)
- You can now extract data from Office files using **Office Reader Pre-Processor** module. For more information, see *Office Reader Pre-Processor* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-103208)
- You can now consider the pattern as a regular expression in the **Drawing Reader Pre-Processor** module. For more information, see *Configure Pattern rule*, *Configure ScatteredText rule* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-103261)
- You can now apply an attribute for all the business objects specific to the target object using the SpecifiedArea rule. For more information, see *Configure SpecifiedArea rule* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-96669)
- You can now extract the information from a table within the pdf file. For more information, see *Configure TableRule and Configure TableColumnRule* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-96667)
- You can now extract title block and tag information from datasheets using the **Datasheet Reader Pre-Processor** module. You can also provide a default value for the particular cell while processing the data file. For more information, see *Datasheet Reader Pre-Processor* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-98816, CR-AM-87662)
- You can now export the existing drawing data to a text file to understand the type of rule to be created. For more information, see *Process the files using the Drawing Reader Pre-Processor module* and *Process the files using PDF Reader Pre Processor* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-97862, CR-AM-97988)
- You can now search and preview the list of PDF documents that do not have any searchable text so that you can process them with an Optical Character Recognition software prior to processing. For more information, see *Process the files using PDF Reader Pre Processor* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-97022)
- You do not have to define this rule if you were to extract only the tags or business objects from the drawing file. For more information, see *Configure ValidationRule rule* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-97023)
- You can now export a template into an XML file and import this XML file to create a new template and the rules defined in it. For more information, see *Drawing Reader Pre-Processor* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-96940)
- You can now select **Match Tag Patterns** option to extract the tags which are defined in the **Tag Discovery Patterns** module. For more information, see *Add Rules* and *Process the files using PDF Reader Pre Processor* in the *SmartPlant Fusion Pre-Processor Utility Guide* (CR-AM-96936)
- You can re-use the patterns which are already defined in the **Tag Discovery Pattern** module to extract tag for matching a particular tag pattern for configuring the Pattern rule. For more information, see *Configure Pattern rule* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-96846)

- You can now type a character in the **Separator** box to combine characters or words to configure Scattered Text rule. For more information, see *Configure ScatteredText rule* in the *SmartPlant Fusion Pre-Processor Utility Guide*. (CR-AM-96937)

SECTION 3

Known Issues

The ReadMe file delivered with the software installation contains information about open issues for SmartPlant Fusion. The Readme.pdf file is available with the SmartPlant Fusion setup.

SECTION 4

Training

SmartPlant Fusion courses are available for the 2016 release. For more information about course availability and schedules, see <http://www.intergraph.com/ppm/training.aspx>.

SECTION 5

SmartPlant Fusion Hardware and Software Recommendations

Before beginning the installation of SmartPlant Fusion, verify that your servers and client workstation computers meet the following hardware and software recommendations.

SmartPlant Fusion Database Server

Please refer to your Oracle or Microsoft SQL Server product documentation for information on configuring your database server hardware.

SmartPlant Fusion database server has the same hardware and software requirements as SmartPlant Foundation. For more information on SmartPlant Foundation hardware and software recommendations, see the *SmartPlant Foundation Installation and Setup Guide* delivered with SmartPlant Foundation software.

SmartPlant Fusion Application Server

The SmartPlant Fusion application server must be installed on a SmartPlant Foundation application server, and it has no additional hardware requirements. SmartPlant Fusion application server has the same software requirements as SmartPlant Foundation with some additional software requirements. For more information on SmartPlant Foundation hardware and software recommendations, see the *SmartPlant Foundation Installation and Setup Guide* delivered with SmartPlant Foundation software.

The SmartPlant Fusion server is a 64-bit application.

