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How to Automate in EPM Cloud with the EPM Automate Utility

By John Taylor

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AGENDA

- *Speaker Background*
- *Company Info*
- *EPM Automate Overview*
- *Comparison to On-Premise EPM*
- *Installation*
- *EPM Automate Commands & Examples*
- *Closing*

John Taylor

- **Sr EPM Consultant, Vertical Edge Consulting Group**
- **Experience working with Hyperion EPM Suite since 2010**
- **Experience working with Oracle Cloud EPM since 2015**

Oracle Certifications

- **Essbase**
- **Hyperion Planning**
- **Oracle Business Intelligence, EE**
- **Planning and Budgeting, Cloud Implementation Specialist**

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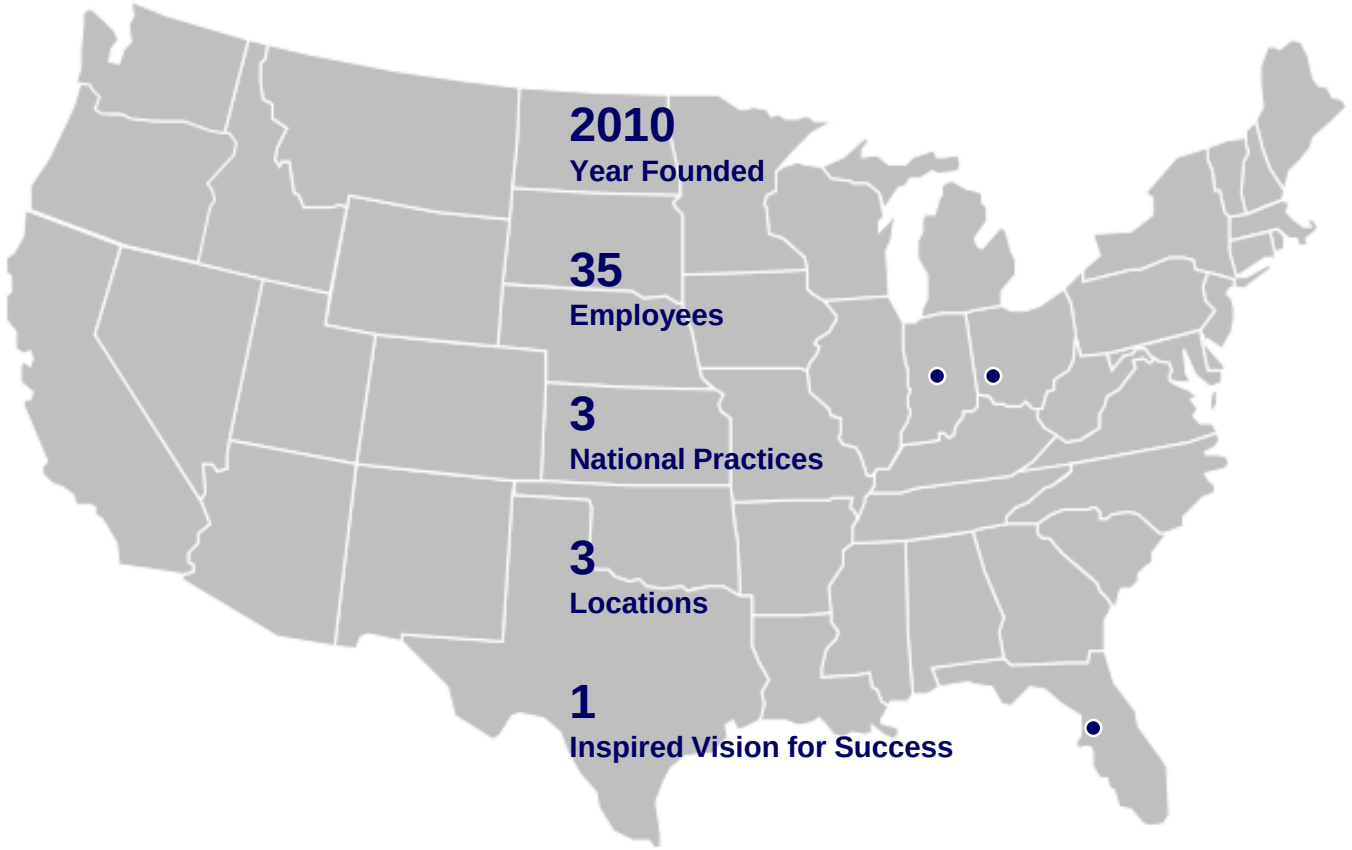

