



# CA Output Management Roadmap & Vision

Ed Blazejewski Broadcom

November 2019 Session NG





# Biography

- Combines unique experience of 20+ years in engineering and product management
- Responsible for the overall planning and strategy of CA's output management products.
- Prior to the Output Management product manager role, held product management roles in Blockchain, Security, and DevOps.
- Led multiple high performing self-directed agile development teams across multiple geographies who built products such as Mainframe Operational Intelligence (MOI), UIM4z, Mainframe Software Manager (MSM), and the Output Management products. Also chaired the Americas/EMEA mainframe, UI & User Experience patent review board at CA Technologies.
- Co-leads Broadcom's Mainframe Incubator



### Agenda

- New Delivery Method
- Techdocs
- Delivered, Planned, Under Consideration for CA View/Deliver/Web Viewer
- Delivered, Planned, Under Consideration for CA Spool
- Influencing our Roadmap



### Disclaimer

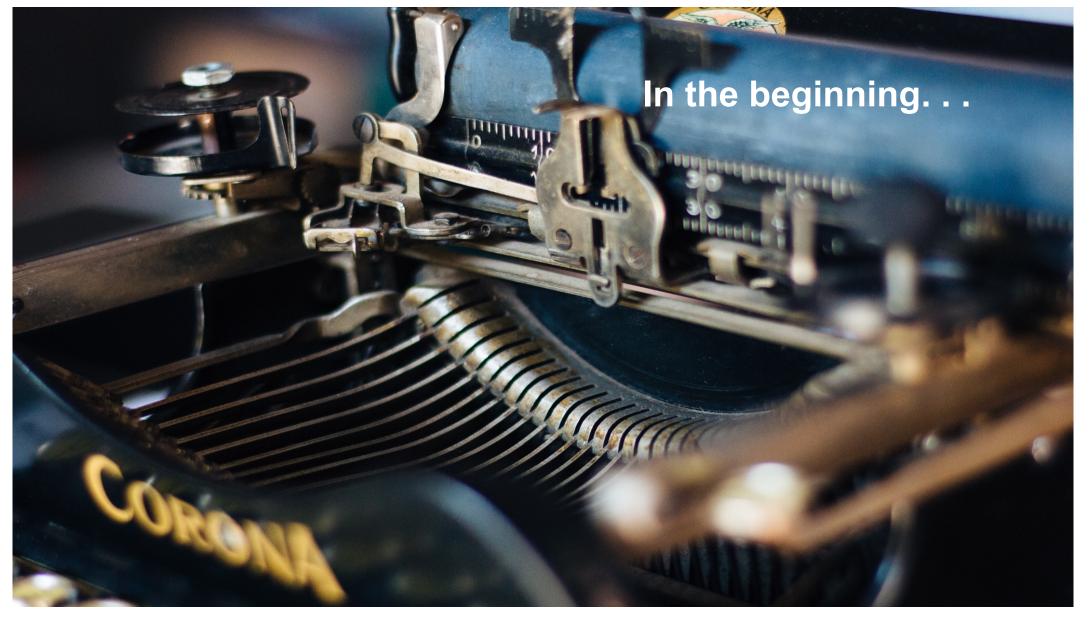
Certain information in this presentation may outline CA's general product direction. This presentation shall not serve to (i) affect the rights and/or obligations of CA or its licensees under any existing or future license agreement or services agreement relating to any CA software product; or (ii) amend any product documentation or specifications for any CA software product. This presentation is based on current information and resource allocations as of 22nd October 2019 and is **subject to change or withdrawal by CA at any time without notice**. The development, release and timing of any features or functionality described in this presentation remain at CA's sole discretion.

Notwithstanding anything in this presentation to the contrary, upon the general availability of any future CA product release referenced in this presentation, CA may make such release available to new licensees in the form of a regularly scheduled major product release. Such release may be made available to licensees of the product who are active subscribers to CA maintenance and support, on a when and if-available basis. The information in this presentation is not deemed to be incorporated into any contract.

Copyright © 2019 Broadcom. All rights reserved. The term "Broadcom" refers to Broadcom Inc. and/or it's subsidiaries. Broadcom, the pulse logo, Connecting everything, CA Technologies and the CA Technologies logo are among the trademarks of Broadcom.

