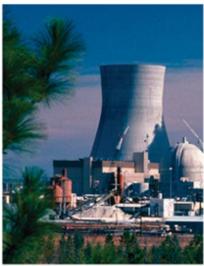
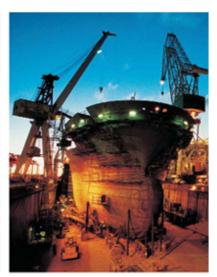
Workshare

Configuration and Reference Guide

Process, Power & Marine









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Preface

This document is a configuration and reference guide for Workshare. The content is the same as the online Help delivered inside the product.

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Using Workshare: An Overview

Workshare functions allow you to share SmartPlant P&ID data within one plant structure with remote sites. Designed for companies running plants from multiple sites, EPCs or Owner/Operators, or for multiple companies that are working on a single plant, Workshare provides tools to manage changes as if they were created at the same site.

Hosts and Satellites

Workshare functions use a host/satellite model for sharing SmartPlant P&ID data among multiple locations. The host, using SmartPlant Engineering Manager, creates satellite slots that include the entire SmartPlant P&ID system and grants access to P&ID data by allowing the satellite sites to subscribe to an available satellite slot.

The satellite sites, after using SmartPlant Engineering Manager to subscribe to a satellite slot at the host site, use SmartPlant P&ID Drawing Manager to create, view, or modify the drawings.

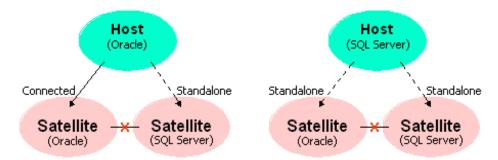
Drawing ownership is controlled at the site where they are created. When ready, the owner of a drawing can grant ownership to the host or to other satellites. Throughout this sharing process, synchronization tools in SmartPlant P&ID Drawing Manager allow the host and the satellites to make sure they are working with the latest data.

Workshare Modes

Workshare can be configured in two modes:

- Connected Uses a database link established between the database servers at the host and satellite sties. In other words, satellites are distributed databases linked to a host database. In connected Workshare, both the host and satellite must be using Oracle. If you plan to use Workshare in a TEF environment, we recommend using connected Workshare to ensure smooth claiming.
- **Standalone** Shares files and data without having a database link. Files are manually transmitted between host and satellites.

Any given site can host both connected and standalone satellites. In other words, the host can use Oracle and the satellite can use SQL Server, or any combination thereof. However, a site must use Oracle to host a connected Workshare collaboration.



Configurations

The configuration possibilities for implementing Workshare are numerous. For example, you can use Workshare to simulate the PDS® 2D Task/Master configuration by using the Workshare host as the Task environment and the satellite as the Master. You could then publish drawings for sharing from the host to the satellite. By limiting user access at the satellite site to Read Only for SmartPlant P&ID objects, the satellite becomes an issued drawing database.

You can also use standalone Workshare in a mixed database environment where the host can be using Oracle and the satellite can be using SQL Server, or vice-versa. This configuration is useful when multiple companies using different database standards are working on the same plant.

Another possible configuration involves using Workshare at the project level within an as-built plant scenario. For more information about using Workshare with projects, see *Using Workshare with Projects: An Overview*, 10.

Automation

Several of the Workshare commands are available in the SmartPlant P&ID automation layer. For more information about using these Workshare automation commands, see *SmartPlant P&ID Programmer's Guide*.

Related Topics

- Configuring Workshare: An Overview, page 39
- Creating Satellite Slots: An Overview, page 44
- Using Workshare with Projects: An Overview, page 9

Using Workshare with The Engineering Framework

The following rules apply to using the Workshare functionality within The Engineering Framework (TEF).

- You can enable and disable Workshare before or after registering a Greenfield plant with TEF.
- You can create satellites and connect to them after registering with TEF.
- You cannot register a satellite or a project host with TEF.
- You cannot retrieve a WBS document when Workshare is enabled.
- Satellites must transfer drawing ownership back to the host in order for the host to publish the drawings and in order for documents retrieved from TEF to have tasks updated within the satellite drawings.

Using the SmartPlant P&ID TEF Commands Within a Workshare Collaboration

The Workshare host can perform the following actions from within SmartPlant P&ID when registered with TEF. For more information about these commands, see the *SmartPlant P&ID User's Guide*.

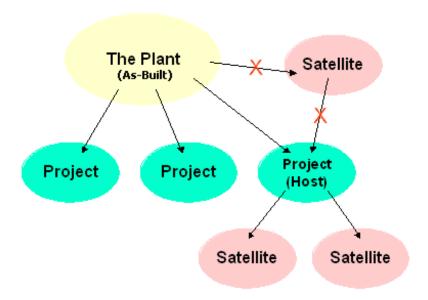
- **Publish** Any drawing can be published to TEF.
- **Retrieve** Any TEF document can be retrieved.
- Correlate Available to review correlations only if the drawing is readonly with respect to Workshare. No other correlation activity is allowed for read-only drawings. If the drawing is owned with respect to the Workshare site, then all correlation activities are available.
- **To Do List** All commands and tasks are available for drawings opened with read-write privileges. For drawings opened in read-only mode, commands that modify a drawing, such as the Run To Do List task, are not available.

Related Topics

- Enable Workshare Command, page 42
- Projects vs. Workshare, page 11

Using Workshare with Projects: An Overview

Workshare functions the same whether using projects or not. The only difference is that when using projects, only a project can function as a Workshare host. The Plant cannot be a host or a satellite when projects are enabled.



Important

- In a Workshare collaboration, new plant groups cannot be created by standalone satellite sites or by the satellite sites in a project.
- Connected Workshare is available only for sites using Oracle databases. If your plants and projects are using a SQL Server database, you cannot use connected Workshare.
- Standalone Workshare allows you to mix the type of databases used in a Workshare collaboration.
- When a project is used as a Workshare host, the satellites synchronize their reference data with the Plant reference data.
- When transferring ownership of a drawing to another Workshare site, the corresponding versions are not transferred. Only the current version of the drawing is transferred.
- New plant groups (plants, areas, units, etc.) cannot be created by satellites hosted by a project.

Using Projects in an Existing Workshare Collaboration

You must discontinue all Workshare collaboration in a plant before you can create projects in the plant. In other words, if the plant structure contains active Satellites, the **Enable Projects** command remains unavailable. We recommend completing the following tasks before enabling the plant for projects.

- 1. Transfer all drawings to the host.
- 2. Delete all satellites.
- 3. Disable the plant for Workshare.
- 4. Enable the plant for projects.
- 5. Create a project to serve as the host.
- 6. Enable the project for Workshare.
- 7. Create satellite slots in the project host.
- 8. Create satellites.
- 9. Check out or fetch drawings at the host, then re-distribute drawings back out to the satellites.

Projects vs. Workshare

The following comparisons may be useful when making the decision about whether to use projects or Workshare or both.

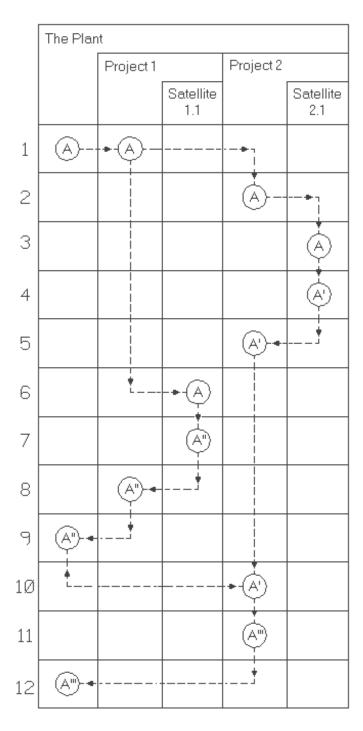
Category	Projects	Workshare
Topology	Each plant can have many projects. Each project belongs to exactly one plant.	Each Workshare host can have many satellites. Each satellite belongs to exactly one host.
Identity	Objects that are transferred between a plant and a project maintain their identity.	Objects that are transferred between a host to a satellite maintain their identity.
Reference Data	One set of reference data is used for a plant and all its projects. Changes can be made only through the Plant. Since all projects use the same reference data as the Plant, all projects immediately see changes to the reference data.	The reference data must be the same for a host and its satellites. Changes can be made only through the host. Changes are propagated to the satellites by means of the synchronize reference data commands in Drawing Manager.

Category	Projects	Workshare
Physical Separation	A plant and all of its projects must exist on the same server and within the same database instance.	Connected Workshare allows data to be distributed to multiple database instances on separate servers that may be remote from the host server.
		Standalone Workshare allows data to be distributed between separate database types.
Organization	Projects are suited to dividing up work that will be done within a single organization.	Workshare is suitable for dividing up work among multiple organizations.
Work Off-line at a Satellite Site?	No. In a projects/Workshare scenario, claim records are stored in the P&ID schema at the host site. If the database link goes down, claimed items at the satellite site will not recognize the claim status. However, the claim status of newly placed items will be recognized when the database link is re-established.	Yes, in a connected Workshare configuration (without projects), work can continue when the database link goes down. Standalone Workshare does not require any database connections.
When to Use?	When the work to be done must be divided into subsets, but it is all done by the same organization and can use the same server.	When the work to be done must be divided into subsets and assigned to different organizations.
	When an as-built facility model is to be built and the changes to that model need to be managed.	When the subsets of work must be done on servers that are physically
	When a master database is to be used for the approved design and a task database is to be used for the ongoing design work.	separated.

Scenario 1: Compare

The following workflow demonstrates how to compare drawings in a connected Workshare collaboration using projects.

1	Project 1 checks out Drawing A.
	Project 1 assigns ownership of Drawing A to Satellite 1.1.
2	Project 2 fetches Drawing A from Project 1.
3	Project 2 assigns ownership of Drawing A to Satellite 2.1.
4	Satellite 2.1 opens, claims items, and modifies Drawing A.
	Drawing A becomes Drawing A'.
	Satellite 2.1 exits Drawing A'.
5	Satellite 2.1 assigns ownership of Drawing A' to Project 2.
6	Satellite 1.1 opens, claims items, and modifies Drawing A.
	Drawing A becomes Drawing A".
	Satellite 1.1 releases claims and exits Drawing A".
7	Satellite 1.1 assigns ownership of Drawing A" to Project 1.
8	Project 1 checks Drawing A" into the Plant.
9	Project 2 checks out Drawing A" (without replacing Drawing A').
10	Project 2 compares Drawing A" (modified in Project 1) with it's own Drawing A'.
11	Project 2 refreshes Drawing A' with differences from Drawing A".
	Drawing A' becomes Drawing A"'.
12	Project 2 checks Drawing A'" in to the Plant.



Related Topics

• Projects vs. Workshare, page 11

Scenario 2: Loops

The following workflow demonstrates using shared items in a connected Workshare collaboration using projects.

1	The Plant creates Drawing A and places 3 DCS instruments.
2	Project 1 checks out Drawing A and creates the following loops:
	P-100 in the drawing stockpile P-101 in plant stockpile (shared = False)
	P-102 in plant stockpile (shared = True)
	Project 1 verifies via the EDE that there are 3 DCS instruments and 3 loops in the drawing.
3	Project 1 closes Drawing A.
	Drawing A becomes Drawing A'.
4	Project 2 fetches (with read/write permissions) Drawing A' from Project 1.
	Project 2 opens Drawing A' and verifies via the EDE that P-100 is in the drawing stockpile and that there are 3 DCS instruments, then closes Drawing A'.
	Project 2 assigns ownership of Drawing A' to Satellite 2.1 and synchronizes shared items.
5	Satellite 2.1 executes Get Latest Version from Remote command and synchronizes shared items.
	Satellite 2.1 opens Drawing A' and verifies via the EDE that P-100 is in the drawing stockpile and that there are 3 DCS instruments, then closes Drawing A'.
6	Project 1 assigns ownership of Drawing A' to Satellite 1.1 and synchronizes shared items.
	Satellite 1.1 executes Get Latest Version from Remote command and synchronizes shared items.
	Satellite 1.1 opens Drawing A' and verifies via the EDE that P-100 is in the drawing stockpile and that there are 3 DCS instruments, then closes Drawing A'.
7	Satellite 1.1 creates Drawing B and places an instrument. Drawing B becomes Drawing B'.
8	Satellite 1.1 opens Drawing B', verifies via the EDE that the only the P102 loop tag is available for assignment (confirming that synchronizing shared items brought the loop over to the satellite), then closes Drawing B'.
9	Satellite 2.1 creates Drawing C and places an instrument. Drawing C becomes Drawing C'.
10	Satellite 2.1 opens Drawing C', verifies via the EDE that the only the P102 loop tag is available for assignment (confirming that synchronizing shared items brought the loop over to the satellite), then closes Drawing C'.
11	Satellite 1.1 assigns ownership of Drawing A' to Project 1 and synchronizes shared items.

Project 1 executes Get Latest Version from Remote command and synchronizes shared items.

Project 1 opens Drawing A' and verifies the following via the EDE:

P-100 in the drawing stockpile

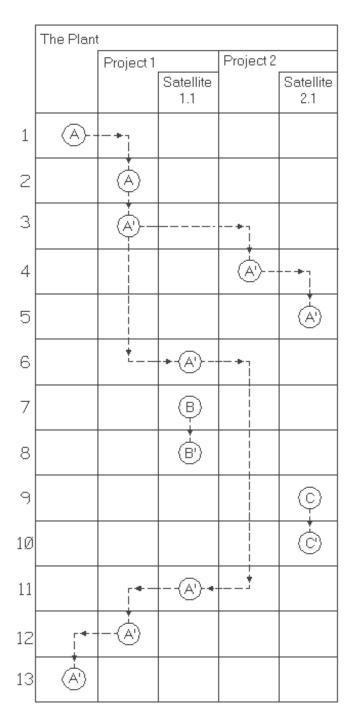
P-101 in plant stockpile (shared = False)

P-102 in plant stockpile (shared = True)

3 DCS instruments

Project 1 closes Drawing A' and then checks Drawing A' into the Plant.

13 The Plant opens Drawing A' as read-only and verifies via the EDE that P-100 is in the drawing stockpile and that there are 3 DCS instruments.



Related Topics

Projects vs. Workshare, page 11

Scenario 3: OPCs

The following workflow demonstrates handling OPCs in a connected Workshare collaboration using projects.

1	Project 1 checks out Drawing A from the Plant.
2	Project 1 checks out Drawing B from the Plant.
3	Project 1 assigns ownership of Drawing B to Satellite 1.1.
4	Project 1 checks out Drawing C from the Plant.
5	Project 1 assigns ownership of Drawing C to Satellite 1.1.
6	Project 1 opens Drawing A, places OPC-100, sends the partner OPC-100 to Drawing B, and closes the drawing.
	Drawing A becomes Drawing A'.
7	Project 1 synchronizes shared items with Satellite 1.1.
8	Satellite 1.1 synchronizes shared items.
9	Satellite 1.1 opens Drawing B, places partner OPC-100 from the drawing stockpile, and closes the drawing.
10	Project 1 synchronizes shared items with Satellite 1.1, then opens Drawing A' and verifies that "to drawing" name in the OPC label is updated with information from Drawing B.
	Drawing A' becomes Drawing A".
11	Project 2 fetches Drawing A" and assigns subscription access to Satellite 2.1.
12	Satellite 2.1 opens drawing A" and verifies that the OPC label is updated with information from Drawing B, then closes Drawing A".
13	Project 1 assigns ownership of Drawing A" to Satellite 1.1 and synchronizes shared items.
	Satellite 1.1 gets latest version of Drawing A" and synchronizes shared items.
	Satellite 1.1 opens Drawing A" and verifies that the "to drawing" name of OPC-100 is updated, then closes Drawing A".
14	Satellite 1.1 opens Drawing B, deletes OPC-100 to the Plant stockpile, then closes the drawing.
15	Satellite 1.1 opens Drawing C, places OPC-100 from the Plant stockpile, then closes the drawing.
16	Satellite 1.1 assigns ownership of Drawing A" to Project 1 and synchronizes shared items.
17	Project 1 gets latest version from remote and synchronizes shared items. Drawing A" becomes Drawing A".

