

Installation Guide

WebtoB 5 Fix#4

TMAXSOFT

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

\${INSTALL_PATH}/lib/licenses

Document History

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1. Installation Overview

This chapter briefly introduces WebtoB and describes the components and system requirements for installation.

1.1. Overview of WebtoB

WebtoB stands for Web to Business. It is server software that handles web browser requests. Through its compatibility with Apache, which dominates the web server market with a 60% market share, WebtoB provides high performance, stability, and security. WebtoB also provides unique features found in no other web server.

WebtoB provides the following services:

- Handles various HTML documents
- Supports CGI and WBAPI
- Supports SSI (Server Side Include)
- Supports PHP script language
- JEUS and Tmax integration
- Supports various security services such as ACL (Access Control List) and SSL (Secure Sockets Layer)
- Supports Servlet and JSP (Enterprise Edition)
- Multi-Node (Enterprise Edition)
- Load balancing and fail-over (Enterprise Edition)

1.2. Installation Components

1.2.1. Package Components

WebtoB package contains:

- A WebtoB product CD-ROM
- WebtoB product license and warranty
- WebtoB product guides

1.2.2. Trial Version Distribution

TmaxSoft provides a trial version of WebtoB for users to download and test.

The trial version has no features limitations, but it is valid for only 2 months.

- Product Download and Technical Support

Users can download WebtoB trial version and seek technical support from the following site.

<http://technet.tmaxsoft.com/en/front/main/main.do>

- Demo License

Users can get a demo license from the following site.

<http://technet.tmaxsoft.com/en/front/main/main.do> > [Downloads] > [Demo License Request]

1.3. System Requirements

Supported platforms and operating systems are as follows:

Operating System	CPU	Memory	When Using CGI/WBAPI	When Using Servlet
IBM AIX V5.3/V6.1/V7.1 64bit	IBM PowerPC	512MB	IBM ANSI C	JDK 7 or later
HP-UX 11.31 or later (64bit)	Intel Itanium	512MB	HP-UX ANSI C	JDK 7 or later
Linux K.2.6 or later (64bit)	Intel Itanium	512MB	GNU ANSI C	JDK 7 or later
	IBM PowerPC	512MB	GNU ANSI C	JDK 7 or later
SunOS 5.8/5.9/5.10/5.11 64bit	UltraSPARC	512MB	SUN ANSI C	JDK 7 or later
Windows 2008/7/8/10 64bit	Intel i386 Processor	512MB	Microsoft Visual 2008 or later	JDK 7 or later

2. Pre-installation Tasks

This chapter describes the required tasks before installing WebtoB.

2.1. System Environment

Before WebtoB is installed, the following must be checked:

- Host name

A host name is required when a license is requested.

There are three ways to check for a host name:

- In the case of UNIX systems

Use the 'name -n' command or "/etc/hosts file".

- In the case of Windows systems

Check system environment variables.

- In the case of using a utility program provided by WebtoB

Execute **ncpu** in the '/license' directory of WebtoB installation path.

- A port number to be assigned when a web server starts. (Default value: 80)

The default port can be used only by root. Other users must use a port number starting after 1024.

- Account used when a web server starts (Default value: root)

2.1.1. Host Name

To properly start WebtoB, the product license is necessary and the WebtoB environment file must be set. To configure the WebtoB environment file, a host name must be checked.

WebtoB automatically searches for a host name and IP address and then registers them in the environment file during installation.

The following example illustrates how to find a host name and an IP address in a SUN Solaris system. If the host name is displayed in the form of FQDN (Fully Qualified Domain Name), only the first name needs to be set.

```
$ ifconfig -a
lo0: flags=849<UP,LOOPBACK,RUNNING,MULTICAST> mtu 8232
    inet 127.0.0.1 netmask ff000000
hme0: flags=863<UP,BROADCAST,NOTRAILERS,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.10 netmask ffff0000 broadcast 192.168.255.255

$ uname -n
```

2.1.2. 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, this port can only be used by a superuser in most operating systems.

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.

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.

If port 80 is not used, a browser has to request a service.

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
```

2.1.3. Environment Variable

Before installing WebtoB, the system environment file in use must be checked. If WebtoB is already installed or a user wants to install WebtoB with WebtoB Servlet Engine together, it is recommended to delete environment variables related to the existing WebtoB installation.

Deleting the environment variables of a previously installed copy of WebtoB prevents installation paths conflicts and the WebtoB Servlet Engine from causing shared memory conflicts.

2.1.4. JDK Version

Whether the JDK path is set or not must be checked because a security password must be encoded while WebtoB Standard Edition and WebtoB Servlet Engine are installed together.

The JDK path can be checked with the following:

```
$which java
```

If JDK has not been installed, download the appropriate JDK 7 or later Standard Edition from the following site:

```
http://www.oracle.com/technetwork/java/index.html
```



JDK of Java 7 or later versions must be installed. After installation, ensure that the

JDK is properly installed.

2.1.5. 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-K2.6	16384
Windows	4096

2.1.6. IPv6 Environment

To run WebtoB in the IPv6 system, the environment variables must be set. If the environment variables are not set, IPv4 socket is used.

• Configuring IPv6

IPv6 can be set differently according to the operating system as below.

◦ UNIX/Linux

```
WEBTOB_PREFER_IPV6=Y #(or y or 1)
export WEBTOB_PREFER_IPV6
```

◦ Windows

```
Variable Name: WEBTOB_PREFER_IPV6
Variable Value: Y
```

• Verifying whether the IPv6 socket is running

The following example verifies whether the IPv6 socket is started.

◦ UNIX/Linux

```
$netstat -a |grep "8080"
tcp        0      0 :::3423          :::*              LISTEN
```

◦ Windows

```
C:\>netstat -a |find "8080"
TCP        [::]:3423          [::]:0            LISTENING
```

2.2. License Issue

A license is required to use WebtoB. Before purchasing a full purchase license, a demo license can be obtained as follows:

1. Check the host name.

A host name is required when applying for the demo license.

A host name can be checked using the **hostname** command or **ncpu** created in the `${WEBTOBDIR}/license` directory while WebtoB is installed.

- An example usage of the hostname command.

```
$ hostname  
Gloria
```

- An example usage of ncpu.

```
$WEBTOBDIR/license/ncpu  
HOST NAME: qpsx1  
HOSTID: A8C03002  
NCPUS: 2  
OPENFILES: 8192/65536  
UNAME: Linux qpsx1 2.6.21-1.3194.fc7 #1 SMP Wed May 23 22:35:01 EDT 2007 i686 i686 i386 GNU/Linux
```

1. Apply for a license.

- a. Apply for a license from the following site:

```
http://technet.tmaxsoft.com > [Demo License Request]
```

- b. Enter the required information, (product name, hostname, e-mail address) in the **License Request** screen.
 - c. The demo license is transferred to the previously specified e-mail address.
2. Apply the license. Save the received demo license to the `${WEBTOBDIR}/license` directory with the name of **license.dat**. If the demo license is applied, a user can use WebtoB for 2 months without limitations.

2.3. Installation Process

The overall installation process for WebtoB is as follows:

1. Verify system requirements, such as platform and operating system, are met.
2. Check if another web server or a previous version of WebtoB is already installed. If another web server is installed, check for port number conflicts, and terminate the web server if necessary.

3. Start the WebtoB installation on the desired server.
4. Apply the license file after installation is completed.

3. Installation and Uninstallation in UNIX

The installation process of WebtoB and its Servlet Engine is identical on all Solaris, HP, AIX, and Linux platforms.

3.1. WebtoB Installation

This chapter describes how to install, uninstall, start, and terminate WebtoB in a UNIX/Linux system.

3.1.1. Console Mode

The following are WebtoB installation instructions. Although default settings are provided in the Installer, carefully enter each setting. To return to the previous step, enter 'back'.



The account used for installation must have read/write permissions to the '/tmp' directory while WebtoB is installed.

1. Begin installation by executing the installation file (*.bin) for each platform. After preinstallation tasks are complete, a simple usage message appears.

Press the <ENTER> key to continue, or type 'quit' to cancel installation.

```
$ ./WEBTOB5_0_SP0_Fix4_LinuxK2_6_x64.bin
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing CONSOLE Mode Installation...

=====
WEBTOB5_0_SP0_Fix#4          (created with InstallAnywhere by Macrovision)
=====

=====
Introduction
-----

InstallAnywhere will guide you through the installation of WEBTOB5_0_SP0_Fix#4.

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. The WebtoB license information and agreement message appears. Type 'Y' to accept the license agreement, or 'N' to cancel installation.

```
=====
License Agreement
-----
```

Installation and use of WEBTOB5_0_SP0_Fix#4 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.

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PRESS <ENTER> TO CONTINUE:

Press the <ENTER> key to go to the next license page or type 'quit' to cancel installation.

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

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PRESS <ENTER> TO CONTINUE:

DO YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT? (Y/N):

3. Choose an Installation Set.

To install WebtoB only, select 1.

To install WebtoB with Servlet Engine provided by WebtoB Enterprise Edition, select 2. Servlet Engine features can be used with a demo license without limitations. However, the Enterprise license must be applied for a full purchase license.

This section describes how to install WebtoB only. To install both WebtoB and Servlet Engine together, refer to [Servlet Engine Installation](#).

```
=====
Choose Install Set
-----

Please choose the Install Set to be installed by this installer.

->1- WebtoB
   2- Servlet + WebtoB

ENTER THE NUMBER FOR THE INSTALL SET, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
:
```

4. Set the WebtoB installation directory. To use the default directory, \$HOME/webtob, press the <ENTER> key. To change the directory, input the absolute path.

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

Where would you like to install?

Default Install Folder: /home/webtob/webtob
```

```
ENTER AN ABSOLUTE PATH, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
:
```

- Before installing WebtoB files, check the installation information (product, installation path, Installation Set, and disk space). Press the <ENTER> key to continue, or type 'quit' to cancel the installation.

```
=====
Pre-Installation Summary
-----

Please Review the Following Before Continuing:

Product Name:
    WEBTOB5_0_SP0_Fix#4

Install Folder:
    /home/webtob/webtob

Install Set
    WebtoB

Disk Space Information (for Installation Target):
    Required: 118,357,437 bytes
    Available: 3,114,831,872 bytes

PRESS <ENTER> TO CONTINUE:
```

- Reconfirm the installation information is correct. Press the <ENTER> key to continue, or type 'quit' to cancel installation.

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

Ready to install WEBTOB5_0_SP0_Fix#4 onto your system at the following
location:

    /home/webtob/webtob

PRESS <ENTER> TO INSTALL:
```

- If WebtoB files are installed and the required installation tasks are complete, information on how to check and permanently change the number of file descriptors appears. Press the <ENTER> key to continue.

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

[=====|=====|=====|=====]
[-----|-----|-----|-----]
```

```

=====
Information
-----

The administrator can set the maximum number of file descriptors as follows.
The machine needs a reboot in order for the configuration change to take
effect.

Linux 2.4 and later
-----

To check the current maximum number of file descriptors:
- Run "ulimit -Hn" on the command line.
This shows the hard limit.

To permanently change the maximum number of file descriptors:
- Open "/etc/security/limits.conf" with a text editor.
- Add a new line "*          hard          nofile          65536".
  65536 is the new maximum. Change it as necessary.

PRESS <ENTER> TO CONTINUE:

```

8. Once installation is complete, a message appears indicating that WebtoB has been successfully installed. Press the <ENTER> key to complete the installation process.

```

=====
Installation Complete
-----

Congratulations. WEBTOB5_0_SP0_Fix#4 has been successfully installed to:

    /home/webtob/webtob

PRESS <ENTER> TO EXIT THE INSTALLER:

```

3.1.2. Silent Mode

To install WebtoB in silent mode, configure webtob.properties, a properties file for the installation, in advance. When installing WebtoB in silent mode, the installer reads and uses the file without receiving environment variables from a user.



The account used for installation must have read/write permissions to the '/tmp' directory while WebtoB is installed.

1. Create webtob.properties as follows. For information about each item, refer to [Silent Installation Properties File](#).

