TIBCO Hawk®

Admin Agent Guide

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TIBCO®

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Preface

This manual describes the functionality of TIBCO Hawk® Admin Agent which when used in conjunction with TIBCO® Enterprise Administrator (TEA) allows you to monitor and administer the Hawk environment.

Topics

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Related Documentation

This section lists documentation resources you may find useful.

TIBCO Hawk Documentation

The following documents form the TIBCO Hawk documentation set:

- *TIBCO Hawk Release Notes:* Read the release notes for a list of new and changed features. This document also contains lists of known issues and closed issues for this release.
- *TIBCO Hawk Concepts:* This manual includes basic descriptions of TIBCO Hawk concepts.
- *TIBCO Hawk Installation, Configuration, and Administration:* Read this book first. It contains step-by-step instructions for installing TIBCO Hawk software on various operating system platforms. It also describes how to configure the software for specific applications, once it is installed. An installation FAQ is included.
- *TIBCO Hawk Methods Reference*: A reference to the microagents and methods used by a TIBCO Hawk Agent for system and application monitoring.
- *TIBCO Hawk WebConsole User's Guide:* This manual includes complete instructions for using TIBCO Hawk WebConsole.
- *TIBCO Hawk Programmer's Guide*: All programmers should read this manual. It contains detailed descriptions of Application Management Interface (AMI), Application Programming Interface (API) concepts, and the TIBCO Hawk security framework and its classes. It also contains detailed descriptions of each class and method for the following APIs:

  — AMI API

  Java, C++ and C API

  — Console API

  Java API

  — Configuration Object API

  Java API

  Programmers should refer to the appropriate language reference sections for the AMI API details. The TIBCO Hawk Application Management Interface (AMI) exposes internal application methods to TIBCO Hawk.

- *TIBCO Hawk Plug-in Reference Guide:* Contains details about the Enterprise Message Service, Messaging and JVM microagents methods that are used to administer and monitor the TIBCO Enterprise Message Service server.
- *TIBCO Hawk Plug-ins for TIBCO Administrator:* Contains detailed descriptions of the TIBCO Hawk plug-ins accessed via TIBCO Administrator.
- *TIBCO Hawk HTTP Adapter User's Guide:* Contains information about performing discovery, monitoring of agent status, monitoring of agent alerts, method invocation, method subscription, and many more activities on TIBCO Hawk and third-party products.
- *TIBCO Hawk Admin Agent Guide:* Contains basic configuration details for TIBCO Hawk Admin Agent and complete instructions for using the web interface of TIBCO Enterprise Administrator for TIBCO Hawk.
- *TIBCO Hawk Security Guide:* Provides guidelines to ensure security within the components of TIBCO Hawk and within the communication channels between the components.

Other TIBCO Product Documentation

You may find it useful to read the documentation for the following TIBCO products:

- TIBCO® Enterprise Administrator
- TIBCO ActiveSpaces®
- TIBCO Rendezvous®
- TIBCO Enterprise Message Service™

Typographical Conventions

The following typographical conventions are used in this manual.

Table 1 General Typographical Conventions

Convention	Use
ENV_HOME *TIBCO_HOME* *HAWK_HOME* *CONFIG_FOLDER*	TIBCO products are installed into an installation environment. A product installed into an installation environment does not access components in other installation environments. Incompatible products and multiple instances of the same product must be installed into different installation environments. An installation environment consists of the following properties: • **Name** Identifies the installation environment. This name is referenced in documentation as *ENV_NAME*. On Microsoft Windows, the name is appended to the name of Windows services created by the installer and is a component of the path to the product shortcut in the Windows Start > All Programs menu. • **Path** The folder into which the product is installed. This folder is referenced in documentation as *TIBCO_HOME*. TIBCO Hawk installs into a directory within a *TIBCO_HOME*. This directory is referenced in documentation as *HAWK_HOME*. The default value of *HAWK_HOME* depends on the operating system. For example on Windows systems, the default value is `C:\tibco\hawk\6.0`. A TIBCO Hawk configuration folder stores configuration data generated by TIBCO Hawk. Configuration data can include sample scripts, session data, configured binaries, logs, and so on. This folder is referenced in documentation as *CONFIG_FOLDER*. For example, on Windows systems, the default value is `C:\ProgramData\tibco\cfgmgmt\hawk`.
`code font`	Code font identifies commands, code examples, filenames, pathnames, and output displayed in a command window. For example: Use `MyCommand` to start the foo process.

Table 1 General Typographical Conventions (Cont'd)

Convention	Use
`bold code font`	Bold code font is used in the following ways: • In procedures, to indicate what a user types. For example: Type **`admin`**. • In large code samples, to indicate the parts of the sample that are of particular interest. • In command syntax, to indicate the default parameter for a command. For example, if no parameter is specified, `MyCommand` is enabled: MyCommand [**`enable`** | disable]
italic font	Italic font is used in the following ways: • To indicate a document title. For example: See *TIBCO BusinessWorks Concepts*. • To introduce new terms For example: A portal page may contain several portlets. *Portlets* are mini-applications that run in a portal. • To indicate a variable in a command or code syntax that you must replace. For example: `MyCommand` *pathname*
Key combinations	Key name separated by a plus sign indicate keys pressed simultaneously. For example: Ctrl+C. Key names separated by a comma and space indicate keys pressed one after the other. For example: Esc, Ctrl+Q.
	The note icon indicates information that is of special interest or importance, for example, an additional action required only in certain circumstances.
	The tip icon indicates an idea that could be useful, for example, a way to apply the information provided in the current section to achieve a specific result.
	The warning icon indicates the potential for a damaging situation, for example, data loss or corruption if certain steps are taken or not taken.

TIBCO Product Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website mainly in the HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product. To access the latest documentation, visit https://docs.tibco.com.

Documentation for TIBCO Hawk is available on the TIBCO Hawk Product Documentation page.

How to Contact TIBCO Support

You can contact TIBCO Support in the following ways:

- For an overview of TIBCO Support, visit https://www.tibco.com/services/support.
- For accessing the Support Knowledge Base, viewing the latest product updates that were not available at the time of the release, and getting personalized content about products you are interested in, visit the TIBCO Support portal at https://support.tibco.com.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to https://support.tibco.com. If you do not have a user name, you can request one by clicking **Register** on the website.

How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature requests from within the TIBCO Ideas Portal. For a free registration, go to https://community.tibco.com.

