

# Installation Guide

WebtoB 6

**TMAXSOFT**

# Copyright

Copyright 2025. TmaxSoft Co., Ltd. All Rights Reserved.

## Company Information

TmaxSoft Co., Ltd.

TmaxTower 8-9F, 29, Hwangsaeul-ro 258 beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, South Korea

Website: <https://www.tmaxsoft.com/en/>

## Restricted Rights Legend

All TmaxSoft Software (Tmax WebtoB®) and documents are protected by copyright laws and international convention. TmaxSoft software and documents are made available under the terms of the TmaxSoft License Agreement and this document may only be distributed or copied in accordance with the terms of this agreement. No part of this document may be transmitted, copied, deployed, or reproduced in any form or by any means, electronic, mechanical, or optical, without the prior written consent of TmaxSoft Co., Ltd. Nothing in this software document and agreement constitutes a transfer of intellectual property rights regardless of whether or not such rights are registered) or any rights to TmaxSoft trademarks, logos, or any other brand features.

This document is for information purposes only. The company assumes no direct or indirect responsibilities for the contents of this document, and does not guarantee that the information contained in this document satisfies certain legal or commercial conditions. The information contained in this document is subject to change without prior notice due to product upgrades or updates. The company assumes no liability for any errors in this document.

## Trademarks

Tmax WebtoB® is a registered trademark of TmaxSoft Co., Ltd. Other products, titles or services may be registered trademarks of their respective companies.

## Open Source Software Notice

Some modules or files of this product are subject to the terms of the following licenses. :ZLIB, Apache License 2.0, Boost Software License 1.0, BSD 3-Clause License, MIT License, curl license, GNU Lesser General Public License (LGPL) version 2.1, PCRE License

Detailed Information related to the license can be found in the following directory:

`${INSTALL_PATH}/lib/licenses`

# Document History

Product Version	Guide Version	Date	Remarks
WebtoB 6	3.1.2	2025-01-22	-

# Contents

1. Pre-Installation Tasks .....	1
1.1. System Requirements .....	1
1.2. System Environment .....	1
2. Installation and Uninstallation in Linux .....	3
2.1. Installation .....	3
2.1.1. Installation Process .....	3
2.1.2. Installation Verification .....	6
2.2. Startup and Shutdown .....	8
2.2.1. Creating the Configuration File .....	9
2.2.2. Starting Up WebtoB .....	11
2.2.3. Shutting Down WebtoB .....	13
2.3. Uninstallation .....	13
2.3.1. Uninstallation Process .....	13
2.3.2. Uninstallation Verification .....	14

# 1. Pre-Installation Tasks

## 1.1. System Requirements

The system requirements for installing WebtoB are as follows:

Operating System	CPU	Memory
Linux K.4.15 or later (64bit)	Intel Itanium	512MB

## 1.2. System Environment

Before installing WebtoB, the following must be checked:

- **Host Name**

To properly start WebtoB, the host name must be set in node/name of the WebtoB configuration file.

On Linux systems, you can check the host name by running the **uname -n** command or by checking the "/etc/hosts" file.



WebtoB automatically searches for a host name during the installation process and registers it in the configuration file (webtob-config.yaml).

- **Port Number**

When WebtoB starts, a port that waits for a connection from an external client (Internet browser) is needed. In general, the default port 80 is used if a web server is installed. However, most operating systems require 'root' privileges to use port 80.

Therefore, only a user who has root privileges can use port 80. To install WebtoB with a general user account, a port number after 1024 must be used. If a port other than 80 is used, the port number must be specified when requesting the service from the browser.

Before registering a port in the environment file, the port must be checked for conflicts with other programs. If a port other than 80 is used, the user must be notified of the port number.

The following example is an HTTP URL when the port number of a web server is 8080:

```
http://www.tmax.co.kr:8080/index.html
```

- **Environment Variable**

Before installing WebtoB, the system environment file in use must be checked. If WebtoB is

already installed, it is recommended to delete environment variables related to the existing WebtoB installation.

