



COLLABORATE 19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY

Extending the Reach of your On-Premise ERP with Oracle PaaS, APEX, ORDS

Session ID:
10758

Prepared by:

Jon Dixon

Co-Founder JMJ Cloud

@jmjcloud

Remember to complete your evaluation for this session within the app!

4/9/2019

#C19TX

Agenda

- Level Set
- The Case for Using PaaS to Extend EBS
- Project Goals
- Technology
- Process Flow (Deep Dive)
- Considerations & Additional Use Cases
- Q&A



COLLABORATE19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY



#C19TX

Level Set

What is Platform as a Service (PaaS)?

- Complete development environment as a service
- Typically cloud based
- Managed by the vendor
- No initial startup costs
- Billed monthly
- Shortened time to delivery
- Automatic upgrades
- Uptake Advanced features



What is PaaS - Example (Exadata Express)



ORDS

Host REST web Services
OAUTH2 Security
REST enabled SQL
Auto REST
...



APEX

Web App Development
Modern Responsive UI
Data Driven
Advanced Charting
Low Code
Single Sign On
Web Service Modules



Database

In Memory
Data Compression
Analytic Views
Data Redaction
...



Credit Card

+

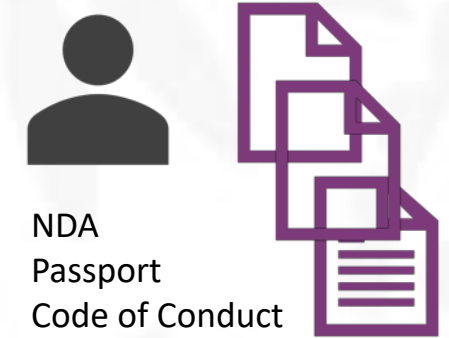
Browser



COLLABORATE 19
accelerating your enterprise mission
with the power of community

Level Set - What is Document of Record?

- Part of the Oracle EBS Human Resources module
- Digital repository of key documents for an employee
 - e.g. Passport, NDA, Employee Handbook
- Accessible by employees, managers and HR
- Searchable from EBS
- Includes workflow for managing approvals (if required)





COLLABORATE19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY



#C19TX

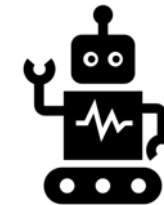
The Case for Using PaaS to Extend EBS

The Case for Using PaaS to Extend EBS

- Defer migration to ERP Cloud
- Improve UX and user engagement
- Simplify key workflows
- Introduce modern technologies
 - Cloud Storage, Printing, SMS Messaging
- Provide functionality outside the firewall



Oracle ERP
Cloud



Release	Premier Support
12.1.X	December, 2021
12.2.X	At Least December, 2030

Source: E-Business Suite Releases –
Support Policy FAQ (Doc ID 1494891.1)



COLLABORATE19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY



#C19TX

Project Goals

Project Goals

- Goals:
 - Improve employee response rates
 - Ability to acknowledge documents from outside the firewall
 - Automate capture of document acceptances
 - Provide visibility to documents of record from EBS HR
 - Extensible framework to add other documents over time
- Specifically, capture electronic signatures for the following documents:
 - Employee Handbook
 - Code of Conduct
 - NDA
 - Incentive Compensation Plan



