ENOVIA SmarTeam

SMARTEAM PROCEDURE FOR UPGRADING TO V5R20

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CHAPTER 1: OVERVIEW

General

SmarTeam V5R20 provides a powerful set of services and tools to facilitate the centralized administration of the SmarTeam environment, in order to reduce costs and to make it easier to configure, manage and maintain the SmarTeam environment introduced in V5R20 versions.

This document will guide you through the upgrade process; from SmarTeam V5R18/V5R19 to SmarTeam V5R20. It is the same upgrade process for V5R18 to V5R20 as V5R19 to V5R20. It is recommended that you read the entire document before proceeding with the hands-on migration.

The target audience is technical personnel, such as application engineers and technical consultants who are conducting the migration of existing customers to SmarTeam V5R20.

This information herein is intended only for those who are upgrading a previous installation, and is not intended for new customers who are installing SmarTeam V5R20 on a 'clean' system.

The latest version of this document is available on the ENOVIA SmarTeam Program Directory.

Notes:

When upgrading to V5R20 from a version prior to V5R18 you must first upgrade to V5R18 or V5R19. For further details refer to relevant SmarTeam Procedure for Upgrading to V5R18 or V5R19.

When upgrading from V5R20 GA to a later Service Pack, run the upgrade Wizsrc and then run the DMD.

Hardware and Software

Before starting the actual upgrade process, make sure your hardware and software are compatible with SmarTeam V5R20 requirements. Refer to SmarTeam V5R20 Hardware and Software Requirements for latest updates and changes, such as:

- Supported Servers and Clients Operating Systems.
- Supported CAD versions
- Supported database versions
- Supported LUM versions

CHAPTER 2: MIGRATION PROCESS PRINCIPLES

Process Flowchart
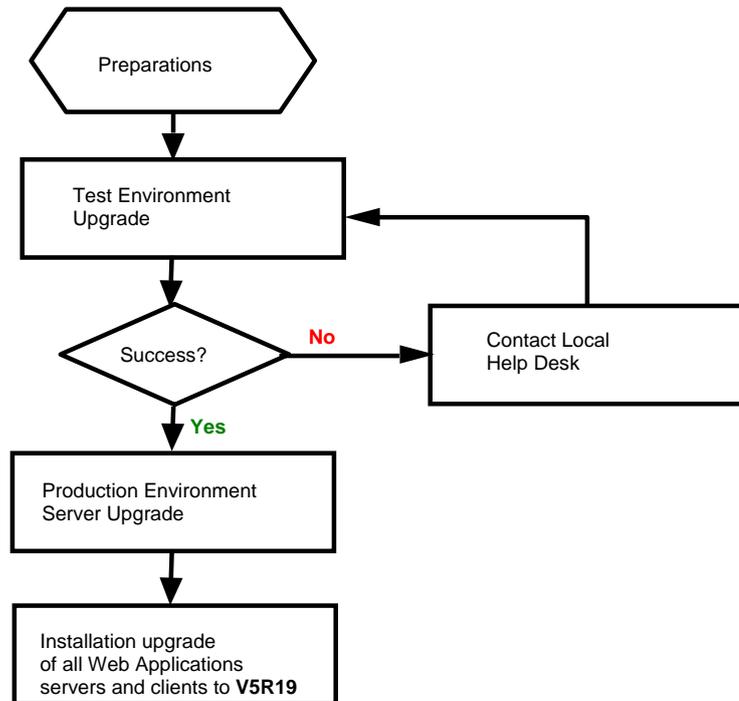
The overall migration process is divided into two main stages:

- Stage 1 - Test Environment upgrade: It is highly recommended to run the upgrade on the Test environment first, in order to verify SmarTeam system integrity in an isolated environment, and to avoid possible impact on the functioning of the Production environment. This test phase also allows you to familiarize yourself and gain experience with the step-by-step technical procedures of the upgrade. For further details refer to Stage 1: Test Environment.

- Stage 2 - Production Environment upgrade:

  - ❑ **Phase 1 - Production Server Upgrade.** After the Test Environment upgrade has been completed successfully; proceed with the upgrade of the Production Environment.

  - ❑ **Phase 2 - Web Servers Upgrade.** After the SmarTeam data has been migrated in production, then proceed with the installation upgrade of all the SmarTeam Web servers when applicable (i.e. SmarTeam – Web Editor and/or SmarTeam – Community Workspace servers)

  - ❑ **Phase 3: Client Machines Upgrade.** Then proceed with the installation upgrade of all clients' applications, such as SmarTeam – Editor, CAD Integrations and SmarTeam – BOM.

  For further details refer to Stage 2: Production Environment.

Machines Required for Upgrade Process

In order to simplify and regulate the whole process of the Test and Production stages of the migration procedure, it is highly recommended to use dedicated computer(s). They should be in the same location where they can access all the required data and software necessary for a successful migration.

In the test environment the following machines should be used:

1 - SmarTeam Core Service Server Machine

This machine hosts the SmarTeam V5R20 Core Services, including:

- Session Management service, which enables a centralized authentication of SmarTeam users

- System Configuration service, which enables centralized control of all SmarTeam configuration settings

- Vault Service

- Workflow Service

2 - Client Machine with Administration Tools

This machine is required in order to perform:

- Install SQL Server 2008 Express Edition (refer to Upgrading the Data Model Designer Utility from V5R18/V5R19 to V5R20 and Upgrading the SQL Database Server).

- Upgrade the Client Machine with Administration Tools

- Upgrade of the WizSrc database to V5R20

- Run the SmarTeam Data Model Designer utility

3 - Client Machine

- Upgrade of the SmarTeam Client Applications

Stage 1: Test Environment

Summary of the Upgrade Process

This section contains a brief summary of the migration activities required in the Test Environment.

Prerequisites:

As every Web Server has SmarTeam – Editor installed on it, if you are going to upgrade the Web Server, you must reset IIS before the SmarTeam – Editor Upgrade process.

Upgrade Procedure:

You must complete all the stages in the order listed in this table to successfully upgrade SmarTeam in the Test Environment to V5R20. This table also includes links to the detailed explanation of each activity, which are provided later in this document.

Upgrade Stage	Machine to Use	Activities Required
Core Services Upgrade	Core Services Server	Install SmarTeam – Foundation V5R20 with the latest Service Pack including Core Services (Session Management Service and System Configuration Service)
Client Machine Upgrade	Client Machine	Install SmarTeam – Editor & additional applications installed at the customer site
WizSrc Upgrade	Client Machine with Administration Tools	Run the SmarTeamWizSrcUpgradeWizard tool (this utility actually extends the customer's current database to support the new features added in V5R20)
Running the Data Model Designer Utility	Client Machine with Administration Tools	Create SmarTeam Database using the SmarTeam Data Model Designer

Stage 2: Production Environment

Summary of the Upgrade Process

This section contains a brief summary of the migration activities required in the Production Environment.

