

Quick and Easy - Accessing z/OS PDSEs and Sequential Data Sets Simply and Easily Using 'MVSDS', an IBM-supplied Component of z/OS Web

Browser

Patricia Wingfield

August 14, 2013

Bank of America



Bank of America Merrill Lynch U.S. Bank of America
America ynch Trust Merrill Lynch

Purpose of This Presentation

- It's been my experience that many z/OS users are still not aware of how easily z/OS PDSE's and flat files can be viewed via the z/OS web browser.
- This paper will cover the basics of how easily this is done and some of the uses that can be made of this facility.

Introduction

- z/OS PDSE's and flat files can be viewed via the z/OS web browser
- IBM distributes a GWAPI program called 'MVSDS' that makes this possible
- z/OS default 'out of the box' installations comes with this facility installed.
- You just need your z/OS system DNS name and possibly appropriate port number in order to view your z/OS text files via your company intranet
- Easier than accessing HFS files since no web browser directives etc. needed

Typical URL

- <https://yourdnsname/MVSDS/'yourflatorpdsedsname'>
- Example:
<https://lpar01.bankofamerica.com:8283/MVSDS/'USERID1.SHR.SAS'>
- DNS name must be for a system that has an instance of the HTTP server started task running on it with 'MVSDS' installed.
- **Default** installation of IBM HTTP Server includes 'MVSDS'
- ***z/OS Systems are BY DEFAULT large web servers, with all of their text data sets accessible via browsers dependent only on RACF security constraints.***

Typical URL - continued



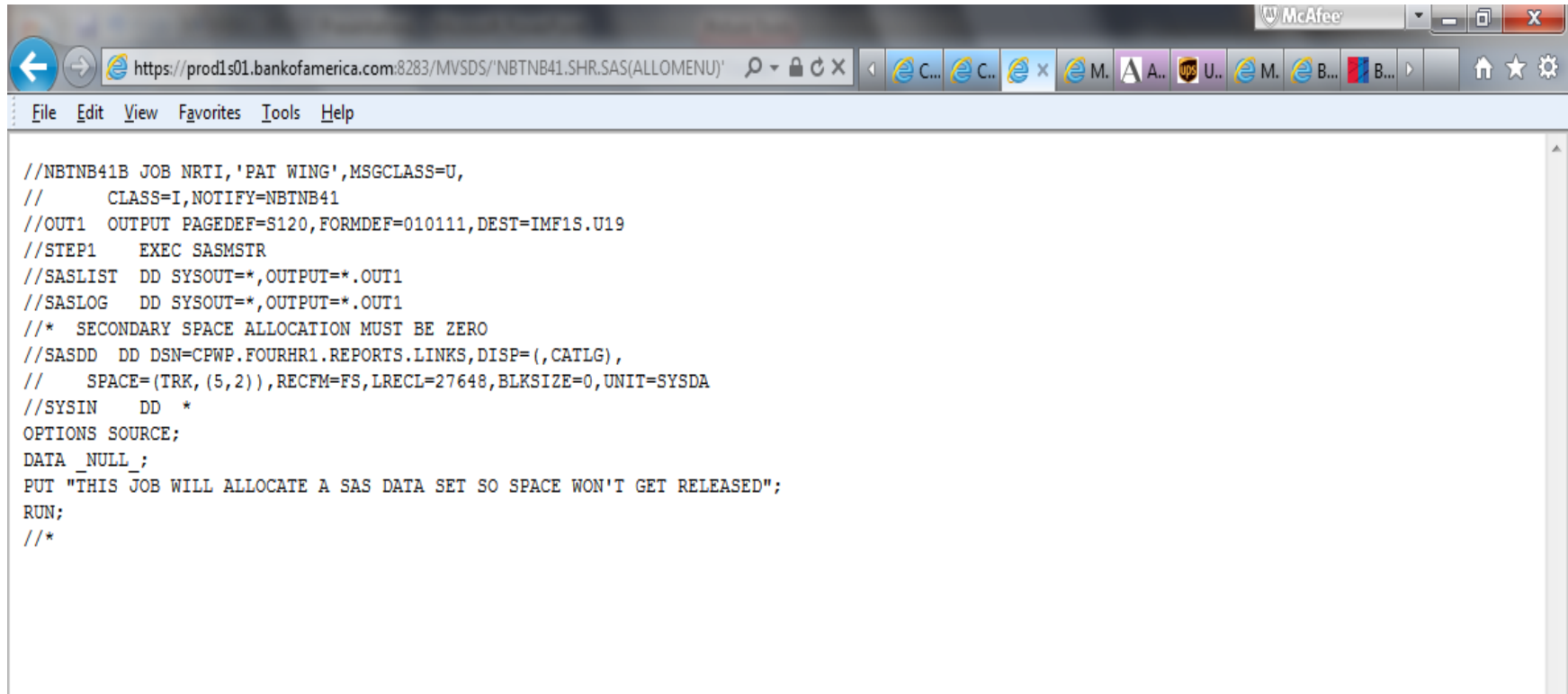
The screenshot shows a web browser window with the address bar containing the URL: `https://prod1s01.bankofamerica.com:8283/MVSDS/'NBTNB41.SHR.SAS'`. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The main content area displays the heading **Directory Listing of 'USERID1..SHR.SAS':** followed by a list of 20 blue, underlined links, each preceded by a bullet point. The links are: \$JOBAVG, \$JOBCFI, \$JOBHIST, \$PGMAVG, \$SHIFT, ABENDS, ABSMIPS, ABSMIPST, ACCUMCIA, ACCUMCIB, ACCUMCIT, ACCUMCIZ, ACCUMDMY, ACCUMDM2, ACTINITS, ACTLGR01, ACTLGR02, ACTLINES, ALLOAS40, ALLOCOPY, and ALLOEXCP.

Directory Listing of 'USERID1..SHR.SAS':

- [\\$JOBAVG](#)
- [\\$JOBCFI](#)
- [\\$JOBHIST](#)
- [\\$PGMAVG](#)
- [\\$SHIFT](#)
- [ABENDS](#)
- [ABSMIPS](#)
- [ABSMIPST](#)
- [ACCUMCIA](#)
- [ACCUMCIB](#)
- [ACCUMCIT](#)
- [ACCUMCIZ](#)
- [ACCUMDMY](#)
- [ACCUMDM2](#)
- [ACTINITS](#)
- [ACTLGR01](#)
- [ACTLGR02](#)
- [ACTLINES](#)
- [ALLOAS40](#)
- [ALLOCOPY](#)
- [ALLOEXCP](#)

Typical URL - continued

Click on a member and you get:

A screenshot of a web browser window. The address bar shows the URL: https://prod1s01.bankofamerica.com:8283/MVSDS/'NBTNB41.SHR.SAS(ALLOMENU)'. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The main content area displays SAS code for a job named NBTNB41B. The code includes job options like CLASS=I, NOTIFY=NBTNB41, and various DD statements for output and log files. It also contains a message to be printed: "THIS JOB WILL ALLOCATE A SAS DATA SET SO SPACE WON'T GET RELEASED".

```
//NBTNB41B JOB NR1I, 'PAT WING',MSGCLASS=U,  
//      CLASS=I,NOTIFY=NBTNB41  
//OUT1  OUTPUT PAGEDEF=S120,FORMDEF=010111,DEST=IMF1S.U19  
//STEP1  EXEC SASMSTR  
//SASLIST DD SYSOUT=*,OUTPUT=*.OUT1  
//SASLOG  DD SYSOUT=*,OUTPUT=*.OUT1  
/** SECONDARY SPACE ALLOCATION MUST BE ZERO  
//SASDD  DD DSN=CPWP.FOURHR1.REPORTS.LINKS,DISP=(,CATLG),  
//      SPACE=(TRK,(5,2)),RECFM=FS,LRECL=27648,BLKSIZE=0,UNIT=SYSDA  
//SYSIN  DD *  
OPTIONS SOURCE;  
DATA _NULL_ ;  
PUT "THIS JOB WILL ALLOCATE A SAS DATA SET SO SPACE WON'T GET RELEASED";  
RUN;  
/**
```

- Can print via file/print etc.

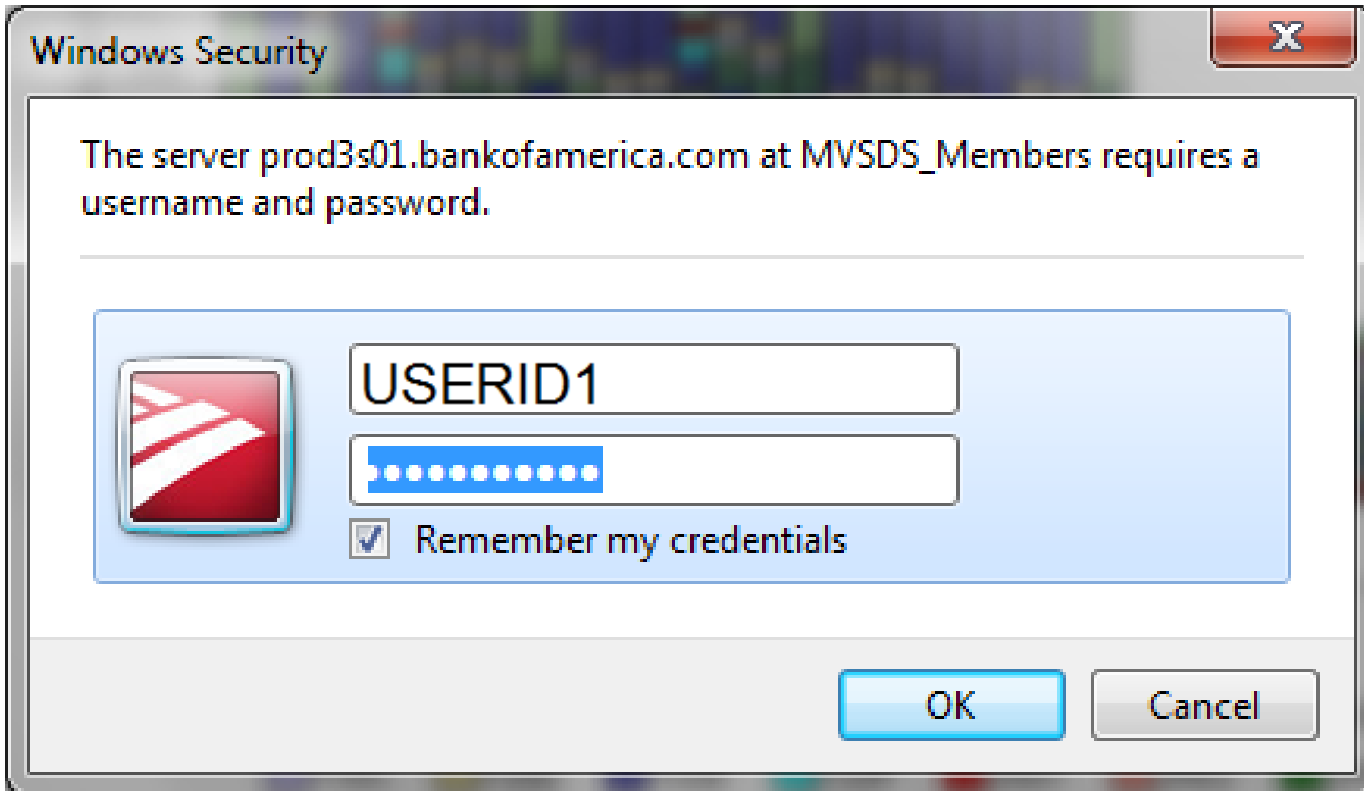
Security – Two Ways to Set up:

- Option #1 – do **NOT** use Web Server Directive “UserID %%CLIENT%%”:
 - Set up to use security settings of z/OS HTTP Server started task. If server started task has ‘READ’ access, then you can browse data set
 - In practice this usually allows access only to data sets with a default RACF access of ‘READ’
 - Very good for report access, since users DO NOT NEED ID defined to access z/OS reports via web
 - Anyone, even managers without mainframe ids, can access reports.

