

Deployment Center 2.2

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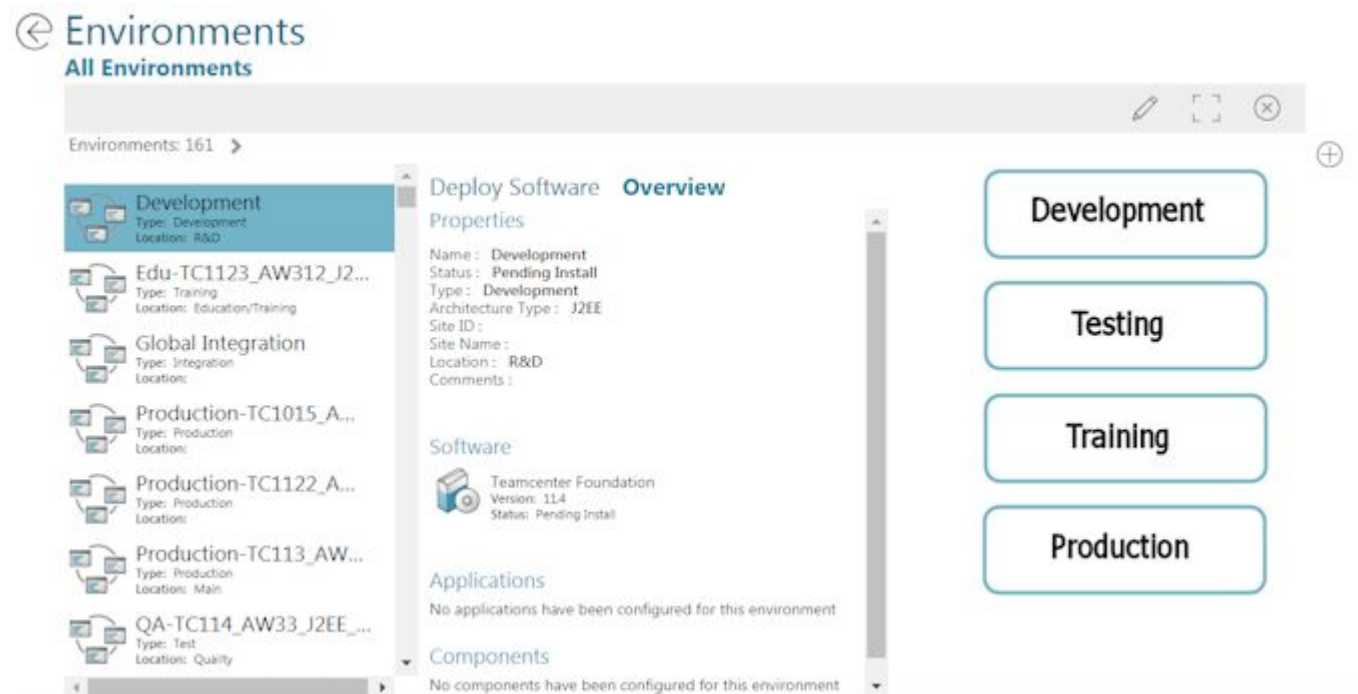
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Chapter 1: Introduction to Deployment Center

Getting started with Deployment Center

Deployment Center is a centralized web application for deploying software to Teamcenter environments. Deployment Center gives you access to multiple environments from a single, centralized location. It simplifies the process of installing and updating software and automates deployment. You can manage a variety of Teamcenter environments more efficiently.



Download software packages to a central location, set up your installation or update in Deployment Center, and generate deployment scripts. Run the scripts on target machines that access and install the software.

Benefits

- Deploy, manage, and maintain multiple versions of software in multiple Teamcenter environments from a single web application with authenticated user access.
- Reduce the costs of managing Teamcenter environments by reducing the number of people, steps, and time involved in software deployment.
- Provide a centralized location to create and view Teamcenter environments and view deployment information.
- Ensure consistency and accuracy by reviewing and adjusting deployment configuration before rollout to Teamcenter environments.

- When setting up your environment, take advantage of entering parameters for one component and having those values shared with related components. For example, when you enter a machine name or port number for a component, that information is shared with other components that require the same information.

Flexible administration of software deployment

The software deployment process is accomplished in two phases.

1. Select the software and configure the deployment in the Deployment Center web application. You can manage responsibility for software deployment using a single administrator or share it among the site's deployment experts. For example:
 - A business analyst could make decisions about choosing the applications. Business analysts can choose the software versions and the applications needed by business units.
 - An administrator could make decisions about the machines, ports, URLs, user names, passwords, and component settings for the target machines in an environment. Administrators can make deployment selections based on knowledge of hardware infrastructure, number of users, and which applications are used by business units.
2. After reviewing the deployment configuration, generate the deployment scripts and deploy the software on the target machines.

Manage software deployment in Teamcenter environments

You can deploy a variety of software among your Teamcenter environments. A **typical deployment process** specifies software configuration and generates deployment scripts that install or update the software on target servers using software kits from a common repository.

Documentation coverage

This documentation describes how to create, deploy, and manage your Teamcenter environments using Deployment Center. To learn how to deploy your specific software or application, refer to the documentation for your version that you plan to install or update.

Deployment considerations

Information about enhancements and new features is in *What's new in Deployment Center 2.2*.

<https://www.plm.automation.siemens.com/locale/docs/>

Find software support on GTAC

For information about specific supported Teamcenter Foundation, Active Workspace, and other software, check compatibility in the **Internal Interoperability – Teamcenter Compatibility Matrix**, available from the GTAC hardware and software certifications page:

<http://www.siemens.com/gtac/>

Deploying custom software with Deployment Center

You can deploy Business Modeler IDE template packages created in Teamcenter 11.3 and later.

Limitations

You can upgrade directly to Deployment Center 2.2 only from these previous Deployment Center releases:

2.0, 2.1, and 2.1.1

If your current Deployment Center version is not supported for direct upgrade to version 2.2, you must upgrade to a supported initial version, and then upgrade to Deployment Center 2.2. For example, if you are using Deployment Center 1.0, first upgrade to version 1.2, then to version 2.0, and finally to version 2.2.

For information on support of software specific to this release, consult the **DeploymentCenter_2.2_README.pdf**, available from the Siemens PLM Software GTAC download site where you obtained the Deployment Center 2.2 product download:

<http://www.siemens.com/gtac/>

To perform additional deployment actions that are not yet available in Deployment Center, run Teamcenter Environment Manager (TEM) on the target servers to complete your environment updates and configuration.

Deployment process

An advantage of using Deployment Center is its ability to simplify your deployment. Deployment Center generates installation or update scripts that you copy to each target machine and then run in a command shell. Each script contains the designated target machine name, what to install or update on the target machine, and the software configurations you specify in Deployment Center.

Your deployment choices are automatically saved in Deployment Center as you go, which allows time to confirm your settings before committing to a deployment. Others can log on to Deployment Center and review the choices and parameter settings before generating the deployment scripts.

When you enter user names and passwords for server components in Deployment Center, passwords are encrypted using AES128 bit encryption in the generated deployment scripts.

Typical approach for deploying software

The general process flow:

1. Plan where to stage the Teamcenter and related software in a **centralized repository location**. Download your software installation kits and choose where to stage them for deployment:

Software staging options

- Keep the software in the repository on the Deployment Center web server. Map or mount a drive to that location on each target server, and specify that path in the **-softwareLocation** argument when you deploy. Use this option if you don't have spare server space located near the target servers.
- Copy the software to a shared location that is convenient to the target servers. Map or mount a drive to that location on each target server, and specify that path in the **-softwareLocation** argument when you deploy. Plan for enough disk space to hold the entire set of deployment software for an environment. Use this option to have the software in one location that is

easier to access during installation. This option is best for environments with **servers on multiple operating systems**.

- Copy all of the software for a deployment to each target machine, ensuring each target server gets the complete set of software. Specify the path in the **-softwareLocation** argument when you deploy. Plan for additional disk space on each target server. Use this option to install software more quickly.

After you unzip and place the software kits in the repository, you are ready to deploy. The software is listed on the **Software Repositories** page in Deployment Center.

This is the location you specify for the **-softwareLocation** deployment script argument.