```

$ vi webtob.properties
INSTALLER_UI=Silent

```



```
CHOSEN_INSTALL_SET=WebtoB
USER_INSTALL_DIR=/home/webtob/webtob
```

2. Execute the installer in silent mode from a console window.

```
$ ./WEBTOB5_0_SP0_Fix4_LinuxK2_6_x64.bin -f webtob.properties
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing SILENT Mode Installation...

=====
WEBTOB5.0_SP0_Fix#4          (created with InstallAnywhere by Macrovision)
-----

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

[=====|=====|=====|=====]
[-----|-----|-----|-----]

Installation Complete.
```

3.1.3. Installation Verification

The following describes how to verify the WebtoB installation.

Directory

Ensure that the following directories are created in the specified path (\$WEBTOBEDIR in UNIX or WebtoB 5.0 in Windows) and files are installed in the directories.

```
$WEBTOBEDIR
|---ap
|---bin
|---cgi-bin
|---config
|---docs
|---icons
|---lib
+---license
|---log
|---path
|---ssl
```

```
|----svct  
+----UninstallerData  
|----usrinc
```

The following list is a description for each directory.

ap

Application files directory.

bin

Executable files (wsm, wscfl, wsuncfl, wsracd, wsgst, wsboot, wsdown, etc.) directory.

cgi-bin

CGI files directory.

config

WebtoB environment files directory.

docs

Default HTML files directory.

icons

Icons used in DIRINDEX 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.

svct

WBAPI service tables.

UninstallerData

Uninstallation files directory.

usrinc

API header files directory.

Environment Variables

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

<.bash_profile>

```
# New environment setting added by WEBTOB5.0_SP0_Fix#4 on Tue Nov 03 17:31:21 KST 2020 1.
# The unmodified version of this file is saved in /home/webtob/.bash_profile125137792.
# Do NOT modify these lines; they are used to uninstall.
WEBTOBDIR=/home/webtob/webtob
export WEBTOBDIR
# End comments by InstallAnywhere on Tue Nov 03 17:31:21 KST 2020 1.

# New environment setting added by WEBTOB5.0_SP0_Fix#4 on Tue Nov 03 17:31:21 KST 2020 2.
# The unmodified version of this file is saved in /home/webtob/.bash_profile125137792.
# Do NOT modify these lines; they are used to uninstall.
PATH="${WEBTOBDIR}/bin:${PATH}"
export PATH
# End comments by InstallAnywhere on Tue Nov 03 17:31:21 KST 2020 2.

# New environment setting added by WEBTOB5.0_SP0_Fix#4 on Tue Nov 03 17:31:21 KST 2020 3.
# The unmodified version of this file is saved in /home/webtob/.bash_profile125137792.
# Do NOT modify these lines; they are used to uninstall.
LD_LIBRARY_PATH="${WEBTOBDIR}/lib:${LD_LIBRARY_PATH}"
export LD_LIBRARY_PATH
# End comments by InstallAnywhere on Tue Nov 03 17:31:21 KST 2020 3.
```

3.2. Servlet Engine Installation

Servlet Engine is a feature provided by WebtoB Standard Edition. This section describes the processes for installing a servlet engine in two modes: Console Mode and Silent Mode

3.2.1. Console Mode

The following is the installation process for WebtoB and Servlet Engine.

1. To install WebtoB and Servlet Engine together, select 2 in the Installation Set.

To install only WebtoB, refer to [WebtoB Installation](#).

```
=====
Choose Install Set
-----

Please choose the Install Set to be installed by this installer.

->1- WebtoB
   2- Servlet + WebtoB

ENTER THE NUMBER FOR THE INSTALL SET, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
:
```

2. Set the WebtoB installation directory. To use the default directory, \$HOME/webtob, press the <ENTER> key. To change the directory, input the absolute path.

```

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

Where would you like to install?

    Default Install Folder: /home/webtob/webtob

ENTER AN ABSOLUTE PATH, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
:

```

3. Set the JDK path used in Servlet Engine. Press the <ENTER> key to use the default path.

```

=====
Choose JDK Folder
-----

Please Choose a Folder:

Input User JDK Folder (DEFAULT: /usr):

```

4. Set the Servlet Engine administrator account password. Enter the password and reenter it to confirm.

```

=====
Password Input
-----

Enter the Password for the administrator account.
This password will be registered in JEUS as the first user.

Input Password::

Corfirm Password::

```

5. Specify the JEUS domain name. To use the default name, press <ENTER>.

```

=====
User Domain name
-----

Enter the Domain name

Enter the Domain name (DEFAULT: jeus_domain):

```

6. Before installing WebtoB files, check the installation information (product, installation path, Installation Set, and disk space). Press the <ENTER> key to continue, or type 'quit' to cancel the installation.

```

=====

```

Pre-Installation Summary

Please Review the Following Before Continuing:

Product Name:

WEBTOB5.0_SP0_Fix#4

Install Folder:

/home/webtob/webtob

Install Set

Servlet + WebtoB

Disk Space Information (for Installation Target):

Required: 512,413,829 bytes

Available: 1,149,385,347,072 bytes

PRESS <ENTER> TO CONTINUE:

7. Reconfirm the installation information is correct. Press the <ENTER> key to continue, or type 'quit' to cancel the installation.

=====

Ready To Install

Ready to install WEBTOB5.0_SP0_Fix#4 onto your system at the following location:

/home/webtob/webtob

PRESS <ENTER> TO INSTALL:

8. If WebtoB files are installed and the required installation tasks are complete, information on how to check and permanently change the number of file descriptors appears. Press the <ENTER> key to continue.

=====

Installing...

```
[=====|=====|=====|=====]
[-----|-----|-----|-----]
```

=====

Information

The administrator can set the maximum number of file descriptors as follows.
The machine needs a reboot in order for the configuration change to take effect.

```
Linux 2.4 and later
```

```
-----
```

To check the current maximum number of file descriptors:

- Run "ulimit -Hn" on the command line.

This shows the hard limit.

To permanently change the maximum number of file descriptors:

- Open "/etc/security/limits.conf" with a text editor.

- Add a new line "* hard nofile 65536".

65536 is the new maximum. Change it as necessary.

PRESS <ENTER> TO CONTINUE:

9. Once installation is complete, a message appears indicating that WebtoB is successfully installed. Press the <ENTER> key to complete the installation process.

```
=====
```

Installation Complete

```
-----
```

Congratulations. WEBTOB5_0_SP0_Fix#4 has been successfully installed to:

/home/webtob/webtob

PRESS <ENTER> TO EXIT THE INSTALLER:

3.2.2. Silent Mode

To install WebtoB and Servlet Engine in silent mode, configure webtob.properties, a properties file for the installation, in advance. When installing WebtoB in silent mode, the installer reads and uses the file without receiving environment variables from a user.



The account used for installation must have read/write permissions to the '/tmp' directory while WebtoB is installed.

1. Create webtob.properties as follows. For information about each item, refer to [Silent Installation Properties File](#).

```
$ vi webtob.properties
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET=Servlet
USER_INSTALL_DIR=/home/webtob/webtob
JAVA_HOME_1=/home/webtob/java7u80
USER_INPUT_PASSWD=1111111
INPUT_DOMAIN_NAME_1=jews_domain
```

2. Run the installer in silent mode from a console window.

```

$ ./WEBTOB5_0_SP0_Fix4_LinuxK2_6_x64.bin -f webtob.properties
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing SILENT Mode Installation...

=====
WEBTOB5.0_SP0_Fix#4          (created with InstallAnywhere by Macrovision)
=====

Installing...
-----

[=====|=====|=====|=====]
[-----|-----|-----|-----]

Installation Complete.

```

3.2.3. Installation Verification

The following describes how to verify the WebtoB and Servlet Engine installation.

Directory

Ensure that the following directories are created in the specified path (\$WEBTOBEDIR in UNIX or WebtoB 5.0 in Windows) and files are installed in the directories.

```

$WEBTOBDIR
|----ap
|----bin
|----cgi-bin
|----config
|----docs
+----jeus
|----bin
|----domains
|----lib
|----nodemanager
|----setup
+----license
|----log
|----path
|----ssl
|----svct
+----UninstallerData

```

Descriptions for each are as follows:

jeus

Created when both WebtoB and Servlet Engine are installed together. JEUS Servlet Engine directory.



For information on other directories, refer to [Directory](#).

Environment Variable

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

<.bash_profile>

```
# New environment setting added by WEBTOB5.0_SP0_Fix#4 on Tue Nov 03 17:31:21 KST 2020 1.
# The unmodified version of this file is saved in /home/webtob/.bash_profile55609546.
# Do NOT modify these lines; they are used to uninstall.
W2B_JEUSHOME=/home/webtob/webtob/jeus
export W2B_JEUSHOME
# End comments by InstallAnywhere on Tue Nov 03 17:31:21 KST 2020 1.

# New environment setting added by WEBTOB5.0_SP0_Fix#4 on Tue Nov 03 17:31:21 KST 2020 2.
# The unmodified version of this file is saved in /home/webtob/.bash_profile55609546.
# Do NOT modify these lines; they are used to uninstall.
PATH="${W2B_JEUSHOME}/bin:${PATH}"
export PATH
# End comments by InstallAnywhere on Tue Nov 03 17:31:21 KST 2020 2.

# New environment setting added by WEBTOB5.0_SP0_Fix#4 on Tue Nov 03 17:31:21 KST 2020 3.
# The unmodified version of this file is saved in /home/webtob/.bash_profile55609546.
# Do NOT modify these lines; they are used to uninstall.
WEBTOBDIR=/home/webtob/webtob
export WEBTOBDIR
# End comments by InstallAnywhere on Tue Nov 03 17:31:21 KST 2020 3.

# New environment setting added by WEBTOB5.0_SP0_Fix#4 on Tue Nov 03 17:31:21 KST 2020 4.
# The unmodified version of this file is saved in /home/webtob/.bash_profile55609546.
# Do NOT modify these lines; they are used to uninstall.
PATH="${WEBTOBDIR}/bin:${PATH}"
export PATH
# End comments by InstallAnywhere on Tue Nov 03 17:31:21 KST 2020 4.