Prerequisites:

1. As every Web Server has SmarTeam – Editor installed on it, if you are going to upgrade the Web Server, you must reset IIS before the SmarTeam – Editor Upgrade process.

2. Back up the SmarTeam script directory.

3. Back up the configuration settings files, located under SmarTeam Home Directory/ConfigurationSettings directory.

4. Back up your CAD templates if they are part of your SmarTeam Environment. The Upgrade process will delete all CAD templates from the default location in the SmarTeam installation.

Upgrade Procedure:

You must complete all the stages in the order listed in this table to successfully upgrade SmarTeam in the Production Environment to V5R20. This table also includes links to the detailed explanation of each activity, which are provided later in this document.

Upgrade Stage	V5R20 Machine to Use	Activities Required
Phase 1 - Production Server Upgrade		
Core Services Upgrade	Core Services Server	Install SmarTeam – Foundation V5R20 with the latest Service Pack including Core Services (Session Management Service and System Configuration Service).
WizSrc Upgrade	Client Machine with Administration Tools	Conduct an upgrade of the WizSrc database once for each database. Copy to V5R20 using the SmarTeamWizSrcUpgradeWizard tool.
Running the Data Model Designer Utility	Client Machine with Administration Tools	Create SmarTeam Database using the SmarTeam Data Model Designer
Phase 2 - Web Servers Upgrade		
Upgrade Web Servers	Web Server	Proceed with upgrade of SmarTeam - Web Editor & Web Navigator Server if relevant and/or proceed with upgrade of SmarTeam - Community Workspace Server if relevant
Phase 3 - Installation upgrade		
Upgrade all Client Machines	All Client Machines	Proceed with upgrade of all SmarTeam V5R20 applications, which are installed on the clients in the following order: • SmarTeam – Editor, which includes CAD Integrations, SmarTeam-BOM

CHAPTER 3: MIGRATION ACTIVITIES

Core Services Upgrade

This section needs to be performed for both Test & Production Environments.

Upgrading the SQL Database Server

If the Customer SmarTeam database is managed in SQL, to upgrade the SQL Database Server from SQL 2005 to SQL 2008, perform the following steps:

1. Detach the SmarTeam database using the Database Connection Manager.
2. If WizSrc, WizDst and Upgrade databases are connected to the SQL Database Server 2005 see "Upgrading the Data Model Designer Utility from V5R18/V5R19 to V5R20" section
3. Install SQL Server 2008.
4. Upgrade SmarTeam – Foundation to the new version (as described in Upgrading SmarTeam – Foundation below).
5. Attach the SmarTeam database to SQL 2008 using the Database Connection Manager.

Upgrading the Oracle Database Server

Note: When upgrading to Oracle 11, note that there was a change in behavior, which affects performance when running a select without using an index (full table scan) on large tables.

For details, see Appendix A in the Oracle 11g Installation Guide.

Upgrading SmarTeam – Foundation

To upgrade SmarTeam – Foundation, perform the following steps:

1. Insert SmarTeam – Foundation Installation CD and select SmarTeam – Foundation.
2. In the Welcome window, click **Next**.
3. In the User Name and Password window, type your User Name and Password. It should be the same login that was used during SmarTeam Installation. Click **Next**.
4. In the Ready to Install the Program window, click Install.
   Note: During the upgrade process the status of the progress will be shown in the Installing SmarTeam – Foundation window (the process may take a few minutes).
5. When the upgrade process has finished the InstallShield Wizard Completed window appears. Click Finish.
6. In the Restarting Windows window; select "Yes, I want to restart my computer now" and click OK.
7. Your machine will be rebooted. The Core Services that you stopped at the beginning of this process will be started automatically.
8. The upgrade of the Core Services is completed.

9. Reconfigure the Workflow Server. The database connections of the Workflow Server service must be redefined through the Workflow Server Setup tool.

10. Reconfigure the Vault Server. After installing Vault Server component of SmarTeam – Foundation V5R20, activate the Vault Server Setup application and reconfigure the hostname (when using NetBIOS) or IP Address (when using TCP/IP) of the machine where the Vault Server Service is installed.

11. If you have additional Vault/Workflow Foundation servers, now you can run the upgrade procedure on them. During the upgrade of these servers, uncheck the option to install the Core Services on the same machine with Vault/Workflow, and indicate the dedicated computer on which the Core Services were installed.

> **Note:** If the Core Services are installed on a dedicated computer separately from the Vault and/or Workflow server, the Core Services installation must be run first.

Upgrading the Data Model Designer Utility from V5R18/V5R19 to V5R20

To upgrade the Data Model Designer (DMD) from V5R18/V5R19 to V5R20:

1. Using SQL Server Management Studio, detach the following databases from SQL 2005: WizSrc, WizDst and Upgrade (if exists).

2. Install SQL Server 2008.

3. Upgrade SmarTeam – Editor to V5R20. Refer to <u>Client Machine Upgrade</u>.

4. Run WizSrc Upgrade. Refer to <u>WizSrc Upgrade</u>.

The Data Model Designer can now be run.

Client Machine Upgrade

This section needs to be performed only for the Test Environment.

The V5R20 Client Upgrade Machine will be used for the upgrade of:

- **WizSrc:** To allow previously prepared custom templates to be saved into the upgraded database.

- **Running the Data Model Designer Utility:** To apply the modifications that were added in V5R20

- **Test the client:** Server connection

In addition, this machine will be used for verification of the SmarTeam authentication mechanism.

To upgrade the client machine:

1. Verify that the V5R20 Client Machine has access to the V5R20 Core Services Server.

2. Verify that the Data Model Designer has been installed on the client machine where the SmarTeam – Editor upgrade will be performed.

3. Install SQL Server 2008 Express Edition (and prerequisites).

4. Insert the SmarTeam Installation DVD and select ENOVIA SmarTeam Windows Client V5R20, and then select the relevant role (Designer or Engineer).

5. In the Welcome Window click **Next** to display the Location window (this may take a few minutes).

6. In the SmarTeam – Foundation Core Services Server Location window, type the name of the test server and click **Next**.

7. In the Database Server window, select the name of SQL 2008 server to which you want to **attach** the database. Type login and password and then click **Next**.

8. In the Ready to Install the Program window, click **Install**.

   Note: During the upgrade process the status of the progress will be shown in the Installing SmarTeam – Editor window (the process may take a few minutes).

