

# October 1, 2019

## Roadmaps and Web Services

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# POLL #1 – Web Service Hosting





Today's Moderator  
Mark O'Brien

# The Agenda

Q&A at End of Webinar

Please enter questions in the  
GoToWebinar Application

1

## Introductions

Mark O'Brien

2

## CA 2E and CA Plex Roadmaps

By Dheeraj Pershad, Broadcom / CA Technologies

## CA Plex Java Security Lightning Talk

By Arun Painuly, Broadcom / CA Technologies

3

## Web Services Lightning Talks

By Mark Schroeder and Andrew Leggett, CM First

4

Q&A



Dheeraj Pershad



# Plex, 2E Roadmap & Updates

**Dheeraj Pershad | Product Manager**



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# Heritage of Technology



1960

Lucent Technologies  
Bell Labs Innovations

1996



2002



1981



2007



1961



Agilent Technologies



2005



2009



2014



2016

2017

2018

2019



1991



1995



1976




1986






# Part of the Broadcom Portfolio



FY18  
net revenue  
**\$20.8B\***

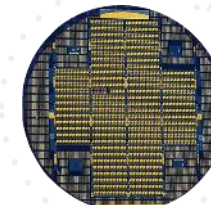


**Category  
Leading**  
semiconductor  
& infrastructure  
software products



One of industry's  
broadest IP portfolios  
with some  
**23,000**  
patents

**\$3.8B**  
investment in R&D  
in FY18



# Priorities: What Does Broadcom Care About?

**Best-in-class technology.** Being leaders in the markets we serve.

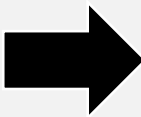
Rapidly **delivering continuous customer value** and business impact.

Building long-term, sustained and **durable customer relationships.**

**Simple** straightforward contracts and **business practices. Portfolio License Agreement**

# Broadcom | Digital Infrastructure Management for Distributed Clouds

Only Broadcom offers a **comprehensive digital infrastructure management platform** that empowers organizations to develop and deliver digital services and apps, and deliver them with reliability, scalability, security and compliance in multi-cloud distributed IT environments



## Business Management Platform

Plan, track and manage any business deliverable to delight customers and drive faster innovation