Chapter 1 Overview

TIBCO® Enterprise Administrator (TEA) is a central administration console that allows you to configure and administer multiple TIBCO products. TIBCO Hawk provides an agent for TEA called Hawk Admin Agent (Admin Agent), which, when registered with the TEA server, allows you to monitor and administer Hawk from within the TEA web user interface. Using the Admin Agent, you can get a consolidated view of all the distributed infrastructure components interacting within the TIBCO Hawk system. The Admin Agent provides pictorial details of each of the components and allows basic monitoring and management in the form of alerts and rules.

TEA uses the Admin Agent to communicate with the Hawk server. The Admin Agent auto-registers itself with the configured TEA server.

You can reconnect or unregister the Admin Agent. For more details on using TEA, see *TIBCO Enterprise Administrator User's Guide.*

On registration, the Admin Agent exposes the artifacts of Hawk to the TEA server.

Topics

- TEA Administrative Interfaces, page 2

TEA Administrative Interfaces

The TIBCO Enterprise Administrator provides three distinct user interfaces to communicate with the Admin Agent: Web UI, command-line-based Shell interface, and Python Scripting.

- Web UI: The TEA server provides a default web-based user interface to manage and monitor products. Hawk is shown as a card in the TEA Web UI. You can drill down the product to see the artifacts of the product. You can then administer and monitor Hawk from the TEA Web UI.
- Shell Interface: The TEA server provides a command-line utility called the TEA Shell. It is a remote shell, based on the SSH protocol. The shell is accessible using any terminal program such as Putty. Its scripting language is similar to bash in UNIX, but has some important differences. You can use the shell to perform almost all the tasks that you can perform from the TEA Web UI.
- Python scripting: You can use Python scripting to perform any activity you performed using the Web UI. Python scripting is especially useful when you have to repeat a task for multiple users or use control structures to work through some conditions in your environment. Although you can use the Shell utility to use the command-line interface, the Shell interface does not support conditional statements and control structures. Python scripting proves to be useful in such cases.

For more information on these interfaces, refer to *TIBCO Enterprise Administrator User's Guide*.

This document discusses how to use the Admin Agent from within the TEA Web UI interface. However, you can use the other two interfaces to achieve just about anything that you achieved using the Web UI.

Using the TEA Web UI, you can do the following:

- View the statistical data about domains, agents, rulebases, and alerts.
- Administer Rulebases, Rules and specify appropriate actions to be taken if the rules are triggered upon satisfying the threshold conditions. This version of TEA only allows you to read, edit, and update the existing rulebases information.
- Subscribe to alerts.

Chapter 2 Installation and Basic Configuration

The TIBCO Hawk installer provides a custom profile, **TIBCO Hawk Admin Agent**, during product installation. If you would like to use TIBCO Enterprise Administrator to monitor the Hawk data, you must install **TIBCO Hawk Admin Agent** along with the Hawk components.

In order for the Hawk Admin Agent to auto-register with the TEA server, create an entry for the Admin Agent machine in the TEA server machine's host file and also create an entry for the TEA server machine in the Hawk Admin Agent machine's host file.

Refer to the "Understanding the Installation Profiles" section in the *TIBCO Hawk Installation, Configuration, and Administration* guide.

To verify if the Admin Agent is installed, you can check if it is available under the **Start** menu:

Start > **All Programs** > **TIBCO** > **TIBCO Hawk Admin Agent** <*version*> >**.**

Topics

- Configuration, page 4
- Starting TIBCO Hawk Admin Agent, page 10

Configuration

After installing TIBCO Hawk and the Admin Agent, you must do the following:

- Configure the location of the transport that will be used in the `<TIBCO_HOME>/tea/agents/hawk/<version>/bin/tibhawkteaagent.tra` file . See Transport Installation Location Configuration on page 4.
- Configure the Hawk domain and transport to be used in the `<CONFIG_FOLDER>\tibco\cfgmgmt\hawkteaagent\config\hawk-domain-transport-cfg.xml` file. See Hawk Domain and Transport Configuration on page 5.
- Configure the Admin Agent in the configuration files located in `<CONFIG_FOLDER>/hawkteaagent/config` directory. See Log Files Location Configuration on page 8.

Transport Installation Location Configuration

The following transport modes are available to be configured as a means of communication between Hawk Agent and Admin Agent:

- TIBCO Rendezvous® (RV)
- TIBCO Enterprise Message Service™ (EMS)
- TCP Transport for TIBCO Hawk

At least one transport mode should be configured in the `<CONFIG_HOME>/tibco/cfgmgmt/hawkteaagent/config/hawk-domain-transport-cfg.xml` file of Admin Agent to enable message or event communication among various Hawk Agent and Admin Agent.

TIBCO Hawk installation has TIBCO Rendezvous configured as the default mode of message and event transport between Hawk Agent and HMA, as well as between Hawk Agent and Hawk WebConsole.

For details on configuration for all transport modes, refer to the 'Configuring Transport Modes' section in the *TIBCO Hawk Installation, Configuration, and Administration* guide.

If TIBCO Rendezvous is chosen as a transport between the Hawk Agent and Admin Agent, the same is used as a transport between the Hawk Agent and the Hawk Microagent or other AMI based applications. You cannot configure it to use a different transport. However, if you choose to use TIBCO Enterprise Message Service as the transport between the Hawk Agent and the Admin Agent, you can only use TIBCO Rendezvous as the transport between the Hawk Agent and the Hawk Microagent or other AMI based applications.

TIBCO Rendezvous and TIBCO Enterprise Message Service are two independent products that need to be installed separately. Additional configurations need to be performed manually based on whether they are installed before or after installing TIBCO Hawk, and whether any of them share the same <*TIBCO_HOME*> installation folder.

If you install TIBCO Rendezvous and TIBCO Enterprise Message Service before you install TIBCO Hawk and you install all three in the same TIBCO_HOME, the installers will automatically configure their values in the `tibhawkteaagent.tra` configuration file and you need not do it manually. Update the <*TIBCO_HOME*>`/tea/agents/hawk/<`*`version`*`>/bin/tibhawkteaagent.tra` file for <*EMS_HOME*> and <*RV_HOME*> if any of the following is true:

- If you use an existing transport (TIBCO Rendezvous or TIBCO Enterprise Message Service) either from a previous installation of TIBCO Hawk 4.x or independent installations of these TIBCO products in the same *TIBCO_HOME* where Hawk is installed.
- If you install TIBCO Rendezvous or TIBCO Enterprise Message Service in the same *TIBCO_HOME* after installing TIBCO Hawk.
- If you currently use or are planning to use a different *TIBCO_HOME* for each of the TIBCO Rendezvous, TIBCO Enterprise Message Service , and TIBCO Hawk components.