9. When the upgrade process has finished the InstallShield Wizard Completed window will appear. Click **Finish**.

10. In the Restarting Windows window; select "Yes, I want to restart my computer now" and click **OK**.

11. Your machine will be rebooted.

12. The client machine upgrade process is completed.

WizSrc Upgrade

This section needs to be performed for both Test & Production Environments.

The WizSrc upgrade tool upgrades the user's WizSrc database located on the SmarTeam database server. The V5R20 Data Model Designer cannot be used without executing this tool. While upgrading, custom templates can be saved to the upgraded database. It is highly recommended to back up the current WizSrc database before running this tool.

To upgrade WizSrc:

1. Run SmarTeamWizSrcUpgradeWizard.exe, located under the <SmarTeam>\Upgrade directory.

2. In the Select Templates window, select the templates that you want to upgrade for V5R20. Any template that you do not select cannot be used in V5R20. Then click **Next**.
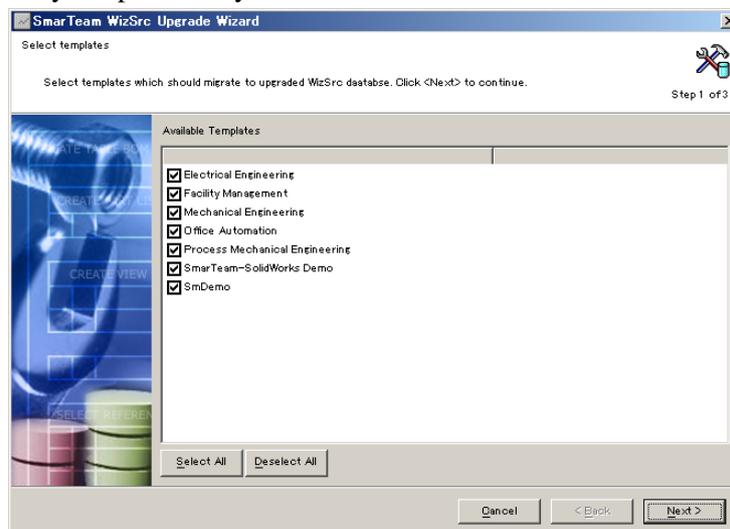
3. In the SQL Server 2008 Express Edition Login window:

   ❑ Type the local SQL Server 2008 Express Edition Server Name, User (Login) Name and Password of the administrator of this server.

   ❑ Click **Finish** to start the WizSrc upgrade process.
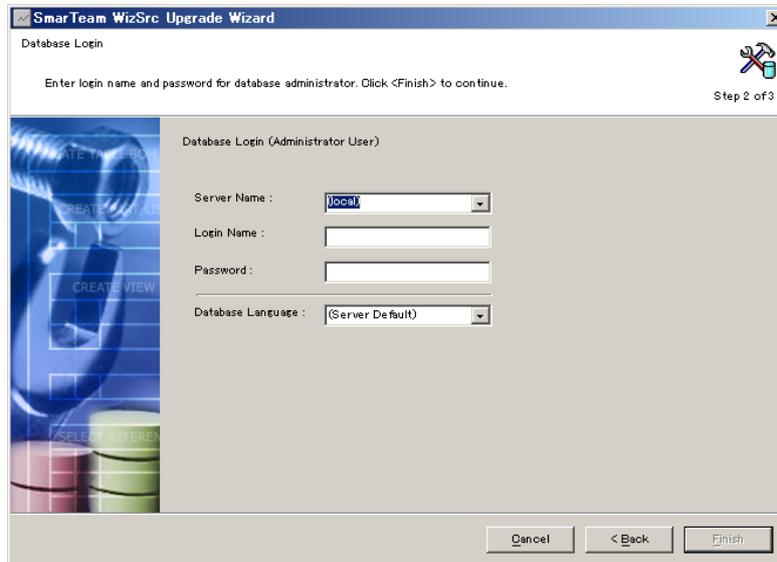
4. The Summary window is generated to indicate that the WizSrc upgrade process is completed.
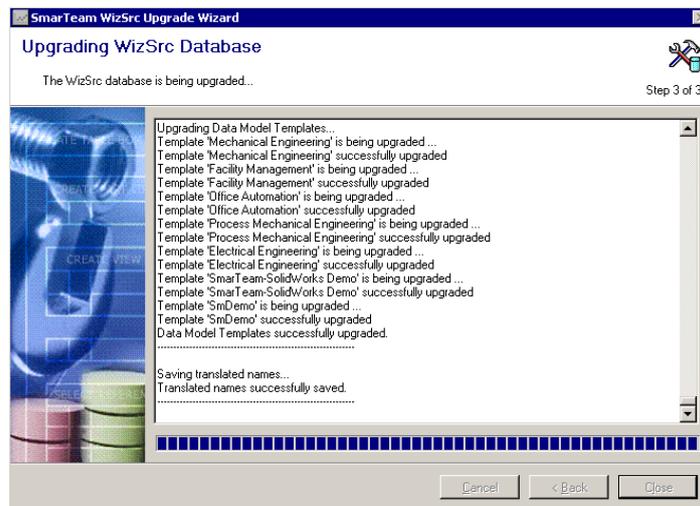
Running the Data Model Designer Utility

This section needs to be performed for both Test & Production Environments.

Before running the SmarTeam Data Model Designer Utility:

1. Verify that the latest Service Pack is installed on the machine.

2. Back up your database.

3. If you use Web, verify that all previous menu items and icons are displayed correctly. The new DMD will not update menu items and icons from previous versions.

4. Verify that the NLS folders are not Read only and they should have shared permissions.

When you run the SmarTeam Data Model Designer utility you will enable the new V5R20 additional functionalities.