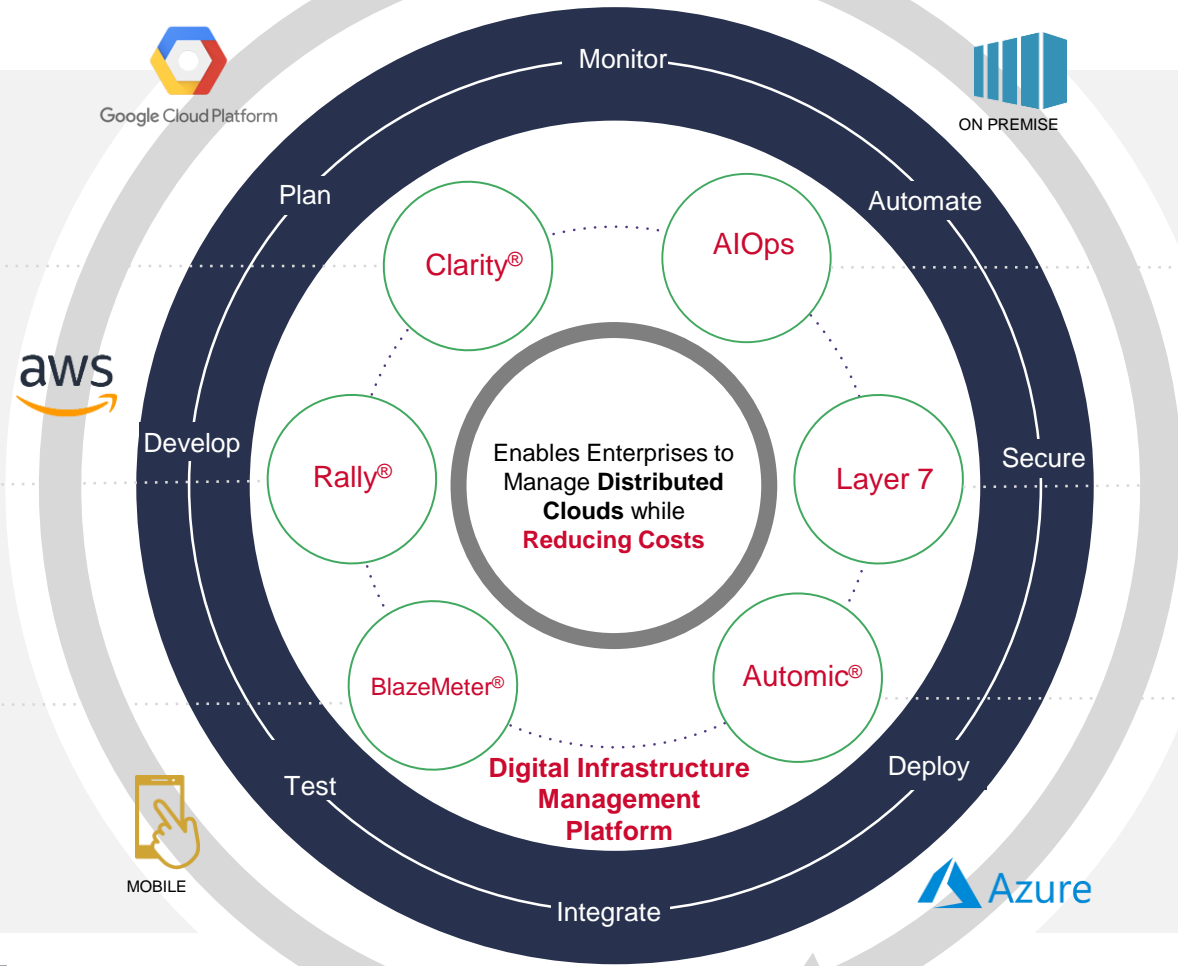
## Agile Management Platform

Speed time to market, and improve agility with more predictable data-driven agile development plans



## Continuous Testing Platform

Increase competitive advantage by delivering better applications, with better quality, faster



## AI Operations Management Platform



Deliver intelligent, reliable and self-healing IT services and apps with predictive analytics across multi-cloud environments

## Security & Integration Platform



Intelligent security that controls cyber risk and stops data breaches. Enables secure APIs and micro-services, user security and transaction security

## Delivery & Automation Platform



Intelligent automation for continuous delivery and service orchestration of business and IT processes