Hawk Domain and Transport Configuration

The Admin Agent can monitor multiple domains configured with different or same transports.

The monitored domain names must be unique within and across different transport types.

The Admin Agent can monitor multiple transports at the same time. Each of those transports supports multiple domain configurations.

Domain Transport Configuration File (hawk-domain-transport-cfg.xml)

- Configure the domains in <*CONFIG_FOLDER*>\tibco\cfgmgmt\hawkteaagent\config\hawk-domain-transport-cfg.xml directory. It follows the DomainTransportCfg.xsd XML schema.

Refer to the examples in the hawk-domain-transport-cfg.xml file on how to configure Hawk Domains and their respective transports. You can configure the Hawk domain and their respective transport for the Admin Agent. One or more Hawk domains can be monitored. You require one DomainTransport section per monitored domain. You must uncomment and configure the code for the DomainTransport section for the transport that you want to use and comment all other DomainTransport sections.

For example, the configuration for the TIBCO Rendezvous transport domain (default) is as follows:

```
<!--  RV transport domain-->
<hk:DomainTransport>
    <hk:HawkDomainName>default</hk:HawkDomainName>
    <hk:Transport>
        <hk:RVTransportCfg>
            <hk:service>7474</hk:service>
            <hk:network></hk:network>
            <hk:daemon>tcp:7474</hk:daemon>
        </hk:RVTransportCfg>
    </hk:Transport>
    <hk:SecurityPolicy></hk:SecurityPolicy>
</hk:DomainTransport>
```

Admin Agent Configurations

All the required configuration parameters are stored in the following files:

- hawk-domain-transport-cfg.xml
- logback-config.xml
- hawk-tea-agent.properties

These files are located in the <*CONFIG_FOLDER*>/hawkteaagent/config directory. The following options can be configured:

Table 2 Admin Agent Properties Options

Parameter	Default Value	Description
hawk.tea.agent.hostname	localhost	Admin Agent host name. In the case of remote connection, use IP Address instead of DNS/Host Name.
hawk.tea.agent.port	8701	Admin Agent port.
auto.config.tea.server.url	None	TEA server URL, where the Admin Agent automatically registers. In the case of remote TEA server, use the IP Address of the TEA server URL instead of DNS or Host Name. If you do not want to auto-register the Admin Agent with the TEA server then you should comment of this parameter out.
hawk.tea.agent.jdbc.user	None	The JDBC user.
hawk.tea.agent.jdbc.password	None	The JDBC password.
hawk.tea.agent.jdbc.url	jdbc:h2:tcp://localhost/~/hawk_tea_agent_db	The JDBC URL.
hawk.tea.agent.jdbc.pool.max.connection	30	The JDBC connection pool's maximum number of connections.
hawk.tea.agent.jdbc.pool.login.timeout	60	The JDBC pool connection login timeout in seconds.
hawk.highalert.perAgent.retention.count	100000	Maximum number of high alerts that an agent can retain before they are purged.
hawk.lowalert.perAgent.retention.count	100000	Maximum number of low alerts that an agent can retain before they are purged.
hawk.mediumalert.perAgent.retention.count	100000	Maximum number of medium alerts that an agent can retain before they are purged.
hawk.notification.perAgent.retention.count	100000	Maximum number of notifications that an agent can retain before they are purged.

Log Files Location Configuration

The Admin Agent uses logback for application logging. By default, the logs are generated under *CONFIG_FOLDER*/hawkteaagent/config/logback-config.xml. You can modify va']rious configuration parameters and change the default settings.

For example, the default configuration is as follows:

```
<configuration scan="true">

  <!-- Configure log location and filename. -->
  <property name="LOG_HOME" value=
     "<CONFIG_HOME>/tibco/cfgmgmt/hawkteaagent/logs" />
  <property name="LOG_FILE_NAME" value="hawk-tea-agent" />

     <appender name="STDOUT" class=
        "ch.qos.logback.core.ConsoleAppender">
       <!-- encoders are assigned the type
        ch.qos.logback.classic.encoder.PatternLayoutEncoder
        by default -->
          <encoder>
            <pattern>%date{dd MMM yyyy;HH:mm:ss.SSS} [%thread]
             %-5level%logger{36} - %msg%n</pattern>
          </encoder>
     </appender>

     <appender name="FILE"
          class="ch.qos.logback.core.rolling.RollingFileAppender">
          <file>${LOG_HOME}/${LOG_FILE_NAME}.log</file>
          <append>true</append>
          <rollingPolicy
           class="ch.qos.logback.core.rolling.FixedWindowRollingPo
                                                          licy">

          <fileNamePattern>${LOG_HOME}/${LOG_FILE_NAME}.%i.log</fi
                                                  leNamePattern>
          <minIndex>1</minIndex>
          <maxIndex>10</maxIndex>
          </rollingPolicy>

          <triggeringPolicy
            class="ch.qos.logback.core.rolling.SizeBasedTriggering
                                                        Policy">
            <maxFileSize>10MB</maxFileSize>
          </triggeringPolicy>
          <encoder>
            <pattern>%date{dd MMM yyyy;HH:mm:ss.SSS} [%thread]
              %-5level %logger{35} - %msg%n</pattern>
          </encoder>
     </appender>

     <!-- Define log levels for individual category -->
        <logger name="com.tibco.tea.agent.hawk" level="INFO" />
```

```
        <logger name="com.tibco.hawk" level="WARN" />
       <logger name="com.tibco.tea.agent.internal" level="ERROR" />
        <logger name="org.eclipse.jetty" level="ERROR" />


     <!-- Root logger -->
         <root level="INFO">
           <appender-ref ref="FILE" />
           <!-- <appender-ref ref="STDOUT" />-->
          </root>
</configuration>
```

Starting TIBCO Hawk Admin Agent

After successful installation of TIBCO Hawk and TIBCO Hawk Admin Agent, start the TIBCO Enterprise Administrator server and Admin Agent.

In order for the Hawk Admin Agent to auto-register with the TEA server, you must have an entry for the Admin Agent machine in the TEA server machine's host file as well as have an entry for the TEA server machine in the Hawk Admin Agent machine's host file.