THIS PRESENTATION IS FOR YOUR INFORMATIONAL PURPOSES ONLY. Broadcom assumes no responsibility for the accuracy or completeness of the information. TO THE EXTENT PERMITTED BY APPLICABLE LAW, BROADCOM PROVIDES THIS DOCUMENT "AS IS" WITHOUT WARRANTY OF ANY KIND, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. In no event will Broadcom be liable for any loss or damage, direct or indirect, in connection with this presentation, including, without limitation, lost profits, lost investment, business interruption, goodwill, or lost data, even if Broadcom is expressly advised in advance of the possibility of such damages.







## Output Challenges

- Each enterprise business line has applications that run on the mainframe and create output
- Reports, bank statements, financial reports, inventory, etc
- User Permissions
- Compliance
- Viewing only the relevant information
- Multiple printers and multiple data sources that need to go different places

# Continuous Delivery

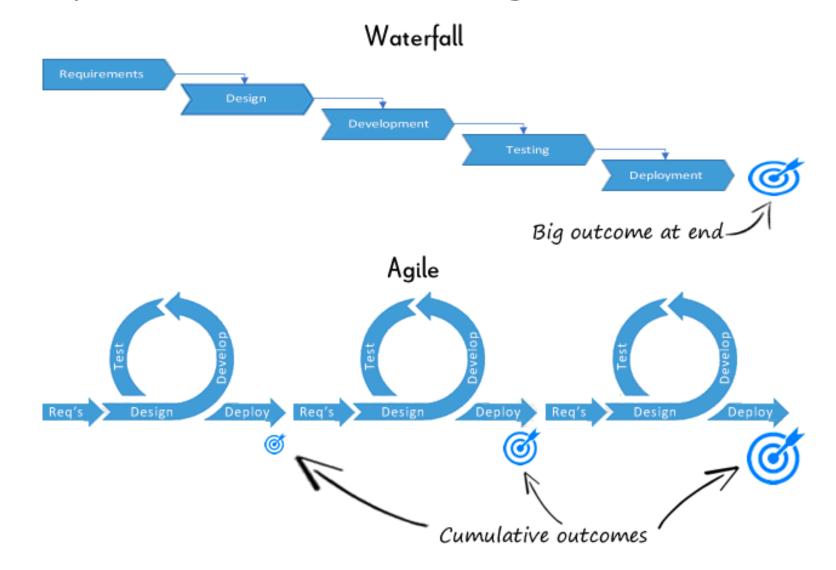


## Development Methodologies

- Waterfall
  - The process by which there are many stages of software development each stage begins when the next one finishes. It could take years for all processes to be complete. At that time the market may change, or customers may not want these features since their requirements changed. A sometimes-large amount of features are usually delivered in a batch at the end of the development cycle. This has been the method used for *many, many years*.
- Agile
  - The process by which there are many stages of software development each stage begins when the next one finishes. It could take years for all processes to be complete. At that time the market may change, or customers may not want these features since their requirements changed. A sometimes-large amount of features are usually delivered in a batch at the end of the development cycle. This has been the method used for *many, many years*.



### **Development Methodologies**





## Continuous Delivery

- Mainframe is transitioning from Incremental Delivery model to Continuous Delivery
- Solves pain points for a number of customers

Highlights

- Releases are GA and fully supported throughout the lifecycle of the CD release.
- Preview/testing of features in the validate program will still apply
- Fixes delivered when needed as individual PTFS, SEPARATE from product features.
- Features Delivered as individual product PTFs but delivered disabled by default.
  - You control when you want these new features activated
  - Fixes can continue to be applied without activating features.
- Service Roll Ups A PTF that pre-reqs all published PTFs in release stream and supersedes
  previous service roll up PTFs
- Service Roll Up Number a way to help customers and better understand their current maintenance level. "vv.r.mm". Version.Release.maintenance level
- CA View/Deliver/Spool/Web Viewer ALL SUPPORT CONTINUOUS DELIVERY!

