

# TeamDrive Personal Server


## Manual

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version 1.1.058*

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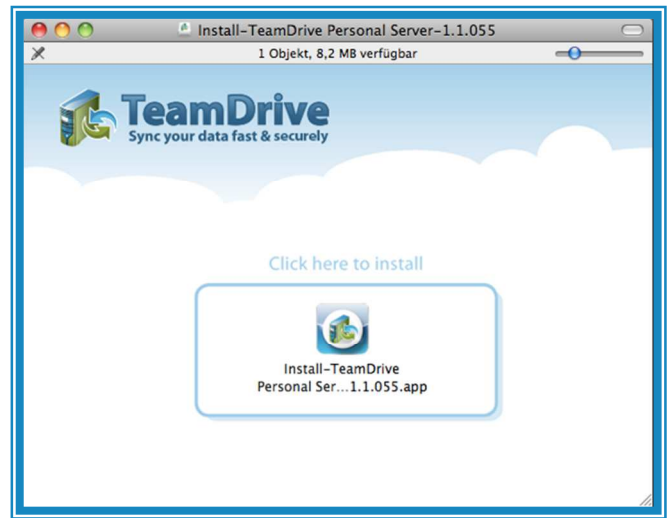
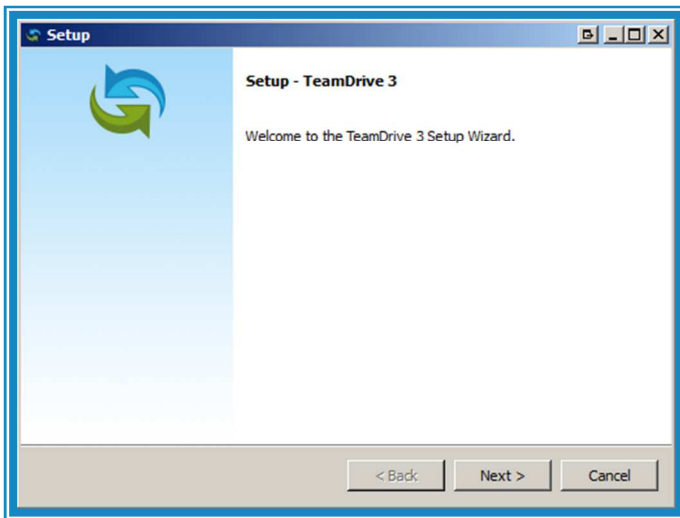


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# 1 Installing the TeamDrive Personal Server

## 1.1 Windows/Mac OS X

- Start the installation by double-clicking on the installer.
- Follow the instructions of the installer.
- Complete the installation process.



### Note:

The server must be properly configured before its first use.

You can find more information on this topic in chapter 3 "[Configuring the TeamDrive Personal Server](#)".

To use your TeamDrive Clients with your TeamDrive Personal Server, the clients need to first be properly configured.

You can find more information on this topic in chapter 5 "[Connecting to a TeamDrive Client](#)".

## 1.2 Linux

- Unpack the package.

Open a terminal window and go to the directory containing the compressed package.

- Unpack the compressed file "TeamDrivePersonalServerLinux\_xxxx.tar.gz": `"tar -xvzf TeamDrivePersonalServerLinux_xxxx.tar.gz"`.



**Note:**

We strongly advise that you regularly backup the "tdps.config" file.

- data/

This is the default directory where your server's repository is stored.

It contains all the Space data of all the users using the server.

You can change the location of the repository by editing the parameter "repository-data" in the configuration file ("tdps.config").

**Note:**

The server's repository must be installed on a local partition.

Network partitions are not supported.

The server uses file locking.

**Attention:**

We strongly advise that you frequently backup the "data" directory.

All the data of all users using the server are stored in it.

If you are using the default directory please be aware that a new installation, or an update, could potentially overwrite older files and directories.

d) To encrypt your password, type: `./tdps-md5pwd myPassword`, where "myPassword" would be your chosen password.

This password will be required to configure the server.



Please also check whether there is a newer version of this document on our web site [www.teamdrive.com](http://www.teamdrive.com).

