ServiceNow Application Developer

Securing Applications Against Unauthorized Users > Exercise: Roles and Groups

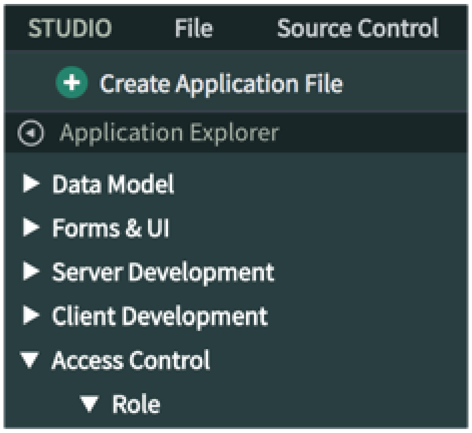
In this exercise you will create a role and two groups for the *NeedIt* application. You will add roles and group members to the groups.

Examine Application and Module Roles

1. If the *NeedIt* application is not open in Studio from the last exercise, open it now.
   a. In the main ServiceNow browser window use the Application Navigator to open **System Applications > Studio**.
   b. In the *Select Application* dialog, click the **NeedIt** application.

2. Determine if the application has an application file of type Role.

   a. In the Application Explorer, look for **Access Control > Role**.



   b. You should see one role. Make a note of the role name.

3. Determine if the application has a *User role* assigned to it.

   a. Open the **File** menu and select the **Settings** menu item.

   b. Scroll to the *User role* field. Does the field have a value?

   c. Close the *Application Settings* tab.

4. Determine if the Application Menu has a role assigned to it.

   a. In the Application Explorer, open **Navigation > Application Menu > NeedIt**.

   b. Examine the *Roles* field. Make a note of the role name.

   c. Close the *Application Menu* tab.

5. Examine the role(s) for the *NeedIt* modules.

   a. In the Application Explorer, open **Navigation > Module > All**.

   b. In the *Visibility* section, examine the *Role* field. Make a note of the module role.

   c. Look at the *Roles* field for the *Create New* and *Open* modules. Are all the roles the same?

Create a Role

Applications commonly have an application admin role in addition to an application user role. Application admins have access to modules that users do not. In this part of the exercise, you will create an admin role for the NeedIt application.

1. Create a role.

   a. In Studio, click the **Create Application File** link.

   b. In the *Filter...* field enter the text **Role** OR select **Access Control** from the categories in the left hand pane.

   c. Select **Role** in the middle pane as the file type, then click the **Create** button.

2. Configure the role:

   Suffix: **admin**

   Name: **(this value is automatically created)**

   Description: **admin role for the NeedIt application**

3. Click the **Submit** button.

Create Groups

1. Create a *NeedIt Users* group.

   a. In the main ServiceNow browser window (not Studio), use the Application Navigator to open **User Administration > Groups**.

   b. Click the **New** button.

   c. Configure the Group.

      Name: **NeedIt Users**

      Manager: **System Administrator**

      Group email: **needit.users@example.com**

      Description: **Group for NeedIt application users**

   d. Click the **Additional actions** menu ( ) and select the **Save** menu item.

      Do not click the *Submit* button because that will take you away from the form.

2. Add a role to the *NeedIt Users* group.

   a. In the *Roles* section, click the **Edit...** button.

   b. Type **x** in the search field to filter the roles. Only the first 100 roles are loaded into the slushbucket. You will not see the NeedIt roles in the slushbucket unless you filter.

   c. Click the **x_<your_company_code>_needit.needit_user** role.

   d. Click the **Add** button ( ) to add the role to the *Roles List* slushbucket.

   e. Click the **Save** button.

3. Add users to the *NeedIt Users* group.

   a. Switch to the **Group Members** section.

   b. Click the **Edit...** button.

   c. Use the slushbucket to add **Beth Anglin** and **Zane Sulikowski** to the *NeedIt Users* group.

   d. Click the **Save** button.

4. In the *Group* record, click the **Update** button to save the changes.

5. Create a *NeedIt Admins* group.

   a. In the main ServiceNow browser window (not Studio), use the Application Navigator to open **User Administration > Groups**.

   b. Click the **New** button.

   c. Configure the Group.

