

eXo Platform 3.0 - Collaboration Functions

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Chapter 1. Applications

1.1. Portlets

1.1.1. Calendar Portlet

The Calendar Portlet is packaged in the Calendar.war file.

1.1.1.1. Description

Calendar Portlet shows the Calendar application of eXo Collaboration, that offers a lot of features to users.

The Calendar application includes the following features:

- Create multiple personal calendars, manage calendars easily with calendar groups.
- Quickly create an event or a task using the **Quick Add** dialog.
- Create events and tasks in details.
- Create all-day events.
- View other attender's availability schedules.
- Create recurring events.
- Get reminders.
- View calendars by various views: day, week, month and year .
- Quickly view events day by day by navigating the mini-calendar.
- Share calendars with others.
- Import/Export calendars.
- Publish your calendars with RSS, CalDAV.
- Search events/tasks in calendars.
- Print your agenda.

1.1.1.2. Portlet.xml

To see the portlet in the project, please follow this path:
/eXoApplication/calendar/webapp/src/main/webapp/WEB-INF/portlet.xml

1.1.2. Chatbar Portlet

The Chatbar Portlet is packaged in the Chatbar.war file.

1.1.2.1. Description

The Chatbar portlet shows the Chatbar application of eXo Collaboration that can be positioned in the portal or page layout as any other, but behaves as a floating box. The bar remains floating at its location even when browser window is scrolled or resized. It has a fixed height, but expands horizontally to whatever size is available in its container. This allows to place the portlet in two layout cases :

- Large width area (typically header or footer)
- Narrow column

Chat Bar application implements all functions of Chat application with the purpose of allowing user to send and receive messages anywhere after he has logged in.

The Chat Bar is a typical tool-bar with buttons that open menus. It gives access to main chat features :

- Status change and presence indicator
- Contacts
- Rooms
- Minimized conversation window

1.1.2.2. Portlet preferences

The Chatbar Portlet consists some preferences as in the following sample code:

```
<portlet-preferences>

    <preference>
        <name>showMailLink</name>
        <value>true</value> <!--true/false -->
        <read-only>false</read-only>
    </preference>

    <preference>
        <name>showCalendarLink</name>
        <value>true</value> <!--true/false -->
        <read-only>false</read-only>
    </preference>

    <preference>
        <name>showContactLink</name>
        <value>true</value> <!--true/false -->
        <read-only>false</read-only>
    </preference>

    <preference>
        <name>mailUrl</name>
        <value>portal/private/intranet/mail</value> <!--String page name-->
        <read-only>false</read-only>
    </preference>

    <preference>
        <name>calendarUrl</name>
        <value>portal/private/intranet/calendar</value> <!--String page name -->
        <read-only>false</read-only>
    </preference>

    <preference>
        <name>contactUrl</name>
        <value>portal/private/intranet/contact</value> <!--String page name-->
    </preference>

</portlet-preferences>
```

```

        <read-only>false</read-only>
    </preference>

    <preference>
        <name>info</name>
        <value>info</value> <!--this is only the key to get the resource bundle the full
        <read-only>true</read-only>
    </preference>
</portlet-preferences>

```

Table 1.1.

Preference Name	Possible Values	Default Values	Description
showMailLink	true / false	true	true or false value to let users see the application icon or not
showCalendarLink	true / false	true	true or false value to let user see the application icon or not
showContactLink	true / false	true	true or false value to let user see the application icon or not
mailUrl	string	Portal/private/intranet/page	page url to application page it come when you configuration page.xml and navigation.xml in portal no need to combine with %domain name : port% chatbar will resolve it from server
calendarUrl	string	Portal/private/intranet/page	page url to application page it come when you configuration page.xml and navigation.xml in portal no need to combine with %domain name : port% chatbar will resolve it from server
contactUrl	string	Portal/private/intranet/page	page url to application page it come when you configuration page.xml and navigation.xml in portal no need to combine with %domain name : port% chatbar will resolve it from server
info	Info	Info	This is only the key to get the resource bundle the full key : UIConfigForm.label.info

1.1.2.3. Portlet.xml

See the portlet in the project following this path:
/eXoApplication/chatbar/webapp/src/main/webapp/WEB-INF/portlet.xml

1.1.3. Chat Portlet

The Chat Portlet is packaged in the Chat.war file.

1.1.3.1. Description

The Chat Portlet shows the Chat application of eXo Collaboration that allows users to enter chat rooms and communicate with online others at real time.

1.1.3.2. Portlet.xml

See the portlet in the project following this path:
/eXoApplication/chat/webapp/src/main/webapp/WEB-INF/portlet.xml

1.1.4. Contact Portlet

Contact Portlet is packaged in the Contact.war file.

1.1.4.1. Description

Contact Portlet shows the Contact application of eXo Collaboration that allows users to personalize their contact view from different view types such as List view and VCards view.

1.1.4.2. Portlet.xml

See the portlet in the project following this path:
/eXoApplication/contact/webapp/src/main/webapp/WEB-INF/portlet.xml

1.1.5. Mail Portlet

The Mail Portlet is packaged in the Mail.war file.

1.1.5.1. Description

Mail Portlet shows the Mail application of eXo Collaboration that offers a lot of features to users such as sending, receiving or viewing their mails through Internet without actually downloading them to their computer. Users not only take advantages of eXo Mail by keeping and receiving all important messages, files and pictures forever but also by looking for and viewing their needed messages easily whenever they want. Additionally, eXo Mail is smoothly integrated with other Collaboration modules such as Address Book and Calendar.

1.1.5.2. Portlet.xml

See the portlet in the project following this path:
/eXoApplication/mail/webapp/src/main/webapp/WEB-INF/portlet.xml

1.1.6. RSSreader Portlet

The RSSreader Portlet is packaged in the Rssreader.war file.

1.1.6.1. Description

eXo Collaboration uses the RSS Reader Portlet that facilitates users to quickly get a view of their favorite feeds around the web. They will get the latest news, the last updated posts from their favorite blogs, latest emails, etc.