Security – Two Ways to Set up:

- Option #2 – **Do** Use Web Server Directive “UserID %%CLIENT%%”:
 - Causes browser user to be prompted for their RACF userid/password
 - Security then allowed or denied by RACF according to user’s security settings.
 - Drawback is that everyone needs an id defined on z/OS system in order to access reports

Security – RACF HTTP Server Userid/Password Prompt:



Security – RACF HTTP Server userid/password prompt:

- If don't have RACF READ or if URL misspelled, get same message –
 - (IMW0254E) Error 404 on browser
- Know it's security if get in SYSLOG:

```
ICH408I USER(WEBSRV ) GROUP(IMWEB ) NAME(WEBSRV VALIDATOR ) 022  
SYS1.PARMLIB CL(DATASET ) VOL(1SXFR1)  
INSUFFICIENT ACCESS AUTHORITY  
FROM SYS1.PARMLIB.** (G)  
ACCESS INTENT(READ ) ACCESS ALLOWED(NONE
```

Making z/OS links:

- Watch out for email etc. bug
- Some email and other Windows products will truncate the ending “)’ “ of your URL
- Can't tell by looking at the link
- Get the same Error 404 message
- Surrounding your URL with double quotes when **making link** will prevent this from happening
- Link looks the same as link made without double quotes, but works – nothing chopped off when click on it

Making z/OS links:

- HTML, PDF, GIF data sets etc. should have 'HTML', 'PDF', 'GIF' etc. as a complete qualifier in data set name.
- Otherwise text - great way to print PDS members if have RACF read to them!
- If don't put member, get directory list displayed in browser and can select desired member
- PDSE's and flat files good
- GDG's also supported – but if want to use gdg# it must be a flat file unless type out the "GxxxVnn"

Advantages of Using MVSDS

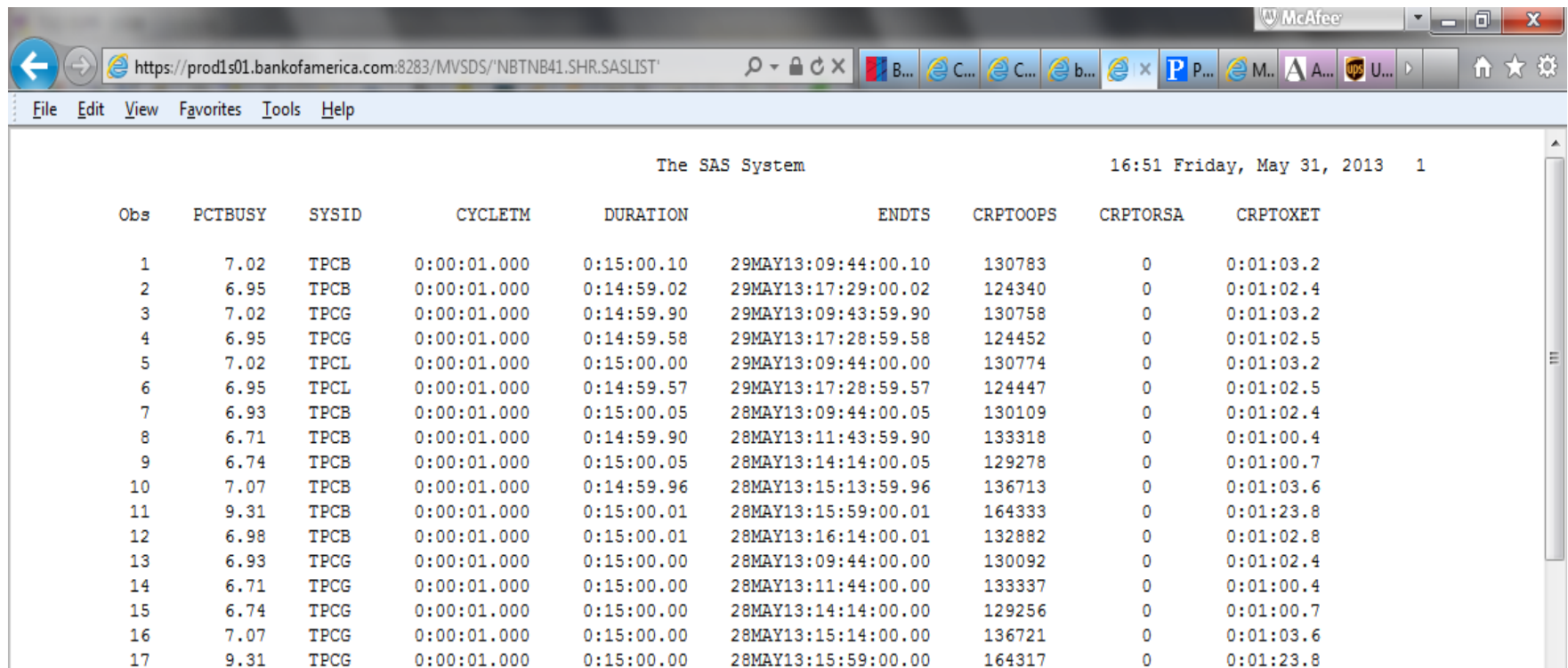
- Don't have to move your data to other platforms to do z/OS reporting
- Can use extensive z/OS automation tools available
- Report data set management etc. available via DF/HSM etc.
- Code in common, centrally managed and supported repositories

Examples for Using MVSDS

- Text reports
- Links via emails
- HTML menus into text reports
- Simple spreadsheets
- Downloading from mainframe
- Single member HTML report or flat file HTML reports (Base SAS)
- HTML multiple PDSE member reports (Base SAS)
- More complicated spreadsheets (Base SAS)
- Graphical reports (SAS Graph)

Examples – Text Reports

- Just use SDSF 'XDC' command to write JES output to data set
- Or write report directly to data set
- Just point URL to it