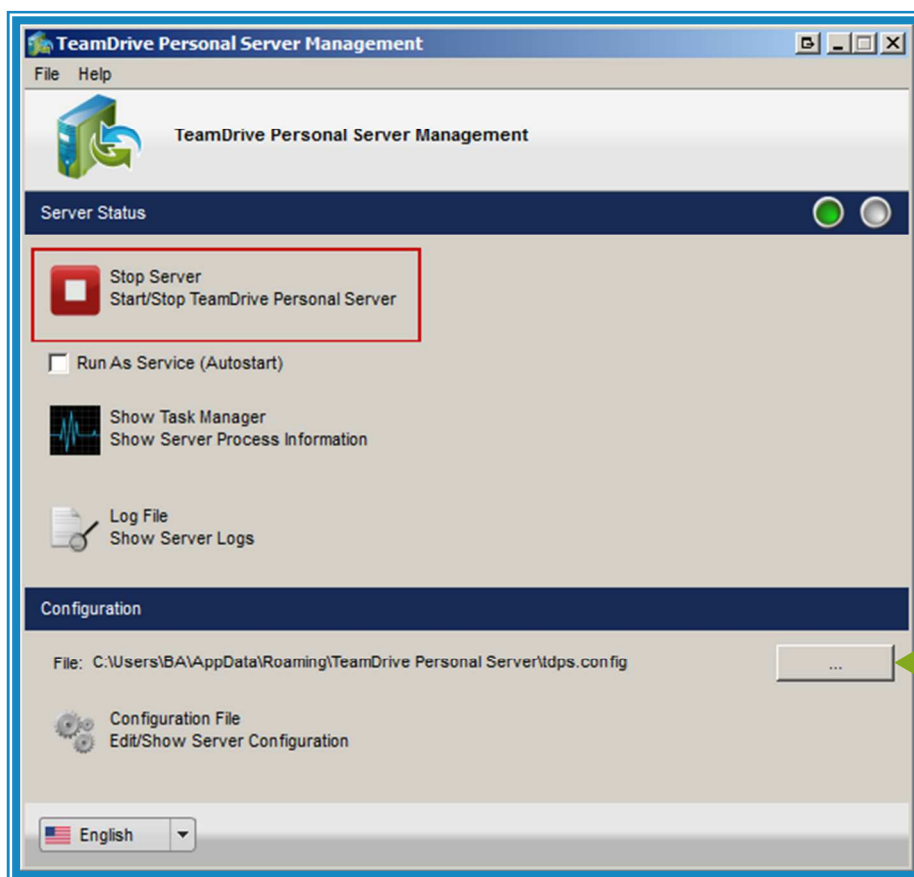
If so, follow the instructions outlined in the newer version.

## 2.1 Windows/Mac OS X

To successfully update the TeamDrive Personal Server from version 1.0.047 (or earlier versions) please execute the following steps:

Windows:

- Stop the TeamDrive Personal Server.

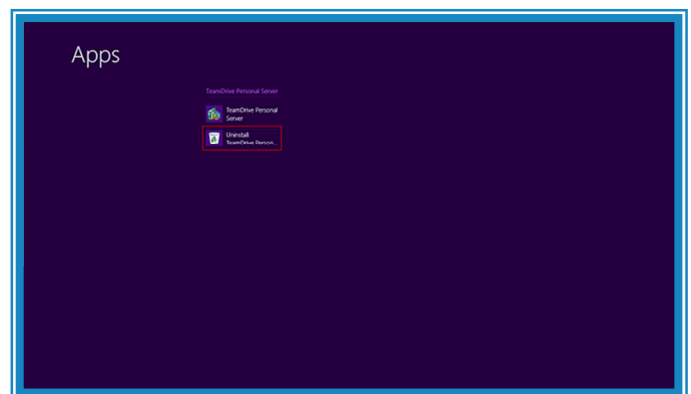
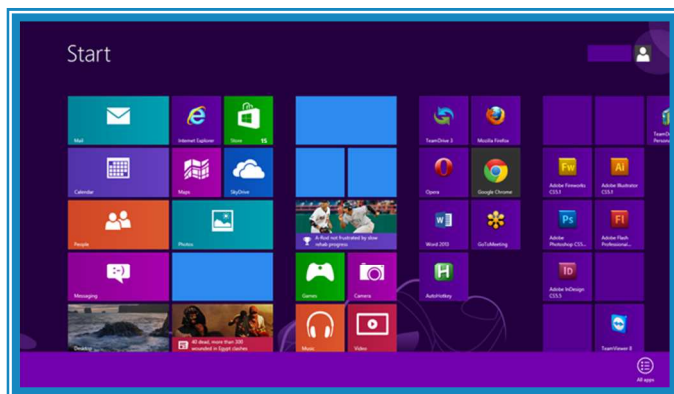


Select your configuration file here.

- Move the TeamDrive Personal Server configuration file "tdps.config" and the "data" folder, which contains all of your Space data, from your previous TeamDrive Personal Server installation location to a new location.
- Uninstall your old version of the TeamDrive Personal Server using the uninstaller provided with the application.
- On Windows 8 please uninstall the TeamDrive Personal Server via the "Programs and Features" folder in the Windows Control Panel. For all other versions of Windows, please uninstall the TeamDrive Personal



Server via the uninstall function provided in the application's folder in the Start menu. The uninstaller will ask you if it should attempt to delete the 'data' folder which contains your Space data. Please select "No".