COLLABORATE19

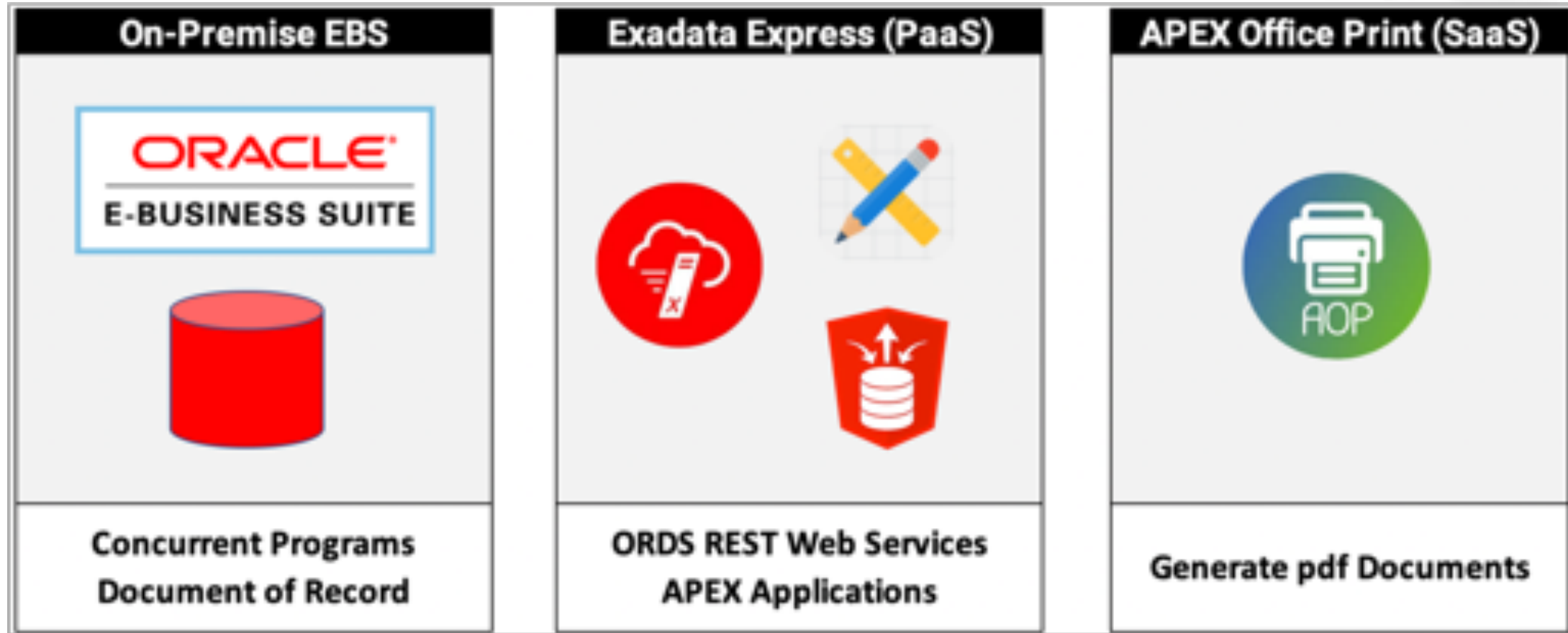
TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY



