

**CICS CDS**  
**[ Content Delivery Server ]**  
**(an evolution from CICS JS/Server)**

**Samples Manual**

Version 3 Release 1








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# Samples

## 1. Favorites Menu

</CICS/MF3Z/sam/samples/favorites.html>

This sample appears as shown below:

CICS Content Delivery Server: Sample Directory		
Name	Description	Open in Editor
<a href="#">RGRAPH / Bookmark / CICS Cobol Program with COMMAREA</a>	An RGRAPH Sample using a Bookmark and a called program with COMMAREA to produce a pie chart	
<a href="#">RGRAPH CICS Cobol Program with COMMAREA</a>	RGRAPH / CICS Cobol Program with COMMAREA to produce a bar chart	
<a href="#">Dojo Toolkit FILEA listing: CICS Cobol Program Ajax call with CONTAINER</a>	Dojo Toolkit calling a CICS Cobol Program to supply the FILEA records	
<a href="#">JSON Data Chart.js sample</a>	JSON Call to CICS to build a Chart.js bar chart	
<a href="#">Use of a CICS TSQueue</a>	CICS TSQueue usage	
<a href="#">Block Type Record Sample</a>	Use of Block Type Records	
<a href="#">FILEA Web Application</a>	FILEA - A modern version	

This sample simply shows a number of the other samples provided with a description and two hyperlinks: the one on the left being a descriptive name of the sample and the Green Spanner Icon that can be clicked to open that particular Application record in the CICS CDS Editor.

## 2. FILEA Web Application

Also selectable from the **Favorites Menu** application, this example can be accessed with the following Url:

</CICS/MF3Z/sam/application/filea/filea.html>

A screen-shot of the application is shown below:

This sample build upon the FILEA sample that IBM provide with CICS itself. The FILEA VSAM file is accessed and the data within it accessed. The records from the file are displayed in the left hand panel and can be scrolled and clicked on. Doing so will result in the record details being shown in the central panel.

Clicking (or right clicking) on the record number/Name in the left hand side green panel will cause an action menu to pop-up from which various actions can be chosen. From here, the record can be deleted, Updated or used as a model for a new record to be added to the file.

When required, a CICS Cobol program (SAM0FILA) is called via AJAX calls from within the javascript that run in the Web page. This program accesses the VSAM file and returns JSON data to the client which then populates the page as required. The Sample program source is supplied in the HLQ..SAMPCOB dataset.

This program, when initiated, looks for WEB FORMFIELD input data and acts accordingly.

When opened in the CICS css Editor, the application is defined in a single FreeformText Fragment as shown below:

Application ID: CICS MF46    Userid: MOFUSR1    Company: MOFS    RegionType: TEST    Id: Test of CDN Server

Add new Area
Preview
Save
Load
Clear
Check

Url: /sam/application/filea/filea.html ie

Page Disable     Page Delete    Expiry: 3600     -1     1 minute     1 hour     1 Day

File: USR    Page HTTPStatus: 202    Status Text: Optional Page Status Text (if/when Page Disabled)

Page Description (optional)

HTTP header fields separated by newline characters (optional)

---

Row: 000     Section Disabled     Section Delete    Type: Fragment / Freeform

Section Description (optional)

Resource: Resource    Transfer: Binary / NoAppendCRLF    Type of Section

Definition: Definition

```

<!DOCTYPE html>
<html>
<head>
<title>FILEA Application</title>
<link rel="shortcut icon" href="/images/favicon.png" type="image/x-icon" />
<link rel="stylesheet" href="/css/filea.css" />
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<script src="/js/filea.js"></script>
</head>
<body>
<div id="wrapper">
  <div class="grid-container">
    <div class="itemH1">
      <h1>FILEA Application</h1>
      <h2>An old application, with a new (modern) look</h2>
    </div>
    <div class="itemH2">
      <span class="hamburger">&#8801;</span>
      <span id="topmenu">
        <span data-top="tAdd">Add new record</span>
        <span data-top="tRel">Reload Page</span>
        <span data-top="tClr">Clear Screen</span>
        <span data-top="tHlp">Help</span>
      </span>
      <br>
      <input id="searchData" type="text" placeholder="&#127859; Search Name and/or Address field">
      <button type="button" id="searchClr" title="Clear Search field">&#8619;</button>
    </div>
  </div>
</div>
        
```