Software Prerequisites

- SmartPlant Foundation 2016
- SmartPlant Markup Plus 2016 (for processing of Microsoft Office files)
- Microsoft Silverlight 5.1

Software Recommendations

- TruView Integrator for SPE/SPO 2016 (required for viewing the Laser Scan files)
- SmartPlant Interop Publisher 2014 or later (for processing of the 3D Model files)
- Microsoft Internet Explorer 9 or 10 in compatibility mode (required for Web Portal and viewing the online documentation delivered with the software)
- Microsoft Office Excel 2010 SP1 or 2013 with VBA 32-bit (required for viewing the Ad-hoc reports)
- Microsoft Office Word 2010 SP1 or 2013 with VBA 32-bit (required for viewing the Open XML reports)

- Microsoft Access Database Engine 64-bit version (required if using Microsoft Excel as data connection in Data Reader Pattern module and Tag Pattern Extractor utility)
- SmartSketch 2014 R1 (for processing the Drawing files)

NOTE For more information on TruView Integrator for SPE/SPO installation, see the *TruView Integrator for SPE/SPO Installation and Configuration Guide* delivered with TruView Integrator software.

SmartPlant Fusion Workstation

The SmartPlant Fusion client can be installed in a 64-bit environment.

Minimum Hardware Recommendations

- 8 core 2.13 GHz processor
- 16 GB RAM
- DVD drive access, either locally or through a network connection for installation

Supported Operating Systems

- Microsoft Windows 7 Professional or Enterprise Service Pack 1 (64-bit)
- Microsoft Windows 8.1 Professional or Enterprise (64 bit)
- Microsoft Windows 10 Professional or Enterprise (64 bit)

Software Prerequisites

- SmartPlant Foundation 2016
- SmartPlant Markup Plus 2016 (for processing of Microsoft Office files)
- Microsoft Silverlight 5.1

Software Recommendations

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- Microsoft Office Word 2010 SP1 or 2013 with VBA 32-bit (required for viewing the Open XML reports)
- Microsoft Access Database Engine 64-bit version (required if using Microsoft Excel as data connection in Data Reader Pattern module and Tag Pattern Extractor utility)
- Windows Media Player (if recording or playing back an animation recording)

Licensing

SmartPlant Fusion is licensed concurrently with SmartPlant Foundation. When you install and configure SmartPlant Foundation and its prerequisite software, you must also install SmartPlant License Manager on the SmartPlant Fusion server.

For more information about licensing for SmartPlant Foundation, see the *SmartPlant Foundation Licensing Guide* delivered with SmartPlant Foundation or the *SmartPlant License Manager Installation and User's Guide* delivered with SmartPlant License Manager.

SECTION 6

Internationalization

Supporting internationalization in a homogeneous environment is one of the enhancements available in SmartPlant Enterprise. A homogeneous environment uses elements from only a single locale. For example, a German customer running on a German operating system using only German characters and German cultural conventions is a fully supported homogeneous environment configuration.

Homogeneous Environments

When starting a new project, use extra care during installation and configuration to ensure the proper creation and maintenance of homogeneous environments:

- All the computers (servers and clients) within an integrated SmartPlant Enterprise implementation must have the same regional settings, and no one should change the regional settings after the project has started.
- Do **not** cross the decimal locale boundary. This is the most common cause of numeric data corruption and calculation errors. Having users with different regional settings (such as with a period versus a comma for the decimal point) causes the software to interpret values unpredictably. For example, a pipe run with a pressure of 35.3 psi can be read by the software as 353 psi to the user with different regional settings. A cable length defined as 39 ft 11,21 inches has been interpreted as 121718910971323 meters when published to an XML file. These incorrect interpretations may be used in internal software calculations and can be impossible to backtrack or correct. Do not change the decimal point character to try to solve an issue. Doing so will only corrupt values in the database or in text files.
- Do **not** cross the character-set locale boundary. For example, the character set boundary between Western (Latin-based) and Eastern Europe (Cyrillic-based), or between Eastern Europe and Japan.
- Create Oracle databases using AL32UTF8 for the database character set and AL16UTF16 for the NLS character set.
- Never modify the NLS_LANG registry entry on an Oracle client. Doing so causes the character data not to convert to Unicode.
- Create Microsoft SQL Server databases with locale-specific collation settings and ensure that all databases have the **same** setting.