1. **Procedure**Set the following directory locations in the `<TIBCO_HOME>\tea\agents\hawk\<version>\bin\tibhawkteaagent.tra` configuration file:

   `tibco.env.JVM_LIB_PATH=<path_to_the_jvm.dll_file>`

   `tibco.env.JVM_LIB_DIR=<path_to_JRE_installation>`

   `tibco.env.EMS_HOME=<EMS_HOME>/<version>`

   `tibco.env.RV_HOME=<RV_HOME>/<version>`

   `tibco.env.AS_HOME=<AS_HOME>/<version>`

   `tibco.env.HAWK_HOME=<TIBCO_HOME>/hawk/<version>`

   `tibco.env.HAWK_TEA_AGENT_HOME=<TIBCO_HOME>/tea/agents/hawk/<version>`

   `tibco.env.TIBCO_CONFIG_HOME=<path_to_the_configuration_folder>`

2. Start the TEA server. Navigate to the `<TIBCO_HOME>\tea\<version>\bin` directory and run `tea.exe`. For more information on TIBCO Enterprise Administrator, refer to the *TIBCO Enterprise Administrator documentation*.

3. Navigate to the `<TIBCO_HOME>\tea\agents\hawk\<Hawk_version>\bin` directory and run `tibhawkteaagent` to start Admin Agent..

4. To start working with the Admin Agent, follow these steps:

   a. In your browser's address box, enter a URL in the following format:

   http://<*IP address*>:<*port_number*>/tea

   where <*IP address*> is the address of the machine where the Admin Agent is installed and the default <*port_number*> is 8777.

   For example, http://localhost:8777/tea

The default port number and other settings can be changed by modifying the settings in `tea.conf` file that is located in the `<TIBCO_CONFIG_HOME>\tibco\cfgmgmt\tea\conf` folder.

b. On the login page, enter a valid user name and password. The default credentials are:

   Username: **`admin`**

   Password: **`admin`**

   Refer to the TEA documentation for password policies if you would like to change the password.

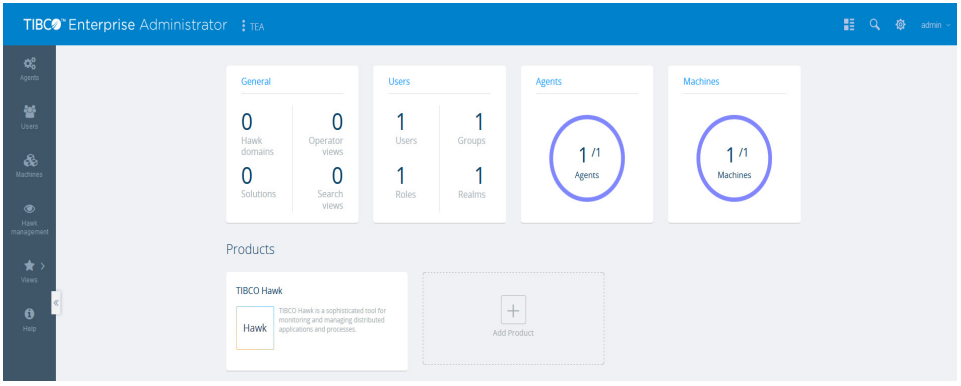
   On successful authentication, the landing page is displayed. The username with which you logged in is shown as a menu option in the title pane.

   The default timeout for a session is 30 minutes.

If the Admin Agent is registered with TEA, you should see the TIBCO Hawk product card after you log in to TEA.

Click the TIBCO Hawk product card to view the landing page for Hawk Admin Agent, see Admin Agent Landing Page on page 14.

Figure 1 TIBCO Enterprise Administrator Home Page



The Left Navigation Bar

The left navigation bar contains some icons that are links to the various views in TEA. Refer to the *TIBCO Enterprise Administrator User's Guide* for more information on them.

Chapter 3 TIBCO Hawk Admin Agent User Interface

TIBCO Hawk Admin Agent provides you various options to monitor and manage TIBCO Hawk using TIBCO Enterprise Administrator user interface.

Topics

- Admin Agent Landing Page, page 14
- Hawk Agents View, page 16
- Agent Description Page, page 17
- Alerts Page, page 19Microagents Page, page 21
- Microagents Page, page 21
- Rulebases Page, page 23
- Schedules Page, page 30

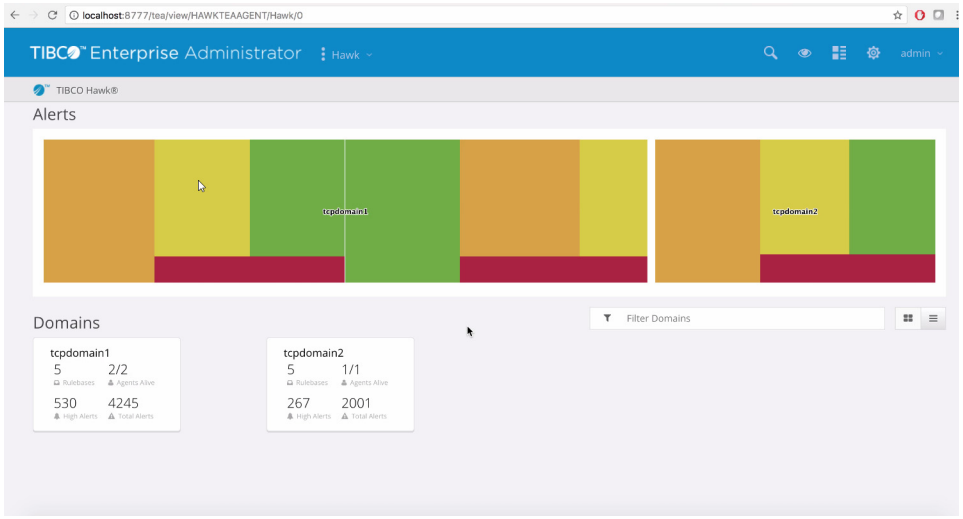
Admin Agent Landing Page

In the TIBCO Enterprise Administrator UI, click the TIBCO Hawk product card to view the landing page for TIBCO Hawk Admin Agent.

The page displays:

- TreeMap of the alerts for each Hawk domain
- Information cards for each domain

Figure 2 Admin Agent Landing Page



Alerts TreeMap

TreeMaps provides visual representations of all the alerts in Hawks and makes it easier to spot patterns. The tree branches are represented by rectangles and displays alert type by color. Individual cells in the map are the alert levels represented as different colors and the size of the individual cell is directly proportional to the number of alerts/notifications of that type.