1.1.6.2. Portlet.xml

See the portlet in the project following this path:
/eXoApplication/content/webapp/src/main/webapp/WEB-INF/portlet.xml

1.2. Gadgets

eXo Collaboration consists of three gadgets: eventslist, tasklist and messageslist. They are packaged in the csResources.war file.

1.2.1. Eventslist

1.2.1.1. Description

Eventslist lists the maximum number of upcoming events, that is configurable by users. For example, they can set the preference list to 5 or 10 events.

1.2.1.2. Description of Preferences

See the preferences of this gadget in the following sample code:

```
<UserPref name="url" display_name="__MSG_baseurl__" datatype="string" value="/calendar" required="true"/>
  <UserPref name="subscribeurl" display_name="__MSG_subscribeurl__" datatype="string" value="/portal/rest/
  <UserPref name="limit" display_name="__MSG_limit__" default_value="10" datatype="string"/>
  <UserPref name="timeformat" display_name="__MSG_format__" default_value="AM/PM" datatype="enum" >
```

Details:

Table 1.2.

Preferences	Description
url	link to Calendar portlet
Subscribeurl	link to upcoming events
limit	The maximum number of upcoming events
timeformat	The time format for upcoming events

For more details on the preferences of gadgets, see [here](#)

1.2.1.3. Links to used REST services

It uses upcomingEvent service in the following package:
org.exoplatform.webservice.cs.calendar.CalendarWebservice.java

1.2.2. Tasklist

Tasklist list the maximum number of upcoming tasks that is configurable by users. For example, they can set the preference list to 5 or 10 tasks.

1.2.2.1. Description of Preferences

See the preferences of this gadget in the following sample code:

```
<UserPref name="setting" default_value="/calendar:/portal/rest/private/cs/calendar/upcoming:10:AM/PM:Default" data-bbox="95 315 1000 330"/>
```

Details: Setting: It collects all the configuration of upcoming tasks and add some more functions to help developers change the configuration of the default skin.

1.2.2.2. Links to used REST services

It uses upcomingEvent service in the following package:
org.exoplatform.webservice.cs.calendar.CalendarWebservice.java

1.2.3. Messageslist:

It lists the maximum number of unread messages, that is configurable by users.

1.2.3.1. Description of Preferences

See the preferences of this gadget in the following sample code:

```
<UserPref name="url" display_name="__MSG_baseurl__" datatype="hidden" value="/mail" required="true"/>
<UserPref name="subscribeurl" display_name="__MSG_subscribeurl__" datatype="hidden" value="/portal/rest/private/cs/calendar/upcoming:10:AM/PM:Default" data-bbox="95 642 1000 711"/>
<UserPref name="limit" display_name="__MSG_limit__" default_value="5" datatype="hidden"/>
<UserPref name="account" display_name="__MSG_account__" default_value="" datatype="hidden"/>
<UserPref name="folder" display_name="__MSG_folder__" default_value="" datatype="hidden"/>
<UserPref name="tag" display_name="__MSG_tag__" default_value="" datatype="hidden"/>
```

Details:

Table 1.3.

Preferences	Description
Url	The Url of Mail Application
Subscribeurl	link to upcoming messages
Limit	The number of displayed unread messages that is set by users

Preferences	Description
Account	The mail account in Mail application
Folder	The folder consists of unread messages
Tag	The tags in all unread messages

1.2.3.2. Links to used REST services

It uses unreadMail service in the following package: *org.exoplatform.webservice.cs.mail.MailWebservice.java*

Chapter 2. Configurations

2.1. Components in eXo Collaboration Configuration

This table shows some main components that take init-param in the applications of eXo Collaboration:

Table 2.1.

Applications	Components	Description
Calendar	CalendarServiceImpl	It is a service that manages calendars in the Calendar application of eXo Collaboration
Chat	HistoryImpl	It is a service that saves the chat history of users
	XMPPMessenger	It is a service that processes messages of chatters, basing on the XMPP Protocol
	DefaultPresenceStatus	It is a component that controls the presence status of chatters
Contact	ContactServiceImpl	It is a service that supplies functions to manage contacts in the Address Book application of eXo Collaboration
Webservice	AddActionsPlugin	It is used to register a listener for the actions on the nodes

2.1.1. CalendarService

The configuration of the Calendar application is applied mainly in */eXoApplication/calendar/service/src/main/resources/conf/portal/configuration.xml* Use the CalendarService to configure the Calendar. The following information will explain details of its configuration. When this configuration file is executed, the component named `org.exoplatform.calendar.service.impl.CalendarServiceImpl` will process the actions of the Calendar application.

```
<component>
  <key>org.exoplatform.calendar.service.CalendarService</key>
  <type>org.exoplatform.calendar.service.impl.CalendarServiceImpl</type>
  <init-params>
    <properties-param>
      <name>eventNumber.info</name>
      <property name="eventNumber" value="100"/>
    </properties-param>
  </init-params>
</component>
```

Details:

Table 2.2.

Properties-Param	Property name	Description	Possible Value	Default Value
eventNumber	eventNumber	The number of events in a calendar	interger	100

2.1.2. HistoryImpl

The configuration of historyImpl is found in the `/extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/chat/chat-service-configuration.xml`. When this configuration file is executed, the component named `org.exoplatform.services.xmlmpp.history.impl.jcr.HistoryImpl` initializes all the configured parameters.

```
<component>
  <type>org.exoplatform.services.xmlmpp.history.impl.jcr.HistoryImpl</type>
  <init-params>
    <value-param>
      <name>workspace</name>
      <value>collaboration</value>
    </value-param>
    <value-param>
      <name>repository</name>
      <value>repository</value>
    </value-param>
    <value-param>
      <name>path</name>
      <value>exo:applications/exoChat/history</value>
    </value-param>
  </init-params>
</component>
```

Details:

Table 2.3.