#C19TX

Technology Components

Technology Components



Oracle EBS 12.1.3
Oracle APEX 18.1
Oracle DB 11.2.0.4

Oracle APEX 18.2
Oracle ORDS 3.0.7
Oracle Exadata 12.2

AOP 18.2



COLLABORATE19

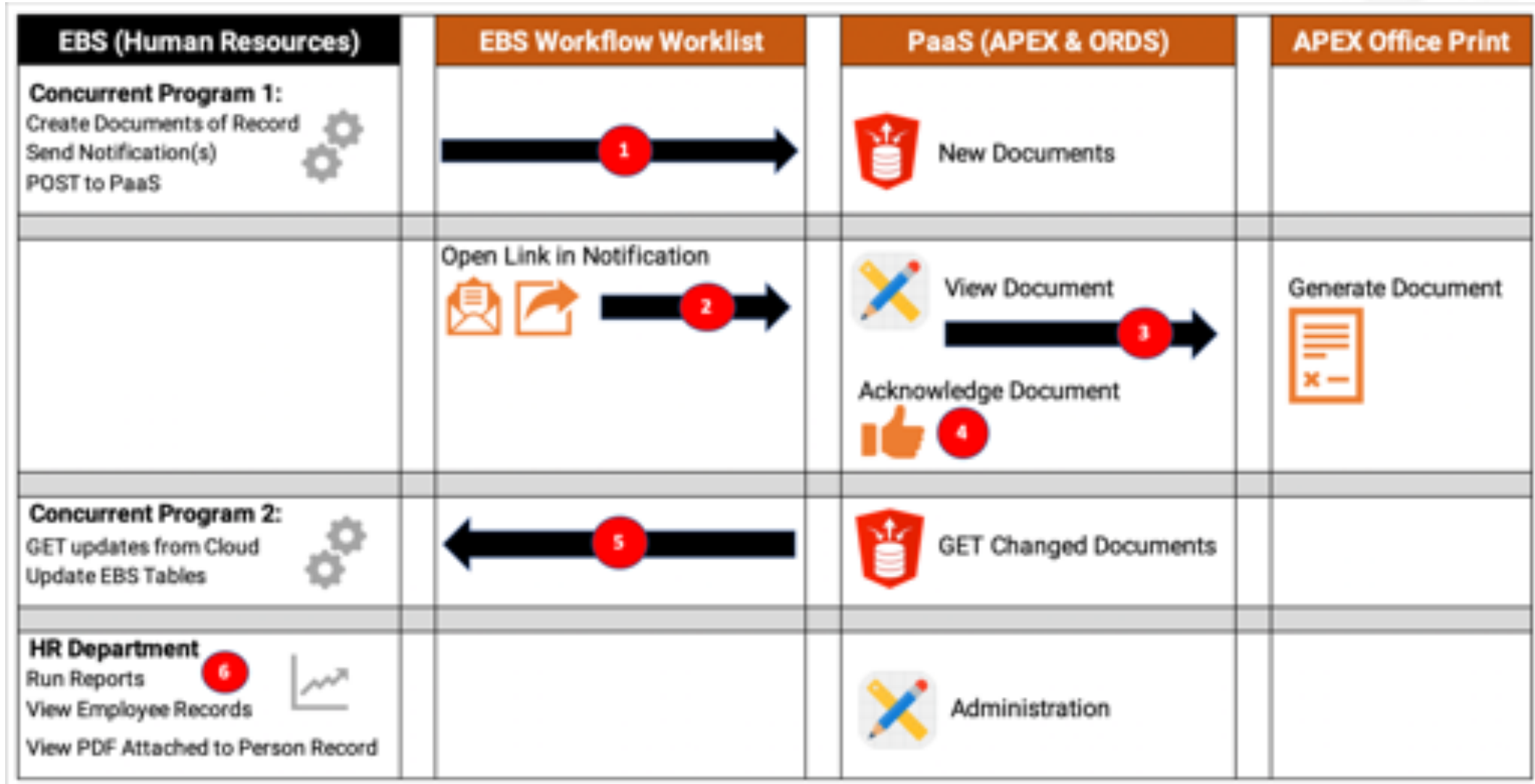
TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY



#C19TX

Process Flow (Deep Dive)

Process Flow



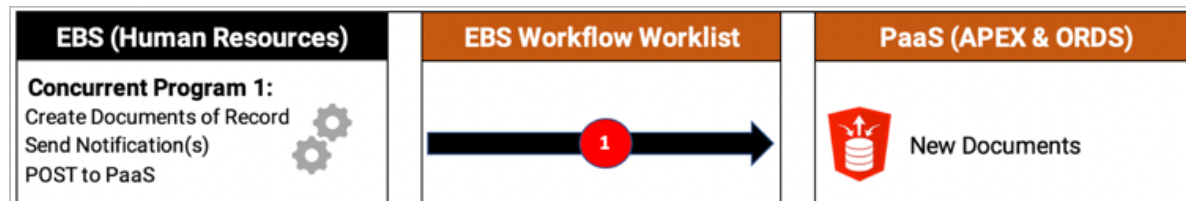
Process Flow 1 – Generate Document of Record

Process Flow Detail

- Has document been acknowledged?
- Generate new document of record
- POST data to PaaS
- Launch Workflow
 - Add item to worklist & send email
 - Include link to PaaS APEX App
- Send reminders?