- Install the new version of the TeamDrive Personal Server into the default directory, or into a directory that is empty, and launch the configuration dialog.
- In the "Configuration" section click on the "..." button to locate and select your original "tdps.config" file which you used with your previous installation.
- Click on "Configuration File" to display the "Configure Server" dialog which allows you to edit your "tdps.config" file. Click the "..." button next to "Repository Path" to locate and select your original "data" folder, which contains all of the Space data, from your previous TeamDrive Personal Server installation.
- Click "Save" to save your changes and close the configuration file.
- The TeamDrive Personal Server will then start automatically and can, for example, be set to "Run As Service". If, in any case, the TeamDrive Personal Server does not automatically start, press "Start Server" to start the server.

#### Mac OS X:

- Stop and close the TeamDrive Personal Server.
- Via "Finder" → "Applications", locate the TeamDrive Personal Server application and select the option "Move to Trash" or just drag it to the trash can.
- Install the new version of the TeamDrive Personal Server. After the installation is complete, launch the configuration dialog.
- In the "Configuration" section click on the "..." button to locate and select your original "tdps.config" file which you used with your previous installation. By default this file is located under the following path: "/Users/<username>/Library/Application Support/TeamDrivePersonalServer/tdps.config." By default the "Library" folder is hidden. If the "Library" folder is hidden on your computer please perform the following steps:
  - In the "Open" dialog under "Places" select your home directory (where the house icon is).
  - Press **[Cmd]+[Shift]+[G]** to open the "Go to Folder" dialog, type "Library" and select "Go".
  - Navigate to the sub-folder "Application Support" > "TeamDrivePersonalServer", select the configuration file "tdps.config" and click "Open".
- Click on "Configuration File" to display the "Configure Server" dialog which allows you to edit your "tdps.config" file. Click the "..." button next to "Repository Path" to make sure the repository path still points to your original "data" folder, which contains all of the Space data, from your previous TeamDrive

Personal Server installation. By default the "data" folder is located under the following path:  
"/Users/<username>/Library/Application Support/TeamDrivePersonalServer/data".

- Click "Save" to save your changes and close the configuration file.
- The TeamDrive Personal Server will then start automatically and can, for example, be set to "Run As Daemon". If, in any case, the TeamDrive Personal Server does not automatically start, press "Start Server" to start the server.

To Update the TeamDrive Personal Server from Version 1.0.048 and above you only need to perform the following steps:

- a) Stop the TeamDrive Personal Server.  
You can find more information on this topic in chapter [4.1.2 "Stopping the Server"](#).
- b) Initiate the installation process of the newer version and follow the instructions of the installer.

## 2.2 Linux



### Attention:

Do not forget to save your repository and configuration file before proceeding with the update.

Updating could potentially lead to the repository being accidentally overwritten if you are using the same installation directory!

- a) Stop the TeamDrive Personal Server.
- b) Install the new version into an empty directory.
- c) Copy the existing repository folder and the latest configuration file, "tdps.config", from your old version into the new installation directory or adjust the configuration of the server accordingly.

## 3 Configuring the TeamDrive Personal Server

### 3.1 Windows/Mac OS X

All configuration settings for the server are stored in a file called "tdps.config".

By default, this file is saved under the following path:

Windows XP: "C:\Documents and Settings\<UserName>\Application Data\TeamDrive Personal Server"

Windows Vista/7/8: "C:\Users\<UserName>\AppData\Roaming\TeamDrive Personal Server\"

Mac OS X: "/Users/<UserName>/TeamDrive Personal Server/"

Linux: The TeamDrive Personal Server directory



**Note:**

We strongly advise that you regularly backup the "tdps.config" file.

Start the Teamdrive Personal Server Management application.