Value-Param	Description	Possible Values	Default Values
workspace	Workspace is the workspace name in JCR where history data is stored	string	collaboration
repository	Repository is the repository name in JCR where history data is stored	string	repository
path	Path is JCR path to the location where history data is stored	string	exo:applications/exoChat/history

2.1.3. XMPPMessenger

The configuration of the XMPPMessenger component is found in */extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/chat/chat-service-configuration.xml*. It helps eXo Collaboration connect the Openfire instance.

```
<component>
  <type>org.exoplatform.services.xmpp.connection.impl.XMPPMessenger</type>
  <init-params>
    <properties-param>
      <name>openfire-connection-conf</name>
      <property name="host" value="127.0.0.1" />
      <property name="port" value="5222" />
    </properties-param>
    <properties-param>
      <name>send-file</name>
      <property name="timeout" value="7200000" />
    </properties-param>
  </init-params>
</component>
```

Details:

Table 2.4.

Properties-param	Property name	Description	Possible Values	Default Values
openfire-connection-conf	host	IP address or hostname for the openfire server	string of integer	127.0.0.1
	port	port to connect to on the openfire server. Should be the same that set in openfire configuration "Client to Server"	string of integer	5222
send-file	timeout	timeout before aborting attempt to establish a file transfer	string of integer	7200000

2.1.4. DefaultPresenceStatus

The configuration of the DefaultPresenceStatus component is found in */extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/chat/chat-service-configuration.xml*

```
<component>
  <type>org.exoplatform.services.presence.DefaultPresenceStatus</type>
  <init-params>
    <properties-param>
      <name>presence-status</name>
      <property name="mode" value="Free to chat" />
    </properties-param>
  </init-params>
</component>
```

Details:

Table 2.5.

Properties-param	Property name	Description	Possible Values	Default Values	
presence-status	mode	It shows the present status of users	string	Free to chat	

2.1.5. ContactService

The configuration of the ContactService component is found in *eXoApplication/contact/service/src/main/resources/conf/portal/configuration.xml* when the server starts, the configuration file that contains the declaration of ContactService component is executed, after that a ContactService component is created with params and plug-ins in the configuration file.

```
<component>
  <key>org.exoplatform.contact.service.ContactService</key>
  <type>org.exoplatform.contact.service.impl.ContactServiceImpl</type>
  <init-params>
    <values-param>
      <name>UserCanSeeAllGroupAddressBooks</name>
      <description>User can see all GroupAddressBooks or only GroupAddressBooks that the user has at least one
      <value>>false</value>
    </values-param>
    <values-param>
      <name>NonPublicGroups</name>
      <description>Groups that should not be displayed in broadcast list. Wildcards may be used in groups name
    </values-param>
  </init-params>
</component>
```

Table 2.6.

Values-param	Description	Possible Values	Default Values
UserCanSeeAllGroupAddressBooks	User can see all GroupAddressBooks or only GroupAddressBooks that the user has at least one membership	true/false	false
NonPublicGroups	Groups that shouldn't be displayed in broadcast list. Wildcards may be used in groups name	true/false	N/A

2.2. External Component Plug-ins

Table 2.7.

Applications	Components	Description
Calendar	NewUserListener	It is a plug-in used to create default personal calendars
	NewGroupListener	It is a plug-in used to create default group calendars
	NewMembershipListener	It is plug-in used to share calendars to members of a specific group
	ReminderPeriodJob	It is a plug-in used to execute sending reminder emails to users
	PopupReminderPeriodJob	It is a plug-in used to open a pop-up reminder on the browser of users
	AddActionsPlugin	It is a plug-in that helps the systems automatically update the updated date of events / tasks in a calendar when the content of these events / tasks are changed
Chat	HistoryPeriodJob	It is a plug-in used to save the chat history of users
	RequestFilterComponentPlugin	It is used to delete the session of a user when he suddenly closes the browser or changes the session
	AuthenticationLoginListener	It is used to start the session and log in the chat server
	AuthenticationLogoutListener	It is used to end the session and log out the chat server
Contact	NewUserListener	It is used to create personal contact data for users
	NewMembershipListener	It is used to create address book for a specific group
	UpdateUserProfileListener	It is used to update the personal profile of a user when he changes it on the portal
Content	RSSContentPlugin	It is a formatter used to analyze the data from a RSS rsource
	DescriptionPlugin	It is a plug-in to represent the data from a RSS source
Mail	AuthenticationLogoutListener	It is a plug-in used to stop checking mails of a user when he logs out
Social Intergration	CalendarDataInitialize	It is a plug-in used to create a calendar for a group in a specific space

Applications	Components	Description
	ContactDataInitialize	It is a plug-in used to create an address book for a group in a specific space
	ContactSpaceActivityPublisher	It is a plug-in used to customize the activity status of a specific space when an event happens on a address book
	CalendarSpaceActivityPublisher	It is a plug-in used to customize the activity status of a specific space when an event happens on a calendar
	PortletPreferenceRequiredPlugin	It is a plug-in used to declare the application that will automatically create database

2.2.1. Calendar Configuration

2.2.1.1. NewUserListener

Each user can have a default personal calendar created. Use the NewUserListener to configure that. To use the plug-in in the component configuration, you must use the target-component:

```
<target-component>org.exoplatform.services.organization.OrganizationService</target-component>
```