Technical Components

- EBS Concurrent Program
 - Public API (create document of record)
 - APEX_WEB_SERVICE
- EBS Custom Workflow
- PaaS
 - ORDS POST Web Service (secured by OAUTH2 client credentials flow)
 - Custom Table



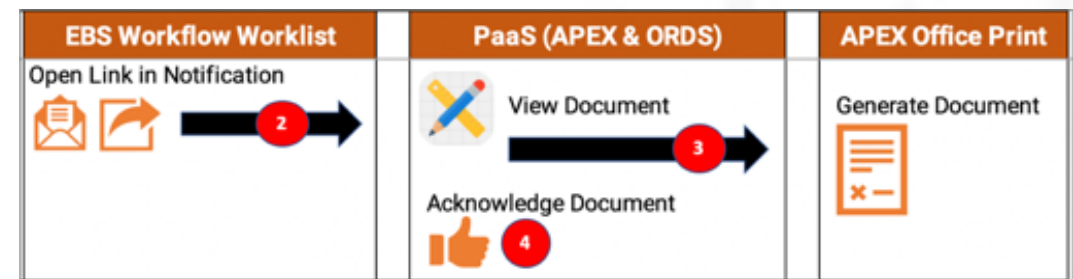
Process Flow 2, 3 & 4 – View Document & Accept

Process Flow Detail

- Employee Opens Link
- APEX App on PaaS is Opened
 - Verify token
 - Get details for document of record
 - Direct user to appropriate step
- Employee Opens pdf of Document
- Employee acknowledges document
 - Enter last 4 of social
 - Type the word 'accept'
- Employee downloads 'signed' copy
 - Includes IP address and date

Technical Components

- APEX App on PaaS
- Custom table on PaaS
 - Capture dates and IP address
- APEX Office Print (PaaS)
 - AOP Template
 - PL/SQL to generate JSON for AOP



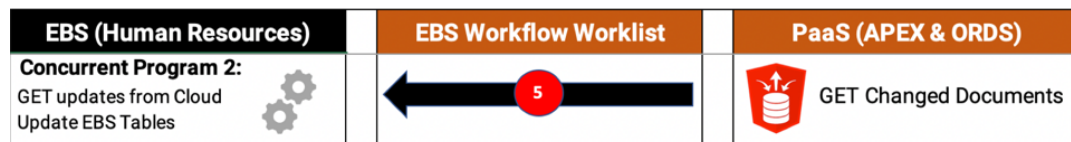
Process Flow 5 – Retrieve Updates from PaaS

Process Flow Detail

- Are there new updates on PaaS
- Update document of record in EBS
- Attach a copy of the 'signed' pdf to the employees record in HR

Technical Components

- EBS Concurrent Program
 - APEX_WEB_SERVICE
 - Public API (update document of record)
 - Call APEX Office Print
 - FND Attachments API to attach pdf
- APEX Office Print (PaaS)
 - Generate pdf for attachment
- PaaS
 - ORDS GET Web Service
- EBS Custom Workflow
 - Close notification




6 – HR Department

Process Flow Detail

- EBS HR
 - Review document of record details
 - Standard Reporting
- PaaS
 - Maintain document definitions
 - Check status of documents
 - Administer AOP Templates

Technical Components

- On-Premise
 - Standard Oracle HR
- APEX (PaaS)
 - Administration APEX App

EBS (Human Resources)	EBS Workflow Worklist	PaaS (APEX & ORDS)
HR Department Run Reports View Employee Records View PDF Attached to Person Record		 Administration



COLLABORATE19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY



#C19TX

User Experience


Step 1 - Workflow Notification

Oracle Applications Home Page >

Action Required: Acknowledge [REDACTED]

To **Dixon, Jon**
Sent **19-Dec-2018 11:34:02**
Due **03-Jan-2019 11:34:02**
ID **5397285**

Please click the button below to Review and Acknowledge the [REDACTED]



Action History

Num	Action Date	Action	From	To
1	19-DEC-2018 11:34:02	Submit	Dixon, Jon	Dixon, Jon

[Return to Worklist](#)

Step 2 - Review Document

Employee Document of Record

English Help Dixon, Jon

Incentive Compensation

Review Document

Accept Document

Complete

Next >

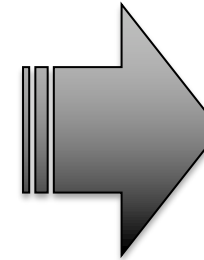
Instructions

Please review your Incentive Compensation Plan.

