Extend to use accounts which follow OAuth2 protocol

SuperMap iServer provides the OAuth2Client interface, which is used to follow the third-party login extension in OAuth2 protocol. The third party login: QQ, Sina Weibo and Renren. The QQ and Sina Weibo are the built-in login way of SuperMap iServer.

OAuth2Client interface introduction

com.supermap.services.security.OAuth2Client interface has following methods:

- getRedirectURI(String clientId, String state, String redirectUri);
  This method is used to get the jumping URL of OAuth.

- getAccessToken(String clientId, String clientSecret, String code, String redirectUri) throws IOException;
  This method is used to access Token.

- getUserId(String accessToken) throws IOException;
  This method is used to get the user ID.

- getUserInfo(String token, String clientId, String userId) throws IOException;
  This method is used to get the user information.
Extension and configuration flow

Here we have an example to show the extension. Use the Renren login method.

1. The implement class of Renren account login

Implement the RenRenLoginExtended class. Inherit from the OAuth2Client interface, as shown below:

```java
// Implement the RenRenLoginExtended class. Inherit from the OAuth2Client interface, as shown below:

public class RenRenLoginExtended implements OAuth2Client {
    // Implement the RenRenLoginExtended class.

    // The implement class of Renren account login
    public void login(String username, String password) {
        // Implement login functionality
    }
}
```

Copy the com folder that contains the compiled RenRenLoginExtended.class file to the SuperMap iServer Web application, that is %SuperMap iServer_HOME%/webapps/iserver/WEB-INF/classes (first create a classes folder in this directory).

2. Configuration of "Renren account"

Create a new extendedOAuth.xml file in the root directory of %SuperMap iServer_HOME%/webapps/iserver/WEB-INF, containing the followings:
The `<extendedOAuthSettings>` is the configuration set of third party login method extension. It can contain multiple `<extendedOAuthSetting>` labels. Each `<extendedOAuthSetting>` label corresponds to a third-party login extension configuration that follows the OAuth2 protocol. The contents in `<extendedOAuthSetting>` correspond to the configuration of ExtendedOAuthSetting:

- `<loginType>`: the extension login type. Here is the "RENREN".

- `<oAuthLoginResourceClass>`: the detailed implement class.

Add the following contents to the root node of iserver-system.xml, which is located in iServer_HOME%webapps/iserver WEB-INF:

```
<server>
  ...
  <OAuthConfigs>
    <OAuthConfig>
      <id>1</id>
      <enabled>true</enabled>
      <loginType>RENREN</loginType>
      <buttonText>Renren Login</buttonText>
      <clientId>7b75a49cc9524ba9641346f3723834b</clientId>
      <clientSecret>91274f0e345ca487c3b6661b</clientSecret>
      <redirectDomain>iserver.supermap.com</redirectDomain>
      <loginIcon>renren.png</loginIcon>
    </OAuthConfig>
  </OAuthConfigs>
```

The `<OAuthConfigs>` is the configuration set of third party login method. It can contain multiple `<OAuthConfig>` labels. Each `<OAuthConfig>` label corresponds to a configuration of the login method. The contents in `<OAuthConfig>` correspond to the configuration of OAuthConfig:
• `<id>`: the configuration ID that follows the OAuth2 protocol.

• `<enabled>`: whether to enable the third party login method.

• `<loginType>`: the third party login type that follows the OAuth2 protocol. Here it is "RENREN".

• `<buttonText>`: the button name displayed in the login interface. Here it is Renren Login.

• `<clientSecret>`: The AppSecret when applying the application. Here it is the Secret Key when apply the Renren account.

• `<clientID>`: The Appkey when applying the application. Here is the API KEY when apply the Renren account.

• `<redirectDomain>`: The callback domain name when applying the application. Here it is the "iserver.supermap.com".

• `<loginIcon>`: The login picture ID displayed in the login page. Here it is the "renren.png". This picture is located in ./staticFiles/img foder of iserver-all.jar in %SuperMap iServer_HOME%webapps/iserver/WEB-INF/lib. If `<loginType>` is QQ or Weibo, this label can be ignored.

`<oAuthMetas>` label represents the meta info (will be added to the HEAD label in the HTML codes in the first page ) used to verify website address. Extending the Renren account does not need to fill with in the meta data.
3. View the extension result

When you finish above steps, representing you have added the Renren login method. In the third party login configuration (http://iserver.supermap.com:8090/iserver/manager/security/oauthconfig), you can view the configuration. These information correspond to configuration in `<oAuthConfig>` label. Access the login page of iPortal, iServer or iExpress, you can see that the Renren account button is added. Please refer to Usage of Third-party Loogin for more information.

Usage of Third-party Loogin:

iPortal, iServer and iExpress not only support using the existing account to log in, but also support using the third-party account which uses OAuth2.0 protocol. Below will show how to use it in iServer.

iServer currently supports directly configuring QQ, Sina Weibo accounts login, also supports the use of other third-party accounts which follow OAuth2.0 protocol through extensions, please refer to: Extension for the use of other third-party accounts which follow OAuth2.0 protocol.

- Third-party account login configuration
  - Configure QQ account login
  - Configure Sina Weibo account login
- Log in with third-party accounts
Third-party account login configuration

Access iServer Manager, click Security>Third-party Configuration to get the configuration web page, and start to configure.

Configure QQ account login

- First, the iServer administrator needs to apply the APP ID and APP KEY parameters in http://connect.qq.com/login, for details please see: QQ website access instructions. Note: the administrator needs to copy the meta information which is used to verify the site address to the related text box to the configuration web page.

- Second, click "Add the third party login configuration" on the "Third-party login configuration" web page to open a dialog, fill APP ID, APP KEY and callback domain (the same one which is used to get APP ID and APP KEY), click OK to finish the QQ account login configuration.

- At last, the administrator can view the configured QQ account login way on the "Third-party login configuration" web page, also can delete, edit and start/stop the login way.

- The service domain provided by the administrator for the users must be identical with the related callback domain on "Third-party login configuration" web page.
Configure Sina Weibo account login

- First, the iServer administrator needs to apply the App Key and App Secret parameters in http://open.weibo.com/index.php, for details please see: Website access instructions. Note: the administrator needs to copy the meta information which is used to verify the site address to the related text box to the configuration web page.

- Second, click "Add the third party login configuration" on the "Third-party login configuration" web page to open a dialog, fill App Key, App Secret and callback domain (the same one which is used to get App Key and App Secret), click OK to finish the Sina Weibo login configuration.

- At last, the administrator can view the configured Sina Weibo account login way on the "Third-party login configuration" web page, also can delete, edit and start/stop the login way.

- The service domain provided by the administrator for the users must be identical with the related callback domain on "Third-party login configuration" web page.

Log in with third-party accounts

After the configuration, you can use the service domain (callback domain) to access the login page, view all the configured login ways, and use the third-party account to
login iPortal, iServer or iExpress. Below will introduce how to login iServer with QQ account.

Click the button QQ account login to pop up the login page, input the correct QQ account name and password. If it is the first time to use this login way, after clicking "Authorize and login", it will display the following dialog:

If you already have an iServer account, please click "binding iServer account" to bind QQ account and iServer account, next time you can use both of them to login iServer, and when you use the QQ account to login, it will grant you the same privileges with the iServer account role.

If you don't have an iServer account, or you don't want to bind iServer account and QQ account, please click Immediate login button. The user name will be a random string which can be viewed in the user management page(http://localhost:8090/iserver/manager/security/users). Note: If you don't bind the two accounts at the first time, you can only use QQ account to login iServer later on, and only can access the service instances.