**Flexibility to Work in ANY Environment**





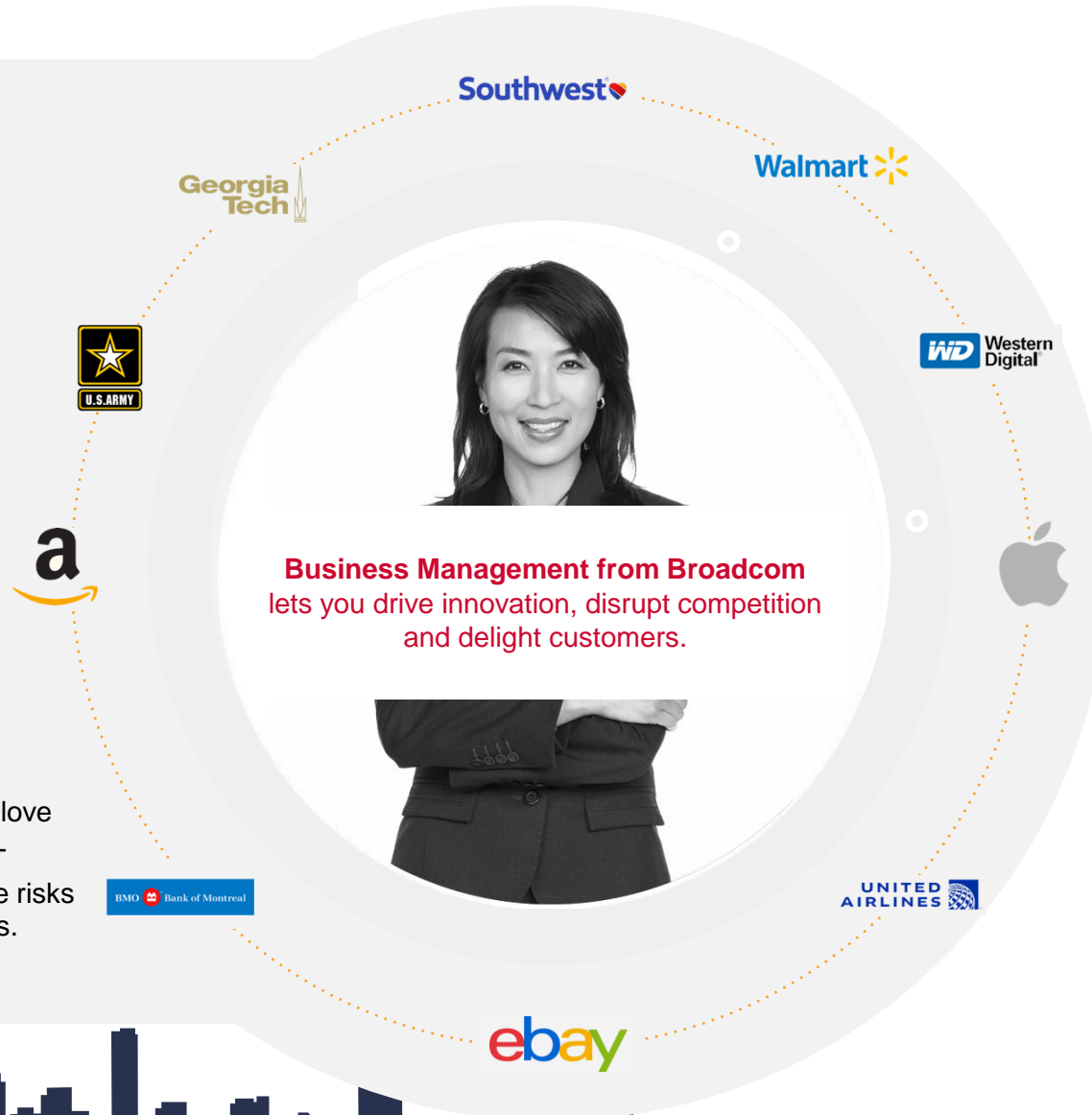
# Enterprise Software: Business Management

## Pain Points

- Can't align strategy with goals and be nimble enough to react to market demands
- Hard to innovate in the face of discerning customers, agile competition and anxious stakeholders
- Lack automated infrastructure to bring new products and services to market.

## Value Proposition

- Beat the competition with faster innovation
- Create products your customers love
- Manage, automate and deliver IT services that curtail costs, reduce risks and transform the entire business.



## Products

- Clarity PPM
- Service Desk Manager
- Service Catalog
- IT Asset Manager
- Plex, 2E and Harvest
- Business Service Insight
- Configuration Automation
- Client Automation



## Awards

**Leader IDC**  
Agile PPM Provider

**Leader Gartner**  
Project Portfolio Management

**Leader Gartner**  
Integrated IT Portfolio Analysis Applications

**Leader Gartner**  
Agile Planning Tool

# Strategic Direction for 2E & Plex

1

**SUPPORT:** Any customer reported defects take priority

We follow **agile methodology**, meaning we pivot as needed based on customer needs and for us, supporting our customers and fixing their defects comes first

.....

2

**CERTIFY:** Certifications go next for us in supporting our customers

In priority, continuing on the theme of supporting our customers comes any certifications that will ensure **business continuity** for customers

.....

3

**INVENT:** Look to improving the product by adding incremental enhancements

Although nothing big bang, but we do look to add **incremental value** to our customers in the form of enhancements from our customer asks.





# POLL #2 – Plex Roadmap



# Plex Roadmap

## Delivered (v7.2.1 RP4)

Released on 10 Apr'19

### Key Enhancements

- Select All in the source code editor
- Automatically remove triples for deleted calls
- Commenting multiple lines of Action Diagram
- Default Object Browser Filter to NOT ALL
- Object Browser – Favorites

### Customer Reported Issues

IBMi 7.4 certification for latest release

## Planned (v7.2.1 RP5)

First half of CY-20

### Key Enhancements

- Type through list in Object browser (E vs Emp)
- Navigate to previous cursor position functionality (debug long ADs)
- Model Housekeeping (unused local fields)
- Save model configuration settings
- CA Plex – Free Limited Edition