- **GLIBC Version**

WebtoB operates only on GLIBC 2.26 or higher, so the GLIBC version of the system must be checked before WebtoB installation.

The following is how to check the GLIBC version:

```
$ getconf -a | grep libc
GNU_LIBC_VERSION          glibc 2.35
```



If the GLIBC version is lower than 2.26, WebtoB will not start even if it is installed normally.

- **File Descriptor**

File Descriptor (FD) affects the number of concurrent processes and file accesses. The FD value must be larger than the sum of the number of concurrent processes and accesses.

For optimal performance, it is recommended to set FD according to the following table.

Operating System	Maximum FD Value
UNIX/Linux K.4.15	16384

## 2. Installation and Uninstallation in Linux

### 2.1. Installation

#### 2.1.1. Installation Process

In a Linux environment, WebtoB is installed through the following process. To cancel the installation process, press <Ctrl>+C.



The installer provides default settings, but you should always be careful when entering configuration values.

##### 1. Running the Installation File

Run the installation file (\*.bin). After pre-installation tasks are performed, a brief usage message appears.

Press the <ENTER> key to continue.

```
$ sh ./WebtoB-6_Linux_x64.bin

=====
Introduction
-----

Installer will guide you through the installation of WebtoB 6.

It is strongly recommended that you quit all programs before continuing with
this installation.

Respond to each prompt to proceed to the next step in the installation. If you
want to change something on a previous step, type 'back'.

You may cancel this installation at any time by typing 'quit'.

PRESS <ENTER> TO CONTINUE :
```

##### 2. License Agreement

When the WebtoB license information and agreement are displayed, choose whether to accept the agreement. Press the <ENTER> key to review the full license information. If you accept the agreement, enter 'Y' to proceed to the next step. If you do not agree, enter 'N' to cancel the installation.

If the <ENTER> key is pressed, the remaining portion of the license information is displayed.

=====

## License Agreement

-----

Installation and use of WebtoB 6 requires acceptance of the following License Agreement:

### WebtoB Release

Tmax Soft Co., Ltd. (hereafter, Tmax Soft) End-User License Agreement

Product : WebtoB

This is a legal agreement between you (either an individual or an company) and Tmax Soft, Incorporated. By opening the sealed software package and/or by using the software, you agree to be bound by the terms of this agreement.

### Tmax Soft License

1. Grant of License: This Tmax Soft License Agreement ("License") permits you to use one copy of the Tmax Soft product Tmax, on any single computer, provided the software is in use on only one computer at any one time. If this package is a license pack, you may make and use additional copies of the software up to the number of licensed copies authorized. If you have multiple licenses for the software, then at any time you may have as many copies of the software in use as you have licenses.

The software is "in use" on a computer when it is loaded into the temporary memory (i.e., RAM) or installed into the permanent memory (e.g., hard disk, CD-ROM, or other storage devices) of that computer, except that a copy installed on a network server for the sole purpose of distribution to other computers is not "in use". If the anticipated number of users of the software will exceed the number of applicable licenses, then you must have a reasonable

PRESS <ENTER> TO CONTINUE:

mechanism or process in place to ensure that the number of persons using the software concurrently does not exceed the number of licenses.

2. Copyright: The software (including any images, "applets," photographs, animations, video, audio, music and text incorporated into the software) is owned by Tmax Soft or its suppliers and international treaty provisions. Therefore, you must treat the software like any other copyrighted materials (e.g., a book or musical recording) except that you may either (a) make one copy of the software solely for backup or archival purposes, or (b) transfer the software to a single hard disk provided you keep the original solely for backup or archival purposes. You may not copy the printed materials accompanying the software, nor print copies of any user documentation provided in "online" or electronic form.