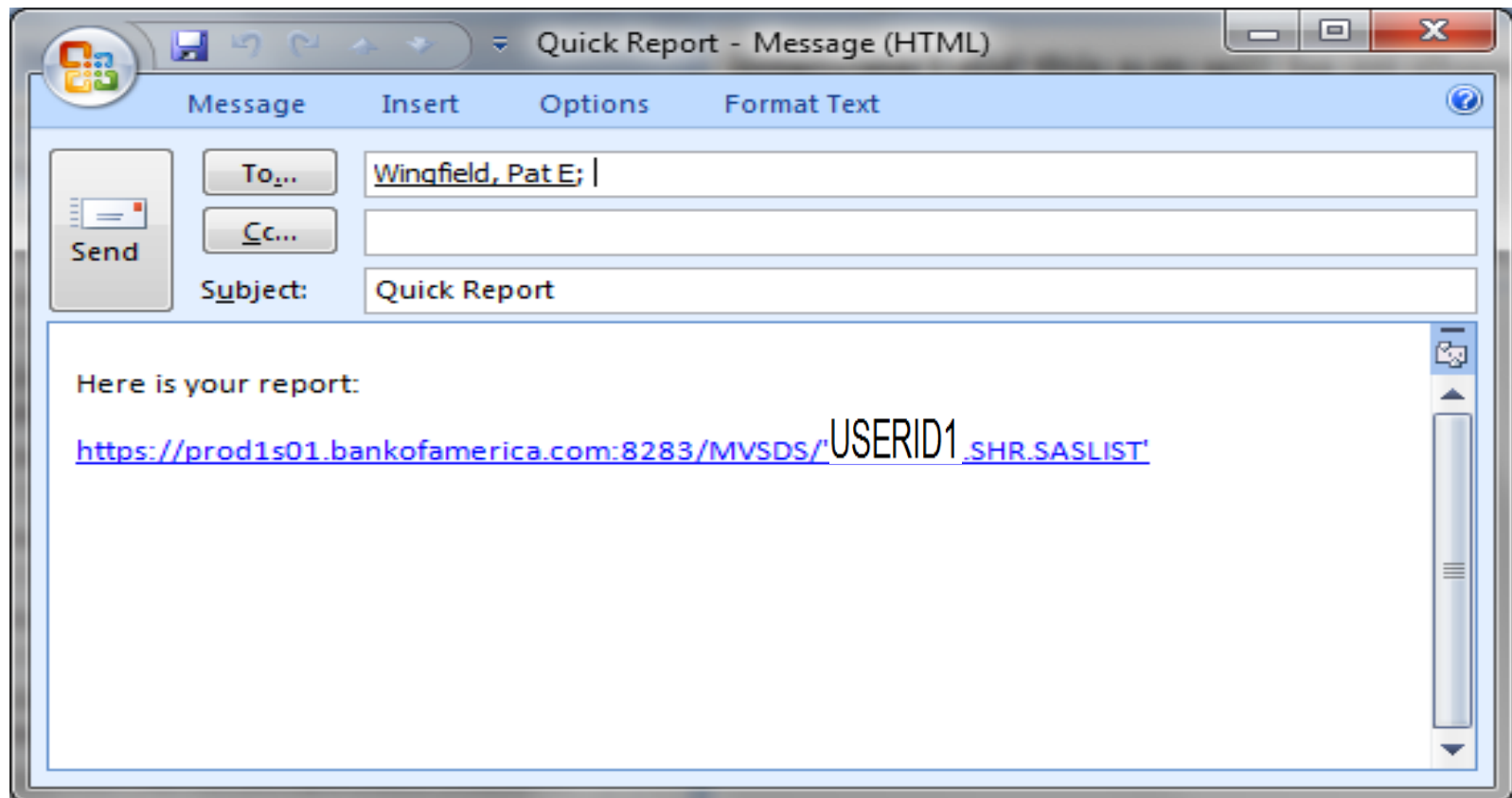
The SAS System

16:51 Friday, May 31, 2013 1

Obs	PCTBUSY	SYSID	CYCLETM	DURATION	ENDTS	CRPTOOPS	CRPTORSA	CRPTOXET
1	7.02	TPCB	0:00:01.000	0:15:00.10	29MAY13:09:44:00.10	130783	0	0:01:03.2
2	6.95	TPCB	0:00:01.000	0:14:59.02	29MAY13:17:29:00.02	124340	0	0:01:02.4
3	7.02	TPCG	0:00:01.000	0:14:59.90	29MAY13:09:43:59.90	130758	0	0:01:03.2
4	6.95	TPCG	0:00:01.000	0:14:59.58	29MAY13:17:28:59.58	124452	0	0:01:02.5
5	7.02	TPCL	0:00:01.000	0:15:00.00	29MAY13:09:44:00.00	130774	0	0:01:03.2
6	6.95	TPCL	0:00:01.000	0:14:59.57	29MAY13:17:28:59.57	124447	0	0:01:02.5
7	6.93	TPCB	0:00:01.000	0:15:00.05	28MAY13:09:44:00.05	130109	0	0:01:02.4
8	6.71	TPCB	0:00:01.000	0:14:59.90	28MAY13:11:43:59.90	133318	0	0:01:00.4
9	6.74	TPCB	0:00:01.000	0:15:00.05	28MAY13:14:14:00.05	129278	0	0:01:00.7
10	7.07	TPCB	0:00:01.000	0:14:59.96	28MAY13:15:13:59.96	136713	0	0:01:03.6
11	9.31	TPCB	0:00:01.000	0:15:00.01	28MAY13:15:59:00.01	164333	0	0:01:23.8
12	6.98	TPCB	0:00:01.000	0:15:00.01	28MAY13:16:14:00.01	132882	0	0:01:02.8
13	6.93	TPCG	0:00:01.000	0:15:00.00	28MAY13:09:44:00.00	130092	0	0:01:02.4
14	6.71	TPCG	0:00:01.000	0:15:00.00	28MAY13:11:44:00.00	133337	0	0:01:00.4
15	6.74	TPCG	0:00:01.000	0:15:00.00	28MAY13:14:14:00.00	129256	0	0:01:00.7
16	7.07	TPCG	0:00:01.000	0:15:00.00	28MAY13:15:14:00.00	136721	0	0:01:03.6
17	9.31	TPCG	0:00:01.000	0:15:00.00	28MAY13:15:59:00.00	164317	0	0:01:23.8

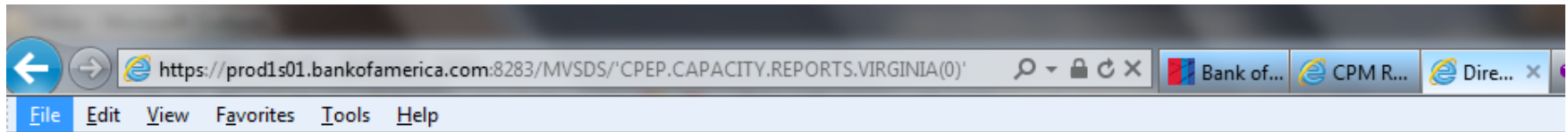
Examples – Links via email etc.

- Then you can send link to report in an email
- Remember to put double quotes around link as you make it!



Examples – Text Reports:

- You can also just write to fixed PDSE gdg and then point url to directory of member reports:

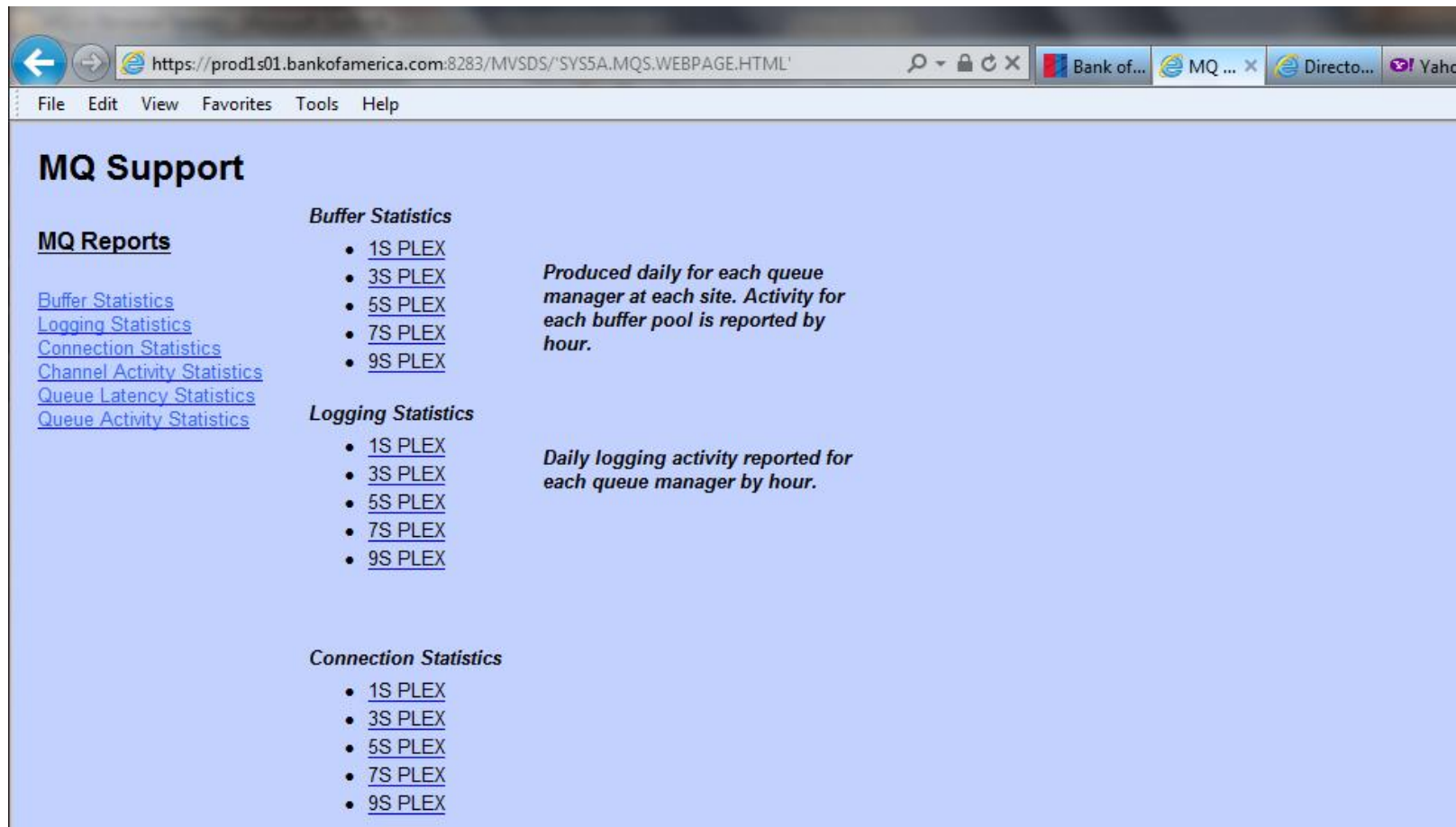


Directory Listing of 'CPEP.CAPACITY.REPORTS.VIRGINIA(0)':

- [\(DAILYCIC\)](#)
- [\(DAILYIMS\)](#)
- [\(DAILYOVR\)](#)
- [\(DAILYREG\)](#)
- [\(EXCPCICS\)](#)
- [\(EXCPIMS\)](#)
- [\(HOURCICS\)](#)
- [\(HOURIMS\)](#)
- [\(PCD80BAP\)](#)
- [\(PCD80BAT\)](#)
- [\(PCD80CIC\)](#)
- [\(PCD80DEV\)](#)
- [\(PCD80IMS\)](#)
- [\(PCD80OVR\)](#)

Examples – HTML Menus into Text Reports:

- Static HTML Menu Created via Windows product and uploaded to mainframe pointing to text gdgs:



The screenshot shows a web browser window with the address bar containing the URL: <https://prod1s01.bankofamerica.com:8283/MVSDS/'SYS5A.MQS.WEBPAGE.HTML'>. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The page content is titled "MQ Support" and features a left-hand menu under "MQ Reports" with links to Buffer Statistics, Logging Statistics, Connection Statistics, Channel Activity Statistics, Queue Latency Statistics, and Queue Activity Statistics. The main content area is divided into three sections:

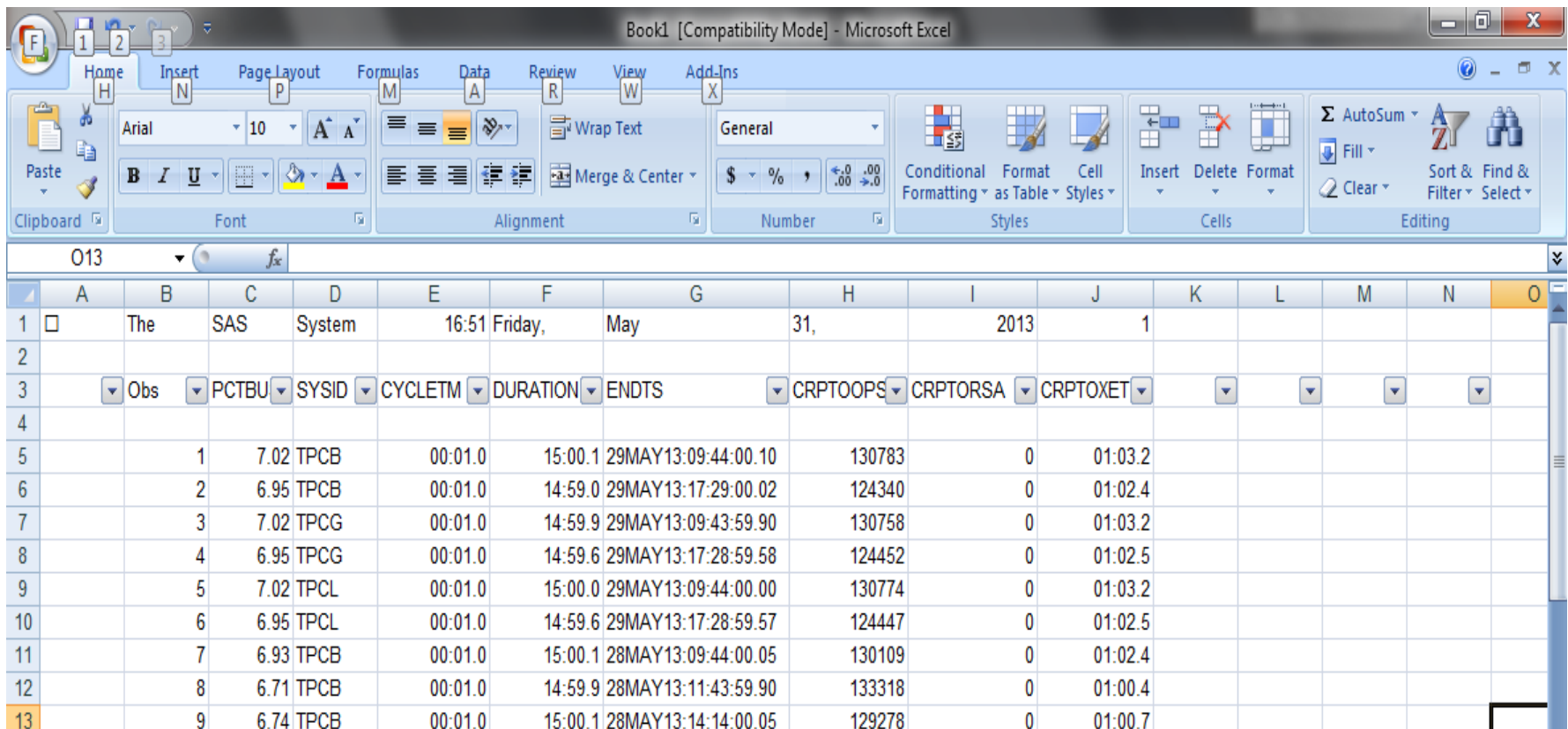
- Buffer Statistics**
 - [1S PLEX](#)
 - [3S PLEX](#)
 - [5S PLEX](#)
 - [7S PLEX](#)
 - [9S PLEX](#)