### Customer Reported Issues

## Under Consideration

### Key Enhancements

- Improving impact analyser
- Improved searchability in Model Editor and AD
- Action Diagram usability improvements
- Multiple Triples via Model Editor
- Support JSON format on WCF Services
- Empowering WSDL import
- Improved performance via visibility on client server calls

- 64 Bit Support

### Customer Reported Issues

[https://docs.google.com/spreadsheets/d/1ATrvhf9SNA94VgVfb8Hsa\\_wcKvt86rJohIJ5uTEf3LE/edit#gid=2041590641](https://docs.google.com/spreadsheets/d/1ATrvhf9SNA94VgVfb8Hsa_wcKvt86rJohIJ5uTEf3LE/edit#gid=2041590641)

New Features

Supportability

Customer Voice



# POLL #3 – 2E Roadmap

# 2E Roadmap

## Delivered (v8.7)

- **Simplify conversion from DDS to DDL database** by allowing you to continue to use RLA functions without regenerating and recompiling them
- **Simplify deployment and Change Management** by allowing generated database objects to be compiled into any desired SQL collection or library as specified in the YSQLLIB model value
- **Ensure that indexes are protected from data corruption** by creating them with LVLCHK(\*YES) when the RCDFMT keyword is used

- Change Management support for DDL objects

### Customer Reported Issues

## Planned (v8.7.1)

Q1'2020

### Key Enhancements

- **REST Enablement**

**Make it easier to consume web services** by having meaningful names in WSDL

Restful webservice deployment using input source \*PATH\_PARAM

- **Improve SQL Support** by adding enhanced support for SQL

Optimize for "N" Rows

Data access by file type - RLA for DDS and SQL for DDL/SQL files

### Customer Reported Issues

## Under Consideration

### Key Enhancements

- **Make CA 2E Easier to Use** by adding native string handling routines
- **WebOption** Server enhancements (scalability)
- Improved century character handling in 2E
- Improve comment handling in source generation
- Better audit control on display model object screen

- **Improve SQL Support** by adding enhanced support for SQL

Select by Column Name

Custom Views

### Customer Reported Issues

IBMi 7.4 certification for latest release

New Features

Supportability

Customer Voice



# What's New



# What's new in CA Plex v7.2.1 RU4

- Automatically remove triples for deleted calls: This functionality resolves the known limitation of removing the 'calls FNC' triple manually after deleting the respective function call from Action Diagram.
- Select All in the source code editor: This functionality enhances the tool's ability to select the entire text in source code editor with '**Ctrl+A**' keys.
- Commenting multiple lines of Action Diagram: This functionality resolves the known limitation of commenting & uncommenting only single Action Diagram block within a single operation.
- Default Object Browser Filter to NOT ALL: Provision to set customized search filter pattern for **Object Browser** default search pattern. So far this is set to star (\*) that takes long time to list out all objects of selected object type while opening large models.
- Object Browser – Favourites: Provision to mark the required object(s) as your favourite object(s).



# Important Lifecycle Dates

Release/ Version	GA	End Of Service
CA Plex r7.1	Feb 2014	Jan 31, 2019
CA Plex r7.2	Dec 2015	<b>Jan 31, 2019</b>
CA 2E r8.6	Apr 2012	<b>Jan 31, 2019</b>
CA Plex r7.2.1	Aug 2016	Not Announced
CA 2E r8.7	Oct 2014	Not Announced

- CA Plex and 2E will no longer follow an Incremental Release Process.
- The process was an attempt to follow Agile and Deliver new Functionality on a faster pace. Instead it lead to dissatisfaction among customers
- The new Continuous Delivery Methodology will deliver fixes and features and new release versions

With us moving away from PTF model to a new continuous delivery model, our objective is to provide timely incremental value to our customers



# Thank You





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connecting everything®





Arun Painuly

# CA Plex

Lightning talk



# # Plex Java Variant – Encrypted password in properties file



# Plex Java Variant – Encrypted password in properties file

Plex Java runtime properties file (obusr.properties, obClient.properties & obsvr.properties) stores Database password as plain text that is vulnerable. The solution is - provide an option to user to encrypt the database password and update Plex Java runtime to consider encrypted database password.

The solution has two parts,

- 1) External Java application, to
  - Encrypt database password.
  - Update encrypted database password in Plex Java runtime property file.
  
- 2) Java runtime changes
  - To handle encrypted database password within Plex Java runtime.