# Current Releases



## CA Output Product Releases

Product	Release	GA Info	Actively Developed	End Of Support
CA View/CA Deliver	12.2	GA-1 since Jun 2014	No	October 31, 2020
	14	GA since Nov 2016	Yes	Not Announced
CA OM Web Viewer	11.5	GA since Mar 2010	No	Working on sending out letters soon – 12 months from Nov 2019
	12.1	GA-1 since Jun 2015	No	Not Announced
CA Content Viewer	14	GA since May 2017	Yes	Not Announced
CA Spool & "C" transformers	12	GA-1 since Apr 2015	No	Working on sending out letters soon – 18 months from Nov 2019
	14	GA since Nov 2018	Yes	Not Announced

# DocOps -> TechDocs



#### CA VIEW® 14.0

			↓ PDF	Version v 14.0 v
Q Search this product		Release Notes	Install and Upgrade	Lising
Release Notes	~	Release Notes	CA View an	Using
Release Notes	•	Summary of enhancements, fixes,	Systems programmers use this	Information and procedures for end
Install and Upgrade CA View and Related Components	~	and open issues.	Installing and Upgrading section to install and upgrade CA View, CA Deliver, mtcwv, an	users.
Using	~			
Web User Interfaces for CA	View	VIEW ALL	VIEW ALL	VIEW ALL
Programming	~			
Reference Initialization, Database, and Batch Processing	~	Web User Interfaces for CA Vie	Programming	Reference Initialization, Dat
and batch Frocessing		CA View 12.2 and 14.0 provide the	Contains reference material for the	This Reference section is for
Reference Miscellaneous	~	following web interfaces. Administrators typically install and maintain one of th	developers.	system programmers, administrators, and end users of CA View. CA View archi
CA DRAS Operations	~			
Messages and Abend Codes	~	VIEW ALL	VIEW ALL	VIEW ALL

 Documentation is updated frequently as features are released UK REGIO

# Product Updates

# What's Been Delivered in CA OM Web Viewer?



## CA OM Web Viewer – What's Delivered?

Feature	Description	Benefit
Search for indexes based on filter criteria	Users can search for indexes based on search, criteria, get a list of indexes that meet the criteria	Indexing allows you to reduce the amount of data within the report that is viewable. It is a way to break down large reports into smaller viewable reports based on values within the report
Change Password	The Mainframe Password or Passphrase can be changed on the logon screen	No need to logon to the mainframe and change the credentials when the password/passphrase expires
Wizard to find reports based on index values	From the index list, a user can select one and a wizard will walk the user through a series of steps to pick a sub-index name, enter values which can include wildcards, get a list of index rows that meet the criteria, select a row and display the reports/logical views for the index	Finding a report based on index values is a simple easy process
Group repositories to minimize exposure to complete list	Repositories can be grouped so that a user can select a group and only see those repositories in the repository list that are within the specified group	Don't have to wade through a list of repositories that have no interest to the user or see ones that they are not authorized to see
Support 8 character Userids	Change generation of jobnames built on userids and additional characters since User ids can now contain up to 8 characters	Jobnames will be generated properly when Userids are 8 characters starting with z/OS 2.3



### CA OM Web Viewer – What's Delivered?

Feature	Description	Benefit
Save report	The report being viewed in the View Content page can be saved. The report will be saved with the name equal to Report ID and a filetype as the type of file text, PDF, AFP etc and it will be saved to the browsers download location	The report being viewed can be saved on the local device
Email link of one or more reports	A user can select one or more reports from the report list or the current report from the View Content page, create a link and copy it to the default email system for sending	The email system of choice can be used to compose an email with links to one or more reports and at the same time the reports remain secure in CA View
Print one or more reports	A user can select one or more reports from the report list or the current report from the View Content page and print it	One or more reports can be printed
Download one or more reports	A user can select one or more reports from the report list page and download it. The report will be downloaded with the name equal to Report ID and a filetype as the type of file text, PDF, AFP etc and it will be saved to the browsers download location	One or more reports can be downloaded to the local device
Audit information stored in SMF records when action performed	SMF records are written for each action performed	SMF the system of record for audit information is the single source to report on who is accessing reports
Export Text report	A user can select one or more Text reports from the report list or the current text report from the view content page and download/save it as a CSV file for later importing into a spreadsheet program such as Excel	Popular Spreadsheet tools can be used to analyze and further refine CSV files
Restful Web Services that call CA View to retrieve content	Restful Web Services to replace DRAS, CCI and ENF when using Web Viewer	Performance improvements and cost savings due to reducing the amount of infrastructure that is required for Web Viewing.