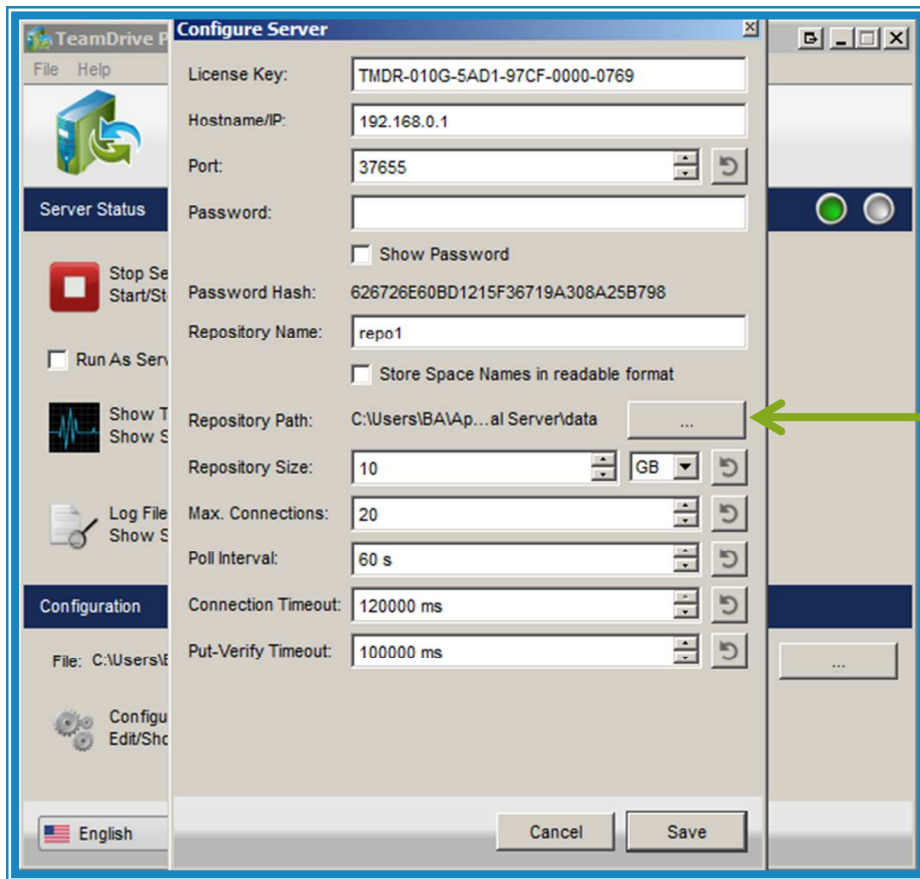
Under "Configuration" you are able to select an existing configuration file.

You can easily edit the selected configuration file by clicking "Edit/Show Server Configuration" or by using the menu item "Configure Server..." (Windows) or "Preferences" (Mac OS X).



**Note:**

We strongly recommend configuring the TeamDrive Personal Server by using the the TeamDrive Personal Server Management application and not by manually editing the file with a text editor.

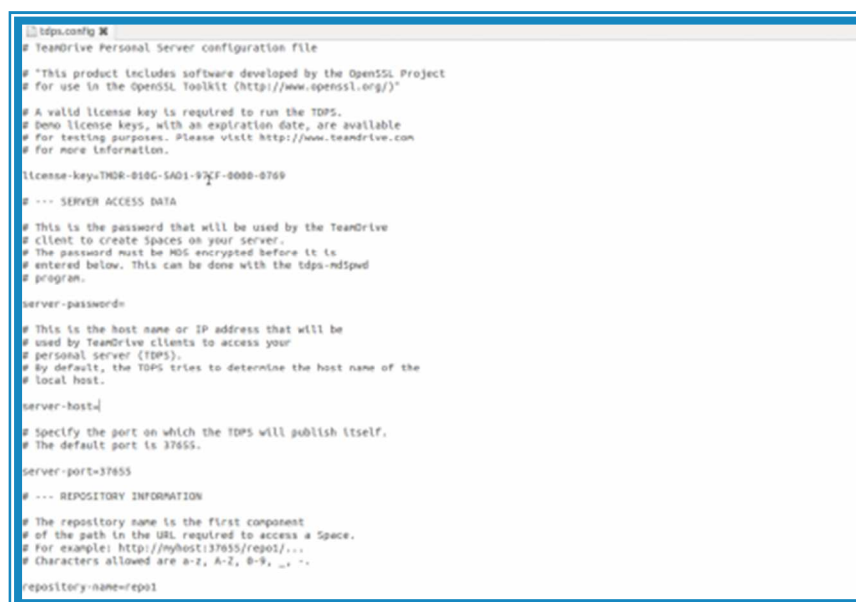


Select your repository path here.

## 3.2 Linux

Stop the TeamDrive Personal Server before making any changes to the server's configuration.

Edit the configuration file ("tdps.config"), which is located in the TeamDrive Personal Server directory.



## 3.3 Configuration Parameters



### Note:

To setup the The TeamDrive Personal Server in a test environment only an address (hostname or IP-address) and a server password are required.

Most parameters can be used with their default values.

The parameters crucial for setting up the server are the following:

### 3.3.1 Valid License Key

Enter your valid license key here.

Upon purchasing a TeamDrive Personal Server license you will receive a valid license key.

The default license key is that of an unlimited demo key with a maximum storage capacity of 10 GB.

license-key=TMDR-010G-5AD1-97CF-0000-0769

### 3.3.2 Hostname/IP-Address

The address (hostname or IP-address) the server responds to (as seen from the TeamDrive clients).



### Note:

enter IP-Address or hostname without "http" in front.