- Project 1 opens Drawing A" and verifies that the graphical label in OPC-100 contains the correct information and that the data relating to OPC-100 and its partner is correct in the EDE, then closes the drawing.
- Project 2 fetches Drawing A'" from Project 1.

Project 2 opens Drawing A" and verifies that the graphical label in OPC-100 contains the correct information and that the data relating to OPC-100 and its partner is correct in the EDE, then closes the drawing.

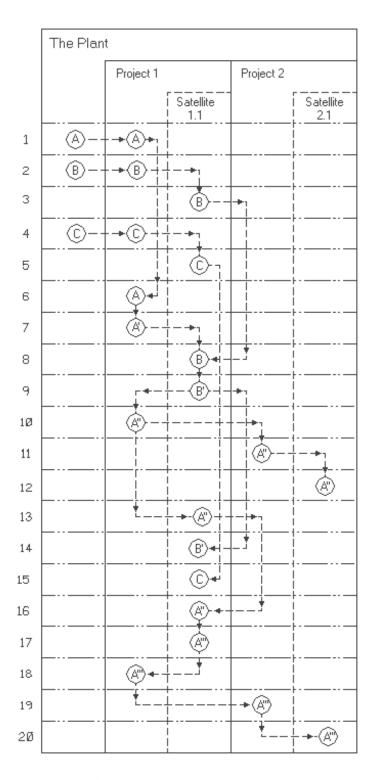
Project 2 publishes and assigns subscription access for Drawing A'" to Satellite 2.1, then synchronizes shared items.

Satellite 2.1 gets latest version, subscribes to the updated Drawing A", and 20 synchronizes shared items.

Satellite 2.1 opens Drawing A'' and verifies that the graphical label in OPC-100 contains the correct information and that the data relating to OPC-100 and its partner is correct in the EDE, then closes the drawing.

Note

In a standalone Workshare collaboration, the satellite site needs only to be given subscribe access to a drawing in order to access items (for example, OPCs) in the Plant stockpile.

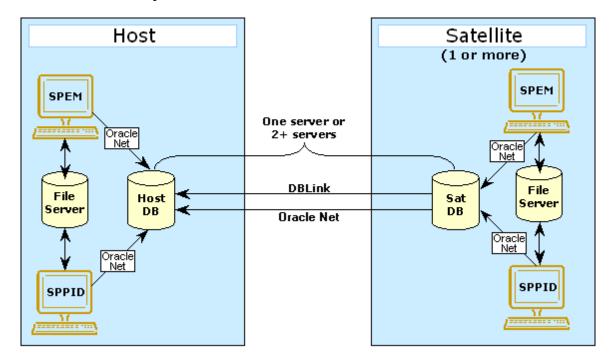


Related Topics

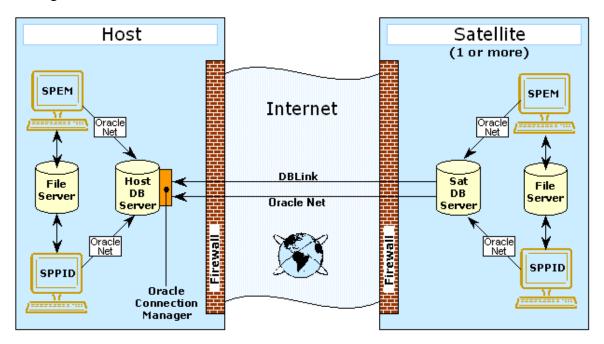
• Projects vs. Workshare, page 11

Networking for Connected Workshare: An Overview

All connected Workshare collaborations require a live network connection to the host. To use connected Workshare over the network, you need to set up an Oracle Net Services environment where an Oracle database link can be established. The diagram below describes one possible intranet Workshare collaboration.



This environment can exist behind a firewall or, if you need to cross a firewall, it can exist by using a Demilitarized Zone (DMZ) at each site or by setting up a Virtual Private Network (VPN) tunnel to each site. Both of these options require that the IP addresses and port numbers remain static, unless you use Oracle's Connection Manager.



Ultimately, the decision about how to establish the networking and database environments must be made on a case-by-case decision based on the purpose of the connected Workshare collaboration, the security needs of the companies involved, and the expertise of the networking personnel.

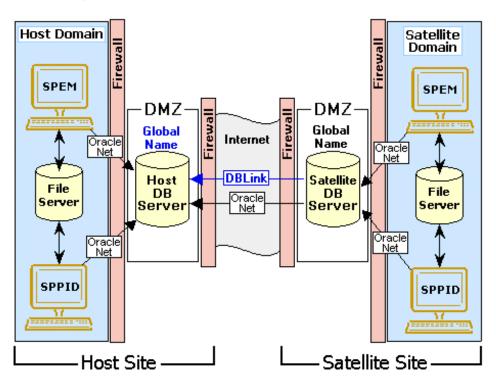
The following sections discuss using a DMZ vs. a VPN and provide sample configuration diagrams.

Collaborating through Firewalls

The following sections discuss the available networking technologies for establishing a connected Workshare collaboration in a firewall environment using either a Demilitarized Zone (DMZ) or Virtual Private Network (VPN) solution. Most corporate network firewalls have the ability to create a DMZ environment. A VPN solution can be implemented using Microsoft Windows® 2000 Server and is delivered with Windows 2000; however, there are other hardware- and softwarebased VPN solutions. Regardless of which firewall environment you configure, SmartPlant Engineering Manager and SmartPlant P&ID use Oracle Net connections to communicate with Oracle databases.

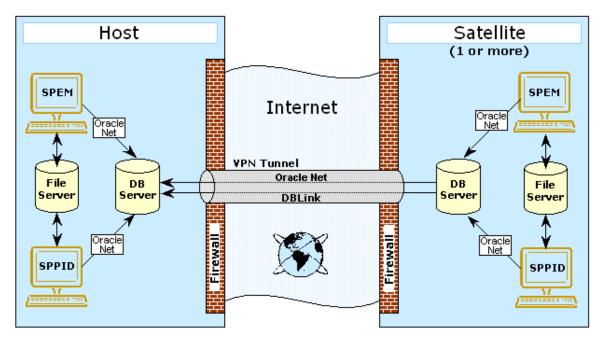
Demilitarized Zone (DMZ)

A DMZ places certain ports on your database server outside the firewall to allow communication over the Internet with other sites. When using a DMZ network implementation, the servers placed outside the firewall can be locked down so that only a single IP address and one port for Oracle communication (port 1521) is allowed to communicate across the Internet to transfer data between the Oracle databases at the host and satellite sites. Communication between the host and satellite sites transfers data only between each other. With the proper firewall rules established, no other IP addresses are allowed on the connection.



Virtual Private Network (VPN)

A VPN can be used to enhance your data protection between sites by using packet encryption to further protect information as it is sent from and received at your network. A VPN can be set up using several different encapsulating protocols (for example, IPSec, L2TP, PPTP, or L2F) that wrap a protective encrypted packet around the data during the transfer between the host and satellite sites. In essence, this creates a virtual Local Area Network (LAN) between the host and satellite locations. Each computer participating in the VPN can be isolated so that no other computers on your corporate LAN are visible to the opposite site.



DMZ vs. VPN

The following questions should be considered before determining which networking environment you will use for creating and maintaining a database link between sites.

Will the SmartPlant P&ID connected Workshare collaboration need share-level access to update or synchronize plant and reference data files?

- If share-level access is used to update or synchronize plant and reference data for a company-internal plant between two or more company locations, then a corporate WAN connection for this process is recommended.
- If the connected Workshare collaboration is between different companies, a DMZ environment is a better solution. If a DMZ solution is used, performing a manual update of the plant and reference data will be required as share-level access in a DMZ environment is not recommended.

What are the corporate firewall policies for customers or vendors that need access to data inside your corporate LAN?

 If customer or vendor access is not a possible solution for access to data inside your corporate firewall, a DMZ environment is the recommended solution.

What if I have a secure VPN established between my location and the satellite location for a connected Workshare collaboration?

• If this environment is available, then we recommend share-level access for project and reference data updates and synchronization.

What ports need to be open for database access in a DMZ environment?

- Port 1521 needs to be opened between the database servers at each location if the databases are using USE_SHARED_SOCKET to lock Oracle into using the single port for operation.
- If USE_SHARED_SOCKET is not used, then all ports between the two locations must be open because Oracle uses random ports to communicate after the initial connection.
- If both locations use Oracle Enterprise Edition, you can use Connection Manager to handle port connection between the databases at each location.

Isolating Network Clients in a DMZ Environment

All SmartPlant P&ID clients inside the LAN that must access the database server in the DMZ can be isolated on their own sub-network (subnet). Doing this restricts their connections so that they can communicate only with other SmartPlant P&ID clients, the SmartPlant P&ID file server, the SmartPlant Engineering Manager Server, and the Oracle database being used for the project.

To allow access rights on SmartPlant Engineering Manager and file servers if a domain controller is not available, you need to establish a workgroup with local user accounts on the isolated subnet on the LAN.

Subnet Addressing

Two computers belonging to the same subnet do not require an external server (such as DNS or Gateways) to exchange data. This example demonstrates how to determine which IP addresses are considered in your subnet and which ones will not pass through the gateway.

Subnet masks work bitwise and by using a mask.

For example, the following three computers have the following assigned IP addresses:

A: 192.168.1.1 **B**: 192.168.0.127 **C**: 192.168.3.1

If **A**'s subnet is set to 255.255.254.0, then **B** is part of **A**'s sub-network.

Sub-network:

```
192.168.1.1 and 255.255.254.0 = 192.168.0.0 192.168.0.127 and 255.255.254.0 = 192.168.0.0
```

Because both **A** and **B** addresses are the same bitwise after using the subnet mask, both **A** and **B** are considered on the same subnet.

However, **C** is not part of the same sub-network:

192.168.3.1 and 255.255.254.0 = 192.168.2.0

Using a Router to Segment Computers

LAN segments can be interconnected by routers to enable communication between LANs. Routers allow blocking of other types of traffic while also implementing broadcast filters and logical firewalls.

Routers offer the following benefits in LAN segmentation:

Media Transition- Routers are used to connect networks of different media types, taking care of the Layer 3 address translations and fragmentation requirements.

Packet Filtering - Routers can filter packets either inbound or outbound between LAN segments or LAN and WAN segments.

VLAN Communications- Routers remain vital for switched architectures configured as logically defined virtual workgroups (VLANs) because they provide the communication between VLANs.

Using a Switch to Segment Computers

Switches are data link layer devices that enable multiple physical LAN segments to be interconnected into a single larger network. Switches forward and flood traffic based on MAC addresses and are significantly faster because switching is performed in hardware instead of in software. Switches use either store-and-forward switching or cut-through switching when forwarding traffic.

Segmenting shared-media LANs divides the users into two or more separate LAN segments, reducing the number of users contending for bandwidth.

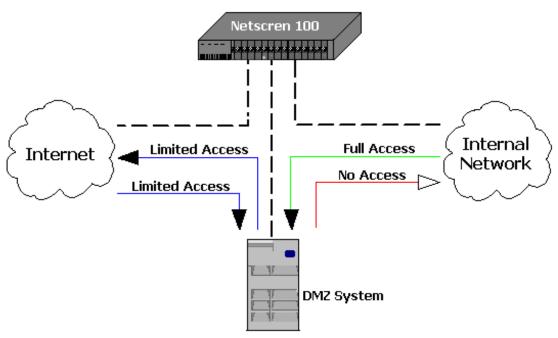
Switches have the intelligence to monitor traffic and compile address tables, which then allows them to forward packets directly to specific ports in the LAN. Switches also usually provide non-blocking service, which allows multiple conversations (traffic between two ports) to occur simultaneously.

LAN switches can be used to segment networks into logically defined virtual workgroups (VLANs). This logical segmentation, commonly referred to as VLAN communication, offers a fundamental change in how LANs are designed, administered, and managed. Logical segmentation provides substantial benefits in LAN administration, security, and management of network broadcast across the enterprise.

Sample DMZ Environment Configurations

The following general items should be considered when establishing a DMZ configuration.

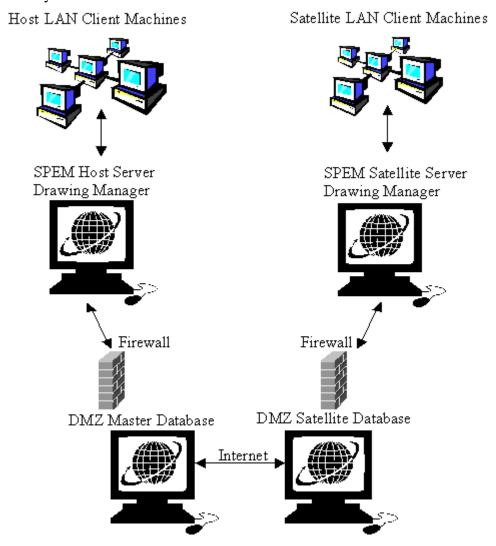
- Use a single network-ready computer with only one assigned IP address.
 No other networking connection should be allowed to a DMZ system (no backdoors).
- Install and maintain virus scanning software on the NIC system.
- Load and maintain all current operating system security patches.
- Load and maintain all current application security patches.
- Limit access from the Internet node (for example, a satellite site) to allow only the functions needed for Workshare. For example, telnet access is not needed for a system whose function is to be a host database server.
- Grant full access from internal networks to the computer in the DMZ.
- Limit access from the computer in the DMZ to the Internet to allow only those functions needed for Workshare.
- Block access from the computer in the DMZ to internal networks. Only
 for special cases should holes be made to allow access from a DMZ to an
 internal system (for example, SQL authorization from a web server in the
 DMZ to an internal domain controller).



In the configuration below, SmartPlant Engineering Manager and Drawing Manager reside inside the LAN behind the firewall to allow domain users and groups to be added to the Roles section in SmartPlant Engineering Manager. This configuration allows domain users to authenticate against the local domain. The DMZ firewall rules need to be set up for the SmartPlant Engineering Manager server on the LAN to allow access to the satellite database and the host database via an Oracle alias for the satellite database. At the satellite site, a database link needs to be created and pointed to the database at the host. This link allows the satellite database to connect to the host database and subscribe to a satellite slot.

• Important

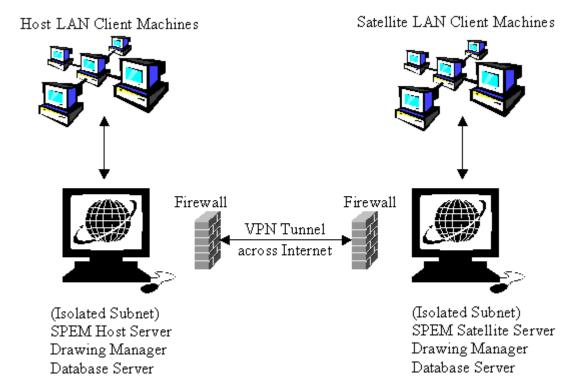
The only communication between the host and the satellite databases is through the database link. There is no need to create a database alias from any satellite clients to the host.



Sample VPN Environment Configuration

In the sample VPN configuration below, the database, SmartPlant Engineering Manager, and Drawing Manager reside behind the firewall. A secure and encrypted tunnel is established between the host site and the satellite location. The database servers at both sites can be isolated on their own subnet at each location with rules applied to each firewall so that only these computers are visible in the VPN. This way, no other computer on a site's LAN is accessible.

The server containing SmartPlant Engineering Manager, Drawing Manager, and the database resides in an isolated subnet separate from the SmartPlant P&ID computers. Only the isolated subnet at each site is visible to the other site. The visible computers between locations and firewall rules for the connection are defined in the VPN.



Configuring Oracle for Connected Workshare: An Overview

If you have not already installed Oracle, use the instructions found in the *SmartPlant P&ID Installation and Upgrade Guide* to install and configure your database, then complete the following steps to configure your Oracle database for Workshare.

- 1. Create a global name for your database, if it was not created during database installation. For more information, see *Enable Oracle Global Naming*, page 32.
- 2. Add a **USE_SHARED_SOCKET** registry key to HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\HOME0 to lock Oracle into using a single port. This key tells Oracle to use port 1521 for all Oracle communications to and from the database in the DMZ or VPN environment instead of using random ports after the initial communication connection (that is, the first time the database link is connected). For more information, see *Lock Oracle into Using a Static Port*, page 33.
- 3. Create the database link from the satellite database server to the host database server. For more information, see *Create the Database Link*, page 34.