Produced daily for each queue manager at each site. Activity for each buffer pool is reported by hour.
- Logging Statistics**
 - [1S PLEX](#)
 - [3S PLEX](#)
 - [5S PLEX](#)
 - [7S PLEX](#)
 - [9S PLEX](#)

Daily logging activity reported for each queue manager by hour.
- Connection Statistics**
 - [1S PLEX](#)
 - [3S PLEX](#)
 - [5S PLEX](#)
 - [7S PLEX](#)
 - [9S PLEX](#)

Examples – Simple Spreadsheets

- You can make text report into a quick and easy spread using Select All/Copy; paste into spread and then 'Text to Columns' under 'Data' Excel tab – No more CSV's!



Book1 [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins

Clipboard Font Alignment Number Styles Cells Editing

O13 fx

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	<input type="checkbox"/>	The	SAS	System	16:51	Friday,	May	31,	2013	1					
2															
3		Obs	PCTBU	SYSID	CYCLEM	DURATION	ENDTS	CRPTOOPS	CRPTORSA	CRPTOXET					
4															
5		1	7.02	TPCB	00:01.0	15:00.1	29MAY13:09:44:00.10	130783	0	01:03.2					
6		2	6.95	TPCB	00:01.0	14:59.0	29MAY13:17:29:00.02	124340	0	01:02.4					
7		3	7.02	TPCG	00:01.0	14:59.9	29MAY13:09:43:59.90	130758	0	01:03.2					
8		4	6.95	TPCG	00:01.0	14:59.6	29MAY13:17:28:59.58	124452	0	01:02.5					
9		5	7.02	TPCL	00:01.0	15:00.0	29MAY13:09:44:00.00	130774	0	01:03.2					
10		6	6.95	TPCL	00:01.0	14:59.6	29MAY13:17:28:59.57	124447	0	01:02.5					
11		7	6.93	TPCB	00:01.0	15:00.1	28MAY13:09:44:00.05	130109	0	01:02.4					
12		8	6.71	TPCB	00:01.0	14:59.9	28MAY13:11:43:59.90	133318	0	01:00.4					
13		9	6.74	TPCB	00:01.0	15:00.1	28MAY13:14:14:00.05	129278	0	01:00.7					

Examples – Downloading from z/OS

- Sometimes a file is too large to copy/paste into a spreadsheet – then you need to download
- HTTP Server directive:
AddType .DOWNLOAD text/download ebcdic 1.0 # MVSDS
- Whenever a URL is selected that ends in ‘.DOWNLOAD’, the Windows downloading dialog window will pop up.

Examples – Downloading from z/OS

https://prod1s01.bankofamerica.com:8283/MVSDS/CPWP.APPLMIPS.TRENDING.REPORTS.HTM

File Edit View Favorites Tools Help

Select Month for Trending Reports/Downloads by AITID Within LOB/Node

Prime Shift Report:	Non-Prime Shift Report*:	Prime Shift CSV Download (All LOBs One Month):	Non-Prime Shift CSV Download (All LOBs One Month)*:
2013-04	2013-04	2013-04	2013-04
2013-03	2013-03	2013-03	2013-03
2013-02	2013-02	2013-02	2013-02
2013-01	2013-01	2013-01	2013-01
2012-12	2012-12	2012-12	2012-12
2012-11	2012-11	2012-11	2012-11
2012-10	2012-10	2012-10	2012-10
2012-09	2012-09	2012-09	2012-09
2012-08	2012-08	2012-08	2012-08
2012-07	2012-07	2012-07	2012-07
2012-06	2012-06	2012-06	2012-06
2012-05	2012-05	2012-05	2012-05

Please Select link for Report Desired
***Non-Prime MIPS reductions are only being credited for the 1D, 3K, 3W, 1C, and 3C**

Capacity & Performance Management

Do you want to open or save 'CPWP.APPLMIPS.CSV.ALL.YM201304.DOWNLOAD(FRMMEM)' from prod1s01.bankofamerica.com?

Open Save Cancel

100%

Examples – HTML reports

- Base SAS easily creates HTML reports
- Base SAS using ODS HTML or ODS tagsets.mvshtml creates HTML documents.
- SAS ‘PROC REPORT’ extremely useful – can assign URLs as cell attributes etc.

Examples – HTML reports

- Won't go into SAS coding techniques here – this has been covered in previous papers – this is overview of what you CAN do – not HOW to do it.
- Please see Section 'Downloads' of Barry Merrill's web site: <http://www.mxg.com/downloads/> ,
Pat Wingfields's z/OS SAS ODS & Graph Paper
- Also presented at CMG 2009 – 'No More Downloading' paper
- Presented at NESUG/SESUG several times
- Many papers/presentations available on SAS

Examples – HTML reports

Our Report Index – SAS PROC REPORT used to assign links to cells:

The screenshot shows a web browser window with the URL [https://prod1s01.bankofamerica.com:8283/MVSDS/CPWP.REPORTS.INDEX.HTML\(FRM](https://prod1s01.bankofamerica.com:8283/MVSDS/CPWP.REPORTS.INDEX.HTML(FRM). The browser tabs include "Bank of America | Fl...", "CPM REPORT IN...", and "Kim Kardashian & K...". The browser's address bar shows the URL, and the menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help".

The main content area is titled "Mainframe Capacity Planning and Performance Report Index". It contains a list of reports:

- [1. CPU Daily by CEC \(Includes zIIP/IFL\)](#)
- [2. CPU Trending by CEC \(Includes zIIP/IFL\)](#)
- [3. CPU Daily by Node/Lpar \(Includes zIIP/IFL\)](#)
- [4. CPU Trending by Node/Lpar \(Includes zIIP/IFL\)](#)
- [5. OOCOD \(Capacity On Demand\)](#)
- [6. SMF 113 Reports - RNI/CPI/L1MP etc.](#)
- [7. IBM i Reporting](#)
- [8. z/VM z/LNX Reporting](#)
- [9. CICS](#)

The right side of the image shows a detailed view of the report index structure, which is a table with the following rows:

Mainframe Capacity Planning and Performance
Reports Created and Residing on z/OS Systems and Accessed Using z/OS Web Capabilities
CPU Daily by CEC (Includes zIIP/IFL)
DAILY: CEC CPU UTILIZATION>85% ALONG WITH SYSID ACTIVITY
DAILY: KANSAS CITY DEVELOPMENT CEC 15 MINUTE UTILIZATION
DAILY: SELECTED VIRGINIA CECS ONE MINUTE MIPS USE
DAILY: WORKLOAD MIPS USED DRILL DOWN BY CEC (ALSO ZIIP)
DAILY: CPU UTILIZATION BY HOUR FOR CEC/LPAR (ALSO ZIIP/IFL)
Mainframe Capacity Planning & Performance Global Sharepoint

Examples – HTML reports

Network Exception Reporting System – each link is to a report showing an exception threshold exceeded:

CSV File Exception Documentation

Bank of America - &GROUP - Job CPWDEXCP Network Exceptions for the Past 35 Days Select on Exception Value to Link to Daily or Weekly Report										
Network Exceptions										
Date	Category	Type	Node	Sysid	# Times/Day	1st Hour	Threshold	1st Exception Value	Base Value	Second Value
06/02/13	NRT	E1INFO	1S	1S01	5	0	0.3	0.3099999	.	.
06/02/13	NRT	FHINFO1	1S	1S01	5	0	0.3	0.3099999	.	.
06/02/13	NRT	ITS1	9S	9S01	1	5	0.3	16.030195	.	.
06/02/13	NRT	ITW2	9S	9S02	1	5	0.3	9.123714	.	.
06/02/13	NRT	T01CICV	CN	CG90	1	21	0.3	0.3582777	.	.
06/02/13	TCP	ECSA	2Q	2Q01	1	8	0.3	1.9083622	29481.885	85744
06/02/13	TCP	ECSA	9S	9S02	1	5	0.3	0.433911	39090.292	56052
06/02/13	VTM	EXP-CRA4	9S	CS9S02	2	5	75	163	.	.
06/02/13	VTM	EXP-CRPL	9S	CS9S01	2	5	75	96	.	.
06/02/13	VTM	EXP-CRPL	9S	CS9S02	2	5	75	122	.	.
06/02/13	VTM	EXP-IO00	9S	CS9S01	2	5	75	216	.	.
06/02/13	VTM	EXP-IO00	9S	CS9S02	2	5	75	394	.	.