# New environment setting added by WEBTOB5.0_SP0_Fix#4 on Tue Nov 03 17:31:21 KST 2020 5.
# The unmodified version of this file is saved in /home/webtob/.bash_profile55609546.
# Do NOT modify these lines; they are used to uninstall.
LD_LIBRARY_PATH="${WEBTOBDIR}/lib:${LD_LIBRARY_PATH}"
export LD_LIBRARY_PATH
# End comments by InstallAnywhere on Tue Nov 03 17:31:21 KST 2020 5.
```


3.3. Startup and Shutdown

This section briefly describes how to configure and compile the environment file and how to start and terminate WebtoB.



For more information on WebtoB start and termination, refer to *WebtoB Administrator's Guide*.

3.3.1. Environment File Configuration and Compilation

To start WebtoB, the environment file must be configured and compiled.

Environment File Configuration

The environment file is configured using the default http.m file in the **\${WEBTOBDIR}/config** directory.

<http.m>

```
*DOMAIN
webtob1

*NODE
qpsx1      WEBTOBDIR="/home/webtob/webtob",
           SHMKEY = 54000,
           DOCROOT="/home/webtob/webtob/docs",
           PORT = "8080",
           HTH = 1,
           #Group = "nobody",
           #User = "nobody",
           NODENAME = "${NODENAME}",
           ERRORDOCUMENT = "503",
           #JSVPORT = 9900,
           LOGGING = "log1",
           ERRORLOG = "log2",
           SYSLOG = "log3"

*HTH_THREAD
hth_worker

           SendfileThreads = 4,
           AccessLogThread = Y,
           #ReadBufSize=1048576, #1M
           #HtmlsCompression="text/html",
           #SendfileThreshold=32768,
           WorkerThreads=8

*SVRGROUP
htmlg      NODENAME = "qpsx1", SVRTYPE = HTML
cgig       NODENAME = "qpsx1", SVRTYPE = CGI
ssig       NODENAME = "qpsx1", SVRTYPE = SSI

*SERVER
```

```

cgi          SVGNAME = cgig, MinProc = 2, MaxProc = 10, ASQCount = 1
ssi          SVGNAME = ssig, MinProc = 2, MaxProc = 10, ASQCount = 1

*URI
uri1         Uri = "/cgi-bin/",   Svrtype = CGI
uri2         Uri = "/examples/",  SvrType=JSV, SvrName=MyGroup

*ALIAS
alias1       URI = "/cgi-bin/", RealPath = "/home/webtob/webtob/cgi-bin/"

*LOGGING
log1         Format = "DEFAULT", FileName = "/home/webtob/webtob/log/access.log_%M%D%Y%",
              Option = "sync"
log2         Format = "ERROR",   FileName = "/home/webtob/webtob/log/error.log_%M%D%Y%",
              Option = "sync"
log3         Format = "SYSLOG",  FileName = "/home/webtob/webtob/log/system_%M%D%Y%.log",
              Option = "sync"

*ERRORDOCUMENT
503          status = 503,
              url = "/503.html"

*EXT

```

The following are the properties that must be modified and their descriptions.

Property	Description
SHMKEY	This property must be modified to avoid a possible conflict between WebtoB and other programs. If conflict occurs, an error message appears.
PORT	The port number must be set to an unused value. If the PORT number is already in use by another program, WebtoB will not operate correctly.
JSVPORT	The port number must be set to an unused value. If the JSVPORT number is already in use by another program, Servlet Engine will not operate correctly.

Compiling the Environment File

After checking the environment file, compile the file using the following example. If compilation is successful, the **wsconfig** file is created.

```

$ wscfl -i http.m
Current configuration:
    Number of client handler(HTH) = 1
    Supported maximum user per node = 16327
    Supported maximum user per handler = 16327

Successfully created the configuration file (/home/webtob/webtob/config/wsconfig) for node qpsx1.
The host name of the running machine is qpsx1.

```

3.3.2. Starting Up WebtoB

The following describes the process for starting WebtoB.

1. Run **wsboot**.

```
$ wsboot

Booting WebtoB on node (qpsx1)
Starting WSM at Tue Nov 03 20:03:47 2020
Starting HTL at Tue Nov 03 20:03:47 2020
Starting HTH at Tue Nov 03 20:03:47 2020
    Current WebtoB Configuration:
        Number of client handlers (HTH) = 1
        Supported maximum user per node = 16327
        Supported maximum user per handler = 16327
Starting SVR(cgis) at Tue Nov 03 20:03:47 2020
Starting SVR(cgis) at Tue Nov 03 20:03:47 2020
Starting SVR(ssis) at Tue Nov 03 20:03:47 2020
Starting SVR(ssis) at Tue Nov 03 20:03:47 2020
```

2. After WebtoB starts, request services through a browser.

```
http://<ip-address>:<port>/
```

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.



WebtoB Start Screen

3.3.3. Shutting Down WebtoB

To shut down WebtoB, run the **wtdown** command.

The following example shows the process of shutting down WebtoB.

```
$ wsdwn
Do you really want to shut down WebtoB? (y : n): y

WSDOWN for node(qpsx1) is starting:
WSDOWN: SERVER(:10) downed: Tue Nov 03 20:03:50 2020
WSDOWN: SERVER(:0) downed: Tue Nov 03 20:03:50 2020
WSDOWN: SERVER(:1) downed: Tue Nov 03 20:03:50 2020
WSDOWN: SERVER(:11) downed: Tue Nov 03 20:03:50 2020
WSDOWN: HTL downed: Tue Nov 03 20:03:50 2020
WSDOWN: HTH downed: Tue Nov 03 20:03:50 2020
WSDOWN: WSM downed: Tue Nov 03 20:03:50 2020
WSDOWN: WebtoB is down
```

3.4. WebtoB Uninstallation

This section describes the process for uninstalling WebtoB and verifying the uninstallation.

3.4.1. Uninstalling WebtoB

The following describes the process for uninstalling WebtoB on UNIX systems.

1. Run the WebtoB Uninstaller located in the following directory.

```
$WEBTOBDIR/UninstallerData/Uninstall
```

2. If the Uninstaller is executed, the following message is displayed.

Directories and files created during installation are deleted during uninstallation. Files created after installation must be deleted manually. Press the <ENTER> key to continue.

```
$ ./Uninstall
Preparing CONSOLE Mode Installation...

=====
WEBTOB5_0_SP0_Fix#4                (created with InstallAnywhere by Macrovision)
=====

=====
Uninstall WEBTOB5_0_SP0_Fix#4
=====

About to uninstall...

WEBTOB5_0_SP0_Fix#4

This will remove features installed by InstallAnywhere. It will not remove
files and folders created after the installation.
```

PRESS <ENTER> TO CONTINUE:

3. The following screen is displayed while files and environment variables are deleted.

```
=====
Uninstalling...
-----

...*
*
*****
```

4. If uninstallation is successful, the following message appears, and the uninstaller is terminated.