Enabling Oracle Global Naming: An Overview

Before you can create a database link, you must define the Oracle global database name **global_name** parameter at the host and at each satellite database site. The global database name is the full name of the database and uniquely identifies it from any other database.

The global database name is in the form <code>database_name.database_domain</code>, where <code>database_name</code> is the database name, and the <code>database_domain</code> is the fully qualified domain name where the database is located. For example, if the <code>database_domain</code> is myserver.b30.ingr.com and <code>myserver</code> has a database named hostbeta, then the <code>global_name</code> parameter should be set to hostbeta.myserver.b30.ingr.com.

! Important

The global database name should have been defined during database installation and configuration. To verify that the global database name is properly defined, be sure the global_name and db_domain parameters are set properly. To determine the current global database name, run the following SQL statement:

```
select * from global_name;
```

Enable Oracle Global Naming

1. Run SQL Plus Worksheet to connect to the database and then run the SQL statement:

```
ALTER DATABASE RENAME global_name TO database name.database domain;
```

- 2. Set the **db_domain** parameter to match the *database_domain* above. You can run DBA Studio to do this.
- 3. Set the **global_name** parameter to be **TRUE**.



• The **global_name** parameter for ALL databases used in the connected Workshare process must be set to **TRUE**.

Locking Oracle into Using a Static Port

To lock Oracle into using a single port for operation, add a **USE_SHARED_SOCKET** key to the Registry as described in the steps below. This key tells Oracle to use port 1521 instead of using random ports after the initial communication connection (that is, the first time the database link is connected).

! Important

- You do not need to create this key if you are using Workshare within a single network domain (LAN) because you will not have a port availability problem.
- You must add this **USE_SHARED_SOCKET** key to the Registry on the Oracle server and on each Oracle client computer.

Lock Oracle into Using a Static Port

- 1. Click **Start > Run**, type **regedit**, and then browse to the KEY LOCAL MACHINE\SOFTWARE\ORACLE\HOME0 registry location.
- 2. Select the **HOMEO** folder, and then right-click and select **New > String Value**.



• Important

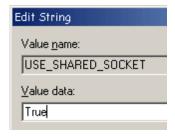
- If you have more than one Oracle instance, you may have multiple Oracle HOMES. In this case, be sure to select the HOME<#> folder that corresponds to the database instance being used for Workshare.
- 3. Type **USE SHARED SOCKET** for the name of the new string value.



4. Select the new string variable, right-click and select **Modify**.



5. On the **Edit String** dialog box, type **True** in the **Value** data field and then click OK.



Understanding the Database Link: An Overview

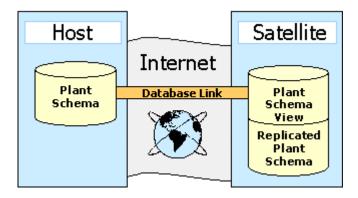
The database link is a network object stored in the local database that identifies a remote database, a communication path to that database, and optionally, a user name and password. Once defined, the database link is used to access the remote database and is vital to a successful connected Workshare collaboration.

Note

• Configuring a database link is not necessary for a standalone Workshare collaboration.

Plant Schema

The database link allows each satellite to view all plant data in the plant schema. When you are at a satellite and are viewing the plant schema over an active database link, you are actually viewing the database at the host site. This plant schema, containing the data available at the time of the last reference data synchronization, is replicated at each satellite, to be used by the satellite in the event the database link is not active.



The SmartPlant P&ID Modeler always uses the local replication plant schema, even when the database link is up. All other SmartPlant P&ID applications use the host plant schema when the link is up.

Drawing Manager dynamically changes both the host and replication schemas when adding new drawings. All drawing-level changes are reflected in both schemas when the change is made at the satellite, allowing the SmartPlant P&ID Modeler environment to be aware of new drawings created locally without having to synchronize reference data.

Drawing Transfer

The transfer of published drawings takes place automatically over the database link, rather than your having to manually bundle and transmit the data to the satellites.

Reference Data Synchronization

The reference data consists of data in the file system and data in the plant and P&ID schemas. Because only the Workshare host has permission to modify the reference data, the updated reference data must be shared with all satellites whenever the reference data is modified. Satellites cannot publish drawings or get the latest version of drawings until the satellite site reference data is in sync with the host.

The file system reference data (rules file, symbol files, format files, and so forth) must be transmitted manually to satellite sites no matter the mode of Workshare collaboration. However, in a connected Workshare collaboration, the database portion (plant and application schemas) of the reference data is synchronized via the database link.

Shared Items Synchronization

Shared items are defined as OPCs, utility connectors, shared instrument loops, and package systems. These items are referred to as "shared items" since they are designed to intelligently cross drawing boundaries. If one or more of these items crosses the boundary from one drawing to another drawing at another connected Workshare site, the **Synchronize Shared Items** command uses the database link to maintain data for the shared items at each site.

Create the Database Link

- 1. On the host database server, use Oracle Net Manager to create a net service name for the host database (for example, set the name to **master**).
- 2. On the satellite database server, use Net Manager to create a net service name for both the satellite database and the host database.

! Important

- The net service name at the satellite site must match the net service name at the host site.
- The database server at the host or satellite site usually has two IP addresses, one for internal and the other for external use. The database server (either the host or the satellite) should open to the IP addresses of the database servers of the other sites.
- 3. At the satellite database site, run DBA_Studio in standalone mode and select the net service name for the satellite site. Log in with the system/manager login/password combination.

🕁 🛄 Array Type

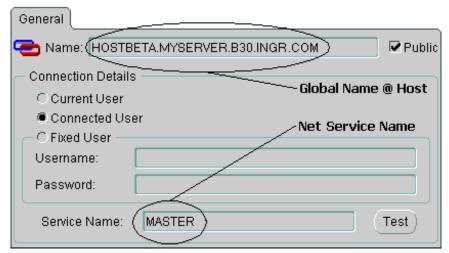
>•**□** Cluster

🔲 Database Link

4. Under the **Schema > Database Link** node, select the appropriate schema node, right-click and select **Create**.



- In Oracle 9i, the **Database Link** node is located under the **Distributed** node rather than the **Schema** node.
- 5. In the **Name** field, type the global name of the host database server (for example, **hostbeta.myserver.b30.ingr.com**). The name of the database link must be the same as the global name of the host database server.



- 6. Select the **Public** option.
- 7. In the **Connection Details** box, select the **Connected User** option.

• Important

- The database link should be created with the Connected User option. Defined in this manner, the database link user does not automatically inherit DBA privileges, but rather the database link user privileges are determined at runtime when the link is accessed by the connected user. If the connected user has credentials at the destination of the link, then those credentials determine what actions are possible via the database link with respect to the destination or remote database.
- Another option is to create a special user with system Create
 Database Link privileges and then use this special user to create the
 database link. However, when the database link is defined with the
 Connected User option, the application will have the same privileges
 as if the database link was created using a system account.
- 8. In the **Service Name** field, type the net service name created above (for example, **master**).
- 9. Click the **Test** button to verify that the database link is active.

If testing the database link fails using DBA_Studio, you can test the database link in either SVRMGRL or SQLPLUS using the following steps.

- 1. Log in as scott/tiger at the satellite site.
- 2. Run the following SQL statement:

Select * from dual@<dblinkname>

3. One row of data is returned if the database link is active.

Note

• If the scott/tiger account does not exist with only connect privileges, run the following SQL statements in SVRMGRL. If no row is found, the database link is not set up properly.

Create user scott identified by tiger default tablespace users temporary tablespace temp;
Grant connect to scott;

Breaking the Database Link: The Significance

If the database link is unavailable, the connected Workshare collaboration can continue, but is not recommended. If you do proceed with the connected Workshare collaboration while the database link is down, the following limitations apply.

Projects

At connected project satellites, all claim operations (claim and unclaim) are persisted at the host and the local satellite database in case the database link is disconnected. While the database link is down, the local claim information is used and all items that were previously claimed are still known to be claimed. As new items are created, they are automatically claimed and this information is stored locally. Pre-existing items cannot be claimed or unclaimed. In other words, the claim state of pre-existing items is frozen.

When the database link is re-established, the local claim information is automatically synchronized with the host claim information and all claim operations are allowed. This automatic synchronization occurs during the first SmartPlant P&ID session initiated after the database link is restored.

Plant Schema

The SmartPlant P&ID Modeler always uses the local replication plant schema, even when the database link is up. All other SmartPlant P&ID applications use the host plant schema when the link is up.

Drawing Manager dynamically changes both the host and replication schemas when adding new drawings. All drawing-level changes are reflected in both schemas when the change is made at the satellite, allowing the SmartPlant P&ID Modeler environment to be aware of new drawings created locally without having to synchronize reference data.

Drawing Creation

New drawings cannot be created when the database link is down because drawing name and number uniqueness must be checked against the host schema.

When the database link is down, we recommend not using Drawing Manager to open drawing files since Drawing Manager still attempts to use the database link. Instead, run the SmartPlant P&ID directly and use the **File > Open** command to open a drawing when the database link is down.

Drawing Transfer

Publishing drawings, giving ownership or subscribe access, taking ownership, and subscribing activities are not available when the database link is inactive.

OPC Placement

When the database link is inactive, you can place OPCs in drawings at your site, but you cannot assign the mates to drawings located in other sites. For example, when you place an OPC on your drawing when the database link is down, the mate OPC is assigned to the local plant stockpile. When the database link is reactivated, you can then move the mates to the drawing stockpiles at other sites.

Reference Data Synchronization

The reference data cannot be synchronizated when the database link is inactive.

The satellite can add, modify, and delete the contents of drawings that they owned at the time the reference data was last synchronized with the host. The satellite cannot, however, delete or rename such drawings until the database link is re-established. Therefore, reference data should be synchronized on a regular/frequent basis.

Shared Items Synchronization

Shared items cannot be synchronized when the database link is inactive.

Local Model Item Lookup Table Utility

Use the LocalModelItemLookupTable.sql utility if your connected Workshare satellite experiences performance problems when transferring piping data from SmartPlant P&ID to PDS. This script converts a satellite database view (namely, the T_ModelItemLookup) that references a host table into a local table, allowing the data transfer to proceed without using a database link.

SmartPlant P&ID uses the database link to fetch unique Long IDs from the Host when running from a connected Workshare satellite. If the performance of opening the PID file in PDS is an issue or if maintaining the correlation between SmartPlant P&ID and PDS after the merge is not an issue, then you can run this script to change the lookup for the Long ID from a view to the host to a local query.

This utility is delivered as an SQL script to the C:\Program Files\SmartPlant\P&ID Workstation\Program folder and can be executed using any Oracle user interface, such as SQLPlus.

• Important

• Do not use this script if the transferred PDS data will be merged back into a host PDS database because the Long IDs will not be unique at the host.

For more information about transferring piping data, see the *SmartPlant P&ID to PDS Piping Data Transfer Configuration and Reference Guide*.

Configuring Oracle for Connected Workshare: An Overview

Configuring Workshare: An Overview

Whether you are using connected or standalone Workshare, you must complete the following tasks at the host and satellite sites.

- 1. Enable the host site for Workshare.
- 2. Create satellite slots at the host site.
- 3. Configure the satellite site.
- 4. Subscribe to a satellite slot from the satellite site.

! Important

If you are using connected Workshare, you must configure your network and establish a database link before configuring the host and satellite sites.

Related Topics

- Configuring Oracle for Connected Workshare: An Overview, page 30
- Create a New Satellite Slot, page 45
- Create the Database Link, page 34
- Enable Workshare, page 43
- Subscribe to a Satellite Slot, page 54

Configuring the Host Site: An Overview

Configuring the host site for Workshare involves the following activities.

- 1. Enabling the plant structure for Workshare
- 2. Creating satellite slots.
- 3. Manually transmitting the Workshare password, the satellite template (.sat) file, and reference data, if it has been modified, to the satellite sites via e-mail, network share, CD, or other means.

! Important

Prior to enabling Workshare, you must have already created a site and plant structure, associated the SmartPlant P&ID application with the plant structure, and defined user access rights for the SmartPlant P&ID application. See the SmartPlant Engineering Manager User's Guide or online Help for information about how to complete these tasks.

- Create a New Satellite Slot, page 45
- Enable Workshare, page 43

Enabling Workshare: An Overview

Before you can share data between the host and satellite sites, you must use SmartPlant Engineering Manager to activate Workshare at the host site for each plant structure that you plan to share.

When you enable Workshare, you are asked to select the publishing method to be used between the host and the satellite for the selected plant structure. Each plant structure can use either the database publishing or the file sharing method.

After Workshare is enabled for the selected plant structure, the **Satellites** node is added to the plant structure node.

• Important

You must have SmartPlant P&ID associated with your plant before you can access the **Enable Workshare** command.

Enable Workshare Command

Workshare > Enable Workshare

Allows you to enable Workshare for the plant structure or project using the **Enable** Workshare dialog box. The Enable Workshare command is disabled unless you have SmartPlant P&ID associated with your plant and you have selected a plant structure in the Plant Structures node.

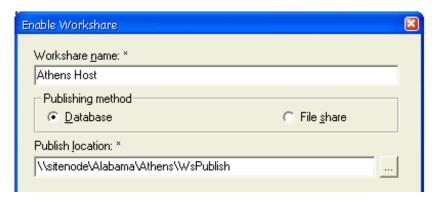
For information about enabling Workshare while using projects, see *Using* Workshare with Projects: An Overview, page 10.

For information about enabling Workshare while using The Engineering Framework, see Using Workshare with The Engineering Framework, page 9.

- Enable Workshare, page 43
- Using Workshare with Projects: An Overview, page 10

Enable Workshare Dialog Box

Allows you to activate Workshare for the plant structure.



Workshare name - Type a name for the plant being enabled for Workshare. This name will be seen by the satellite site/location.

Publishing method - Select the publishing method to be used to share data contained in the plant.

- **Database** (Recommended) Published files are stored in the database as Oracle blobs at the host. Oracle database links are used to transfer published files between host and satellites.
- **File share** Published files are stored on a file share at either the host or satellite site.

Publish location - Type a UNC path to the shared location on the host site where the published drawings are to be stored. The default location is the WsPublish folder in the plant folder. This field is limited to 255 characters.

Notes

- Names cannot start with a numeric digit and cannot contain any of the following characters: $<,>? \ / '; \{ \} [] \sim `! \% * () | " :$
- Location paths cannot contain any of the following characters: < , > ? / '; { } [] ~ `! % * (): | "

- Breaking the Database Link: The Significance, page 36
- Enable Workshare, page 43

Enable Workshare

1. Select the plant structure in which you want to create a Workshare collaboration.



- 2. Right-click and select the **Enable Workshare** command.
- 3. Enter the requested information on the **Enable Workshare** dialog box.

Note

• You must enable each plant structure for Workshare separately.

- Configuring the Host Site: An Overview, page 41
- Enabling Workshare: An Overview, page 41

Creating Satellite Slots: An Overview

After enabling Workshare, the host site must create a satellite slot to which the satellite site can subscribe. Satellite slots appear in the **Satellites** node inside the plant structure in the **List** view.

Related Topics

New Satellite Slot Wizard, page 45

Create a New Satellite Slot

- 1. Select the **Satellites** node in the plant structure in which you want to create a satellite slot.
- 2. Click **File > New**.
- 3. Follow the prompts in the **New Satellite Slot** wizard.
- 4. Send the Workshare password, the satellite template (.sat) file, and reference data, if it has been modified, to the satellite sites via e-mail, file sharing, floppy disk, CD, or other means.

Note

If the **Satellites** node does not appear in the plant structure node, you must enable the plant for Workshare before you can create a satellite slot.

Related Topics

Enable Workshare, page 43

New Satellite Slot Wizard

Steps you through creating satellite slots in the host plant. You must enable the plant structure for Workshare before you can create a satellite slot.

To start the wizard, select the **Satellites** node in the plant structure in which you want to create a satellite slot, right-click and select New Satellite.