Click the **green** button below to review a pdf of the plan document. Once you have reviewed the document, click the 'Next >' button to proceed to the next step.

Attachments

Incentive Compensation



Employee Document of Record

English Help Dixon, Jon

Incentive Compensation

Next >

Instructions

Please review your Incentive Compensation Plan.

Click the **green** button below to review a pdf of the plan document. Once you have reviewed the document, click the 'Next >' button to proceed to the next step.

Attachments

Incentive Compensation

Step 3 – Accept Document

Employee Document of Record English Help Dixon, Jon

Incentive Compensation

< Review Document Accept Document Complete Next >

☒ Accept Document

National Identifier *

6789

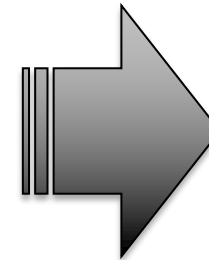
Enter the last 4 digits of your National Identifier (e.g. 1234).

Accept *

accept

Type the word 'ACCEPT'.

Please provide the requested information in the fields above and then click the 'Next >' button to proceed to the final step.



Employee Document

Incentive Compensation

< ✓ ● ● Next >

☒ Accept Document

National Identifier *

6789

Enter the last 4 digits of your National Identifier (e.g. 1234).

Accept *

accept

Type the word 'ACCEPT'.


Please provide the requested information in the fields above and then click the 'Next >' button to proceed to the final

Step 4 – Download Signed Copy

Employee Document of Record English Help Dixon, Jon

Incentive Compensation


Review Document Accept Document Complete

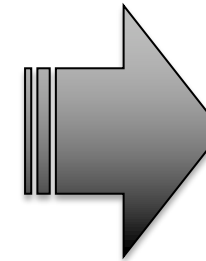


Thank You Dixon, Jon




The process is complete, you may close your browser window now. Click the 'Download for Your Records' button below to download a copy of the document for your records.


Date You Accepted 12/26/2018 Accepted from IP Address 199.47.94.100

Download for Your Records 



Employee Document Incentive Compensation


  



Thank You Dixon, Jon

The process is complete, you may close your browser window now. Click the 'Download for Your Records' button below to download a copy of the document for your records.

Date You Accepted 12/26/2018 Accepted from IP Address 199.47.94.100

Download for Your Records 



COLLABORATE19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY



#C19TX

Considerations

Considerations

- On-Premise EBS Database SSL Certificates
 - Required to call https web service on PaaS from On-Premise DB
 - Download and certificate from Exadata Express and create DB Wallet
- Backing up PaaS
 - Manual Process, backup to Oracle Cloud Storage
- Call Web Services on PaaS from On-Premise
 - More secure than calling from PaaS to On-Premise
- PaaS Upgrades
 - APEX & ORDS upgrades
- Vanity URL for PaaS Environment
 - <https://apps.abccorp.com> instead of <https://abccorp-a4942344.db.us2.oraclecloudapps.com>
 - Use cloud based load balancer