3. Other restrictions: This license is your proof of license to exercise the rights granted herein and must be retained by you. You may not rent, lease, or transfer your rights under this license on a permanent basis provided you transfer this license, the software, and all accompanying printed materials, retain no copies, and the recipient agrees to the terms of this license. You may not reverse engine, decompile, or disassemble the software, except to the extent that the foregoing restriction is expressly prohibited by applicable law.

PRESS <ENTER> TO CONTINUE :



```
DO YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT? [y/n] :
```

### 3. Specifying the Installation Directory

Set the directory where WebtoB will be installed. Press the <ENTER> key to use the default value, or enter the absolute path to change the directory. (Default: \$HOME/webtob)

The following is an example of specifying the installation path as /home/tmax/webtob6.

```
=====
Choose Install Folder
-----

Where would you like to install?

    Default Install Folder: /home/tmax/webtob

ENTER AN ABSOLUTE PATH, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
Input -> _____
```

### 4. Verifying the Installation Path

Verify the path where WebtoB will be installed. If the path is correct, press the <ENTER> key to start the installation.

```
=====
Ready To Install
-----

Ready to install WebtoB 6 onto your system at the following
location:

    /home/tmax/webtob

PRESS <ENTER> TO INSTALL ( Press Ctrl-C to quit )
```

### 5. Proceeding with the Installation

Once the WebtoB file is installed and all necessary tasks are completed, check the precautions for using WebtoB. After reviewing all the information, press the <ENTER> key to proceed to the next step.

```
=====
Installing...
-----

config/
docs/
.
```



### 2.1.2.1. Directory

Ensure that the following directories are created in the specified path (\$WEBTOB6\_HOME\_PATH) and files are installed in the directories.

```
$WEBTOB6_HOME_PATH
+- bin
|- config
|- docs
|- icons
|- lib
|- license
|- log
|- path
|- ssl
+- include
```

The following list is a description for each directory.

#### **bin**

Executable files (wsboot.sh, boot\_inner.sh, wsboot, wsdown, wsadmin, configValidator, configMigrator, mkpwd, wsreboot.sh, etc.) directory.

#### **config**

WebtoB environment files directory.

#### **docs**

Default HTML files directory.

#### **icons**

Default icons directory.

#### **lib**

Library files directory.

#### **license**

License files directory.

#### **log**

Log files directory.

#### **path**

Named-pipe for internal communication among processes directory.

#### **ssl**

SSL related files directory.

#### **schema**

WebtoB schema files directory.

## include

WebtoB header files directory.

### 2.1.2.2. Environment Variables

Ensure that the environment variables are registered in '.profile' (for ksh) or '.bash\_profile' (for bash shell).

The following is an example of a '.bash\_profile' file:

```
# 2024. 07. 30. (Tue) 20:03:03 KST
WEBTOB6_HOME_PATH=/home/tmax/webtob6;      export WEBTOB6_HOME_PATH
WEBTOB6_CONFIG_FILE_NAME=webtob-config.yaml; export WEBTOB6_CONFIG_FILE_NAME
PATH=${WEBTOB6_HOME_PATH}/bin:$PATH;      export PATH
```

The following describes the environment variables that can be set in WebtoB.

Environment Variable	Description
WEBTOB6_HOME_PATH	Sets the directory information where WebtoB is installed. (default: Parent directory)
WEBTOB6_CONFIG_FILE_NAME	Sets the name of the WebtoB configuration file. (default: webtob-config.json)
WEBTOB6_CONFIG_FILE_PATH	Sets the path to the WebtoB configuration file. (default: \${WEBTOB6_HOME_PATH}/config)
WEBTOB6_LIBRARY_PATH	Sets the path to the library used by WebtoB. (default: \${WEBTOB6_HOME_PATH}/lib)
WEBTOB6_LICENSE_PATH	Sets the path where the WebtoB license file is located. (default: \${WEBTOB6_HOME_PATH}/license)
WEBTOB6_SSL_PATH	Sets the path to the certificate used by WebtoB. (default: \${WEBTOB6_HOME_PATH}/ssl)
WEBTOB6_SCHEMA_PATH	Sets the path to the schema file used by WebtoB. (default: \${WEBTOB6_HOME_PATH}/schema)

## 2.2. Startup and Shutdown

To check if WebtoB is operating properly after installation, a simple test startup is performed.