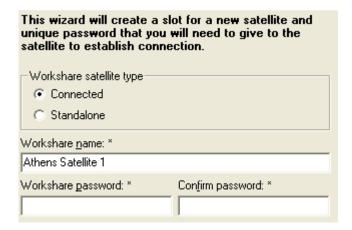


Related Topics

Enable Workshare, page 43

New Satellite Slot Wizard - Type and Name

Allows you to define the unique name and password for the satellite slot. The password is used as a key of sorts so that only the correct remote site can connect to the satellite slot at the master plant structure. An asterisk (*) means a value is required for that box.



Workshare satellite type - Select the type of Workshare collaboration for this new satellite slot.

Connected - Specifies that this satellite slot will use a database link and will collaborate through an Oracle database.

Standalone - Specifies that this satellite slot will not collaborate through a database. This type of Workshare collaboration allows the host and satellite to use different databases locally.

Workshare name - Use the default name provided or type a name for this satellite slot. This name is used as the name of the slot in the **Satellites** node and must be unique per satellite slot. This name cannot start with a numeric digit and cannot contain any of the following characters: $<,>? \ / '; \{ \} [] \sim `! \% * () | " :$

Workshare password - Type a password for the satellite slot. The password is casesensitive. This password will be needed by the user at the remote site who will be connecting to this satellite slot, and can be changed later, if necessary.

Confirm password - Re-type the password.

Caution (

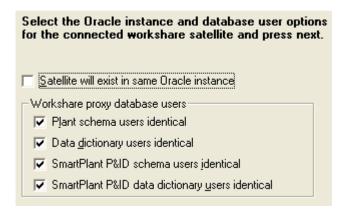
Be sure to make a note of this password because there is no way to retrieve it if you forget it. You must delete and re-create the satellite slot if you forget the password that you set here.

Related Topics

Change Password (Workshare) Command, page 74

New Satellite Slot Wizard - Connected Workshare

Allows you to specify combinations of users for a connected Workshare satellite slot. These database users can be the same as or different from the users at the host plant structure or any combination thereof.



Satellite will exist in the same Oracle instance - Select this option if you want the satellite users to exist in the same Oracle instance as the host plant structure. This option is usually used only when Workshare is implemented internally and not across different geographic locations. In this situation, the host and satellite sites will reside in the same database instance. The individual user options below are disabled when this option is selected because the satellite slot user names cannot be identical to the host user names in the same Oracle instance. When this option is selected, you are prompted to define the satellite user names (proxy user names) on subsequent pages in this wizard.

Plant schema users identical - Select this option if you want to use the same users for the satellite schema that are used for the host plant schema.

Data dictionary users identical - Select this option if you want to use the same users for the satellite data dictionary that are used for the host plant data dictionary.

SmartPlant P&ID schema users identical - Select this option if you want to use the same users for the satellite SmartPlant P&ID schema that are used for the host plant SmartPlant P&ID schema.

SmartPlant P&ID data dictionary users identical - Select this option if you want to use the same users for the satellite SmartPlant P&ID data dictionary that are used for the host plant SmartPlant P&ID data dictionary.

Related Topics

Change Password (Workshare) Command, page 74

New Satellite Slot Wizard - Plant Schema

Allows you to define the plant schema user name for the satellite. This page does not display if the **Plant schema users identical** option is selected on the **Location** page. An asterisk (*) means a value is required for that box.

Plant schema username - Type the user name you want to use for the satellite plant schema.

Database password - Type the password for the satellite plant schema.

Enter the satellite plant schema database username and password. Plant schema <u>u</u>sername: * Athenssat1 Database password: * Confirm password: * ***** *****

Confirm password - Re-type the password for the satellite plant schema.



Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: $.<,>?\/';{}[]\sim`!\%$ *()&\$@#"

New Satellite Slot Wizard - Plant Data Dictionary

Allows you to define the plant data dictionary user name for the satellite. This page does not display if the **Data dictionary users identical** option is selected on the **Location** page. An asterisk (*) means a value is required for that box.



Plant data dictionary username - Type the user name you want to use for the satellite plant data dictionary.

Database password - Type the password for the satellite plant data dictionary.

Confirm password - Re-type the password for the satellite plant data dictionary.



Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: $.<,>?\/';{}[]\sim`!\%$ *()&\$@#"

New Satellite Slot Wizard - SmartPlant P&ID Schema

Allows you to define the SmartPlant P&ID schema user name for the satellite. This page does not display if the SmartPlant P&ID schema users identical option is selected on the **Location** page. An asterisk (*) means a value is required for that box.

SmartPlant P&ID schema

username - Type the user name you want to use for the satellite SmartPlant P&ID schema.

Database password - Type the password for the satellite SmartPlant P&ID schema.

Enter the satellite SmartPlant $P\underline{I}D$ schema database username and password.		
SmartPlant P&ID schema <u>u</u> sername: * Athenssat1pid		
ion <u>f</u> irm password: *		

Confirm password - Re-type the password for the satellite SmartPlant P&ID



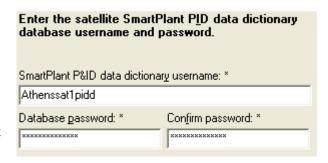
Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: $.<,>? \ / '; \{ \} [] \sim `! \%$ *()&\$@#"

New Satellite Slot Wizard - SmartPlant P&ID Data Dictionary

Allows you to define the SmartPlant P&ID data dictionary user name for the satellite. This page does not display if the SmartPlant P&ID data dictionary users identical option is selected on the **Location** page. An asterisk (*) means a value is required for that box.

SmartPlant P&ID data dictionary **username** - Type the user name you want to use for the satellite SmartPlant P&ID data dictionary.

Database password - Type the password for the satellite SmartPlant P&ID data dictionary.



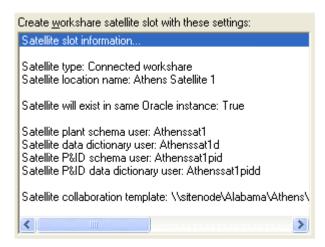
Confirm password - Re-type the password for the satellite SmartPlant P&ID data dictionary.



Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: $.<,>? \ / '; \{ \} [] \sim `! \%$ *()&\$@#"

New Satellite Slot Wizard - Finish

Displays all the settings that you have defined to create the new satellite slot. Review these settings carefully. If you are satisfied with the settings, click **Finish**. Otherwise, click **Back** to change one or more of the settings.



🚺 Important

After creating the satellite slot, send the Workshare password, the satellite template (.sat) file, and reference data, if it has been modified, to the satellite sites via e-mail, file sharing, floppy disk, CD, or other means.

- Change Password (Workshare) Command, page 74
- Creating Satellite Templates: An Overview, page 76
- New Satellite Slot Wizard Type and Name, page 45

Satellite Slot Properties Dialog Box

Allows you to view the properties for the selected satellite slot. The tabs, and the options on those tabs, displayed differ depending on the Workshare mode and use status for each satellite slot.

Data Access Tab (Satellite Slot Properties Dialog Box)

Displays the data access information for the satellite slot. This tab displays only when a connected satellite site is using the slot.

Workshare name - Displays the name of the satellite slot. You cannot change the satellite slot name after the satellite slot has been created.

Workshare type - Displays the type of Workshare mode for the satellite slot.

Owned drawings - Displays the number of drawings currently owned by the satellite connected to this slot.

Publishing method - Displays the type of publishing used for the satellite slot.



Related Topics

Breaking the Database Link: The Significance, page 36

Proxy Users Tab (Satellite Slot Properties Dialog Box)

Displays the user names defined for the satellite proxy users. This tab displays only when a connected satellite site is using the slot.

Plant schema username - Displays the user name defined for access to the plant schema.

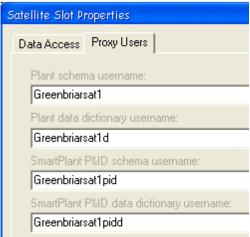
Plant data dictionary username - Displays the user name defined for access to the plant data dictionary.

SmartPlant P&ID schema username -

Displays the user name defined for access to the SmartPlant P&ID schema.

SmartPlant P&ID data dictionary

username - Displays the user name defined for access to the SmartPlant P&ID data dictionary.



Standalone Slot Properties Tab (Satellite Slot Properties Dialog Box)

Displays the data access information for the satellite slot. This tab displays only for standalone satellite slots.



Workshare name - Displays the name of the satellite slot. You cannot change the satellite slot name after the satellite slot has been created.

Workshare type - Displays the type of collaboration this satellite slot allows.

Owned drawings - Displays the number of drawings currently owned by the satellite.

Configuring a Satellite Site: An Overview

Configuring the satellite site for Workshare involves the following activities.

- 1. At each satellite site, subscribe to a satellite slot at the host site by creating a new Workshare collaboration. The host site must provide you with the Workshare password and the satellite template file for the satellite slot to which you are subscribing.
- 2. Define user access rights. You must grant at least **Modify Settings** access rights in the SmartPlant P&ID Options category.
- 3. Using Options Manager in SmartPlant P&ID, adjust the starting sequence numbers for the OPCItemTag, EquipNextSeqNo, InstrLoopNextSeqNo, and **PiperunNextSeqNo** settings to avoid duplicate item numbers.
- 4. Using Options Manager in SmartPlant P&ID, modify the CAD Definition File entry by changing .xls to exportlayer.xls.

! Important

Prior to configuring the satellite site for Workshare, you should have already created a site using SmartPlant Engineering Manager at the satellite location. For information about how to create a site, see the SmartPlant Engineering Manager User's Guide or online Help.

Notes

- All satellites use the host plant schemas. During satellite slot creation, the host creates a satellite creation template (.sat) that contains all of the plant schema information needed to create the same schemas at the satellite site. This template file must be sent from the host to the satellite via e-mail, file sharing, floppy disk, CD, and so forth.
- If you are working across multiple sites and are using separate database instances, we suggest using the same user names at the satellites that are used at the host so that creating proxy users is not necessary.
- New plant groups (plants, areas, units, etc.) cannot be created standalone satellites or by satellites hosted by a project.
- You cannot create a plant or application data dictionary template at a satellite site. You must create the templates at the host site.

Related Topics

New Workshare Collaboration Wizard, page 54

New Collaboration Command

Workshare > New Collaboration

Starts the **New Workshare Collaboration** wizard. To complete the Workshare configuration, the satellite site must subscribe to an available satellite slot at the host site. The **New Workshare Collaboration** wizard steps you through the subscription process by using the satellite template, Workshare password, and reference data received from the host site to create a "copy" of the host plant structure.

Notes

- You cannot create a satellite in the same site as the host site. You must have a separate site for the satellite.
- You must obtain the Workshare password and the satellite template from the host site administrator prior to subscribing to a satellite slot.

Related Topics

• New Workshare Collaboration Wizard, page 54

Subscribe to a Satellite Slot

- 1. Open the satellite site in SmartPlant Engineering Manager.
- 2. Click Workshare > New Collaboration.
- 3. Follow the prompts in the **New Workshare Collaboration** wizard.
- 4. Set the user access rights for the satellite plant.
- 5. Run SmartPlant P&ID Options Manager and edit the sequence numbers as needed for the satellite site.

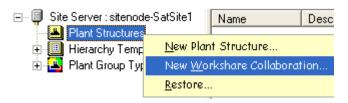
Notes

- You cannot create a satellite in the same site as the host site. You must have a separate site for the satellite.
- You must obtain the Workshare password from the host site administrator, as it will be needed to complete the New Workshare Collaboration wizard.

- Change Password (Workshare) Command, page 74
- Configuring a Satellite Site: An Overview, page 52
- New Satellite Slot Wizard Type and Name, page 45
- New Workshare Collaboration Wizard, page 54

New Workshare Collaboration Wizard

Steps you through subscribing to a satellite slot. This process is much like creating a plant structure, except that the satellite plant is based on a "copy" of the host plant structure instead of being created from scratch. The "copy" information is provided by the host site in the satellite template file. Upon completing this wizard, the satellite is connected to a satellite slot at the host site.



Notes

- You cannot create a satellite in the same site as the host site. You must have a separate site for the satellite.
- You must obtain the Workshare password and the satellite template (.sat) file from the host site administrator before you can complete this wizard. Both of these items were created when the satellite slot was created at the host. This information can be sent to you via e-mail, file sharing, floppy disk, or CD.

Related Topics

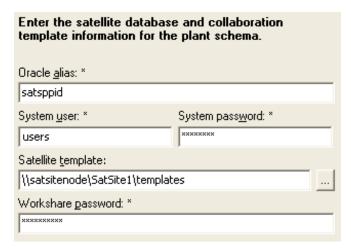
- Changing the Workshare Password: An Overview, page 73
- Creating Satellite Templates: An Overview, page 76

New Workshare Collaboration Wizard - Template and Password

Displays the options for creating the satellite plant structure in the satellite site.

Oracle alias - Specifies the Oracle net service alias that allows connection to the Oracle database at the satellite site. This field defaults to the alias specified when the satellite site was created.

Database node - Type the node name of the server on which the SOL Server database resides.



This option appears only if SQL Server is selected as the database type.

System User - Type a database system user name. This name does not have to be the database administrator user name, but this user must have system privileges.

System password - Type a system user password.

Satellite template - Type the UNC path or browse to the location where you placed the satellite template file (.sat) received from your host administrator. This field is limited to 255 characters.

Workshare password - Type the Workshare password. This password, sometimes called a location key, is specified during the satellite slot creation at the host site. The host administrator must provide you with this password as the key to connecting your satellite with a satellite slot at the host site.

Related Topics

• Changing the Workshare Password: An Overview, page 73

New Workshare Collaboration Wizard - Template Verification

Displays the information obtained from the satellite template that is based on the satellite slot information defined at the host site.

Workshare name - Displays the name of the satellite slot at the host to which you are connecting.

Workshare type - Displays the type of Workshare collaboration available through the satellite slot.

Plant structure name - Displays the name of the plant containing the satellite slot.

Verify the information from the template file you selected. Click Back to change the collaboration template, or click Next to continue. Workshare name: Athens Satellite 1 Workshare type: Connected same instance satellite Plant structure name: * Athens Plant structure description:

Plant structure description -

Displays the available information about the plant containing the satellite slot.

New Workshare Collaboration Wizard - Paths

Allows you to specify a storage directory for the files that the satellite pulls from the host and the paths to the reference data.



• All paths must use the Universal Naming Convention (UNC) format and are limited to 255 characters per path.

Plant structure path - Specify the path to the storage location on the satellite server for the plant data and the drawing files. You must create the plant structure share before running this wizard, using the form \\siteserver\sitename\plantname.
The wizard will create the plantname folder if it does not already exist.

Backup location - Type, or browse to, the path to the storage location to use when backing up the satellite plant files. We recommend selecting a backup location <u>outside</u> the **Plant structure path** to avoid recursive backups being stored in a single

Specify paths and other information necessary f publishing and synchronizing data between the and satellite.		
Plant structure path: *		
\\satsitenode\SatSite1\GreenbriarSat		
Backup location: *		
\\satsitenode\SatSite1\Backups		
Format file: *		
\\satsitenode\SmartPlant\P&ID Reference Data\format		
SmartPlant P&ID reference data path: *		
\\satsitenode\SmartPlant\P&ID Reference Data		
Publishing method Database File share		
Publish location: *		
\\sitenode\SatSite1\GreenbriarSat\WsPublish		

backup file. For example, if the Plant structure path is

\\siteserver\sitename\plantname, do <u>not</u> set the backup location for *plantname* to \\siteserver\sitename\plantname\backups.

Format file location - Type, or browse to, the format.txt file. This file is delivered to the SmartPlant P&ID reference data path defined below.

SmartPlant P&ID reference data path - Type, or browse to, the path where the reference data is located at the satellite site.

Publishing method - Select the publishing method to be used to share data contained in the plant.

- **Database** (Recommended) Published files are stored in the database as Oracle blobs at the host. Oracle database links are used to transfer published files between host and satellites.
- **File share** Published files are stored on a file share at either the host or satellite site.

Publish location - Type a UNC path to the shared location on the satellite site where the published drawings are to be stored. This field is limited to 255 characters and is available only for standalone satellites or for connected satellites using the file share publishing option.

Note

Paths and locations cannot contain any of the following characters: < , > ?
 /'; { } [] ~ `! % * () : | "

New Workshare Collaboration Wizard - Plant Schema

Defines the plant schema database information for your new standalone Workshare collaboration. An asterisk (*) at the end of an item name indicates a value is required for that item.