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- ✓ Consultants average 12-15 years of industry and Big 4 consulting experience
- ✓ Technology focus on EPM, BI and Cloud solutions, integrating with leading Tier 1 and 2 ERP systems
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Technology Expertise

ABOUT THE EPM AUTOMATE UTILITY

- The EPM Automate Utility enables Service Administrators to remotely perform tasks within Oracle Enterprise Performance Management Cloud instances.
- It enables Service Administrators to automate many repeatable tasks
- Scripts login to the EPM Cloud and execute commands on the application
- Many of the execution commands require repeatable jobs be created in the application
- Login operations are done with Oracle cloud credentials; passwords can be encrypted

ABOUT THE EPM AUTOMATE UTILITY

Actions Available in EPM Automate:

- Import and export metadata
- Import and export data
- Import and export reports, forms, application snapshots, and other artifacts
- Upload files to cloud folders from local drives
- Download files from the cloud folders to local drives
- Run business rules
- Refresh the application databases
- Run Data Management rules
- Set Substitution Variables
- Reset Services
- And more…

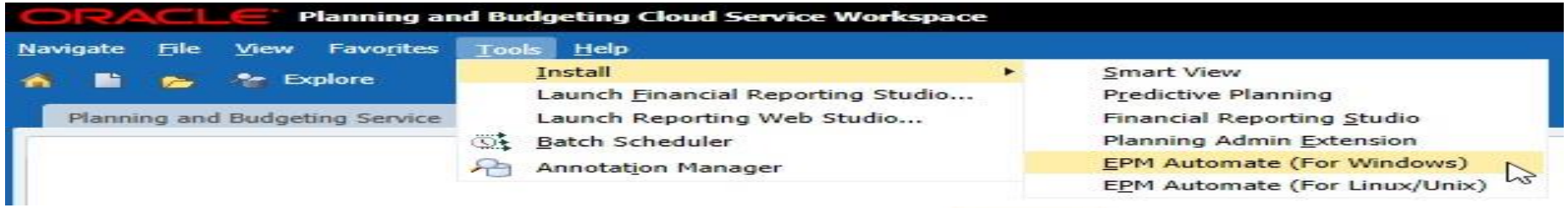
COMPARISON TO ON-PREMISE EPM

EPM Automate provides several key differences in Automation from traditional on-premise Automation:

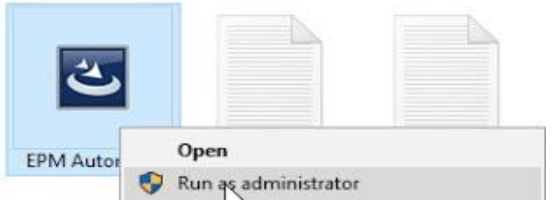
EPM Automate (Cloud)	On-Premise EPM Automation
Single utility to run commands against multiple EPM products	Unique utilities exist to run each Product (HFM, Planning, Essbase, etc.)
Standard set of syntax commands apply against different products for common actions	Unique syntax commands vary by Product even for common actions
Processing files must load to cloud before commands are triggered related to the files	Processing files can used from any location that you have access to within the local network
Utility upgrades occur monthly to fix bugs and provide additional commands	Upgrades only occur as often as local patches/installations happen
Utility commands can be combined with other scripting commands for integrated processes	Utility commands can be combined with other scripting commands for integrated processes
Utility is installed on a local machine	Utility is installed on a local machine
Batch Scripts are triggered from a local machine	Batch Scripts are triggered from a local machine

