



PDTool Installer Admin Guide

An Open Source Asset for use with TIBCO® Data Virtualization

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Purpose	Administrator Guide



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Related Documents

Name	Author
PDTool Installer User Guide.pdf	Mike Tinius

Supported Versions

Name	Version
TIBCO® Data Virtualization	7.0.8 or later

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1 Introduction

Purpose

The Administration Guide provides a PDTool Administrator with the steps to “pre-configure” the PDTool installer for Windows with a consistent and uniform deployment across the development and testing user base. This guide does not provide the background for installing PDTool but instead guides the Administrator through the process of setting up for the installation. The Administrator can configure standard variables for your organization that will be used by all to make it easier for “mass installation”. Ultimately, a consistent installation means it is easier to support the developers and testers when they have questions or issues. PDTool operates with Data Virtualization (DV) 8.x.

This is the part of PDTool that provides deployment and testing facilities.

What gets installed?

- PDTool8.3.0
- VCS Client if the Administrator chooses to pre-configure the \VCSClients folder

Where do the files get copied?

- Recommended default location:
C:\Users\%USERNAME%\PDTool[7.0.0|8.00|8.3.0]_[NOVCS|TFS|SVN|GIT|P4]
 - E.g. C:\Users\user1\PDTool8.3.0_GIT
 - **\PDTool** – PDTool deployment directory
 - **\VCSClients** – Pre-configured VCS clients are optional if installed elsewhere.
 - **\SVN_client** – Subversion client
 - **\TFS_TEE_client** – Team Explorer Everywhere client
 - **\GIT_client** – Git client
 - **\P4_client** – Perforce client

Audience

This document is intended to provide guidance for the following users:

- Architects – who want to understand how PDTool is used with Data Virtualization.
- Developers – who want to deploy resources from a version control system (VCS) such as TFS or Subversion to a target DV server.
- Administrators – who need to manage setup and connection with the Data Virtualization environment.
- Operations personnel – who wants to encrypt a PDTool file which contains passwords.

- QA/Test personnel – who want to use PDTool Regression Module for testing but do not need to connect to a VCS.

Platform Support

The PDTool Installer is only supported on Windows.

References

Product references are shown below. Any references to CIS or DV refer to the current TIBCO® Data Virtualization.

- TIBCO® Data Virtualization was formerly known as
 - Cisco Data Virtualization (DV)
 - Composite Information Server (CIS)

2 PDTool (Deployment and Testing) Installer Admin Guide

Pre-Requisite Checklist

The following is a list the Administrator will need to check when setting up the “pre-configuration” for PDTool:

1. Network Connection:

Each user must be connected to a network and have access to the VCS server.

2. JDK or JRE requirements

- a. JRE8 Installed for PDTool 7.0.0 or PDTool 8.0.0 [supports TDV 8.0 - 8.2]:

JRE 8 (1.8) must be pre-installed on the target computer before installing PDTool. Each user must perform this action. Example: “C:\Program Files\Java\jre8”.

- b. JDK11 Installed for PDTool 8.3.0 [supports TDV 8.3 and higher]:

JDK 11 must be pre-installed on the target computer before installing PDTool.

Each user must perform this action. Example: “C:\Program Files\Java\jdk-11.0.8”.

3. Version Control System (VCS) Access:

Each user must perform this action.

The user must submit a request in advance to their organization to get access to a version control system (VCS) repository prior to installation of PDTool.

4. Pre-configure Installer Default Variables:

The Administrator performs this action.

For VCS installation, edit: **PDTool-VCS.bat** and provide any default values that require modification. For non-VCS installation, edit **PDTool-NOVCS.bat** and provide any default values that require modification.

5. Pre-configure VCS Client Software:

The Administrator performs this action.

To insure consistency of VCS clients across the developer community, be sure to copy the correct client software into the appropriate VCSClients sub-directory.

- SVN_client – copy the subversion binaries.
- TFS_TEE_client – copy the Team Foundation Everywhere client binaries.
- P4_client – copy the Perforce client binaries.
- GIT_client – copy the GIT client binaries.

6. Pre-configure Configuration Property Files:

The configuration property files provide a mechanism for setting standard default variables for each target DV environment.

7. Pre-configure PDTool servers.xml Property File:

The servers.xml provides the connection details for each target DV environment.