```
=====
Uninstall Complete
-----

All items were successfully uninstalled.
```

3.4.2. Uninstallation Verification

When WebtoB uninstallation is complete, check that the following has been deleted:

- **Verifying files deletion**

Ensure that the installation files have been completely deleted. Files that were created after the installation must be manually deleted.

- **Verifying environment variables deletion**

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

4. Installation and Uninstallation in Windows

This chapter describes how to install and uninstall WebtoB in a Windows system and how to register and delete a service. The installation and uninstallation process are GUI-based.

4.1. WebtoB Installation

This section describes how to install WebtoB and verify the installation.

4.1.1. GUI Mode

The following describes how to install WebtoB using GUI on a Windows system.

1. The compilation environment of a Windows platform has been changed to VC90 so that "C runtime" and "C++ Run-Time and Standard C++ Library" (msvcm90.dll, msvcp90.dll, msucr90.dll) are necessary to operate the system.

When Microsoft.NET Framework 3.5 SP1 or higher is installed, Redistributable Package does not need to be installed. The following are URLs where Redistributable Packages can be download for each operating system.

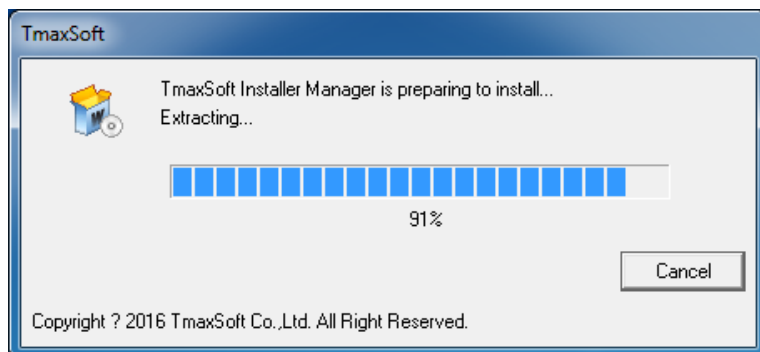
- Windows x86 (32bit)

<http://www.microsoft.com/downloads/ko-kr/details.aspx?FamilyID=9B2DA534-3E03-4391-8A4D-074B9F2BC1BF>

- Windows x64 (64bit)

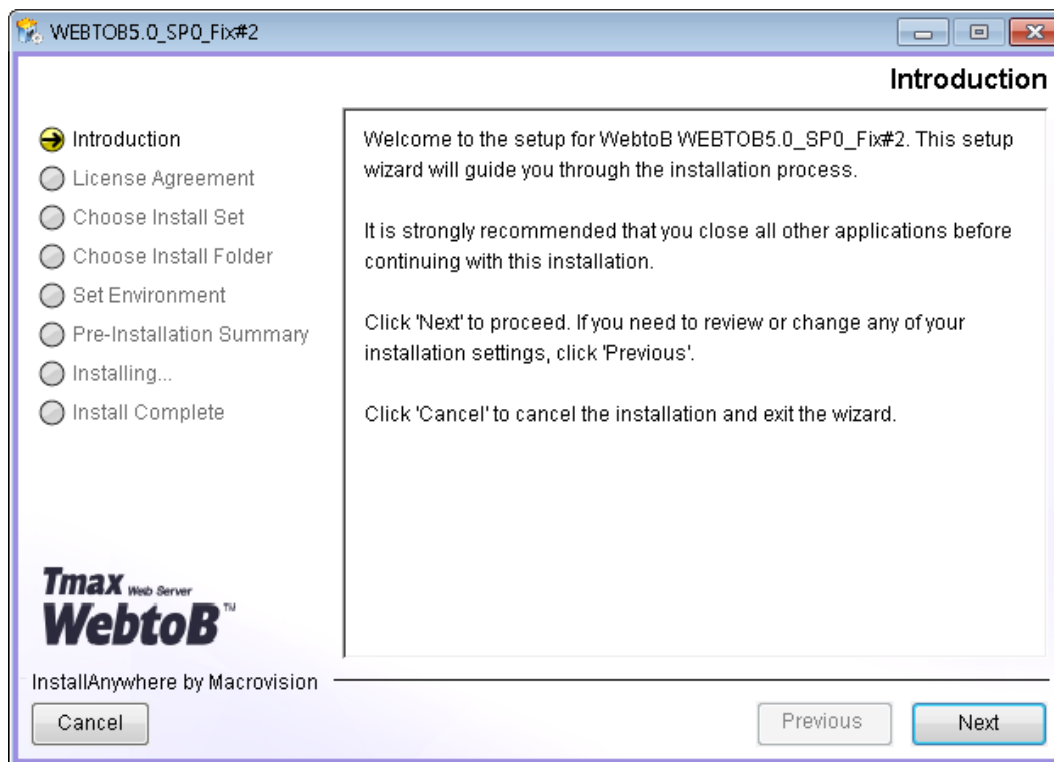
<http://www.microsoft.com/downloads/ko-kr/details.aspx?FamilyID=bd2a6171-e2d6-4230-b809-9a8d7548c1b6>

2. Execute **WEBTOB5_0_SP0_Fix4_Windows_x64.exe**. If the installation starts, the following window appears.



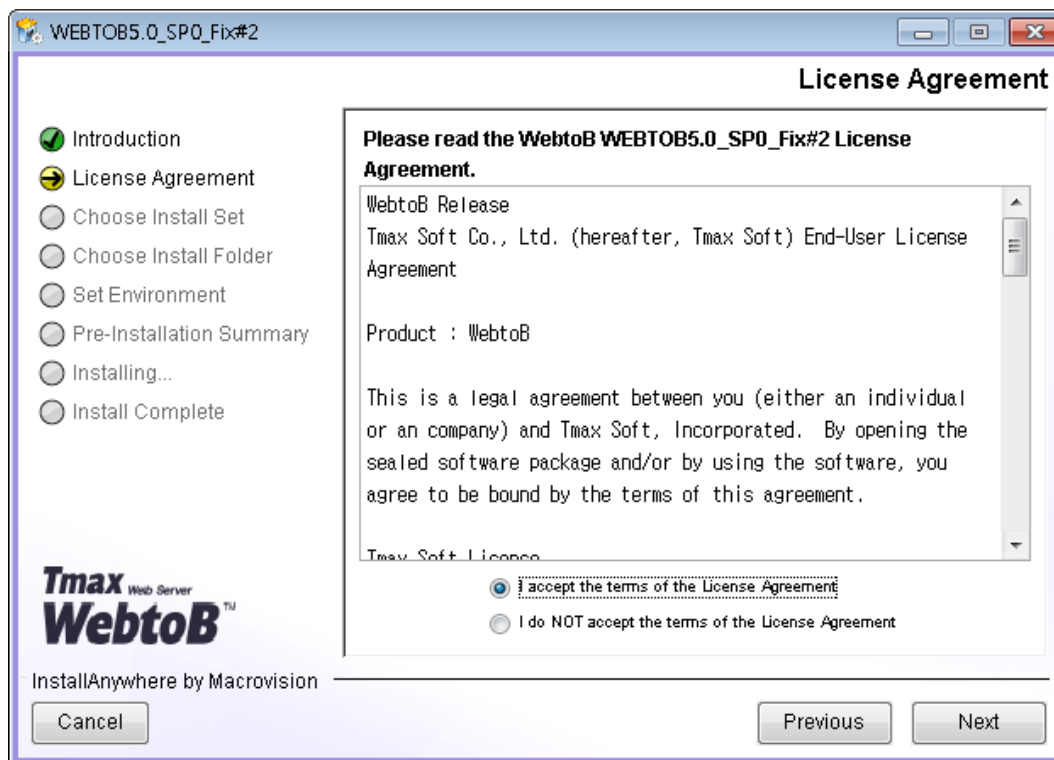
Installer Preparation Window

3. The introduction page shows the requirements needed to install WebtoB using the Installer. Click the **[Next]** button to continue, the **[Previous]** button to return to the previous step, or the **[Cancel]** button to cancel the installation.



WebtoB Installation - Introduction Page

4. The WebtoB License Agreement page appears. Select **'I accept the terms of the License Agreement'** to accept the license information and click the **[Next]** button to continue. If the license information is not accepted, installation cannot continue.

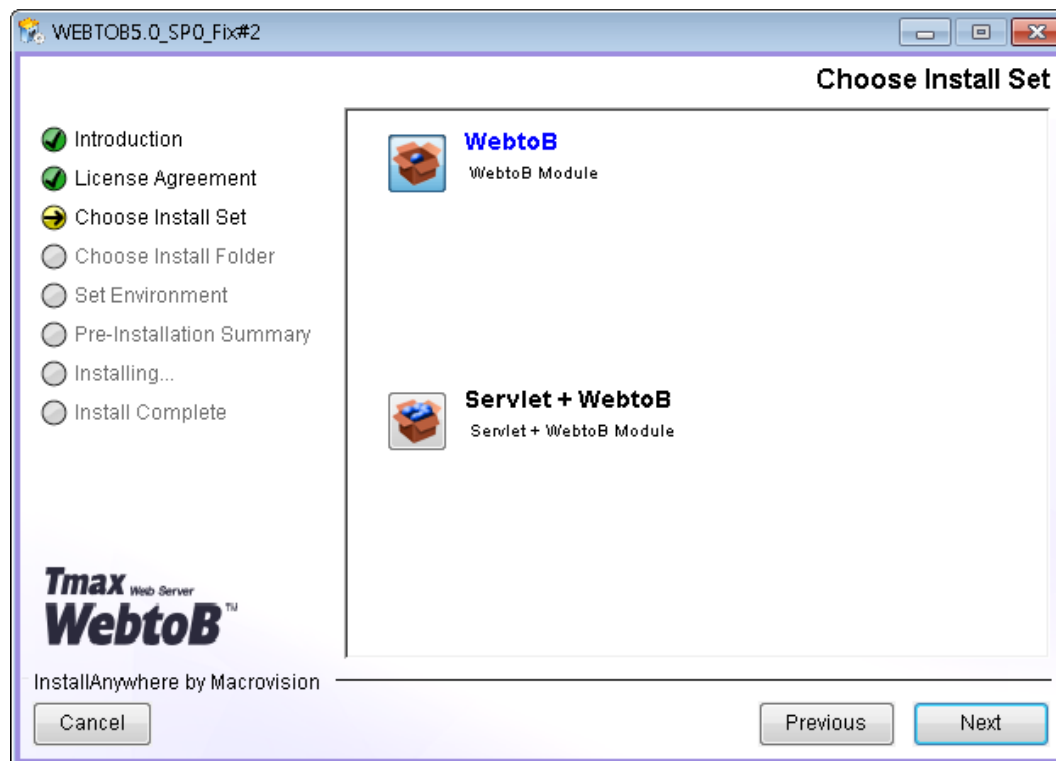


WebtoB Installation - License Agreement Page

5. Select the Installation Set.

Select **[Servlet + WebtoB]** to install WebtoB with Servlet Engine (WebtoB Enterprise Edition) together. Servlet Engine features can be used with the demo license with no limitations. However, the Enterprise license is required for the full purchase license.

Select **[WebtoB]** to install WebtoB only. This section describes how to install WebtoB only.

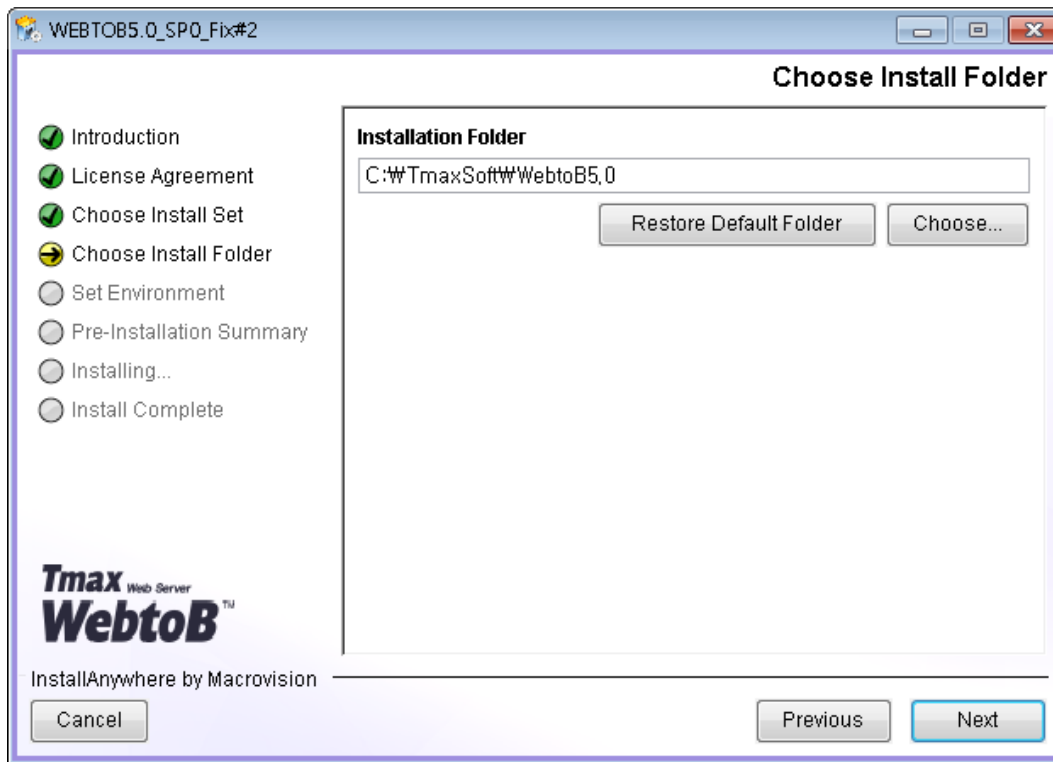


WebtoB Installation - Choose Install Set Page



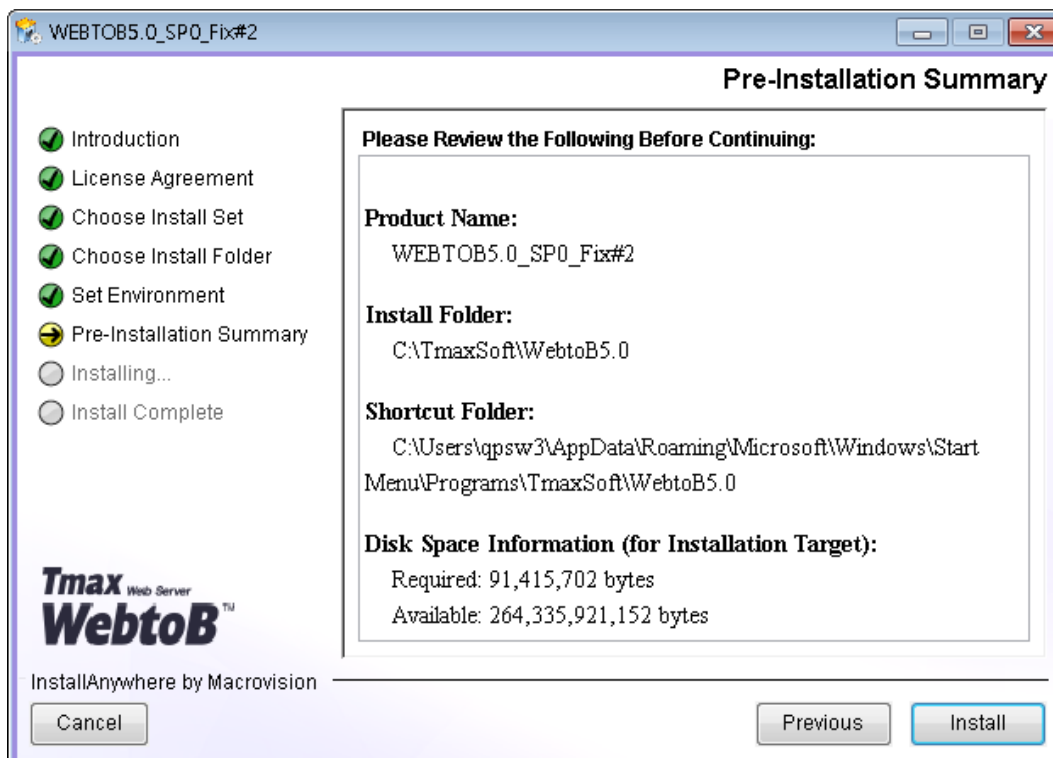
To install both WebtoB and the Servlet Engine, refer to [Servlet Engine Installation](#).

6. Set the WebtoB installation directory. To use the default directory, click the **[Next]** button. To change the directory, click the **[Choose]** button, select desired path, and then click the **[Next]** button.



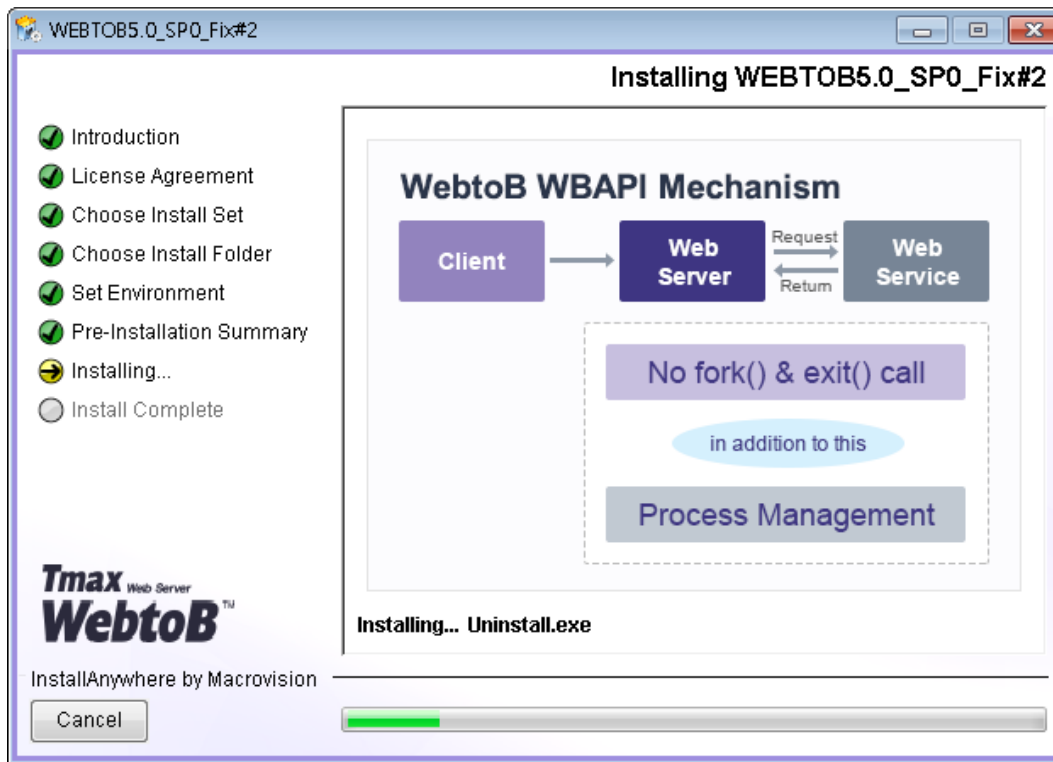
WebtoB Installation - Choose Install Folder Page

7. Before installing WebtoB files, check the installation information (product, installation path, Installation Set, and disk space). Click the **[Next]** button to continue, the **[Previous]** button to return to the previous window, or the **[Cancel]** button to cancel the installation.

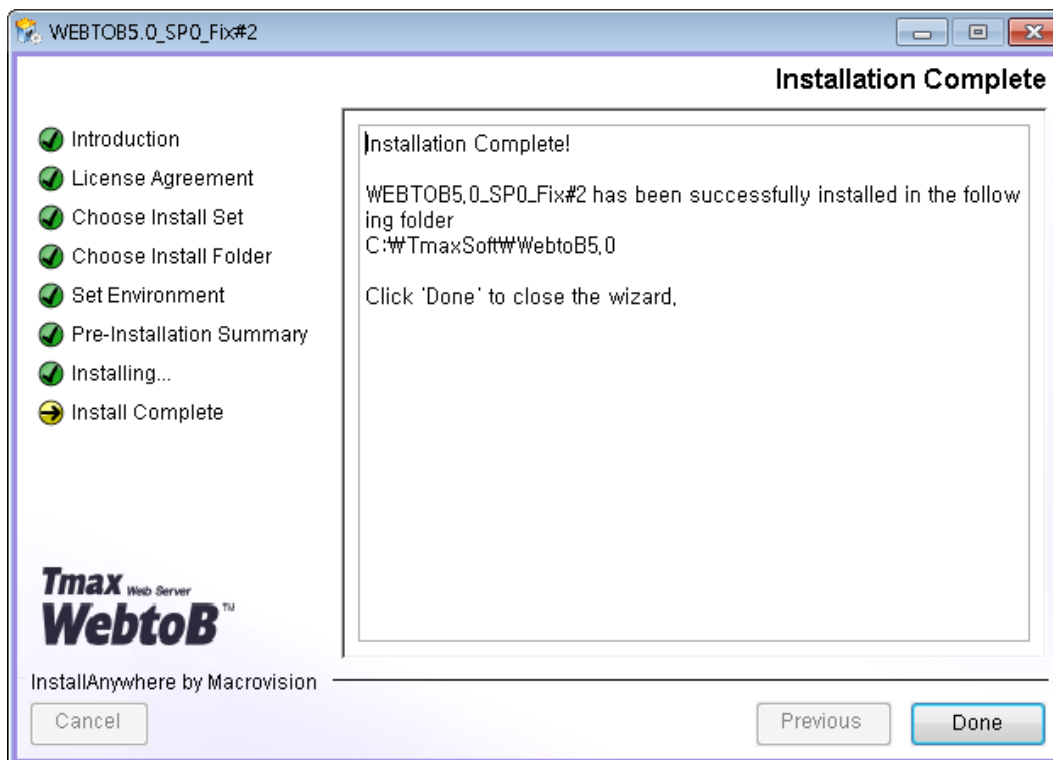


WebtoB Installation - Pre-Installation Summary Page

8. If WebtoB files are installed and the required installation tasks are complete, an installation complete message appears. Click the **[Done]** button to exit the installer.



WebtoB Installation - File Installation Page



WebtoB Installation - Install Complete Page

4.1.2. Silent Mode

To install WebtoB in silent mode, configure webtoB.properties, a properties file for the installation, in advance. When installing WebtoB in silent mode, the installer reads and uses the file without receiving environment variables from a user.

1. Create webtoB.properties as follows. For information about each item, refer to [Silent Installation](#)

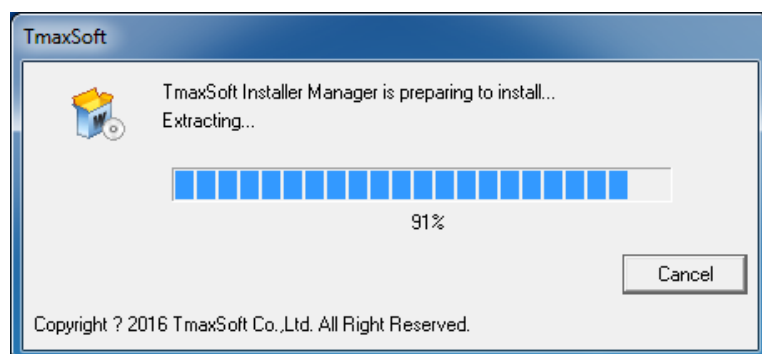
Properties File.