For more information about starting and shutting down WebtoB, refer to *WebtoB Administrator's Guide*.

## 2.2.1. Creating the Configuration File

To start WebtoB, the configuration file must be created. The configuration file is set using the webtob-config.json file, which is provided by default in the **`${WEBTOB6_HOME_PATH}/config`** directory.

The following is an example of the webtob-config.json file.

```
---
{
  "node": {
    "name": "tmaxsoft",
    "hth_count": 1,
    "worker_threads": 8,
    "hth_schedule": "RR"
  },
  "server": {
    "http": {
      "mime_type_file": "mime.types",
      "common_config": {
        "doc_root": "docs",
        "service_order": "uri,ext",
        "access_log": "access_log1",
        "enable_keepalive": true,
        "keepalive_timeout": 60
      },
      "http_servers": [
        {
          "name": "http1",
          "idle_timeout": 300,
          "port": 8080,
          "enable_ssl": false
        }
      ]
    },
    "wjp": {
      "port": 9900,
      "wjp_servers": [
        {
          "name": "MyGroup1",
          "svr_chk_time": 60
        }
      ]
    },
    "admin": {
      "port": 9090
    }
  },
  "logging": {
    "access_log": [
      {
        "name": "access_log1",
        "level": "INFO",
        "format": "DEFAULT",
        "handlers": {
          "file_handler": {
            "file_name": "access.log"
          }
        }
      }
    ]
  }
}
```

```

    },
    "enable_console_handler": false
  }
},
"error_log": {
  "level": "INFO",
  "handlers": {
    "file_handler": {
      "file_name": "errors.log"
    },
    "enable_console_handler": false
  }
},
"system_log": [
  {
    "name": "webtob",
    "level": "INFO",
    "handlers": {
      "file_handler": {
        "file_name": "webtob.log"
      },
      "enable_console_handler": false
    }
  }
],
"destination": {
  "jeus": [
    {
      "name": "MyGroup1",
      "server_schedule": "RR",
      "connection_schedule": "RR"
    }
  ],
  "reverse_proxy": {
    "reverse_proxy_group": [
      {
        "name": "rproxyGroup1",
        "reverse_proxy_server": [
          {
            "address": "internal.server:8888",
            "name": "rproxy1",
            "enable_proxy_ssl": false
          }
        ]
      }
    ]
  }
},
"htmls": [
  {
    "name": "htmls1"
  }
],
"service": {
  "uri": [
    {
      "name": "uri1",

```

```

    "target_http_servers": [
      "http1"
    ],
    "match": {
      "type": "prefix",
      "target": "/rproxy",
      "rewrite": "/"
    },
    "destination": {
      "type": "REVERSE_PROXY",
      "target": "rproxyGroup1"
    }
  },
  "ext": [
    {
      "name": "ext1",
      "target_http_servers": [
        "*"
      ],
      "match": {
        "type": "exact",
        "target": "text/html"
      },
      "destination": {
        "type": "JEUS",
        "target": "MyGroup1"
      }
    }
  ]
}

```

The following are the items that must be modified when creating the webtob-config.json file:

Item	Description
server > http > http_servers > port	Specifies the port to be used by the HTTP server.
server > wjp > port	Specifies the port to be used by the WJP server.



When setting the port numbers for the HTTP and WJP servers, specify a unique number, as WebtoB may not start if the port is already in use.

## 2.2.2. Starting Up WebtoB

The following describes the process for starting WebtoB.

