



TECHILA® WORKER INSTALLATION GUIDE WINDOWS

ADMINISTRATOR DOCUMENT

17 OCTOBER 2016

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1. Introduction

This document is intended for Techila Administrators who are planning on installing the Techila Worker software on computers with a Microsoft Windows based operating system. After installing the Techila Worker software as described in this document, the Techila Worker will connect to Techila Server and will participate in computational Projects processed in the Techila Distributed Computing Engine (TDCE) environment.

2. Prerequisites & Security

This section details prerequisites for Techila Worker installation and important security considerations. Read this section carefully before installing the Techila Worker.

2.1. General Prerequisites

Before starting the operation, please make sure that the following prerequisites have been met:

- The installation destination should be located on the local hard drive of the workstation. Note that all data is always written in this installation directory only and its subdirectories.
- The security settings and account policies have to be configured:
 - For local installations, the MSI package will automatically create and configure the user account.
 - For domain installations, the domain user has to be created and configured by the domain administrator.
- You need to have administrative rights to perform the installation procedure.
- Verify the system date and time to make sure the Keys are generated correctly.
- Any other software which utilizes the idle CPU time (for example SETI@Home) should not be installed on the workstation. Otherwise they may interfere with the efficiency of the Techila computations.

2.2. Required Installation Files

In order to install the Techila Worker software on a computer, you will need access to the Techila Worker Windows Installer. The Techila Worker Windows Installer can be downloaded from the "Administrator Downloads" section in the Techila Extranet located at the following network address:

<http://www.techilatechnologies.com/extranet/>

The name of the Techila Worker software Windows Installer file follows the following naming convention:

TechilaWorkerInstallerWindows<platform>_v<version>.msi

The *<platform>* and *<version>* contain the required system platform (64bit) and the version number of the package (e.g. 1.15.04).

2.3. Security

- Limit the local administrators' access to the workstations for security reasons. Local administrators can override the security settings to see the contents of the Techila Worker directories.
- Deny the booting of the workstation from any external media (CD, DVD, floppy disk, USB memory stick, etc.) to prevent any unauthorized access to the hard drives.
- There is no need to open ports on the Techila Worker as all communications are from the Techila Worker to the Techila Server.

3. Installation

This Chapter contains instruction for installing the Techila Worker software.

Installations on all Windows operating systems are performed by using the Windows Installer. Typically the MSI package requires some environment specific parameters to be provided when launching the installer. These parameters are used to e.g. specify the IP address of the Techila Server. These parameters can be configured by creating MST transform file or by giving the required parameters as command line parameters.

The local installation process will automatically perform the following activities:

- Create and configure new non-interactive user account to the Windows environment. Default account name is: "techila". Please see Chapter 6.2 for a list of settings that will be set for the account by the installer.
- Create an installation directory for the Techila Worker software. Default installation directory is: "C:\Program Files\Techila\"
- Register Techila Worker as a service.

Note

- It is highly recommended that you install the Techila Worker on a local drive of the workstation
- If you are re-installing the Techila Worker software, the old installation must be removed before continuing. If the old installation is not removed, Techila Worker software will not install correctly

Prerequisites

- You need administrative rights on the computer where you want to install the Techila Worker.

3.1. Installing the Techila Worker Software

The installation procedure described in this Chapter can be used to install the Techila Worker with configurable parameters. These parameters are used, for example, to specify the IP address and port of the Techila Server. If a parameter is not defined, the default value for the parameter will be used.

Available parameters are listed below.

Parameter	Description
USERACCOUNT	The name of the user account used to run the Techila Worker processes. Default is "techila"
USERDOMAIN	The domain of the user account. The value %COMPUTERNAME% should be given for local accounts. Default value of this parameter is the value in %COMPUTERNAME%.
USERPW	The password of the user account. If you are using an Active Directory account, specify the password for that account.
SERVERHOST	The hostname (or IP address) of the Techila Server.
SERVERPORT	The communication port of the Techila Server, usually 20001. Default value is "20001"
DESTINATION	The destination directory where Techila Worker software will be installed. Default value is "C:\Program Files\Techila\"
NEWUSER	Defines if the user account should be created if it does not exist already. Default value is "yes" if the default value for USERACCOUNT is used, otherwise the value will be set to "no". If you wish to create a user account which is not named techila, the NEWUSER parameter must be set to "yes".
WORKERID	Optional parameter. When defined, the value of this parameter will be used used to define the name of the Techila Worker Key and the Alias of the Techila Worker. Example: WORKERID=%COMPUTERNAME%

