



# RAD

## Caché SQL – CSP – Bootstrap

Christophe Drieghe (CRC)

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# CRC Industries Europe

- Worldwide leader in production of chemicals for
  - Industry (marine, electrical, hardware, aviation)
  - Automotive
- +70 million aerosol cans per year
- HQ Europe in Zele
  - Production plants:
    - Zele (BE)
    - Bridgwater (UK)
  - Offices and warehouses in BE, UK, FR, DE, ES, SE, FI, IN
- Part of global group
  - US + Australia + New Zealand
- See [www.crcind.com](http://www.crcind.com)



# About me

- Oracle background (+15 years)
  - Technical (database + toolset + ERP eBusiness Suite)
  - Functional (ERP eBusiness Suite)
- Technical skills:
  - Oracle database (DDL - DML)
  - SQL
  - PL/SQL
  - Forms Designer (GUI)
  - Reports Designer
  - BI Publisher (XML)

# What's left?

- ~~Oracle background (+15 years)~~
  - ~~Technical (database + toolset + ERP eBusiness Suite)~~
  - ~~Functional (ERP eBusiness Suite)~~
- **Technical skills:**
  - ~~Oracle database (DDL - DML)~~
  - ~~SQL~~
  - ~~PL/SQL~~
  - ~~Forms Designer (GUI)~~
  - ~~Reports Designer~~
  - ~~BI Publisher (XML)~~

# New skills (since 1 year)

- Training:
  - Caché database (Foundations training @ Intersystems)
- Self learning:
  - Objectscript
  - CSP
  - HTML
  - Javascript (incl. JQuery – Bootstrap)
  - JSON/REST/Angular (future)
  - ZEN (on hold at this moment)
  - DeepSee



# Rapid Application Development

## Building a Bootstrap Datatable


# Technical components

- Data: Caché database + SQL (class query)
- Connector: CSP (Caché Server Page)
- GUI / Frontend:
  - HTML5
  - JQuery => set of Javascript API's
  - Bootstrap => framework of CSS & Javascript
    - Core libraries
    - Datatables extension
    - DateTimePicker extension
    - Bootbox extension (modals)

# http://getbootstrap.com/




Bootstrap   Getting started   CSS   Components   JavaScript   Customize   Themes   Expo   Blog



Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.

[Download Bootstrap](#)

Currently v3.3.5



Take full control of your website with Sitefinity CMS and Bootstrap.  
ads via Carbon



The screenshot shows the jQuery website homepage. At the top left is the jQuery logo with the tagline "write less, do more.". To the right, a heart icon contains the jQuery logo, with text stating "Your donations help fund the continued development and growth of jQuery." and a yellow button labeled "SUPPORT THE PROJECT". Below this is a navigation bar with links for "Download", "API Documentation", "Blog", "Plugins", and "Browser Support", along with a search box. The main content area features three icons: a box for "Lightweight Footprint", a stylized 'E' for "CSS3 Compliant", and a globe with arrows for "Cross-Browser". A large orange button on the right says "Download jQuery v1.11.3 or v2.1.4". Below the icons are sections for "What is jQuery?" and "Corporate Members". The "What is jQuery?" section explains that jQuery is a fast, small, and feature-rich JavaScript library. The "Corporate Members" section lists logos for mt, WordPress, maxCDN, and neobux. On the right, a "Resources" section lists links to documentation, learning center, blog, and foundation. At the bottom right, there is a "TRY jQuery" banner with an airplane icon and the text "Learn jQuery in your browser!".

# JSON / REST / Angular

- Currently only internal applications (intranet only) => CSP
- More Javascript needed
  - slows down development
  - more complex
- Needed when building external applications (extranet & internet)
- Wait & see how this evolves



# Demo

# Include CSS and JS

```

<csr:section name="HEAD" block="1">
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <title>CRC Portal page</title>
  <meta name="viewport" content="width=device-width, initial-scale=1">

  <link rel="stylesheet" href="./css/bootstrap.min.css"> <!-- bootstrap v3.3.4 -->
  <link rel="stylesheet" href="./css/dataTables.bootstrap.css">
  <link rel="stylesheet" href="./css/bootstrap-datetimepicker.min.css">
  <link rel="stylesheet" href="./css/jquery-ui.min.css">

  <script src="./js/jquery-2.1.3.min.js"></script>           <!-- jquery    v2.1.3 -->
  <script src="./js/bootstrap.min.js"></script>             <!-- bootstrap v3.3.4 -->

  <script src="./js/jquery.dataTables.min.js"></script>
  <script src="./js/dataTables.tableTools.js"></script>
  <script src="./js/dataTables.bootstrap.js"></script>
  <script src="./js/bootstrap-datetimepicker.min.js"></script>
  <script src="./js/bootbox.min.js"></script>