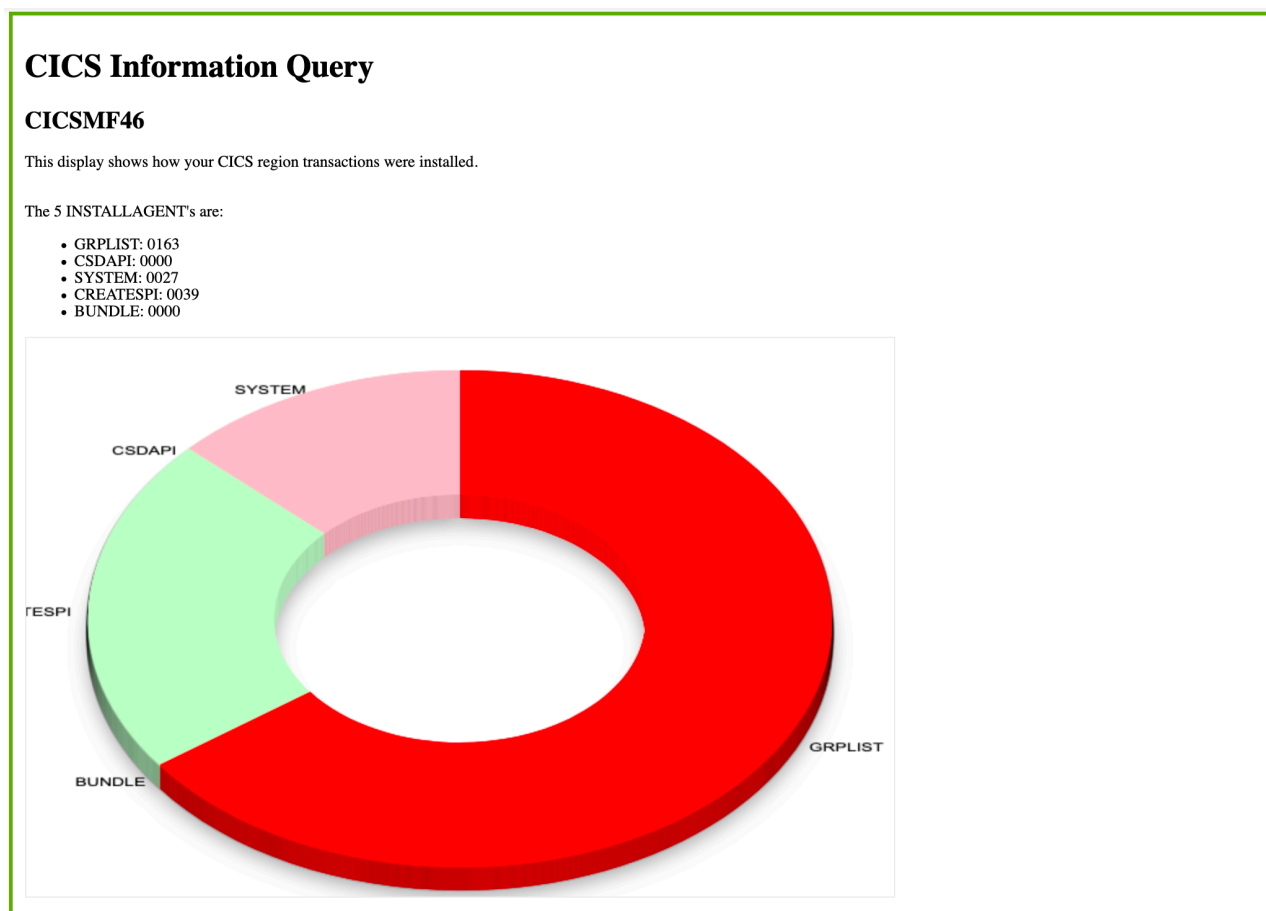
As can be seen, a number of components of the application are also served from CICS CDS, such as the relative address to /css/filea.css and /js/filea.js