### Note:

127.0.0.1/localhost can only be used for a local installation (server and client on the same machine).

If the client is running on another machine in the local network, this needs to be the server's IP-address.

You can find the IP-address by typing "ipconfig/all" in the windows "Command Prompt" or by using the "ifconfig" command via "Terminal" on Linux/Mac OS X.

In a global environment, if the server is located behind a router, this address needs to be, from a TeamDrive client's point of view, the address the router responds to and proper port forwarding needs to be setup.

Consider that your Internet Service Provider (ISP) might be giving you a different IP-address each time you connect to the internet.

To be able to provide a static address for the TeamDrive clients, it may be suitable to use a service like Dyn DNS (<http://dyn.com/dns/>) nutzen.

In this case it needs to be the hostname that is registered with DynDNS (e.g. "teamdriveServer.dyndns.net").

```
server-host=192.168.30.157
```

### 3.3.3 Port

Port the server listens to.



**Note:**

If you are behind a firewall, permission to access the port may need to be given.

```
server-port=37655
```

### 3.3.4 Password

On Windows/Mac OS X it is enough to just enter your password in the TeamDrive Personal Server Management application in plain text.

It will be automatically stored as an encrypted MD5 Hash String in the configuration file ("tdps.config").

On Linux the password must be saved as an encrypted MD5 Hash String in the configuration file.

To encrypt your password you can use the generator that is included in the package "./tdps-md5pwd".

You can find more information on this topic in chapter [1.2 "Linux"](#).

The default password, in this example, is "myPassword":

```
server-password=f14a298bc87fff2cd757f71054fdd94d
```

### 3.3.5 Repository Name

The repository name is the first component of the path in the URL required to access a Space.

For example: `http://myhost:37655/repo1/...`

Characters allowed are a-z, A-Z, 0-9, `_`, `-`.

`repository-name=repo1`

### 3.3.6 Storing Space Names in a Readable Format

This parameter can be enabled ('yes') or disabled ('no').

When enabled, the titles of Spaces are stored in plain text in the "space-db" file.

For privacy reasons, we recommend using the default setting of disabled ('no').

`store-space-titles=no`

### 3.3.7 Repository Path

This is where the server's repository is stored.

It contains all the Space data of all the users using the server.

If, at some point, you would like to move the "data" directory, stop the server if it is running and move the existing "data" directory to the desired location before setting it as the new repository path.



#### **Note:**

The repository of your server must be installed on a local partition.

Network partitions are not supported. The server uses file locking.

On Windows it is strongly recommended to use a local NTFS partition.



#### **Attention:**

We strongly advise that you frequently backup the "data" directory.

All the data of all users using the server are stored in it.

If you are using the default directory please be aware that a new installation, or an update, could potentially overwrite older files and directories.

`repository-data=`

### 3.3.8 Maximum Repository Size

The minimum size for a repository is 10MB.

If you have a license allowing a limited amount of storage, this value may not exceed that of your maximum storage allowance.

Entering a value that exceeds the storage limit allowed by the license would prevent the server from starting.

The maximum size for the repository must be specified in the configuration file as a number followed by one of the following unit abbreviations: MB, GB or TB.

The following configuration parameters are intended for experienced users and administrators.

In general, we recommend using the default, pre-configured values.

```
repository-size=10GB
```

### 3.3.9 Maximum Number of Connections

This is the maximum number of connections the TeamDrive Personal Server will allow.

If this number is exceeded, clients must wait for a connection to be freed up before it can connect to the TeamDrive Personal Server.

```
maximum-connections=20
```

### 3.3.10 Poll Interval

This the minimum poll frequency in seconds.

This determines how often active clients check the server for changes.

```
poll-interval=60
```

### 3.3.11 Connection Timeout

This is a value in milliseconds.



If no data is received on a connection within the give time it is assumed that the connection has closed.

connection-timeout=10000

### 3.3.12Put-Verify Timeout

This is a value in milliseconds. After a file is uploaded, an MD5 check is done to verify the data on disk.

If this operation takes too long the server will send a status code of 100 and continue after the amount of time specified here.

put-verify-timeout=100000

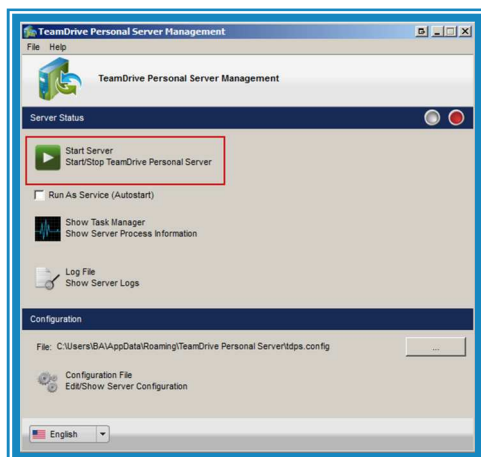
## 4 Using the TeamDrive Personal Server

### 4.1 Windows/Mac OS X



#### Note:

We recommend to exclusively use the TeamDrive Personal Server Management application to manage the TeamDrive Personal Server.