2. Start and log on to Deployment Center.

You can display existing, registered Teamcenter environment properties. For each environment, you can view the deployed software, applications, and server component parameters.

3. Registered environments are listed on the **Environments** page. You can create and manage registered environments:

- **Create a new environment** in Deployment Center if you are beginning with a new installation of Teamcenter. In a new environment, you can view basic properties before deployment.
- **Register your existing Teamcenter environments** with Deployment Center. The registration process provides information about existing software, applications, and components. Deployment Center displays this information after registration. You can evaluate each environment before you make deployment selections.

Register your existing environment by running the **send_configuration_to_dc** script locally on your Teamcenter environment's corporate server. The script sends the environment information to Deployment Center.

The **Machines** page lists all server machines used by components in registered environments. The machines from registered environments are also available from the **Machine Name** list for components.

4. After staging your software download kits, display the repository contents. The **Software Repositories** page lists all software kits available for deployment. Determine whether you have software dependencies, and be sure you have all of the necessary software kits downloaded for your environment.
5. In Deployment Center, choose the software and applications you want to install in the environment.
6. Determine whether to deploy in a multiple server environment or on a single machine. If your components are on multiple servers, verify the server for each component.
7. Select server components and enter or confirm their configuration parameter values. Some components may be automatically selected for you.

Selections and settings are saved as you go, so you can take your time to review and verify them. If you are unsure of your setup or you need to make changes, return later to complete or update your settings before deployment.

8. After you verify your configuration information, generate the deployment scripts and then copy each script to its corresponding target machine.
9. Be sure the software downloads are available from the shared repository and that the target machines can access it.
10. Run the deployment scripts in diagnostic mode on each of the target machines to validate the configuration entered in Deployment Center. Check the log output for validation errors. No updates are made to the target machine during diagnostic validation. Make the corrections in Deployment Center, regenerate the deployment scripts, and run them in diagnostic mode until all errors are addressed.
11. Run the deployment scripts on each of the target machines.
Be sure the software downloads are available from the shared repository and that the target machines can access it.
12. To perform additional deployment actions that are not yet available in Deployment Center, run Teamcenter Environment Manager (TEM) on the target servers to complete your environment updates and configuration.

Return to Deployment Center if you want to:

- Install or update additional applications and components in Teamcenter environments managed from Deployment Center.
- Perform maintenance on component configuration or parameter values after installation or update in the environments managed from Deployment Center.

Deployment Center architecture

The basic architecture of Deployment Center is comprised of several main parts that communicate with each other.

Jetty web server and the Deployment Center web application	A Jetty web server is automatically installed and configured for Deployment Center, and the installation automatically deploys and runs the Deployment Center web application. No additional installation or configuration is required for the Jetty web server or the Deployment Center web application. Access the web application from a web browser on any machine.
H2 database	The H2 database is also automatically installed and configured for Deployment Center. The database stores information about the Teamcenter environments registered with Deployment Center. No additional installation or configuration is required for the H2 database.

Repository and the repository service

The repository stores the downloaded software kits. Deployment Center uses the repository subdirectories when it registers Teamcenter environments and displays choices for installing and updating software and applications.

You provide the repository directory location during installation of Deployment Center. Be sure that repository location has adequate disk space available to store all the software kits needed for your deployments.

The repository subdirectories are automatically created:

- **dc_contributions**

Contains the Deployment Center files for versions of Teamcenter, Active Workspace, Business Modeler IDE, and other supported software.

Caution

Do not make changes to this directory.

- **deploy_scripts**

Contains a directory for each environment managed by Deployment Center. Generated deployment scripts and related files are placed in the appropriate environment subdirectory in a timestamped folder. The Deployment Center populates this directory structure for installing software.

Caution

Do not make changes to this directory.

- **software**

Contains the software you want to install or update using Deployment Center. Download Teamcenter software from the GTAC software download site, unzip the archives, and then copy the unzipped folders into the **software** directory.

Deployment Center automatically scans this directory and displays the list of selections on the **Software Repositories** page.

- **system**

Stores Deployment Center software files.

Caution

Do not make changes to this directory.

The repository service is automatically installed when you install Deployment Center. The repository service runs automatically and monitors the repository. The repository service reports the software kits to Deployment Center and populates the list of available software selections.

Staging area

The staging directory is where Deployment Center stores the generated deployment script ZIP files that are created when you finish the deployment tasks. Copy the deployment scripts to each of the target machines. If you have configured components that run on multiple machines in the environment, there is one generated deployment script ZIP file for each machine.

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Chapter 2: Installing and using Deployment Center

System requirements

Operating systems	Free disk space	Free RAM	Third-party software
Windows 7, Windows Server 2008 R2, Windows Server 2012, Windows Server 2016 All systems must be 64-bit	300 MB Additional disk space is required to store software download kits	2 GB minimum	JRE 1.8 or later

System, hardware, and software support for your Teamcenter environments is available from GTAC. You must have a WebKey account to access GTAC.

- Certifications are available from the hardware and software certifications page:
<http://www.siemens.com/gtac/>
- The **Internal Interoperability – Teamcenter Compatibility Matrix** is also available from the hardware and software certifications page.

Install Deployment Center

Prepare to install Deployment Center

Before you begin the Deployment Center installation, check:

- The server meets **system requirements**.
- The repository directory for Deployment Center has sufficient disk space for software storage.
- The server directory path for Deployment Center has write access.

Note

Be sure the path does not contain spaces or quotation marks.

- The port you want to use for the Deployment Center web server is not in use.
- The port that you want to use for the repository to communicate with the Deployment Center server is not in use.
- The installing user account has administrative privileges so that the Deployment Center service is installed correctly.

Install Deployment Center

1. Download the installation ZIP file for Deployment Center from the GTAC software **Download** page.
2. Install the supported JRE version of Java and set **JAVA_HOME** to the location.
3. Extract the Deployment Center installation ZIP file to the server where you want to run Deployment Center. The server must be accessible to the Teamcenter environments where you want to install and manage software.
4. Open a command prompt window and navigate to the location where you extracted the Deployment Center installation software. Go to the **deployment_center** directory.
5. Run **deployment_center.bat** using the following arguments. Required arguments are noted; running Deployment Center as a service is optional.
 - install** (required)
Run in install mode.
 - serverDir** (required)
Specify the full path to the directory for the Deployment Center web server and the database. The path can't contain spaces.
 - serverPort** (required)
Specify the port where the Deployment Center web server listens for requests.
 - repoDir** (required)
Specify the full path to the directory for the Deployment Center repository. The path presumes that the required **software** subdirectory exists.
You can choose to **map a drive to an existing software repository**.
 - repoPort** (required)
Specify the port where the Deployment Center repository listens for requests from the Deployment Center server.
 - user** (required)
Specify the user name for Deployment Center. The user views environments, sets up installations, and generates deployment scripts. Specify a user name and remember it for logon later.
 - password** (required)
Specify the password for the Deployment Center user. Remember it for logon later.
 - serviceName** (optional)
Specify the service name for the Deployment Center web server. If you omit this argument, the server is not installed as a service and must be started manually.

-serviceDName (optional)

Specify the service display name for the Deployment Center web server.

For example:

```
deployment_center.bat -install -serverDir=D:\apps\deployment_center\server
  -serverPort=9090 -repoDir=D:\apps\deployment_center\repo -repoPort=9595
  -user=dcadmin -password=dcadmin -serviceName=DC_Service
```

6. In this step, the script prompts you to choose whether to participate in the Product Excellence Program.

Choose **Y** to participate or **N** if you do not want to participate.

Privacy statement

The Product Excellence Program helps Siemens PLM Software understand how customers use our products and assists us in improving our products. The program is anonymous and participation is voluntary.

The Product Excellence Program is designed to protect the privacy of the user and the intellectual property created through the use of Siemens PLM Software products.

How does it work?

The Product Excellence Program is used to collect data about your installation, the features you use and how you use them. The data is sent to Siemens PLM Software for analysis. By examining usage patterns from a large number of people, we gain insight into how the products are used and how to improve the software in future releases. Data collection occurs in the background as you use the software and does not affect performance or functionality.

What data is sent?