Examples – HTML reports

Updated Version of MQ Operational Reports Shown Earlier:

Daily MQ Operational Reports									
Queue Activity Statistics									
Channel Activity Statistics		Queue Latency Statistics		Queue to Application		Application to Queue		Buffer Manager Statistics	Connection Statistics
by Date	by Hour	by Date	by Hour	by Base Queue Name	by Object Queue Name	by Base Queue Name	by Object Queue Name	by Date and Hour	by Queue Manager, Type, and Date
06/02/13	06/02/13	06/02/13	06/02/13	06/02/13	06/02/13	06/02/13	06/02/13	06/02/13	06/02/13
05/31/13	05/31/13	05/31/13	05/31/13	05/31/13	05/31/13	05/31/13	05/31/13	05/31/13	05/31/13
05/30/13	05/30/13	05/30/13	05/30/13	05/30/13	05/30/13	05/30/13	05/30/13	05/30/13	05/30/13
05/29/13	05/29/13	05/29/13	05/29/13	05/29/13	05/29/13	05/29/13	05/29/13	05/29/13	05/29/13
05/28/13	05/28/13	05/28/13	05/28/13	05/28/13	05/28/13	05/28/13	05/28/13	05/28/13	05/28/13
05/27/13	05/27/13	05/27/13	05/27/13	05/27/13	05/27/13	05/27/13	05/27/13	05/27/13	05/27/13
05/26/13	05/26/13	05/26/13	05/26/13	05/26/13	05/26/13	05/26/13	05/26/13	05/26/13	05/26/13
05/24/13	05/24/13	05/24/13	05/24/13	05/24/13	05/24/13	05/24/13	05/24/13	05/24/13	05/24/13
05/23/13	05/23/13	05/23/13	05/23/13	05/23/13	05/23/13	05/23/13	05/23/13	05/23/13	05/23/13
05/22/13	05/22/13	05/22/13	05/22/13	05/22/13	05/22/13	05/22/13	05/22/13	05/22/13	05/22/13
05/21/13	05/21/13	05/21/13	05/21/13	05/21/13	05/21/13	05/21/13	05/21/13	05/21/13	05/21/13
05/20/13	05/20/13	05/20/13	05/20/13	05/20/13	05/20/13	05/20/13	05/20/13	05/20/13	05/20/13

Examples – HTML

SAS Proc Report:

- Eye tracking shading etc.
- PREV/NEXT/Home/Menu buttons for report navigation
- Notice Data Center Links at upper left – can navigate to cloned reports residing on different z/OS Sysplexes
- All hangs together like one physical report

DCONNCPU
[Richmond, VA](#)
[Merrill Lynch at Richmond, VA](#)
[Richardson, TX](#)
[Kansas City, MO](#)
[Wyndham, TX](#)
[Malaysia and Camberley, UK](#)
[Text GDG\(0\)](#)

[Home](#) [Menu](#)

[PREV](#) [NEXT](#)

Bank of America - Mainframe Capacity Planning and Performance - Job CPWDMQS2
Connection Statistics by Queue Manager, Type, and Date for Richmond

Queue Manager Name=QPC1 System Identifier=1C01 Date=01JUN2013

Queue Manager Name	System Identifier	Date	Type Of Connection	CONNECTION NAME	Total CPU Time	Total Elapsed Time	Total PUT Calls	Total GET Calls	Total API Calls
QPC1	1C01	01JUN2013	BATCH/TSO	DB2PAC11	0:00:00.253	0:00:00.3	60	0	240
QPC1	1C01	01JUN2013	BATCH/TSO	DB2PAC12	0:00:23.757	0:00:24.7	238,274	0	953,096
QPC1	1C01	01JUN2013	BATCH/TSO	DC1PMQL1	0:00:18.657	0:03:31.2	0	1,095,240	1,095,240
QPC1	1C01	01JUN2013	BATCH/TSO	IMIBV001	0:00:00.000	0:00:00.0	1	0	3
QPC1	1C01	01JUN2013	BATCH/TSO	IMIG001G	0:00:00.001	0:00:00.0	3	0	9
QPC1	1C01	01JUN2013	BATCH/TSO	IMIG002G	0:00:00.001	0:00:00.0	3	0	9
QPC1	1C01	01JUN2013	BATCH/TSO	IMIG003G	0:00:00.001	0:00:00.0	3	0	9
QPC1	1C01	01JUN2013	BATCH/TSO	IMIJO02J	0:00:00.001	0:00:00.0	3	0	9
QPC1	1C01	01JUN2013	BATCH/TSO	IMIL001L	0:00:00.001	0:00:00.0	3	0	9

1. Connection Statistics by Queue Manager, Connection, Date
Queue Manager Name=QPC1 System Identifier=1C01 Date=01JUN2013

Queue Manager Name=QPC1 System Identifier=1C01 Date=02JUN2013

Queue Manager Name=QPR1 System Identifier=2R01 Date=01JUN2013

Queue Manager Name=QPR1 System Identifier=2R01 Date=02JUN2013

Examples - HTML

SAS Proc Report – freeze headers, highlight exception cells etc.

Browser address bar: <https://prod1s01.bankofamerica.com:8283/MVSDS/CPWP.TOP10.TREND.CEC.VA.YM2013>

File Edit View Favorites Tools Help

CEC [PREV](#) [NEXT](#)

Monthly Top 10% Driver Analysis

[Richmond](#)
[Richardson](#)
[Wyndham](#)
[Kansas City, MO](#)
[United Kingdom and Malaysia](#)

[Home](#) [Menu](#)

1. Drivers Prime Shift Table of Values by CEC, AITID

2. Drivers Prime Shift Table of Values by CEC, AITID, HLQ
[CEC=RV2](#)
[CEC=RV3](#)
[CEC=RV5](#)
[CEC=RV6](#)
[CEC=RV7](#)
[CEC=RV8](#)
[CEC=RV9](#)

3. Correlation Values
[SHIFT=Prime](#)

4. Prime Shift Chart P95 vs Average Drivers by Month Comparison
[CEC=RV2](#)

Bank of America - Mainframe Capacity Planning and Performance - Job CPWMP49
Table of Drivers by Month and Metric Type

CEC=RV2

			Standard Deviations				Means of Months MAY2011 - JUN2012				Change Month to Month
MAY2012	JUN2012	JUL2012	Maximum Hour	P95 Hour	Shift Avg.	Top 10% Avg.	Maximum Hour	P95 Hour	Shift Avg.	Top 10% Avg.	Change From First Month to Last Month
2.53	4.33	3.99	.	.	3.91	.	.	.	4.29	.	2.2
3.13	1.64	0.78	.	.	.	3.88	.	.	.	3.19	-4.3
			2.88	1.30	3.91	3.88	1.53	0.75	4.29	3.19	
0.24	0.00	12.41	3.46	.	.	.	1.21	.	.	.	12.4
0.00	0.00	0.07	.	2.56	.	.	.	0.80	.	.	-0.2
11.41	6.47	6.24	.	.	3.74	.	.	.	2.85	.	5.6
5.27	1.74	8.93	.	.	.	2.76	.	.	.	2.06	8.9
			3.46	2.56	3.74	2.76	1.21	0.80	2.85	2.06	
0.03	2.87	0.00	0.79	.	.	.	0.25	.	.	.	0.0
0.00	0.16	0.20	.	0.07	.	.	.	0.03	.	.	0.2

This Information is Confidential and Intended for Bank of America Internal Use Only
 No Capture Ratios Have Been Applied to Data
 IMSDB2 Only included from 06/2012 on; VMLNX & KC from 07/2012 on. KC 'Top 10' and 'P95' data only available starting JUL2012. Canary Wharf data intermittent prior to OCT2012
 HLQ's with Latest Month Avg. Shift MIPS Values LE 1 are rolled into '99LOW'
 Batch Includes both Production and Test
 Specialty Engines Excluded from MIPS Used Values

Examples – Creating spreadsheet from HTML:

- Select All/Copy/Paste to Empty Spread
- Gives you a nice formatted spreadsheet – need to be careful of any subtotal lines however

Book1 [Compatibility Mode] - Microsoft Excel

Bank of America - Mainframe Capacity Planning and Performance - Job CPWMRP49

Table of Drivers by Month and Metric Type

CEC=RV2

MIPS Used

Shift	CEC	TCO AITID	TCO Description	HLQ	Metric Type	May-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12
Prime	RV2	DLD	DLD	DLD	Maximum Hour	1.33	0.03	1.24	0.07	0.66	1.33	5.95	31.18	2.14	0.97	0.11	1.8
Prime	RV2	DLD	DLD	DLD	P95 Hour	2.53	0.99	0.3	0.73	0.03	0.12	1.34	1.56	0.01	1.18	0.25	0.2
Prime	RV2	DLD	DLD	DLD	Shift Avg.	3.29	3.2	3.31	4.05	2.21	4.18	3.48	4.73	1.7	4.38	2.2	2.6
Prime	RV2	DLD	DLD	DLD	Top 10% Avg	1.98	0.89	1.02	1.07	1.19	3.83	2.33	4.67	0.87	3.26	0.58	2.
		DLD	DLD	DLD													
Prime	RV2	DMU	DMU	DMU	Maximum Hour	0	0	0	0	0	0	0	0	0	0	0	0
Prime	RV2	DMU	DMU	DMU	P95 Hour	0	0	0	0	0	0	0	0	0	0	0	0
Prime	RV2	DMU	DMU	DMU	Shift Avg.	0.1	0.05	0.04	0.04	0.09	0.04	0.04	0.03	0.05	0.7	0.03	0.0
Prime	RV2	DMU	DMU	DMU	Top 10% Avg	0	0.02	0	0.02	0.06	0	0	0.01	0.07	0.04	0	0.0
		DMU	DMU	DMU													
Prime	RV2	EXP	EXP	EXP	Maximum Hour	3.92	4.05	3.77	4.14	4.44	4.11	4.07	4.32	4.31	4.11	4.36	4.1