8. Pre-configure Automated Test Framework:

The Automated Test Framework provides a way for the developers, deployers and QA testers to validate the target DV environment.

Administrator Setup Procedure

1. Unzip the PDTool Release Zip File:

- a. Unzip to any directory on your windows machine e.g. [C:\Temp].
- b. PDTool8.3.0-YYYY-MM-DD.r1.zip

2. Edit Installer Batch Files:

- a. *Purpose* – The purpose of this is to “pre-configure” the installation for your organization so that you have a consistent and uniform configuration across the developer and tester user base.

b. *Location*

- a. C:\Temp\PDTool8.3.0_installer\installer

- c. **PDTool-NOVCS.bat** – used for installing a NO VCS configuration typically focused on QA testers who do not need VCS.

REM # Force SetupPDTool.bat to use default values when present and bypass prompting the user. Values=[Y or N]. This will streamline setup.

REM # Set to “Y” to bypass prompting for defaults values that are set with a value.

set DEF_FORCE_PROMPT_BYPASS=N

REM # Default for I_JAVA_HOME

set DEF_JAVA_HOME=C:\Program Files\Java\jdk-11.0.8

REM # Default for I_PDPTOOL_DESTINATION_HOME

set

DEF_PDPTOOL_DESTINATION_HOME=C:\Users\%USERNAME%\PDTool8.3.0_NOVCS

REM # Default for I_PDPTOOL_DESTINATION_DIR

set DEF_PDPTOOL_DESTINATION_DIR=PDTool

REM # Default for I_CONFIGURE_VCS. Bypass VCS variables when set to "N".

set DEF_CONFIGURE_VCS=N

REM # Default for I_VCS_BASE_TYPE=[SVN|TFS|GIT|P4]

set DEF_VCS_BASE_TYPE=

```

REM # Default for I_VCS_HOME is the location of where the VCS client executable is
located
set DEF_VCS_HOME=
REM # Default for I_VCS_REPOSITORY_URL - Always use 4 forward slashes to escape
https://url --> https://url and no slash at the end.
set DEF_VCS_REPOSITORY_URL=
REM # Default for I_VCS_PROJECT_ROOT
set DEF_VCS_PROJECT_ROOT=
REM # Default for I_RELEASE_FOLDER
set DEF_RELEASE_FOLDER=
REM # Default for I_VCS_WORKSPACE_NAME. The name of the workspace.
REM # To use variable delayed expansion put 2 %% signs around each variable name
otherwise simply use a value.
REM # Example: Combination of VCS username and release folder to make a unique
workspace name=%%I_VCS_USERNAME%%I_RELEASE_FOLDER%%
set DEF_VCS_WORKSPACE_NAME=
REM # Default for I_VCS_USERNAME. Generally this will be the standard computer
USERNAME value.
set DEF_VCS_USERNAME=
REM # To be appended to the I_VCS_USERNAME as in user@domain or leave blank if
not applicable. TFS requires this.
set DEF_VCS_DOMAIN=
REM # Default for I_CIS_USERNAME. Generally this will be the standard computer
USERNAME value.
set DEF_CIS_USERNAME=%USERNAME%
REM # Default DV Domain used for connection by CIS_USERNAME
set DEF_CIS_DOMAIN=<ORGANIZATION_LDAP_DOMAIN>
REM # Default VCS Configuration property file used for connecting PDTool to DV and
VCS.
REM # This is a default value only and may be overridden during PDTool execution.
set DEF_CONFIG_PROPERTY_FILE=deploy_NOVCS_UAT1.properties
REM # This is the list of drive letters that PDTool will use to search for the first available
drive.
REM # Depending on how /PDTool/bin/setVars.bat is configured, this may be used for
"subst" or it may be used for "net use".
REM # It is recommended to use "net use" because it survives log offs and reboots.
set PDTOOL_SUBSTITUTE_DRIVE_LIST=I: J: K: L: M: N: O: P: R: S: T: U: V: W: X: Y: Z:
d. PDTool-VCS.bat – used for installing a VCS configuration focused on
developers or deployment operators who require access to VCS for doing
DV deployments.

REM # Force SetupPDTool.bat to use default values when present and bypass prompting
the user. Values=[Y or N]. This will streamline setup.
REM # Set to "Y" to bypass prompting for defaults values that are set with a value.
set DEF_FORCE_PROMPT_BYPASS=N
REM # Default for I_JAVA_HOME