The hierarchy in the Hawk alerts TreeMap is:

Hawk > Domains > Agents > Alert types

Thus, initially you will see alerts representation for Hawk separated by domains. Once you click on any domain, you can view alerts representation for that domain separated by Hawk agents. Now, when you click on any Hawk agent you can view the alerts representation for that agent. Each color identifies the alert type. If

you click on any alert type, the Alerts page for the selected Hawk agent is displayed with the **Severity** filter set for the selected alert type and the **Cleared** filter set to active. The Alerts page displays list of all the active alerts for that alert type for that agent.

The following are the legends of the Hawk alerts TreeMap:

- - High alert
- - Medium alert
- - Low alert
- - Notification

The TreeMap also displays the total number of alerts for the tree branch when you hover the mouse pointer over it.

Domain Card

The following information is displayed in each domain card:

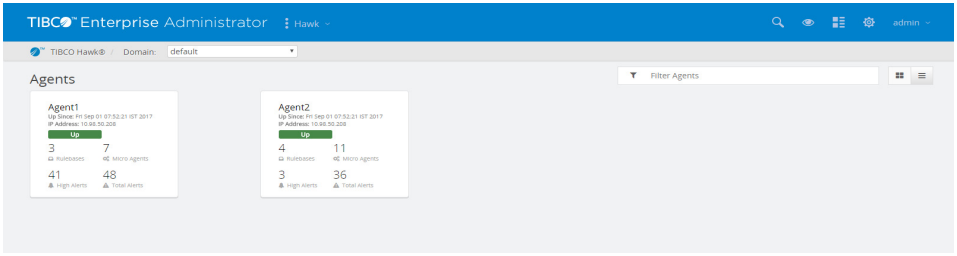
- Domain name.
- **Rulebases**: number of rulebases defined on the all agents in the domain
- **Agents Alive**: number of agents that are up and in a running state out of the total number of agents that belong to the domain.
- **High Alerts**: number of alerts with a '**`high`**' status that are generated for all agents in the domain.
- **Total Alerts**: total number of alerts generated for all agents in the domain.

For more details on any particular domain, click the domain card for that domain. See Hawk Agents View, page 16 for details.

Hawk Agents View

Click a Domain card to display the Hawk Agents page, which displays all the Hawk agents that belong to that domain.

Figure 3 Hawk Agents View



Each agent card in the Hawk Agents view displays the following details:

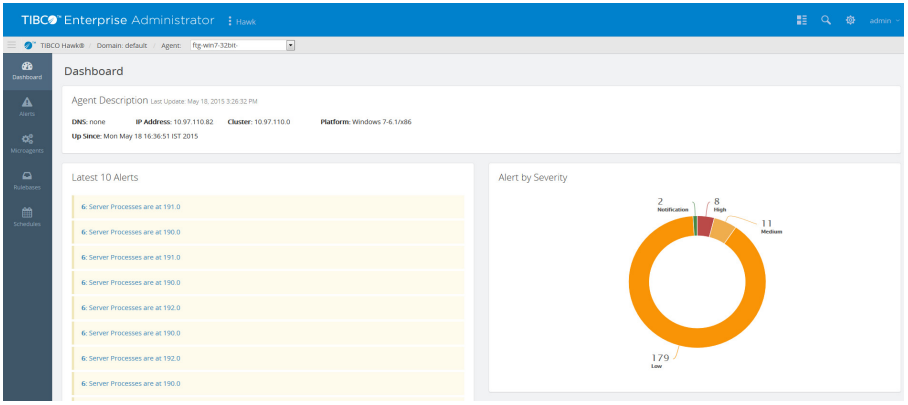
- Agent name.
- **Up Since**: the timestamp when the agent was started.
- **IP Address**: IP address of the agent machine.
- Status of the agent as **`Up`**, or **`Down`** button. You can click the **Up** button to open a dashboard view of the agent.
- **Rulebases**: displays the number of rulebases defined on the agent.
- **Micro Agents**: displays the number of Microagents for the agent.
- **High Alerts**: displays the number of alerts with the status '**`high`**' generated for the agent.
- **Total Alerts**: the total number of alerts generated for the agent.

To get more detailed description of the agent, click anywhere on the agent card. See Agent Description Page, page 17 for details.

Agent Description Page

To get a detailed description of an agent, click anywhere on the agent card in the Hawk Agents page. The Agent Description page is displayed. You can also get to this page by clicking the Dashboard icon on the left panel.

Figure 4 Agent Description

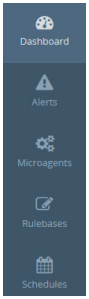


The Agent Description page displays the alert list as well as a pie chart representation of alerts. It displays the following details about the agent:

- **Last Update**: timestamp when the agent was last updated.
- **DNS**: DNS of the agent.
- **IP**: IP address of the machine on which it is running.
- **Cluster**: IP address of the cluster that the agent machine belongs to
- **Platform**: Operating system installed on the machine on which the agent is running.
- **Up Since**: Timestamp when the agent was started
- **Latest 10 Alerts**: details of the last 10 alerts that were generated for the selected agent.
- **Alert by Severity**: Displays a pie chart showing the number of `High`, `Medium`, `Low` and `Notification` status alerts.

The Agent Description page contains a left navigation panel. Click an icon in the left panel to get the specific details of the agent.