The data collected can vary by product and by release as we gain more insight or add new capabilities. The Product Excellence Program may collect information on the functions utilized, the operating environment (for example, OS, RAM, graphics, etc.), product version, or other indications of user interactions. This data is solely used by Siemens PLM Software to improve our products and is never shared with any third party.

There is no contact information in the data and Siemens PLM Software will not contact you by phone or email as a result of the data collected. Absolutely no information about the data you create or manage is collected.

Participation is optional.

You can review and control your participation at any time.

You can opt out of the Product Excellence Program during installation or after installation. **Change your decision** to join or opt out at any time.

What does this mean for Deployment Center?

The following table provides examples of the type of usage data that is collected by Siemens PLM Software and, equally as important, clarifies what data is *not* collected by Siemens PLM Software.

What we collect	What we do <i>not</i> collect
<p>The data collected contains information about how Deployment Center is deployed and used, for example:</p> <ul style="list-style-type: none"> • Deployment Center version • Client browser type and locale • Participation count 	<p>The data collected <i>does not</i> contain user information or intellectual property, including:</p> <ul style="list-style-type: none"> • Contact information • Information about data created or managed in Deployment Center • IT infrastructure identifiable information, including server IP addresses and host names

7. After the installation is complete, the script returns the URL to access Deployment Center. Record the URL to log on to Deployment Center. The URL has the form:

```
http://host:serverPort/deploymentcenter
```

The script also returns the location of the installation log files.

The installation log file also contains the Deployment Center URL. In the Deployment Center root directory, navigate to:

```
deployment_center\logs\deployment_center_debug_timestamp.log
```

If you experience a problem in your installation or upgrade, see [Troubleshoot Deployment Center installation or upgrade](#).

How to specify an existing repository during Deployment Center installation

If you have an existing directory that contains software kits on a separate server from Deployment Center, you may prefer not to duplicate that directory on the Deployment Center server. You have the option to create a mapped drive to the server and share the repository path with Deployment Center. During installation, specify the mapped drive to the shared location containing existing software.

On the server where you are installing Deployment Center, you need to ensure that the local system account can access the location where you want to map the drive. In the following procedure, the system user creates a scheduled task to mount the mapped drive to the repository.

1. Move your Teamcenter software into a **software** directory under your repository location. Be sure the software kits have been unzipped and their folders are inside the **software** directory.
2. Open a command window. Map a drive to your alternate repository using the following command:

```
schtasks /create /tr "net use network-drive-letter:  
\\server-host\shared-repo-directory user-password /USER:user-name  
/persistent:yes" /tn task-name /sc onstart /RU SYSTEM
```

Be sure that the specified user has write access to the shared directory. You need to restart the system for the scheduled task to run.

Example

```
schtasks /create /tr "net use Z: \\10.134.68.64\repo  
Pa22w0rd /USER:dcadmin /persistent:yes" /tn "MountZDrive"  
/sc onstart /RU SYSTEM
```

This example mounts \\10.134.68.64\repo as the **Z:** drive, and presumes the repository path provided to Deployment Center is **Z:**.

3. When you install Deployment Center, specify the *network-drive-letter* in the **-repoDir** parameter, for example, **-repoDir=Z:**.

Be aware that after you set the repository directory location, you can't change it later.

Continue defining your **deployment_center.bat** command arguments for the Deployment Center installation.

Upgrade Deployment Center

When you upgrade, all Deployment Center data is preserved, including software in the repository and deployed environment information. Be sure to **check supported upgrade paths** for Deployment Center before you proceed.

To upgrade Deployment Center:

1. Download the upgrade ZIP file for Deployment Center from the GTAC software **Download** page.
2. Extract the Deployment Center ZIP file to the server where you installed Deployment Center.
3. Stop the Deployment Center web server, including the service if it is running.
4. Check the supported JRE version of Java and the value of **JAVA_HOME**.
5. Open a command prompt window and navigate to the location where you extracted the Deployment Center upgrade software. Go to the **deployment_center** directory.
6. Run **deployment_center.bat** using the following arguments. All arguments are required for an upgrade.

-upgrade (required)

Run in upgrade mode.

-user (required)

Specify the user name for Deployment Center to validate the upgrade.

-password (required)

Specify the password for the Deployment Center user to validate the upgrade.

-serverDir (required)

Specify the full path to the directory for the Deployment Center installation.

For example:

```
deployment_center.bat -upgrade -serverDir=D:\apps\deployment_center\server
-user=dcadmin -password=dcadmin
```

- The script prompts you to choose whether to participate in the Product Excellence Program. This program anonymously shares information with Siemens PLM Software about how you deploy Deployment Center software. This information assists us in improving future releases of Deployment Center. Data is collected in the background as you use the software, without affecting performance or functionality.

Participation in the program is voluntary. If you do not want to participate, enter **N**. You can **change your decision** to join or opt out at any time.

The script returns the status of the upgrade and the location of the upgrade log files. If you experience a problem in your upgrade, see [Troubleshoot Deployment Center installation or upgrade](#).

Participate in the Product Excellence Program

During installation or upgrade of Deployment Center, you were offered the opportunity to participate in the Siemens PLM Software Product Excellence Program. This program anonymously shares information with Siemens PLM Software about how you deploy Deployment Center software. This information assists us in improving future releases of Deployment Center. Data collection occurs in the background as software is used and does not affect performance or functionality.

After installation or upgrade, you can change your participation choice. After you log on to Deployment Center, you can:

Join the program Enter the URL:

```
http://dc_server:port/deploymentcenter/rest/
softwareanalytics/updatesoftwareanalytics?enabled=true
```

Deployment Center responds that enabling participation succeeded.

Opt out of the program Enter the URL:

```
http://dc_server:port/deploymentcenter/rest/
softwareanalytics/updatesoftwareanalytics?enabled=false
```

Deployment Center responds that disabling participation succeeded.

After you confirm your request, log out of Deployment Center and log on again for the change to take effect.

Troubleshoot Deployment Center installation or upgrade

If you have difficulty with installing or upgrading Deployment Center, look for log files in the location where you extracted the Deployment Center installation ZIP file:

The logs are in **deployment_centerlogs**. The logon URL is available from [the installation log](#).

- **dc_install_error.log**
Provides a description of the installation or upgrade failure.
- **dc_install_debug.log**
Provides detailed information about the installation or upgrade operation.
- **dc_database_upgrade_error.log**

Provides a description of the database upgrade failure.

- **dc_database_upgrade_debug.log**

Provides detailed information about the upgrade operation.

Be sure you run the Deployment Center installation script from a location with no spaces or quotation marks in the path. For example, if your installation script is located in:

```
D:\DC Kits\deployment_center_2.2\deployment_center
```

you may get the following error:

```
Could not find or load main class Kits\deployment_center_2.2
\deployment_center\deployment_center.jar\com.dc.jrechecker.jar
'JAVA_HOME' is set to an unsupported version of Java.
```

The **D:\DC** portion of the path is ignored. Remove the space in the path:

```
D:\DCKits\deployment_center_2.2\deployment_center
```

Start Deployment Center

Before you access the Deployment Center web application from a web browser, start the Deployment Center web server. You can choose either of the following ways:

- Automatically start the server as a service

If you specified the **-serviceName** argument during installation, the Deployment Center web server is installed as a service and started automatically.

The **-serviceDName** argument, if specified, provides the **Services** display name. Otherwise, the service name defaults to the internal name specified by the **-serviceName** argument.

- Start the server manually

If you did not specify the service arguments, start the Deployment Center service from its startup script. Navigate to the server directory specified by the **-serverDir** argument when you installed Deployment Center and run the **startdc.bat** script.

If you experience a problem starting Deployment Center, see [Troubleshoot Deployment Center operations](#).

Log on to Deployment Center

1. Enter the Deployment Center URL in the web browser. The form of the URL is:

```
http://host:serverPort/deploymentcenter
```

host is the server where Deployment Center is installed.

serverPort is the port number specified by the **-serverPort** argument for the [Deployment Center installation script](#).

Tip

The URL is displayed in the command window after Deployment Center installation finished.

The URL is also in the installation log file. In the Deployment Center directory, look for:
`deployment_center\logs\deployment_center_debug_timestamp.log`

2. Enter the user name and password as specified by the **-user** and **-password** arguments for the Deployment Center installation script.