### CA OM Web Viewer – What's Delivered?

Feature	Description	Benefit
Redesign uses less CPU and memory, and is faster than r12	Fast and efficient access to CA View content no matter how large the content is or how many users are concurrently accessing that content	Quickly view content stored in CA View regardless of size
Select a repository to process from a list of available repositories	A list of repositories is extracted from Web Viewer database and displayed for the user to select. Shown in the repository list is the code page that will be used to display reports in the localized language	Ability to select a repository containing reports to view. No longer any need to have a separate DRAS started task for each code page used
Log in to a repository using Mainframe credentials using default mode and DISTribution ID.	Mainframe credentials of Userid and Password or Passphrase are required to login to mainframe. No need to sign on to each repository if on the same sysplex using the same credentials	Repositories reside on the mainframe and credentials are validated against Top Secret, ACF2 and/or RACF
Search for report with filter criteria using default fields based on mode and distID set in CA View	Search/filter criteria can be entered to limit the report list results to just those reports that the user is authorized to see based on security and the distID that is set in CA View for the user and those reports that meet the search criteria	The report list can be limited to show just those reports that the user is interested in seeing
Select one or more reports to View	From the report list, the user can select one or more reports to view. Each report will open and controlled by a separate tab of the browser	Multiple reports can be viewed at the same time

# What's Been Delivered in CA View &CA Deliver?



# CA View, CA Deliver, Content Viewer Packaging Improvements



#### PAIN

SYSPROG has to download different CA product solution tapes for installation of the CA solution

- CA Deliver and its components
- •CA View and its components
- •CA Content Viewer and its components

#### **SOLUTION**

- One Mainframe install tape for complete CA Report Management solution
- Use CA license keys to turn on component options or features

- Improved User Experience
  - Easy to install to target libraries
  - Quick and improved deployment or upgrade process
  - Improved product/solution management within the environment



### CA View Updated AFP to PDF transformers





#### PAIN

- Need to print AFP data to view it
- This can be very expensive
- May only need to see one page
- Installing a 3<sup>rd</sup> party AFP viewer on every machine is not optimal

#### SOLUTION

- CA View now ships data transformers that are used by Content Viewer
- Transforms AFP to PDF without requiring CA Spool

- Reduces cost since Java based transformer can run on the zIIP processor
- Using AFP to PDF, you can now view your documents in a standard format without CA Spool
- Print to a standard lower cost printer
- Only view the page you want, no need to print the entire report



## CA View Collects JESJCLIN via FSS Collector



#### PAIN

 CA View collects JESJCLIN but only via SARSTC but with so many jobs running I need a way to collect it more quickly with more specifications

#### **SOLUTION**

• A new FSS Collector is now available that can not only collect via SARSTC but you can start multiple Functional Sub System (FSS) collectors.

#### BENEFIT

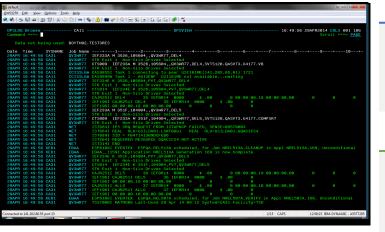
Mainframe

• Allows you to collect the JESJCLIN data set with SYSOUTs that contain JESMSGLG, JESYMSG, and JESJCL data sets in parallel using multiple FSS collectors.



### CA View - CA OPS/MVS<sup>®</sup> Heartbeat and Status Messages

#### Integration providing status information



#### PAIN

- Difficult to determine the status of multiple started tasks
- When resources are not in the correct status, reports are unavailable

#### **SOLUTION**

- Generate OPS/MVS Status Messages for all started tasks
- Allows OPS/MVS to accurately manage via System State Manager
- CA OPS integrates with SARSTC, SAREAS, SARXTD and FSS

- Easily automates started tasks within OPS/MVS System State Manager
- Allows use of generic System State Manager message rules
- Reports are available during desired time frames
- No configuration is needed! If CA View finds CA OPS it will start communicating.