# Part 1 - External Application

CA Plex - Encrypt DB Password & update in Java Prperty file...

Enter Database Password: PlainTextPassword

Encrypted Password: iN7+VizQW+qGizvCbVN38FSWiqMw0Ya/Q+xA/nCgNEE=

Property file name with full path: C:\ProgramData\CA\Plex\7.2.1\Objava\obclient.properties

Property Key Name: Environment.Default.Password

Buttons: Encrypt Password, Update Java Property file with Encrypted Password

Details on how to encrypt and update database password in properties file:

- Provide plain text password in 1<sup>st</sup> field on panel.
- Click on "Encrypt Password" pushbutton.
- Provide property file name with absolute path in 3<sup>rd</sup> field from top, on panel.
- Provide database password Property Key name. The possible property name could be,
  - Default database connection password entry i.e. "Environment.Default.Password".
  - Any other logical database connection password entry e.g. multiple database connection entry.  
Default property value populated in user interface is default connection password entry.
- Click on "Update Java Property file with Encrypted Password" pushbutton.

The aforementioned process will encrypt and update the database password within provided Property file for given property Key.

Note: These deliverables will be included in upcoming PTF builds.



# Part 2 - Plex Java runtime update

- Open Plex Java runtime property file.
- Add following key value pair in Java property file. By default, the value is set to **No**.

***Environment.Default.SecurePWD=Yes***



Dem  
o





# Thank You

Arun Painuly | [arun.painuly@broadcom.com](mailto:arun.painuly@broadcom.com)





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Mark Schroeder  
IBM I Web Services



# IBM Web Services Promotion

- Three Primary Methods of Web Service Deployment on the IBMi
  1. Manual execution of IBMi shell scripts
  2. IBMi Deployment Wizard
  3. Automated Deploy
- Review IBMi Wizard and Automated Deployment.

# IBM Web Services Wizard

Manual steps to deploy a SOAP or REST Web Service in the IBM I

1. Select IBM I Web Server
2. Select Deploy or Redeploy
3. Enter Service Name and Service Description
4. Set Parameters to Input or Output
5. Select User ID
6. Enter Library List
7. Specify Transport Metadata
8. Specify WSDL Options
9. Finish





# IBM Web Service Deployment Tool

## A CM MatchPoint ALM Module

1. Enter the web service once in CM MatchPoint (manually or through import)
2. Define input/out parameters and meaningful parameter names
3. Select SOAP or REST
4. Deploy

Steps 1 – 3 only need to be done once. For any following deployments (to QA or Production) only need step 4.



# Define Web Service Object Types

**Edit**

Object Type: WSCBL

Description: WebService File CBL

Location: WebService Files

Extension: CBL

System i Type: \*PGM

System i Attribute: CBLLE

System i Sourcefile: QCBLLSRC Prefix Source File

Promotion Option: Object

Buttons: Apply, Delete, New, Refresh

Continue new?

**List**

Description	Location Description	Object Type	Extension
RESTEXT	Client-Programs	RESTXT	restext
RPG Program	System i Programs	RPG	rpg
ILE-RPG Program	System i Programs	RPGLE	rpgle
ILE-RPG Program Special	System i Programs Special	RPGLEX	rpgle
Textfile	Client-Programs	TXT	txt
Web Archive	Web Archive	WAR	war
WebClient Templates	Web Templates	WCLI	wcli
<b>WebService File CBL</b>	<b>WebService Files</b>	<b>WSCBL</b>	<b>CBL</b>
WebService File RPG	WebService Files	WSRPG	RPG
Websyidian Pages	Client-Programs	WSYD	.html
XAML	Client-Programs	XAML	xaml

Close



# Add Web Service Objects to Promotion

✕

## Edit Promotion Objects

### Details

Application: CA 2E

Version: 1

Change Request: 4000112

Promotion: 3

### Import

System i Import

Filesystem Import

Plex Import

SVN Import

2E Import

ERI Olympic Import

### Add Objects

Object Type:

Implementation Name:

Object Name:

Subdirectory:

### Filter Repository

Object Type:

Implementation Name:

Object Name:

### Objects of Promotion

Number of Objects:

Object Type	Impl. Name	Object Name	Data
RPGLE	C1AZXFR	EXT Get Person No Aud    Execute external	*Blank
WSRPG	TWB1XFR	EXT Get Division    Division	*Blank

