

ProActive *Parallel Suite*



An Open Source Middleware For Parallel, Distributed, Multicore Computing

ProActive Agent

The OASIS Research Team and ActiveEon Company



Version $\{\text{version}\}$ $\{\text{TODAY}\}$



Leading Open Source Middleware

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ProActive v\${version} Documentation

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Public questions, comments, or discussions can be posted on the ProActive public mailing list

proactive@ow2.org

The mailing list archive is placed at

<http://mail.ow2.org/wws/arc/proactive>

Bugs can be posted on the ProActive Jira bug-tracking system

<https://galpage-exp.inria.fr:8181/jira>

Table of Contents

Part I. ProActive Scheduler	
Chapter 1. ProActive Agent Installation	2
1.1. Installation	2
1.2. Uninstall	2
1.3. Usage	2
1.4. Configuration	2
1.4.1. Events	2
1.4.2. Actions	2
1.4.3. ProActive Agent Screensaver	3

Part I. ProActive Scheduler

Table of Contents

Chapter 1. ProActive Agent Installation 2

- 1.1. Installation 2
- 1.2. Uninstall 2
- 1.3. Usage 2
- 1.4. Configuration 2
 - 1.4.1. Events 2
 - 1.4.2. Actions 2
 - 1.4.3. ProActive Agent Screensaver 3

Chapter 1. ProActive Agent Installation

1.1. Installation

The ProActive Windows Agent is a Windows Service which is able to create a ProActive computational node on the current machine. This node will be provided as a computational resource to ProActive applications (such as ProActive Scheduler&Resource Manager or ProActive P2P Network) according to a user defined schedule. A tray icon shows the state of the agent and allows the user to start it, stop it, or change its schedule. The ProActive Windows Agent does not interfere with the day-to-day usage of the desktop Windows machine. Prerequisites: .Net framework v2.0 or later should be installed on your system. If it is not, the installer will ask you to install it. Go to www.microsoft.com/downloads and download Microsoft .NET Framework Version 2.0 (or later) Redistributable Package. Visual C++ 2008 (or later) Redistributable Package needs to be installed on your computer. The installer will install the packages if not found. The agent also needs a Java and a ProActive installation.

1. Download the agent installation files [<http://www.activeeon.com/downloads.html>] and run the setup.exe file
2. Provide the path for the PROACTIVE_HOME folder and JAVA_HOME folder



Note

If you are using the Scheduler just provide the Scheduler home folder as PROACTIVE_HOME

1.2. Uninstall

Make sure the AgentController is not started when uninstalling the application. Go to "Start/Programs/ProActiveAgent/uninstall"

1.3. Usage

Launch the Agent Control program or click on the notify icon if the "Automatic Launch" is activated. You can edit the configuration file in order to set-up configuration parameters. A GUI for editing is provided.

1.4. Configuration

The configuration file is composed of several sections

1.4.1. Events

A ProActive Runtime will be started by the agent when an Event occurs. In the configuration of the Agent we can set Calendar Events which specify the time when the Runtime should be launched as well as the lifetime of the Runtime. The agent will stop the Runtime and the processes started by it when the time has expired.

For defining an event, we specify:

- Day of the week, hour, minute, and seconds when the Event occurs. The system assumes that the Events are recurring every week.
- The lifetime of the Event in days, hours, minutes, and seconds.

1.4.2. Actions

An "Action" is the activity that will be initiated by the Agent during duration of an Event. Only one action can be specified for a particular Event (i.e. The agent will execute the same action each time the Event occurs).

There are three types of actions:

- AdvertAction - starts a local ProActive Node and registers (advertises) it in a local RMI registry. The name of the node can be specified (optionally).
- RMAAction - starts a local ProActive Node and registers it in a Resource Manager. The URL of the ResourceManager where the node is to be registered has to be specified.
- P2PAction - starts a local peer and joins the Peer-To-Peer network. One must define a set of "first contact? peers" (by their URLs).

**Note**

A priority can be defined for each action. This is the priority for the Windows process launched by the Agent and for all its children processes.

1.4.3. ProActive Agent Screensaver

The ProActive screensaver will send a message to the WindowsAgent through the (Windows Service) when it is launched (when the screensaver appears on the screen of the user). The agent will start a ProActive runtime at this moment. A message will also be sent when the screensaver is stopped which will cause the agent to stop the Runtime. (see 'conflicts solving bellow')