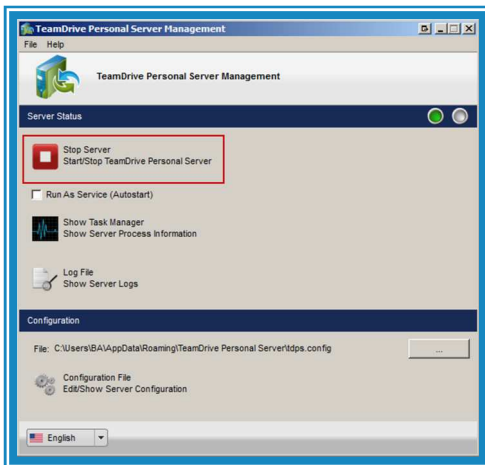
#### 4.1.1 Starting the Server

To start the server, click "Start Server".

The operational status of the server, represented by a green light, is displayed in the header line "Server Status".

The server can be run as a service ("Run As Service") on Windows or as a background process ("Run As Daemon") on Mac OS X.

In this case, the server is started automatically when starting the computer.



### 4.1.2 Stopping the Server

To stop the server, click "Stop Server".

The operational status of the server, represented by a red light, is displayed in the header line "Server Status"..

### 4.1.3 Monitoring the Server Status

To check the operational status and see if the server is running click the button "Show Server Process Information".

This will, depending on the configuration, open "Windows Services" or "Task Manager" on Windows and the "Activity Monitor" on Mac OS X.

If the server does not start, the log file, "tdpsd.log", may contain valuable clues as to what is going wrong.

To view the server's log file, click "Show Server Logs" or use the appropriate menu option.

## 4.2 Linux



### Attention:

The TeamDrive Personal Server needs to run under a user account.

You cannot run the TeamDrive Personal Server under the root user.

### 4.2.1 Starting the Servers

Use `"/tdpsd"` to start the server.

```
teamdrive@teamdrive: ~/tdps
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$
teamdrive@teamdrive:~$tar -xvzf TeamDrivePersonalServerLinux_1.1.055.tar.gz
tdps/tdpsd
tdps/stop-tdps
tdps/tdps-md5pwd
tdps/EULA_en.rtf
tdps/mime.types
tdps/data/space-db
tdps/EULA_de.rtf
tdps/watch-tdps
tdps/tdps.config
teamdrive@teamdrive:~$cd tdps
teamdrive@teamdrive:~/tdps$dir
data          EULA_en.rtf  stop-tdps    tdpsd        watch-tdps
EULA_de.rtf  mime.types   tdps.config  tdps-md5pwd
teamdrive@teamdrive:~/tdps$./tdps-md5pwd meinPasswort
F14A298BC87FFF2CD757F71054FDD94D
teamdrive@teamdrive:~/tdps$./tdpsd
```

### 4.2.2 Stopping the Server

Use `"/stop-tdps"` to stop the server.

```
teamdrive@teamdrive: ~/tdps
=====
130705 16:49:39 TeamDrive Personal Server, version 1.1.055 (CSLib 1.0.0(Built Jul 3 2013 11:01:16)), running as "teamdrive"
Command line: ./tdpsd
130705 16:49:39 [Note] License key repository space limit: 10GB
130705 16:49:39 [Note] ./data/disk-usage not found: recalculating disk usage...
130705 16:49:39 [Note] Disk usage: 0 bytes
130705 16:49:39 [Note] TeamDrive Personal Server listening on port 37655
```