```

# Basic CSS and JS

```

<csr:section name="HEAD" block="1">
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <title>CRC Portal page</title>
  <meta name="viewport" content="width=device-width, initial-scale=1">

  <link rel="stylesheet" href="./css/bootstrap.min.css"> <!-- bootstrap v3.3.4 -->
  <link rel="stylesheet" href="./css/dataTables.bootstrap.css">
  <link rel="stylesheet" href="./css/bootstrap-datetimepicker.min.css">
  <link rel="stylesheet" href="./css/jquery-ui.min.css">

  <script src="./js/jquery-2.1.3.min.js"></script> <!-- jquery v2.1.3 -->
  <script src="./js/bootstrap.min.js"></script> <!-- bootstrap v3.3.4 -->

  <script src="./js/jquery.dataTables.min.js"></script>
  <script src="./js/dataTables.tableTools.js"></script>
  <script src="./js/dataTables.bootstrap.js"></script>
  <script src="./js/bootstrap-datetimepicker.min.js"></script>
  <script src="./js/bootbox.min.js"></script>

```

# Class Query

```

Query QCugEmp() As %SQLQuery
{
    SELECT  P.userid "UserId"
            ,P.name "Name"
            ,P.department->description "Department"
            ,P.affiliate "Affiliate"
            ,(SELECT InternalTel FROM WhoIsWho.PersonPhone WHERE UserId = P.UserId AND Affiliate = 'CRCBE') "Phone"
            ,(SELECT InternalMobile FROM WhoIsWho.PersonPhone WHERE UserId = P.UserId AND Affiliate = 'CRCBE') "Mobile"
            ,P.externaltel "External Phone"
            ,P.externalmobile "External Mobile"
            ,LOWER(P.email) "Email"
            ,TR.wkntype->description "Type"
            ,DECODE(TR.ehbo, 'Y', 'EHBO', NULL) "EHBO"
            ,NVL(DECODE(TE.iostatus, 'IN', 'PRESENT', 'OUT', 'ABSENT', NULL), 'UNKNOWN') "Status"
            ,CASE P.affiliate
                WHEN 'CRCBE' THEN DECODE(TE.locatedat, 'CRC', 'BPC', TE.locatedat)
                ELSE NULL
            END "Location"
    FROM Person P
    LEFT OUTER JOIN Tikklok.TikReg TR ON P.userid = TR.usercode
    LEFT OUTER JOIN Tikklok.TikEM TE ON TR.badge = TE.badge
    WHERE 1=1
    AND NVL(P.department, 'OUT') != 'OUT'
    AND NVL(P.affiliate, 'CRCXX') != 'CRCXX'
}

```

# CSP call to query

```

WhoIsWho.Person.cls WhoIsWho.Department.cls cugemp.csp cugemp.js
1 <!-- Copyright (c) 2015 CRC Industries Europe ALL RIGHTS RESERVED -->
2 <csp:class description="CUG Bootstrap Demo 24/11/2015 by CRC Industires">
3
4 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
5 <meta http-equiv="X-UA-Compatible" content="IE=edge">
6
7 <head>
8
9 <crcportal:framework />
10
11 <script language="Cache" method="OnPreHTTP" arguments="" returntype="%Boolean">
12     set ok=##class(CRCPortal.LoginSubs).CheckUser()
13     quit ok
14 </script>
15
16 </head>
17
18 <body>
19
20 <csp:query name="GenericList" classname="WhoIsWho.Person" queryname="QCugEmp">
21
22 <!-- #include file="js/cugemp.js" -->
23
24 <div id="wrapper">
25
26 <!-- Navigation bar -->
27 <div id="header">
28     <div class="cover">
29         <nav class='navbar #($case($g(navbarcolor,""), "INVERSE":"navbar-inverse", : "navbar-default"))#>'>
30             <div class="row">
31                 <div class="container-fluid">
32                     <crcportal:navbarlogo TITLE="CRC Portal" MENU="1" />
33                     <crcportal:getmenu />
34                 </div>
35             </div>
36         </div>