To run the SmarTeam Data Model Designer utility perform the following steps:

1. On the machine with the database, open the SmarTeam Data Model Designer utility, which is in Administration Tools. Select **File** menu and then **Modify Database Structure**.
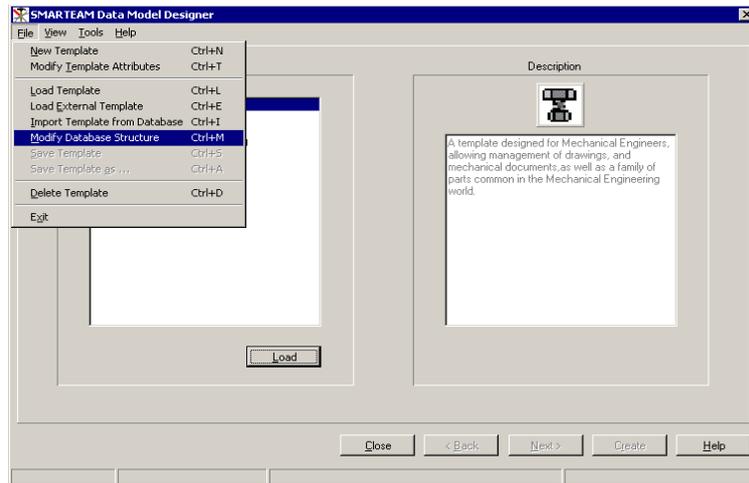
2. In the Available Databases window, select the Database that needs to be upgraded and click OK.
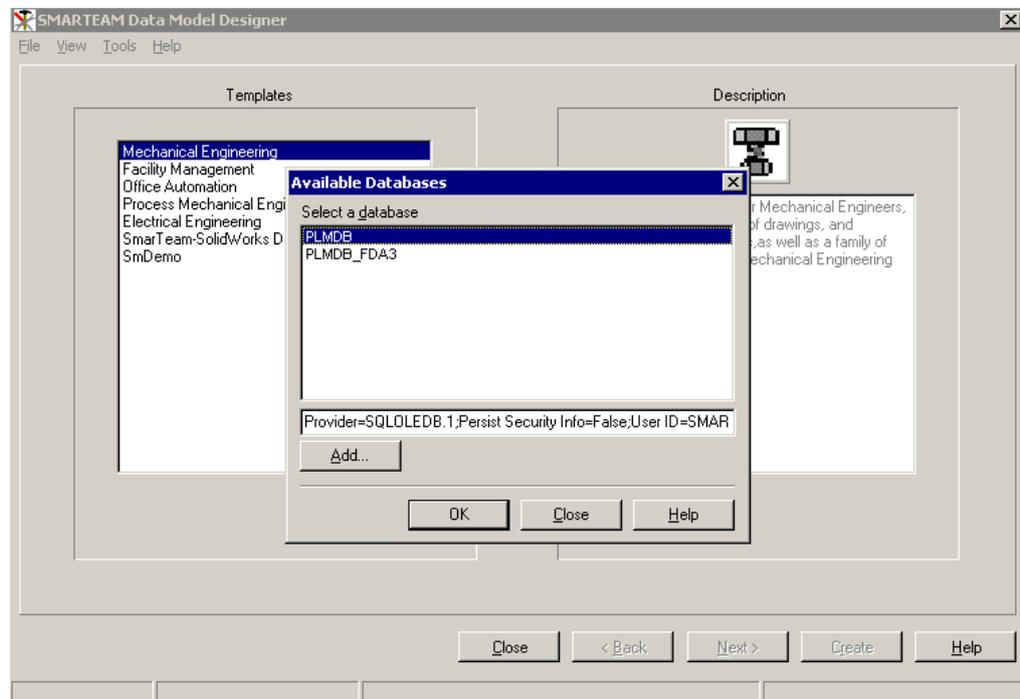
3. In the message window, click Yes.
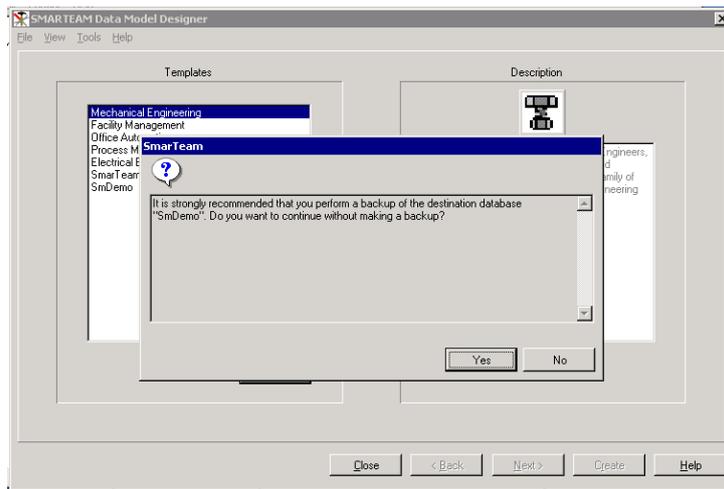
4. It will take few moments until the login window appears. Type your login (which must be Administrator) and click OK.
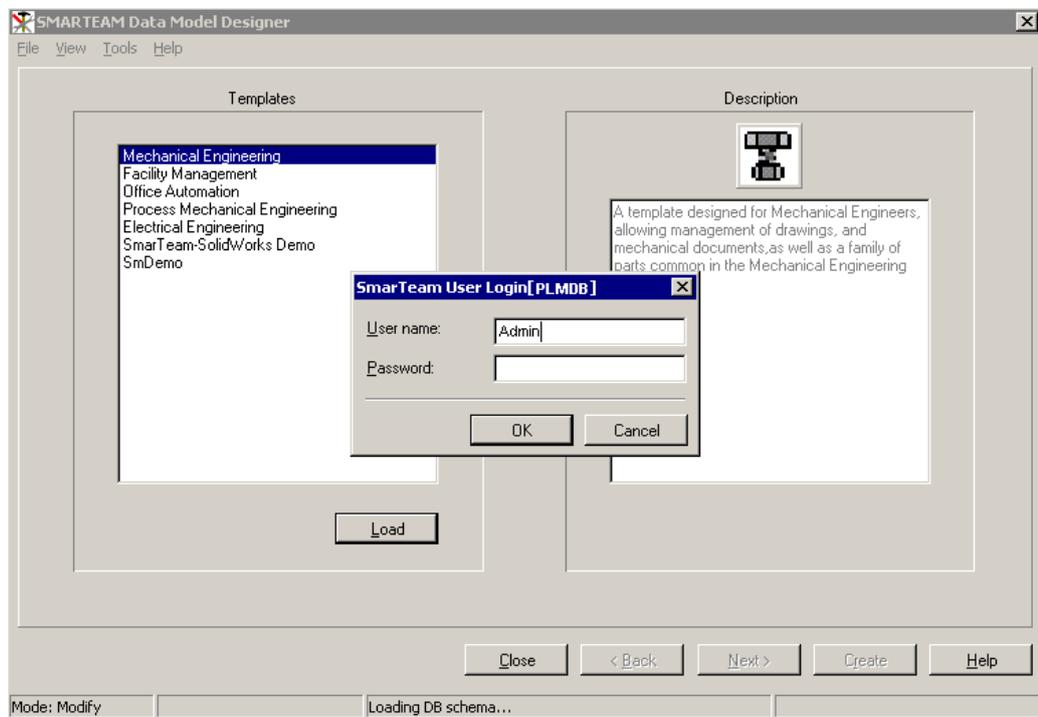
5. In the SmarTeam Data Model Designer window, wait until the database structure has been downloaded (may take a few minutes) and then click **Create**. This operation will automatically add all modifications required for V5R20 (this may also take a few minutes).
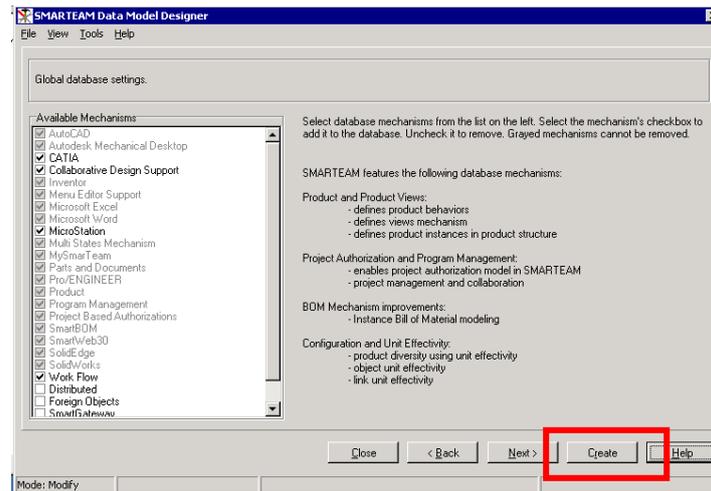
> **Note:** For issues regarding Express Database upgrade, refer to the *SmarTeam Express Configuration Guide*.