Procedure

To install the Techila Worker software, please follow the instructions below:

1. Launch a Command Prompt window with administrator permissions.

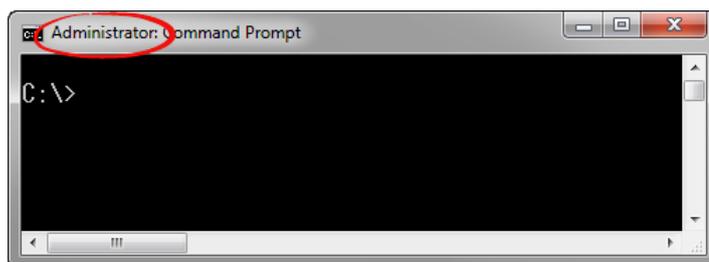


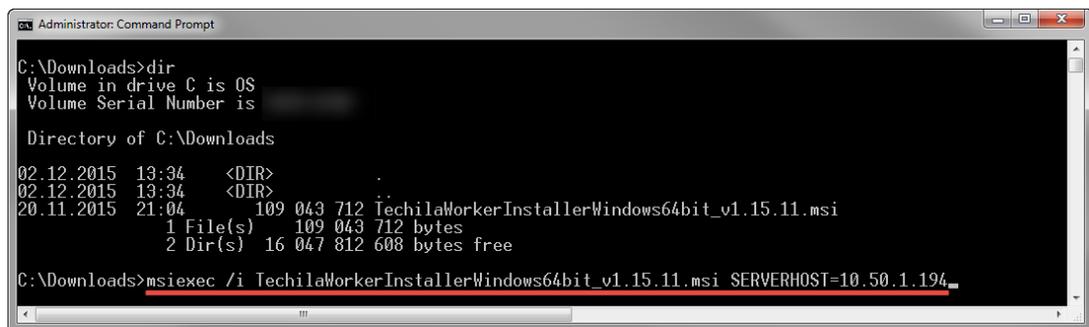
Figure 1. Command Prompts which have administrator permissions can be recognized by the "Administrator" word in the window title bar.

- Using the Command Prompt window, change your current working directory containing the Techila Worker software installer.
- Run the Windows Installer by entering the command shown below to the Command Prompt:

```
msiexec.exe /i TechilaWorkerInstallerWindows<platform>_<version>.msi USERACCOUNT=<account>  
USERDOMAIN=<domain> USERPW=<password> SERVERHOST=<hostname|serverip>  
SERVERPORT=<server port> DESTINATION=<destination directory> NEWUSER=<yes|no>
```

Please note that you will either need to replace the *<value>* notations with the values you wish to use **or** omit the parameter definition if you wish to use the default value.

Example: The command shown in the example screenshot below would install the Techila Worker software using the Windows Installer file stored in 'C:\Downloads'. The only command line parameter that has been defined is the 'SERVERHOST' parameter, which in this example defines that the Techila Worker software should establish a network connection to IP address 10.50.1.194 (which is the IP address of the Techila Server).



```
Administrator: Command Prompt  
C:\Downloads>dir  
Volume in drive C is OS  
Volume Serial Number is  
  
Directory of C:\Downloads  
02.12.2015 13:34 <DIR>  
02.12.2015 13:34 <DIR>  
20.11.2015 21:04 109 043 712 TechilaWorkerInstallerWindows64bit_v1.15.11.msi  
1 File(s) 109 043 712 bytes  
2 Dir(s) 16 047 812 608 bytes free  
  
C:\Downloads>msiexec /i TechilaWorkerInstallerWindows64bit_v1.15.11.msi SERVERHOST=10.50.1.194
```

Figure 2. Example syntax for installing the Techila Worker software.