```

# HTML table

```

40 <!-- ----- -->
41
42 <div id="content">
43   <!-- Breadcrumbs -->
44   <crcportal:breadcrumbs />
45
46   <!-- Main Window -->
47   <div class="container-fluid">
48
49     <div class="dataTables-wrapper">
50
51       <table id="crgentable" class="table table-striped table-bordered" cellspacing="0" width="100%">
52
53         <thead>
54           <tr>
55             <csp:while counter="col" condition="(col<GenericList.GetColumnCount())">
56               <th>#(GenericList.GetColumnName(col))#</th>
57             </csp:while>
58           </tr>
59         </thead>
60
61         <tbody>
62           <csp:while counter="row" condition="GenericList.Next()">
63             <tr>
64               <csp:while counter="col" condition="(col<GenericList.GetColumnCount())">
65                 <td>#(GenericList.GetData(col))#</td>
66               </csp:while>
67             </tr>
68           </csp:while>
69         </tbody>
70
71       </table>
72     </div>
73
74   </div>
75 </div>
76
77 <!-- ----- -->
78

```



# Table header

```

40  <!-- ----->
41
42  <div id="content">
43    <!-- Breadcrumbs -->
44    <crcportal:breadcrumbs />
45
46    <!-- Main Window -->
47    <div class="container-fluid">
48
49      <div class="dataTables-wrapper">
50
51        <table id="crgentable" class="table table-striped table-bordered" cellspacing="0" width="100%">
52
53          <thead>
54            <tr>
55              <csp:while counter="col" condition="(col<GenericList.GetColumnCount())">
56                <th>#(GenericList.GetColumnName(col)) #</th>
57              </csp:while>
58            </tr>
59          </thead>
60
61          <tbody>
62            <csp:while counter="row" condition="GenericList.Next()">
63              <tr>
64                <csp:while counter="col" condition="(col<GenericList.GetColumnCount())">
65                  <td>#(GenericList.GetData(col)) #</td>
66                </csp:while>
67              </tr>
68            </csp:while>
69          </tbody>
70
71        </table>
72      </div>
73
74    </div>
75  </div>
76
77  <!-- ----->
78

```

# Table content

```

40 <!-- ----- -->
41
42 <div id="content">
43   <!-- Breadcrumbs -->
44   <crcportal:breadcrumbs />
45
46   <!-- Main Window -->
47   <div class="container-fluid">
48
49     <div class="dataTables-wrapper">
50
51       <table id="crgentable" class="table table-striped table-bordered" cellspacing="0" width="100%">
52
53         <thead>
54           <tr>
55             <csp:while counter="col" condition="(col<GenericList.GetColumnCount())">
56               <th>#(GenericList.GetColumnName(col)) #</th>
57             </csp:while>
58           </tr>
59         </thead>
60
61         <tbody>
62           <csp:while counter="row" condition="GenericList.Next()">
63             <tr>
64               <csp:while counter="col" condition="(col<GenericList.GetColumnCount())">
65                 <td>#(GenericList.GetData(col)) #</td>
66               </csp:while>
67             </tr>
68           </csp:while>
69         </tbody>
70       </table>
71     </div>
72   </div>
73
74 </div>
75 </div>
76
77 <!-- ----- -->
78