      Name: **NeedIt Admins**

      Manager: **System Administrator**

      Group email: **needit.admins@example.com**

      Parent: **NeedIt Users**

      Description: **Group for NeedIt application admins**

6. Click the **Additional actions** menu ( ) and select the **Save** menu item. Do not click the *Submit* button because that will take you away from the form.

7. Add a role to the *NeedIt Admins* group.

▶ **QUESTION**: There is already a role in the *Roles* section. Where did this role come from?

a. In the *Roles* section, click the **Edit...** button.

b. Type **x** in the search field to filter the roles. Only the first 100 roles are loaded into the slushbucket. You will not see the *NeedIt* roles in the slushbucket unless you filter.

c. Click the **x_<your_company_code>_needit.admin** role.

d. Click the **Add** button (>) to add the *x_<your_company_code>_needit.admin* role to the Roles List.

e. Click the **Save** button.

8. Add users to the *NeedIt Admins* group.

a. Switch to the **Group Members** section.

b. Click the **Edit...** button.

c. Use the slushbucket to add **Fred Luddy** and **Alissa Mountjoy** to the *NeedIt Admins* group.

d. Click the **Save** button.

9. In the *Group* record, click the **Update** button to save the changes.

▶ **QUESTION**: Why did you create the groups in the main ServiceNow browser window and not in Studio?

- **QUESTION**: The roles from the *NeedIt Users* group were inherited by the *NeedIt Admins* group. Were the *NeedIt User* group users also inherited?

Create and Modify Modules

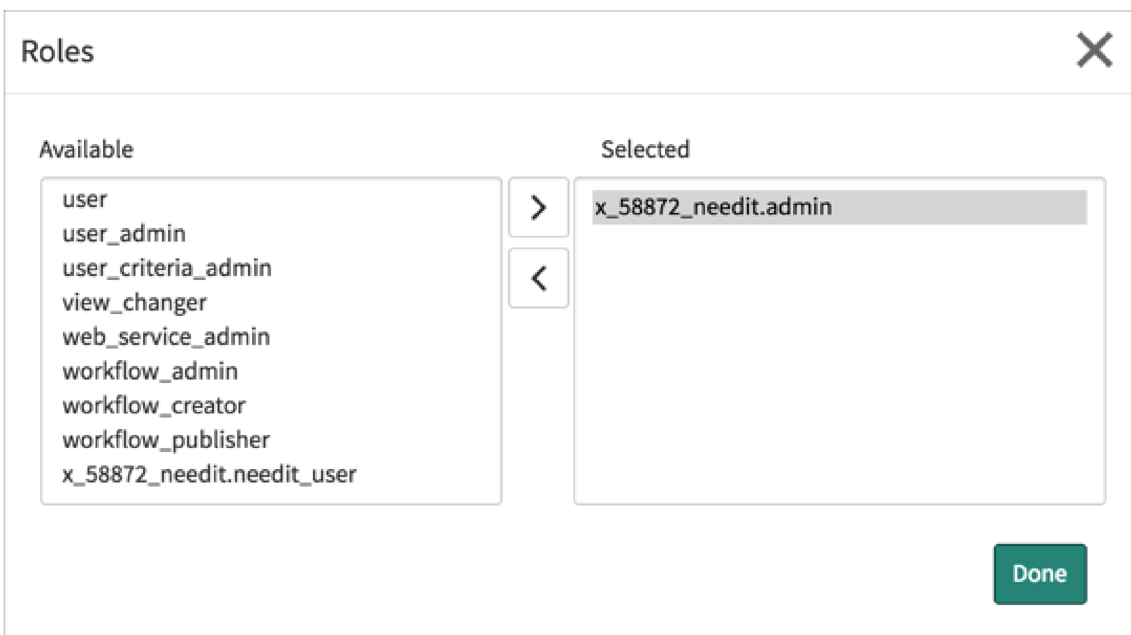
1. Make the *Open* module usable only by users with the *x_<your_company_code>_needit.admin* role.

   a. In Studio, use the Application Explorer to open **Navigation > Module > Open** for editing.

   b. In the *Visibility* section, click the **Edit User Roles** button ( ).

   c. In the *Selected* slushbucket, click the **x_<your_company_code>_needit.needit_user** role then click the **Remove** ( ) button.

   d. In the *Available* slushbucket, click **x_<your_company_code>_needit.admin** and then click the **Add** button ( ).



e. Click the **Done** button to close the *Roles* dialog.

f. In the *Module* record, click the **Update** button to save the changes.