### 4.2.3 Monitoring the Server Status

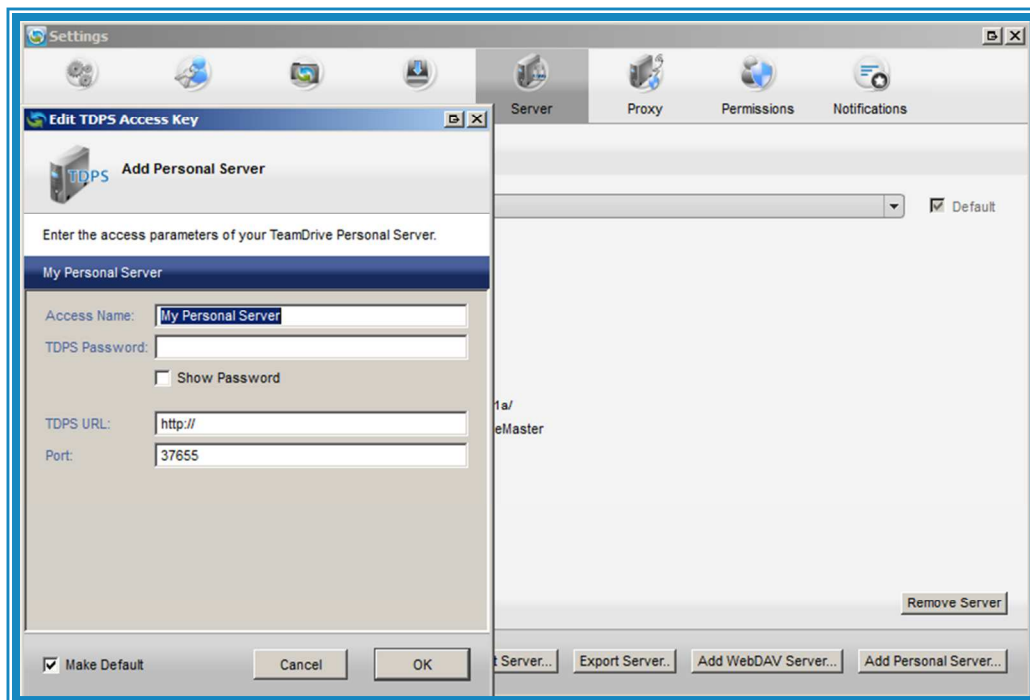
Use `"watch-tdps"` to start monitoring the server.

This will display the server's status in the console.

Additionally, the status will always be logged in the log file ("`tdpsd.log`").

## 5 Connecting to a TeamDrive Client

- a) Start the TeamDrive client.
- b) Navigate to the "Settings" panel and go to "Server".
- c) Choose "Add Personal Server".
- d) Fill in the information appropriate to the settings of your TeamDrive Personal Server and click "OK".
- e) Please be aware that "Make Default" is checked by default.
- f) Close the settings window.
- g) You are now able to use your TeamDrive client with your TeamDrive Personal Server.
- h) Create a new Space on the TeamDrive Personal Server by selecting the TeamDrive Personal Server from the server list during the Space creation process.



## 6 Backup and Restoration

All you need to reconstruct your TeamDrive Personal Server, in the case of, for example, a total failure of your hard disk, is the repository and the configuration file.

For this reason it is essential to regularly backup these two components.

We also recommend backing up these components before performing an update.

The administrator is responsible for the security of TeamDrive Space data stored on a Teamdrive Personal Server.



In the following section we will discuss backup and restoration procedures for the repository data directory.

## 6.1 Backing Up the TeamDrive Personal Server

The simplest way to make a backup is to shutdown the TeamDrive Personal Server and make a complete copy of the repository data directory (referenced by the "repository-data" system parameter).

You may also wish to make backups of the configuration file ("tdps.config") and "mime.types" if you have modified this file.

Of course, instead of a complete copy, "rsync" can be used to update an existing backup.

## 6.2 Online Backup

If your availability requirements do not allow the server to be shutdown, an online backup can be performed.

The procedure for creating an online backup is as follows:

- For each Space (numbered directories) in the repository data directory, do the following:
  - Backup the log files in the protolog sub-directory as follows:
  - Lock the file called "last.log", if it exists (additional software required).
  - Scan the directory and determine the highest numbered log file.
  - Backup the "last.log" file.
  - Unlock the "last.log" file (additional software required).
  - Backup all numbered log files with a number equal to or less than the highest number found in the previous step.
  - Backup all files in the data sub-directory.
- Backup all remaining files in the repository data directory.

## 6.3 Restoring the TeamDrive Personal Server

A restore can only be done offline.

Even if only part of the space repository is restored, TeamDrive Personal Server will run the recovery procedure for the entire repository.

This is not an issue because the clients can recognize if a Space has not changed after the restoration process and will continue to use the Space as it did before.

Follow this procedure to restore the repository data directory:

- Shutdown the TeamDrive Personal Server.
- Replace the repository data directory with your backup.
- As mentioned above, you may also restore Space directories selectively.
- Start the TeamDrive Personal Server with the --restored option.

This can be done through the "Command Prompt" or "Terminal".

The TeamDrive Personal Server will recover all Spaces in the repository before it allows any client connections.

As an alternative to the --restored option, creating an empty file (a file with no extension) in the repository data directory called "restored" will have the same effect.

The path to the data directory (repository) can be found in the file "tdps.config".

If the TeamDrive Personal Server is stopped during the recovery process it will automatically resume the recovery process when it starts again.

After the recovery, a file called "restore-state" will be created.

The "restore-state" file contains the information relevant to the restore procedure.