The Deployment Center home page appears.

 Deployment Center



If you experience a problem in logging on to Deployment Center, see [Troubleshoot Deployment Center operations](#).

Troubleshoot Deployment Center operations

You can consult log files if you have difficulty with Deployment Center operations, such as:

- Inability to log on to Deployment Center.
- Inability to add software, applications, or components to a Deployment Center environment.
- Failure to create a deployment script.
- Deployment Center operation failures such as internal server error, display problems, or missing configuration files.

Find the log files on the Deployment Center server in **deployment_center_server_dir\logs**:

- **web_server_debug.log**
Provides a detailed description of Deployment Center operations.
- **web_server_warn.log**
Provides a description of operation failures as well as other warnings.
- **web_server_error.log**
Provides a description of operation failures.
- **spring_api.log**
Provides third-party application information.
- **hibernate_api.log**
Provides third-party application information.

Backup and recovery procedures

You can back up key Deployment Center software files for recovery in case of a failure. You can recover from a configuration error that cannot be otherwise changed in the system. You can also recover from a database corruption.

Deployment Center installation paths and parameters are referenced in the procedures. You need to be familiar with the [Deployment Center installation process](#). In the procedures, *DC-install-dir* is the installation path to the Deployment Center.

Back up the Deployment Center system

Note

Best practices for backup frequency are after each deployment and when you add software to Deployment Center.

1. Stop the Deployment Center server.
2. If you set up a repository service, stop the service. The service name (and display name if specified) were set when you installed Deployment Center using the **-serviceName** and **-serviceDName** arguments.
3. Copy these database files to a safe location:
 - DC-install-dir\serverDir\db\deploy_center.h2.db*
 - DC-install-dir\serverDir\db\deploy_center.trace.db*
4. Record the list of software packages you downloaded to the repository. The repository directory is set to the location specified by the **-repoDir** during Deployment Center installation, for example:

```
DC-install-dir\repository\software
```

Note

If you already recorded software packages and there are no changes to the repository since the last backup, you can skip this step.

- Restart the repository service and/or start Deployment Center.

If you encounter a problem, stop Deployment Center and the repository service and replace the database files from your backup. If that doesn't fix the problem when you restart Deployment Center, download and replace the software packages in the repository.

Reinstall Deployment Center

If your recovery is not successful, you may need to reinstall Deployment Center.

- Stop Deployment Center, and delete the repository service.
- Either move or rename the Deployment Center installation, in case you need to access the software directories to repopulate the repository.
- Reinstall Deployment Center into the same location, using the same paths and ports as the original installation. To restore the database files, the repository path specified by **-repoDir** must be identical to the previous installation.
- Update the repository with the same software packages that you recorded from the previous backup. If the repository software packages are safely available from the installation that you moved or renamed, copy those files.

Wait for Deployment Center to update and recognize the software.

- Stop the Deployment Center server.
- If you set up a repository service, stop the service.
- Copy the backup database files to your current Deployment Center installation:

```
DC-install-dir\serverDir\db\deploy_center.h2.db
```

```
DC-install-dir\serverDir\db\deploy_center.trace.db
```

- Restart the repository service and/or start Deployment Center.

Deployment Center should be restored to the state it was in from the last backup.

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Chapter 3: Managing Teamcenter environments

Manage the repository

The repository stores the software kits that Deployment Center uses when you create or register Teamcenter environments. It also provides the software and applications choices for installation or update in Deployment Center. To access the repository, log on to Deployment Center and click **SOFTWARE REPOSITORIES**.

Manage software kits

The Deployment Center **repository directory structure** contains a **software** directory for your unzipped software downloads. The **-repoDir argument** for the Deployment Center installation script specifies the repository directory path to the **software** location where you store the downloaded software.

Deployment Center only finds software in unzipped subdirectories of the **software** directory. Deployment Center can read directories nested under **software**, which mean you can have subdirectory categories, such as **software\ActiveWorkspace**, provided they contain unzipped directories. Software that is in a ZIP file or placed in another location on the server is not scanned.

Note

If your Teamcenter environment has **multiple operating systems**, place only one operating system software kit for each software version in the Deployment Center repository. If you have multiple software kits for the same software version on Windows, Linux, and UNIX, put only one of the system kits in the repository. When you are ready to deploy, then you need to be sure all the software kits are in the **software location** specified by the **deploy.bat** script when you run it.

For existing environments, Teamcenter software that matches your currently installed Teamcenter environment must be placed in the repository directory to successfully register and update the environment.

Review repository contents

The **Contents** tab displays information about the software kits that are recognized and scanned by Deployment Center. The **Software Media** table displays information about each software kit, such as the name and version of the software, its release type and platform, and whether it has a dependency. Dependent software must be present before you **choose software to install**. Deployment Center refers to the base Teamcenter software as Foundation software. The repository services polls for software at 10 second intervals and updates this list as necessary.

1. For existing Teamcenter environments, download the Teamcenter software that match the versions currently used in your environment. Be sure to download the major version and the latest minor release for your Teamcenter version. For example, if your Teamcenter environment

is running version 11.4, download the Teamcenter 11.2 major release and the Teamcenter 11.4 minor release.

2. Unzip the software kits and copy the unzipped directories to the **software** subdirectory in the repository.
3. Download the software installation or update kits for the versions that you want to deploy in a Teamcenter environment.
4. Unzip the software installation or update kits and copy the unzipped directories to the **software** subdirectory in the repository.

Tip

The **Repositories** page displays the first platform it finds for a specific software download version. If your environment has multiple operating systems, you need only one software kit for each version of software in the repository. However, if you have software kits for multiple operating systems for the same version, be sure to put them all **in the location specified by the `-softwareLocation` argument** when you deploy the generated scripts.


5. Log on to Deployment Center, and click **SOFTWARE REPOSITORIES**.
The **Software Repositories** page opens to the **Contents** of the repository and displays the **Software Media** table.
6. Check the list of software to verify that it is correct and complete for your planned deployment. Note whether there are missing dependencies as noted in the **DEPENDENCIES** column. If so, retrieve the missing software and copy it into the repository.

If you experience a problem in adding software to the Deployment Center repository, you can [troubleshoot the repository service](#).

Update repository properties

The **Overview** tab provides helpful information about the server and the repository. The system information includes disk space, which you can monitor when you put software kits in the repository. The available and used disk space values are updated when you add or change software kits in the repository.

You can edit some of the repository properties.


1. Click **Start Edit**  to change the following information:
2. You can change the following information:
 - **Repository Name**
Enter or update a name for the repository.
 - **Location**

Enter or update a location for the repository. You can use any convention you wish, such as geographical location, the name of a facility, or another value that helps you define the location.

- **Comments**

Enter or update additional information that might be helpful to an administrator.

3. Click **Save Edits** .

To cancel your changes, click **Cancel Edits** .

Troubleshoot the repository service

If you have difficulty with software not appearing on the **Software Repositories** page, you may have repository scanning issues or software file problems. The repository log files are located on the Deployment Center server in **deployment_center_server_dir\reptool\logs**:

- **media_scanner_debug.log**
Provides a detailed description of Deployment Center software scanning operations.
- **media_scanner_error.log**
Provides a description of software scanning operation failures.
- **tem_config_rest_service.log**
Provides the communications information between the Deployment Center server and the repository scanning utility.

Manage environments

The **Environments** page lists all environments being tracked by Deployment Center. You can view, **create**, and **delete** environments. To access the list of environments, log on to Deployment Center and click **ENVIRONMENTS**.

Deploy software in an environment

The **Deploy Software** tab displays the selected software used by environments currently registered, which is necessary to proceed with deploying updates. If an environment is new, the selected software list may be empty. This is where you begin the **software deployment process**.

View an environment's properties

The **Overview** tab displays the environment's properties, such as the architecture, site, software version, applications, and components installed in the environment. Click an environment to learn more about it.

- Review the **Properties** for the environment.

If an environment is new, the **Overview** displays the information used to create it.

You can [edit some environment properties](#).

- Review the **Software**, **Applications Installed**, and **Components** for an existing environment. You can [click a selection to display more information](#) in the right pane.

If an environment is new, **Software**, **Applications Installed**, and **Components** may not be populated, so no Teamcenter environment information may be displayed.