2. Make the *All* module visible only by users with the *x_<your_company_code>_needit.admin* role.

3. Create a new module to dynamically display all NeedIt records for the currently logged in user.

   a. In Studio, click the **Create Application File** link.

   b. In the *Filter...* field enter the text **Module** OR select **Navigation** from the categories in the left hand pane.

   c. Select **Module** in the middle pane as the file, type then click the **Create** button.

   d. Configure the module:

      Title: **My NeedIt Requests**

      Application Menu: **NeedIt**

      Order: **150**

      Hint: **A list of my NeedIt Requests**

   e. In the *Visibility* section (tab) and click the **Edit** button ( ) for the *Roles* field.

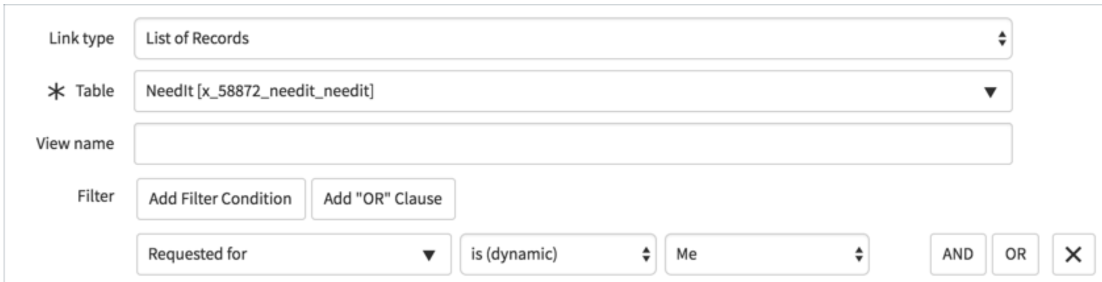
   f. Use the slushbucket to add the *x_<your_company_code>_needit.needit_user* role to the module.

g. Switch to the **Link Type** section (tab) and configure the options:

Link Type: **List of Records**

Table: **NeedIt [<scope value>_needit]**

Filter: **[Requested for] [is (dynamic)] [Me]**



4. Click the **Submit** button to save the module.

Testing

1. Configure three *NeedIt* requests for testing.

   a. In the main ServiceNow browser window, use the Application Navigator to open **NeedIt > All**.

   b. Open a *NeedIt* record and set the *Requested for* value to **Abel Tuter**.

   c. Click the **Update** button to save the changes.

   d. Open a second *NeedIt* record and set the *Requested for* value to **Beth Anglin**.

   e. Edit a third *NeedIt* record and set the *Requested for* value to **Fred Luddy**.

2. Examine *Abel Tuter*'s user record.

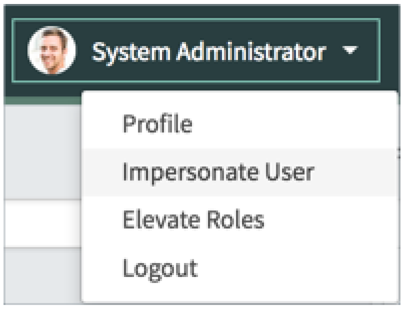
   a. In the main ServiceNow browser window, use the Application navigator to open **User Administration > Users**.

   b. In the *Users* list, click **abel.tuter**.

   c. Scroll to the *Roles* related list. Does Abel have any roles? Do you think Abel will be able to see the *NeedIt* application and its modules?

3. Impersonate *Abel Tuter* and test his access to the *NeedIt* application and modules.

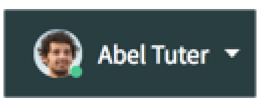
   a. In the main ServiceNow browser window, open the **User menu** by clicking your user name in the ServiceNow banner. Select the **Impersonate User** option.