```
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET=WebtoB
USER_INSTALL_DIR=C:\\TmaxSoft\\WebtoB5.0
```

2. Run the installer in silent mode from a console window.

```
C:\TmaxSoft>WEBTOB5_0_SP0_Fix4_Windows_x64.exe -f webtob.properties
```

3. When the installation starts, the following page appears.



Installation in Silent Mode

4.1.3. Installation Verification

The following describes how to verify the WebtoB installation.

Directory

Ensure that the following directories are created in the specified path (\$WEBTOBEDIR in UNIX or WebtoB 5.0 in Windows) and files are installed in the directories.

```
$WEBTOBEDIR
|----ap
|----bin
|----cgi-bin
|----config
|----docs
|----icons
|----lib
+----license
|----log
|----path
|----ssl
|----svct
+----UninstallerData
|----usrinc
```

The following list is a description for each directory.

ap

Application files directory.

bin

Executable files (wsm, wscfl, wsuncfl, wsracd, wsgst, wsboot, wsdown, etc.) directory.

cgi-bin

CGI files directory.

config

WebtoB environment files directory.

docs

Default HTML files directory.

icons

Icons used in DIRINDEX 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.

svct

WBAPI service tables.

UninstallerData

Uninstallation files directory.

usrinc

API header files directory.

Environment Variable

Ensure that the environment variables are registered as follows:

```
WEBTOBDIR=C:\TmaxSoft\WebtoB5.0  
PATH=%WEBTOBDIR%\bin;%WEBTOBDIR%\lib;
```

4.2. Servlet Engine Installation

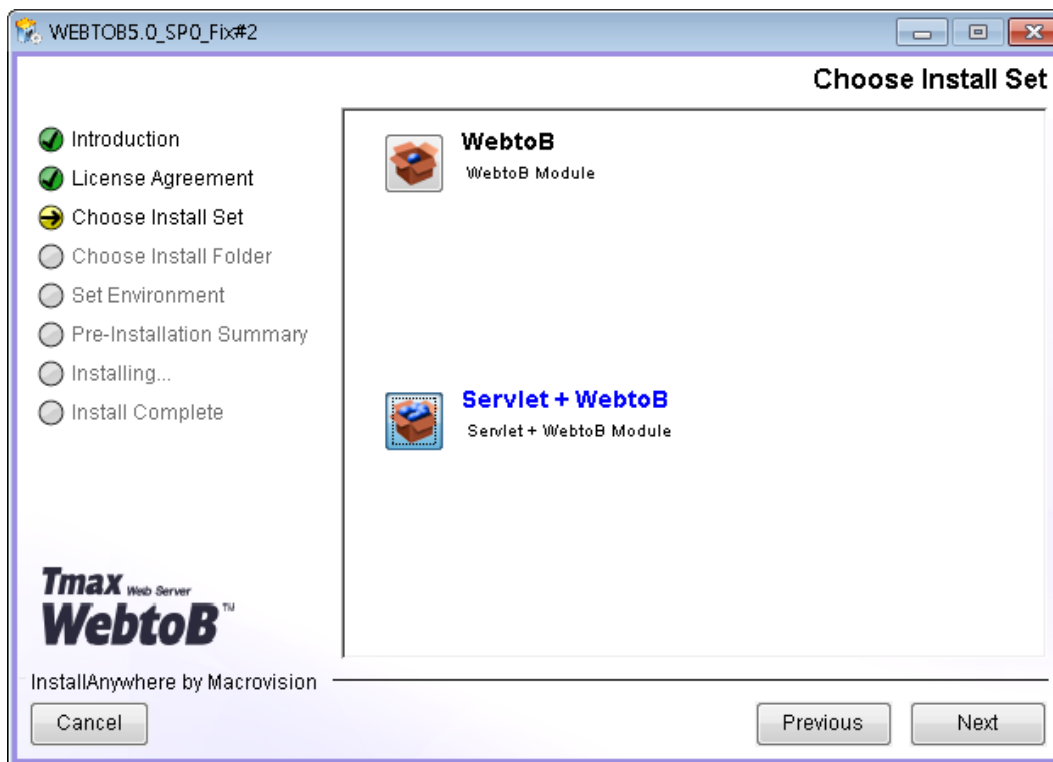
Servlet Engine is a feature provided by WebtoB Enterprise. This section describes the process for installing WebtoB along with the Servlet Engine.

4.2.1. GUI Mode

The following is the installation process for WebtoB and Servlet Engine using GUI.

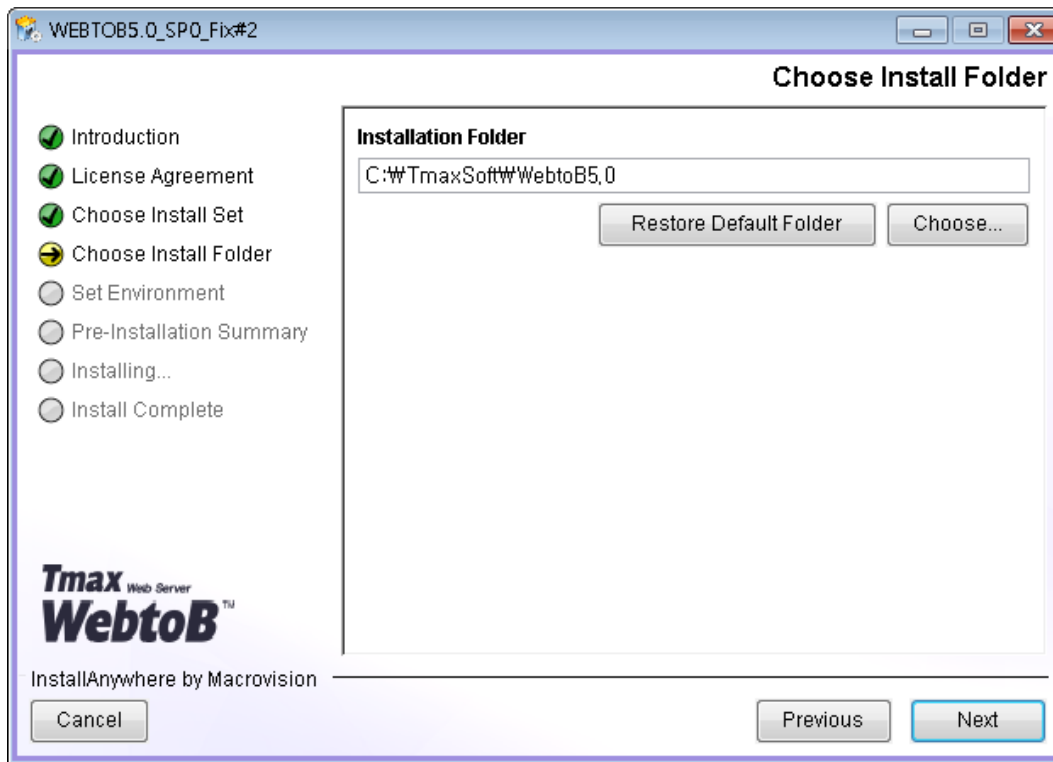
1. Choose whether to install WebtoB with a servlet engine or WebtoB only in the Installation Set.

To install WebtoB with Servlet Engine, select **[Servlet + WebtoB]**. To install WebtoB only, refer to [WebtoB Installation](#).



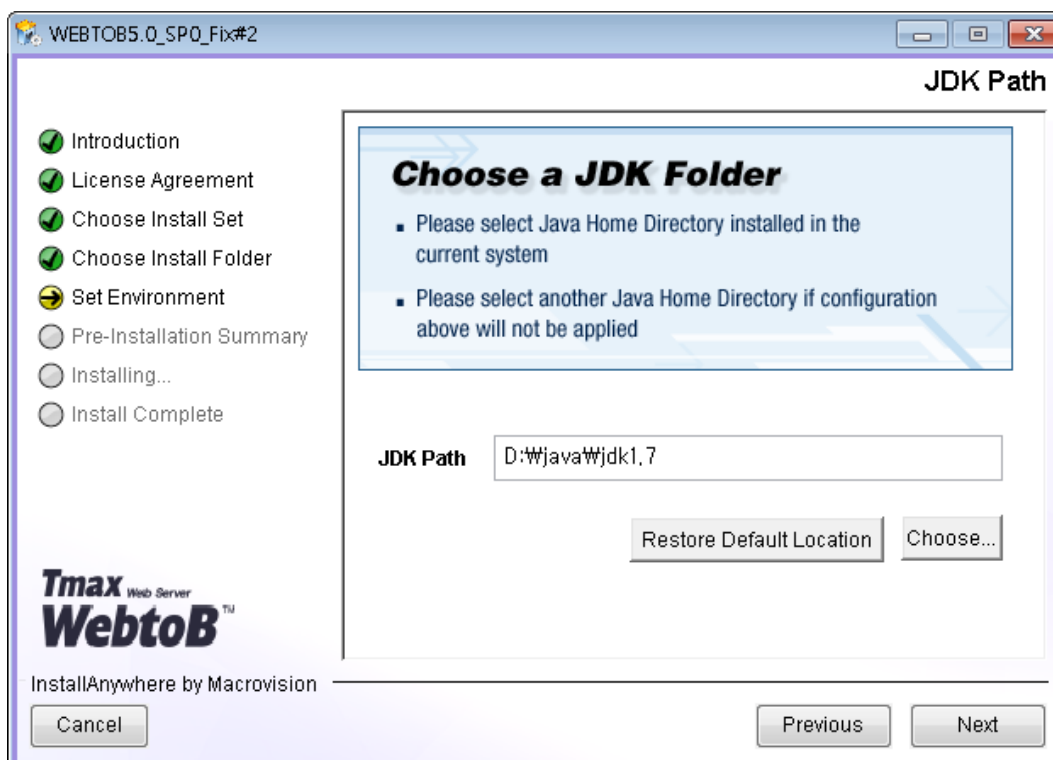
Servlet Engine Installation - Choose Install Set Page

2. Set the WebtoB installation directory. To use the default directory, click the **[Next]** button. To change the directory, enter in an absolute path or click the **[Choose]** button, select desired path, and then click the **[Next]** button.



Servlet Engine Installation - Choose Install Folder Page

- Set the JDK path used in Servlet Engine. To use the default path, click on the **[Next]** button. To change the directory, enter in an absolute path or click the **[Choose]** button, select desired path, and then click the **[Next]** button.



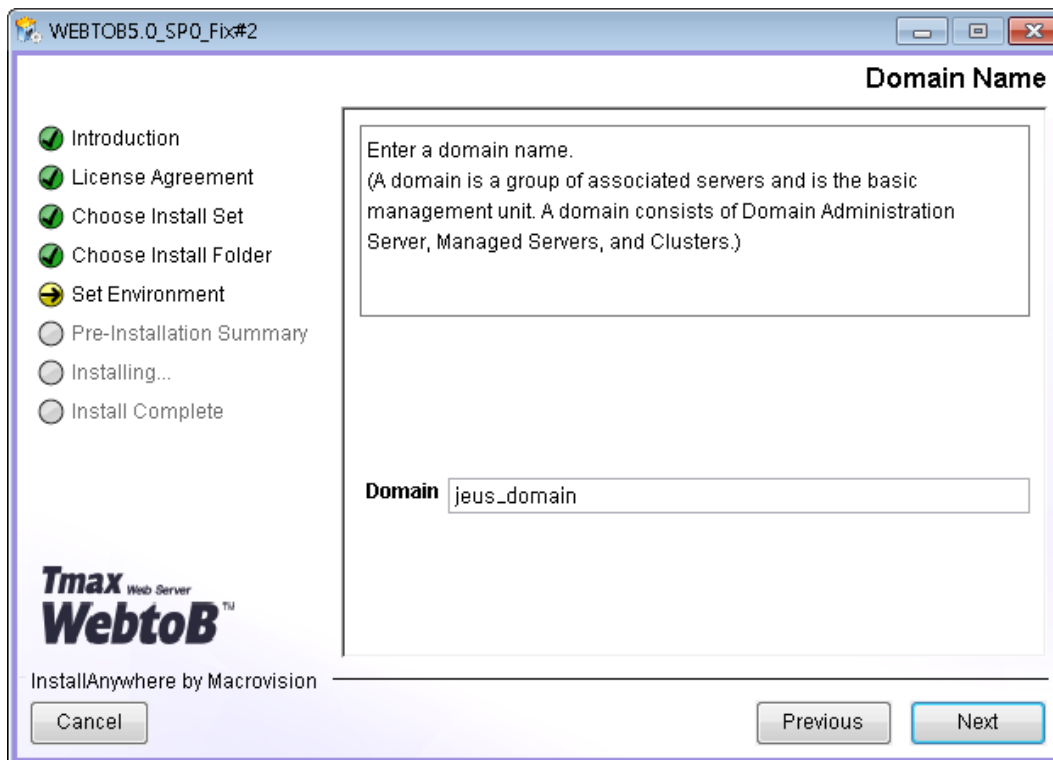
Servlet Engine Installation - JDK Path Page

- Set the Servlet Engine administrator account password. Enter the password, and re-enter it to confirm.



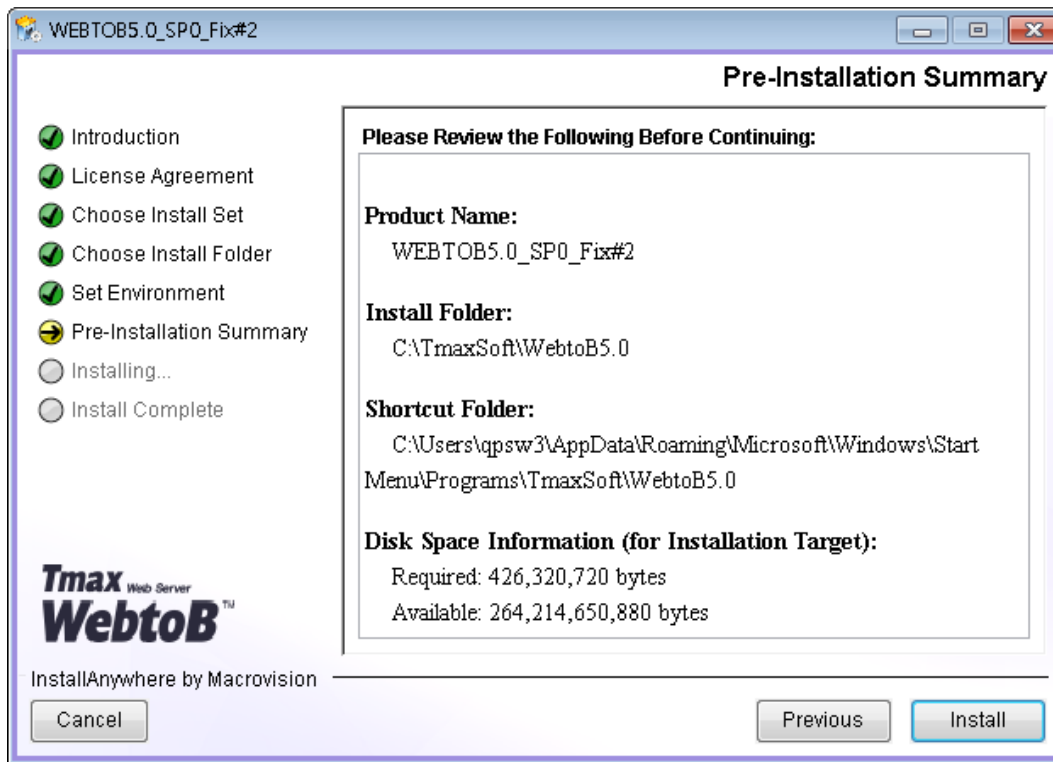
Servlet Engine Installation - Administrator's Password Page

- Set the domain name, and then click the **[Next]** button.



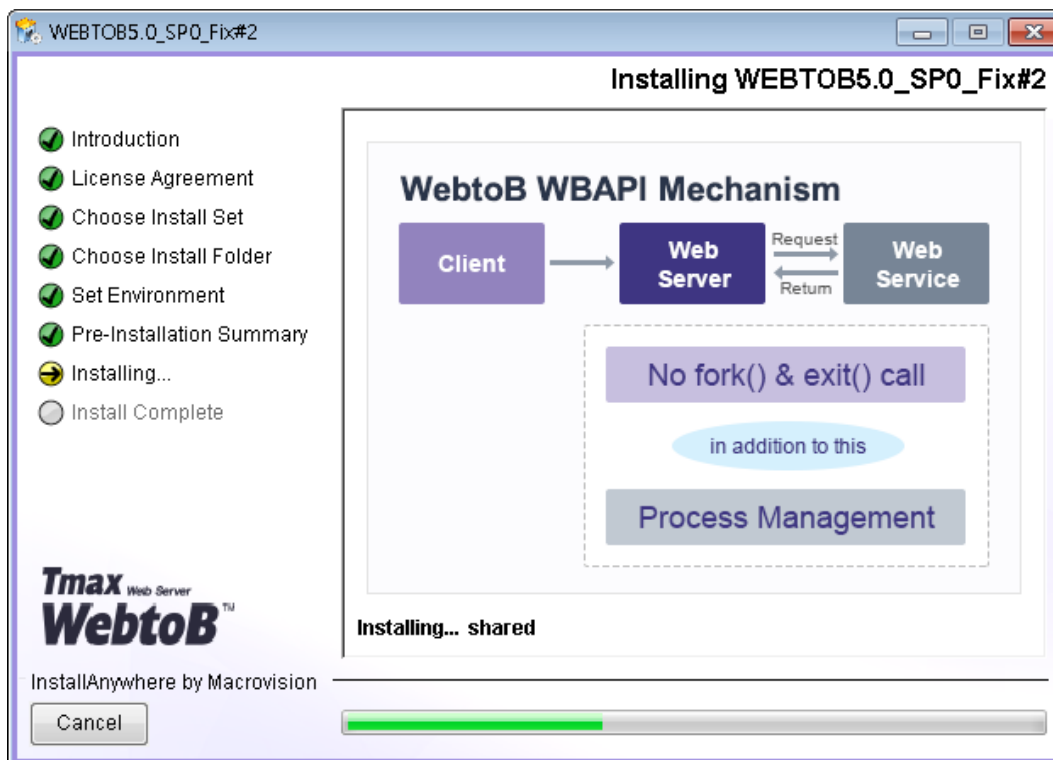
Servlet Engine Installation - Domain Name Page

- Before installing WebtoB files, check the installation information (product, installation path, Installation Set, and disk space). Click the **[Next]** button to continue, the **[Previous]** button to return to the previous window, or the **[Cancel]** button to cancel the installation.

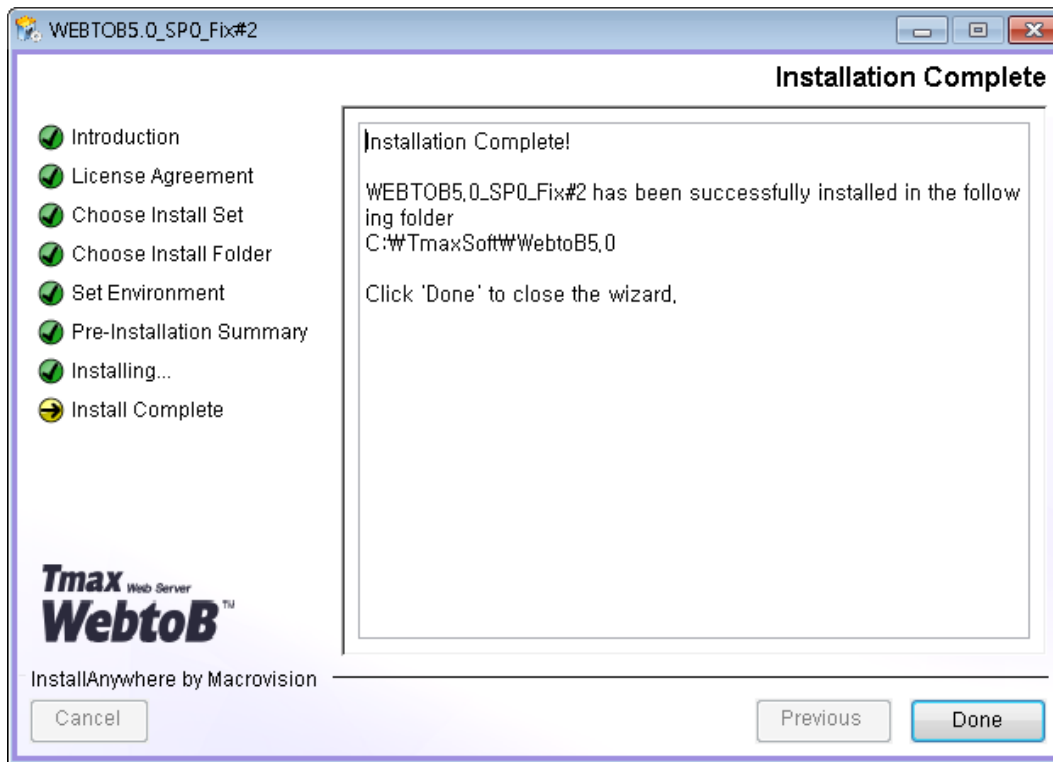


Servlet Engine Installation - Pre-Installation Summary Page

- If WebtoB files are installed and the required installation tasks are complete, an installation complete message appears. Click the **[Done]** button to exit the installer.



Servlet Engine Installation - File Installation Page



Servlet Engine Installation - Install Complete Page

4.2.2. Silent Mode

To install WebtoB in silent mode, configure `webtob.properties`, a properties file for the installation, in advance. When installing WebtoB in silent mode, the installer reads and uses the file without receiving environment variables from a user.

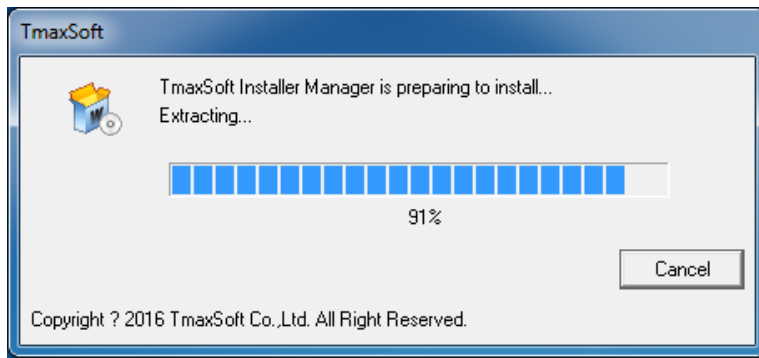
1. Create `webtob.properties` as follows. For information about each item, refer to [Silent Installation Properties File](#).