1. Go to the `${WEBTOB6_HOME_PATH}/bin` directory and run the **wsboot.sh** command.

```

$ wsboot.sh
Booting WebtoB on node (tmax)

```

```

Current maximum open files per node 65535
Version: WEBTOB 6.0 Fix #0
    Environment variables for WebtoB boot:
        WEBTOB6_HOME_PATH = /home/webtob/
        WEBTOB6_CONFIG_FILE_PATH = /home/webto/config/
        WEBTOB6_LIBRARY_PATH = /home/webtob/lib/
        WEBTOB6_SSL_PATH = /home/webtob/ssl/
        WEBTOB6_LICENSE_PATH = /home/webtob/license/
        WEBTOB6_SCHEMA_PATH = /home/webtob/schema/
        WEBTOB6_LOG_PATH = /home/webtob/log/
        WEBTOB6_CONFIG_FILE_NAME = webtob-config.json

Welcome to WebtoB Demo system.
Enterprise edition License in used.
Schema file path: /home/webtob/schema/webtob-config-enterprise.schema.json

***** Start config validation *****
1. Opened schema file
2. Opened config file
3. Config parsing finished
4. Pre-validation process finished
5. Validation using json-schema finished
6. Post-validation process finished
7. Environment-validation process finished
Config file "/home/webtob/config/webtob-config.json" is validated with schema file
"/home/webtob/schema/webtob-config-enterprise.schema.json"
Success to load config files : webtob-config.json
***** Validation success *****
    Current WebtoB Configuration:
        Number of client handlers (HTH) = 1
        Number of worker threads per handler (HTH) = 8
        Number of connection pool size per handler (HTH) = 8192

Today is 2024-10-07
License expires on 2024-11-29 (53 days remaining)
Starting Server(pid:17611) at Mon Oct 7 12:04:18 2024
Successfully started the server. The server state is now RUNNING.

```

2. After WebtoB starts, request services through a browser. Be sure to include "index.html" in the request.

```
http://<IP address>:<port number>/index.html
```

3. If WebtoB has successfully started, the following page appears.



# WebtoB Web Server has been successfully Installed on this website!

If you can see this page, then the owner of this domain has successfully installed the [WebtoB Web Server](#) software.



## 2.2.3. Shutting Down WebtoB

To shut down WebtoB, run the **wsgdown** command. Before shutting down, check the `.webtob.pid` file to verify if WebtoB is currently running. Then, go to the `${WEBTOB6_HOME_PATH}/bin` directory and execute the **wsgdown** command.

The following is an example of running the **wsgdown** command to shut down WebtoB.

```
$ wsgdown
wsgdown: Shutting down Webtob.
wsgdown: Webtob(pid: 17611) is terminated.
```

## 2.3. Uninstallation

### 2.3.1. Uninstallation Process

The following describes the process for uninstalling WebtoB:

1. Terminate the running WebtoB.

```
$ wsgdown
wsgdown: Shutting down Webtob.
wsgdown: Webtob(pid: 17611) is terminated.
```

2. Delete the WebtoB installation directory. If any files need to be preserved, move them to a separate path.
3. Remove environment variables. At this time, remove the three environment variables added during WebtoB installation from the `'.profile'` or `'.bash_profile'` file.

```
WEBTOB6_HOME_PATH=/home/tmax/webtob; export WEBTOB6_HOME_PATH
```

```
WEBTOB6_CONFIG_FILE_NAME=webtob-config.yaml; export WEBTOB6_CONFIG_FILE_NAME  
PATH=${WEBTOB6_HOME_PATH}/bin:$PATH; export PATH
```

## 2.3.2. Uninstallation Verification

Check if WebtoB has been deleted properly as follows:

- **Verifying Files Deletion**

Ensure that all files related to WebtoB have been deleted.

- **Verifying Environment Variables deletion**

Ensure that the environment variables and paths added to the PATH variable have been completely deleted.