Verify software, applications, and components

On the **Environments** page, you can review the software, applications, and components for each environment.

Software You can verify the status of software for the selected environment. The list includes installed and pending software. You can select the software package to see additional software details.

Applications Installed You can verify the status of applications for the selected environment. The list includes installed and pending applications. You can select an application package to see additional application details.

Applications are associated with their installed software, such as Search for Active Workspace.

Components You can verify the status of components for the selected environment. The list includes installed and pending components. You can select the component package to see additional information about component settings. Components are associated with their applications, such as Indexing Engine and Indexer for Search.

The component information in the right pane offers two views of the information. In the upper right corner, you can choose the view:



Show all parameters

Required parameters view displays only required parameter information. Click to expand the view to display both required and optional parameters.




Show only required parameters

All parameters view displays both required and optional parameter information. Click to collapse the view to required parameters.

Edit environment properties

On the **Environments** page, you can edit some environment properties. Click the **Overview** tab to display the properties of the selected environment.

- Click **Start Edit**  to display the editable fields.

2. You can change the following information:

- **Environment Name**

Displays the name provided during setup for the environment. The environment name is specified in the **-environment** argument of the **send_configuration_to_dc** script.

You can update the name for the environment.

- **Environment Type**

Displays the type of the environment. The available types are **Integration**, **Development**, **Production**, **Test**, and **Training**. The type is set to **Production** by default when the environment is registered, but you can select another type.


- **Location**

Displays the location of the environment. You can enter or update the geographical location for the environment, such as a city, the name of a facility, or another value that helps you define the location of the environment.

- **Comments**

Displays additional information entered by the administrator. You can enter or update information about the environment.

3. Click **Save Edits** .

To cancel your changes, click **Cancel Edits** .


Create environments

You can create an environment for your planned deployment. When you are ready to **add software** to your new environment, Deployment Center displays only the versions of **Available Software** that are supported in a new environment.

Create an environment



1. Log on to Deployment Center, and click **ENVIRONMENTS**.


The **Environments** page lists currently planned and registered environments.

2. On the far right below the command bar, click **Add** .

3. The new environment appears highlighted in the list. Choose **Overview** to display its information.

4. You can **edit some of the properties**, such as **Name** and **Type**. On the command bar:

Click **Start Edit**  to edit properties. To save your changes, click **Save Edits** .

To cancel your changes, click **Cancel Edits** .

Register environments

Register your environments in Deployment Center by running the **send_configuration_to_dc** script on the corporate server that hosts each Teamcenter environment. If the environment is distributed across multiple servers, you must run the script on each machine that is part of the specific Teamcenter environment. The script sends configuration information about the applications and components that are currently installed to Deployment Center.

After the environment is registered, you can view its configuration information and verify the content. Deployment Center saves information about server machines deployed in your environments.

- **View the machines** used in deployed Teamcenter environments from the **MACHINES** tile on the Deployment Center home page.
- **Select a machine from a list of servers** when configuring components.

Caution

Before updating an existing registered Teamcenter environment, be sure that you run the **send_configuration_to_dc** script to update the environment information. Configuration changes performed locally on Teamcenter servers since the last time the **send_configuration_to_dc** script ran could be overwritten.

1. On the machine hosting the Teamcenter environment, install the supported version of the JRE and set **JAVA_HOME** to the location.
2. Open a command prompt window, and set **TC_ROOT** to the Teamcenter installation directory if it's not already set.
3. From the location where you installed Deployment Center, navigate to the **additional_tools\Teamcenter\send_configuration_to_dc** directory and find the **send_configuration_to_dc.zip** file. Copy and unzip the file. Place the extracted directory on the machine hosting the Teamcenter environment.
4. In the command prompt window on the Teamcenter host, navigate to the **send_configuration_to_dc** directory. Run **send_configuration_to_dc.bat** (Windows) or **send_configuration_to_dc.sh** (Linux or UNIX) using the following arguments. Required arguments are noted.
 - dcurl** (required)
Specify the URL you use to access Deployment Center.
 - dcusername** (required)
Specify the user name for Deployment Center as defined when installing Deployment Center.
 - dcpassword** (required)
Specify the password for Deployment Center as defined when installing Deployment Center.
 - environment** (required)

Specify a name to identify the environment being scanned. Because an environment is ordinarily identified by its site ID, this argument allows you to create a readable label that makes it easier to identify the Teamcenter environment.

-config (optional)

Specify the ID value for the configuration used when installing the Teamcenter environment. Specify this argument if multiple configurations are installed in a single **TC_ROOT** location using the TEM installer.

For example:

```
send_configuration_to_dc.bat -dcurl=http://dc_host:9000/deploymentcenter
-dcusername=dcadmin -dcpassword=dcadmin -environment=Sandbox
```


After the scan completes, the script returns the message:

```
All operations completed successfully.
```

If you experience a problem in registering environments with Deployment Center, see [Troubleshoot registering environments](#).

Remove environments

You can remove an environment from the **Environments** list in Deployment Center.

1. Log on to Deployment Center, and click **ENVIRONMENTS**.
The **Environments** page lists all environments.
2. Select the environment you want to remove.
3. Click **Delete**  on the command bar and confirm the deletion.

The environment is only removed from Deployment Center tracking. The Teamcenter system remains intact.

Troubleshoot registering environments

You can consult log files if you have difficulty with sending an environment configuration to Deployment Center (using the **send_configuration_to_dc** script), such as:

- Sending configuration to Deployment Center fails.
- Inability to communicate with a Deployment Center server.
- Invalid credentials passed when sending environment configuration.

The registration configuration log files are located on the Teamcenter environment server in **send_configuration_to_dc_dir\logs**:

- **tem_config_scanner_error_timestamp.log**

Provides a description of environment scanning operation failures.

- **tem_config_rest_service_timestamp.log**

Provides the communications information between the Deployment Center server and the `send_configuration_to_dc` utility.

View registered machines

View the machines used in deployed Teamcenter environments. Select a machine name from the list to view its properties, such as operating system, disk capacity, and free disk space.

1. Log on to Deployment Center, and click **MACHINES**. The **Machines** page lists all servers used by components in deployed environments. When you select a machine, the **Overview** provides information about the server where one or more software components are installed.
2. Verify that the properties for the server machine are what you expect.

Properties for a machine from a deployed environment include:

- **Machine Name and IP Address**

Identifies the machine by the server name and IP address.

- **OS and OS version**

Displays the operating system type and version installed on the machine.

- **Local Time**

Displays the current date, time, and time zone at the machine's location.

- **Disk Capacity and Disk Free**

Displays the total disk space and the free space available. The pie chart to the right displays the same information visually.

- **Last Update**

Displays the last time information about this server was refreshed. The information is obtained and sent by the `send_configuration_to_dc` utility.

Chapter 4: Deploying software using Deployment Center

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Chapter 4: Deploying software using Deployment Center

Deployment tasks

The **Deploy Software** page displays each step in the deployment progress bar. In each task, Deployment Center prompts you to make selections and provide information. At any time in the process, you can save your work and exit. The settings are stored in Deployment Center, and you can return to the deployment process at your convenience.



Dark blue means the task is available and is currently selected.



Medium blue means the task is available.



Gray means the task is not available yet. These tasks become available as steps within the previous tasks are completed.

Click a chevron to go to that task. You can revisit any task you previously completed to make changes. For example, if you completed the **Components** task, you can still return to the **Applications** task and make changes.

Deployment procedure

Caution

Before proceeding with an existing registered Teamcenter environment, be sure that you run the **send_configuration_to_dc script** to update the environment information in Deployment Center. Configuration changes performed locally on Teamcenter servers since the last time the **send_configuration_to_dc** script ran could be overwritten.

1. Open the **Environments** page and choose the environment where you want to install software. The **Deploy Software** page provides access to the deployment tasks.
2. **Software**
Choose the software to install. The software determines the list of available applications. For example, if you choose Active Workspace software, you can install the applications it provides.
3. **Options**
Choose single server or multiple server deployment for **Environment Type**.
Choose the Java or Windows architecture for **Architecture Type**.
4. **Applications**

Choose the applications. The list of available applications depends on the software selected in the **Software** task. Some applications may be automatically selected for you by default.

