

RUNA WFE. Task Notifier Developer's guide.

Version 2.1

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Project structure

lib – additional libraries

nsis – build files

resources – application settings

resources/img – pictures for UI

src – project source files

Architecture

This application works with the RuneWFE system through two "channels": RMI and HTTP.

Authentication can be performed both over HTTP and RMI.

For HTTP you can use the following authentication methods: user name and password, NTLM, Kerberos (browser functionality is used).

For RMI you can use the following authentication methods: user name and password, Kerberos (Java GSS API).

For RMI the following two interfaces are used:

AuthenticationServiceDelegate (for authentication) and **ExecutionServiceDelegate** (to check new tasks).

This application performs two types of checking: periodic and requested. The former is performed after a timeout, the latter – on MouseOver events in the System tray.

The application is built with NSIS (NullSoft Installation System) to get an EXE file in the end.

Description of Classes

ru.runa.notifier.PlatformLoader

Start class of the application. When started, it shows a splash (a picture) in another Shell and after initialization it starts another Shell with support of system tray.

ru.runa.notifier.GUI

The main class of the application graphical shell. Creates a Browser and attaches event handlers to the three buttons in the top right corner of the screen.

ru.runa.notifier.tray.SystemTray

Provides support in system tray. Contains system tray event handlers.

ru.runa.notifier.tray.SystemTrayAlert

Implements a pop-up window near system tray. Contains functions for drawing this window. Called when it is necessary to notify the user about new tasks.

ru.runa.notifier.checker.TaskChecker

Provides periodical (TimerTask) or requested (SystemTray) checking of new tasks.

ru.runa.notifier.auth.LoginHelper

This class performs Kerberos authentication in a RuneWFE system. In case authentication fails, it displays a dialog window.

ru.runa.notifier.auth.LoginModuleResources

Used as container for kerberos_module.properties settings.

ru.runa.notifier.auth.LoginConfiguration

Configuration for authentication.

org.eclipse.swt.widgets.StrayItem

SWT message event handler class. Designed to respond to MouseOver events.

ru.runa.notifier.util.ExtendedThread

Used by the SystemTrayAlert class.

ru.runa.notifier.util.WidgetsManager

Helper class.

ru.runa.notifier.util.ResourcesManager

A class to load and store application.property values.

ru.runa.notifier.util.LayoutsManager

A helper class, used by the SystemTrayAlert class.

ru.runa.notifier.util.ImageManager

A manager class to handle images (load, unload).

Application Configuration

kerberos_module.properties

```
appName=com.sun.security.jgss.initiate
moduleClassName=com.sun.security.auth.module.Krb5LoginModule
useTicketCache=true
doNotPrompt=true
debug=false
serverPrincipal=WFServer
```

appName – login module name
moduleClassName – login module class
useTicketCache – whether to use cache for Kerberos tickets
doNotPrompt – do not use user input in any situation
debug – additional logging for authentication
serverPrincipal – login from the server side (configured in AD)

application.properties

All Russian values are specified in ANSI coding.

application.name, popup.newtasks, user.name, user.password, login.message,
retry.message, error.login, error.internal, popup.no.tasks, popup.tease,
popup.error, menu.open, menu.exit – localized user messages

server.url – server URL

(Example: <http://localhost:8080/wfe>)

login.relative.url – a starting page of the system (an authentication page)

(Examples:

/login.do – a form for entering user name and password;

/ntlm.do – NTLM authentication;

/ntlm.do – Kerberos authentication;

)

start.relative.url – a page with tasks

(Example: /manage_tasks.do?tabForwardName=manage_tasks)

check.tasks.timeout – Timeout for checking for new tasks, ms

check.tasks.min_interval – Minimal timeout for forced checking of new tasks, ms

authentication.type – sets authentication type for RMI (possible values are **userinput**, **kerberos**)

infopath.submit.button.name – The name of the button for running InfoPath form

infopath.submit.button.name – The name of the button for InfoPath form cancellation

(Only for username and password authentication)

userinput.default.login – default login name, recommended to left blank

userinput.default.password – default password, recommended to left blank