Heterogeneous Environments

In contrast, a heterogeneous environment using elements from different, or even multiple locales, **is not supported**. Many customers are currently operating in unsupported heterogeneous environments and are often not aware of that fact. Examples of heterogeneous environments:

- Entering or viewing Japanese data on an US/English operating system
- Using German Regional Settings (where the decimal point is a comma) on a US/English operating system

- Using databases with different character encodings such as CL8MSWIN1251 or JA16SJIS
- Using multiple languages in a project, **especially** when crossing language-group boundaries
- Using an English server with different local language clients

International / Bi-lingual Projects

International bi-lingual projects are possible; however, great care must be used when configuring these environments. Limitations exist and must be properly understood:

- Oracle and MS SQL Server databases can reside on any language operating system, as long as the databases have been created and configured with proper Unicode and collation settings.
- All SQL Server databases must have the same collation setting and reflect the *master* language. Text is stored, sorted, indexed, and presented based on the collation setting. You must determine which language will be used primarily to generate output (P&IDs, SLDs, reports, approval documents, and so forth.) If Russian and English text is entered, and Russian is the target locale, choose the collation based on the Cyrillic character set.
- All Microsoft operating systems (Japanese, Russian, German, and so forth) can enter English characters. The reverse, however, is not true in most cases.
- Keyboard-locale can be changed as long as a character-set and code-page boundary is not crossed. For example, English, German, French, and Spanish characters can all be used in the same project because the same Windows® code-page (1252) is used. However, Russian characters (code-page 1251) cannot be used in a US/English environment.
- You must decide which language operating system is the master for bi-lingual projects.

The following is an example of a Russian-based project:

Companies in the United States and the United Kingdom are working a project with a Russian company and the deliverables (drawings, reports, and so forth) must ultimately be provided in Russian. The companies in the U.S. and the U.K. are working the project using the *master* Russian operating systems (possibly using virtual Russian operating systems running on VMware Workstation). The U.S. and U.K. companies can install and use English Microsoft Office products on the Russian operating system because Office products are globally enabled. If a Russian interface exists for the SmartPlant Enterprise application, then Russian users can use the Russian interface while the English-speaking users continue to use the US/English interface. English-speaking engineers can enter English characters. Russian-speaking engineers can enter Russian characters.

However, because the Russian locale uses different decimal and character-set locales, everyone (English and Russian engineers) **must** use the Russian decimal symbol which is a comma. For customization purposes, databases can be modified to accommodate new Russian-specific requirements (fields, properties, and so forth.) Using filters, display sets, and other software features, bi-lingual projects can be further customized. Graphic data, reports, and so forth can be created in either or both languages.

CAUTION Do not change regional settings to reflect a U.S. environment in order to resolve problems in a non-US/English homogeneous configuration. Doing this creates a heterogeneous configuration that **will** cause other possibly hidden problems that cannot be corrected. Everyone working on a project must use the same regional settings and character set throughout the life of the project.

Citrix XenApp Solutions for International Projects

Using Citrix XenApp Solutions, you can define environments that isolate users from having to interact with non-native language operating systems while improving data integrity and minimizing opportunities for data corruption. However, users must enter data using master locale conventions for the project (decimal separator and date conventions, for example). You can create these environments using different combinations of languages, but some limitations exist. For example, you cannot use Russian and Chinese text together in a project. In addition, special language characters (the German ä and ß for example) cannot be used if the master locale is outside the western Latin-based languages (the master locale is Russian, Chinese, Japanese, or Korean, for example).

Questions and Assistance

Please contact your support representative for assistance and answers to your questions: see *Intergraph Customer Support* (<http://support.intergraph.com/>).

Index

I

Intergraph® Smart Support Online • 7
Internationalization • 18

K

Knowledge Base • 7
Known Issues • 13

L

Licensing • 17

P

Preface • 5

S

SmartPlant Fusion 2016 R1 Updates • 8
SmartPlant Fusion Administrator • 8
SmartPlant Fusion Application Server • 15
SmartPlant Fusion Database Server • 15
SmartPlant Fusion Document Controller • 9
SmartPlant Fusion Hardware and Software
Recommendations • 15
SmartPlant Fusion Pre-processor Utility • 11
SmartPlant Fusion Reviewer • 9
SmartPlant Fusion Viewer • 10
SmartPlant Fusion Workstation • 16
Software compatibility matrix • 7

T

Training • 14