Upgrade Web Servers

As every Web Server has SmarTeam – Editor installed on it, before starting any upgrade procedure on the Web Server, you must reset IIS before the SmarTeam – Editor Upgrade process.

Before upgrading the Web Applications verify that your Hardware & Software meet the requirements. Refer to the V5R20 Hardware and Software Requirements Guide for further details. In addition, you must perform the SmarTeam – Editor upgrade process on the Web Server before you start the Web Application upgrade process.

SmarTeam – Web Editor & SmarTeam – Navigator

SmarTeam – Web Navigator will be automatically upgraded during the SmarTeam – Web Editor upgrade process.

To upgrade SmarTeam – Web Editor:

1. Run the installation process as is described in the SmarTeam – Web Editor Installation Guide (the prerequisites and post installation are not required unless specified otherwise in this document). The following steps will not be available during the upgrade process:

    ❑ SmarTeam System Requirements Window

    ❑ SmarTeam Web Viewer Window

    ❑ Web Server Selection

2. If you have customized the Style sheets files (.CSS), which are used to store some user interface settings of previous SmarTeam – Web Editor Versions, you need to redefine them in V5R20.

If you configured Windows Authentication for SmarTeam – Web Editor in a previous SmarTeam release, you need to reconfigure it when upgrading to V5R20. For further details on how to perform this task, refer to Define Microsoft® Windows Authentication Protocol Mode section in the SmarTeam – Web Editor Installation Guide.

Note: After upgrading to V5R20:

- Verify that the SmarTeam.std.dynamicTypeMappings.config.xml file does not exist in [SmarTeam HOME]\ConfigurationSettings\Data\Domain. If it exists you must delete it.

- If upgrading from R18 or below, the customer DLLs must be recompiled.

SmarTeam – Community Workspace

To upgrade the SmarTeam – Community Workspace, insert the SmarTeam Web Applications CD. Run the SmarTeam – Community Workspace installation process as described in the SmarTeam – Community Workspace Installation Guide (prerequisites and post installation are not required).

Once you have completed the SmarTeam – Community Workspace Installation process, run the Synchronize Assembly Helper utility installation process, which is available on the same CD.

Note: If **Global User Group** in the Define a server name was selected during the installation of Community Workspace in R18, and another server was defined, upgrading to R20 may fail. To upgrade successfully, first uninstall the existing Community Workspace and then install R20 Community Workspace.

Upgrade all Client Machines

This section needs to be performed only for the Production Environment.

Products can be upgraded directly, once the minimal version requirements are met, regardless of any Service Packs and/or hot fixes that were subsequently installed.

SmarTeam – Item and BOM

In V5R20 the installation process of SmarTeam – Item and BOM (previously known as SmarTeam – BOM) is included as part of the SmarTeam – Editor Installation process in the Custom Setup screen. SmarTeam – Item and BOM is activated according to licenses.

If you select BOM – Package Briefcase in the SmarTeam – Editor Installation process, after the upgrade process you must also run the Briefcase Administration Wizard. This is available from the SmarTeam Start Menu.

If you select Item and BOM Management in the SmarTeam – Editor Installation process, when upgrading SmarTeam – Editor to V5R20, you will automatically upgrade SmarTeam – BOM to SmarTeam – Item and BOM V5R20. All previous versions of SmarTeam – BOM will be automatically uninstalled.

If the Item Behavior (may be called Part Behavior) mechanism already exists in the SmarTeam database, you must perform this upgrade process. If it does not exist you need to add Item Behavior to the relevant super class in your database and then perform this upgrade process.

SmarTeam – Item and BOM V5R20 has an enhanced data model, therefore it is necessary to perform database upgrade for SmarTeam releases prior V5R20. It requires running the SmarTeam Data Model Designer as a mandatory step of the upgrade process.

When running the SmarTeam Data Model Designer in V5R20 it automatically upgrades the SmarTeam database without an impact on customer's data. All SmarTeam - Item, BOM & Configuration Management functionality features will be immediately available for operation on an existing customer's data.

> **Note:** Customized SmarTeam environments, in which customization was done in accordance with SmarTeam implementation methodology, does not require an additional upgrade process or the migration of customer's data. However, it must be reviewed and analyzed in order to evaluate impact of the new functionality.

SmarTeam – Regulatory Compliance Framework

Currently it is not possible to upgrade to SmarTeam – Regulatory Compliance Framework from SmarTeam – FDA Compliance.

SmarTeam Viewers Installation

As the SmarTeam Installation does not include Oracle AutoVue Desktop and Web Versions, refer to SmarTeam Viewer Installation documentation for installation instructions.

SmarTeam – Multi-site

The Upgrade procedure for Multi-site involves a Data Model Change and uses the Data Model Propagation functionality.

SmarTeam – Multi-site V5R20 software is installed as a system. Therefore, it is highly recommended to have a Secondary Site computer located on the same LAN as the Primary Site, subsequently returning the computer to its actual location. The reason is that the Add as OMD stage is performed by Oracle as two-phase commit, which is very bandwidth-dependent.

Note: An expert Oracle Database Administrator (DBA) is required when installing SmarTeam – Multi-site software.