```
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET=Servlet
USER_INSTALL_DIR=C:\\TmaxSoft\\WebtoB5.0
MS_PARENT_DIR=C:\\java\\jdk1.7.0_75
USER_INPUT_PASSWD=1111111
INPUT_DOMAIN_NAME_1=jeus_domain
```

2. Run the installer in silent mode from a console window.

```
C:\TmaxSoft>WEBTOB5_0_SP0_Fix4_Windows_x64.exe -f webtob.properties
```

3. When the installation starts, the following window appears.



Installation in Silent Mode

4.2.3. Installation Verification

The following describes how to verify the installation.

Directory

Ensure that the following directories are created in the specified path (\$WEBTOBEDIR in UNIX or WebtoB 5.0 in Windows) and files are installed in the directories.

```
$WEBTOBEDIR
|----ap
|----bin
|----cgi-bin
|----config
|----docs
+----jeus
|----bin
|----domains
|----lib
|----nodemanager
|----setup
+----license
|----log
|----path
|----ssl
|----svct
+----UninstallerData
|----usrinc
```

Descriptions for each are as follows:

jeus

Created when both WebtoB and Servlet Engine are installed together. JEUS Servlet Engine directory.



For information on other directories, refer to [Directory](#).

Environment Variable

Ensure that environment variables are registered using the **[Start] > [Settings] > [Control Panel] > [System] > [Advanced]** menu in Windows.

```
(User Environment Variables)
WEBTOBDIR=C:\TmaxSoft\WebtoB5.0
PATH=%WEBTOBDIR%\bin;%WEBTOBDIR%\lib;%W2B_JEUSHOME%\bin;%W2B_JEUSHOME%\lib\system;
W2B_JEUSHOME=C:\TmaxSoft\WebtoB5.0\jeus
```

4.3. Service Management

WebtoB is designed to work as a Windows service on a Windows system. To use this feature, run the service in the WebtoB directory and then register the service to work as a Windows NT service.

4.3.1. Service Registration

The following describes how to register a WebtoB service on a Windows system.

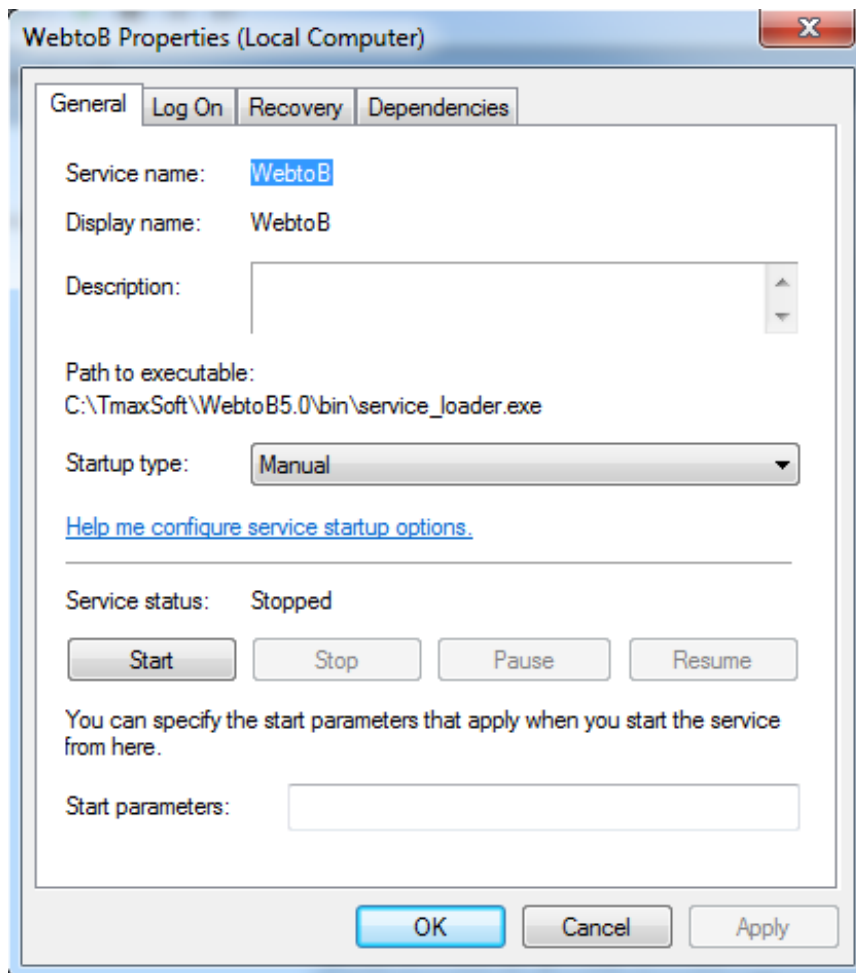
1. Move to the **bin** directory of **%WEBTOBDIR%** where the webtob_service.exe file is located.

(Default path: C:\TmaxSoft\WebtoB5.0\bin)

2. Run **webtob_service.exe -create** to register WebtoB as a service on the Windows system as follows:

```
C:\TmaxSoft\WebtoB5.0\bin>webtob_service.exe -create
WebtoB path="C:\TmaxSoft\WebtoB5.0"
Service command="C:\TmaxSoft\WebtoB5.0\bin\service_loader.exe"
Service log="C:\TmaxSoft\WebtoB5.0\log\service-WebtoB.log"
wsboot command="wsboot -N WebtoB"
wsdown command="wsdown -z -N WebtoB"
Trying to create service WebtoB...
Successfully installed service WebtoB
```

3. Ensure that the WebtoB service is registered with the **[Start] > [Settings] > [Control Panel] > [Administrative Tools] > [Services]** menu in Windows.
4. Double click a service name on the Windows **Services** page to display the **WebtoB Properties** window. If the service is operating, the **[Stop]**, **[Pause]**, and **[Resume]** buttons are activated. If the service is stopped, only the **[Start]** button is activated. To start a service, click the **[Start]** button. The active state of the buttons shows that the Engines registered in the installation files and services are loaded. To stop a service, click the **[Stop]** button.



Service Registration - WebtoB Service Properties Window



If the system WebtoB was installed onto has not rebooted, a "WEBTOBDIR is not set" error may occur due to the environment variables being not yet applied. To run WebtoB with the LocalSystem privilege, reboot the system.

4.3.2. Service Deletion

The following describes how to delete a WebtoB service.

1. A service must be stopped before it can be deleted.

Double click a service name to be stopped in the **[Start] > [Settings] > [Control Panel] > [Administrative Tools] > [Services]** menu in Windows. Click the **[Stop]** button in **Service Status** on the **Service Properties** page to stop WebtoB.

2. If the service stops, run **webtob_service.exe -delete** in the **bin** directory of **%WEBTOBDIR%** to permanently delete the service.