INSTALLING EPM AUTOMATE

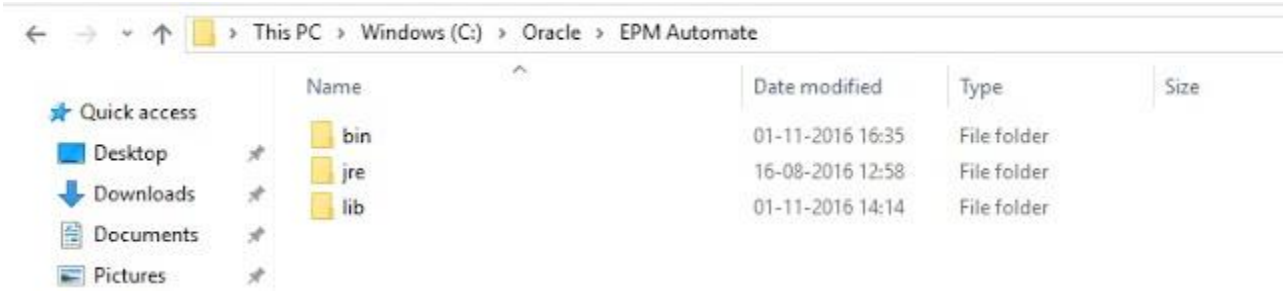
The EPM Automate Utility installer for Windows and Linux/UNIX is available from the service.



Once downloaded install it by running it as administrator.



By default, the Utility is installed in C:/Oracle/EPM Automate.



Note:

- Re-installation is needed as new versions of utility are released.

RUNNING EPM AUTOMATE

The EPM Automate Utility can be ran with:

Windows

- Can be triggered with Windows Batch Command and others

Linux/UNIX

- Can be triggered with Shell script

LOG IN TO THE EPM CLOUD

Login with direct password:

- epmautomate login USERNAME PASSWORD URL IDENTITYDOMAIN

Logout

- epmautomate logout

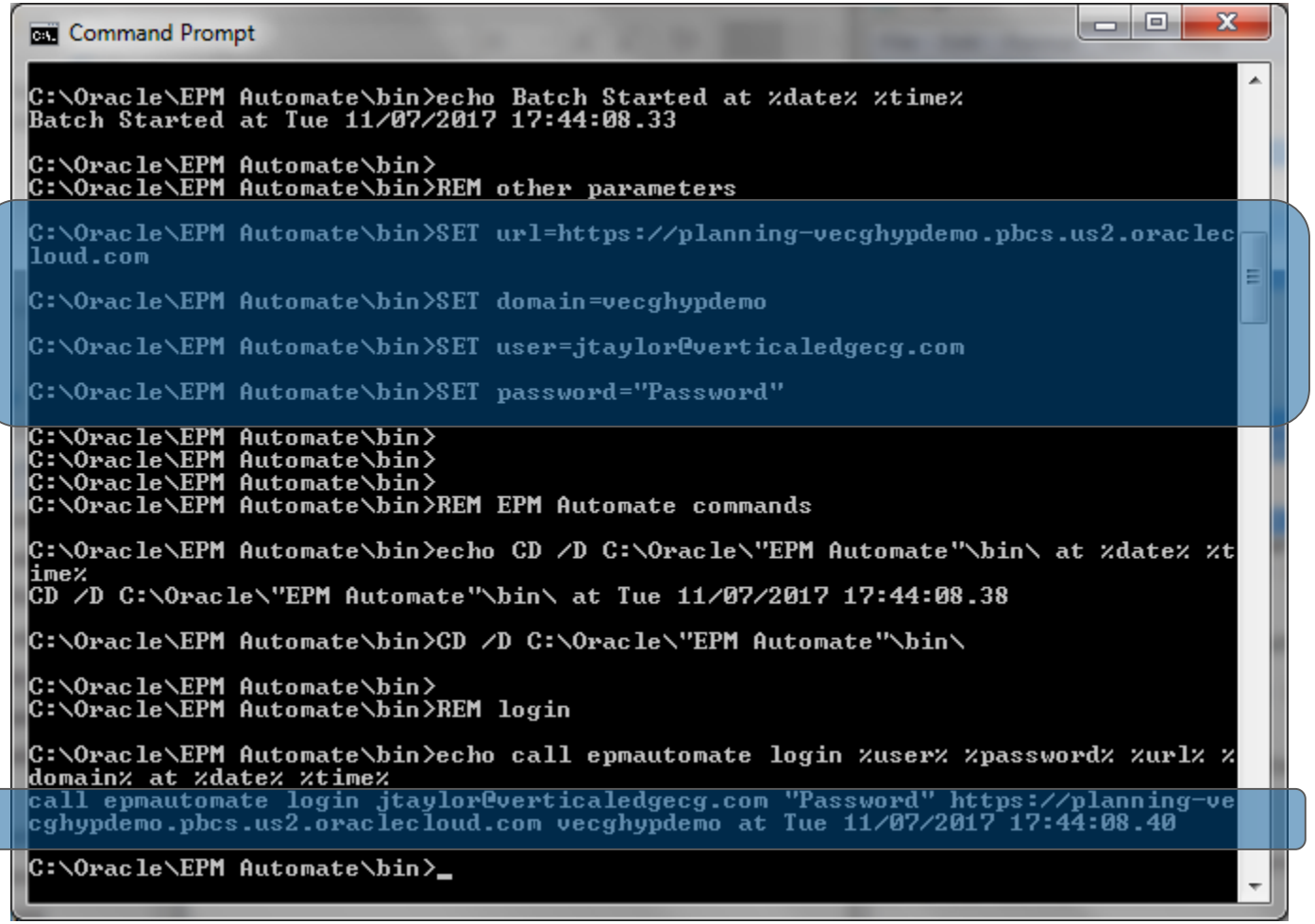
Recommendation:

- Use script parameters to set login parameters!

Note:

- URL is the EPM Cloud service instance
- Identity Domain is the unique domain for each client