SmarTeam – Multi-site Installations

There are two types of SmarTeam – Multi-site installations:

❑ **SmarTeam – Multi-site Client:** The SmarTeam – Multi-site Client software is installed as part of the SmarTeam – Editor installation process.

❑ **SmarTeam – Multi-site Admin:** Includes the required components and administrative tools to configure the distributed environment on the SmarTeam – Multi-site server.

Among the multiple sites, the *Primary Site* refers to that site that is set up for managing the other sites; the Primary Site must have the DBSiteManager software installed on either the server or one of its clients.

Upgrade Steps

The following steps are required for upgrading the SmarTeam – Multi-site:

1. Prior to upgrading, perform these pre-upgrade activities (failure to do so may result in database corruption and data loss):
   ❑ Clean Up Transaction Log: Push all transactions from all sites (failure to do so may result in losing these transactions during the Upgrade procedure).

   ❑ Delete any Oracle Replication Errors: This helps you to determine if any problems occur after Upgrade.

   ❑ Back up Databases: You should perform a cold backup of all databases before starting the Upgrade procedure. Back up all sites at the same time to avoid discrepancies. It is not recommended to use a hot backup, since the sites are not available during the Upgrade procedure, and cold backup offers better protection.

2. Install a SmarTeam – Multi-site Administrator at one of the computers at the Primary Site. Set up the configuration servers in the SmarTeam – Multi-site environment.

3. From the SmarTeam – Multi-site Admin, perform the Server Upgrade for the entire Multi-site system. To upgrade the server-side SmarTeam – Multi-site software Run either of the data model change utilities, the SmartDBUpgrade utility or the SmarTeam – Data Model Designer, on SmarTeam – Multi-site Admin at the Primary Site and perform its upgrade.

   Note: The SmartDBUpgrade utility is used to upgrade from V5R10 to V5R11or V5R12. The Data Model Designer utility is used to upgrade from V5R11/V5R12 to V513/V5R14/V5R16/V5R17/V5R18/V5R19. This also applies to normal data model changes for the SmarTeam system.
   ❑ Propagate changes to all Secondary Sites using Data Model Propagation utility. Refer to section Propagating Data Model Changes.

   ❑ Complete Propagation at Primary Site using Data Model Propagation utility. Refer to section Complete Data Model Changes Propagation.

   Note: After performing this upgrade, SmarTeam – Multi-site preferences policy is set to Global, regardless of policy that existed prior to the upgrade.

4. System Configuration Upgrade: If the change in the SmarTeam – Multi-site system includes changes in the system configuration, you need to synchronize the system configuration at the Secondary Sites in conjunction with the System Configuration on the Primary Site. Specifically, if you upgrade the SmarTeam – Multi-site system from a SmarTeam version where there was no System Configuration (V5R10 or V5R11) you need to migrate the System Configuration at the Primary Site and then distribute it to the Secondary Sites.

Upgrade Existing Data Model

This part describes how to successfully upgrade an existing data model in a SmarTeam – Multi-site environment.

SmarTeam – Multi-site should be installed on all computers in the system; in particular, the SmarTeam – Multi-site Administrator Client software should be installed at the Administrator Client with the Database Replication Options.

One of the main advantages of SmarTeam - Editor is the ability to adjust its Data Model to match a customer's current needs. SmarTeam – Multi-site allows this ability to be applied to all SmarTeam databases in a Multi-site environment. This ability is supported in the SmarTeam Data Model Designer tool.

This part refers only to the SmarTeam Data Model Designer and explains how to upgrade the Data Model in the Primary site and propagate the changes to all Secondary sites.

The SmarTeam Data Model Designer software can be run at the Primary Site only; it is disabled on all secondary sites to prevent data model changes that can conflict with other sites.

SmarTeam – Multi-site captures all changes performed on the data model by the SmarTeam Data Model Designer and dumps them into Oracle export file. This file should be uploaded to all secondary sites to ensure that SmarTeam data model at all sites is identical. This is done by utility called Data Model Propagator.

The Data Model Propagator utility uses this dump file to upload the changed data model to the Secondary Site and perform any other necessary activities.

The process of data model changes causes replication to stop working on all sites, for the entire duration of the process, ensuring Multi-site system integrity. The Multi-site system becomes available for regular processing only after completing the full procedure correctly.

Data Model Upgrade Procedure

There are several stages in the Data Model Upgrade procedure:

1. Changing the Data Model on the Database on the Primary site – using the SmarTeam Data Model Designer tool to introduce the desired changes into the Database
2. Propagating the Primary site Database changes – using the Data Model Propagator tool to:
   i. Introduce the changes into the replicated Databases on each of the secondary sites
   ii. Re-establish coordination between the primary and secondary sites (Propagation Completion).
3. Finish the Data Model Upgrade procedure.

Among the multiple sites, the *Primary Site* refers to that site that is set up for managing the SmarTeam – Multi-site software at all sites.

Overall Upgrade Procedure

The overall Data Model Upgrade procedure consists of the following main stages:

1. Pre-Upgrade

2. Performing Changes in the Primary Database

3. Propagating Data Model Changes

4. Complete Data Model Changes Propagation

5. Finish the Data Model Upgrade Procedure

Notes:

The SmarTeam – Multi-site software will not operate during the Data Model Propagation procedure.

It is recommended to perform a backup of all databases before starting the upgrade procedure.

Preliminary knowledge of SmarTeam – Multi-site and the DBSiteManager application is required.

Pre-Upgrade

Perform the following steps before performing a Data Model upgrade:

1. Designate one computer at each site, primary and secondary, to be the Data Model Propagation Manager at that site. For each designated computer, perform an Administrator Client installation of the SmarTeam – Multi-site software with the Database Replication support option. For the Primary site, you should use same computer that was already designated to be the SmarTeam – Multi-site Administrator Client; in that case no additional Client installation is required. Each of these computers will now have the tools DBSiteManager and Data Model Propagator software installed.

2. Verify that the Oracle Import /Export utilities are installed at each Data Model Propagation Manager. If these utilities are not installed, install them; the SmarTeam – Database Engine CD or original Oracle installation CD is required. The Export/Import Utilities installation option is located in the Database Utilities section.

3. Verify that the connection between sites exists and is stable. This can be done by "pinging" the sites from any-to-any.

4. Run DBSiteManager to verify that the sites are not corrupted. Check if all flags next to the site names are green.

5. Back up all sites as described in SmarTeam – Multi-site Administration Methodology Guide.

Note: Performing a Data Model Upgrade in a Multi-site environment is a very resource-consuming procedure. Therefore it is recommended to perform it in the time of minimal LAN and WAN workload. The Data Model Upgrade SmarTeam – Multi-site procedure working in everything-or-nothing mode: every step must be completed successfully. Failure of a certain step may require restore from backup for the site being currently upgraded or, in the most critical case, of the entire system.