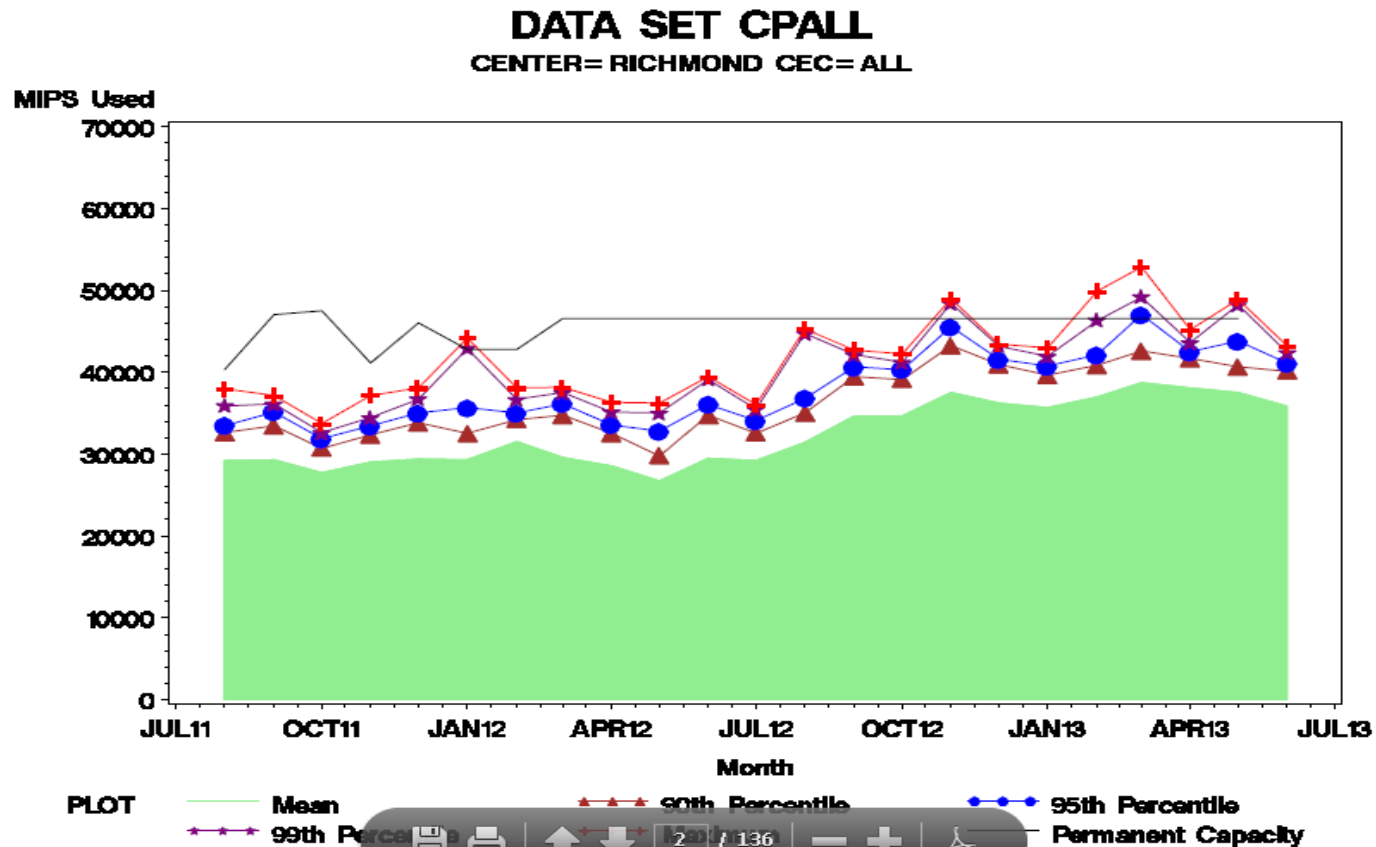
Examples – Creating PDF/RTF formats

- SAS ODS PDF (Adobe Acrobat)
- SAS ODS RTF (Microsoft Word)
- Once again, available with Base SAS

Examples – SAS ODS PDF

- Creates flat file – all one document
- Better for printing etc. than HTML

14:30 Friday, July 26, 2013 2



Examples – SAS ODS tagsets.excelxp

- Text based Excel files
- SAS ODS tagsets.excelxp
- Create z/OS excel file – multiple tabs, summaries etc.
- Gets around some formatting issues when that can be found when copying/pasting from HTML
- Once again, available with Base SAS

Examples – SAS ODS tagsets.excelxp

- Batch job sends out automated email from z/os system:

NEW MAINFRAME CONFIGURATION REPORT AVAILABLE.

PCPW@varchvp02vipa-1s07.bankofamerica.com on behalf of CAPACITY.REPORTING@BANKOFAMERICA.COM

Sent: Wed 6/26/2013 7:42 AM

To: 9.02.02M3P041310

Job CPWDHAR1 has created new daily configuration reports

Please see the following URL for recent changes:

["HTTP://PROD1S05.BANKOFAMERICA.COM//MVSDS/'CPWP.UPGRADES.DAILY.REPORTS.HTML\(LINKS\)'"](http://PROD1S05.BANKOFAMERICA.COM//MVSDS/'CPWP.UPGRADES.DAILY.REPORTS.HTML(LINKS)')

The following URL for a new configuration report:

["HTTP://PROD1S05.BANKOFAMERICA.COM//MVSDS/'CPWP.CONFIG.REPORTS.HTML\(LINKS\)'"](http://PROD1S05.BANKOFAMERICA.COM//MVSDS/'CPWP.CONFIG.REPORTS.HTML(LINKS)')

The following URL for a new CEC configuration XML file:

["HTTP://PROD1S05.BANKOFAMERICA.COM//MVSDS/'CPWP.CONFIG.XML\(CEC\)'"](http://PROD1S05.BANKOFAMERICA.COM//MVSDS/'CPWP.CONFIG.XML(CEC)')

The following URL for a new SYSID configuration XML file:

["HTTP://PROD1S05.BANKOFAMERICA.COM//MVSDS/'CPWP.CONFIG.XML\(SYSID\)'"](http://PROD1S05.BANKOFAMERICA.COM//MVSDS/'CPWP.CONFIG.XML(SYSID)')

THANK YOU,
CAPACITY DATA MANAGEMENT AND ANALYTICS

IMPORTANT: THIS IS AN AUTOMATED MESSAGE, DO NOT REPLY TO THIS EMAIL
PLEASE SEND RESPONSES TO PATRICIA WINGFIELD
MAIL TO PAT.WINGFIELD@BANKOFAMERICA.COM

Examples – SAS ODS tagsets.excelxp – to make XML into spread:

- Click on XML link:



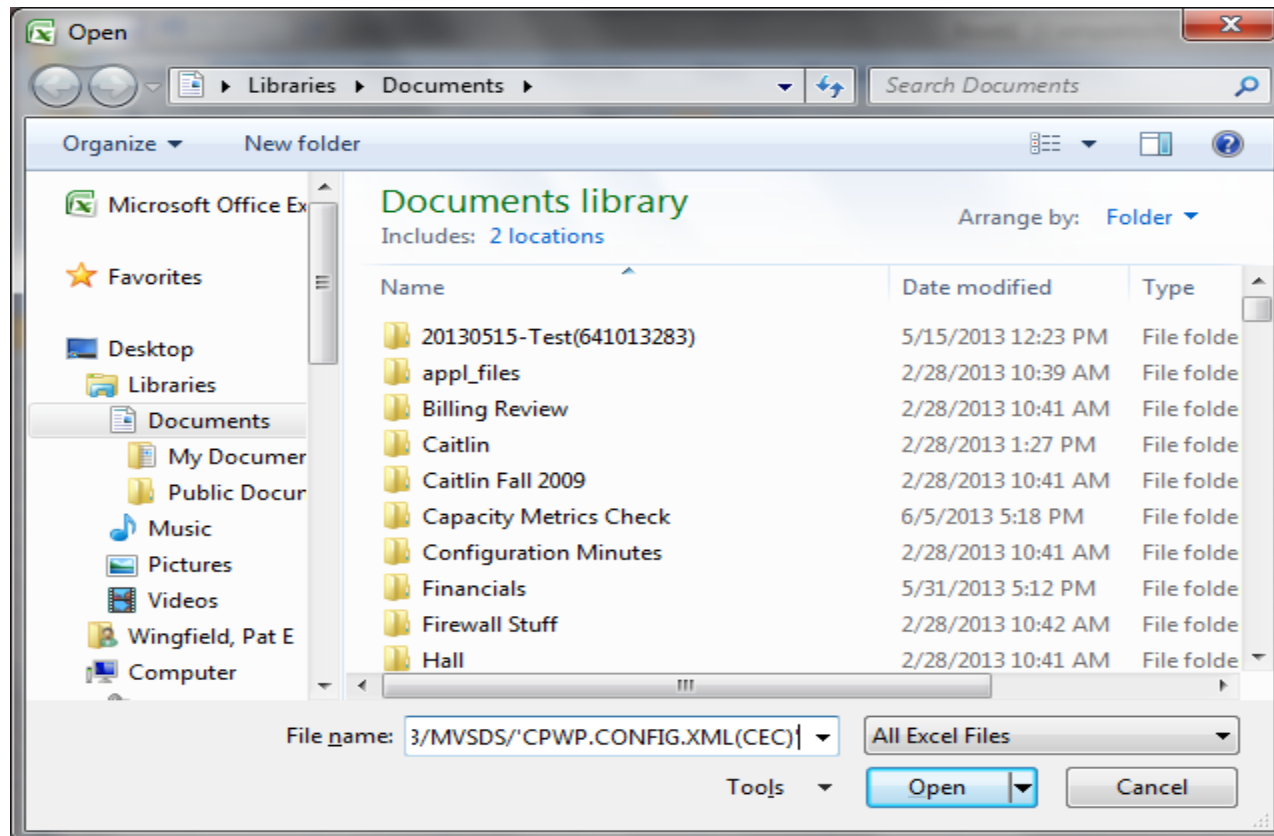
The screenshot shows a web browser window with the address bar displaying the URL: `https://prod1s01.bankofamerica.com:8283/MVSDS/'CPWP.CONFIG.XML(CEC)'`. The browser's address bar also shows several tabs and icons. The main content area of the browser displays XML code with the following structure:

```
<?xml version="1.0" ?>
<?mso-application progid="Excel.Sheet"?>
- <Workbook xmlns="urn:schemas-microsoft-com:office:spreadsheet" xmlns:x="urn:schemas-microsoft-com:office:excel" xmlns:ss="urn:schemas-microsoft-com:office:spreadsheet" xmlns:html="http://www.w3.org/TR/REC-html40">
- <DocumentProperties xmlns="urn:schemas-microsoft-com:office">
  <Author>PCPW</Author>
  <LastAuthor>PCPW</LastAuthor>
  <Created>2013-06-26T07:42:09</Created>
  <LastSaved>2013-06-26T07:42:09</LastSaved>
  <Company>SAS Institute Inc. http://www.sas.com</Company>
  <Version>9.02.02M3P04132010</Version>
</DocumentProperties>
- <Styles>
- <Style ss:ID="_body">
  <Interior ss:Pattern="Solid" />
  <Protection ss:Protected="1" />
</Style>
- <Style ss:ID="_contents">
  <Interior ss:Pattern="Solid" />
  <Protection ss:Protected="1" />
</Style>
- <Style ss:ID="_pages">
  <Interior ss:Pattern="Solid" />
  <Protection ss:Protected="1" />
</Style>
```

Examples – SAS ODS tagsets.excelxp – to make XML into spread:

Method 1:

- Open an empty spread – click file/open
- Copy and paste the entire desired '.XML' link below into the 'File Name' box and click on 'Open'.
- You may be prompted for your id/password and after a few seconds, the spreadsheet will be populated.



Examples – SAS ODS tagsets.excelxp – to make XML into spread:

Spreadsheet opens;

- titles centered
- separate tabs for each 'by' variable etc.