### CA View Prints to Dataset

```
CA View ALL or EXPO ------ Print Attribute Panel ------
Command ===>
  ID
        ---> SWILAROG
       ---> SWILAROG Jobid ---> JOB05739
  Job
Print Attributes:
  BANNER ===> DEFAULT CLASS ===> 3
                                             DEST ===> LOCAL
  COPIES ===> 1
                       BURST ===> N
                                             FORM ===> STD
                    OPTCDJ ===> N
  FCB
       ===>
                                             FLASH ===> (
                                                             ( )
  UCS
       ===>
                    HOLD ===> N
                                             MODIFY ===> (
                                                              . )
  FORMDF ===>
                       PAGEDF ===>
                                             PRMODE ===>
  LINECT ===>
                       VIEW ===>
                                             PRTY ===>
  CHARS ===> (
                , , , )
                                             WRITER ===>
Print to data set:
  NAME ===>
  DISP ===>
              (NEW, OLD, SHR, or MOD)
Enter optional page/record range(s):
  PAGE ===>
  RECORD ===>
           Press ENTER to confirm or enter END command to cancel
```

#### **BENEFIT**

- Users can print to a dataset using the P command (online print) or J command (batch) in all MODEs.
- Users can also use PI command to print index, in MODE ALL

#### PAIN

- Need a way to print output ad hoc, to a dataset, and without using CA Spool
- Can only print to SYSOUT currently

#### **SOLUTION**

• CA View can print to SYSOUT as well as a dataset



### CA View Integrates with Data Content Discovery (DCD)



#### PAIN

- Many CA View database with millions of reports, how do I find Personal Identifiable Information (PII)
- Data breaches can be costly, it is challenging to proactively reduce potential loss during an attach.
- How do you start a data inventory?
   SOLUTION
- CA View integrates with DCD! Find PII quickly

- Enables admins to take an inventory to understand what type of data is being processed and if it's required
- Used to determine if the report is properly secured so only the right people have access
- DCD can find all types of PII (has 180 classifiers) and logs any exposures for later follow up.



## CA View Can Navigate Directly to Jobs Mode

- ISPEXEC SELECT PGM(SARSPF) NEWAPPL(SAR) + PARM(OMMTL.VIEWPE0Z JOB \* \* \* 01012018 12312018) (shows all jobs from year 2018)
- ISPEXEC SELECT PGM(SARSPF) NEWAPPL(SAR) + PARM(OMMTL.VIEWPE0Z JOB \* \* \* -0 -0 END) (shows jobs that ended today)
- ISPEXEC SELECT PGM(SARSPF) NEWAPPL(SAR) + PARM(OMMTL.VIEWPE0Z ALL PAY\* \*\* 01/01/2019 01/31/2019) (shows all reports starting with PAY\* archived in January 2019)

#### PAIN

• Changing to multiple screens and typing to get from an application to CA View JOBs mode screen takes time

#### **SOLUTION**

- Using this new feature you can quickly jump to JOBs mode using a data filter.
- Format: idxname mode sysout-id/jobname jobid selectcode from-date to-date date-type

- From ISPEXEC or ISPSTART PARM field for ISPF or the SARTSO TSO command can jump directly to JOBs mode
- Supports data filters in any mode.



## CA View & Deliver Date Format Customization



#### PAIN

- CA View and CA Deliver's online panel date formats were not customizable.
- Needed to use the AMASPZAP utility

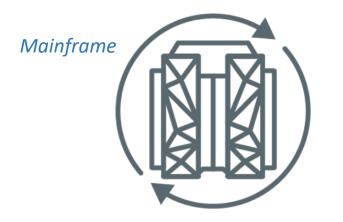
#### **SOLUTION**

- CA Deliver's macros (RMODTTYP, RMODTCHR, and RMOTMCHR can be run to specify which date format you want to display.
- Run CA View's macros SARDTYP, SARDTCHR, and SARTMCHR.

- Can choose up to 8 different date formats
- Such as MM/DD/YYYY or DD/MM/YYYY, YYY/MM/DD and so on



## CA View Collects JESJCLIN



#### PAIN

• CA View collects spent JCL, but need a way to tie it back to the job

#### **SOLUTION**

• Enabling FEATURE=18 allows CA View to capture JESJCLIN datasets with selected SYSOUTs.

#### BENEFIT

• Allows you to collect the JESJCLIN data set with SYSOUTs that contain JESMSGLG, JESYMSG, and JESJCL data sets.