Performing Changes in the Primary Database

In this section you run the SmarTeam Data Model Designer to perform the required changes in the model.

Note: After performing the procedure in this section, the SmarTeam User Account Management mechanism will not work until the Complete Data Model Changes Propagation procedure has been performed.

Changing the Data Model

1. At the Primary site, run the SmarTeam Data Model Designer on the Data Model Propagation Manager computer at `<SmarTeam Home>\bin`; a message appears.

2. Click **OK**; the message to back up your database appears. Click **Yes**.

3. Perform your desired changes in the Data Model structure.

4. Click **Create** to apply the selected changes; a message is displayed.

5. Click **OK**.

6. From the SysAdmin window, type the Password of the Oracle System Administrator and click **OK**; the Select RepAdmin window appears.

7. Type the password of the Oracle Replication Administrator and click **OK.**
    After the SmarTeam Data Model Designer performs the required changes, the following files are produced:

File	Location	Description
SmarTeam Data Model Designer .DMP dump file	<SmarTeam>\Replication	Oracle export file with GUID-style name, for example, 4D29DC5B788F11D69185005004240285.DMP (used for Data Model Propagation)
Log file	<SmarTeam>\Replication	Log file of Oracle export. For example 4D29DC5B788F11D69185005004240285.TXT (not necessary for Data Model Propagation)
MultiSiteWizardLog.log	<SmarTeam>\Replication	Multi-site-related log file Contains error or warning messages (not necessary for Data Model Propagation)

Note: Usually, the execution time of SmarTeam Data Model Designer in Multi-site environment degrades slightly in comparison to the regular SmarTeam –Editor environment.

Propagating Data Model Changes

> **Note**: Before running the Data Model Propagator, it is highly recommended to back up the Secondary Site Database after the Data Model Change.

1. Copy the Oracle export .DMP file to the `<SmarTeam>\Replication` directory of the Data Model Propagation Manager computers in each Secondary Site.

   Note: To minimize the time required, it is highly recommended to perform the Data Model Changes Propagation from the Data Model Propagation Manager located inside the LAN of the Secondary Site being upgraded.

2. Run the Data Model Propagator at a Secondary site:
   `<SmarTeam>\bin\DataModelPropagator.exe`.
   The Data Model Propagator appears.

3. Click **Propagate**.

4. Repeat steps **1-3** for each Secondary Site.

5. After the changes have been successfully propagated to all Secondary Sites go to the Complete Data Model Changes Propagation section.
   Note: In the case of failure, restore from backup – for the current secondary site only.

Complete Data Model Changes Propagation

1. Run the Data Model Propagator on the Primary site at:
   `<SmarTeam>\bin\DataModelPropagator.exe`.
   The Data Model Propagator appears.

2. Click **Complete Propagation**.
   Note: The duration of the Propagation Completion procedure depends on the number of changes performed on the Primary database by the SmarTeam Data Model Designer. For minor changes, for example, adding few attributes, Propagation Completion may take 15-30 minutes; adding a complex mechanism may cause Propagation Completion to take a few hours.

   If a system failure occurs at this point for any reason, see the SmarTeam – Multi-site Administration Guide.

3. From the SysAdmin window, type the **Password** of the Oracle System Administrator and click **Ok**; the Select RepAdmin window appears.

4. Type the **Password** of the Oracle Replication Administrator and click **Ok**.

   The Data Model Propagator window closes automatically.

   After successful completion of the Complete Propagation procedure, the SmarTeam – Multi-site system is available again.

5. Click **OK**.

Finish the Data Model Upgrade Procedure

From the open DMD window, click **OK** to conclude the Data Model Upgrade procedure.

CHAPTER 4: STANDALONE UPGRADE PROCESS

This Upgrade Process is only suitable for Standalone (demonstration environment), when a single, Standalone Upgrade Machine is used for the entire upgrade process.

If both SmarTeam – Foundation and SmarTeam – Editor are installed on one machine, you must upgrade SmarTeam – Foundation services (Vault / Workflow services) first and then upgrade SmarTeam – Editor (includes SmarTeam Integrations). When upgrading SmarTeam – Editor, the installation process identifies the existing installed integrations as well as other components, and automatically upgrades them to V5R20.

If you originally installed SmarTeam – Editor in Standalone mode on each client machine, the V5R20 installation will upgrade to the same mode, which includes the V5R20 Core Services. Therefore, in production environment, it is recommended to uninstall first the original Editor installation and then to proceed with V5R20 installation on each 'clean' machine.

This table contains a brief summary of the migration activities required in the Demonstration Environment. It also includes links to the detailed explanation of each activity, which are provided later in this document.

You must complete all the stages in the order listed in this table to successfully upgrade to SmarTeam V5R20 on a Standalone Machine.

Upgrade Stage	Activities Required
Core Services Upgrade	Install SmarTeam – Editor V5R20 in Standalone mode including Core Services (Session Management Service and System Configuration Service), and all SmarTeam Administrator tools.
	Install the latest Service Pack of SmarTeam – Editor V5R20.
WizSrc Upgrade	Conduct an upgrade of the WizSrc database copy to V5R20 using the SmarTeamWizSrcUpgradeWizard tool.
Running the Data Model Designer Utility	Perform "Create" on this database using SmarTeam Data Model designer as described above.

CHAPTER 5: SERVERS MIGRATION TO WINDOWS 2003

All servers must be installed on Windows 2003 for SmarTeam V5R20. The procedures described in this chapter are provided to assist with the migration of servers to Windows 2003 during the upgrade process to V5R20.

Note: SmarTeam - V5R16 was the last release that supported Windows 2000 as a server platform.

Core Services Server

To migrate an existing Core Services Server installed on Windows 2000 to a new server installed on Windows 2003, perform the following procedure:

1. Disconnect the old Core Services server from the Network.
2. Install SmarTeam Foundation V5R20, making sure that you install the Core Services Server V5R20 on a clean Windows 2003 Server machine.
3. In the existing Core Services Server machine (on Windows 2000), go to <SmarTeam Home>\ConfigurationSettings\Data directory and zip all directories (except "Default") that exist in this directory.
4. Copy the Zipped file to the new Core Services Server machine (on Windows 2003) to the <SmarTeam Home>\Configuration\Data directory and then unzip this file.
5. Give all SmarTeam components the new location of the Core Services Server. This can be done in either of the following ways:
   - Change the Network Identification (DNS name, Hostname and IP address) of the new Core Services Server machine (on Windows 2003) to the Network Identification of the old Core Services Server machine (on Windows 2000).
     Note: You must first change the Network Identification of the old Core Services Server machine in order to avoid collision in the network
   - During upgrade of SmarTeam – Editor to V5R20, change the location of the SmarTeam – Foundation Core Services Server, in the SmarTeam – Editor Install Wizard screen.
6. Update all other SmarTeam server machines with the new location of Core Services Server (Vault, Workflow, and FTS).