```



```

set DEF_JAVA_HOME=C:\Program Files\Java\jdk-11.0.8
REM # Default for I_PDTool_DESTINATION_HOME
set DEF_PDTool_DESTINATION_HOME=C:\Users\%USERNAME%\PDTool8.3.0_TFS
REM # Default for I_PDTool_DESTINATION_DIR
set DEF_PDTool_DESTINATION_DIR=PDTool
REM # Default for I_CONFIGURE_VCS. Bypass VCS variables when set to "N".
set DEF_CONFIGURE_VCS=Y
REM # Default for I_VCS_BASE_TYPE=[SVN|TFS|GIT|P4]
set DEF_VCS_BASE_TYPE=TFS
REM # Default for I_VCS_HOME is the location of where the VCS client executable is
located
set
DEF_VCS_HOME=%DEF_PDTool_DESTINATION_HOME%\VCS\clients\TFS_TEE_client
REM # Default for I_VCS_REPOSITORY_URL - Always use 4 forward slashes to escape
https://url --> https:///url and no slash at the end.
set DEF_VCS_REPOSITORY_URL=http:///localhost:8080/tfs/CompositeCollection
REM # Default for I_VCS_PROJECT_ROOT
set DEF_VCS_PROJECT_ROOT=Rel
REM # Default for I_RELEASE_FOLDER
set DEF_RELEASE_FOLDER=20150918
REM # Default for I_VCS_WORKSPACE_NAME. The name of the workspace.
REM # To use variable delayed expansion put 2 %% signs around each variable name
otherwise simply use a value.
REM # Example: Combination of VCS username and release folder to make a unique
workspace name=%%I_VCS_USERNAME%%\%%I_RELEASE_FOLDER%%
set DEF_VCS_WORKSPACE_NAME=TFSww8
REM # Default for I_VCS_USERNAME. Generally this will be the standard computer
USERNAME value.
set DEF_VCS_USERNAME=%USERNAME%
REM # To be appended to the I_VCS_USERNAME as in user@domain or leave a blank
space if not applicable. TFS requires this.
set DEF_VCS_DOMAIN=
REM # Default for I_CIS_USERNAME. Generally this will be the standard computer
USERNAME value.
set DEF_CIS_USERNAME=admin
REM # Default DV Domain used for connection by CIS_USERNAME
set DEF_CIS_DOMAIN=composite
REM # Default VCS Configuration property file used for connecting PDTool to DV and VCS
REM # This is a default value only and may be overridden during PDTool execution.
set DEF_CONFIG_PROPERTY_FILE=deploy_TFS_UAT1.properties
REM # This is the list of drive letters that PDTool will use to search for the first available
drive.
REM # It will be used as a substitute drive to shorten the overall path to the workspace.

```

REM # Depending on how /PDTool/bin/setVars.bat is configured, this may be used for "subst" or it may be used for "net use".

REM # It is recommended to use "net use" because it survives log offs and reboots.

set **PDTOOL_SUBSTITUTE_DRIVE_LIST**=I: J: K: L: M: N: O: P: R: S: T: U: V: W: X: Y: Z:

- e. **Customization Concept** – if your organization requires the use of multiple VCS configurations, consider making a copy of PDTool-VCS.bat and give it a more specific name that applies to your organizations need. For example, if you require both TFS and Subversion, you could create PDTool-TFS.bat and PDTool-SVN.bat to differentiate the installation package.

3. Configure VCS Clients (Optional):

- a. *Purpose* – The objective is to provide an out-of-the-box experience for the PDTool user. Rather than having the developer install the VCS client, the installer allows you to “pre-configure” one or more clients. This is optional however. The installer allows you to configure a pre-defined directory but this must be standard for all users.
- b. *Location*
 - a. **\VCSClients** – Pre-configured VCS clients are optional if installed elsewhere.
 - i. **\SVN_client** – Subversion client
 - ii. **\TFS_TEE_client** – Team Explorer Everywhere client
 - iii. **\GIT_client** – Git client
 - iv. **\P4_client** – Perforce client
- c. Copy the required client into the appropriate client directory as shown above.
 - a. For SVN, don’t copy the /bin folder but instead copy the entire contents of the bin into SVN_client.
 - b. For TFS, be sure and use the TFS Team Everywhere Explorer (TEE) client and not the GUI client.