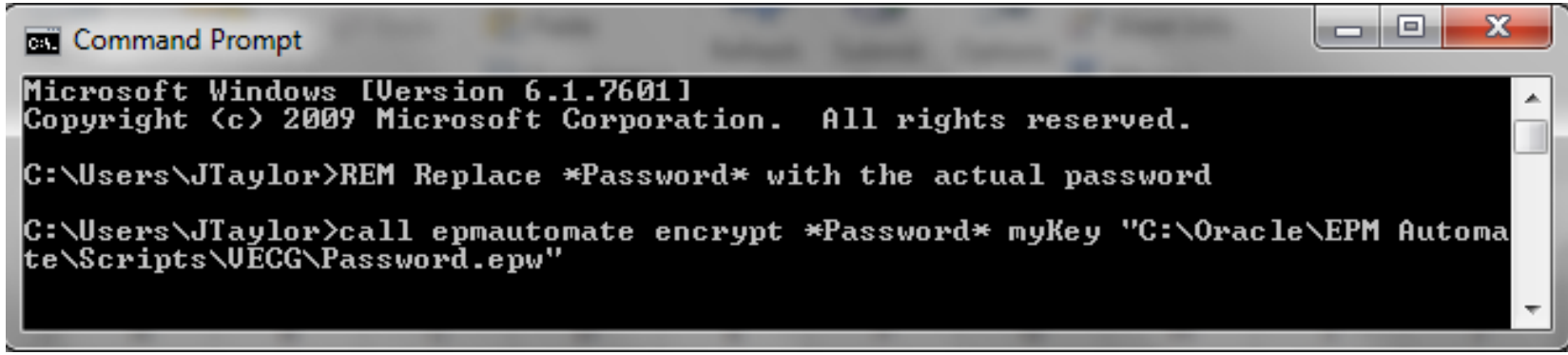
LOG IN TO THE EPM CLOUD

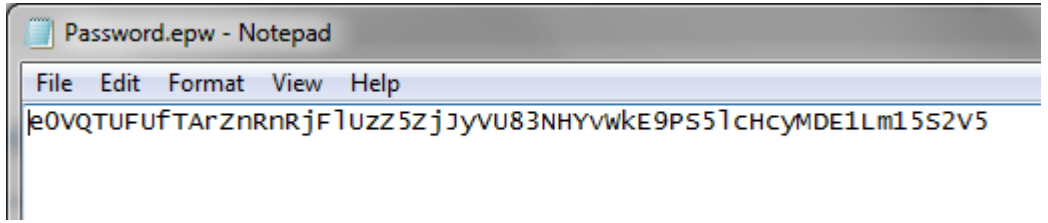


LOG IN TO THE EPM CLOUD WITH PASSWORD ENCRYPTION