The configuration is applied mainly in extension `/webapp/src/main/webapp/WEB-INF/cs-extension/cs/calendar/calendar-service-configuration.xml`

```
<component-plugin>
  <name>calendar.new.user.event.listener</name>
  <set-method>addListenerPlugin</set-method>
  <type>org.exoplatform.calendar.service.impl.NewUserListener</type>
  <description>description</description>
  <init-params>
<value-param>
  <name>defaultEventCategories</name>
  <value>Meeting,Calls,Clients,Holiday,Anniversary</value>
</value-param>
<value-param>
  <name>defaultCalendarCategory</name>
  <value>My group</value><!-- Single value-->
</value-param>
<value-param>
  <name>defaultCalendar</name>
  <value>Default</value>
</value-param>
<!--Params for default calendar setting-->
<value-param>
  <name>viewType</name>
  <value>1</value>
</value-param>

<value-param>
  <name>timeInterval</name>
  <value>15</value><!-- in minutes -->
</value-param>
```

```

<value-param>
  <name>weekStartOn</name>
  <value>2</value>
</value-param>

<value-param>
  <name>dateFormat</name>
  <value>MM/dd/yyyy</value>
</value-param>

<value-param>
  <name>timeFormat</name>
  <value>HH:mm</value> <!-- HH:mm/hh:mm a -->
</value-param>

<value-param>
  <name>localeId</name>
  <value>BEL</value>
</value-param>

<value-param>
  <name>timezoneId</name>
  <value>Europe/Brussels</value>
</value-param>

<value-param>
  <name>baseUrlForRss</name>
  <value></value>
</value-param>

<value-param>
  <name>isShowWorkingTime</name>
  <value>>false</value><!-- boolean true/false -->
</value-param>

<value-param>
  <name>workingTimeBegin</name>
  <value>08:00</value><!-- -->
</value-param>

<value-param>
  <name>workingTimeEnd</name>
  <value>18:00</value><!-- -->
</value-param>

<values-param>
  <name>ignoredUsers</name>
  <description>Definition users to ignore create default calendar</description>
  <!--
  <value>demo</value>
  <value>marry</value>
  -->
</values-param>
</init-params>
</component-plugin>

```

Explanation:

- **Name:** `calendar.new.user.event.listener` - unique key to avoid duplicate names. Users can change it.
- **Set-method:** `addListenerPlugin` - The function is executed at the target of the component to register `NewUserListener`.
- **Type:** `org.exoplatform.calendar.service.impl.NewUserListener` - The class is set up to execute the creation of database.
- **Description:** It is a plug-in used to create default personal calendars.

See the details about the init-params of the component in the following table:

Table 2.8.

Value-params	Description	Possible value	Default Value
defaultEventCategories	Default event categories for users	String (Comma separated list of category names)	Meeting, Calls, Clients, Holiday, An
defaultCalendarCategory	Name of the calendar group	String	Default
viewType	default view after user logins and goes to Calendar portlet	0-6 (see below)	1
timeInterval	the time unit interval when you drag and move the event (in Day view and Week view only)	integer in minutes	15
weekStartOn	day to use as the beginning of the week. only affect on Week view	1-7 (see below)	2
dateFormat	The display format for dates	valid Java Date format	MM/dd/yyyy
timeFormat	The display format for time	valid Java Date format	HH:mm
localeId	ID of the geographic locale	valid locale ID	BEL
timezoneIds	user time zone	valid TimeZone id	Europe
baseUrlForRss	the url to publish the RSS content	none	none
isShowWorkingTime	Indicate if the working time should be highlighted in day view	true/false	false
workingTimeBegin	the start time in working time	time in timeFormat	08:00
workingTimeEnd	the end time in working time	time in timeFormat	18:00
ignoredUsers	Definition users to ignore create default calendar	user id, use multiple by each line	demo/marry

viewType parameter is encoded by a number as follow:

0 : Day view

1 : Week view

2 : Month view

3 : Year view

4 : List view

5 : Schedule view

6 : Working days view

weekStartOn parameter is encoded as follow:

1 : Sunday

2 : Monday

3 : Tuesday

4 : Wednesday

5 : Thursday

6 : Friday

7 : Saturday

2.2.1.2. NewGroupListener

To use the plug-in in the component configuration, you must use the target-component:

```
<target-component>org.exoplatform.services.organization.OrganizationService</target-component>
```

The configuration is applied mainly in *extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/calendar/calendar-service-configuration.xml*

```
<component-plugin>
  <name>calendar.new.group.event.listener</name>
  <set-method>addListenerPlugin</set-method>
  <type>org.exoplatform.calendar.service.impl.NewGroupListener</type>
  <description>description</description>
  <init-params>
    <value-param>
      <name>defaultEditPermission</name>
      <value>*. *</value><!-- Multi value membership, use coma (,) to split values-->
    </value-param>
    <value-param>
      <name>defaultViewPermission</name>
      <value>*. *</value>
    </value-param>
    <value-param>
      <name>defaultLocale</name>
      <value>BEL</value>
    </value-param>
    <value-param>
      <name>defaultTimeZone</name>
      <value>Europe/Brussels</value>
    </value-param>
    <values-param>
      <name>ignoredGroups</name>
      <description>Definition group to ignore create default calendar</description>
```

```

        <!--
        <value>/platform/guests</value>
        -->
        <value>/spaces/*</value> <!-- single value, use more <value> tags to add more group -->
    </values-param>

    </init-params>
</component-plugin>

```

Explanation:

- **Name:** `calendar.new.group.event.listener` is the unique key to avoid duplicate names. Users can change it.
- **Set-method:** `addListenerPlugin` is the function is executed at the target of the component to register `NewGroupListener`.
- **Type:** `org.exoplatform.calendar.service.impl.NewGroupListener` is the class set up to execute the creation of database.
- **Description:** It is a plug-in used to create default group calendars.

See the details about the init-params of the component in the following table:

Table 2.9.

Value-params	Description	Possible values	Default values
defaultEditPermission	The default permission assigned to membership in a specific group to edit calendars and events /tasks of calendar	User id, (Multi value membership, use coma (,) to split values)	. means that all members in that group can modify and add, remove a calendar, events/tasks of the calendar
defaultViewPermission	The default permission assigned to membership in a specific group to view a calendar and events /tasks of the calendar.	User id (Multi value membership, use coma (,) to split values)	. means that all members in that group can view this calendar and all the events/tasks of this calendar.
defaultLocale	The default locale of the calendar	Valid locale id	BEL (see more locale ids http://userpage.chemie.fu-berlin)
defaultTimeZone	The default time zone of calendar	Valid timezone id	Europe/Brussels (see more for timeZone ids http://www.unicode.org/cldr/data)
ignoredGroups	Definition group to ignore create default calendar	Group id (use line to define multiple value)	/platform/guests

2.2.1.3. NewMembershipListener

To use the plug-in in the component configuration, you must use the target-component:

```
<target-component>org.exoplatform.services.organization.OrganizationService</target-component>
```

The configuration is applied mainly in *extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/calendar/calendar-service-configuration.xml*

```
<component-plugin>
  <name>calendar.new.membership.event.listener</name>
  <set-method>addListenerPlugin</set-method>
  <type>org.exoplatform.calendar.service.impl.NewMembershipListener</type>
  <description>description</description>
</component-plugin>
```

Explanation:

- **Name:** calendar.new.membership.event.listener is the unique key to avoid duplicate names. Users can change it.
- **Set-method:** addListenerPlugin is the function is executed at the target of the component.
- **Type:** org.exoplatform.calendar.service.impl.NewMembershipListener is the class is set up to execute the creation of database.
- **Description:** It is a plug-in used to execute sending reminder emails to users.