4. Configure PDTool Configuration Property Files:

- a. *Purpose* – The configuration property files provide a standard mechanism for each DV server environment. It allows the PDTool Administrator to “pre-configure” which environments PDTool will be allowed to connect to and set environment variables that are specific to that environment. There is a standard naming convention used that is tried and true for any customer environment. PDTool comes pre-configured for DEV1, UAT1 and PROD1. It is up to the PDTool Administrator to copy and configure for their specific environments. It is recommended that short names be used to express

each environment. For example, `deploy_SVN_DEV1.properties` or `deploy_NOVCS_DEV1.properties`.

b. Location

- a. `[C:\Temp]\PDTool8.3.0_installer\installer_source\PDTool\resources\config`

c. Procedure

- a. Determine the list of environments needed and the abbreviation name to be used for each. Here are some examples of typical servers and their meaning:
- i. DEV1=development server 1
 - ii. CIT1=Code Integration Test server 1
 - iii. SIT1=System Integration Test server 1
 - iv. UAT1=User Acceptance Test server 1
 - v. TT1=Technical Test server 1
 - vi. PROD1=Production server 1
 - vii. LAB1=Lab server 1
- b. For the given VCS, copy the related “`deploy_[VCS]_DEV1.properties`” and give it a new name. For NOVCS, copy “`deploy_NOVCS_DEV1.properties`” and give it a new name. Typical environment variables are generally at the top of the file include:
- i. `LDAP_ENV=DEV`
 - ii. `SYSTEM_ENV=DEV1`
 - iii. `CIS_REPO_PORT=9428`
 - iv. `CIS_PORT=9420`
 - v. `CIS_HTTP_TYPE=http`
- c. The Administrator may also put standard, custom organization variables in the configuration property file.
- d. Edit the file and change the environment variables to reflect its environment. Save when done.

5. Configure PDTool “`servers.xml`” Property File:

- a. *Purpose* – The `servers.xml` provides the DV server connection information for each DV server. The `<id>` is the `SERVERID` variable that is set the configuration property file described in the previous step. There should be an entry for each environment that is being configured.

b. Location

- a. [C:\Temp]\PDTool8.3.0_installer\installer_source\PDTool\resources\modules

- c. *Example* – The following is an excerpt from servers.xml. Note how <id> contains the environment abbreviation as specified by the configuration property file along with the port and http type. These three items serve to identify a connection profile. Also note the use of standard variables for the \$CIS_USERNAME, \$CIS_PASSWORD and \$CIS_DOMAIN. These are all set by the individual user in the setMyPrePDToolVars.bat which is configured by the installer at installation time. This allows the servers.xml file to be generic across all users.

```
<?xml version="1.0" encoding="UTF-8"?>
<servers>
<server>
  <id>DEV1_9420http</id>
  <hostname>localhost</hostname>
  <port>9420</port>
  <usage>DEV1</usage>
  <user>$CIS_USERNAME</user>
  <encryptedpassword>$CIS_PASSWORD</encryptedpassword>
  <domain>$CIS_DOMAIN</domain>
  <cishome>/CIS7.0.0</cishome>
  <clustername></clustername>
  <site>Local</site>
  <useHttps>>false</useHttps>
  <allowVariables>>true</allowVariables>
</server>

<server>
  <id>UAT1_9420http</id>
  <hostname>localhost</hostname>
  <port>9420</port>
  <usage>UAT1</usage>
  <user>$CIS_USERNAME</user>
  <encryptedpassword>$CIS_PASSWORD</encryptedpassword>
  <domain>$CIS_DOMAIN</domain>
  <cishome>/CIS7.0.0</cishome>
  <clustername></clustername>
  <site>Local</site>
  <useHttps>>false</useHttps>
  <allowVariables>>true</allowVariables>
</server>
</servers>
```

- d. *Procedure* – Create <server> entries as needed for the various environments and connection types. Save when completed.