# What's Planned for CA OM Web Viewer r14?



## Planned – CA Web Viewer

Feature	Description	Benefit
Honoring Filters with Logical View	Any logical view that has a filter will now be honored in the web interface.	Filters in CA View are very powerful and will now be supported in Web Viewer.
Multi-LPAR Support	The ability to have one web viewer communicate with other CA View's on other repositories.	Saves time for users having to remember to connect with multiple web viewers to find their reports.
Find Text in Reports	The ability to search for text found in reports. Since Web Viewer uses cooperative processing not all pages are displayed in the browser, so using the browser find will not find all text	Quickly and efficiently find text in reports.
Enhanced export preview	Completely new design of the export preview wizard	Helps users create rules and saves time.
Integration with Brightside CLI	Able to get report lists, data and other information from the command line with no programming!	Set up schedules to run unattended to download data ready for processing

# What's Planned for CA View / CA Deliver r14?



## Planned – CA View/Deliver

Feature	Description	Benefit
Table feature in CA Deliver	An easier way to add report definitions. Much more flexibility when working with DISTIDs in report definitions. Dynamic DISTIDS can be determined by up to 3 variable conditions instead of one.	Using this new feature it can potentially eliminate hundreds or even thousands of definitions thus saving time and administration. In one case we went from 18k definitions down to 5!
More information on JOBS mode panel	While in JOBs mode the user will be able to see what steps are in error along with the error code	This will increase the productivity of operations now they don't need to drill into each DD and search for errors.

# What's Under Consideration for Web Viewer r14?



### Under Consideration – CA Web Viewer

Feature	Description	Benefit
Favorites	Give the ability to save a link to a report, index, or filter	Saves time having to search for reports
LDAP	Use a network ID to log into the mainframe	Customers use LDAP at their sites need this functionality
WebSphere Support	Run under WebSphere	Some customers have this requirement, as opposed to running Tomcat.
Subscriptions	The ability to be notified through when a new report version arrives.	Instead of having to check for a new report, you will get an email and a link when a new version arrives.
Jobs mode support in Web Viewer	CA View can display the component JCL breakdown of a job, in web viewer.	Operators who view the output of a job through SDSF, SYSVIEW or any other interface can now continue to work in CA View without switching products.
Walk Me/Help Me	Guides a new user through the interface	New users can walk up and start using the web viewer without any training.
Support Zowe API Mediation Layer	Web Viewer's Web API support of Zowe API Mediation layer. Programmers call the API ML to query catalog to see not only what services are available but how to call them. Also allows networking of other LPARS so one web viewer can communicate across LPARs	Normalize the APIs that are available across the Broadcom mainframe product suite. Get your web app built must faster.
Show Info on Reports	For any given report, display the metadata about the report	See all of the information about a report in a single place
Show Versions of a report	For any given report, show a list of all of the versions of that report in a new report list page. The user can select one or more of the versions and act upon it	Easily find all of the versions of a specified report
DB2 Database support	The ability to use a DB2 database instead of the packaged H2 open source database	DB2 is used at a lot of sites and it is a standard, otherwise H2 may cause having to get an exception. Site familiarity.



### Under Consideration – CA Web Viewer

Feature	Description	Benefit
Annotations and Bookmarks support	Users can add multiple annotations to a text report and save them with the report	Annotations can be created and attached to a text report for anyone to view
<b>Search for report</b> with filter criteria using an any column available to the report list	The search capability for a report list is extended to use any field available as a column in the list screen	Limit the number of rows in the report list screen based on search criteria to easily see the reports of interest
Update Comments	The Metadata field for Comments for any type of report can be updated. These comments are displayed on the report list page. When a comment is updated, it replaces the previous content	Comments can be updated for any type of report and shown on the report list screen
Integration with OPS/MVS to provide Web Viewer heartbeat	A heartbeat will be sent to OPS/MVS for monitoring so that action can be taken if Web Viewer is no longer communicating	Improve problem recognition time by being alerted when a CA Web Viewer started task is not responding
Single Sign sign on Support	The mainframe logon can be initiated from a Single Signon System such as CA's own SSO so that the logon screens do not get displayed	Logon once and have the information propagated so there is no need to enter the same credentials again
SAML2 support	SAML2 security will be integrated into Web Viewer	Integrate with other security systems using industry standards
Support Datacom AD as the database for High Availability	Support for CA's DatacomAD database will be added for those users who want a black box database system and don't want to run DB2 or an open source database	Gain the support of Active/Active across the Sysplex
<b>CMIS compliant web</b> <b>service</b> for repository list, report list and content view	Web Services that can be called from products that support the Content Management Interoperability Services	Users familiar with products that support CMIS can view reports stored in View with their tool of choice