2.2.1.4. ReminderPeriodJob

The Calendar application of eXo Collaboration can send event reminders by email by using the email reminder plug-in configuration. You will probably need to adjust this configuration to your own need. The feature is based on a periodic poll of the stored reminders.

You must use the following target component to use the plug-in in this configuration:

```
<target-component>org.exoplatform.services.scheduler.JobSchedulerService</target-component>
```

The configuration is applied in *extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/cs-configuration.xml*

```
<component-plugin>
  <name>RecordsJob</name>
  <set-method>addPeriodJob</set-method>
  <type>org.exoplatform.calendar.service.ReminderPeriodJob</type>
  <description>add e-mail reminder job to the JobSchedulerService</description>
  <init-params>
    <properties-param>
      <name>job.info</name>
      <description>save the monitor data periodically</description>
      <property name="jobName" value="ReminderJob"/>
      <property name="groupName" value="CollaborationSuite"/>
      <property name="job" value="org.exoplatform.calendar.service.ReminderJob"/>
      <property name="repeatCount" value="0"/>
      <property name="period" value="180000"/>
    </properties-param>
  </init-params>
</component-plugin>
```

```

    <property name="startTime" value="+0"/>
    <property name="endTime" value=""/>
  </properties-param>

</init-params>
</component-plugin>

```

Explanation:

- **Name:** RecordsJob is the name of a schedule job. Keep this value.
- **Set-method:** addPeriodJob is the plug-in registering method. Keep this value.
- **Type:** org.exoplatform.calendar.service.ReminderPeriodJob is a class that executes to transfer the data into database of Job Scheduler.
- **Description:** Add email reminder job to the JobSchedulerService.

See the details about the init-params of the component in the following table:

Table 2.10.

Properties-param	Description	Property names	Description	Possible values	Default values
job.info	save the monitor data periodically	jobName	The name of job	String	ReminderJob
		groupName	The name of group job	String	CollaborationSuite
		job	The name of actual job class	Class path	org.exoplatform.calendar
		repeatCount	how many times to run this job	Long	0, (use '0' which means 'run forever')
		period	the time interval (millisecond) between job executions	Long	180000
		startTime	The time the job starts to run	Integer	+0
		endTime	The time the job ends to run	Integer	none

2.2.1.5. PopupReminderPeriodJob

You must use the following target component to use the plug-in in this configuration:

```
<target-component>org.exoplatform.services.scheduler.JobSchedulerService</target-component>
```

The configuration is applied in `extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/cs-configuration.xml`

```
<component-plugin>
  <name>PopupRecordsJob</name>
  <set-method>addPeriodJob</set-method>
  <type>org.exoplatform.calendar.service.PopupReminderPeriodJob</type>
  <description>add popup reminder job to the JobSchedulerService</description>
  <init-params>
    <properties-param>
      <name>job.info</name>
      <description>save the monitor data periodically</description>
      <property name="jobName" value="PopupReminderJob"/>
      <property name="groupName" value="CollaborationSuite"/>
      <property name="job" value="org.exoplatform.calendar.service.PopupReminderJob"/>
      <property name="repeatCount" value="0"/>
      <property name="period" value="6000"/>
      <property name="startTime" value="+0"/>
      <property name="endTime" value=""/>
    </properties-param>
    <properties-param>
      <name>popupreminder.info</name>
      <description>save the monitor data periodically</description>
      <property name="portalName" value="portal"/>
    </properties-param>
  </init-params>
</component-plugin>
```

Explanation:

- **Name:** PopupRecordsJob is the name of the job. Keep this value.
- **Set-method:** addPeriodJob is the plug-in registering method. Keep this value.
- **Type:** org.exoplatform.calendar.service.PopupReminderPeriodJob is a class that executes to transfer the data into database of Job Scheduler.
- **Description:** Add popup reminder job to the JobSchedulerService.

See the details about the init-params of the component in the following table:

Table 2.11.

Properties-param	Description	Property names	Description	Possible values	Default values	
job.info	Save the monitor data periodically	jobName	The name of job	String	PopupReminderJob	
		groupName	The name of group job	String	CollaborationSuite	
		job	The name of actual job class	Class path	org.exoplatform.calendar.service.PopupReminderJob	
		repeatCount	How many times to run this job	Long	0, (use '0' which means 'run forever')	

Properties-parameter	Description	Property names	Description	Possible values	Default values	
		period	The time interval (millisecond) between job executions	Long	6000	
		startTime	The time the job starts to run	Long	+0	
		endTime	The time the job ends to run	Integer	None	
popupremindersinfo	info the monitor data periodically	portalName	The name of the portal	String	portal	##