### 3. RGRAPH / Bookmark / CICS Cobol Program with COMMAREA

Also selectable from the **Favorites Menu** application, this example can be accessed with the following Url:

</CICS/MF3Z/sam/examples/rgraph/pie-chart-3.html>

A screen-shot of the application is shown below:



When this application runs, a CICS Cobol program is called via AJAX and passed a commarea. It acts according to the information supplied to it in that Commarea and then interrogates CICS to build up the numbers of ways in which the local CICS transactions have been installed. This information is passed back to the client where the javascript in use causes the 3-D PieChart to be drawn. The javascript in use in this case is Graph which itself is loaded from CICS CDS. Cobol Source for SAMPCOM2 is supplied with CICS CDS.

The sample also uses a CICS Bookmark that is referenced by the CICS Cobol program to help build the application.

## 4. Dojo Toolkit FILEA listing

### CICS Cobol Program Ajax call with CONTAINER

Also selectable from the **Favorites Menu** application, this example can be accessed with the following Url:

</CICS/MF3Z/sam/filea/list-records-2.html>

A screen-shot of the application is shown below:

#### Dojo DataGrid

#### CICS Sample Application FILEA Data

Data obtained via a json call to CICS where sample program DTK0004H collects the data from FILEA and builds the json response.

Number	Name	Date	Amount	Address	Phone	Notes
000100	S. D. BORMAN	26 11 81	\$0100.11	SURREY, ENGLAND	32156778	*****
000102	J. T. CZAYKOWSKI	26 11 81	\$1111.11	WARWICK, ENGLAND	98356183	*****
000104	M. B. DOMBEY	26 11 81	\$0999.99	LONDON,ENGLAND	12846293	*****
000106	A. I. HICKSON	26 11 81	\$0087.71	CROYDON, ENGLAND	19485673	*****
000111	ALAN TULIP	01 02 74	\$0111.11	SARATOGA,CALIFORNIA	46120753	*****
000654	Steve	26 11 81	9999	Peebles	9999	sdsdsd
000762	SUSAN MALAIKA	01 06 74	\$0000.00	SAN JOSE,CALIFORNIA	22312121	*****
000983	J. S. TILLING	21 04 75	\$9999.99	WASHINGTON, DC	34512120	*****
001222	D.J.VOWLES	10 04 73	\$3349.99	BOBLINGEN, GERMANY	70315551	*****
001781	TINA J YOUNG	21 06 77	\$0009.99	SINDELINGEN,GERMANY	70319990	*****
003210	B.A. WALKER	26 11 81	\$3349.99	NICE, FRANCE	12345670	*****
003214	PHIL CONWAY	00 06 73	\$0009.99	SUNNYVALE, CAL.	34112120	*****
003890	BRIAN HARDER	28 05 74	\$0009.99	NICE, FRANCE	00000000	*****

This application calls a CICS Cobol program to fetch the VSAM FILEA data and respond with that data in JSON formation. Dojo Toolkit functions use that data to build a sortable table in the display.

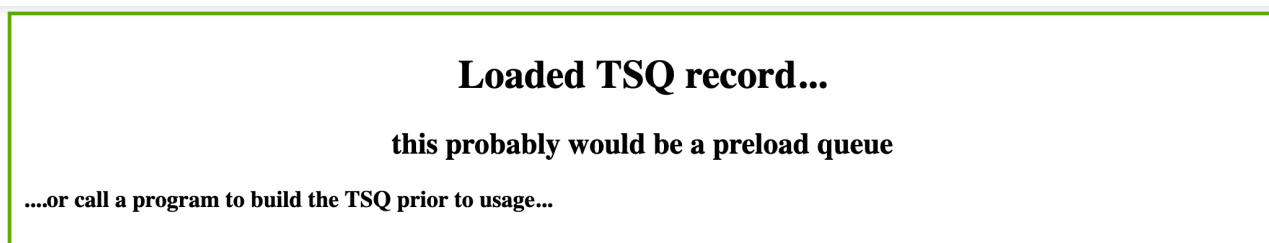
Sample Cobol program source for DTK0004H is provided in HLQ..SAMPCOB