- After executing the command described in the previous step, the Techila Worker will be operational and will not require any additional configuration. Please proceed and verify that the installation was successful as described Chapter 3.2.

3.2. Verification

To verify that the installation was successful, please perform the following checks on the computer where the Techila Worker software was installed:

- Check that Techila Worker service is running (To view services in Windows Vista and Windows 7: Shift+Ctrl+Esc → Services. To view services in Windows XP: Administrative Tools → Services)

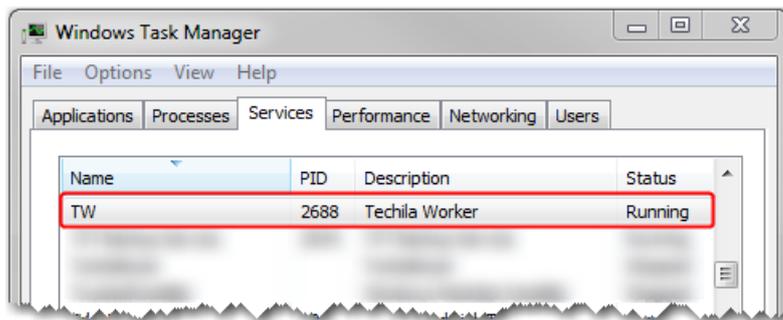


Figure 3. The Techila Worker service.

- Check that the following processes are running (Shift+Ctrl+Esc → Processes)
 - java.exe
 - wrapper.exe
 - cmd.exe

Note! If you installed the Techila Worker software on Windows Vista or Windows 7, you need to click the Show processes from all users button to make the processes visible.

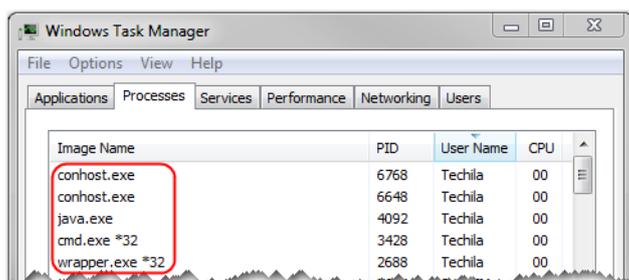


Figure 4. The Techila Worker processes.

The service and processes will automatically become visible after installation has been completed successfully. No reboot will be required.

Also verify that the Techila Worker is connected to the Techila Server by opening the Techila Web Interface and verifying that the new Techila Worker Key is visible in the **Admin → Keys → Worker Keys** page.

After you have verified that the installation was successful, please proceed and finalize the installation process as described in Chapter 3.3

3.3. Finalizing the Installation Process

Before the Techila Worker is able to receive computational Jobs, the status of the Techila Worker Key must be set to 'trusted' by using the Techila Web Interface. To set the status of the Techila Worker Key to trusted, please follow the instructions in the document "Techila Distributed Computing Engine Administration Guide" in Chapter *Adding a new Techila Worker to the Techila system*.

Note! The latest Techila Virtual Server has been configured to automatically trust Techila Worker Keys, which means that you will not need to manually trust the Techila Worker Keys. The Techila Worker Keys will also be automatically trusted if you have configured your Techila Server to automatically trust Techila Worker Keys.

Please note that after you have installed the Techila Worker software and set the status of the Techila Worker Key to 'trusted', no other manual configuration of the Techila Worker is required. All required components will be transferred in Bundles to the Techila Workers from the Techila Server.

4. Uninstallation

This Chapter describes how you can uninstall the Techila Worker software.

The Techila Worker software can be uninstalled using the Add or Remove Program functionality of Windows. Uninstallation will also remove the user account used to run the Techila Worker processes, but will not remove the directories created for the user. These directories can be removed manually.

Prerequisites

- You need to have access to the Techila Worker directory. If administrator access has been restricted, it should be restored before uninstallation.

Note

- Uninstalling the Techila Worker will not remove the Techila Worker Key from the Techila Server. The Techila Worker Key can be removed by using the Techila Web Interface as described in Chapter *Removing Techila Worker Keys* in the Techila Administration Guide. The Techila Worker Key should be removed after the Techila Worker has been uninstalled

Procedure

1. Launch the Windows Control Panel from the Start menu.
2. In the Control Panel, open the **Add or Remove Programs** view.
3. Select **Techila Worker** in the list of currently installed programs and click **Remove**. Remove dialog opens.
4. Click **Yes** to confirm the uninstallation.