2.2.2. AddActionsPlugin

The configuration of the AddActionsPlugin is found in *WEB-INF/cs-extension/cs/webservice/webservice-configuration.xml*. It is used to register the listener named `org.exoplatform.webservice.cs.LastUpdateAction` and it is executed basing on eventTypes.

```

<component>
  <type>org.exoplatform.services.jcr.impl.ext.action.SessionActionCatalog</type>
  <component-plugins>
    <component-plugin>
      <name>Last Update Action</name>
      <set-method>addPlugin</set-method>
      <type>org.exoplatform.services.jcr.impl.ext.action.AddActionsPlugin</type>
      <description>add actions plugin</description>
      <init-params>
        <object-param>
          <name>actions</name>
          <object type="org.exoplatform.services.jcr.impl.ext.action.AddActionsPlugin$ActionsConfig">
            <field name="actions">
              <collection type="java.util.ArrayList">
                <value>
                  <object type="org.exoplatform.services.jcr.impl.ext.action.ActionConfiguration">
                    <field name="eventTypes"><string>addNode,changeProperty</string></field>
                    <field name="nodeTypes"><string>exo:calendarEvent</string></field>
                    <field name="actionClassName"><string>org.exoplatform.webservice.cs.LastUpdateAction</string></field>
                  </object>
                </value>
              </collection>
            </field>
          </object>
        </object-param>
      </init-params>
    </component-plugin>
  </component-plugins>
</component>

```

- **object-param:** Actions is the name of the object.
- **object type:** `org.exoplatform.services.jcr.impl.ext.action.AddActionsPlugin$ActionsConfig` is a

class used to register the following field names in the table below:

Table 2.12.

Field name	Description	String
eventTypes	The type of the event	addNode, changeProperty
nodeTypes	The type of the node	exo:calendarEvent
actionClassName	The registration class to execute the actions that the plug-in requires	org.exoplatform.webservice.cs.LastUpdate

2.2.3. Chat Configuration

The Chat configuration is applied in `/extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/chat/chat-service-configuration.xml`

2.2.3.1. HistoryPeriodJob

```
<external-component-plugins>
  <target-component>org.exoplatform.services.scheduler.JobSchedulerService</target-component>
  <component-plugin>
    <name>ChatRecordsJob</name>
    <set-method>addPeriodJob</set-method>
    <type>org.exoplatform.services.xmpp.connection.impl.HistoryPeriodJob</type>
    <description>add chat messages from Openfire Server to History</description>
    <init-params>
      <properties-param>
        <name>job.info</name>
        <description>save the monitor data periodically</description>
        <property name="jobName" value="messageToHistoricalMessageJob" />
        <property name="groupName" value="CollaborationSuite" />
        <property name="job"
          value="org.exoplatform.services.xmpp.connection.impl.HistoryJob" />
        <property name="repeatCount" value="0" />
        <property name="period" value="3000" />
        <property name="startTime" value="+0" />
        <property name="endTime" value="" />
      </properties-param>
      <properties-param>
        <name>history.info</name>
        <description>save the monitor data periodically</description>
        <property name="logBatchSize" value="50" />
      </properties-param>
    </init-params>
  </component-plugin>
</external-component-plugins>
```

Explanation:

- **Name:** ChatRecordsJob is the name of the job. Keep this value.
- **Set-method:** addPeriodJob is the plug-in registering method. Keep this value.
- **Type:** org.exoplatform.services.xmpp.connection.impl.HistoryPeriodJob is a class that executes to transfer the data into the database of Job Scheduler.
- **Description:** It is used to save chat messages from Openfire Server to History

See the details about the init-params of the component in the following table:

Table 2.13.

Properties-param	Description	Property names	Description	Possible values	Default values
job.info	save the monitor data periodically	jobName	The name of job	String	messageToHistoricalMessage
		groupName	The name of group name	String	CollaborationSuite
		job	The name of actual job class	Class path	org.exoplatform.services
		repeatCount	How many times to run this job	integer	0 (use '0' which means 'run forever')
		period	The time interval (millisecond) between job executions	Long	3000
		startTime	The time the job starts running.	Long	+0
		endTime	The time the job ends running.	Long	none
history.info	save the monitor data periodically	logBatchSize	The maximum number of messages in the cache are saved once the job runs.	Integer	50

2.2.3.2. RequestFilterComponentPlugin

```

<external-component-plugins>
  <target-component>org.exoplatform.services.rest.impl.RequestHandlerImpl</target-component>
  <component-plugin>
    <name>ws.rs.request.filter</name>
    <set-method>addPlugin</set-method>
    <type>org.exoplatform.services.rest.impl.RequestFilterComponentPlugin</type>
    <init-params>
      <value-param>
        <name>RESTXMPPServiceFilter</name>
        <value>org.exoplatform.services.xmpp.rest.filter.RESTXMPPServiceFilter</value>
      </value-param>
    </init-params>
  </component-plugin>
</external-component-plugins>

```

Explanation:

- **Name:** `ws.rs.request.filter` is the name of the filter. Keep this value.
- **Set-method:** `addPlugin` is the plug-in registering method. Keep this value.
- **Type:** `org.exoplatform.services.rest.impl.RequestFilterComponentPlugin` is a class that executes the requests of the plugin.
- **Description:** It is used to delete the session of a user when he suddenly closes the browser or changes the session.

See the details about the init-params of the component in the following table:

Table 2.14.

Value-param	Description	Possible value	Default value
RESTMPPServiceFilter	The name of filter	Class path	<code>org.exoplatform.services.xmpp.re</code>

2.2.3.3. AuthenticationLoginListener and AuthenticationLogoutListener

Two functions: login and logout of XMPPRestService is responsible for creating a new XMPPSessionImpl and destroying an existed XMPPSessionImpl. They can be called by listeners: AuthenticationLoginListener, AuthenticationLogoutListener or from client(browser) through Rest protocol (jabberLogin, jabberLogout in UIMainChatWindow.js). You must use the same target component for two external component plug-ins:

```
<target-component>org.exoplatform.services.listener.ListenerService</target-component>
```

2.2.3.3.1. AuthenticationLoginListener

```
<component-plugin>
  <name>exo.core.security.ConversationRegistry.register</name>
  <set-method>addListener</set-method>
  <type>org.exoplatform.services.xmpp.connection.impl.AuthenticationLoginListener</type>
  <description>description</description>
</component-plugin>
```

Explanation:

- **Name:** `exo.core.security.ConversationRegistry.register` is the name of plug-in.
- **Set-method:** `addListener` is the plug-in registering method. Keep this value.
- **Type:** `org.exoplatform.services.xmpp.connection.impl.AuthenticationLoginListener` is a class to execute the requests of the plug-in.
- **Description:** It is used to start the session and log in the chat server.