6. Configure Automated Test Framework “ATF” (Optional):

- a. *Purpose* – If your QA testers or developers will be using the Automated Test Framework to validate their deployments [recommended], then you will want to pre-configure the ATF directory.
- b. *Location* – **Regression Testing** – used for validating deployments and general DV testing.
 - a. [C:\Temp]\PDTool8.3.0_installer\installer_source\PDTool\AutomatedTestFramework\regression\bin\setVars.bat
 - b. Documentation –
[C:\Temp]\PDTool8.3.0_installer\installer_source\PDTool\AutomatedTestFramework\regression\PDTool - Regression Automated Test Framework.pdf
- c. Edit **Regression** setVars.bat – Depending on whether you installed PDTool PDTool 8.3.0 only configure the required section.
 - a. For 7.0, modify section “BEGIN: 7.0 USER DEFINED VARIABLE SECTION”
 - i. set PDTOOL_INSTALL_HOME_7=
 - ii. set VALID_ENV_CONFIG_PAIRS_7=
 1. PDTool 7.0 configuration Property Pairs format is a comma separate list of environment designators and property file names without the .properties extension which is assumed: DEV~deploy_NOVCS_DEV1, UAT~deploy_NOVCS_UAT1, PROD~deploy_NOVCS_PROD1
 - b. For 8.0, modify section “BEGIN: 8.0 USER DEFINED VARIABLE SECTION”
 - i. set PDTOOL_INSTALL_HOME_8=
 - ii. set VALID_ENV_CONFIG_PAIRS_8=
 1. PDTool 8.3.0 configuration Property Pairs format is a comma separate list of environment designators and property file names without the .properties extension which is assumed: DEV~deploy_NOVCS_DEV1, UAT~deploy_NOVCS_UAT1, PROD~deploy_NOVCS_PROD1
 - c. For common variables modify:

- i. set JAVA_HOME=
 - ii. set EDITOR=
- d. **Location – Migration Testing** – used for testing the migration of DV 8.x.
 - a. [C:\Temp]\PDTool8.3.0_installer\installer_source\PDTool\Automated TestFramework\migration\bin\setVars.bat
 - b. Documentation –
[C:\Temp]\PDTool8.3.0_installer\installer_source\PDTool\Automated TestFramework\migration\PDTool - Migration Automated Test Framework.pdf
- e. **Edit Migration setVars.bat** – For migration, both 7.0 and 8.0|8.3 will be required to be configured. PDTool 7.0 and PDTool 8.0|8.3 will both need to be present on the system.
 - a. For 7.0, modify section “BEGIN: 7.0 USER DEFINED VARIABLE SECTION”
 - i. set PDTOOL_INSTALL_HOME_7=
 - ii. set VALID_ENV_CONFIG_PAIRS_7=
 - 1. PDTool 7.0 configuration Property Pairs format is a comma separate list of environment designators and property file names without the .properties extension which is assumed: DEV~deploy_NOVCS_DEV1, UAT~deploy_NOVCS_UAT1, PROD~deploy_NOVCS_PROD1
 - b. For 8.0|8.3, modify section “BEGIN: 8.3 USER DEFINED VARIABLE SECTION”
 - i. set PDTOOL_INSTALL_HOME_8=
 - ii. set VALID_ENV_CONFIG_PAIRS_8=
 - 1. PDTool 8.3.0 configuration Property Pairs format is a comma separate list of environment designators and property file names without the .properties extension which is assumed: DEV~deploy_NOVCS_DEV1, UAT~deploy_NOVCS_UAT1, PROD~deploy_NOVCS_PROD1
 - c. For common variables modify:
 - i. set JAVA_HOME=

ii. set EDITOR=

7. Zip up the Installer Directory:

a. *Location*

a. [C:\Temp]\PDTool7.0.0_installer

b. [C:\Temp]\PDTool8.3.0_installer

8. Share “pre-configured” PDTool:

- a. Share the PDTool “pre-configured” installer with others in your organization via a shared drive, Sharepoint or some other shared mechanism.

FINISHED

3 Conclusion

Concluding Remarks

The Promotion and Deployment Tool is a set of pre-built modules intended to provide a turn-key experience for promoting DV resources from one DV instance to another. The user only requires system administration skills to operate and support. The code is transparent to operations engineers resulting in better supportability. It is easy for users to swap in different implementations of a module using the Spring framework and configuration files.

How you can help!

Build a module and donate the code back to Professional Services for the advancement of the ***"Promotion and Deployment Tool"***.