```



# The result



UserId	Name	Department	Affiliate	Phone	Mobile	External Phone	External Mobile	Email	Type	EHBO	Status	Location
ADHO	Adrian House	Expediting	CRCUK					adho@crcind.com			UNKOWN	
ALAL	Alberto Alvarez	Sales man	CRCES					alal@crcind.com			UNKOWN	
ALAM	Allan Martin	Produktie	CRCUK					alam@crcind.com			UNKOWN	
ALDE	Alex Debbaut	Produktie	CRCBE						Crisis Coordinator		ABSENT	
ALFO	Alan Fouracre	Regulatory & Security	CRCUK					alfo@crcind.com			UNKOWN	
ALKN	Alexandra Knórr	Customer service internal	CRCDE					alkn@crcind.com			UNKOWN	
ALMA	Alicia Martin	Customer service	CRCES					alma@crcind.com			UNKOWN	
ANBY	Antonia Bylo	Customer service	CRCDE					anby@crcind.com			UNKOWN	
ANFR	Angelika Franke	Finance & administration	CRCDE					anfr@crcind.com			UNKOWN	
ANHE	Ana Herrero	Finance & administration	CRCES					anhe@crcind.com			UNKOWN	
ANSE	Anneke Segers	R&D	CRCBE					anse@crcind.com	Office		PRESENT	BPC
ANTA	Andrew Taylor	Produktie	CRCUK					anta@crcind.com			UNKOWN	
ANTK	Antti Kokko	Customer service	CRCFI					antk@crcind.com			UNKOWN	
ANWY	Andrew Wyatt	Produktie	CRCUK								UNKOWN	
BARO	Barbara Otte	Management	CRCBE					baro@crcind.com	Office		ABSENT	
BAVH	Bart Van Hoecke	Planning	CRCBE						Non Office		PRESENT	EDC
BAVK	Bart Van Kerckhove	Quality control	CRCBE					bavk@crcind.com	Office		PRESENT	BPC
BECO	Bernard Court	Produktie	CRCUK								UNKOWN	
BEDE	Betty De Decker	Purchase	CRCBE					bede@crcind.com	Office		PRESENT	BPC
BFFO	Becca Fox	Marketing	CRCUK					befo@crcind.com			UNKOWN	

# Enable Datatable

```
1 <script language="javascript">
2
3     $(function () {
4         var table = $('#crcgentable').dataTable({});
5
6         $('#div.dataTables_filter input').focus();
7
8     } );
9
10
11 </script>
12
13
```

# Include Javascript file

```
WhoIsWho.Person.cls WhoIsWho.Department.cls cugemp.csp cugemp.js
1 <!-- Copyright (c) 2015 CRC Industries Europe ALL RIGHTS RESERVED -->
2 <csp:class description="CUG Bootstrap Demo 24/11/2015 by CRC Industires">
3
4 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
5 <meta http-equiv="X-UA-Compatible" content="IE=edge">
6
7 <head>
8
9 <crcportal:framework />
10
11 <script language="Cache" method="OnPreHTTP" arguments="" returntype="%Boolean">
12     set ok=##class(CRCPortal.LoginSubs).CheckUser()
13     quit ok
14 </script>
15
16 </head>
17
18 <body>
19
20 <csp:query name="GenericList" classname="WhoIsWho.Person" queryname="QCugEmp">
21
22 <!-- #include file="js/cugemp.js" -->
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28         <div class="cover">
29             <nav class='navbar #($case($g(navbarcolor,""),"INVERSE": "navbar-inverse",:"navbar-default"))#'>
30                 <div class="row">
31                     <div class="container-fluid">
32                         <crcportal:navbarlogo TITLE="CRC Portal" MENU="1" />
33                         <crcportal:getmenu />
34                     </div>
35                 </div>
36             </div>
37         </div>
38     </div>
39 </div>
40 </body>
41 </csp:query>
42 </csp:class>
```

# The end result

Show 10 entries Search:

Userid	Name	Department	Affiliate	Phone	Mobile	External Phone	External Mobile	Email	Type	EHBO	Status	Location
ADHO	Adrian House	Expediting	CRCUK					adho@crcind.com			UNKNOWN	
ALAL	Alberto Alvarez	Sales man	CRCES					alal@crcind.com			UNKNOWN	
ALAM	Allan Martin	Produktie	CRCUK					alam@crcind.com			UNKNOWN	
ALDE	Alex Debbaut	Produktie	CRCBE						Crisis Coordinator		ABSENT	
ALFO	Alan Fouracre	Regulatory & Security	CRCUK					alfo@crcind.com			UNKNOWN	
ALKN	Alexandra Knórr	Customer service internal	CRCDE					alkn@crcind.com			UNKNOWN	
ALMA	Alicia Martin	Customer service	CRCES					alma@crcind.com			UNKNOWN	
ANBY	Antonia Bylo	Customer service	CRCDE					anby@crcind.com			UNKNOWN	
ANFR	Angelika Franke	Finance & administration	CRCDE					anfr@crcind.com			UNKNOWN	
ANHE	Ana Herrero	Finance & administration	CRCES					anhe@crcind.com			UNKNOWN	

Showing 1 to 10 of 182 entries Previous **1** 2 3 4 5 ... 19 Next



# Questions?