Figure 5 Hawk Agent Description: Left Panel

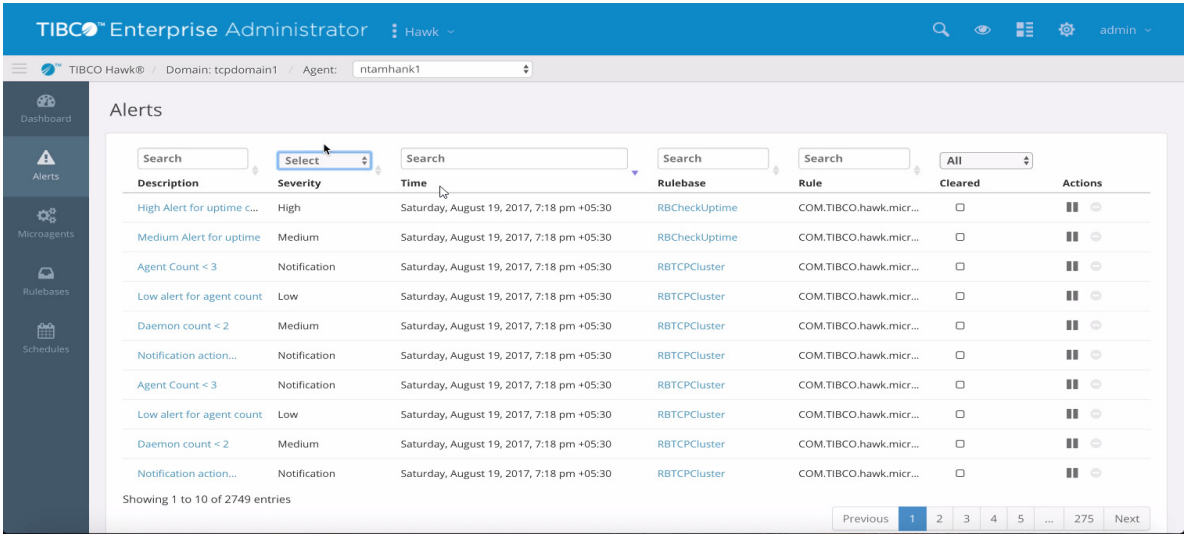


- **Dashboard** - The Dashboard icon takes you to the Agent Description page where you can see the details of the agent from which you clicked the Dashboard icon.
- **Alerts** - Click on the Alerts icon to open the Alerts details page, see Alerts Page on page 19.
- **Microagents** - Click on the Microagents icon to open the Microagent details page, see Microagents Page on page 21.
- **Rulebases** - Click on the Rulebases icon to open the Rulebases page, see Rulebases Page on page 23.
- **Schedules** - Click on the Schedules icon to open the Schedules details page, see Schedules Page on page 30.

Alerts Page

When you click the Alerts icon, you get the latest alerts in a tabular format for the selected agent.

Figure 6 Alerts



For each alert, the following details are provided and you can filter out the results based on these details:

- **Description:** a string that describes the alert.
- **Severity:** type of severity which can be one of High, Medium, Low, or Notification.
- **Time:** timestamp when the alert was generated. For filtering alerts based on their timestamp, you can use the use the date and time picker to select a range.
- **Rulebase:** name of the rulebase which generated this alert.
- **Rule:** name of the rule that triggered the alert.
- **Cleared:** specifies if the alert has been cleared or not. The check box is selected if the alert has been cleared.
- **Actions:** the action that you want to take on this alert. You can either Suspend (make it inactive) the alert for an specified amount of time or Delete it by clicking on the appropriate button in this column. You can delete only those alerts which have the **Cleared** check box selected.

Searching Across Alerts

You can search individual columns by using the Search box above that column or to search across all columns use the stand-alone Search box located on the top right of the page.

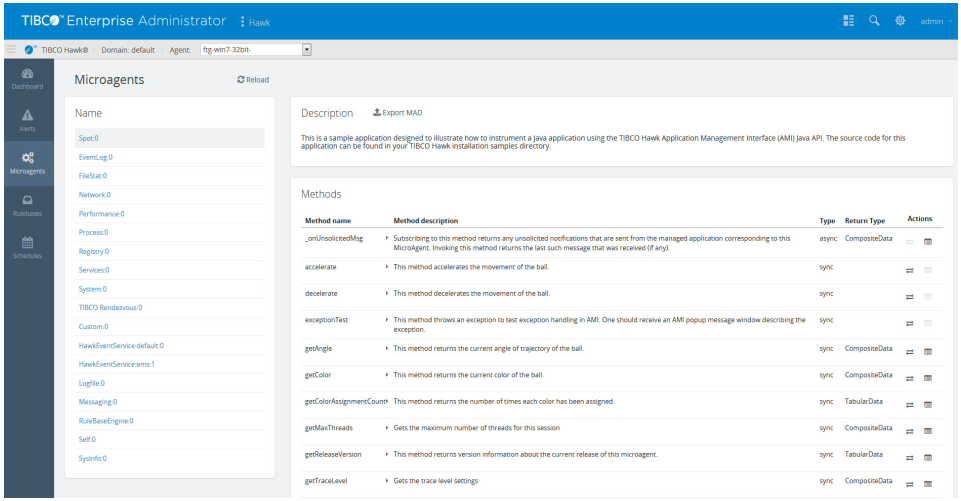
Alert, Rule, and Rulebase Details

To get the details of an alert or the details of the rulebase that triggered the alert, click its Description link or the Rulebase link. Alert details such as the Alert text and the Alert ID are displayed. Rulebase details such as the Rulebase name, its data source, the rule that triggered this alert, the rule description, action, and DataIndex are displayed.

Microagents Page

Each agent has a set of default microagents, that are discovered by agents when it is started. If you install and start an adapter or gateway, or instrument an application with AMI, microagents for these objects are dynamically added to the agent. When you click the Microagents icon, you can view microagents and their methods for any discovered TIBCO Hawk agents. For more details on microagents, see *TIBCO Hawk Concepts Guide*.

Figure 7 Microagents



You can click any microagent to get the following details:

Description: Displays the name and possibly some text describing the selected microagent. All the methods available for the selected microagent are displayed in a table in the panel beneath the description.

The following details for each method are displayed in a table:

- **Method Name**: Displays the name of the method.
- **Method Description**: Describes what the method does.
- **Type**: Subscription information is returned either synchronously, on a regular time schedule, or asynchronously, when data becomes available.
- **Return Type**: Data is returned as Tabular Data, or Composite data.

- **Action:**
  - **Invoke**: Use the Invoke mode to immediately view the results. Invoking is useful when you want to test a method before using it in a rule, or to check a return value for troubleshooting purposes. This example demonstrates the Invoke mode of operation.
  - **Subscribe**: Use the Subscribe mode to view the microagent method results over time. Creating a subscription is useful when you want to test a range of return values before specifying boundaries in a rule, or to identify general patterns of activity.

Exporting the Description for a Microagent

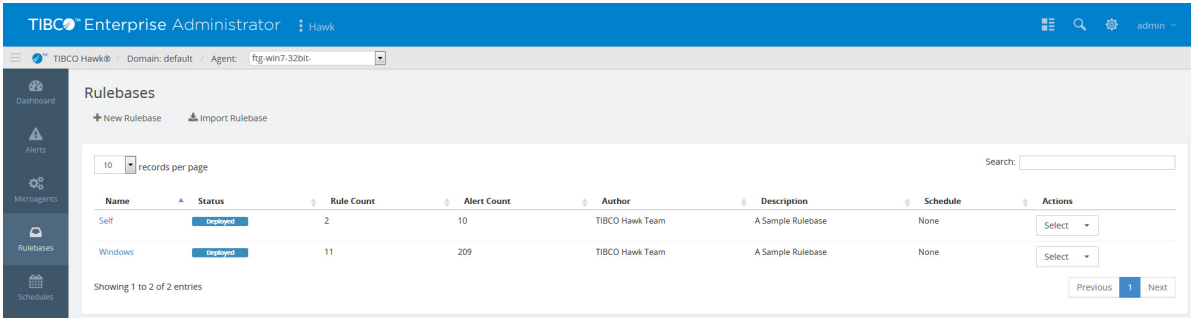
You can either view or download the microagent description to a file. Click the Export MAD link in the Description panel and select whether you want to open it or save the file locally.