5. Troubleshooting

This section gives tips for troubleshooting common installation problems.

If the installation fails, check the following:

- In the case of the failed installation, the error message should appear telling the reason of the problem. Make a note of the error.
- If the service fails to start due to a logon failure, check that the user and the “Users” group have permission to log on as a service.
- If the java.exe, wrapper.exe, cmd.exe processes are not visible in the Process list, ensure that you did not install over an existing installation.
- If the problem occurs after the installation, the error message will not appear, and the Techila Worker will not connect the server, check the log files **wrapper.log**, **logs*** and **fwdir\data\1\gosglog*** in the Techila Worker installation directory.
- A more detailed description of the installation procedure can be obtained, by adding **/l*vx <logfile>** parameter in the installation command line, for example:

```
msiexec.exe /i TechilaWorkerInstallerWindows<platform>_<version>.msi  
/l*vx <logfile> USERACCOUNT=<account> USERDOMAIN=<domain>  
USERPW=<password> SERVERHOST=<serverip> SERVERPORT=<serverport>  
DESTINATION=<destinationdirectory> NEWUSER=<yes|no>
```

If no clear reason or solution is found, the log files mentioned above should be sent to Techila Technologies.

6. Appendix

6.1. Appendix 1: Creating a Techila Worker User Account on Windows XP

This section describes how to create a non-interactive user account in Windows XP.

Note: These instructions describe the creation of a local account. In a domain environment, some tasks may differ.

Prerequisites

- You need administrative rights on the computer where you want to create the user account.

Procedure

1. Go to Administrative Tools → Computer Management → Local Users and Groups → Users, and choose Action → New User. The new user dialog opens.
2. Define a name (techila) and password for the account.
3. Check “User cannot change password” and “Password never expires”. Click **OK**.
Click on the Groups folder and double click on the “Users” group. The properties window for the Users group opens.
4. Click on the account you created, and click **Remove**. The Techila Worker account is removed from the Users group.
5. Start Windows Explorer (Windows key + E) and create the destination directory for Techila Worker installation (example `C:\Program Files\Techila\Worker`)
6. Right click on the directory you created, and click **Properties**. The properties window opens.
7. Go to the Security tab and click **Advanced**. Remove the tick from “Inherit from parent...”. The Security dialog opens.

Note: If the security tab is not available, please make sure the “Use simple file sharing” is turned off in (Tools → Folder Options → View tab → Advanced Settings).

8. Click **Remove**. All existing permissions are removed.
9. Click **Add**. The Select User or Group dialog opens.
10. Add permissions for the user account (techila) and Administrators groups by typing the names of the users (or groups) in the “Enter the name to select” field. Note that you can only add one user or group at a time. Click **Check Names** and the correct user or groups should be shown in the field. Click **OK**. The Permission Entry dialog opens:

11. Choose “Allow” for Full Control and click **OK**.
Optionally: remove the techila user access to the other directories in the system by adding the techila user to the permission lists with permission “Deny” for Full Control.
Note: The techila user must have access (read and execute) to the Windows directory.
12. Accept the user to Log on as a service. Go to Administrative Tools → Local Security Policy → Local Policies → User Rights Assignment. Right click on Log on as a service and click **Properties**, and then **Add User or Group**. The Select Users or Groups dialog opens.

To prevent other use of the account, add the user also to *Deny logon locally*, *Deny access to this computer from the network*, and *Deny logon through Terminal Services* lists. Follow the same procedure as in the previous step. Also make sure the group *Users* or any other group the account may belong to is not included in the Deny logon as a service list.

6.2. Appendix 2: List of Settings Configured by the Windows Installer

During a local installation, the Windows Installer will automatically configure the following settings for the user account:

- Deny access to this computer from the network
- Deny log on locally
- Deny log on through Remote Desktop Services
- Log on as a service

The installer will also set the following options for the user account:

- User cannot change password
- Password never expires