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Timebeat Software Installation Guide

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TIMEBEAT

Installation Guide

(Timebeat Software)

If you are unsure as to what is required for Timebeat to operate check out our Before you begin guide.

Dependencies

UTC:

Timebeat relies on a source of UTC, this can be from public NTP pools, your own sources of UTC provided by Grand Master Clocks, or Timebeat Cloud sources. Timebeat can utilise NTP, PTP, PPS or NMEA to synchronise your systems.

O/S:

Ensure that you are deploying to a supported operating system (typically this is Linux or Windows)

Elastic:

Timebeat ships data to an elastic database, you must ensure that your network allows your device running Timebeat to reach a functioning elastic database. (this is not necessary for Timebeat to function however to use the visualisations this will be required.

Kibana: *(optional-front-end)*

Timebeat ships with a Kibana dashboard as standard allowing you to visualise your data as soon as the application starts.

Grafana *(recommended-front-end enterprise users only):*

Timebeat Enterprise ships with extended dashboards for Grafana, Timebeat Cloud provides Grafana as standard. If you are running your own installation we highly recommend you have Grafana set up to get the most out of Timebeat.

Deploying to Linux

Assuming you have downloaded the Timebeat software to a directory on the local device and you can operate with administrator privileges:

(Timebeat can be downloaded at <https://timebeat.app/download.php>)

Open up a terminal and run the following commands:

```
sudo rpm -ivh timebeat<version-number/full-file-name>.rpm
```

If the operation works correctly you should see similar output to the terminal as below.

```
Verifying... ##### [100%]  
Preparing... ##### [100%]  
Updating / installing...  
 1:timebeat-1.2.1-1 ##### [100%]
```

That's all it takes to get the Timebeat agent installed. Now we need to configure the config file to ensure that your Timebeat application can source UTC and report to elastic. For this we will need to edit the following file:

```
/etc/timebeat/timebeat.yml
```

For configuration details please see the [configuration guides](#).

Assuming you have configured the timebeat.yml file and placed it within the correct folder:

```
/etc/timebeat/timebeat.yml
```

Next, we need to make sure your License file is in the correct location. We recommend that this is placed in the following location:

```
/etc/timebeat/timebeat.lic
```

Although this location is not necessary it is the default location within the timebeat.yml configuration file, therefore if you place the license in a different path location make sure to update the path within the configuration file as well.

To obtain a license just fill out the form at <https://timebeat.app/license.php>

Once complete the license will arrive in your inbox in seconds.

Assuming your dependencies are set up and your config file is updated, you are ready to start the Timebeat service. We recommend that you run the following command to start the service in the foreground after any config changes. Running this command will highlight any errors that may be present in the config file so that you can quickly amend and restart the service.

```
sudo /usr/share/timebeat/bin/timebeat -c /etc/timebeat/timebeat.yml
```

Once you are comfortable that the service is operating as you expect you can start the service normally with the below commands:

```
sudo service timebeat start
```

To check that Timebeat is running you can check the status with:

```
sudo service timebeat status
```

It is also recommended at this stage that you run the following command to enable Timebeat at startup so that you are not caught without synchronisation during system restarts.

```
sudo systemctl enable timebeat
```

Deploying to Windows

Assuming you have downloaded the Timebeat software to a directory on the local device and you can operate with administrator privileges:

Unzip the contents of the zipped Timebeat file

Copy the unzipped folder and place it within Program Files

Open up a PowerShell window as administrator and change directory to Program files

From here you may need to change the execution policy depending on your current Windows configuration. In order to run the Timebeat installer, you will need to configure the execution policy to Unrestricted.

Run the following command within the Program Files folder

```
Set-ExecutionPolicy Unrestricted
```

When carried out correctly you will receive the below output within the PowerShell window at which point select [Y]. Depending on the Windows O/S release other options may be available in which case select the option which best represents the outcome you desire.

```
PS C:\Program Files> set-ExecutionPolicy Unrestricted
```

```
Execution Policy Change
```

```
The execution policy helps protect you from scripts that you do not trust. Changing the execution policy might subject your computer to the security risks described in the about_Execution_Policies help topic at http://go.microsoft.com/fwlink/?LinkID=135170. Do you want to change the execution policy now?
[Y] Yes [N] No [S] Suspend [?] Help (default is "Y"):
```

Now enter the Timebeat folder and run the following commands:

```
.\install-service-timebeat.ps1
```

If you have not carried out the ExecutionPolicy correctly you will see output to the PowerShell window similar to the one below.

```
PS C:\Program Files\timebeat-1.2.1-windows-x86_64> .\install-service-timebeat.ps1
.\install-service-timebeat.ps1 : File C:\Program Files\timebeat-1.2.1-windows-x86_64\install-service-timebeat.ps1 cannot be loaded. The file C:\Program Files\timebeat-1.2.1-windows-x86_64\install-service-timebeat.ps1 is not
digitally signed. You cannot run this script on the current system. To learn more about digital signing, see about_Execution_Policies at http://go.microsoft.com/fwlink/?LinkID=135170.
At line:1 char:1
+ .\install-service-timebeat.ps1
+ ~~~~~
+ CategoryInfo          : SecurityError: (:) [], PSSecurityException
+ FullyQualifiedErrorId : UnauthorizedAccess
```

If the ExecutionPolicy is correctly set you will be greeted with the below PowerShell output:

```
PS C:\Program Files\timebeat-1.2.1-windows-x86_64> .\install-service-timebeat.ps1
Security warning
```

```
Run only scripts that you trust. While scripts from the internet
computer. If you trust this script, use the Unblock-File cmdlet to
message. Do you want to run C:\Program Files\timebeat-1.2.1-windows
[D] Do not run [R] Run once [S] Suspend [?] Help (default is "D"):
```

At this stage select [R] to continue the process. Once [R] is selected the following output will appear:

```
Status Name DisplayName
-----
Stopped timebeat timebeat
```

To complete the installation you will need to run the installation PowerShell Script one more time which will look like the below (be aware you will need to respond with [R] again:

```
PS C:\Program Files\timebeat-1.2.1-windows-x86_64> .\install-service.ps1

Security warning
Run only scripts that you trust. While scripts from the internet
computer. If you trust this script, use the Unblock-File cmdlet to
message. Do you want to run C:\Program Files\timebeat-1.2.1-windows
[D] Do not run [R] Run once [S] Suspend [?] Help (default is "D"):
```

```

__GENUS : 2
__CLASS : __PARAMETERS
__SUPERCLASS :
__DYNASTY : __PARAMETERS
__RELPATH :
__PROPERTY_COUNT : 1
__DERIVATION : {}
__SERVER :
__NAMESPACE :
__PATH :
ReturnValue : 5
PSComputerName :

__GENUS : 2
__CLASS : __PARAMETERS
```

```
__SUPERCLASS :
__DYNASTY : __PARAMETERS
__RELPATH :
__PROPERTY_COUNT : 1
__DERIVATION : {}
__SERVER :
__NAMESPACE :
__PATH :
ReturnValue : 0
PSComputerName :

Status : Stopped
Name : timebeat
DisplayName : timebeat
```

That's all it takes to get the Timebeat agent installed. Now we need to configure the config file to ensure that your Timebeat application can source UTC and report to elastic. For this we will need to edit the following file:

```
C:\\Program Files\\timebeat<version-number/full-file-name>\\timebeat
```

For configuration details please see the [configuration guides](#).

Next, we need to make sure your License file is in the correct location. We recommend that this is placed in the following location:

```
C:\\Program Files\\timebeat<version-number/full-file-name>\\timebeat
```

Although this location is not necessary it is recommended for ease. You will need to update the default location within the timebeat.yml configuration file, therefore if you place the license in a different path location make sure to update the path within the configuration file as well. Unlike with Linux installations the pathname will need to be within single quotes (this is the same for all path locations) an example would look like the below:

```
'C:\\Program Files\\timebeat-1.2.1-windows-x86_64\\timebeat.lic'
```

To obtain a license just fill out the form at <https://timebeat.app/license.php>

Once complete the license will arrive in your inbox in seconds.

Assuming your dependencies are set up and your config file is updated, you are ready to start the Timebeat service. We recommend that you run the following command to start the service in the foreground after any config changes. Running this command will highlight any errors that may be present in the config file so that you can quickly amend and restart the service.

The following command will run Timebeat in the foreground of the PowerShell window provided you are within the Timebeat file directory location, if you are not in the Timebeat file directory then just add the full pathname to the front of the timebeat.exe:

```
.\timebeat.exe -d "*" -e
```

Once you are comfortable that the service is operating as you expect you can start the service normally with the below commands:

```
Start-Service timebeat
```

Similarly, you can navigate to the services tab within Task manager and start the service from there.

To check that Timebeat is running you can check the status by:

- Opening up Task Manager and finding Timebeat within the services tab and checking that the status is Running

The Gotchas/tasks to remember

Sometimes you will have followed the above steps but you still can't get Timebeat to work.

Below we provide some insight into the common items which are overlooked or forgotten about.

Firewalld : You have the options to configure firewalld or in most cases, we recommend simply turning it off or disabling it with the below commands.

```
sudo systemctl stop firewalld
sudo systemctl disable firewalld
```

Windows Firewall / Defender: Similarly on windows you need to disable (or configure) Windows Firewall and Windows Defender.

This is done in the command panel, just ensure the necessary boxes are ticked with off.

License Key : This solution is the same for many items in Timebeat configuration. Always check your path names are accurate and correct, you can't always rely on the default values even if in most cases this would be fine. Ensure your license key has the correct file name and matches that to what you have configured within the timebeat.yml file.

Pathname defaults : This sometimes takes a bit of trial and error and as such we always recommend starting Timebeat within the terminal when you start for the first time after making config changes - especially when moving config files between operating systems. Timebeat on Linux defaults with pathnames with "/" where as Windows will use "\" similarly Linux uses the double quote "" but Windows uses single quotes '' Double check these are correct. Again using the debug command above (-d "*" flag) allows you to identify the line of the config file which is proving problematic.

YAML: One thing to always remember when modifying the yaml file is that you have to use spaces and not tabs. If you use tabs the file will not be read correctly and as a word from the wise, a tab is near impossible to locate as it appears the same as spaces.

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