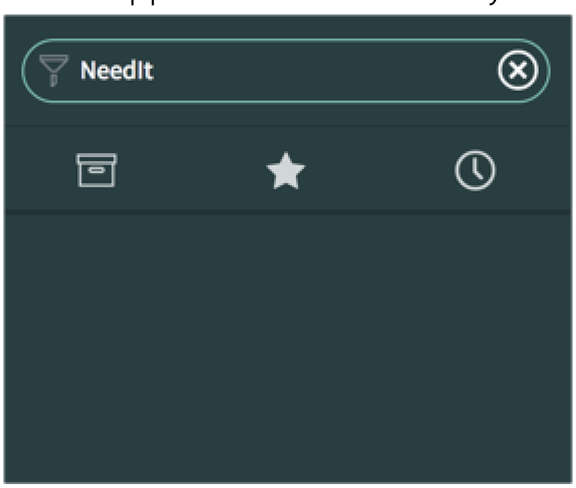
   b. In the *Search for user* field, type **Abel**.

   c. In the drop-down list, click **abel.tuter**.

   d. Examine the *User menu* in the ServiceNow banner. You should now be *Abel Tuter*.

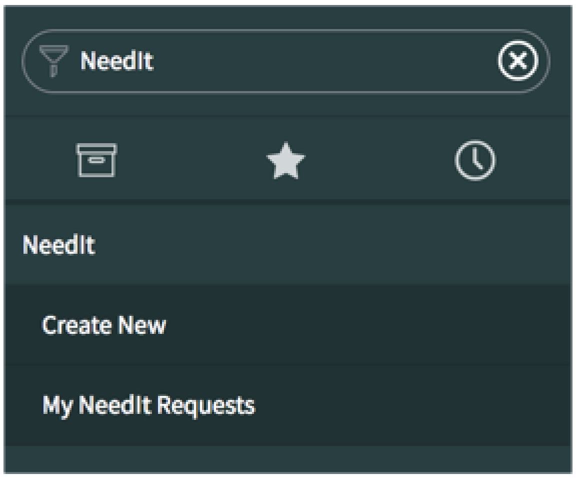
   e. In the Application Navigator filter field type **NeedIt**. Abel should not see the *NeedIt* application or modules. If you see something else, debug and re-test.

4. Do you think Beth Anglin can see the *NeedIt* application? If so, which modules should Beth be able to see?

   a. Test your prediction by impersonating **beth.anglin**.

   b. Beth should see the *NeedIt* application and two modules. If you see something else, debug and re-test.

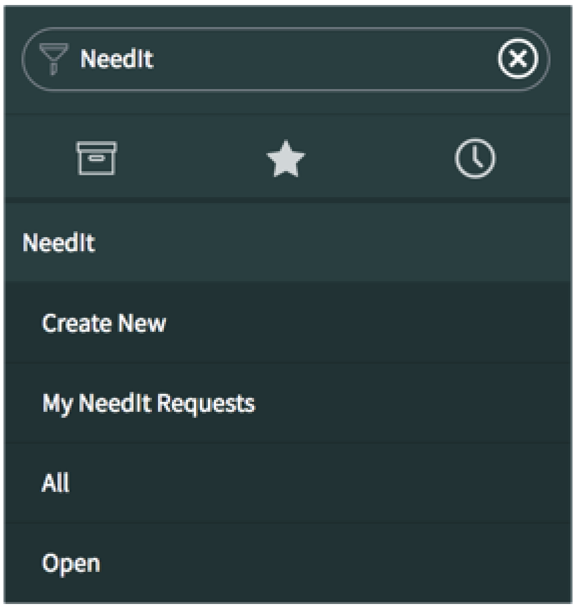
   

   c. Open the **My NeedIt Requests** module. Does Beth see only her *NeedIt* requests? If not, debug and re-test.

5. Do you think Fred Luddy can see the *NeedIt* application? If so, which modules should Fred be able to see?

   a. Test your prediction by impersonating **fred.luddy**.

   b. Fred should see the *NeedIt* application and all four modules. If you see something else, debug and re-test.

   c. Open the **All** module. Can Fred see all the *NeedIt* records? If not, debug and re-test.

   d. Open the **My NeedIt Requests** module. Does Fred see only his NeedIt requests? If not, debug and re-test.

6. Impersonate the **System Administrator** user.