
Chapter 1. Execute JOnAS as a WIN32 Service

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This document describes the procedures necessary to run JOnAS as a system service on Microsoft Windows platforms.

1.1. Instructions

The procedure uses the Java Service Wrapper open source project which must be downloaded and installed separately.

1.1.1. Download and Install Java Service Wrapper

1. Download Java Service Wrapper [<http://wrapper.tanukisoft.com/doc/english/index.html>] version 3.3.6 or later, and unzip the package to a directory in the local filesystem.
2. Set `WRAPPER_HOME` environment variable to the root directory for Java Service Wrapper.

For example, if the package for Wrapper version 3.3.6 is unzipped into `C:\Programs`, then set `WRAPPER_HOME=C:\Programs\wrapper-windows-x86-32-3.3.6`

1.1.2. create_win32service

Before JOnAS can be run as a WIN32 service, it is necessary to create a Java Service Wrapper configuration file. Prior to executing the steps in this section, it is necessary to create a `JONAS_BASE` directory as described in the JOnAS Configuration Guide [[configuration_guide.html](#)].

1. Verify that `JAVA_HOME` is set as a system environment variable.
2. Verify that `JONAS_ROOT`, `JONAS_BASE` and `WRAPPER_HOME` environment variables are set.
3. Set `%JONAS_ROOT%\templates\win32` as the current directory.
4. Set environment variables required for JOnAS execution (see list below).
5. Execute

```
ant [-Djonas.name=<server_name>] create_win32service
```



Note

The `-Djonas.name=<server_name>` parameter is optional. If not specified, the default server name is 'jonas'.

1.1.3. install_win32service

After the `%JONAS_BASE%` directory has been updated for use with Java Service Wrapper, JOnAS can be installed as a WIN32 service using the

```
install_win32service
```

ant target. Prior to installing the configuration as a WIN32 service, the configuration can be tested as a standard console application. Refer to the Section 1.4, “Testing Configuration” section for more information. The following steps will install the service.

1. Verify that `JONAS_BASE` and `WRAPPER_HOME` environment variables are set.
2. Set `%JONAS_ROOT%\templates\win32service` as the current directory.
3. Execute `ant install_win32service`. As an alternative, the service may be installed from a DOS command window using the `jonas ntservice install` command.

By default, the service is configured to start automatically each time Windows starts. If the administrator would prefer to start the service manually, modify the `wrapper.ntservice.starttype` parameter in the `%JONAS_BASE%\conf\wrapper.conf` file. Set the value as described in the comments found in the `wrapper.conf` file.

1.1.4. uninstall_win32service

When it is no longer desirable to run JOnAS as a Windows service, the service can be uninstalled using the `uninstall_win32service` ant target.

1. Verify that `JONAS_BASE` and `WRAPPER_HOME` environment variables are set.
2. Set `%JONAS_ROOT%` as the current directory.
3. Verify that the service has been stopped.
4. Execute `ant uninstall_win32service`. As an alternative, the service may be uninstalled from a DOS command window using the `jonas ntservice uninstall` command.

1.1.5. Start JOnAS Service

To start the JOnAS service, open the Service Control Manager (Control Panel Services) window, select the JOnAS service and start the service. As an alternative, the service may be started from a DOS command window using the `jonas ntservice start` command.

By default, JOnAS will be started automatically each time Windows is started. After installing the service, it can be started manually to avoid the need to reboot Windows.



Note

Any environment variables referenced within either of the `wrapper.conf` and `wrapper_ext.conf` files must be defined as system environment variables.

1.1.6. Stop JOnAS Service

To stop the JOnAS service, open the Service Control Manager window, select the JOnAS service and stop the service. As an alternative, the service may be stopped from a DOS command window using the `jonas ntservice stop` command.

1.1.7. Status of JOnAS Service

The status of the JOnAS service may be obtained from a DOS command window using the `jonas ntservice status` command.

1.2. Files Managed by create_win32service

The `create_win32service` ant target copies files from the Java Service Wrapper installation directory and generates a configuration file in the `%JONAS_BASE%` directory. The following files are managed by the `create_win32service` ant target.

- `lib\wrapper.jar`
- `lib\wrapper.dll`
- `conf\wrapper.conf`
- `conf\wrapper_ext.conf`

`wrapper.conf` contains Java Service Wrapper configuration properties. This file is copied to the `conf` directory by the `CREATE_JONASBASE` command. Changes made to this file are not affected by subsequent execution of the `create_win32service` target.

`wrapper_ext.conf` contains Java Service Wrapper configuration properties specific to the JOnAS service. This file is generated by the `create_win32service` ant target. Any changes made to this file will be lost when the `create_win32service` target is executed.

1.3. Modify JOnAS Configuration

In addition to the files located in the `conf` directory, JOnAS configuration is affected by the following environment variables, `CLASSPATH`, `JAVA_OPTS`, `JONAS_OPTS`. If changes are made to these environment variables, it is necessary to update the Java Service Wrapper configuration files.

JOnAS memory usage is controlled by the `-Xms` and `-Xmx` JVM arguments. Prior to running `create_win32service`, set the `JAVA_OPTS` environment variable with the desired values for `-Xms` and `-Xmx`. The `create_win32service` target will generate these values as `wrapper.java.additional` parameters in the `wrapper_ext.conf` file.

1.3.1. Update Wrapper Configuration

1. Stop the JOnAS service using the Windows Service Control Manager, or the `jonas ntservice stop` command line.
2. Make changes to `config_env.bat`, and the `CLASSPATH`, `JAVA_OPTS`, `JONAS_OPTS` environment variables as needed.
3. Update the Java Service Wrapper configuration. Refer to the Section 1.1.2, “`create_win32service`” section for details.
4. Test the updated configuration. Refer to the Section 1.4, “Testing Configuration” section for more information.

- Restart the JOnAS service using the Windows Service Control Manager, or the `jonas ntservice start` command line.



Note

Changes to the JOnAS configuration files located in the `%JONAS_BASE%\conf` directory do not affect the contents of the `wrapper_ext.conf` file. When making changes to the files located in the `conf` directory, it is only necessary to stop the service and restart the service for the changes to take effect.

1.4. Testing Configuration

After the Java Service Wrapper configuration files have been generated, it is possible to test the configuration in a console window before installing the configuration as a WIN32 service.

- Verify that `JONAS_BASE` environment variable is set.
- Execute `jonas ntservice console`.

The Java Service Wrapper will start as a console application and load JOnAS using the configuration generated by the `create_win32service` ant target.



Note

This test procedure is using environment variables that are set for the current user. Verify that any environment variables used in the `wrapper.conf` and/or `wrapper_ext.conf` files are also set as system environment variables.

Enter `CTRL-C` to terminate JOnAS. After pressing `Ctrl-C`, the Java Service Wrapper displays the following messages to the execution report, and/or log file.

```
wrapper | CTRL-C trapped. Shutting down.
jvm 1   | 2003-12-02 15:25:20,578 : AbsJWebContainerServiceImpl.unregisterWar
                                     : War /G:/w32svc/webapps/autoload/ctxroot.war no longer
available
jvm 1   | Stopping service Tomcat-JOnAS.
wrapper | JVM exited unexpectedly while stopping the application.
wrapper | <-- Wrapper Stopped.
```