Vault Server

To migrate an existing Core Services Server installed on Windows 2000 to a new server installed on Windows 2003, perform the following procedure:

1. Disconnect the old Core Services server from the Network.
2. Install SmarTeam Foundation V5R20, making sure that you install the Vault Server V5R20 on a clean Windows 2003 Server machine.
3. Upgrade all SmarTeam clients to V5R20.
4. Run the Data Model Designer from a client machine with Administration tool on the database.

5. Copy SmVaults directory from the existing Vault Server to the new V5R20 Vault Server.

6. Change Network Identification (DNS name, Hostname and IP address) of new Vault Server machine (on Windows 2003) to the Network Identification of the old Vault Server machine (on Windows 2000).
Note: You must first change the Network Identification of the old Core Services Server machine in order to avoid collision in the network.

Final Tuning of Configuration:

1. Copying of the smVault directory erases all permissions made in the old Vault Server machine. Therefore, you must add the shared authorization to the following directories:
   - Add "smVaultAdmins" and "smVaultUsers" groups to be authorized on SmVault Subdirectories.

2. Run "Vault Server Setup" from a SmarTeam client with Administration tools. This is done by directing SmVault to the existing path (Verify IP address should be the same as the server machine. If not, change protocol from "TCP\IP" to "Named Pipes" and again to "TCP\IP" in order to update the IP Address).

> **Note:** For each vault server, the Generate Key and Import Key operations must be performed. For more information refer to the Vault documentation in the SmarTeam – Foundation Administration Guide.

3. Run the Database Connection Manager from new Vault Server (on Windows 2003) and check "Available for Use in SmarTeam Vault".

NLS

To migrate the existing customized NLS data to the new server, copy the custom directory from the NLS folder to the NLS folder in the new server.

Full-Text Search (FTS) Server

To migrate an existing Full Text Server installed on Windows 2000 to a new server installed on Windows 2003, perform the following procedure:

1. Install SmarTeam – Foundation V5R20, making sure that you install the Full Text Search on a clean Windows 2003 Server machine.

2. Create indexing according to the guidelines in the SmarTeam – Editor Administrator Guide (Full Text Search Server, Defining a New Catalog and New Index for files directories).

3. If the new Full Text Search Server machine has a different Network Identification, update the following related system configuration keys in the System Configuration Editor:
   - SmartFTS.IndexingServer in SmarTeam.std.legacyPreferences
   - SmartFTS.MachineName in SmarTeam.std.legacyPreferences
   - SmartFTS.Catalog in SmarTeam.std.legacyPreferences

Workflow Server

To migrate an existing Workflow Server installed on Windows 2000 to a new server installed on Windows 2003 server, perform the following procedure:

1. Install SmarTeam – Foundation V5R20, making sure that you install Workflow, on a clean Windows 2003 Server machine.
2. After installation, run the Workflow Server setup utility to configure the Workflow Server in the SmarTeam environment.
3. Remove the old Workflow Server services in order for all new workflow processes to work with the new Workflow Server.

Web Editor Server

To migrate an existing SmarTeam – Web Editor Server installed on Windows 2000 to a new SmarTeam – Web Editor Server installed on Windows 2003, perform the following procedure:

1. Install SmarTeam – Web Editor V5R20 on a clean Windows 2003 machine.

2. Copy all customized files that were updated to the new server, e.g. Scripts.

3. Change the following System Configuration key, which relate to the SmarTeam Web – Editor Server location, to the new Network Identification of the new server:

   - WorkflowAlerts.SmartWebServer in SmarTeam.std.legacyPreferences

4. You need to verify that the following System Configuration keys are pointing to the new server, if you changed the values of these System Configuration Keys in a previous release:
   - uploadDirectory in SmarTeam.std.filestoragemanager

   - downloadDirectory in SmarTeam.std.filestoragemanager

   - UploadURL in SmarTeam.std.filestoragemanager

   - Download URL in SmarTeam.std.filestoragemanager

Community Workspace Server

To migrate an existing SmarTeam – Community Workspace Server installed on Windows 2000 to a new SmarTeam – Community Workspace Server installed on Windows 2003, perform the following procedure:

1. Install SmarTeam – Community Workspace V5R20 on a clean Windows 2003 machine.
2. Copy all customized files that were updated to the new server e.g. Scripts.

3. Set the URL/Server Name of the new SmarTeam – Community Workspace Server to point to the new location of the Community Workspace Server. This is performed as described in the "Setting the URL/Server Name for SmarTeam – Community Workspace" section of in the SmarTeam – Community Workspace Installation Guide, Post Installation Chapter.

Web Viewer Server

To migrate an existing SmarTeam – Web Viewer Server installed on Windows 2000 to a new SmarTeam – Web Viewer Server installed on Windows 2003, perform the following procedure:

1. Make sure that all Markup files are copied to the Vault before starting to upgrade to V5R20.
2. Install SmarTeam – Web Viewer V5R20 on a clean Windows 2003 machine.
3. Change the following System Configuration keys, which relate to the SmarTeam – Web Viewer Server location, to the new Network Identification of the new server

   - TemporaryViewerPath in SmarTeam.std.viewers

   - TemporaryViewerURL in SmarTeam.std.viewers

   - JVueViewerDirectory in SmarTeam.std.viewers

   - JVueURL in SmarTeam.std.viewers

   - JVueServer in SmarTeam.std.viewers

Gateway Server

To migrate an existing SmarTeam – Gateway Server installed on Windows 2000 to a new SmarTeam – Gateway Server installed on Windows 2003, install SmarTeam – Gateway V5R20 on a clean Windows 2003 Server machine.

APPENDIX A: SDK SCRIPTS

This section is only relevant if you use SDK Scripts.

When you install SmarTeam – Editor, after upgrading to V5R20, all scripts are moved to <SmarTeam>\SDK. Their previous location was <SmarTeam>\Scripts.

If a script provided by SmarTeam is needed for customer's use, it must be copied to <SmarTeam>\Scripts directory.

Examples of such scripts:

❑ UpdateDirtyFlag.bs

❑ SetDesc.bs

❑ DesignCopy.bs - If the Design Copy Script was modified in previous versions you need to add the changes to the Design Copy Script in the new release.