Create password encryption file:

- epmautomate encrypt *PASSWORD KEY PASSWORD_FILE*





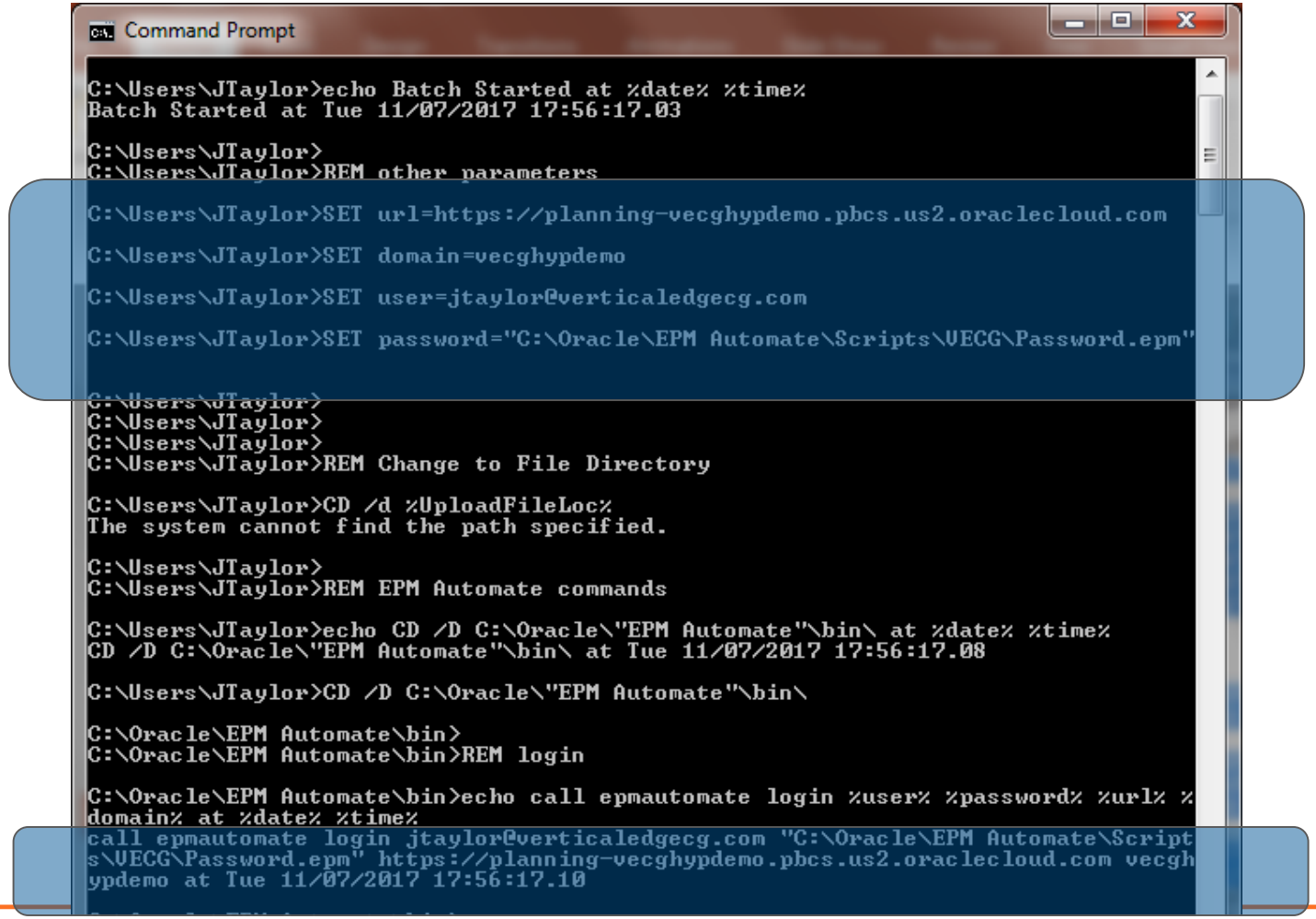
Note:

- The Password Encryption File must be updated when password changes

LOG IN TO THE EPM CLOUD WITH PASSWORD ENCRYPTION

Login with encrypted password file:

- epmautomate login *USERNAME PASSWORD_FILE URL IDENTITYDOMAIN*



UPLOAD/DOWNLOAD A FILE TO THE EPM CLOUD

A key component of EPM cloud is interacting with the cloud server in a remote location

A large part of the EPM cloud Application automation involves uploading/downloading files to and from the cloud

Locations on the cloud

- Inbox/Outbox Explorer (Generic Cloud repository for application files and snapshots)
- Data Management Folder (FDMEE folders for Data Integration)
- Profit Inbox (Profitability and Cost Management processes)

Note:

•When uploading files it is generally necessary to delete the existing cloud file first if it has the same file name.

•Files must be generated on the cloud in order for them to be downloaded (i.e. export data first then download the results)

UPLOAD A FILE TO THE EPM CLOUD

Delete Pre-existing File

- epmautomate deletefile "[*FILE_PATH*]/*FILE_NAME*"

Upload File

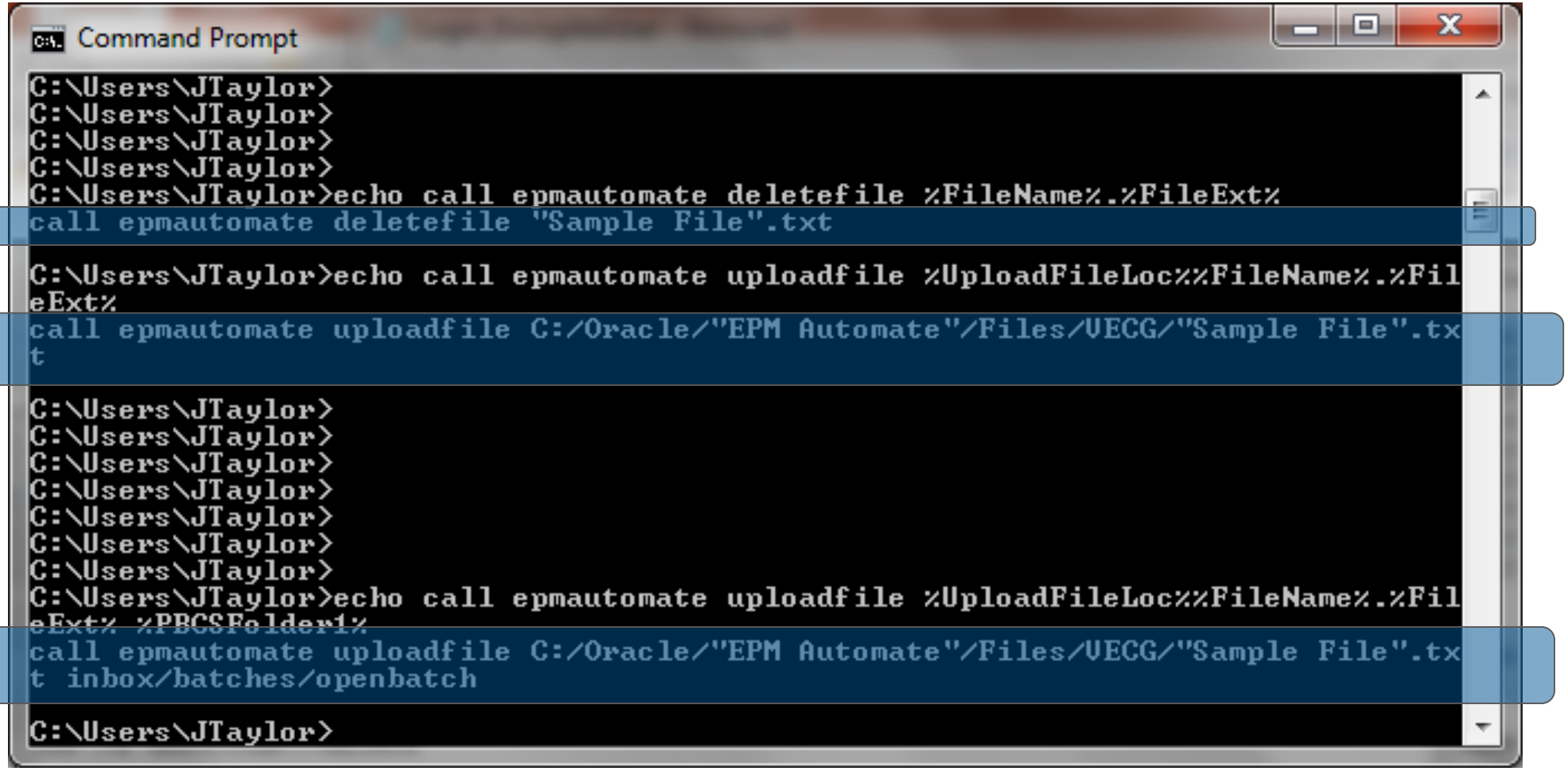
- epmautomate uploadfile "*FILE_NAME*" [*DATA_MANAGEMENT_FOLDER* | profitinbox]

Recommendation:

- Run a File delete command first before uploading new files

UPLOAD A FILE TO THE EPM CLOUD

- Delete File
- Upload File
- Upload File to Data Management



DOWNLOAD A FILE FROM THE EPM CLOUD

Download File

- epmautomate downloadfile epmautomate downloadfile "[*FILE_PATH*]/*FILE_NAME*"

