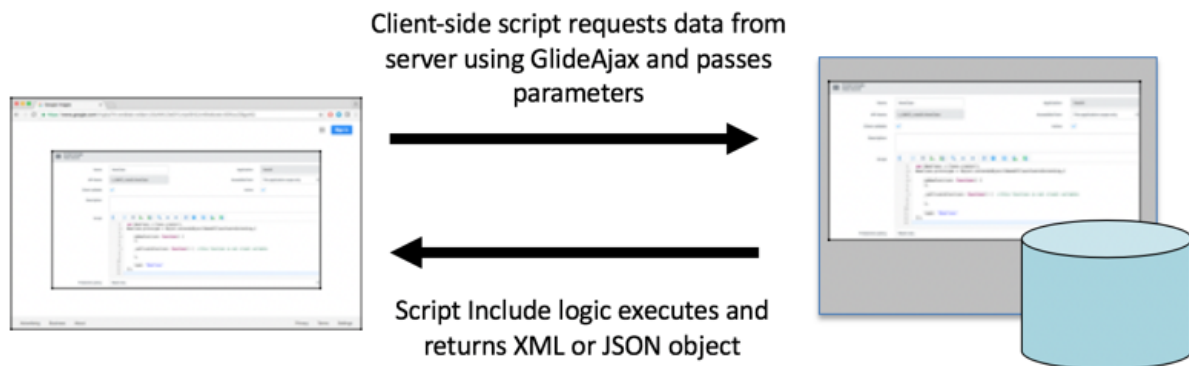


ServiceNow Application Developer

Server-side Scripting > Extending GlideAjax

The *GlideAjax* class is used by client-side scripts to send data to and receive data from the ServiceNow server. The client-side script passes parameters to the Script Include. The Script Include returns data as XML or a *JSON* object. The client-side script parses data from the response and can use the data in subsequent script logic.

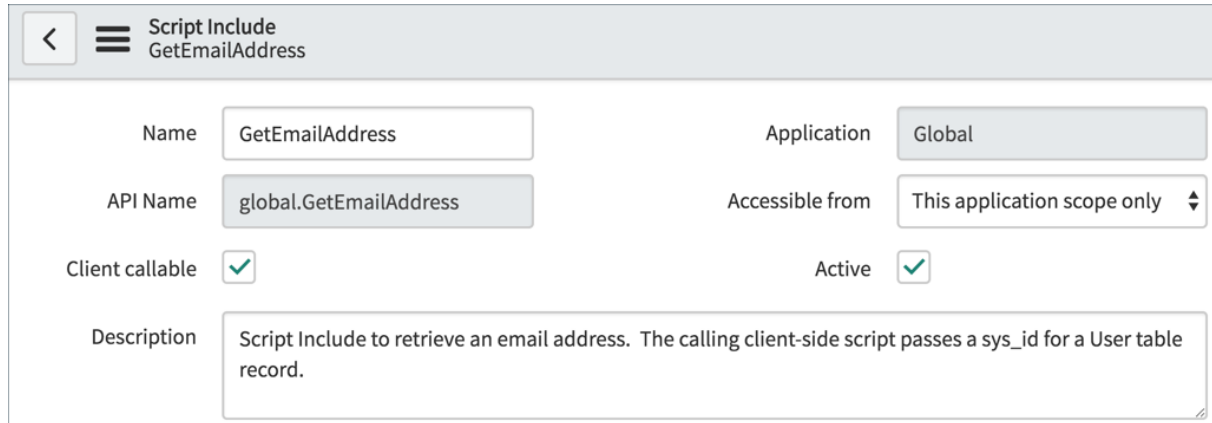


The *NeedIt* form has a reference field called *Requested for*. The *Requested for* field references a record on the *User [sys_user]* table. The *User* table has a column called *Email* which stores a User's email address. Recall that client-side scripts have access only to data from the fields on a form. Although the *NeedIt* form has a field that references the *User* table, it does not have access to the *Requested for*'s email address which is stored in the database. This example will extend the *GlideAjax* class. The new class will be passed a *sys_id* for the *User* table and will retrieve and pass back the user's email address.