# What's Under Consideration for CA View & CA Deliver?



## Under Consideration – CA View/Deliver

Feature	Description	Benefit
Audit tracking in CA Deliver	As definitions are added, changed, or deleted these will be tracked by CA Deliver	This will be provided out of the box for CA Deliver so that admins can monitor and record all changes to CA Deliver.
CA Dispatch Archive support	Import Dispatch archive into CA View database	Migrate CA Dispatch archive all at once instead of on demand as needed.
Logical View for job output	Be able to provide a logical view or filter while viewing a job.	This could cut down on all the noise in the job output and only show lines that matter.
Bookmarks and Annotations for jobs	Provide the ability to book mark and annotate a job while viewing the job output.	While looking through a lot of output it would save time to be able to bookmark and/or annotate the job output so you can refer to it at a later date.
Expose JOBS MODE via agents	Able to use Zowe CLI to get job information from CA View	Useful for scripting. Can take actions based on job output.

# What's Been Delivered for CA Spool?



## Delivered – CA Spool

#### Delivered

- Complete transition to fully functional Java based data transformers for increased performance
- Usability improvements to make installing much easier, removing all post install jobs
- E-Boks and XES-AFP support
- AFP overlay support
- Support for larger screens past MOD4
- Pervasive encryption for disk/dataset print drivers
- SFTP support
- Email notification to invoke web interface

#### Delivered

- Sharepoint Integration
- CMIS (Content Management Interoperability Service) support
- Sharepoint interface
- Exploit OpenText Designer for Windows

Currently GA

Marquee

Features/

Business Value



## Planned & Under consideration – CA Spool

#### Planned

- Internet Print Protocol (IPP support)
- Print interface to DB2 database
- Print interface to MQ

#### **Under Consideration**

- New reporting tool (creates text reports)
- Printer interface to OneDrive & DropBox
- Telemetry
- Standard Web API interface
- Integration to Zowe CLI and ML
- Interface operational data to Mainframe Operational Intelligence (MOI)

Marquee Features/ Business Value



# Are You Participating in Community Ideation?

#### **Broadcom Communities Ideation**

- Submit your ideas on communities.broadcom.com
- Vote and comment on ideas that are important to you
- Broadcom Product Management reviews ideas and updates status as they move through the lifecycle
- "Currently Planned" idea status indicates inclusion in Agile Backlog or Product Roadmap

#### **Customer Validation**

- Register to participate in:
  - Live Demos / End-of-Sprint Review meetings
  - Private Members Only Online Community
  - Pre-Complete Release Feature Testing and Support
  - Upgrade Support From SWAT Team
- How to register: validate.broadcom.com
- Validate set up for CA Spool, and CA View/Deliver/Web Viewer



### Thank You!

Email: Ed.Blazejewski@broadcom.com



## Please submit your session feedback!

- Do it online at <u>http://conferences.gse.org.uk/2019/feedback/NG</u>
- This session is NG



1. What is your conference registration number?

🛉 This is the three digit number on the bottom of your delegate badge

2. Was the length of this presention correct?

🍟 1 to 4 = "Too Short" 5 = "OK" 6-9 = "Too Long"



3. Did this presention meet your requirements?

脊 1 to 4 = "No" 5 = "OK" 6-9 = "Yes"

 $\overset{1}{\bigcirc} \quad \overset{2}{\bigcirc} \quad \overset{3}{\bigcirc} \quad \overset{4}{\bigcirc} \quad \overset{5}{\bigcirc} \quad \overset{6}{\bigcirc} \quad \overset{7}{\bigcirc} \quad \overset{8}{\bigcirc} \quad \overset{9}{\bigcirc}$ 

4. Was the session content what you expected?

🍟 1 to 4 = "No" 5 = "OK" 6-9 = "Yes"

 $\overset{1}{\bigcirc} \quad \overset{2}{\bigcirc} \quad \overset{3}{\bigcirc} \quad \overset{4}{\bigcirc} \quad \overset{5}{\bigcirc} \quad \overset{6}{\bigcirc} \quad \overset{7}{\bigcirc} \quad \overset{8}{\bigcirc} \quad \overset{9}{\bigcirc}$