### Object Repository

Object Type	Impl. Name	Object Name
RPGLE	C1AOPVR	PMT DLT Policy    Prompt & validate record
RPGLE	C1ARSRR	SEL Select Person    Select record
RPGLE	C1ASSRR	Select USR User    Select record
RPGLE	C1ATEFR	EDF Edit Users    Edit file
RPGLE	C1AYUPR	EUP Get Person W/Names    Execute user progra
RPGLE	C1AZXFR	EXT Get Person No Aud    Execute external functi
RPGLE	TWB1XFR	EXT Get Division    Division
RPGLE	TWBLEFR	Work With    Division
WSRPG	C1A0EFR	EDF Edit File    Edit file

# Promote and Deploy Web Service

**Filter**

RFC No.   Priority   Only cumulative

Status   open QA Engineer  Application   Show content

RFC  Developer  Version  View  Internal

Reference  Analyst  Theme   External

Object  Product  Item Type   All

Environment  Item Group  Project  Customer

**List**

Creation Date	Desired End Date	Planned End Date	Application	Version	Promote CR (F10)	RFC	Status	Priority	
9/6/2019	0/0/0000	0/0/0000	CA 2E	1	4000112	New cusotmer panel	ready for promotion	0	2E Application DEV
8/29/2019	0/0/0000	0/0/0000	CA 2E	1	4000111	New Customer WS	test	0	2E Application QA
8/28/2019	0/0/0000	0/0/0000	CA 2E	1	4000110	Test 2	QA Process	0	2E Application QA
8/28/2019	1/1/1753	9/15/2019	CA 2E	1	4000109	Promotion Test	promoted	0	2E Application QA

# Web Service Promotion History

**Edit Change Requests**

**Filter**

RFC No.   Priority   open

Requester  Application   Only cumulative

QA Engineer  Version   Show content

Developer  Theme  View  Internal

Analyst  Item Type   External

Product  Project   All

Item Group  Customer

**List**

Creation Date Desired End Date Planned End Date Application Promotion History(Ctrl-H) RFC Status Priority

9/6/2019	0/0/0000	0/0/0000	CA 2E	1	4000112	New cusotmer panel	promoted	0	2E Application QA
8/29/2019	0/0/0000	0/0/0000	CA 2E	1	4000111	New Customer WS	test	0	2E Application QA

**Installation History for CR 4000109, Promotion Test**

**List**

Application	Version	Installation Date	Change Request	Surrogate	Creation Type	Installation Status	Promotion	Company Surrogate	Environment	Creation User
CA 2E	1	8/28/2019	4000109	1698	Promotion	Promoted (and modified)	1	0	2EAPP_QA	HEC
CA 2E	1	8/28/2019	4000109	1695	Promotion	Promoted (and modified)	1	0	2EAPP_QA	HEC
CA 2E	1	8/28/2019	4000109	1694	Promotion	Promotion Failed	1	0	2EAPP_QA	HEC
CA 2E	1	8/28/2019	4000109	1693	Promotion	Promoted (and modified)	1	0	2EAPP_QA	HEC
CA 2E	1	1/1/1753	4000109	1699	Promotion	Promoted	1	0	2EAPP_QA	HEC

# Primary Features

- **Automated Deployment**
- Once a Web Service is defined in CM MatchPoint, the deployment process is fully automated across all environments
- **Deployment History**
- Every deployment is logged into the Deployment History and makes any change traceable in order to meet audit requirements.
- **Remote Deployment**
- IBM I Web Services can be deployed across multiple IBM I Servers
- **Deploy with other changes**
- The deployment of IBM I Web Services is fully integrated into the change management of the complete application. It can be deployed with any other object associated with the change.
- **Meaningful Parameter Names**
- The Web Service Parameters can be overridden with meaningful names. These meaningful names are used every time the Web Service is deployed
- **Integrated into DevOps process**
- The deployment of web services is fully integrated into the defined DevOps process and all rules of the process are enforced when deploying IBM I web services
- **REST and SOAP services**
- Option for XML and JSON



# POLL #4 – Web Service Management





Andrew Leggett  
CA Plex Web Services



# POLL #5 – MINT

Thank You and Until Next Time