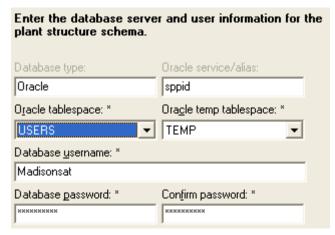
Note

This page displays only when configuring a satellite for standalone Workshare.

Database type - Displays the database type used at the satellite site.

Oracle service/alias - Displays the Oracle net service alias used by the satellite site in which the satellite plant will be created. This option appears only if the satellite site is using Oracle.

Database server - Displays the node name of the server on which



the SQL Server database resides. This option appears only if SQL Server is used by the satellite site.

Database name - Displays the name of the SQL Server database used by the satellite site in which the satellite plant will be created. This option appears only if SQL Server is selected as the database type.

Oracle tablespace - Select the default Oracle tablespace name for your satellite plant database. These tablespaces were defined when the database administrator created the default database instance using Oracle Database Assistant. This option appears only if the satellite site is using Oracle.

Oracle temp tablespace - Select the default Oracle temporary tablespace name for your satellite plant database. If this list is empty, contact your database administrator. This option appears only if the satellite site is using Oracle.

• Important

- We recommend that you do not use SYSTEM for the default tablespace because Oracle uses this tablespace for its own uses.
- If you create new Oracle tablespaces or SQL Server databases after starting this wizard, you must refresh the tablespace list by clicking **Back** and then clicking **Next** to return to this page before the new information will display in the appropriate lists.

Database username - Type the user name you want to use for the plant user. This value, which must be unique in the database, defaults to the satellite plant name.

Database password - Type the password for the database user. We recommend using the satellite plant database user name, entered above, as this password.

Confirm password - Re-type the password for the database user.



Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: $.<,>? \ / '; \{ \} [] \sim `! \%$ *()&\$@#"

New Workshare Collaboration Wizard - Plant Data Dictionary

Allows you to specify the database information for the satellite plant data dictionary. An asterisk (*) at the end of an item name indicates a value is required for that item.

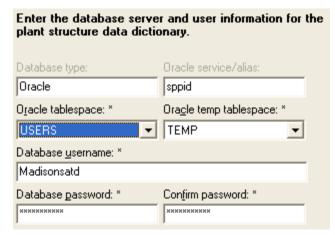
Note

This page displays only when configuring a satellite for standalone Workshare.

Database type - Displays the database type used at the satellite site.

Oracle service/alias - Displays the Oracle net service alias used by the satellite site in which the satellite plant will be created. This option appears only if the satellite site is using Oracle.

Database server - Displays the node name of the server on which



the satellite SQL Server database resides. This option appears only if SQL Server is used by the satellite site.

Database name - Displays the name of the SQL Server database used by the satellite site in which the satellite plant data dictionary will be created. This option appears only if SQL Server is selected as the database type.

Oracle tablespace - Select the default Oracle tablespace name for your satellite plant data dictionary. These tablespaces were defined when the database administrator created the default database instance using Oracle Database Assistant. This option appears only if the satellite site is using Oracle.

Oracle temp tablespace - Select the default Oracle temporary tablespace name for your satellite plant data dictionary. If this list is empty, contact your database administrator. This option appears only if the satellite site is using Oracle.

• Important

- We recommend that you do not use SYSTEM for the default tablespace because Oracle uses this tablespace for its own uses.
- If you create new Oracle tablespaces or SQL Server databases after starting this wizard, you must refresh the tablespace list by clicking Back and then clicking **Next** to return to this page before the new information will display in the appropriate lists.

Database username - Type the user name you want to use for the plant data dictionary user. This value, which must be unique in the database, defaults to satellite plant name.

Database password - Type the password for the plant data dictionary user. We recommend using the satellite plant database user name, entered above, as this password.

Confirm password - Re-type the password.

Note

Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: $.<,>?\/';{}[]\sim`!\%$ *()&\$@#"

New Workshare Collaboration Wizard - SmartPlant P&ID Schema

Allows you to enter database information for the SmartPlant P&ID application schema at the satellite site. The tablespaces and other database information displayed in the drop-down lists are based on the information specified on the satellite plant structure creation page. An asterisk (*) means a value is required for that box.

Note

This page displays only when configuring a satellite for standalone Workshare.

Application to associate - Displays the application being associated to the satellite plant.

Schema type - Displays the application schema type being created.

Oracle service/alias - Specifies the Oracle net service name for the satellite plant database. This value is carried forward from the satellite plant structure definition page and appears only if using Oracle.

Enter the database server and user connection information for SmartPlant P&ID schema.		
Application to associate:	Schema type:	
SmartPlant PID	SPPID	
Oracle service/alias:		
sppid		
Ogacle tablespace: *	Ora <u>c</u> le temp tablespace: *	
USERS ▼	TEMP _	
Database <u>u</u> sername: *		
Madisonsatpid		
Database password: *	Confirm password: *	
******	******	

Database server - Displays the

node name of the server on which the satellite SQL Server database resides. This option appears only if using SQL Server.

Database name - Displays the name of the SQL Server database used by the satellite plant to which the application is being associated. This option appears only if using SQL Server.

Oracle tablespace - Select the default tablespace name for your application schema. These tablespaces are defined when the database administrator created the default database instance using Oracle Database Assistant.

Oracle temp tablespace - Select the default temporary tablespace name for your application schema. The temporary tablespace was defined when the database administrator created the temporary database instance using Oracle Database Assistant. If this list is empty, contact your database administrator.

• Important

We recommend that you do not use SYSTEM for the default tablespace because Oracle uses this tablespace for its own use. This option appears only if using Oracle.

If you create new Oracle tablespaces or SQL Server databases after starting this wizard, you must refresh the tablespace list by clicking Back and then clicking **Next** to return to this page before the new information will display in the appropriate lists.

Database username - Type the user name you want to use for the satellite SmartPlant P&ID database user. This name must be unique in the database.

Database password - Type the password for the satellite SmartPlant P&ID database user. We recommend using the satellite SmartPlant P&ID user name defined above as this password.

Confirm password - Re-type the password.



Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: $.<,>? \ / '; \{ \} [] \sim `! \%$ *()&\$@#"

New Workshare Collaboration Wizard - SmartPlant P&ID Data Dictionary

Allows you to enter database information for the SmartPlant P&ID application data dictionary at the satellite site. The tablespaces and other database information displayed in the drop-down lists are based on the database used in the plant structure creation. An asterisk (*) means a value is required for that box.

Note

This page displays only when configuring a satellite for standalone Workshare.

Application to associate - Displays the application being associated to the satellite plant. This value is carried forward from the previous page.

Schema type - Displays the schema type being created. This value is carried forward from the previous page.

Oracle service/alias - Specifies the Oracle net service name as defined by your database administrator. This value is carried forward from the

Enter the database server and user connection information for SmartPlant P&ID data dictionary. Schema type: Application to associate: SmartPlant PID SPPIDDATA_DICTIONARY Oracle service/alias sppid Oracle tablespace: * Oracle temp tablespace: * USERS TEMP Database username: * Madisonsatpidd Database password: * Confirm password: * ****** ~~~~~~~~~~~

previous page and appears only if using Oracle.

Database server - Displays the node name of the satellite server on which the SQL Server database resides. This option appears only if using SQL Server.

Database name - Displays the name of the SQL Server satellite database used by the satellite plant to which the application is being associated. This option appears only if SQL Server is selected as the database type.

Oracle tablespace - Select the default tablespace name for your application data dictionary database. These tablespaces are defined when the database administrator created the default database instance using Oracle Database Assistant.

Oracle temp tablespace - Select the default temporary tablespace name for your application data dictionary database. The temporary tablespace was defined when the database administrator created the temporary database instance using Oracle Database Assistant. If this list is empty, contact your database administrator. This option appears only if using Oracle.

! Important

- We recommend that you do not use SYSTEM for the default tablespace because Oracle uses this tablespace for its own use. This option appears only if using Oracle.
- If you create new Oracle tablespaces or SQL Server databases after starting this wizard, you must refresh the tablespace list by clicking **Back** and then clicking **Next** to return to this page before the new information will display in the appropriate lists.

Database username - Type the user name you want to use for the application data dictionary user. This name must be unique in the database.

Database password - Type the password for the application data dictionary user. We recommend using the application data dictionary user name defined in the field above as this password.

Confirm password - Verify the password by retyping it.



Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: $.<,>? \ / '; \{ \} [] \sim `! \%$ *()&\$@#"

New Workshare Collaboration Wizard - Replication Schema

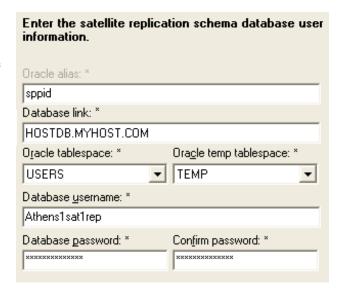
Allows you to create a replication schema for use when the satellite is working offline. This schema is a replica of the plant schema at the host site. The plant schema is not always replicated, but the plant data dictionary is always replicated.

Note

 This page displays only for connect Workshare collaborations.

Oracle alias - Specifies the Oracle net service alias that allows connection to the Oracle database at the satellite site.

Database link - Select the database link that points to your host database server. The dropdown list displays all available database links on your satellite database server. This option displays only for connected different-instance collaborations.



Oracle tablespace - Select the user tablespace of the Oracle database at the satellite location.

Oracle temp tablespace - Select the temporary tablespace of the Oracle database at the satellite location.

Database username - Type the user name you want to use for the replication plant user. This name must be unique in the database.

Database password - Type the password for the replication database user. This value defaults to the value in the **Database username** field.

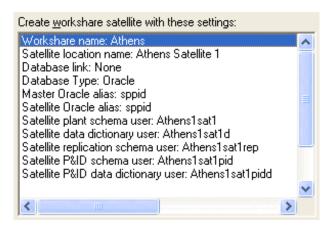
Confirm password - Re-type the password for the replication database user. This value defaults to the value in the **Database username** field.



Database usernames and passwords cannot start with a numeric digit and cannot contain any of the following characters: . < , > ? \ / '; { } [] ~ `! % * () & \$ @ # "

New Workshare Collaboration Wizard - Finish

Displays all the settings that you have defined to create the new Workshare collaboration. Review these settings carefully. If you are satisfied with the settings, click Finish. Otherwise, click Back to change one or more of the settings.



! Important

- After completing this wizard, be sure to set the user access rights for the satellite plant.
- Also, you must run SmartPlant P&ID Options Manager and edit the sequence numbers as needed for the satellite site. Each satellite site can have its own settings (except path), however, the reference data is controlled by the host.

Concluding a Workshare Collaboration: An Overview

Just as you use the **Enable Workshare** command to begin using Workshare, you use the **Disable Workshare** command to conclude a Workshare collaboration. Similarly to when you configured the Workshare collaboration, concluding a Workshare collaboration involves several steps at both the host and satellite sites using SmartPlant Engineering Manager and other SmartPlant P&ID products.

Conclude a Workshare Collaboration

- 1. Ensure that both host and satellite sites are running the latest SmartPlant P&ID and SmartPlant Engineering Manager service packs.
- 2. Satellites transfer ownership of all drawings to the host.
- 3. The host gets the latest versions of all drawings.
- 4. The host synchronizes shared items. This step cleans up the T_INTERSITEOPC table.
- 5. Using SmartPlant Engineering Manager, satellite sites delete satellite plants from their sites. This cleans up the schema users for the plant, plant data dictionary, SmartPlant P&ID, and SmartPlant P&ID data dictionary.
- 6. Using SmartPlant Engineering Manager, the host site runs **Workshare > Disable Workshare**.
- 7. The host ensures that all drawings and shared items are owned by the host. For example, open a drawing and, in the plant stockpile, select a loop that was created at the satellite site. Make sure it can be edited. Also, check the **Engineering Data Editor** to make sure OPC labels match correctly.
- 8. The host runs **Delete Orphan Model Items > Clean DB**.

Notes

- If the satellites do not delete the satellite plants from their sites, orphan data is left behind in their databases, but the host can still disable Workshare.
- For more information about using the **Delete Orphan Model Items** utility, see the *SmartPlant P&ID Installation and Upgrade Guide*.

Disabling Workshare: An Overview

Disabling a plant for Workshare returns the plant to a pre-Workshare state. When you disable a plant for Workshare, the plant returns to its original plant structure status, and the **Satellites** node is removed from under the plant node.

Disable Workshare Command

Workshare > Disable Workshare

Returns the plant structure to a pre-Workshare state. When you disable a plant for Workshare, the **Satellites** node is removed from under the plant node.

Before you can access the **Disable Workshare** command in a connected Workshare collaboration, all connected satellite slots under the **Satellites** node must inactive. In other words, connected satellite sites must be deleted and the **In Use** state must be **False** for all connected satellite slots before you can disable a connected Workshare collaboration.

Standalone Workshare collaborations can be disabled only after all drawings at the satellite site are deleted. All drawings originating from the host must be transferred back to the host with ownership assigned to the host.

Disable Workshare

- 1. In the **Tree** view, select the plant node.
- 2. Click Workshare > Disable Workshare.

! Important

- In a connected Workshare collaboration, all connected satellite slots under the Satellites node must inactive before you can disable Workshare. In other words, connected satellite sites must be deleted and the In Use state must be False for all connected satellite slots before you can disable a connected Workshare collaboration.
- Standalone Workshare collaborations can be disabled only after all
 drawings at the satellite site are deleted. All drawings originating from the
 host must be transferred back to the host with ownership assigned to the
 host.

Related Topics

• Conclude a Workshare Collaboration, page 66



Managing a Workshare Collaboration: An **Overview**

The following administrative commands are available in SmartPlant Engineering Manager to help you manage your Workshare collaborations.

Change Password (Workshare) Command, page 74

New Template Command, page 77

Owner Command, page 70

Publish Standalone Package Command, page 72

Recreate Proxy Users Command, page 76

Note

Several of the Workshare commands are available in the SmartPlant P&ID automation layer. For more information about using these Workshare automation commands, see the SmartPlant P&ID Programmer's Guide.

Owning Plant Groups: An Overview

During the course of administering a connected Workshare collaboration, you can decide to transfer the ownership of a plant group item, such as a unit, to a satellite site. Transferring ownership at this level allows the connected satellite site full control over plant group properties modifications. The owner can also delete the plant group item if all the drawings under it have been deleted.

Owner Command

Workshare > Owner

Allows you to transfer ownership of a plant group item in a plant group. The owner can edit, modify, or delete plant group item properties.

Notes

- The **Owner** command is available at the host only if there is at least one connected satellite slot in use.
- At the host site, you do not need to have ownership of the plant group item to create drawings in that plant group item.

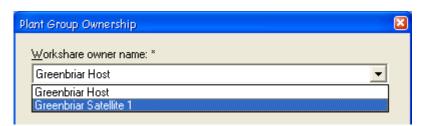
Related Topics

• Transfer Ownership of a Plant Group, page 70

Plant Group Ownership Dialog Box

Allows you to specify the owner of the selected plant group. Transferring ownership at this level allows the connected satellite site full control over plant group properties modifications. The owner can also delete the plant group item if all the drawings under it have been deleted.

Only a host site in a greenfield connected Workshare collaboration can assign plant group ownership. In other words, the connected Workshare collaboration cannot involve projects at any level.



Workshare owner name - Lists the host site and the currently connected satellite sites. Select the location to which you want to grant ownership privileges.

Transfer Ownership of a Plant Group

- 1. In the **List** view, select the plant group for which you want to transfer ownership.
- 2. Right-click and select the **Owner** command.
- 3. On the **Plant Group Ownership** dialog box, select the satellite site to which you want to grant ownership privileges.

Note

- The **Owner** command is available only at the host site in a greenfield connected Workshare collaboration. In other words, the connected Workshare collaboration cannot involve projects at any level.
- The **Owner** command is enabled at the host only if there is at least one connected satellite slot in use.

Related Topics

• Plant Group Ownership Dialog Box, page 70

Publishing Data for Synchronization: An Overview

Because only the Workshare host has permission to modify the reference data, the updated reference data must be shared with all satellites whenever the reference data is modified (for example, adding a new attribute, creating a new select list, etc). Satellites cannot publish drawings or get the latest version of drawings until the satellite site reference data is in sync with the host.