```
C:\TmaxSoft\WebtoB5.0\bin>webtob_service.exe -delete
Trying to remove service WebtoB...
Successfully deleted service WebtoB.
```

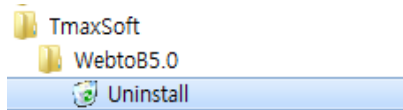
4.4. WebtoB Uninstallation

This section describes the process for uninstalling WebtoB and verifying the uninstallation.

4.4.1. Uninstallation

The following describes how to uninstall WebtoB in Windows systems.

1. To uninstall WebtoB, click the **[Start] > [TmaxSoft] > [WebtoB 5.0] > [Uninstall]** menu in Windows.

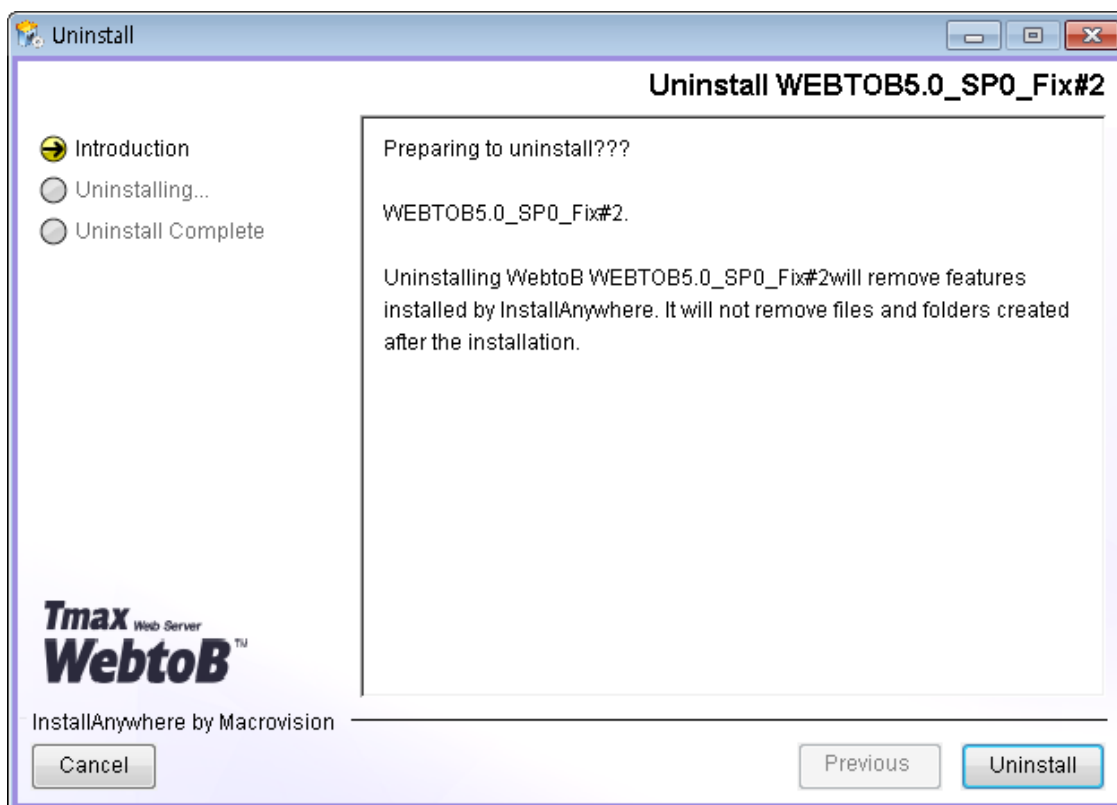


Uninstall Menu Selection



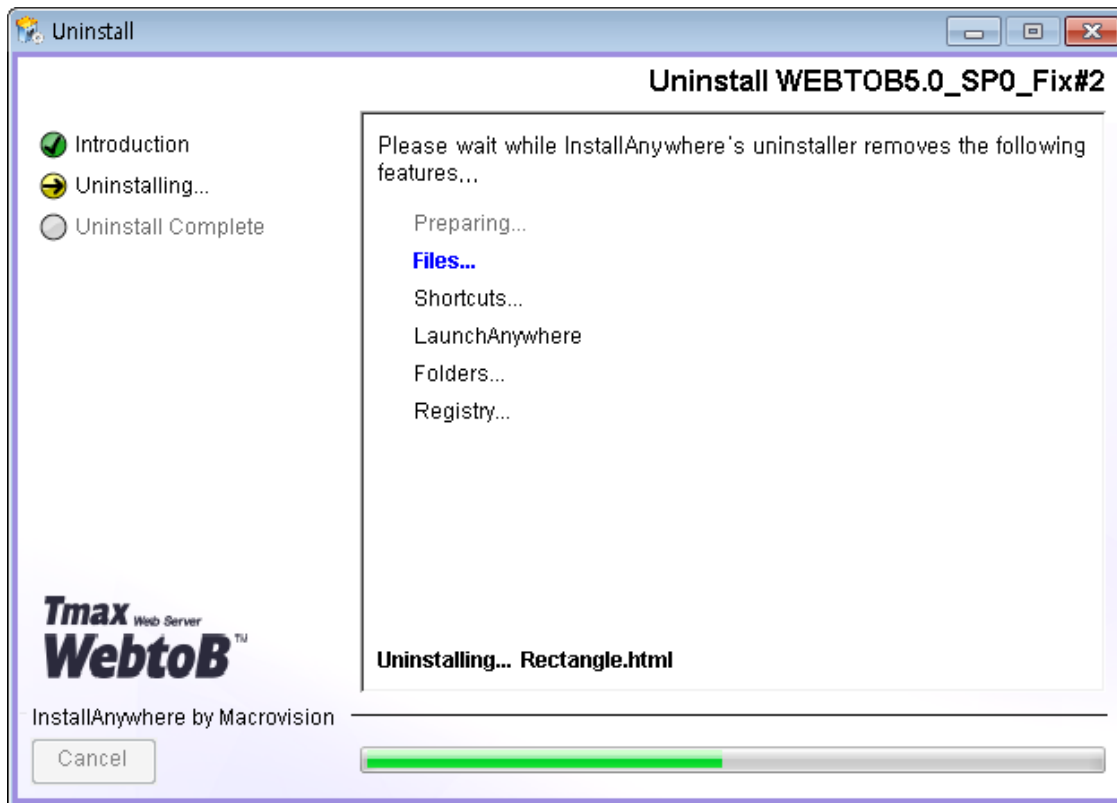
In Windows 10, click **[Start] > [Tmaxsoft] > [Uninstall]**.

2. When clicking **[Uninstall]**, the following introduction page appears.



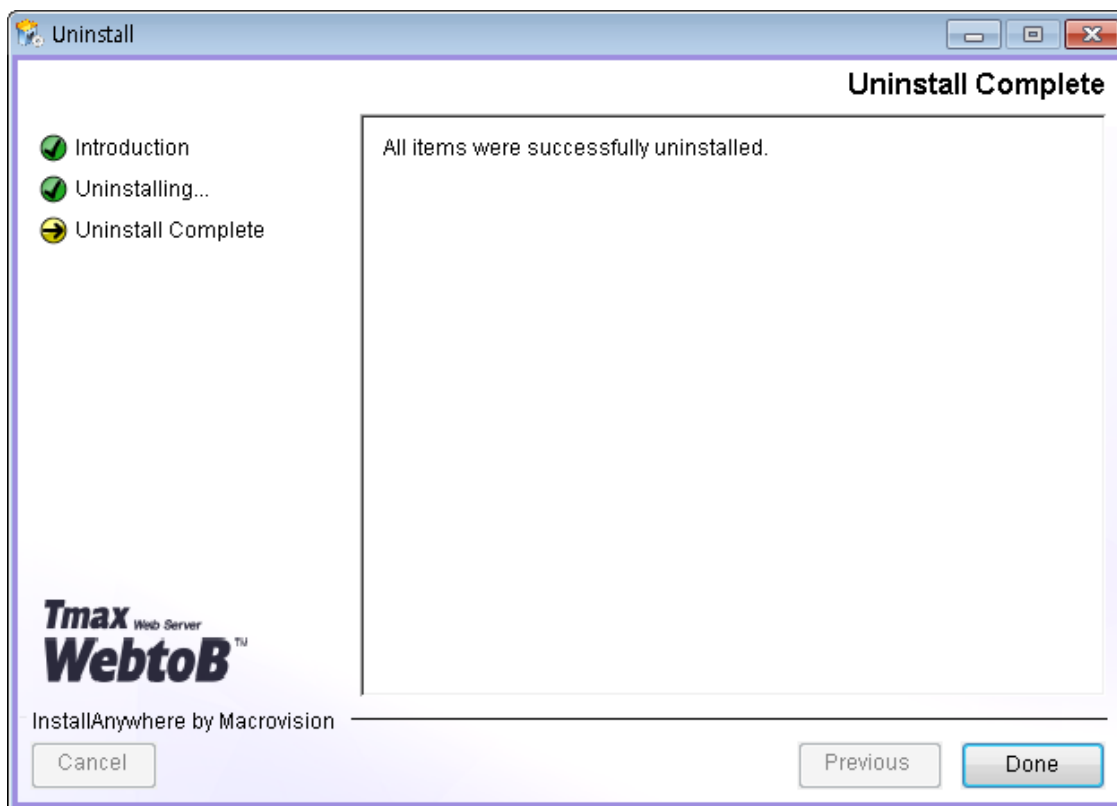
WebtoB Uninstallation - Introduction Page

3. Click the **[Uninstall]** button to delete files and environment variables. The following is displayed while files and variables are being deleted.



WebtoB Uninstallation - Progress Page

4. Check the message indicating that the WebtoB uninstallation successfully completed. Click the **[Done]** button to quit the uninstallation.



WebtoB Uninstallation - Uninstall Complete Page

4.4.2. Uninstallation Verification

Check the following when the uninstallation of WebtoB is complete.

- **Verifying files deletion**

Ensure that the installation files have been completely deleted. Files that were created after the installation must be manually deleted.

- **Verifying environment variables deletion**

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

Appendix A: Silent Installation Properties File

This appendix describes how to configure the webtob.properties file used to install WebtoB in silent mode.

A.1. UNIX

Configure webtob.properties as follows in UNIX.

```
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET={WebtoB|Servlet}
USER_INSTALL_DIR=install-dir-path
JAVA_HOME_1=jdk-dir-path
USER_INPUT_PASSWD=user-password
INPUT_DOMAIN_NAME_1=input-domain-name
```

Item	Description
INSTALLER_UI	Set to Silent for the installation in silent mode.
CHOSEN_INSTALL_SET	Installation option. <ul style="list-style-type: none">◦ WebtoB: install only WebtoB. (Default value)◦ Servlet: install both WebtoB and Servlet Engine.
USER_INSTALL_DIR	WebtoB installation path.
JAVA_HOME_1	JDK path used in Servlet Engine.
USER_INPUT_PASSWD	Servlet Engine administrator password.
INPUT_DOMAIN_NAME_1	Domain name used in Servlet Engine.

The following is an example webtob.properties which can be used to install WebtoB in UNIX.

```
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET=WebtoB
USER_INSTALL_DIR=/home/webtob/webtob
```

The following is an example webtob.properties which can be used to install WebtoB and Servlet Engine in UNIX.

```
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET=Servlet
USER_INSTALL_DIR=/home/webtob/webtob

JAVA_HOME_1=/usr/jdk1.6.0_07
```



```
USER_INPUT_PASSWD=1111111
INPUT_DOMAIN_NAME_1=jeus_domain
```

A.2. Windows

Configure webtoB.properties as follows in Windows.

```
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET={WebtoB|Servlet}
USER_INSTALL_DIR=install-dir-path
MS_PARENT_DIR=ms-parent-dir-path
USER_INPUT_PASSWD=user-password
INPUT_DOMAIN_NAME_1=input-domain-name
```

Item	Description
INSTALLER_UI	Set to Silent for the installation in silent mode.
CHOSEN_INSTALL_SET	Installation option. <ul style="list-style-type: none">◦ WebtoB: install only WebtoB. (Default value)◦ Servlet: install both WebtoB and Servlet Engine.
USER_INSTALL_DIR	WebtoB installation path.
MS_PARENT_DIR	JDK path used in Servlet Engine.
USER_INPUT_PASSWD	Servlet Engine administrator password.
INPUT_DOMAIN_NAME_1	Domain name used in Servlet Engine.

The following is an example webtoB.properties which can be used to install WebtoB in Windows.

```
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET=WebtoB
USER_INSTALL_DIR=C:\\TmaxSoft\\WebtoB5.0
```

The following is an example webtoB.properties which can be used to install WebtoB and Servlet Engine in Windows.

```
INSTALLER_UI=Silent
CHOSEN_INSTALL_SET=Servlet
USER_INSTALL_DIR=C:\\TmaxSoft\\WebtoB5.0

MS_PARENT_DIR=C:\\Program Files\\Java\\jdk1.7.0_79
USER_INPUT_PASSWD=1111111
INPUT_DOMAIN_NAME_1=jeus_domain
```