

A photograph of two mountaineers on a rocky mountain peak. One climber in a yellow jacket is reaching up to assist another climber in an orange jacket who is on a higher ledge. The background features a vast, snow-covered mountain range under a blue sky with scattered white clouds.

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REST and JSON

INTERSYSTEMS

REST

REpresentational State Transfer

- REST is not a technology, not even a standard!
- REST is just HTTP
- Any system that supports HTTP supports REST

Using REST in Caché

- You need to:
 - Create a new CSP application pointing on the target namespace
 - Declare in this CSP application the name of a "dispatch class"
 - Create a class that extends %CSP.REST
 - Use the "UrlMap" XData block to declare how to dispatch an HTTP request into Caché (to a classmethod)

Using REST in Caché

Name	<input type="text" value="/csp/restdemo"/>
	Required. (e.g. /csp/appname)
Description	<input type="text"/>
Namespace	<input type="text" value="REST"/> <input type="checkbox"/> Default Application for REST: /csp/rest <input type="checkbox"/> Namespace Default Application
Enabled	<input checked="" type="checkbox"/> Application <input checked="" type="checkbox"/> CSP/ZEN <input checked="" type="checkbox"/> Inbound Web Services <input type="checkbox"/> DeepSee <input checked="" type="checkbox"/> iKnow
Permitted Classes	<input type="text"/>
Security Settings	Resource Required <input type="text"/> Group By ID <input type="text"/> Allowed Authentication Methods <input checked="" type="checkbox"/> Unauthenticated <input type="checkbox"/> Password <input type="checkbox"/> Login Cookie Two-Factor Enabled <input type="checkbox"/>
Session Settings	Session Timeout <input type="text" value="2"/> seconds Event Class <input type="text"/> Use Cookie for Session <input type="text" value="Always"/> Session Cookie Path <input type="text" value="/"/>
Dispatch Class	<input type="text" value="Rest.Handler"/>
CSP File Settings	Serve Files <input type="text" value="Always"/> Serve Files Timeout <input type="text" value="3600"/> seconds CSP Files Physical Path <input type="text" value="c:\intersystems\cache2015176\csp\rest\"/> <input type="button" value="Browse..."/> Package Name <input type="text"/> Default Superclass <input type="text"/> CSP Settings <input checked="" type="checkbox"/> Recurse <input checked="" type="checkbox"/> Auto Compile <input checked="" type="checkbox"/> Lock CSP Name
Custom Pages	Login Page <input type="text"/> Change Password Page <input type="text"/> Custom Error Page <input type="text"/>

Using REST in Caché

- Class Rest.Handler Extends %CSP.REST

```
{
```

```
XData UriMap
```

```
{
```

```
<Routes>
```

```
<Route Url="/person/:person" Method="GET" Call="GetPerson"/>
```

```
<Route Url="/sql" Method="GET" Call="GetSQL"/>
```

```
<Route Url="/push" Method="POST" Call="PushPerson"/>
```

```
<Route Url="/manuel/:person" Method="GET" Call="GetManuel"/
```

```
>
```

```
</Routes>
```

```
}
```

Using REST in Caché

```
ClassMethod GetPerson(pPID As %String) As %Status
{
  Try {
    Set objPerson=##class(User.Person).%OpenId(pPID)
    Set %response.ContentType="application/json
    Do ##class(%ZEN.Auxiliary.jsonProvider).%ObjectToJSON(objPe
    rson)
  }
  Catch (e) {
    Set tSC=e.AsStatus()
  }
  Quit tSC
}
```

Using JSON in Caché

- Use class `%ZEN.Auxiliary.jsonProvider` to parse a JSON stream into Caché objects and to output JSON from any Caché structure
- Methods:
- `%ObjectToJSON` to output a Caché object as JSON (to the current device)
- `%ConvertJSONToObject` parses a JSON string or stream into a Caché object
- `%WriteJSONFromSQL` to output a ResultSet