! Important

In a standalone Workshare collaboration, the user bears full responsibility
of making sure the reference data is in sync between the host and
satellites.

Reference data consists of two parts: data in the file system and data in the plant and P&ID schemas and data dictionaries.

The file system reference data (rules file, symbol files, format files, and so forth), no matter the Workshare mode, must be transmitted manually to satellite sites for synchronization.

Synchronizing the database portion (plant and application schemas) of the reference data depends on the Workshare mode. For connected Workshare collaborations, the database portion of the reference data is synchronized automatically via the database link. For standalone Workshare collaborations or connected collaborations in which the database link is down (the **Synchronize Reference Data from Copy** command is unavailable), this portion of the reference data must be extracted from the database, bundled into a zip file, and manually transmitted to the satellite site. The **Publish Standalone Package** command creates this bundled zip file.

Publish Standalone Package Command

Workshare > Publish Standalone Package

Bundles the database portion of the reference data (plant and application schemas and data dictionaries, plant structure, and options data) into a zip file (plantname sync.zip) for manual transmission to the standalone satellite. This zip file is placed in the **Synchronization Templates** folder under the plant folder at the host site.

The satellite site accesses this file in Drawing Manager using the **Published** standalone package file field on the Synchronize Reference Data by Copy dialog box.

Notes

- This command is available only at the host in a standalone Workshare collaboration.
- The host should run this command before publishing drawings to standalone satellite sites.

Publish Standalone Package for Synchronization

- 1. At the host site, select the host plant in the **List** view.
- 2. Click Workshare > Publish Standalone Package.
- 3. Send the *plantname_*sync.zip file to the satellite site for synchronization.

Note

The *plantname_*sync.zip file is placed in the **Synchronization Templates** folder under the plant folder at the host site.

Related Topics

Plant Group Ownership Dialog Box, page 70

Changing the Workshare Password: An Overview

During the course of administering a Workshare collaboration, you can decide to change the Workshare password for any of the satellite sites. The Workshare password is the key used by a satellite site to subscribe to a satellite slot at the host site. Created during the satellite slot creation at the host site, each satellite slot has its own password. This password must be communicated from the host to the satellite user, usually by e-mail or phone, before the satellite site can subscribe to a satellite slot.

Change Password (Workshare) Command

Workshare > Change Password

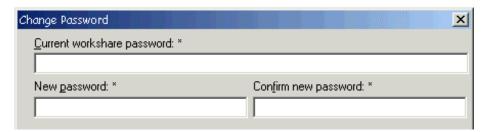
Allows you to change the Workshare password that you set during the satellite slot creation process. This password is the key that allows remote users to establish a new collaboration with the satellite slot at the host. The password is case-sensitive and is available only at the host site.

Related Topics

- Change the Workshare Password, page 74
- New Satellite Slot Wizard Type and Name, page 45

Change Password Dialog Box

Allows you to modify the Workshare password set when you created the satellite slot in the plant structure.



Current Workshare password - Type the current Workshare password. This password was set when Workshare was enabled on the plant structure.

New password - Type a new password for the Workshare access to the plant structure data.

Confirm new password - Re-type the new Workshare password.

Change the Workshare Password

- 1. In the **List** view, select the satellite slot for which you want to change the password.
- 2. Right-click the **Satellite Slot** and select the **Change Password** command.
- 3. Type the current Workshare password in the **Change Password** dialog box.
- 4. Type and confirm the new Workshare password.

- Change Password (Workshare) Command, page 74
- Change Password Dialog Box, page 74

Recreating Proxy Users: An Overview

Designating proxy users provides a way of granting users at remote satellites the ability to "talk" to the tables in the host database instance. Proxy users are necessary for connected, same-instance Workshare collaborations. If the user names at the host and the satellite sites are identical and the databases are in separate database instances, you do not need to use proxy users.

Recreate Proxy Users Command

Workshare > Recreate Proxy Users

Available only at the host site and only when a satellite slot is not in use, this command drops and recreates all existing proxy users for the satellite slot.

We recommend recreating proxy users when collaboration has failed for a sameinstance satellite or when a privilege problem seems to exist, causing collaboration to fail for either separate or same-instance satellite slots.

When working with proxy users, keep the following scenarios in mind:

Same database instance - Sites are in different database instances, but the plant structures are in the same database instance. In this situation, the user names at the host and satellite sites cannot be the same. You were asked to create the proxy user names during the satellite slot creation.

Different database instance - If user names at the host do not match the user names at the satellite, a proxy user must be created at the host site to provide a way of granting the remote user the ability to talk to the tables in the host database instance. If the user names at the host do match the user names at the satellite, proxy user names are not needed.

Recreate Proxy Users

- 1. In the **List** view, select the satellite slot for which you want to recreate proxy users.
- 2. Right-click and select the **Recreate Proxy Users** command.

Creating Satellite Templates: An Overview

The satellite template, created during satellite slot creation at the host site, is used at the satellite site to create a view of the host plant schema. The template also contains the Workshare password and the database user names for the satellite slot.

During the course of a Workshare collaboration, the data at the host site may change and thereby impacting the content of the satellite template. When this happens, or when proxy users change, the host must generate a new template and send the updated template to the satellite.

New Template Command

Workshare > New Template

Allows the host to create a new Workshare template. During the course of a Workshare collaboration, the data at the host site may change, thereby impacting the content of the satellite template. When this happens, or when proxy users change, the host must generate a new template and send the updated template to the satellite.

Create a New Template

- 1. In the **List** view, select the satellite slot for which you want to create a new template.
- 2. Right-click and select the **New Template** command.
- 3. Type the path and file name for the connection template.

Note

• This command is available only at the host site.

Managing a Workshare Collaboration: An Overview				

Using Workshare: Common Tasks

After configuring Workshare at the host and satellite sites, the following tasks are used frequently when you are using Workshare in SmartPlant P&ID. Most of these procedures can also be scheduled for a later time or at a regular interval.

Publishing and Assigning Ownership: An Overview, page 79

Getting Latest Versions: An Overview, page 88

Synchronizing Reference Data: An Overview, page 96 Synchronizing Shared Items: An Overview, page 106

Publishing and Assigning Ownership: An Overview

To share a drawing with another site, you must first publish that drawing. Publishing the drawing does not grant access: it only freezes a copy of the drawing in anticipation of ownership being transferred. Between the publication of a drawing and the transfer of ownership, the publishing site still owns the drawing and is free to modify it.

Granting subscription access to the drawing gives another site read-only access to the published copy of the drawing. Assigning ownership, on the other hand, allows the site to claim ownership of the drawing and to obtain the published copy of the drawing.

In a standalone Workshare collaboration, drawing ownership controls from which site the host receives a publish of a given drawing. In other words, if a published file did not originate from the site with ownership, the host will ignore it when receiving the latest version of drawings. Only the host can assign ownership, which means that the host can "take back" or revoke ownership of a drawing at any time.

Hosts and satellites can create drawings in either Workshare mode. However, drawing name and number uniqueness is not enforced across a standalone Workshare collaboration.

In connected Workshare collaborations, published files are stored in the database at the publishing site and the Oracle database link is used to transfer published files between sites. In standalone Workshare collaborations, published files are stored in the WSPublish folder at the publishing site and must be manually transmitted to the other sites by e-mail, CD, network share, or other means.

- Assign Ownership to a Drawing, page 88
- Breaking the Database Link: The Significance, page 36
- Publish a Drawing, page 81
- Understanding the Database Link: An Overview, page 33

Publish Command

Workshare > Publish

Publishes the selected drawing or drawings. The **Publish** dialog box displays the status of the operation.

The act of publishing a drawing actually bundles the drawing and its related data and places it as a "blob" object in the host database.

In a connected Workshare collaboration, when the satellite uses the **Get Latest Version from Remote** command, the published "blob" is copied from the host database to the satellite site database. At the satellite site, the "blob" is then unbundled and the drawing is placed in the local file system while its related data is placed in the local SmartPlant P&ID database.

In a standalone Workshare collaboration, the published "blob" is automatically extracted into a published zip file. The **Publish** command derives which sites have been given subscribe access to the drawings being published and places the published zip files in the target WSPublish folder in individual folders corresponding to each subscribing site, allowing you to more easily determine which published zip files to transmit to a given site. The receiving site then uses the **Get Latest Version from Local** command to unbundle the zip file, placing the drawing in the local file system and the related data into the local SmartPlant P&ID database.

For mixed Workshare collaborations, the publishing process detects the types of satellites involved and performs the appropriate actions. For example, when a drawing is published for both a standalone and a connected satellite, the **Publish** command creates the published zip file in the WSPublish folder and places the corresponding "blob" in the database.

! Important

- Before the connected satellite site can access the published drawing, you
 must grant subscription access to or assign ownership of the drawing to
 the satellite site.
- For standalone Workshare collaborations, if you do not grant subscription access to or assign ownership of a drawing before you publish it, the published drawing zip file will not be created in the WSPublish folder.
- Satellite-to-satellite data transfer is not supported in standalone Workshare.
- Published zip files in the WSPublish folder are overwritten without warning as needed by subsequent publishes.
- When using Workshare in TEF environments, satellites must transfer drawing ownership back to the host in order for the host to publish the drawings and in order for documents retrieved from TEF to have tasks updated within the satellite drawings.

Publish Dialog Box

Displays the status of your publishing operation. This status dialog box opens when you publish drawings or when you assign ownership to drawings.



Drawings - Lists the drawings that are being published, and shows the status of that operation.

View Log - Opens the log file that is created when you perform a Workshare operation.

Publish a Drawing

- 1. In the **List** view, select the drawings that you want to publish.
- 2. Grant access to the drawings by using either the **Subscribe Access** or **Assign** Ownership commands.
- 3. Click Workshare > Publish. If you used the Assign Ownership command in the previous step, the Publish process is launched automatically.
- 4. On the **Publish** dialog box, you can click **View Log** to see the history of the Workshare operation just completed.
- 5. If you are using standalone Workshare, be sure to extract the published drawings so that you can transmit the zipped drawing data to the satellite.
- 6. If you are using standalone Workshare and changes have been made to the reference data, be sure to use the **Publish Standalone Package** command in SmartPlant Engineering Manager to bundle the database reference data for synchronization with the satellite.

Notes

- Linked or embedded files are not transferred by Workshare. Those files must be transferred manually. We do not recommend using linked files in a Workshare collaboration.
- You can schedule the selected drawings for publishing at a later time or on a regular interval by using the **Schedule Publish** command in Drawing Manager and following the prompts on the **Schedule Task Wizard**.
- When using Workshare in TEF environments, satellites must transfer drawing ownership back to the host in order for the host to publish the drawings and in order for documents retrieved from TEF to have tasks updated within the satellite drawings.

- Assign Ownership to a Drawing, page 88
- Extract Published Drawings, page 84
- Publish Standalone Package Command, page 72
- Set Subscription Access for a Drawing, page 85

Extract Published Drawings Command

Workshare > Extract Published Drawings

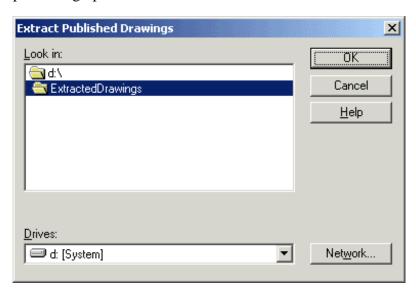
Extracts all plant-wide published drawing and related data from the database into zip files (one zip file per drawing) so that the data can be manually transmitted to a satellite. The satellite then unbundles the zip file using the Get Latest Version from **Local** command, which places the drawing in the local file system and the related data into the local SmartPlant P&ID database.

Note

This command is available only in connected Workshare collaborations.

Extract Published Drawings Dialog Box

Allows you to specify the location, on a local or network drive, where the extracted data will be placed into a new folder named using the day, date, and time of the publishing operation.



Look in - Lists the available directories. You can choose a folder and click **OK**. A new folder to hold your published drawings is created inside the folder you select.

Drives - Displays the currently active drive. To change to another drive, click Network.

Network - Opens the Microsoft standard **Map Network Drive** dialog box with which you can specify a new active drive.

OK - Extracts all published data plant-wide and places it in a new folder inside the folder selected in the Look in list.

Extract Published Drawings Status Dialog Box

Displays the progress of the extraction operation.

Extraction Progress Bar - Displays the name of the drawing which is being extracted and the progress of that operation.

Cancel - Quits the process if the publishing operation is underway. If the extraction is complete, **Close** simply dismisses the dialog box.

Related Topics

- Extract Published Drawings Command, page 82
- Extract Published Drawings, page 84

Extract Published Drawings

- 1. In Drawing Manager, select the plant structure in the **Tree** view.
- 2. Click Workshare > Extract Published Drawings.
- 3. On the **Extract Published Drawings** dialog box, browse to the directory to which you want your drawings published.
- 4. Click **OK**.

Notes

- A new folder is created in this directory and named using the day, date, and time of the publishing operation. This folder contains the results of the extraction operation. The folder could be on a local or network drive.
- Extracting published drawings is later used with the **Get Latest Version from Local** command.
- This command is available only in connected Workshare collaborations.

Related Topics

• Get Latest Version from Local Command, page 91

Subscribe Access Command

Workshare > Subscribe Access

Designates which sites should receive a published drawing and grants read-only access to those sites.

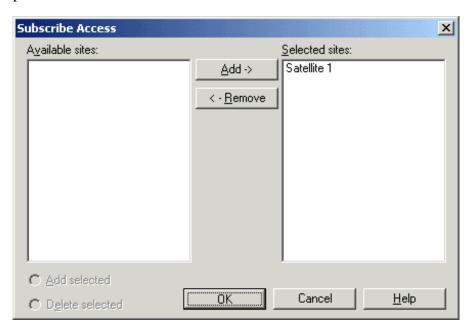
In standalone Workshare mode, only the host can set subscribe access. In connected Workshare mode, this command is available to the host and the connected satellites.

In a mixed-mode Workshare collaboration, the following limitations apply:

- For drawings owned by the host, subscribe access can be given by the host to any standalone or connected satellite.
- For drawings owned by a standalone satellite, subscribe access can be given by the host to any other standalone or connected satellite or the host itself. For the host to transfer subscription access to a drawing from one satellite to another, the host must first transfer the access back to itself before granting subscription access to the other satellite.
- For drawings owned by a connected satellite, subscribe access cannot be set by the host.

Subscribe Access Dialog Box

Allows you to specify the sites that have subscribe access to drawings that you publish.



Available sites - Lists the satellite sites that are available to subscribe to the selected drawing.

Selected sites - Lists the sites that currently have subscribe access to the drawings that you publish.

Add - Moves a selected site from the Available sites list to the Selected sites list.

Remove - Moves a selected site from the Selected sites list to the Available sites list.

Add selected - Gives subscription access to all the sites selected in **Available sites**.

Delete selected - Removes subscription access from all the sites selected in **Selected** sites.

Related Topics

- Publish a Drawing, page 81
- Publish Command, page 79
- Subscribe Access Command, page 84

Set Subscription Access for a Drawing

- 1. In Drawing Manager, select the drawings for which you want to set the subscription access.
- 2. Click Workshare > Subscribe Access.
- 3. On the **Subscribe Access** dialog box, select the site that you want to grant read access to from the **Available Sites** list.
- 4. Click **Add** to move that site into the **Selected Sites** list.



 You can remove read access from these permissions by using the Remove button to move a site out of the Selected Sites list.

Notes

- You must have published a drawing before you can assign read access to another site.
- To grant read/write permission for a drawing, see *Assign Ownership to a Drawing*, page 88.
- When the other site gets a copy of a drawing to which they have read access, they do not see updates to that drawing after the point when they receive that version. That is, the two instances of the drawing are not linked dynamically. For more information about getting the latest version of a drawing, see *Getting Latest Versions: An Overview*, page 88.

Related Topics

• Publish a Drawing, page 81

Assign Ownership Command

Workshare > Assign Ownership

Opens the **Assign Ownership** dialog box, where you can specify which Workshare sites have read/write permission for published drawings. Drawing ownership is used to control, for a given drawing, which satellite's published data the host receives during a Get Latest Version operation.