The screenshot shows an Excel spreadsheet with the following content:

Bank of America
Mainframe Capacity Planning and Performance - JOB CPWDHAR1
Site/CEC/LPAR End of Day Configuration for 06/25/13

General Purpose Engines				Specialty Engines			MIPS Ratings						
Total Reserves	Activated Reserves	Un-Activated Reserves	Non-Reserve Activated	zAAPS	zIIPS	IFLs	Permanent Model	Model (ABSMIP S)	Model Power Factor	Permanent MSU Rating	LPARSTD1	LPARSTD2	
0	0	0	0	0	0	0	0	36	36	193.34	7	F20	NONE
0	0	0	0	0	0	0	0	240	240	1288.94		ER21	PRHA
2	1	1	0	0	0	0	1	4,320	5,300	5692.8	531	ELN1	ELN2
2	0	2	0	0	0	0	1	4,320	4,320	5800.21	531	ELN3	ELN4
2	0	2	0	0	0	0	2	5,300	5,300	5692.8	650	EM01	EN01
6	1	5	0	0	0	0	4	14,216	15,196		1,719		
1	1	0	0	0	0	0	0	7,160	8,020	5384	879	DEV2	DEV4
0	0	0	0	0	0	0	0	6,250	6,250	5594.34	766	DEVJ	DEV1
1	1	0	0	0	0	0	0	3,310	4,320	5800.21	408	PRK4	1J01

Examples – SAS ODS tagsets.excelxp – to make XML into spread:

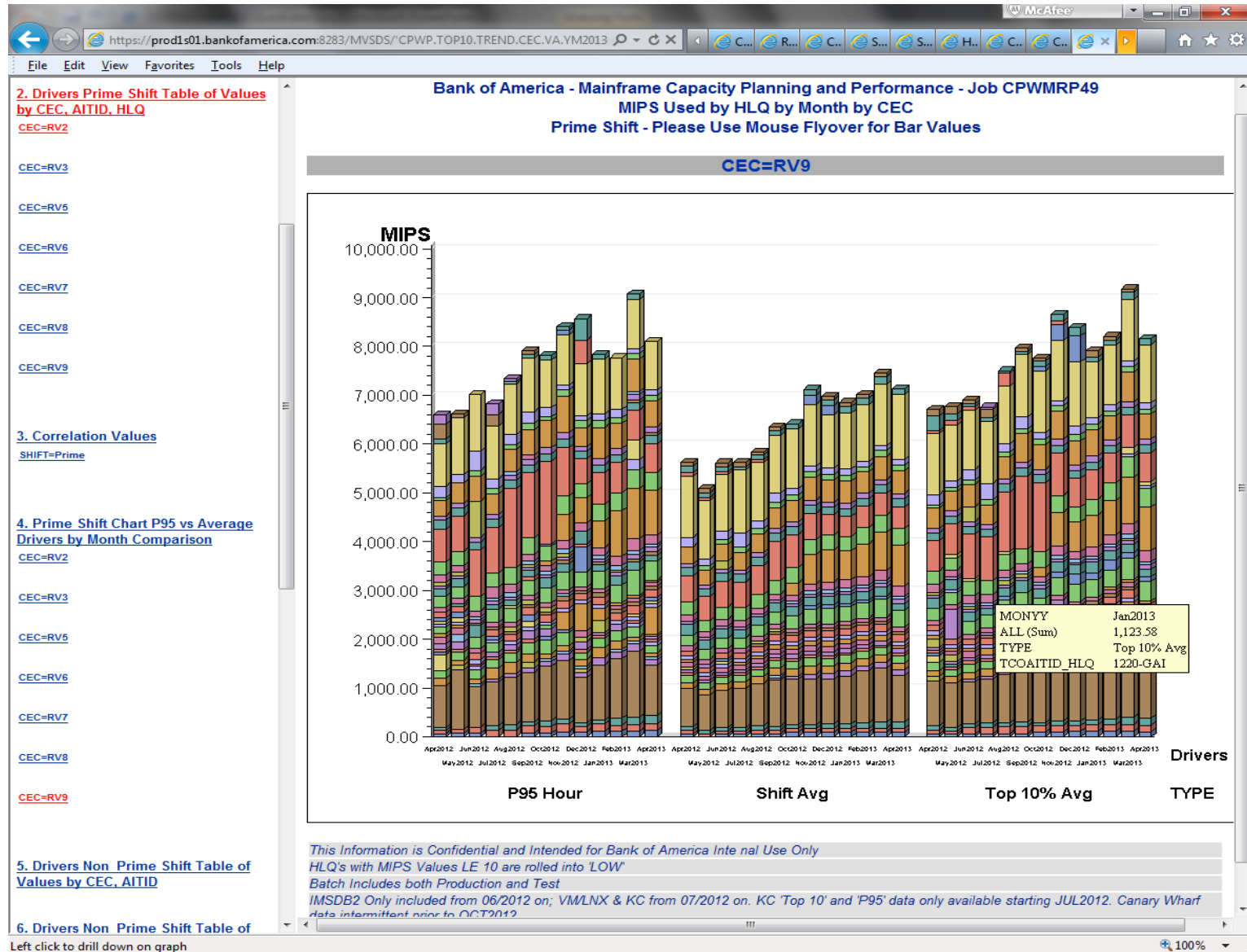
Method 2:

- Click on link
- XML text data set displayed (as in previous slide)
- Save as '.XML' file in desired location
- When click on saved file, opens as a spreadsheet.

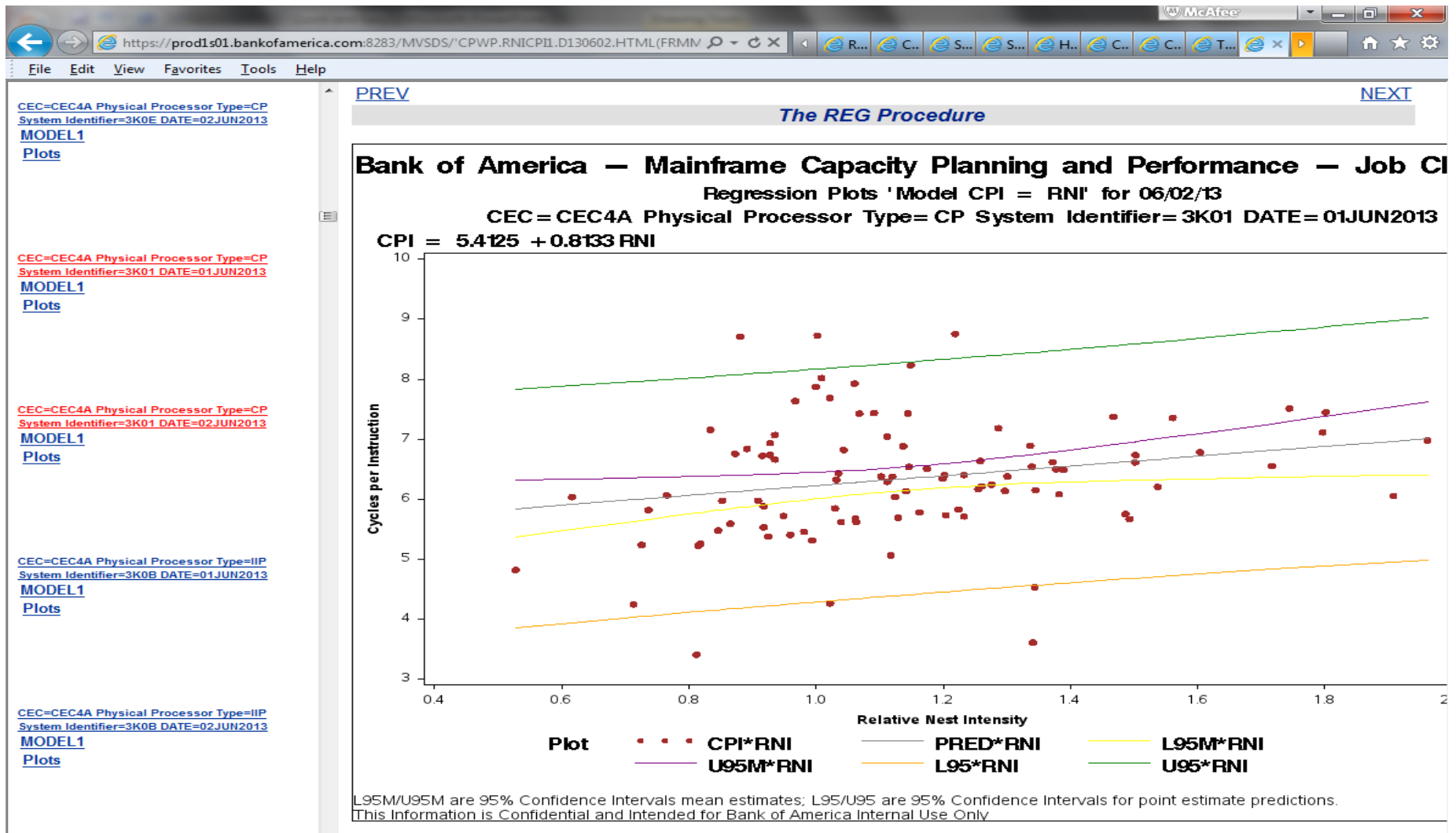
Examples – Graphical Reports

- Both static and dynamic graphs available If have SAS licensed on mainframe,
- Or can use Windows etc. based product and upload to mainframe
- If fortunate enough to have SAS/Graph on mainframe, can easily do automated extensive graphical reporting