Each software package can have one or more applications in its bundle. Applications provide business logic, data model, work processes, and administration data for specific business uses, industries, or integrations. In this step, you do not need to know details of your network or configuration of software or hosts.

5. **Components**

Choose and configure components. Components run on the servers in your environment. Some components are automatically selected for you as required by the applications selected in the **Application** task. You need to configure any component that is not listed as **100%** complete.

Component status:

- **Pending Install** components will be installed during deployment.
- **Pending Update** components are already installed in your environment, but they need updates to support your selected applications.
- **Installed** components are already installed in your environment, and they don't need any updates.

You need to know the server hosts on which components will be installed or updated, user names and passwords for the server component, and component URLs. Some components may have additional required or optional settings.

6. **Deploy**

Generate deployment scripts. This task is not available until the **Components** task is complete.

Deployment scripts contain the information you configured in Deployment Center for the servers in your environment. The scripts install the software, applications, and components onto each target machine in your environment.

7. **Run the deployment scripts.**

After the scripts and software ZIP files are generated, copy them to each target machine and run them.

Deploy in a multiple operating system environment

If your deployment environment has multiple operating systems, you must place the software kits for only one of the operating systems into the Deployment Center repository. Deployment Center only recognizes the first kit it finds for a specific version. For example, if you have Teamcenter 11.4 software kits for Windows, Linux, and UNIX, put only one system's software kit in the repository.

1. Put the software kits for one of the operating systems for your environment in the Deployment Center repository. Don't drop all the software kits for the same version into the Deployment Center repository, as you can't choose which operating system Deployment Center finds first.

2. Run Deployment Center and enter your configuration settings. Deployment Center prompts for the selections and parameters, regardless of operating system, to deploy the applications and components.
3. Generate the deployment scripts. Deployment Center creates the deployment scripts correctly for the supported platforms in your environment.
4. **Stage the software kits** for all of the operating systems in the repository, and be sure it's accessible to the target environment servers.
5. Run the **deploy.bat** script on each of the target servers, specifying the repository location in the **-softwareLocation** argument.

Update and maintenance of your environment

Deployment Center can update software or components in a registered Teamcenter environment. Before you perform an update or maintenance, you must run the **send_configuration_to_dc** script on the target servers to send the latest environment updates to Deployment Center. Deployment Center then guides you through selecting software, applications, and components.

Deployment Center software updates and maintenance use the same underlying process as installation. When you want to update your environment, choose the version of software you want to apply. Deployment Center determines what to install or update based on what is required by the selected version.

Perform software updates

The deployment tasks for updating are similar to installation:

1. Ensure the current version of software for your environment is in the Deployment Center repository.
2. Download the version of updated software and place it in the Deployment Center repository.
3. Open the **Environments** page and choose the environment where you want to update software. Begin the **Deploy Software** tasks.
4. **Software**
Choose the software from the **Available Software** list. The software selections determine the list of available applications that you can install during an update. Applications that must be updated are automatically selected. The **Selected Software** list displays currently installed versions and latest pending versions for the environment. If the software you need is not listed, check whether it is listed in the repository.
5. **Options**
Choose single server or multiple server deployment for **Environment Type**. If you previously had a **Single Box** environment, you can choose **Distributed**; however, you will need to update the server information for components. If an environment is already deployed on multiple servers, **Single Box** is not available.

The **Architecture Type** for your environment is automatically selected and can't be changed.

6. Applications

Applications that are already installed are automatically included for update. You can add other applications from the list. Applications that display a **Pending Install** status are waiting for deployment to complete. Applications that are installed but need updates to support your selected software display the **Pending Update** status.

7. Components

It's possible that a selection from the current update may cause a previously configured component to need more information. The component displays the % configured. If it's less than **100%**, complete the required parameter values. Components that have no impact from the selected applications can be ignored (showing **100%** configured).

Components that are not yet installed display the **Pending Install** status.

Components that are installed but need updates to support your selected applications display the **Pending Update** status.

8. Deploy

Generate deployment scripts for the update. This task is available when the **Components** task is complete.

Deployment scripts contain the information you configured in Deployment Center for the selected environment.

9. Run the deployment scripts

After the scripts and software ZIP files are generated, copy them to each target machine and run them.

Perform component maintenance

You can perform component maintenance by updating component configuration. Use the **Deploy Software** tasks to navigate to the **Components** task.

1. Open the **Environments** page. Select the environment where you want to update components and navigate through the **Deploy Software** progress bar tasks to **Components**.

2. Components

Review the components on the list that are already installed in the Teamcenter environment. You can change values only on editable parameters for installed components.

Components with updated parameter values display the **Pending Update** status.

3. Deploy

Generate deployment scripts for component maintenance. This task is available when the **Components** task is complete.

Deployment scripts contain the parameter changes for the selected environment. After the scripts are generated, copy them to each target machine and then run them.

Software task

Deploy Software Overview




Selected Software



In this task, select the software to install from the list of installable applications. The software you select determines the list of applications available in the **Applications** task. The **Selected Software** list displays both current and pending installations for the environment.

Selecting a minor version of software also automatically adds its underlying major version. For example, choosing the minor version Teamcenter 12.1 automatically adds the major version Teamcenter 12.0.

A selected version of Teamcenter software can make additional software available. The **Available Software** choices are dependent on a version compatible with the selected version of Teamcenter. For example, if Teamcenter 11.6 is selected, Active Workspace 4.1 could become available.

1. In the **Software** task, click **Edit Selected Software**  to add software.
This **Available Software** panel displays the software choices.
2. The **Available Software** panel lists software from the repository. The software status displays information about the software kit. After making your selections, click **Update Selected Software** to add them to **Selected Software**.
If the software you need is not listed, you must **add it to the repository**. Add software as needed, but you may have to choose applications and configure components before deployment.
3. When your **Selected Software** list is complete, go to the **Options** task.

Options task

Deploy Software Overview



Options

In this task, choose the deployment options for your environment.

1. Choose the **Environment Type**.
 - Choose **Single box** to install all components on a single server.
After you define **Machine Name**, **OS**, and **Teamcenter Installation Path** for one of the components, those values are adopted by the other components.
If an environment is already deployed on multiple servers, this type will not be available.
 - Choose **Distributed** to install components on any server in an environment. **Machine Name**, **OS**, and **Teamcenter Installation Path** configuration values are shared only with other components that are required to be on the same server.

This type may be selected for you if your environment is already set up as a distributed environment.

You can change the value from **Distributed** to **Single box** if an install or an update is not in progress. For configured components that are not yet installed, **Machine Name**, **OS**, and **Teamcenter Installation Path** are changed to the values specified for the corporate server component.

2. Choose **Architecture Type**.

- Choose **Java EE** to filter component choices to the Java EE architecture.
- Choose **.NET** to filter component choices to the Windows .NET architecture.

If your environment already has deployed one of the architectures, the type is selected and can't be changed.

3. When your selections are complete, click **Save Environment Options** to go to the **Applications** task.

Applications task

Deploy Software Overview



Selected Applications



In this task, choose applications for the software you selected. The list of available applications is determined by the **Selected Software** packages. Each software package includes one or more applications as a part of its bundle. The applications contain components, which you select later in the **Components** task.

Some applications are automatically selected based on your **Selected Software**. For example, if you choose Active Workspace, the **Selected Applications** list displays the applications that are configured as required for installation.

Applications that have a **Pending Install** status are waiting for installation deployment to complete. Applications that have a **Pending Update** status are already installed but need an update to support other selections,

1. In the **Applications** task, click **Edit Selected Applications**  to add applications.

The **Available Applications** panel displays the application choices.

2. In **Available Applications**, choose the applications to install. If you choose an application that has one or more required applications associated with it, the associated applications are automatically selected. Click **Update Selected Applications** to add them to the **Selected Applications** list.

- You can add or remove applications as long as they are not already installed. Selected applications show the **Pending Install** status. When your **Selected Applications** list is complete, go to the **Components** task.

Components task

Deploy Software Overview



Selected Components



In this task, configure components for installation. Components provide the functionality for your environment. The **Selected Components** list displays required components that are automatically added from the **Selected Applications** list. **Selected Components** also displays optional components that were either already installed or previously selected. You can add more optional components from the **Available Components** panel.