Rulebases Page

A rulebase is a collection of one or more rules. A rule is a user-defined monitoring policy. It specifies the following:

- A data source in the form of a microagent method
- One or more tests that check for conditions
- One or more actions to perform if a test result is `true`.

Figure 8 Rulebases



The Rulebases page shows all the rulebases for the agent. You can select the number of rulebases displayed on a page by selecting 10, 25, 50 or 100 from the **records per page** drop-down menu.

The following information is displayed for each rulebase:

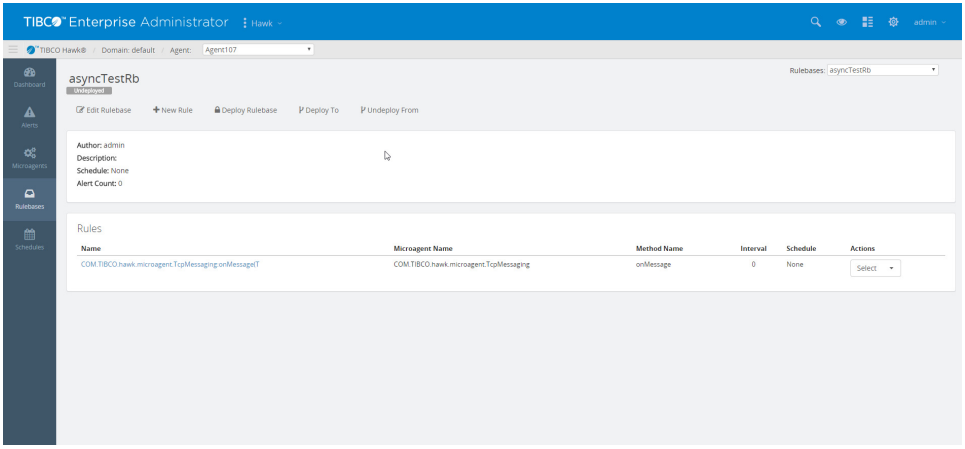
- **Name**: the name of the Rulebase
- **Status**: whether the rulebase is deployed or undeployed
- **Rule Count**: the number of rules in the Rulebase
- **Alert Count**: the number of alerts generated by the Rulebase on the agent
- **Author**: name of person or entity that created the Rulebase
- **Description**: text used to describe the Rulebase
- **Schedule**: the name of the schedule that is used by the Rulebase

- **Actions**: you can take the following actions on the Rulebase:
  - edit the rulebase
  - deploy the rulebase on the agent
  - delete the rulebase
  - export the rulebase to a `.hrb` file
  - derive a new rulebase based on an existing one
  - deploy the rulebase to an agent other than the agent on which the rulebase exists
  - undeploy the rulebase from an agent on which it was previously deployed

Rulebase Details Page

Click on a Rulebase name to see the details of the Rulebase. The page for a specific Rulebase displays the details of the Rules in that Rulebase in addition to its author, description, schedule used, and alert count.

Figure 9 Rulebase Details Page



The following information about the Rules is displayed:

Name: name of the rule. Click the rule name to open the Rule Details page, see Rules Details Page on page 25.

Microagent Name: name of the microagent that uses this rule

Method Name: name of the method to be invoked to retrieve data

Interval: interval in seconds between two subsequent method invocation

Schedule: schedule used by this rule

Actions: actions that can be taken on the rule are:

- Edit the rule
- Delete the rule
- Derive a new rule from this rule

Click a Rule name to see the details for the Rule.

You can also do the following from an individual Rulebase page by clicking on these links:

Edit Rulebase: edit or update name, description or schedules used in the Rulebase

New Rule: create a new rule in the Rulebase

Undeploy Rulebase: undeploy the Rulebase from the current agent

Get Alerts: get a list of the alerts that are generated by this Rulebase

Export Rulebase: export this Rulebase to a .hrb file on your local machine

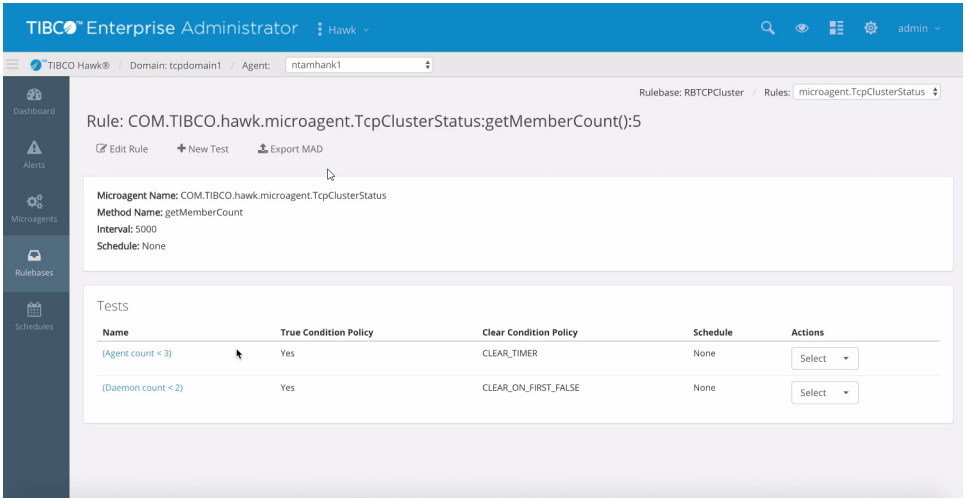
Deploy To: deploy this Rulebase to other agents

Undeploy From: undeploy the rulebase from an agent on which it was previously deployed

Rules Details Page

The Rule Details page provide details on the tests associated with the rule. You can also edit or create new tests for the rule.

Figure 10 Rule Details Page



Actions

The page contains the following buttons to take action on the rule:

- **Edit Rule** - Click the **Edit Rule** button to update the microagent name, method name, interval, and schedule for the rule.
- **New Test** - Click the **New Test** button to create a new test for the rule.
- **Export MAD** - Click the **Export MAD** button to export the microagent descriptor to the `.hmd` file.