In a mixed-mode Workshare collaboration, the following limitations apply.

- For drawings owned by the host, ownership can be given by the host to any standalone or connected satellite.
- For drawings owned by a standalone satellite, ownership can be given by the host to any other standalone or connected satellite or the host itself. For the host to transfer ownership to a drawing from one satellite to another, the host must first transfer ownership back to itself before granting ownership to the other satellite.
- For drawings owned by a connected satellite, ownership cannot be set by the host.
- When using Workshare in TEF environments, satellites must transfer drawing ownership back to the host in order for the host to publish the drawings and in order for documents retrieved from TEF to have tasks updated within the satellite drawings.

When the host, in standalone mode, is functioning as a project, all items on the selected drawings are automatically claimed when the drawing ownership is assigned to a satellite site. If exclusive claiming is being used and one or more items have already been claimed by another project, assigning ownership is not allowed.

Notes

- Assigning ownership of a drawing automatically publishes the drawing.
- When transferring ownership of a drawing, the corresponding drawing versions are not transferred. Only the current version of the drawing is transferred.
- If the site to which ownership has been assigned has subscription access, the subscription access will be removed.

Related Topics

Assign Ownership to a Drawing, page 88

Assign Ownership Dialog Box

Allows you to specify the site to which you want to grant ownership of the selected drawing.

Available Workshare sites -

Lists the sites that are currently linked to your site and available to take ownership of the selected drawing.



OK - Assigns ownership of the

drawing to the specified site and publishes the selected drawing.

Related Topics

• Assign Ownership Command, page 86

Assign Ownership to a Drawing

- 1. In the List view, select the drawings to which you want to grant write access.
- 2. Click Workshare > Assign Ownership.
- 3. On the **Assign Ownership** dialog box, choose the appropriate site from the list.
- 4. Click OK. The drawings are immediately published.

Notes

- The sites available on the **Assign Ownership** dialog box are specified automatically according to the sites currently participating in the Workshare collaboration. These Workshare sites are set up in SmartPlant Engineering Manager.
- Assigning ownership of a drawing also publishes the drawing.
- If you want to grant read access only, see *Set Subscription Access for a Drawing*, page 85.
- Only the site that owns the drawing can assign ownership of the drawing to another site, and only one site can have ownership of a drawing at any given time.
- When transferring ownership of a drawing, the corresponding drawing versions are not transferred. Only the current version of the drawing is transferred.
- When using Workshare in TEF environments, satellites must transfer drawing ownership back to the host in order for the host to publish the drawings and in order for documents retrieved from TEF to have tasks updated within the satellite drawings.

Getting Latest Versions: An Overview

After a site has been granted access to a published drawing, that site must subscribe to the latest version of the drawing in order to open or edit that drawing. In a connected Workshare collaboration, you get the latest version from the owner site over a database connection by using the commands for remote access. In a standalone Workshare collaboration or a connected collaboration where the satellite does not have remote access to the host, you get the latest version from the owner site by getting the latest version from a local directory after the published files have been extracted into a zip file and manually transmitted to the satellite site via e-mail, CD, network share, or so forth.

Drawings are never dynamically linked between sites. That is, the version you view is only the latest version to which you subscribed or the latest version left on your site. If another site has modified the drawing since you retrieved the latest version of a published drawing, you do not see those changes. At sites that have a copy of a drawing but do not own the drawing, a red lock on the drawing icon 4 appears in the **List** view. This icon indicates that your version of the drawing may not be the most current.

Get Latest Version from Remote Command



Typically used only in a connected Workshare collaboration, this command is opens the Get Latest Version From Remote dialog box, which allows you to specify the site from which you want to receive the latest versions of published drawings.

When you get the latest version of a drawing, you do not see updates to that drawing after the point in time when you got that version. That is, the two versions of the drawing are not linked dynamically.

Before you can get the latest version of a drawing, that drawing must first be published and assigned to you with the appropriate permissions, and you must have a network or database connection to the Workshare site where the published drawing currently resides.

Important

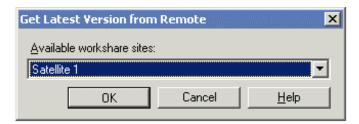
The latest version of a drawing replaces any versions of that drawing currently at your site; therefore, use caution when subscribing to the latest versions.

Related Topics

Get the Latest Version of a Drawing from a Remote Site, page 90

Get Latest Version From Remote Site Dialog Box

Allows you to specify the remote site from which you want to receive the latest versions of drawings. Clicking **OK** on this dialog box opens the **Get Latest Version** from Remote dialog box.



Available Workshare Sites - Lists the sites in your Workshare collaboration that have published drawings available to you. If the site you are looking for is not in the list, check to see if that site has published any drawings and, if so, has it assigned access to you.

Related Topics

- Get Latest Version from Remote Command, page 89
- Get the Latest Version of a Drawing from a Remote Site, page 90

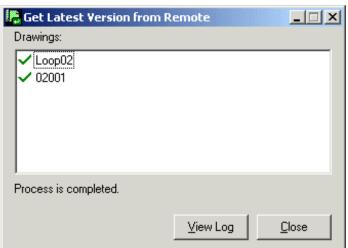
Get Latest Version from Remote Dialog Box

Displays the status of the get latest version operation.

Drawings - Lists the drawings that are being updated and shows the status of that operation.

View Log - Opens the log file that is created during this procedure.

- Get Latest Version from Remote Command, page
- Get the Latest Version of a Drawing from a Remote Site, page 90
- Publish a Drawing, page 81



Get the Latest Version of a Drawing from a Remote Site

1. In the **Tree** view in Drawing Manager, select the plant structure to accept the latest versions of drawings.

💡 Tip

- This site must have either subscription access or ownership of the latest versions of drawings.
- 2. Click Workshare > Get Latest Version from Remote.
- 3. On the **Get Latest Version From Remote Site** dialog box, select the location from which you want to get the latest versions of drawings, then click **OK**. The Get Latest Version from Remote dialog box opens and displays the status of the operation.

! Important

- You must have a network connection or DBLink with the remote site to use this command. If you received the published drawings from the remote site via a CD or e-email and have stored those files locally, use the **Get Latest Version from Local** command to access those files.
- 4. Click **View Log** to see the history of the subscription operation just completed.

Notes

- The locations available in the list in the **Get Latest Version From** Remote Site dialog box are specified automatically according to the satellites connected to the host.
- When you get a version of a drawing, you do not see updates to that drawing after the point in time when you subscribed to it. That is, the two versions of the drawing are not linked dynamically.
- Linked files are not transferred by Workshare. Those files must be transferred manually. We do not recommend using linked files in a Workshare collaboration.
- You can click Workshare > Schedule Get Latest Version from Remote to open the Schedule Task Wizard and defer the subscription to a later time or on a regular interval. You must still complete the next step in this procedure.

- Get Latest Version from Local Command, page 91
- Schedule Get Latest Version from Remote Command, page 110
- Schedule Task Wizard, page 109
- Synchronizing Reference Data: An Overview, page 96

Get Latest Version from Local Command

Workshare > Get Latest Version from Local

Typically used in a standalone Workshare collaboration, this command is opens the Get Latest Version From Local dialog box, which allows you to browse to the published zip file you received from another site and to select the drawings you want to receive. The Get Latest Version from Local command detects if the incoming published files originated from the expected host site. If they did not, the files are skipped and an entry is written in the log file.

When you get the latest version of a drawing, you do not see updates to that drawing after the point in time when you got that version. That is, the two versions of the drawing are not linked dynamically. In a connected Workshare collaboration, the latest version of a drawing replaces the version of a drawing that you currently have on your computer. In a standalone collaboration, a version is created for each replaced drawing.

When a new drawing created at a satellite is obtained by the host, the drawing ownership at the host is set to the originating site. For projects, when new objects created by a satellite site are obtained by the host, new claim records are created at the host.

! Important

Before you can get the latest version of a drawing, that drawing must first be published and assigned to you with the appropriate permissions, and you must have placed the zip file containing the extracted published files on your local computer or a network share to which you have access.

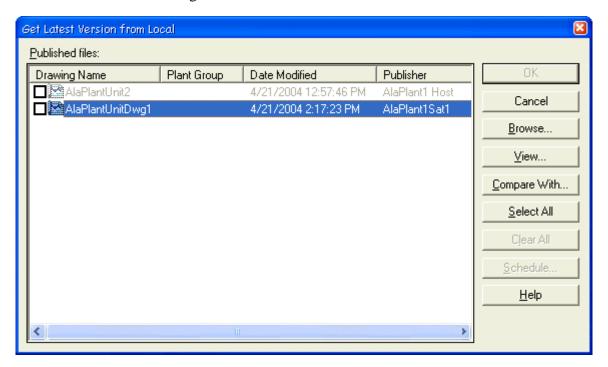
Related Topics

Get the Latest Version of a Drawing from the Local Computer, page 95

Get Latest Version from Local Dialog Box

Allows you to open the zip file containing the extracted published drawings you received from another site. After opening the zip file, you can view a drawing or compare it with an existing version at your site prior to actually obtaining the drawing and writing it to your local database.

At a connected site, published files for drawings owned by that site and drawings from a site not collaborating with the same host.



Published files - Displays the drawings included in the published zip file. In the following situations, certain published drawings are excluded from this list:

- At a connected satellite, excludes published files for drawings owned by that site and drawings from a site not collaborating with the same host.
- At the host, excludes published drawings not owned by the originating site and drawings from a site not collaborating with the same host.
- At a standalone satellite, excludes published files for drawings from a site not collaborating with the same host.

Browse - Opens the Select Publish Folder dialog box, which allows you to browse to the location where you saved the zip file containing the extracted published files.

View - Opens the View dialog box, which displays a read-only view of the selected drawing version without opening SmartPlant P&ID. You can manipulate the view or select drawing items and review their properties.

Compare With - Opens the **Compare With** dialog box, allowing you to compare the current drawing version at your site with the incoming data. You cannot compare incoming data to a previous version of the drawing.

Select All - Marks all drawings in the **Published files** list to be extracted from the zip file and written to your local plant database.

Clear All - Unchecks all drawings in the Published files list.

Schedule - Opens the **Schedule Task Wizard**, which allows you to schedule the get latest from local process for a later time.

Related Topics

- Get Latest Version from Local Command, page 91
- Get the Latest Version of a Drawing from the Local Computer, page 95

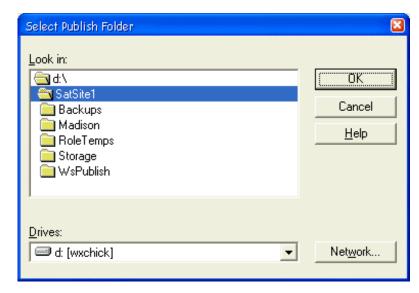
Select Publish Folder Dialog Box

Allows you to locate the folder in which the zip file containing the extracted published drawing is stored.

Look in - Lists the available directories.

Drives - Displays the currently active drive. To change to another drive, click **Network** or select a drive from the drop-down list.

Network - Opens the Microsoft standard Map Network Drive dialog box, allowing you to specify a new active drive.



OK - Opens the zip file containing the extracted published drawings and lists the drawings in the Get Latest Version from Local dialog box.

- Get Latest Version from Local Command, page 91
- Get the Latest Version of a Drawing from the Local Computer, page 95
- Publish a Drawing, page 81

Get Latest Version from Local Status Dialog Box

Displays the status of the **Get Latest Version from Local** process.



Drawings - Lists the drawings that are being updated and shows the status of that operation.

View Log - Opens the log file.

- Get Latest Version from Local Command, page 91
- Get the Latest Version of a Drawing from the Local Computer, page 95
- Publish a Drawing, page 81

Get the Latest Version of a Drawing from the Local Computer

- 1. In the **Tree** view in Drawing Manager, select the plant structure to accept the latest versions of drawings. This plant must have either subscription access or ownership of the latest versions of drawings.
- 2. Click Workshare > Get Latest Version from Local.
- 3. On the **Get Latest Version from Local** dialog box, click **Browse**.
- 4. On the **Select Publish Folder** dialog box, browse to the folder that contains the zip file containing the extracted files associated with the latest drawing version.
- 5. Click **OK**. The **Get Latest Version from Local Status** dialog box opens and displays the status of the operation.
- 6. Click **View Log** if you want to read notes from this process.
- 7. Be sure to synchronize reference data before trying to open the newly obtained drawings.

Notes

- You can schedule this process for a later time by using the Schedule Task Wizard.
- If you are using a connected Workshare collaboration and have an active network connection to the remote site, you can get the latest version from there, too. For more information, see *Get the Latest Version of a Drawing from a Remote Site*, page 90.

- Publish a Drawing, page 81
- Schedule Task Wizard, page 109

Synchronizing Reference Data: An Overview

Because only the host site may change the reference data, satellite sites need to synchronize the reference data from the host site each time it changes.

Synchronizing the reference data (RDB) involves making sure both the host and satellites are using the same plant schema and data dictionary, plant structure, SmartPlant P&ID schema and data dictionary, and various options settings. Synchronization also involves making sure various data files at the satellite site remain up to date with the files at the host. These files include the rules file, insulation specifications, report and drawing templates, symbology settings, CAD definition file, format file, and so forth.

• Important

Changes made to a data dictionary require reference data synchronization before any publishing or subscription activity. Since the data dictionary can be modified only at the host site, the host administrator should inform the satellite administrators when any data dictionary at the host is modified. Reference data stored in the data dictionary that can be changed or updated includes, but is not limited to, new properties or changes to existing properties (such as display name, category) Validation or Calculation IDs, filters, and Engineering Data Editor layouts.

You can synchronize reference data either directly with the host site over a network connection or with a copy of the reference data on your local computer (or network share) using the **Synchronize Reference Data** commands. For more information, see Synchronize Reference Data from Host, page 99 or Synchronize Reference Data from a Copy, page 105.

Two Synchronization Stages:

- 1. Database, Schema, and Data Dictionary Synchronization Involves synchronizing the database-related data listed below. In connected Workshare collaborations, synchronizing this portion of the reference data is accomplished automatically over the DBLink using the Synchronize Reference Data command. For standalone Workshare collaborations, the host uses the **Publish** Standalone Package command in SmartPlant Engineering Manager to bundle this information into a zip file (plantname sync.zip) for the satellite site to access in the Published standalone package file field on the Synchronize Reference **Data from Copy** dialog box.
 - Plant schema and data dictionary
 - Plant structure
 - Plant replication schema, if using connected Workshare
 - SmartPlant P&ID schema and data dictionary
 - **Options settings**

- 2. **File Synchronization** Involves the host site manually transmitting the following data files to the satellite site for access using either of the **Synchronize Reference Data** commands.
 - Rules file (rules.rul)
 - Insulation specifications (InsulationSpec.isl)
 - Report and drawing templates (border files are synchronized only if they are in the same location as the drawing templates)
 - Symbology settings (ProjectStyles.spp)
 - CAD definition file (exportlayer.xls)
 - P&ID templates
 - Formats file (format.txt)
 - Path to the symbol catalog

For connected Workshare collaborations across domains, the satellite site can use the **Synchronize Reference Data** command to synchronize the database part of the reference data only if it has no access to the reference data shared folder at the host. If file synchronization is also needed, then the satellite should use the **Synchronize Reference Data from Copy** command.

A log file is created in \\Program Files\\Smartplant\\P&ID \\Workstation\\Program\\Control\\yourfile.\log during the synchronization process. This log file contains a list similar to the list that is displayed in the **Synchronize Reference Data** dialog box.

Notes

- Customizations should be done at the host. For example, Plant Filters should not be created at a satellite site because when you synchronize reference data with the host, you lose that information. However, you can always create My Filters in the Filter Manager environment.
- Automation programs (for example, DLL and OCX files) are not synchronized. For more information about automation, see *SmartPlant P&ID Programmer's Guide*.
- Reference data at the satellite site must be synchronized with the host reference data before any drawings and shared items can be synchronized or transferred.
- Border files are synchronized only if they are in the same location as the drawing templates.
- Archived drawings are not considered reference data.
- We recommend scheduling synchronization for a time when no users are working in the data.