Components that have a **Pending Install** status are waiting for installation deployment to complete. Components that have a **Pending Update** status are already installed but need an update to support other selections.

Some administrative tasks require that you have server names, user names, passwords, URLs, and other information available for the deployment. The following conditions may apply during component configuration:

- If a server machine was previously deployed in another environment or is specified in the current deployment for a different component, you can select it from the **Machine Name** list.
- If a component has a dependency on another component that is already defined, those values are shared with dependent components. This means that the component displays some percentage of completion.
- If you have not configured a component, the state may be either **Start** or some percentage complete if it has a shared dependency.
- When you are defining parameter values, some fields may not be editable. For example, if the component is already deployed in an environment, some parameters can't be changed (such as **Machine Name** and **OS**).
- If you selected the **Single Box** environment type in the **Options task**:
 - Specifying a **Machine Name**, **OS**, and **Teamcenter Installation Path** for one component shares those values with the remaining components. If you change these values on one of the components, the changes are propagated to the other components when you save.
 - If a component is already selected or installed, it is only listed as an available component if multiple instances of that component are supported.

Add a component

- In the **Components** task, click **Add component to your environment**  to add components.

The **Available Components** panel displays the optional component choices.

2. In **Available Components**, select the components to install. Then click **Update Selected Components** to add them to the **Selected Components** list.
3. In **Selected Components**, the **COMPLETE** column displays the state of completion for required component settings.
4. Click a component in the list to display its parameters in the right panel. This panel initially displays only required parameters. You must enter values for settings that appear in required parameters view. You can toggle the view between required parameters and all parameters.




Show all parameters


Required parameters view displays only required parameter information. Click to expand the view to display both required and optional parameters.



Show only required parameters

All parameters view displays both required and optional parameter information. Click to collapse the view to required parameters.

Corporate Server 

Status: Pending Install 

Machine

Machine Name
LM65003

OS
wntx64 ▼

General Settings


Teamcenter Installation Path
C:\Program Files\Siemens\Teamcenter11


Teamcenter Administrative User

User
infodba

Password
.....

Confirm Password
.....

Corporate Server 

Status: Pending Install 

Machine

Machine Name
LM65003

OS
wntx64 ▼

General Settings

Teamcenter Installation Path
C:\Program Files\Siemens\Teamcenter11

Teamcenter Data Path
C:\Program Files\Siemens\tc_data

The Xerces C++ 2.7.0 libraries have been identified to have security related issues. If you have customizations based on this version and you need to continue to use these libraries, then leave this checkbox checked. If you have customizations that are based on the new version Xerces C++ 3.1.4, you can deselect the checkbox, which will remove the older libraries from the environment.

Install the Xerces C++ 2.7.0 libraries?

Teamcenter Administrative User

User
infodba

Password
.....

Confirm Password
.....

Volume Settings

Volume Name
DefaultVolume


Volume Directory
C:\Program Files\Siemens\volumes

Transient Volume Directory

Windows Clients
c:\temp\transientVolume

UNIX Clients
.....

5. Completing all of the required settings pushes the state to **100%** complete. If you don't have all the information you need, you can save your settings at any time and return to finish them.

For example, if you are installing the corporate server, required parameters include machine name, platform, Teamcenter installation path, and administrative user information. If you expand to **Show all parameters** , the corporate server displays additional optional settings.


6. When you are finished entering settings, click **Save Component Settings**.
7. The next component that is not complete appears in the right-side panel. When all **Selected Components** are **100%** configured, go to the **Deploy** task. The **Deploy** task is not available until the **Selected Components** are all complete.

Remove a component

You can remove a component from the list, provided that the component:

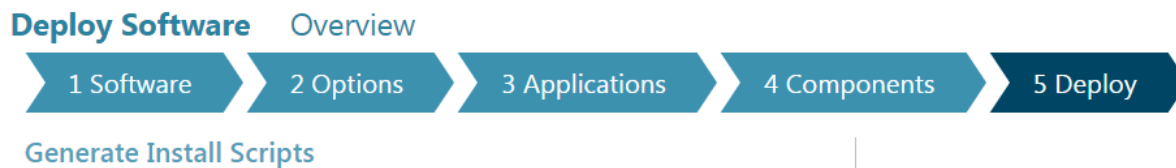
- Is optional.
- Has a status of **Pending Install**.

Dependent components that were added to the environment with the main component are also removed for the same server. Other components of the same type are not removed. For example, if you have two server pools, removing one server pool removes its dependents but the other server pool remains.

1. In **Selected Components**, click the component you want to remove.
2. From the command bar, click **Remove** .

You are prompted to confirm removing the component from the list.

Deploy task



In this task, generate deployment scripts for the components you want to install. Deployment scripts contain the information you configured in Deployment Center for the selected environment. The scripts install the software, applications, and components on to each target machine in your environment.

When the scripts are finished, the **Deploy Instructions** panel displays information about the deployment and instructions for proceeding with the deployment. You must copy the scripts to each target machine and run them to complete the installation.

1. To generate deployment scripts, click **Generate Install Scripts**.

Deployment Center generates installation scripts, and reports information about the scripts in the right panel.

Deploy Instructions

Successful Script Generation!

The Deployment Center has generated a set of scripts to install the "Teamcenter Active Workspace 4.0:0511, Teamcenter Foundation 11.5" software into your "TC115_AW40_J2EE_DC_INSTALL" Teamcenter environment.

Script Generation Date

May 11, 2018 02:35 PM (Eastern Standard Time)

Deployment Overview

Software To Be Installed

- Teamcenter Active Workspace 4.0:0511
- Teamcenter Foundation 11.5

Software Needed For Install

Ensure that the following software is copied to a directory location that can be accessed by all target machines:

- Teamcenter Active Workspace 4.0:0511
- Teamcenter Foundation 11.2
- Teamcenter Foundation 11.5

Deploy Script Directory

The zip files are located on the "CII6S127" machine in following directory locations:

-
C:\DC_INS~1\nightly\repoDir\deploy_scripts\TC115_AW40_J2EE_DC_INSTALL\install\20180511_13551EDT

Deploy Scripts

The table below provides a listing of the zip files that were generated, the target machine, and the component(s) that will be installed on to each target machine.

ZIP File Name	Target Machine	Component
20180511_143551EDT_TC115_AW40_J2EE_DC_INSTALL_Im6s003.zip	Im6s003	Active Workspace Client (Java EE) Corporate Server FSC Indexer Indexing Engine RM Word Extension (Java EE) Server Pool (Java EE) Teamcenter Client Communication System Teamcenter Office Online Web Service Teamcenter Web Tier (Java EE) Visualization Server Manager

- In the **Deploy Instructions** panel, you can view the report about the deployment, including the location of the deployment scripts and the instructions for continuing the deployment.
 - Script Generation Date** displays the time stamp for the local date and time of script generation.
 - Deployment Overview** describes the deployment covered by the scripts.
 - Software To Be Installed** lists the software required to deploy the components.
 - Software Needed For Install** lists software that is already installed on the machine but is still needed for this process to deploy other components.

- **Deploy Script Directory** displays the path to the location of the ZIP files containing the generated scripts. Go to the ZIP file directory and check for one or more ZIP files corresponding to the machines in your Teamcenter environment. Look for the **Deploy_Instructions.html** file, which contains the same information and instructions that you reviewed in the report.
- **Deploy Scripts** displays the ZIP files that were generated for each server along with the associated component names. Each ZIP file contains the installation scripts for a single server.

If all components are to be installed on the same machine, there is only one ZIP file. The ZIP file name ends with the target machine name where you run the script. For example, if the ZIP file is named **20180511_202452EDT__Sandbox_LM6W006.zip**, it runs on the **LM6W006** machine. Run an installation script only on its designated machine.

3. After you determine that the scripts you need are in the directory, you can proceed with the deployment.

Run the deployment scripts

The generated scripts are saved in the repository staging area on the Deployment Center server. The **-repoDir** argument of the **deployment_center.bat** installation script set the path to the **staging_directory** location. The **Deploy_Instructions.html** file is saved to the same repository. It contains the same information and instructions that you reviewed in the **Deploy Instructions** panel of the **Deploy** task.