Rule Information

The following fields are displayed for the rule:

- Microagent Name
- Method Name
- Interval
- Schedule

Test List

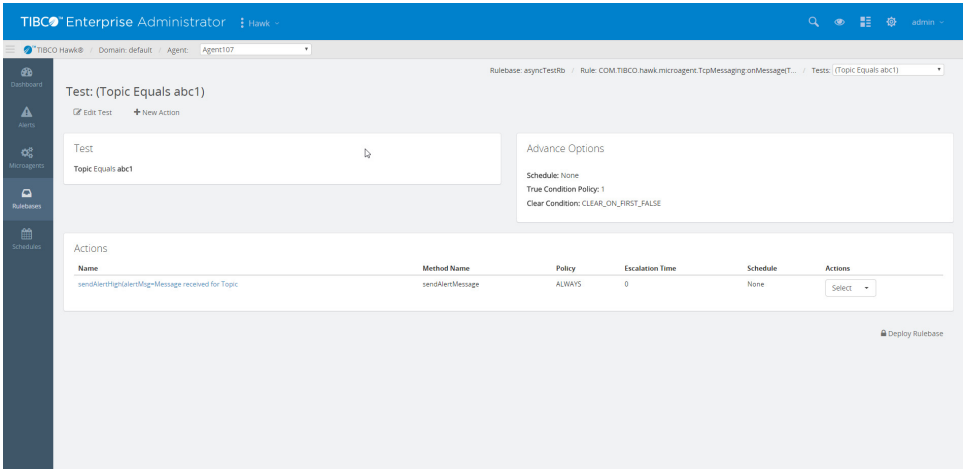
The page also displays the list of tests associated with the rule with some information about them. The following are the columns displayed for the tests list:

- **Name** - The name of the test. Click on the test name to open the Test Details page.
- **True Condition Policy** - Specifies if the true condition policy has been applied for the test. If the true condition policy has been applied, the action is triggered only after the test passed for the specified number (**True Count Threshold**) of test evaluations. The values are:
  - Yes
  - No
- **Clear Condition Policy** - Specifies the clear policy that is applied to the test. The values are:
  - `CLEAR_ON_FIRST_FALSE` - After the test becomes `true`, the test is cleared when the first time the test changes from `true` to `false`.
  - `CLEAR_TIMER` - After the test becomes `true` it remains `true` until the specified interval has passed without an additional `true` test.
  - `CLEAR_TEST` - After the test becomes `true`, it becomes false only when the specified clear test expression becomes `true`.
- **Schedule** - Specifies the schedule applied to the test.
- **Actions** - Specifies the list of action that you can take on the test. The following actions are available for the test:
  - Edit the test
  - Delete the test
  - Derive a new test from the selected test.

Test Details Page

The Test Details page provides information about the test and the actions associated with it.

Figure 11 Test Details Page



Actions

The page contains the following buttons to take action on the test:

- **Edit Test** - Click the **Edit Test** button to edit the test.
- **New Action** - Click the **New Action** button to create a new action for the test.
- **Deploy Rulebase** - Click the Deploy Rulebase button to deploy the rulebase directly from the Test Details page.

Test Information

The following fields are displayed for the test:

- Test name
- Schedule
- True Condition Policy
- Clear Condition

Action List

The page also displays the list of actions associated with the test with some information about them. The following are the columns displayed for the actions list:

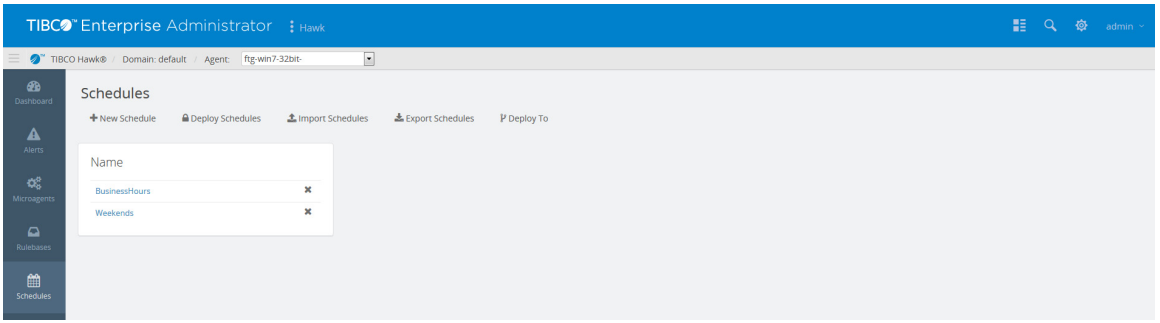
- **Name** - The name of the action. Click on the action name to open the Action Details page.

- **Method Name** - The method associated with the action type.
- **Policy** - Specifies how the action is performed.
- **Escalation Time** - Specifies the wait interval before the action is performed.
- **Schedule** - Specifies the schedule applied to the action.
- **Actions** - Specifies the list of operations that you can perform on the action. The following operations are available for the action:
  - Edit the action
  - Delete the action
  - Derive a new action from the selected action.

Schedules Page

The Admin agent allows you to create one or more schedules for when the rules should trigger.

Figure 12 Schedules



Adding and Deploying a New Schedule

You can create a new schedule and deploy it to a rulebase, a rule, or a condition within a rule.

Procedure

1. Click the **Schedules** icon in the left vertical pane. The Schedules page will open.
2. Click the **+New Schedule** link to open the Schedule dialog.
3. Enter a name for the schedule you are creating in the **Schedule Name** text box.
4. Select a time zone depending on the location of the machine from the **Time Zone** drop-down menu.
5. Click the **+Save** button. You should see your newly created schedule added on the Schedules page.
6. Click the name of your new schedule. You can specify the time, day, month, and year for the schedule by clicking the + sign in the Inclusion Periods box to specify the time period when you would like the system to apply the rule or rulebases depending on whether the conditions are met. Likewise, you can do the same by clicking the + sign in the Exclusions Periods when you would like the system to ignore the rules or rulebases.
7. Click Deploy Schedules to deploy the schedule to the agent.

8. (Optional) If you would like to deploy this schedule to another agent too, click **Deploy To** link and select the agents to which you would like to deploy the newly created schedule.

Importing and Exporting Schedules

You can export your existing schedules to a .hsf file on your local machine by clicking the **Export Schedules** link. This is helpful when you want to reuse the schedule on another agent. You can import your exported schedule into another agent by clicking the **Import Schedules** link on the Schedules page of the agent. It will save you the effort of recreating the schedules.