GlideAjax is used by *g_form* methods like *getReference()*. The *getReference()* method is passed a *sys_id* and returns that record as a *GlideRecord*. The new class created in this demonstration is passed a *sys_id* and returns only an email address and not an entire record. Although the performance difference between returning an entire record and a single value may seem negligible, performance is based on all the calls occurring on a form and not a single call. If multiple scripts save time, the cumulative effect can be noticeable.

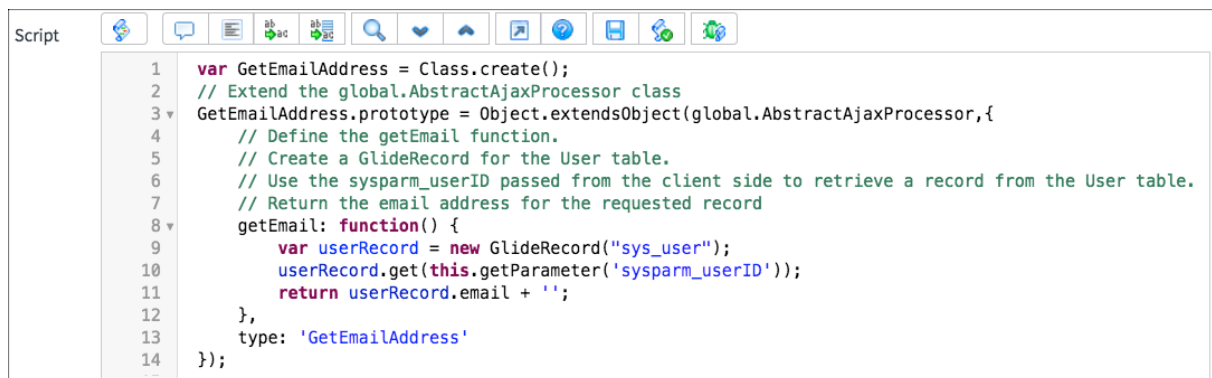
Script Include for Retrieving an Email Address

The Script Include must be client callable because it will be used by client-side scripts.



The screenshot shows the configuration form for a Script Include named 'GetEmailAddress'. The form is titled 'Script Include GetEmailAddress'. It has several fields: 'Name' is 'GetEmailAddress', 'Application' is 'Global', 'API Name' is 'global.GetEmailAddress', 'Accessible from' is 'This application scope only', 'Client callable' is checked, and 'Active' is checked. The 'Description' field contains the text: 'Script Include to retrieve an email address. The calling client-side script passes a sys_id for a User table record.'

The *AbstractAjaxProcessor* class is part of the *Global Scope*. The *GetEmailAddress* Script Include is in the *NeedIt* scope. To extend the *AbstractAjaxProcessor*, the class must be prepended by the scope: *global.AbstractAjaxProcessor*. The new class defines a method called *getEmail*.

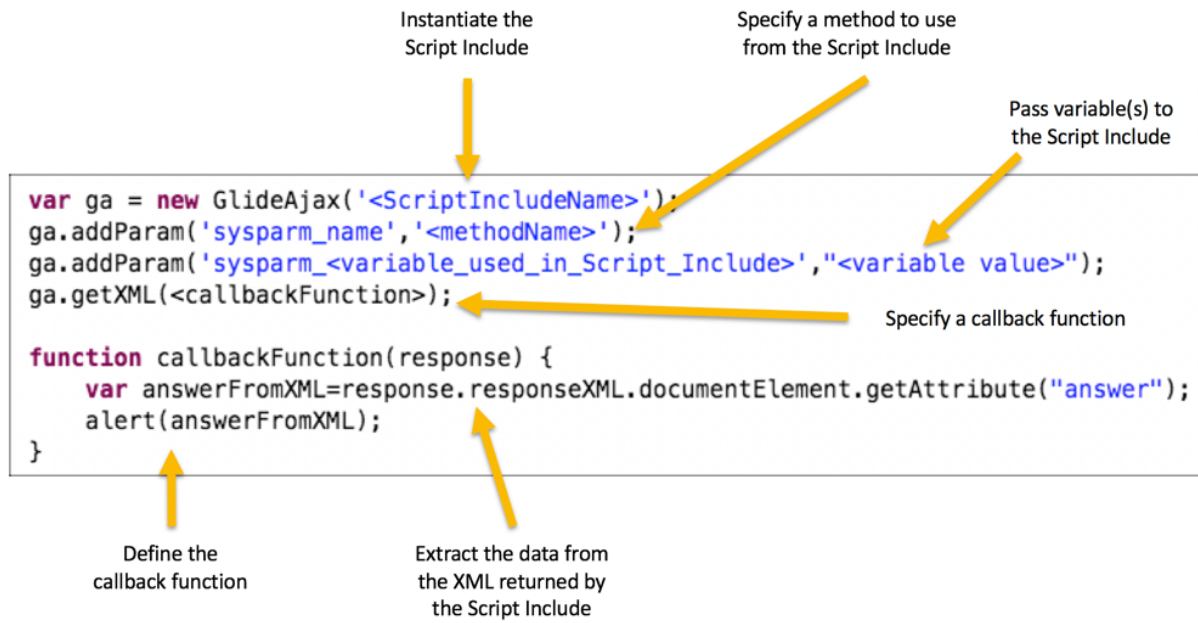


```
Script
1  var GetEmailAddress = Class.create();
2  // Extend the global.AbstractAjaxProcessor class
3  GetEmailAddress.prototype = Object.extend(Object.prototype, {
4    // Define the getEmail function.
5    // Create a GlideRecord for the User table.
6    // Use the sysparm_userID passed from the client side to retrieve a record from the User table.
7    // Return the email address for the requested record
8    getEmail: function() {
9      var userRecord = new GlideRecord("sys_user");
10     userRecord.get(this.getParameter('sysparm_userID'));
11     return userRecord.email + '';
12   },
13   type: 'GetEmailAddress'
14 });
```