If recovery is in progress, and you would like for the TeamDrive Personal Server to start the recovery again from the beginning (for example, because you have restored different data), then remove this file and start the TeamDrive Personal Server with the --restored option again.

During recovery, the TeamDrive Personal Server scans each space and determines the current log offset.

It writes this information to a file called "restore-state" in the Space.

It also increments the global "restore-id".

The "restore-id" is the time of the restore in seconds from 01-01-2010.

## 6.4 TeamDrive Client Space Recovery


TeamDrive client Space recovery occurs automatically if necessary.

The TeamDrive client software checks the restore state of a Space if the client's local "restore-id" of a Space is not equal to that of the global "restore-id" on the server.

If the client's log offset is beyond the server side offset (after the restore), the client will begin local recovery of the Space.

The client recovers a Space by resetting the local copy of the space to the state of the Space at the time of the restore (as it was on the server).

Before this is done, a backup copy of the local space data is made.



The user is then responsible to check if there are any local changes to the Space in the backup, but not in the Space.

The user should then apply these changes to the Space, for example, by copying over the changed files.

Some coordination with other users of the Space may be required to prevent duplicating this procedure.

## 7 Security

The individual client PC and server should be adequately protected from third party access.

In regards to this, we recommend reading the security tips in this handbook.

### **Note:**

We recommend viewing the information provided by the BSI ([https://www.bsi.bund.de/EN/Home/home\\_node.html](https://www.bsi.bund.de/EN/Home/home_node.html)) for more information on this topic.

### 7.1 Encryption

Encrypted transfer of data is TeamDrive's underlying security feature.

The encrypted exchange of data is divided into three steps:

- a) When a member is invited to a Space, the TeamDrive-software receives the Public Key from the registration-server.
- b) In order to access a (shared) Space a "Data Key" (256 bit-AES-Key) is created locally, is encrypted with the member's Public Key, and is then sent to the member via a private communication path.
- c) As soon as you leave the client-PC, the Space's data is encrypted using your data-key.

This data is then saved on a relay-server in encrypted form. The encryption means that the Space's data can only be accessed by the Space's members.

Because every member has his/her own key, they are authorized and will receive data from the Space.

This data is then decrypted using their Data Key and can then be viewed/edited.

## 7.2 Anti-Virus Software

TeamDrive data stored on a computer is guarded by the local antivirus software.

The software tests the relevant file when the TeamDrive database is accessed.

Your current antivirus software should always guard all Spaces in your local file system.

### **Note:**

We recommend having your own local antivirus software.

Every TeamDrive user quickly acquires many Spaces and files (files potentially accessed and/or edited by every member of the Space) with various different teams.

Self-protection is the safest method.

## 7.3 Tips Regarding Privacy Protection and Administration

With its default settings applied, TeamDrive ensures its adherence to the privacy regulations, as outlined by the German government, of government agencies, offices and institutions as well as companies and private users.

To maximize compliance with privacy protection policies the following information should be adhered to when installing and using the product.

The respective client and server PC should be adequately protected from unauthorized third party access. With the default settings of the TeamDrive Personal Server enabled, Space names will not be stored on the server in plain text.

For privacy protection reasons, we strongly recommend using the default settings. You can find more information on this topic in chapter [3.3.6 "Storing Space Names in a Readable Format"](#).


When using TeamDrive applications, other miscellaneous privacy protection guidelines may also apply.

In the event that the product is not used in combination with an internally hosted TeamDrive Personal Server (within a LAN environment), the pre-conditions, in relation to the commissioned data processing of your server provider, on which the TeamDrive Personal Server is installed must be kept in mind.

Here there is also no particular difference to other products which use external data storage centers.

The customer should choose wisely when selecting a server provider and provide them with the appropriate instructions.





In general, a separate data processing agreement should be arranged.

Further information regarding data processing agreements, with respective samples in the Virtual Privacy Office (<http://www.datenschutz.de/privo>). If you have additional questions, or require further assistance, we would be more than happy to assist you in getting in touch with their office.

This product contains program libraries from the OpenSSL Project for the utilization of the OpenSSL Toolkit. (<http://www.openssl.org/>).

## 7.4 Notice to Companies Required to Store Confidential Data

TeamDrive is designed to store and share confidential data and information. The encryption methods and technologies used by the TeamDrive client safeguards all data from being accessed by unauthorized third parties.

Unauthorized access to your data can only be initiated by the user. For example, wrongfully assigning user access rights to a Space.

We recommend, to companies required to store confidential data, using password protection, for example, when sending Space invitations. Protecting your invitations with passwords add an additional level of protection and require the invited user to enter the given password before they can accept the invitation. We advise using a password which contains numbers and upper/lowercase letters.