2.2.3.3.2. AuthenticationLogoutListener

```
<component-plugin>
  <name>exo.core.security.ConversationRegistry.unregister</name>
  <set-method>addListener</set-method>
  <type>org.exoplatform.services.xmpp.connection.impl.AuthenticationLogoutListener</type>
  <description>description</description>
</component-plugin>
```

Explanation:

- **Name:** `exo.core.security.ConversationRegistry.unregister` is the name of plug-in.
- **Set-method:** `addListener` is the plug-in registering method. Keep this value.
- **Type:** `org.exoplatform.services.xmpp.connection.impl.AuthenticationLogoutListener` is a class to execute the requests of the plug-in.
- **Description:** It is used to end the session and log in the chat server.

2.2.4. Contact Configuration

The Contact Application is configured by three external component plug-ins: `NewUserListener`, `NewMembershipListener` and `UpdateUserProfileListener`. They use the same target component:

```
<target-component>org.exoplatform.services.organization.OrganizationService</target-component>
```

The Contact configuration is found in *extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/contact/contact-service-configuration.xml*

2.2.4.1. NewUserListener

```
<component-plugin>
  <name>contact.new.user.event.listener</name>
  <set-method>addListenerPlugin</set-method>
  <type>org.exoplatform.contact.service.impl.NewUserListener</type>
  <description>description</description>
</component-plugin>
```

Explanation:

- **Name:** `contact.new.user.event.listener` is the name of listener.
- **Set-method:** `addListenerPlugin` is the plug-in registering method. Keep this value.
- **Type:** `org.exoplatform.contact.service.impl.NewUserListener` is a class that executes all the requires of the plug-in.
- **Description:** It is used to initialize personal contact data for users.

2.2.4.2. NewMembershipListener

```
<component-plugin>
  <name>contact.new.membership.event.listener</name>
  <set-method>addListenerPlugin</set-method>
  <type>org.exoplatform.contact.service.impl.NewMembershipListener</type>
  <description>description</description>
</component-plugin>
```

Explanation:

- **Name:** contact.new.membership.event.listener is the name of the listener.
- **Set-method:** addListenerPlugin is the plug-in registering method. Keep this value.
- **Type:** org.exoplatform.contact.service.impl.NewMembershipListener is a class that executes all the requires of the plug-in.
- **Description:** It is used to initialize an address book for a specific group.

2.2.4.3. UpdateUserProfileListener

```
<component-plugin>
  <name>contact.new.userprofile.event.listener</name>
  <set-method>addListenerPlugin</set-method>
  <type>org.exoplatform.contact.service.impl.UpdateUserProfileListener</type>
  <description>description</description>
</component-plugin>
</external-component-plugins>
```

Explanation:

- **Name:** contact.new.userprofile.event.listener is the name of the listener.
- **Set-method:** addListenerPlugin is the plug-in registering method. Keep this value.
- **Type:** org.exoplatform.contact.service.impl.UpdateUserProfileListener is a class that executes all the requires of the plug-in.
- **Description:** It is used to update the personal profile of a user when he changes it on the portal.

2.2.5. Content Configuration

The Content application such as RSS reader of eXo Collaboration is configured by two external component plug-ins: RSSContentPlugin and DescriptionPlugin Both the external components plug-ins use the same target component:

```
<target-component>org.exoplatform.content.service.ContentDAO</target-component>
```

This content configuration is applied in *extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/content/content-service-configuration.xml*

2.2.5.1. RSSContentPluginDescriptionPlugin.

```
<component-plugin>
  <name>rssreader.listener</name>
  <set-method>addPlugin</set-method>
  <type>org.exoplatform.content.service.RSSContentPlugin</type>
  <description>rss reader plugin</description>
</component-plugin>
```

Explanation:

- **Name:** `rssreader.listener` is the name of the listener.
- **Set-method:** `addPlugin` is the plugin registering method. Keep this value.
- **Type:** `org.exoplatform.content.service.RSSContentPlugin` is a class extending `ContentPlugin` and implements `loadContentMeta` method to get content items.
- **Description:** It is a formater used to analyze the data from a RSS resource.

2.2.5.2. DescriptionPlugin

```
<component-plugin>
  <name>description.listener</name>
  <set-method>addPlugin</set-method>
  <type>org.exoplatform.content.service.DescriptionPlugin</type>
  <description>Description plugin</description>
</component-plugin>
```

Explanation:

- **Name:** `description.listener` is the name of the listener.
- **Set-method:** `addPlugin` is the plug-in registering method. Keep this value.
- **Type:** `org.exoplatform.content.service.DescriptionPlugin` is a class that executes all the requires of the plug-in.
- **Description:** It is a plug-in to represent the data from a RSS source.

2.2.6. Mail Configuration

2.2.6.1. AuthenticationLogoutListener

In the Mail application of eXo Collaboration, when a user check messages for one account, the remote mailbox fetch is performed as a background job. Before CS 1.2, the job was continuing until all messages had been retrieved or when the user stopped the check through the UI. Hence, even when a user was not logged in, the background job was continuing. This can be resource intensive for the server if many users have large mailboxes.

Since CS 1.2, we added the capability to halt the background job when the user session terminates (logout or time out). It makes CS more friendly with server resources. If you want to activate this feature, you need to add a bunch of xml configuration in `/extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/mail/mail-service-configuration.xml`:

```

<external-component-plugins>
  <target-component>org.exoplatform.services.listener.ListenerService</target-component>
  <component-plugin>
    <name>exo.core.security.ConversationRegistry.unregister</name>
    <set-method>addListener</set-method>
    <type>org.exoplatform.mail.service.AuthenticationLogoutListener</type>
    <description>description</description>
  </component-plugin>
</external-component-plugins>

```

Explanation:

- **Name:** `exo.core.security.ConversationRegistry.unregister` is the name of listener.
- **Set-method:** `addListener` is the plug-in registering method. Keep this value.
- **Type:** `org.exoplatform.mail.service.AuthenticationLogoutListener` is a class that executes all the requires of the plug-in.
- **Description:** It is a plug-in used to stop checking mails of a user when he logs out.