The syntax *this.getParameter('sysparm_<parameter_name>')* means to get the value of the parameter passed in from the client-side script. In this example, *sysparm_userID* contains the *sys_id* of a *User* table record.

Client-side Script for Using the GetEmailAddress Script Include

Any in-scope client-side script can use Script Includes which extend the *AbstractAjaxProcessor*. The generalized syntax is:



The first call to `addParam()` should be for the parameter `sysparm_name` and should pass as the value the name of the server-side method you want to call. Use `addParam` to pass user-defined parameters starting with `sysparm_` and their values. Users can create their own `sysparm_` variables except `sysparm_name`, `sysparm_type`, `sysparm_function`, and `sysparm_value`.

The `getXML` method sends the server a request to execute the method and parameters associated with this `GlideAjax` object. The server processes the request asynchronously and returns the results via the function specified as the callback function. This example, which uses a callback function, is asynchronous meaning that the user's screen is not frozen while the script waits for a response to come back from the server. Asynchronous `GlideAjax` is recommended over synchronous.

The callback function is passed the response back from the server. The script logic extracts the return value from the response. Subsequent script logic can use the extracted value.

The example shows the client-side logic for using the `GetEmailAddress` Script Include:

```
Script
1  function onChange(control, oldValue, newValue, isLoading, isTemplate) {
2      // Modified the if to return if the newValue == oldValue to avoid
3      // unnecessary trips to the server
4      if (isLoading || newValue === '' || newValue == oldValue) {
5          return;
6      }
7      // Instantiate the GetEmailAddress Script Include
8      var getEmailAddr = new GlideAjax('GetEmailAddress');
9      // Specify the getEmail method
10     getEmailAddr.addParam('sysparm_name', 'getEmail');
11     // Pass the Requested for sys_id
12     getEmailAddr.addParam('sysparm_userID', g_form.getValue('u_requested_for'));
13     // Send the request to the server
14     getEmailAddr.getXML(populateEmailField);
15
16     // When the response is back from the server
17     function populateEmailField(response){
18         // Extract the email address from the response, clear any value from the email field,
19         // set new value in the email field
20         var emailFromScriptInclude = response.responseXML.documentElement.getAttribute("answer");
21         g_form.clearValue('u_requested_for_email');
22         g_form.setValue('u_requested_for_email', emailFromScriptInclude);
23     }
24 }
```

For information about returning multiple values or *JSON* objects, see the **[Return multiple values from *GlideAjax* article on the ServiceNow community site \(https://community.servicenow.com/community?id=community_question&sys_id=81b1db6ddbdcdcb01dc3231f96190d\)](https://community.servicenow.com/community?id=community_question&sys_id=81b1db6ddbdcdcb01dc3231f96190d)**.