## 5. Use of a CICS TSQueue

Also selectable from the **Favorites Menu** application, this example can be accessed with the following Url:

</CICS/MF3Z/sam/tsq/tsq1.html>

A screen-shot of the application is shown below:



In the Editor, it appears as follow:

Application ID: CICS MF46    Userid: MOFUSR1    Company: MOFS    RegionType: TEST    Id: Test of CDN Server

Url:

Page Disable     Page Delete    Expiry: -1     -1     1 minute     1 hour     1 Day

File:     Page HTTPStatus: 202    Status Text:

---

Page Description (optional) 0

HTTP header fields separated by newline characters (optional)

---

Row: 000     Section Disabled     Section Delete    Type: Fragment / Freeform 0

Section Description (optional)

Resource:     Transfer:

Definition:  243

```
<head>
<title>CDN Sample: TSQ Usage</title>
<style>
.center {
margin: auto;
width: 60%;
border: 3px solid #73AD21;
}
```

---

Row: 001     Section Disabled     Section Delete    Type: Load TSQ 150

Section Description (optional)

Resource: APPLICATION-X    Transfer:

Definition:  150

```
<h1>Loaded TSQ record...</h1>
<h2> this probably would be a preload queue</h2>
<h3>...or call a program to build the TSQ prior to usage...</h3>
```

---

Row: 002     Section Disabled     Section Delete    Type: Insert TSQ 0

Section Description (optional)

Resource: APPLICATION-X    Transfer:

Definition:  0

Fragment text (depends on 'Type')

---

Row: 003     Section Disabled     Section Delete    Type: Fragment / Freeform 23

Section Description (optional)

Resource:     Transfer:

Definition:  23

```
</div>
</body>
</html>
```

The application is shown inserting information into named TSQ (which is created or added to) and then uses that named TSQ to insert information into the web response.



## 6. Block Type Record Sample

Also selectable from the **Favorites Menu** application, this example can be accessed with the following Url:

</CICS/MF3Z/sam/testing/htmlblock1.html>

A screen-shot of the application is shown below:



This sample shows how blocked records can be used to build up a web response.

## 7. Use of PDS DOCTEMP resource definition

Also selectable from the **Favorites Menu** application, this example can be accessed with the following Url:

</CICS/MF3Z/sam/doctemp/simple-page.html>

screen-shot of the application is shown below:

### Simple webpage built using a PDS member CICS document template

In the editor, it looks like this:

**Application ID:** CICAMF50 **Userid:** MOFUSR1 **Company:** Matter of Fact **RegionType:** ACCEPTANCE **Id:** Test of CDServer

<input type="button" value="Add new Area"/>	<input type="button" value="Preview"/>	<input type="button" value="Save"/>	<input type="button" value="Load"/>	<input type="button" value="Clear"/>	<input type="button" value="Check"/>
Url: <input type="text" value="/sam/doctemp/simple-page.html"/>					
<input type="checkbox"/> Page Disable	<input type="checkbox"/> Page Delete	Expires: <input type="text" value="1"/>		<input type="radio"/> 1 minute <input type="radio"/> 1 hour <input type="radio"/> 1 Day	
URL to be Loaded / Saved (updated) or Deleted					
File: <input type="text" value="USR"/>	Page HTTPStatus: <input type="text" value="202"/>	Status Text: <input type="text" value="Optional Page Status Text (if/when Page Disabled)"/>			
Page Description (optional)					
HTTP header fields separated by newline characters (optional)					
Row: 000	<input type="checkbox"/> Section Disabled	<input type="checkbox"/> Section Delete	Type: Document Template		
Section Description (optional)					
Resource: <input type="text" value="HTML0001"/>	Transfer: <input type="text" value="EDCDIC / NoAppendCRLF"/>				
Definition: <input type="text" value="MEM(HTML0001) DD(SAMFILE)"/>					
Fragment text (depends on 'Type')					

As can be seen, a CICS DOCUMENT TEMPLATE named HTML0001 in the PDS with DDNAME SAMLIFE is defined as the content of the application. In turn, the content of that file member is as follows:

```
<!DOCTYPE html>
<html lang=en>
<head>
  <title>CICS Content Delivery Server</title>
</head>
<body>
  <h1>Simple webpage built using a PDS member CICS document template</h1>
</body>
</html>
```