COLLABORATE19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY

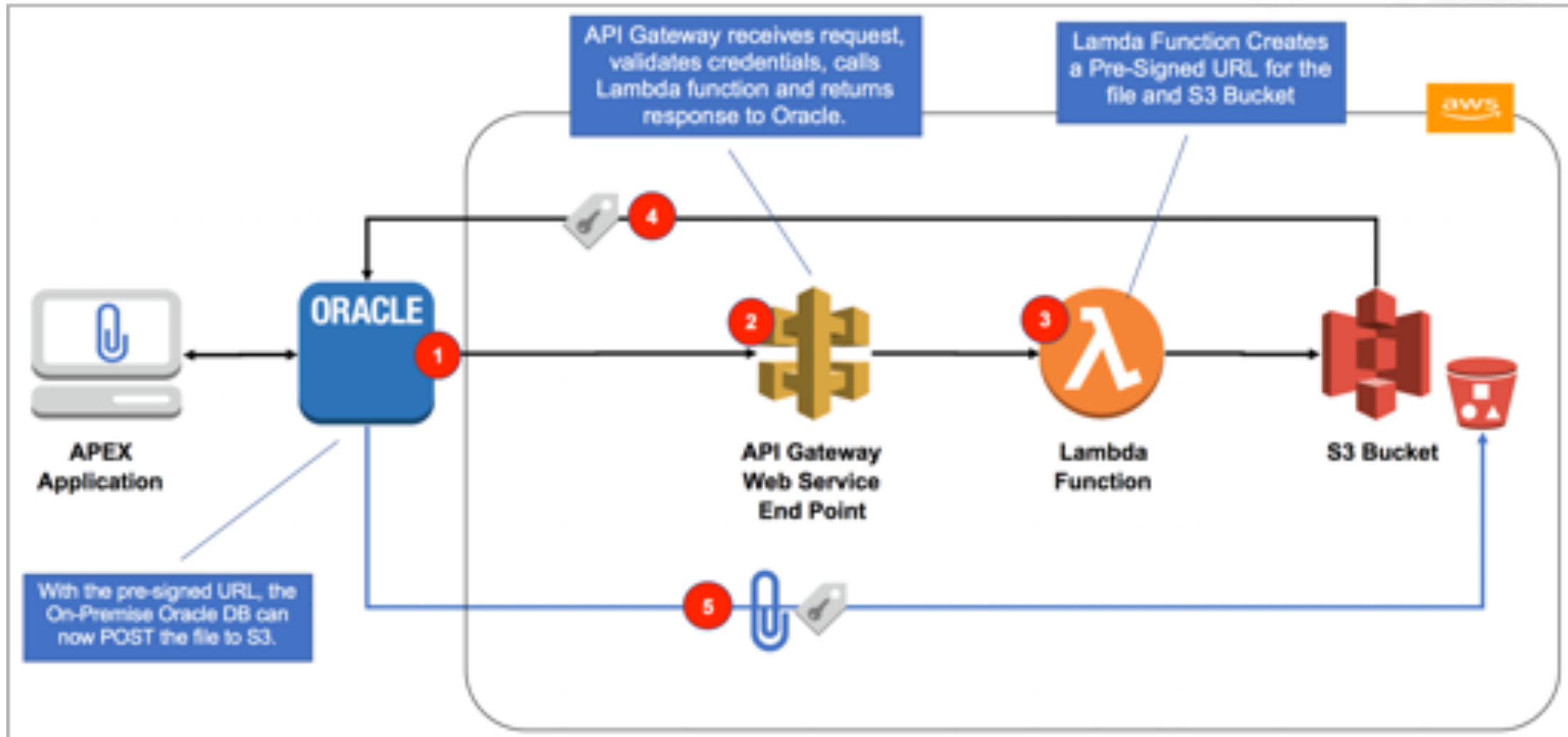


Additional Use Cases

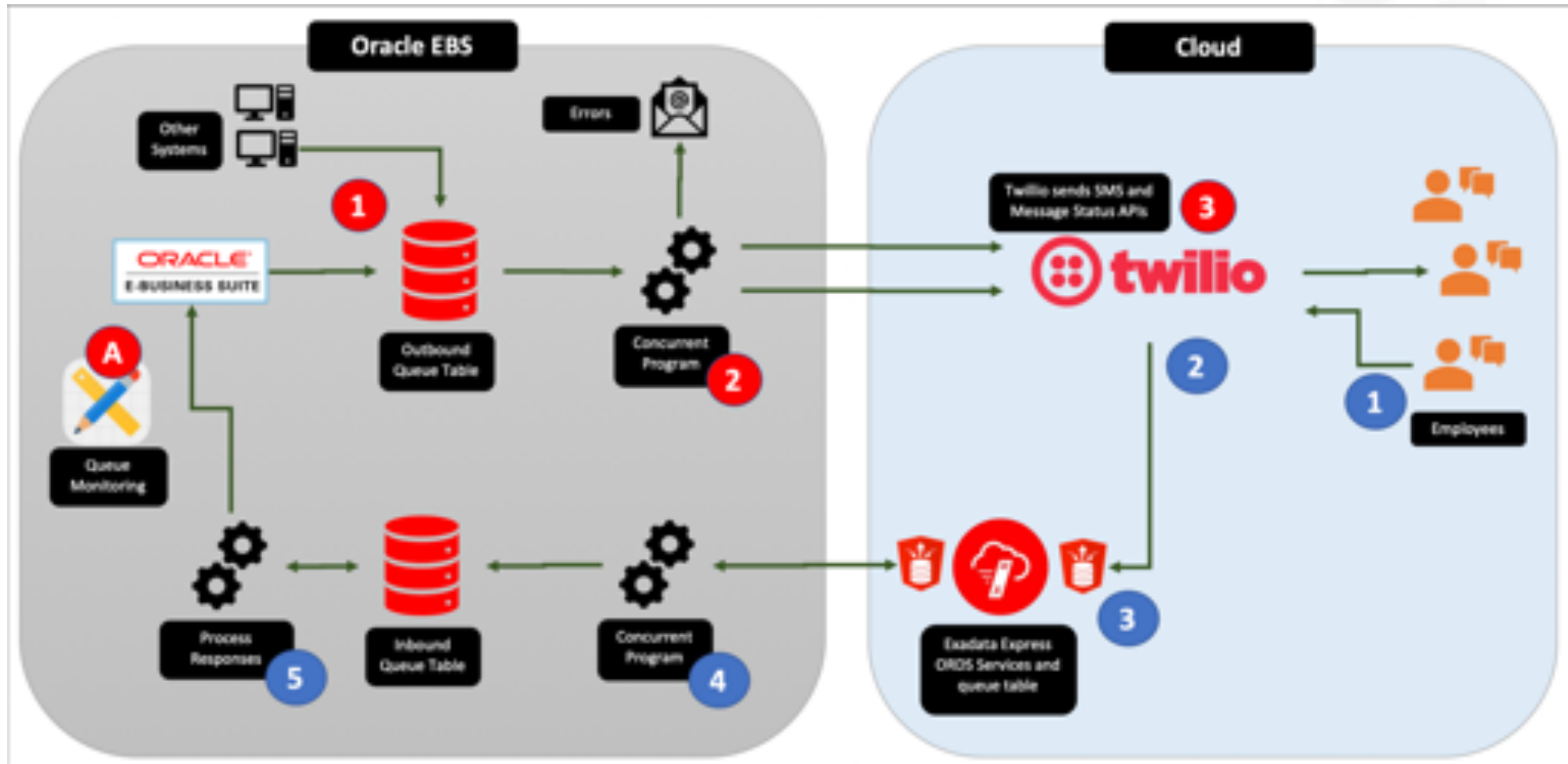
Additional Use Cases

- SaaS Cloud File Storage (AWS S3)
 - Post documents to AWS S3 from EBS
 - AWS API Gateway end point (POST document, GET pre-signed document URL)
 - Lambda to create thumbnail image and post document to S3
 - Store index on local table
- SMS Messaging (Twilio)
 - Send and receive SMS messages to / from employees and or customers
 - POST SMS from EBS using APEX_WEB_SERVICE
 - Receive response via ORDS Service on Exadata Express

Utilizing S3 File Storage



Utilizing Twilio to Send/Receive SMS Messages





COLLABORATE19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY

jon.dixon@jnjcloud.com

Session ID:

10758

Remember to complete your evaluation for this session within the app!

#C19TX



COLLABORATE19

TECHNOLOGY AND APPLICATIONS FORUM
FOR THE ORACLE COMMUNITY



#C19TX