Caution

Before you deploy on an existing Teamcenter environment, be sure that you ran the **send_configuration_to_dc script** to update the configuration information in Deployment Center before making changes. Configuration changes performed locally on Teamcenter servers since the last time the **send_configuration_to_dc** script ran could be overwritten.

1. In the **Deploy Instructions** panel of the **Deploy** task, find the **Deploy Script Directory** section and take note of the path to the repository staging directory.

On the Deployment Center server, open a file explorer and navigate to **staging_directory**.

There may be one or more subdirectories under the staging directory following the pattern:

```
environment_name\install\timestamp
```

environment_name is the name of the Teamcenter environment for your deployment, and *timestamp* is the date and time that the deployment scripts were generated.

2. Determine which subdirectory you need, and find the installation ZIP files and the **Deploy_Instructions.html** that you generated. The ZIP files have the naming convention:

```
timestamp_environment_host-name.zip
```

3. Before you run the deployment scripts, make them available to the designated servers in your Teamcenter environment.

Copy the ZIP files to a directory that is accessible to the servers in your environment using one of these methods:

- **Copy the ZIP files directly to each server and unzip them**

Select this method if you want to run the deployment locally on the machine. You must copy the correct ZIP file that matches each server. Be sure the server host name matches the *host_name* in the ZIP file name.

- **Copy the ZIP files to a shared location, unzip them, and map a drive on each server**

Select this method if you want to run the deployment from a common location accessible to all the servers in the Teamcenter environment. You must share the deployment location by mapping a drive to it on each server.

Choose this method when you have **multiple operating systems in your environment**.

If you unzip on a UNIX or Linux system, be aware that path and file names are in mixed case. Avoid converting path and file names to lowercase, as paths are case sensitive on these systems. See the documentation for your ZIP utility for information.

4. Set **JAVA_HOME**.

JAVA_HOME can be set to the Java JDK location or the Java JRE location.

If you are installing the Active Workspace Client Java EE, **JAVA_HOME** must be set to the Java JDK location.

5. If a Teamcenter server manager is running, stop it.

6. Open a command prompt window and navigate to the location where you unzipped the files.

Be sure you logged in as an Administrator or a user with administrative privileges before executing the deployment script.

7. Run the **deploy.bat** (Windows) or **deploy.sh** (UNIX or Linux) script.

On a UNIX or Linux system, be sure to run the script in the KornShell (**ksh**) to avoid an error.

The **deploy** script uses the following arguments:

-dcusername

Specify the user name for Deployment Center as defined when installing Deployment Center.

-dcpassword

Specify the password for Deployment Center as defined when installing Deployment Center.

-diagnosticChecks (Optional)

Run a diagnostic validation of the deployment. Diagnostic mode checks whether the deployment tasks in the **deploy** script can be completed successfully on the target machine. Diagnostic mode does not perform any updates during validation.

The diagnostic mode validates operating system and database credentials, ports, installation paths, FSC unique IDs, and so on.

The log output provides success and failure information. Make any necessary corrections in Deployment Center and regenerate your deployment scripts, and run them again in diagnostic mode. Repeat until all the errors are addressed.

-softwareLocation

Specify the location in the **-softwareLocation** argument, for example,

```
-softwareLocation=D:\deploy_software
```

Tip

On Windows, you can omit specifying a software location when you run the deployment script. By default, the deployment script looks for the installation files on the **M** drive. The script takes a **-softwareLocation** argument, which you can omit if you map the shared drive to **M**. Be sure that the **M** drive is free on each target machine when you set up the mapped drive for the shared location.

Example

On a UNIX system:

```
./deploy.sh -softwareLocation=/kits/  
-dcusername=dcadmin -dcpassword=dcadmin
```

When the installation is complete, the command prompt returns the message:

```
Deployment action successfully completed
```

Log files are in the directory where the installation ZIP file was unzipped.

Tip

If you have multiple Teamcenter servers in your environment, you can run deployment scripts on them in parallel. Running deployment scripts on Teamcenter servers in parallel is supported in releases 11.4 and later.

First, run the deployment script on the primary business logic server (the corporate server). Deployment Center uploads a dataset to the volume that contains key items from the **TC_DATA** directory, which provides the necessary information for deploying on the remaining servers. Then you can subsequently run the install or update deployment script on the rest of the servers concurrently, saving a significant amount of time.

If you experience a problem in running the **deploy** script, see [Troubleshoot the deployment script](#).

Troubleshoot the deployment script

As a best practice, **run each deployment script in diagnostic mode** to test the deployment tasks without making changes to the system. Running the deployment scripts in diagnostic mode on the target machines validates the configuration entered in Deployment Center. Review the log files for

the **deploy.bat** or **deploy.sh** scripts and check for errors. No updates are made to the target machine during diagnostic validation. After you make the corrections in Deployment Center, regenerate the deployment scripts and run them in diagnostic mode. Repeat the cycle until all errors are addressed.

The log files are located in **deployment_script_dir/logs** on the Teamcenter machine where you are running **deploy.bat** or **deploy.sh**:

- **deployer_timestamp.log**
Provides a detailed description of the deployment operation.
- **scanner_timestamp.log**
Provides information about the software scanning performed during deployment.

Some of the more common errors you may see:

- Inability to locate the software required by the script (as specified by **-softwareLocation** or in the Windows mapped **M:** drive location).
- Inability to communicate with a Deployment Center server.
- A deployment failure.

When the deployment script runs on a Teamcenter server, it may encounter errors that are outside the scope of Deployment Center. If an error occurs when you run **deploy.bat** or **deploy.sh**, check the log file **deployer_timestamp.log**:

1. Look for a section titled **Diagnostic Checks Details**, which provides validation information.
2. Look for the point of failure and check whether the error notification is followed by a path to another log file on the Teamcenter server. For example, a Business Modeler IDE error can generate its own log file, which is saved on the Teamcenter server. The path to other log files is provided in the **deployer_timestamp.log**.
3. If the script reports an error without an explanation, check Teamcenter server error logs, which are located in either **TC_ROOT/logs** or the server's temporary directory (for example, **TEMP** or **TMP**).

In the Teamcenter error logs, look for an error that has a timestamp for approximately the same time as the error logged in **deployer_timestamp.log**.

Tip

Be sure that your environment software is not running when you deploy.

On supported AIX systems, you may see an error that a file can't be overwritten because it's associated with a running process. Change the permissions on the file to write (**755**), and you can complete the deployment.

Chapter 5: How to deploy the Business Modeler IDE templates on Teamcenter

Deploy Business Modeler IDE packages	5-1
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Chapter 5: How to deploy the Business Modeler IDE templates on Teamcenter

Deploy Business Modeler IDE packages

Users can generate a Business Modeler IDE template package in Teamcenter 11.3 or later that can be deployed to Teamcenter environments using either Deployment Center or Teamcenter Environment Manager (TEM). This consolidated output directory contains templates, libraries, and deployment configuration files.

To deploy a Business Modeler IDE template package, obtain the directory of the template package output generated by the Business Modeler IDE. Place the Business Modeler IDE output directory in the **software** subdirectory of the Deployment Center repository.

To ensure you have a supported template package, check:

- Directory naming convention

template-internal-name_OS_template-version_build-version_YYYY_MM_DD_HH-MM-SS

An optional template version may be assigned by the Business Modeler IDE user to track the versions of a template package. If the Business Modeler IDE user assigns a build number, the template is in development. The build version tracks iterative testing before the template is ready for production. Template versions and build versions are expressed as integers separated by periods, up to four places.

- **artifacts** subdirectory

Contains the template software ZIP files for deployment.

- **dc_contributions** subdirectory

Contains the template bundle information (called packages) for deployment by Deployment Center. If you use TEM, this directory is ignored.

- **tem_contributions** subdirectory

Contains the template bundle information for deployment by TEM. If you use Deployment Center, this directory is ignored.

- **media_teamcenter_template-package-name.xml** file

Provides the application names to both TEM and Deployment Center for deployment.

The Deployment Center repository displays **Dependencies** as specified within Business Modeler IDE packages using package IDs.

For information on creating and updating Business Modeler IDE packages, refer to the Business Modeler IDE documentation included with Teamcenter.

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