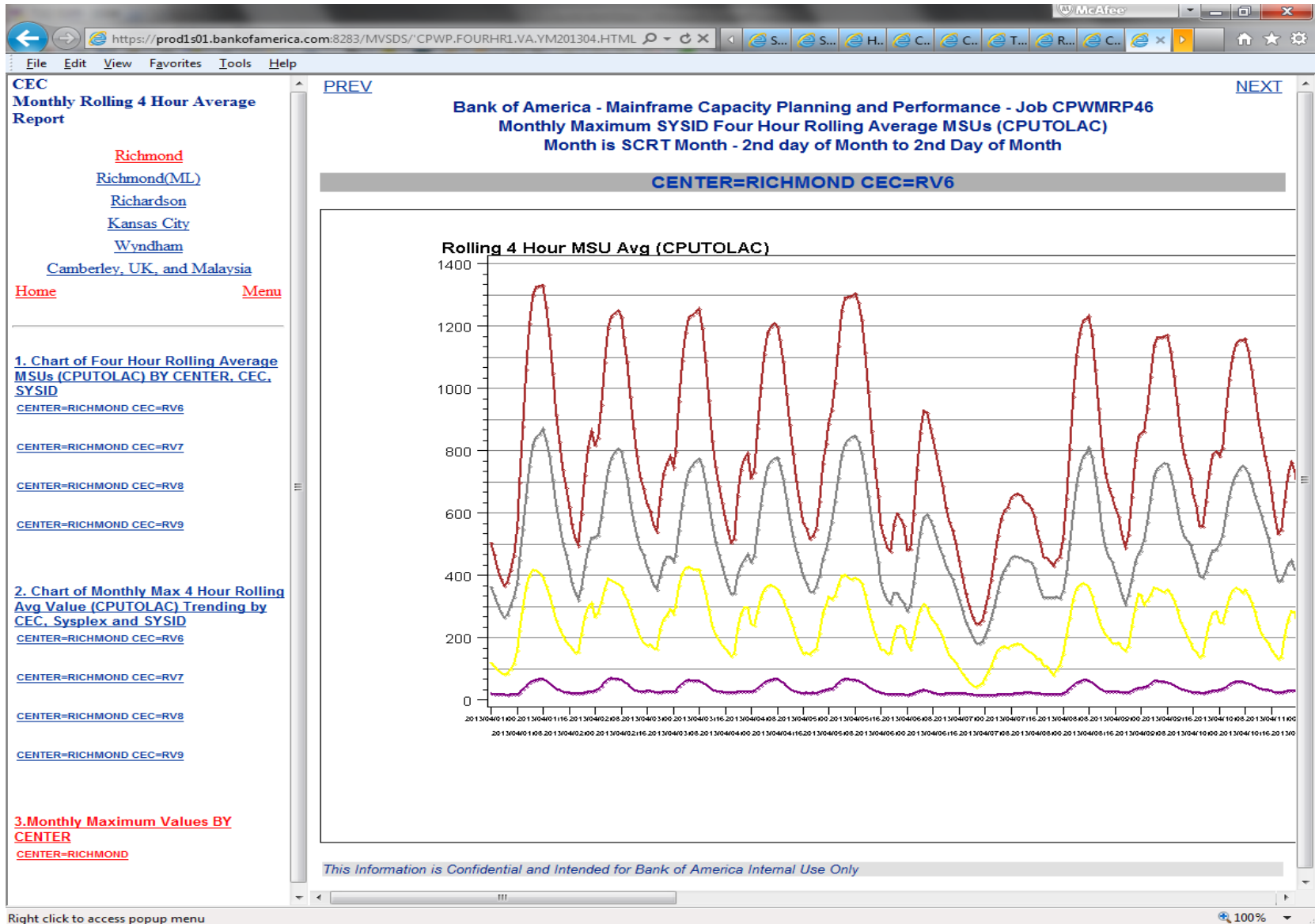
Examples – Graphical Reports – SAS java graph



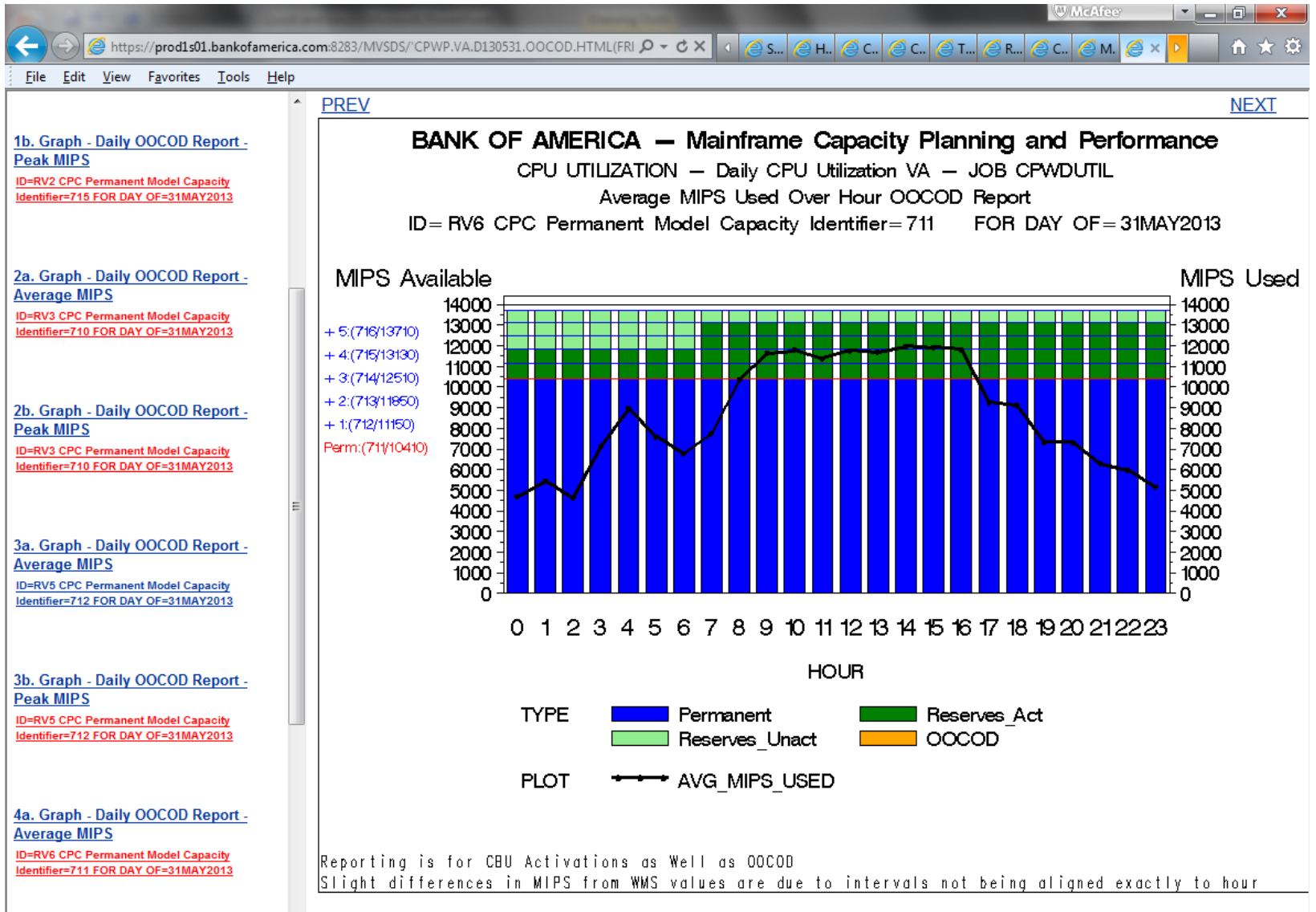
Examples – Graphical Reports – SAS PROC REG Relative Nest Intensity vs CPI analysis graph



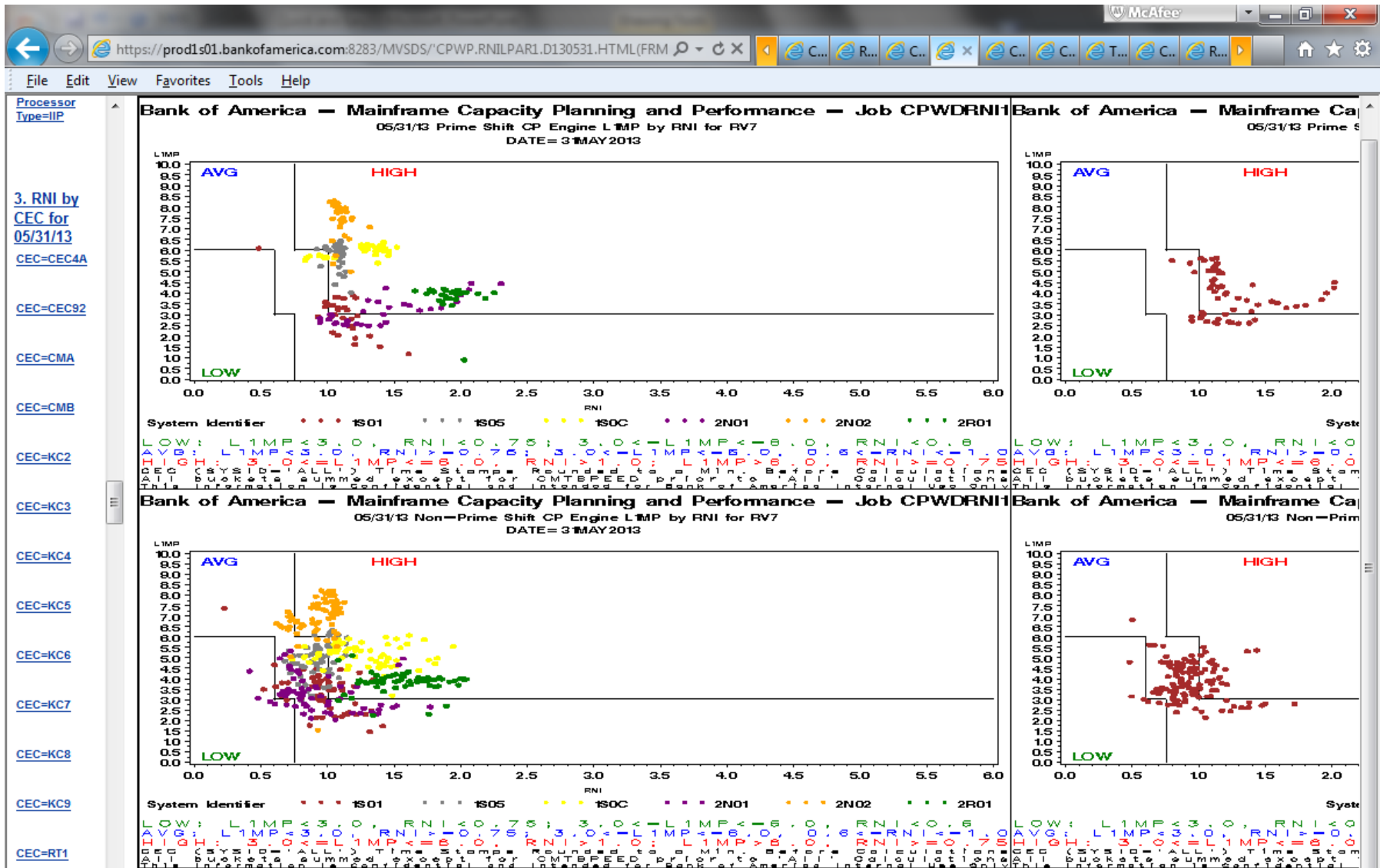
Examples – Graphical Reports – SAS Gplot Rolling Four Hour Average



Examples – Graphical Reports – SAS PROC Gchart CEC OOCOD Usage



Examples – Graphical Reports – SAS PROC Gchart Greplay tiled RNI/L1MP Reports



Apache Web Server

- z/OS Web Server changing to 'Apache' web server
- 'MVSDDS' still supplied
- I have not been able to test, as we don't have 'Apache'

References

- Vincent DelGobbo and Cynthia L. Zender from SAS Institute have done very helpful papers on SAS tagsets.excelxp
- Also from SAS:
<http://support.sas.com/rnd/base/ods/templateFAQ/MVSODS3.pdf>
- Also on www.MXG.com under 'Downloads' section 'No More Downloading' paper by Patricia.

Questions?