## 8. Chart.js sample - Ajax call for data responding json

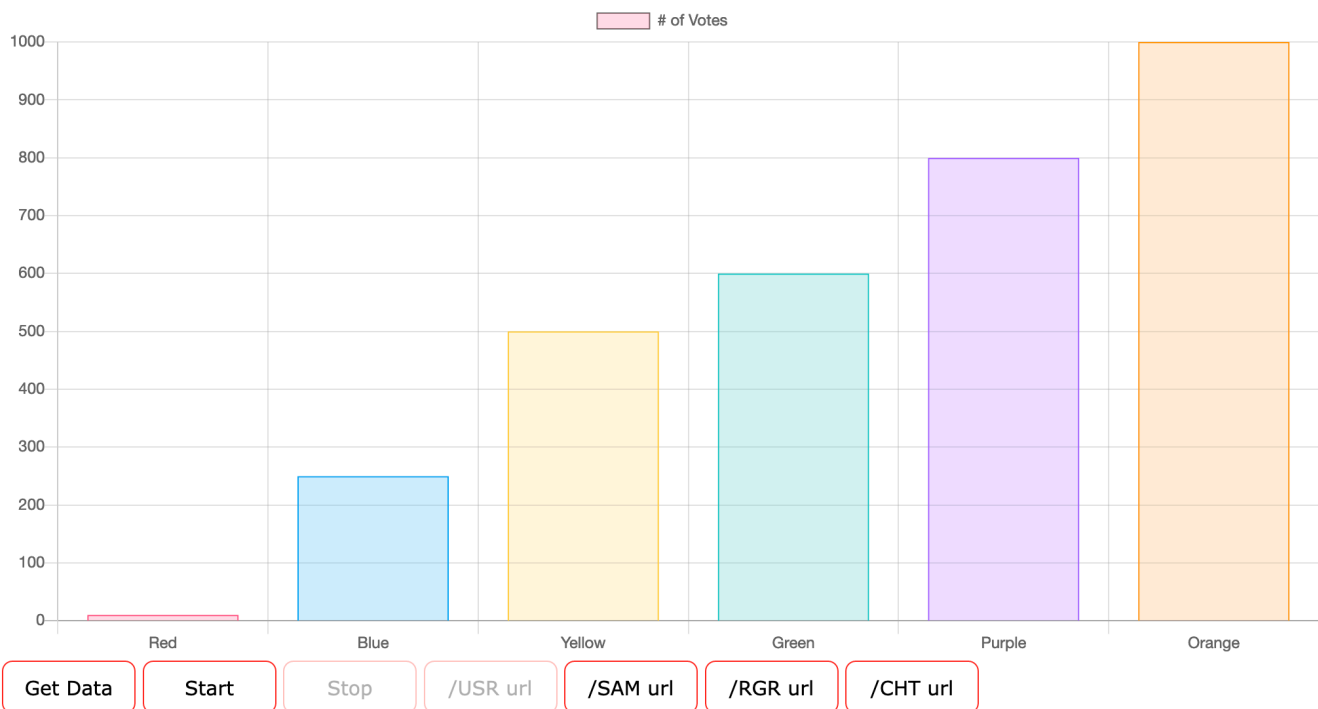
Also selectable from the **Favorites Menu** application, this example can be accessed with the following Url:

</CICS/MF3Z/sam/examples/tsq3.html>

screen-shot of the application is shown below:

### Chart.js Bar Chart Demo

(with CICS [CoBOL] Random data retrieval)



Data URL: /CICS/MF3Z/USR/ian/RGraph/testRAND.json

This sample uses Chart.js to build a bar graph. By clicking the /SAM url button and then the Start button, Ajax calls are made to the application defined at testRAND.json. Doing so will result in the graph being dynamically redrawn periodically as new data is fetched from CICS.