- Schedule Synchronize Reference Data Command, page 111
- Synchronize Reference Data from Host, page 99
- Synchronize Shared Items, page 108

Synchronize Reference Data Command

Workshare > Synchronize Reference Data

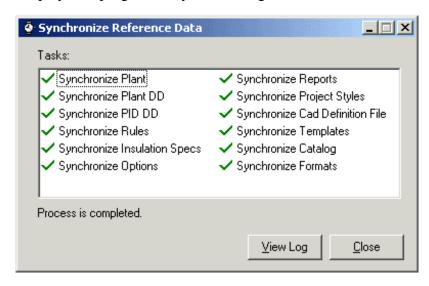
Typically used in a connected Workshare collaboration, this command uses the DBLink or network connection between host and satellite to synchronize the data. The **Synchronize** dialog box displays the progress of synchronizing your reference data with the host reference data.

Related Topics

- Synchronize Reference Data from a Copy, page 105
- Synchronize Reference Data from Host, page 99

Synchronize Reference Data Dialog Box

Displays the progress of synchronizing reference data.



Tasks - Lists the individual parts of the reference data and displays their status in the synchronization process.

View Log - Opens the log file that is created when you perform a Workshare operation.

- Synchronize Reference Data Command, page 97
- Synchronize Reference Data from a Copy, page 105
- Synchronize Reference Data from Copy Command, page 100
- Synchronize Reference Data from Host, page 99

Synchronize Reference Data from Host

- 1. Click Workshare > Synchronize Reference Data.
- 2. When the synchronization process finishes, click **Close**.
- 3. Exit, then re-open Drawing Manager. You can now publish or get the latest version of drawings.

Notes

- In order to synchronize the databases, the DBLink or other network connection between host and satellite must be active.
- You can view the progress of the synchronization process on the **Synchronize** dialog box.
- If a satellite does not synchronize reference data, the satellite can neither publish nor get the latest version of a drawing.
- For information about synchronizing reference data without a remote connection to the host, see *Synchronize Reference Data from a Copy*, page 105.

Synchronize Reference Data from Copy Command

Workshare > Synchronize Reference Data from Copy

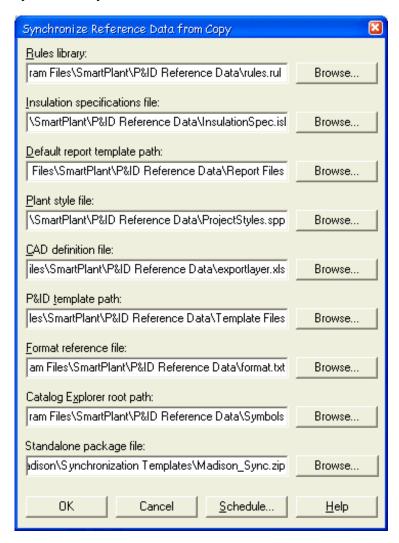
Typically used in a standalone Workshare collaboration, this command allows you to synchronize the reference data with a copy of the data as opposed to over a network connection. The **Synchronize Reference Data from Copy** dialog box allows you to specify the directories or files that contain the copies of the reference data.

Related Topics

• Synchronize Reference Data from a Copy, page 105

Synchronize Reference Data from Copy Dialog Box

Specifies the paths to the copies of the specific reference data with which you want to synchronize your data.



Rules library - Specify the path to the rules file (rules.rul) in the copied reference data. By default, this file is located in the SmartPlant\P&ID Reference Data folder on your computer.

Insulation specifications file - Specify the path to the insulation specifications file (InsulationSpec.isl) in the copied reference data. By default, this file is located in the SmartPlant\P&ID Reference Data folder on your computer.

Default report template path - Specify the path to the default report templates folder in the copied reference data. This path typically points to the Report Files folder in the SmartPlant\P&ID Reference Data folder on your computer.

Project style file - Specify the path to the plant styles file (ProjectStyles.spp) in the copied reference data.

CAD definition file - Specify the path to the CAD definition file (exportlayer.xls) in the copied reference data. By default, this file is located in the SmartPlant\P&ID Reference Data folder on your computer.

P&ID template path - Specify the path to the P&ID templates in the copied reference data. This path typically points to the Template Files folder in the SmartPlant\P&ID Reference Data folder on your computer.

Format reference file - Displays the path to the format file (format.txt) in the copied reference data. By default, this file is located in the SmartPlant\P&ID Reference Data folder on your computer.

Catalog Explorer root path - Displays the path to the Catalog Explorer root path in the copied reference data. This path typically points to the Symbols folder in the SmartPlant\P&ID Reference Data folder on your computer.

Standalone package file - Specify the path to the zipped file (*plantname*_sync.zip) containing the database reference data information bundled by the host using the **Publish Standalone Package** command. This field is available only for standalone Workshare collaborations.

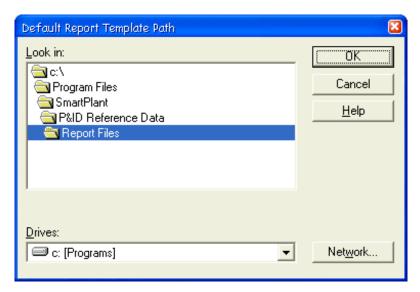
Browse - Allows you to browse to the appropriate file or folder for the pertinent reference data.

Schedule - Opens the **Schedule Task Wizard**, which allows you to defer synchronizing data to a later time or to schedule it on a regular interval.

- Schedule Synchronize Reference Data Command, page 111
- Schedule Task Wizard, page 109
- Synchronize Reference Data from a Copy, page 105
- Synchronize Reference Data from Copy Command, page 100

Default Report Template Path Dialog Box

Allows you to search for a folder on your computer or the local network. This dialog box opens only when you are browsing for the **Default report template path** on the **Synchronize Reference Data from Copy** dialog box.



Look in - Lists the available directories. Choose a folder and click **OK**.

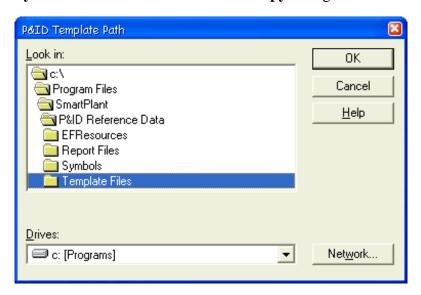
Drives - Displays the currently active drive. To change to another drive click **Network**.

Network - Opens the Microsoft standard **Map Network Drive** dialog box where you can specify a new active drive.

- Synchronize Reference Data from a Copy, page 105
- Synchronize Reference Data from Copy Command, page 100

P&ID Template Path Dialog Box

Allows you to search on your computer or the local network for a folder. This dialog box opens only when you are browsing for the **P&ID template path** on the **Synchronize Reference Data from Copy** dialog box.



Look in - Lists the available directories. Choose a folder and click **OK**.

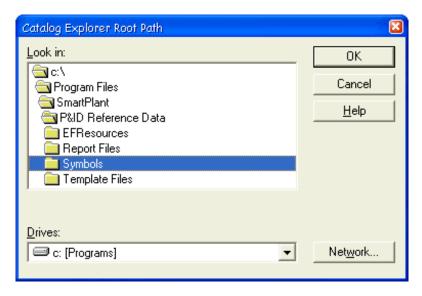
Drives - Displays the currently active drive. To change to another drive click **Network**.

Network - Opens the Microsoft standard **Map Network Drive** dialog box where you can specify a new active drive.

- Synchronize Reference Data from a Copy, page 105
- Synchronize Reference Data from Copy Command, page 100

Catalog Explorer Root Path Dialog Box

Allows you to search for a folder on your computer or the local network. This dialog box opens only when you are browsing for the **Catalog Explorer root path** on the **Synchronize Reference Data from Copy** dialog box.



Look in - Lists the available directories. Choose a folder and click **OK**.

Drives - Displays the currently active drive. To change to another drive, click **Network**.

Network - Opens the Microsoft standard **Map Network Drive** dialog box where you can specify a new active drive.

- Synchronize Reference Data from a Copy, page 105
- Synchronize Reference Data from Copy Command, page 100

Synchronize Reference Data from a Copy

- 1. Click Workshare > Synchronize Reference Data from Copy.
- 2. On the **Synchronize Reference Data from Copy** dialog box, click each **Browse** button and specify the paths to the copies of the reference data files.

💡 Tip

- You must have a live network connection to these files if they are not on your local computer.
- 3. Specify a path for every file listed on this dialog box. Until every path is specified, the **OK** button is not available.
- 4. The **Synchronize Reference Data** dialog box opens and displays the progress of the synchronization operation.
- 5. You can click **View Log** if you want to read notes on the synchronization operation.
- 6. Exit, then re-open Drawing Manager. You can now publish or get latest version of drawings.

Notes

- If a satellite does not synchronize reference data, the satellite cannot publish or get the latest version of a drawing.
- If you are using a Workshare environment in SmartPlant P&ID and you are at a satellite site, you should not store custom layouts for the **Engineering Data Editor** or Plant Filters because when you synchronize reference data, you lose that information.
- You can click Schedule to defer this task to a later time or schedule it on a
 regular interval. When the Schedule Task Wizard opens, follow
 directions in the wizard to complete the scheduling of this synchronizing
 operation.

Synchronizing Shared Items: An Overview

Some drawing items, such as off-page connectors, instrument loops, and utility connectors, require special handling when using Workshare. Because these items can be shared by more than one drawing, any modifications made to a drawing at another site may have ramifications for the shared items contained in that drawing. Consequently you must synchronize these shared items.

- Connectors (OPCs such as off-unit connector, off-page connector, and utility connector) To be sure OPCs synchronize properly, be sure, when placing a connector in a drawing at your site, use the SmartPlant P&ID Move Partner OPC command to specify the drawing at another site on which the partner OPC should be placed. After synchronizing shared items at both sites, the partner OPC is transferred to the drawing stockpile for the specified drawing at the other site.
- Plant Item Groups (instrument loop, package, safety class, and test system) These items can be placed only in the stockpile. To share these items with another site, first place them in the stockpile in SmartPlant P&ID and then set the Isshared property in the Properties window to True. After synchronizing shared items at both sites, this plant item group appears in the stockpile at the other site and can now be associated with items at that site, but cannot be modified by the originating site.

Related Topics

- Schedule Synchronize Shared Items Command, page 112
- Schedule Task Wizard, page 109
- Synchronize Reference Data from Host, page 99
- Synchronize Shared Items, page 108

Synchronize Shared Items Command

Workshare > Synchronize Shared Items

Opens the **Synchronizing Shared Items** dialog box, which allows you to start and monitor the synchronization operation.

! Important

• Run this command at the host and then at the satellite site.

Related Topics

• Synchronize Shared Items, page 108

Synchronizing Shared Items Dialog Box

Displays the progress of the synchronization operation.



View Log - Opens the log file that is created when you perform a synchronizing operation. This button is not available unless an error occurred during the synchronization.

Related Topics

- Synchronize Shared Items Command, page 107
- Synchronize Shared Items, page 108

Synchronize Shared Items

- 1. Click Workshare > Synchronize Shared Items.
- 2. On the **Synchronizing Shared Items** dialog box, click **View Log** to see the record of this synchronization operation.

Note

If you want to defer this activity, or schedule it on a regular interval, you
can click Workshare > Schedule Synchronize Shared Items. Follow the
instructions on the Schedule Task Wizard.

- Schedule Synchronize Shared Items Command, page 112
- Schedule Task Wizard, page 109

Sample Synchronize Shared Items Workflow

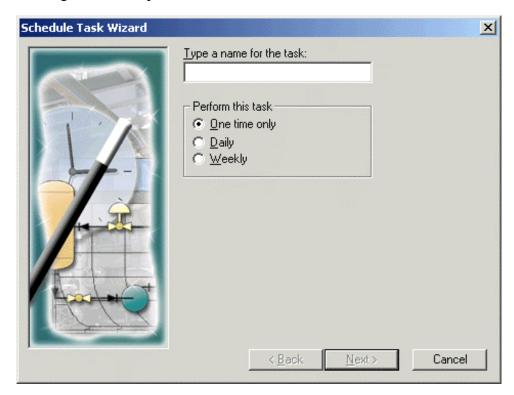
Synchronizing shared items is an automated process in a connected Workshare collaboration but is unsupported in standalone Workshare. Shared items must be manually synchronized in standalone Workshare collaborations as shown in the sample workflow below.

- 1. Host creates Dwg1 and assigns to Site1 and creates Dwg2 and assigns to Site2.
- 2. Host publishes these two drawings and sends the resulting .zip files to their respective sites.
- 3. Site1 and Site2 perform a Get Latest Version from Local to receive their drawings.
- 4. Site1 places an OPC on Dwg1.
- 5. Site1 creates a new drawing, Dwg3.
- 6. Site1 moves the partner OPC from Dwg1 into the drawing stockpile of Dwg3.
- 7. Site1 publishes Dwg1 and Dwg3 and sends the resulting .zip files to the Host.
- 8. Host performs a Get Latest Version from Local on both drawings.
- 9. Host publishes Dwg1 and Dwg3 and sends the resulting .zip files to Site2.
- 10. Site2 performs a Get Latest Version from Local on both drawings.
- 11. Site2 moves the partner OPC from Dwg3 to the drawing stockpile of Dwg2.
- 12. Site2 places the OPC in Dwg2.
- 13. Site2 publishes Dwg2 and sends the resulting .zip file to the Host.
- 14. Host performs a Get Latest Version from Local on Dwg2. (The Host receives a moved items error condition and must move the OPC currently in Dwg3 to the plant stockpile before the **Get Latest Version from Local** command can succeed.)
- 15. Host publishes Dwg2 and sends to Site1.
- 16. Site1 performs a Get Latest Version from Local on Dwg 2. (Site1 receives a moved items error condition and must move the OPC currently in the Dwg3 stockpile to the plant stockpile before the **Get Latest Version from Local** command can succeed.)
- 17. Site1 opens Dwg 1 to cause the OPC label to refresh.

- Schedule Synchronize Shared Items Command, page 112
- Schedule Task Wizard, page 109
- Synchronize Reference Data from Host, page 99
- Synchronize Shared Items, page 108

Schedule Task Wizard

Allows you to specify options for scheduling a task, such as printing, archiving, publishing, and so forth. Follow the directions on the wizard as you choose options. Clicking **Next** advances you to the next appropriate screen in the wizard where you further specify options for the task that you are scheduling. On the final screen, clicking **Finish** completes the schedule and closes the wizard.



! Important

 After setting up the schedule, the wizard relinquishes control over the schedule to your Windows operating system. The only way to modify or delete a task schedule is to use the Control Panel > Scheduled Tasks utility.

Schedule Publish Command

Workshare > Schedule Publish

Opens the **Schedule Task Wizard**, which allows you to schedule publishing the selected drawing or drawings at a later time or on a regular interval.

Related Topics

Publish a Drawing, page 81

Schedule Get Latest Version from Remote Command

Workshare > Schedule Get Latest Version from Remote

Opens the **Schedule Get Latest Version From Remote** dialog box, which allows you to schedule getting a remote version of a drawing at a later time or on a regular interval. When you click **OK**, the **Schedule Task Wizard** opens. Follow the prompts on the wizard to complete scheduling the subscription operation.

Related Topics

Get the Latest Version of a Drawing from a Remote Site, page 90

Schedule Get Latest Version from Remote Dialog Box

Specifies the site where the latest drawing versions reside. Clicking **OK** on this dialog box opens the **Schedule Task Wizard**.



Available Workshare Sites - Lists the sites in your Workshare collaboration that have published drawings available to you. If the site you are looking for is not in the list, check to see if that site has published any drawings and, if so, has it assigned access to you.

- Get Latest Version from Remote Command, page 89
- Get the Latest Version of a Drawing from a Remote Site, page 90

Schedule Synchronize Reference Data Command

Workshare > Schedule Synchronize Reference Data

Opens the **Schedule Task Wizard**, which allows you to schedule synchronizing with the host reference data at a later time or on a regular interval.

Related Topics

• Synchronize Reference Data from Host, page 99

Schedule Synchronize Shared Items Command

Workshare > Schedule Synchronize Shared Items

Opens the **Schedule Task Wizard**, which allows you to schedule the synchronizing of shared items at a later time or on a regular interval.

Related Topics

• Synchronize Shared Items, page 108

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