2.2.7. Social Integration Configuration

The Social Integration Configuration is applied in `/extension/webapp/src/main/webapp/WEB-INF/cs-extension/cs/social-integration/social-integration-configuration.xml`

2.2.7.1. CalendarDataInitialize

```

<external-component-plugins>
  <target-component>org.exoplatform.social.core.space.spi.SpaceService</target-component>
  <component-plugin>
    <name>CalendarDataInitialize</name>
    <set-method>addSpaceListener</set-method>
    <type>org.exoplatform.cs.ext.impl.CalendarDataInitialize</type>
    <init-params>
      <value-param>
        <name>portletName</name>
        <value>CalendarPortlet</value>
      </value-param>
    </init-params>
  </component-plugin>
</external-component-plugins>

```

Explanation:

- **Name:** `CalendarDataInitialize` is the name of plug-in.
- **Set-method:** `addSpaceListener` is the plug-in registering method. Keep this value.
- **Type:** `org.exoplatform.cs.ext.impl.CalendarDataInitialize` is a class that executes all the requires of the plug-in.
- **Description:** It is used to initialize a calendar for a group in a specific space.

See the details about the init-params of the component in the following table:

Table 2.15.

value-param	Description	Possible value	Default value
portletName	The name of the portlet	String	CalendarPortlet

2.2.7.2. ContactDataInitialize

```

<external-component-plugins>
  <target-component>org.exoplatform.social.core.space.spi.SpaceService</target-component>
  <component-plugin>
    <name>ContactDataInitialize</name>
    <set-method>addSpaceListener</set-method>
    <type>org.exoplatform.cs.ext.impl.ContactDataInitialize</type>
    <init-params>
      <value-param>
        <name>portletName</name>
        <value>ContactPortlet</value>
      </value-param>
    </init-params>
  </component-plugin>
</external-component-plugins>

```

Explanation:

- **Name:** ContactDataInitialize is the name of the plug-in.
- **Set-method:** addSpaceListener is the plug-in registering method. Keep this value.
- **Type:** org.exoplatform.cs.ext.impl.ContactDataInitialize is a class that executes all the requires of the plug-in.
- **Description:** It is a plug-in used to initialize an address book for a group in a specific space.

See the details about the init-params of the component in the following table:

Table 2.16.

value-param	Description	Possible value	Default value
portletName	The name of the portlet	String	ContactPortlet

2.2.7.3. ContactSpaceActivityPublisher

```

<external-component-plugins>
  <target-component>org.exoplatform.contact.service.ContactService</target-component>
  <component-plugin>
    <name>ContactEventListener</name>
    <set-method>addListenerPlugin</set-method>
    <type>org.exoplatform.cs.ext.impl.ContactSpaceActivityPublisher</type>
  </component-plugin>
</external-component-plugins>

```

Explanation:

- **Name:** ContactEventListener is the name of the plug-in.
- **Set-method:** addListenerPlugin is the plug-in registering method. Keep this value.
- **Type:** org.exoplatform.cs.ext.impl.ContactSpaceActivityPublisher is a class that executes all the requires of the plug-in.
- **Description:** It is a plug-in used to customize the activity status of a specific space when an event happens on a address book.

2.2.7.4. CalendarSpaceActivityPublisher

```
<external-component-plugins>
  <target-component>org.exoplatform.calendar.service.CalendarService</target-component>
  <component-plugin>
    <name>CalendarEventListener</name>
    <set-method>addEventListenerPlugin</set-method>
    <type>org.exoplatform.cs.ext.impl.CalendarSpaceActivityPublisher</type>
  </component-plugin>
</external-component-plugins>
```

Explanation:

- **Name:** CalendarEventListener is the name of the plug-in.
- **Set-method:** addEventListenerPlugin is the plug-in registering method. Keep this value.
- **Type:** org.exoplatform.cs.ext.impl.CalendarSpaceActivityPublisher is a class that executes all the requires of the plug-in.
- **Description:** It is a plug-in used to customize the activity status of a specific space when an event happens on a calendar.

2.2.7.5. PortletPreferenceRequiredPlugin

```
<external-component-plugins>
  <target-component>org.exoplatform.social.core.space.spi.SpaceService</target-component>
  <component-plugin>
    <name>portlets.prefs.required</name>
    <set-method>setPortletsPrefsRequired</set-method>
    <type>org.exoplatform.social.core.application.PortletPreferenceRequiredPlugin</type>
    <init-params>
      <values-param>
        <name>portletsPrefsRequired</name>
        <value>CalendarPortlet</value>
        <value>ContactPortlet</value>
      </values-param>
    </init-params>
  </component-plugin>
</external-component-plugins>
```

Explanation:

- **Name:** ortlets.prefs.required is the name of the plug-in.

- **Set-method:** `setPortletsPrefsRequired` is the plug-in registering method. Keep this value.
- **Type:** `org.exoplatform.social.core.application.PortletPreferenceRequiredPlugin` is a class that executes all the requires of the plug-in.
- **Description:** It is a plug-in used to declare the application that will automatically create database.

See the details about the init-params of the component in the following table:

Table 2.17.

value-param	Description	Possible value	Default value
portletsPrefsRequired	The name of plug-in added to <code>SpaceService</code>	String	<code>ContactPortlet</code> / <code>ContactPortlet</code>

2.3. eXo Chatserver Configuration

<http://wiki.exoplatform.org/xwiki/bin/view/CS/Chat%20Configuration>

2.3.1. Openfire Configuration

eXo CS 1.3 chat services is a Jabber engine powered by Openfire. eXo will delegate the actual Jabber protocol communication to Openfire.

You have full latitude to configure Openfire. There are two possible ways do it :

the admin console : <http://localhost:9090/> the `openfire.xml` file, in `$openfirehome/conf/`