The Directory listing for the URL </sam/utility/testrand.json> is shown below:

<b>Control:</b>	Record# 1	Url: <a href="/sam/utility/testrand.json">/sam/utility/testrand.json</a>	Segments: 1
<b>Meta:</b>	UserId: CICSD LastUpdate: Mon, 11 May 2020 15:20:55 +0000 (3798181255000)		
<b>Page:</b>	Active: Yes	Expiry: -1	Status: 202 Description: RGraph Demo test1
<b>Section:</b>	Active: Yes	Length: 8	Type: P (Program)
<b>Resource (8)</b>	MF3RAND2		

As can be seen, the CICS Program MF3RAND2 is used when that AJAX call is made. The Cobol source for that program is supplied with CICS CDS in the SAMPCOB file.

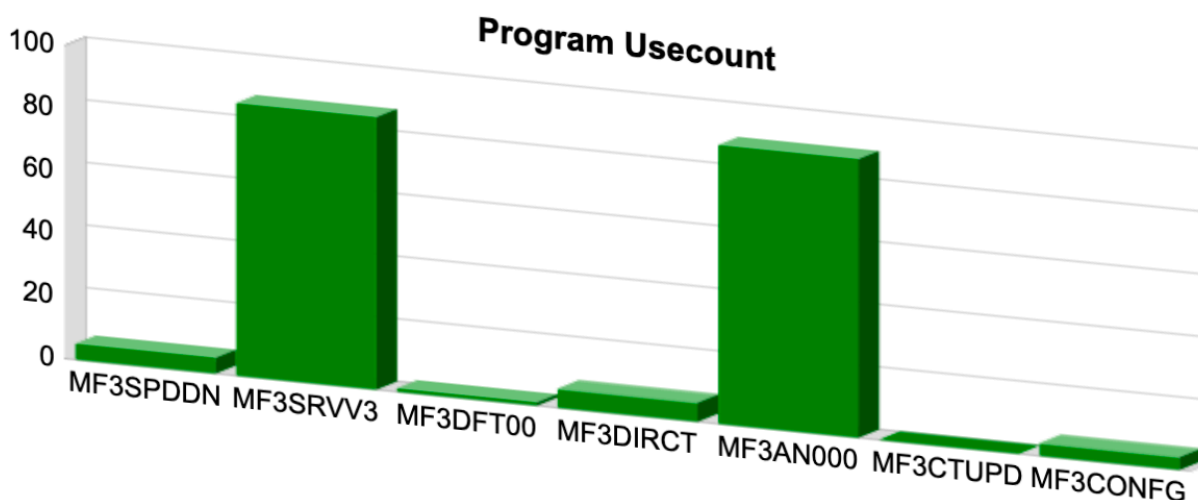
## 9 RGraph AJAX call to Cobol returning JSON

Also selectable from the **Favorites Menu** application, this example can be accessed with the following Url:

</CICS/MF3Z//rgr/4.65/demos/bar-ajax-4.html>

screen-shot of the application is shown below:

## A Bar chart using AJAX



This sample uses Rgraph.js. The RGraph parameters used call a CICS Cobol program called SAMCOM3 passing a COMMAREA. The definition for the AJAX called program is shown below:

<b>Control:</b>	Record# 235	Uri: /rgr/4.65/demos/getdata3.html	Segments: 1
<b>Meta:</b>	UserId: MOFUSR1    LastUpdate: Tue, 21 Apr 2020 13:05:36 +0000 (3796445136000)		
<b>Page:</b>	Active: Yes	Expiry: -1	Status: 202
<b>Section:</b>	Active: Yes	Length: 79	Type: Q (Prog. CommArea)
<b>Resource (8)</b>	SAMPCOM3		
<b>Content (79)</b>	PROGRAM-USECOUNT MF3SPDDN MF3SRVV3 MF3DFT00 MF3DIRCT MF3AN000 MF3CTUPD MF3CONFG		

As can be seen, the Commarea contents can be specified within the application definition for the AJAX called program. When SAMPCOM3 executes, it use the contents of the COMMAREA to determine its actions - in this case to interrogate the USECOUNT for a number of CICS programs. That information is placed in a JSON web response and returned to the Client where the RGraph.js toolkit creates a barchart as shown.

## **Appendix.**

As time passes, Matter of Fact Software are creating new and improved Samples and examples. Contact us for the latest developments.

End of Document