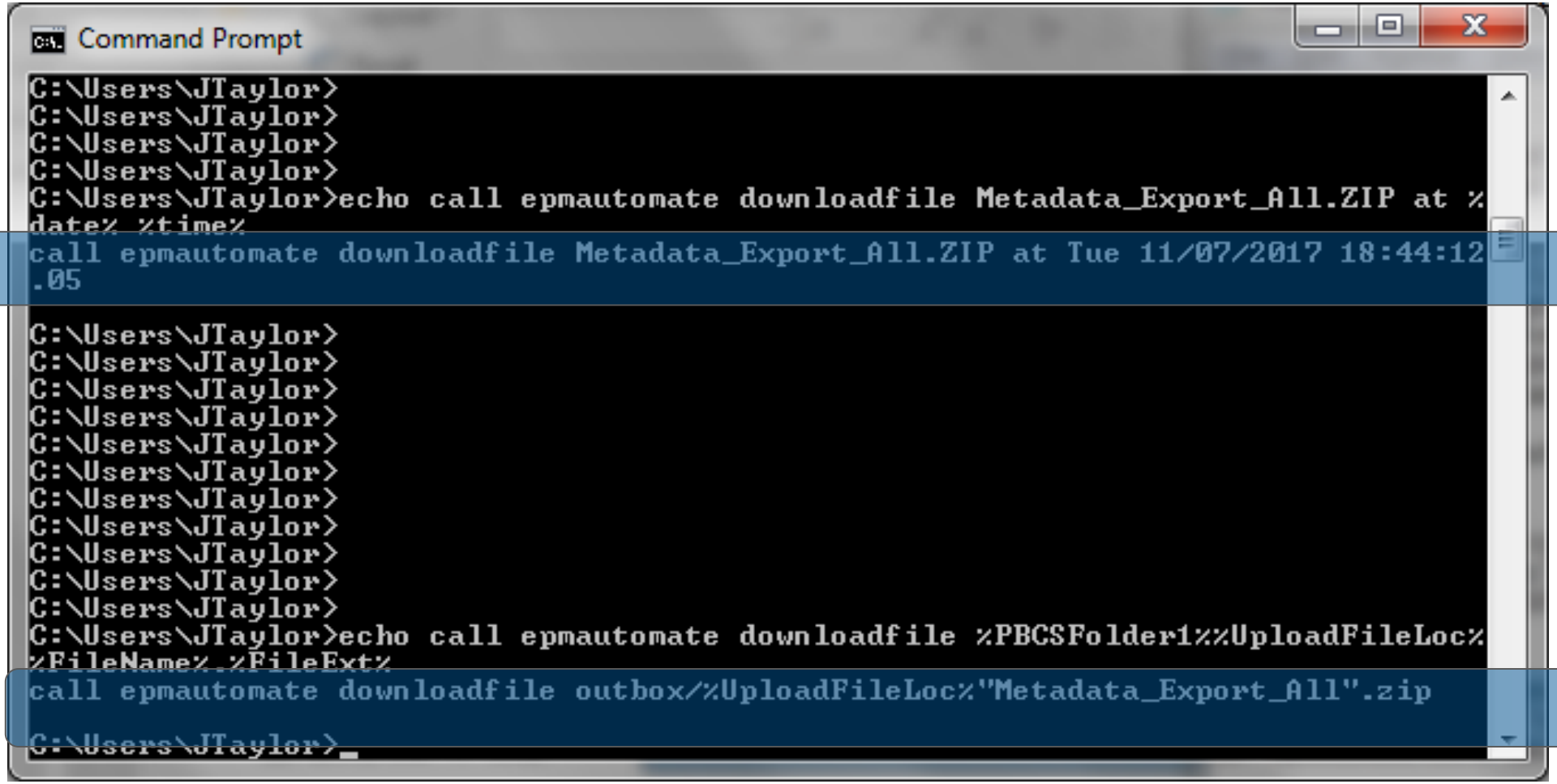
Notes:

- File downloads to the directory location from which the EPM Automate script is currently set
- Change the script directory location to the desired folder before running the download (or move the file after the download is completed)

DOWNLOAD A FILE FROM THE EPM CLOUD

- Download File

- Download File from Data Management



EXECUTE DIRECT COMMANDS ON THE EPM CLOUD

Some commands can be executed directly against an EPM Cloud application without pre-existing setup

Examples Include:

- Reset the Service
- Remove the Application
- Create Substitution Variables
- Run User Audit Reports
- Provide Feedback to Oracle Support
- List Files in cloud directory

Notes:

- Most of these are generic out of the box functions

EXECUTE INDIRECT COMMANDS ON THE EPM CLOUD

Most commands in EPM Automate require pre-existing setup to occur on the application

Business Rule Execution require:

- Business Rules are created and deployed to the application

Data Management Load Rules and Batches require:

- Load process have been created with sources/targets, import formats, locations, load rules, load mappings, and batch definitions

Application Snapshots require

- Pre-existing snapshot has been defined

Job Definitions are required to execute many common actions

- Metadata Import/Export
- Direct File Import/Export
- Database Refresh
- Database Cell Clearing
- Data Mapping

RUNNING BUSINESS RULES IN THE EPM CLOUD

Business Rules must be created and deployed to the Application first

Run Business Rule

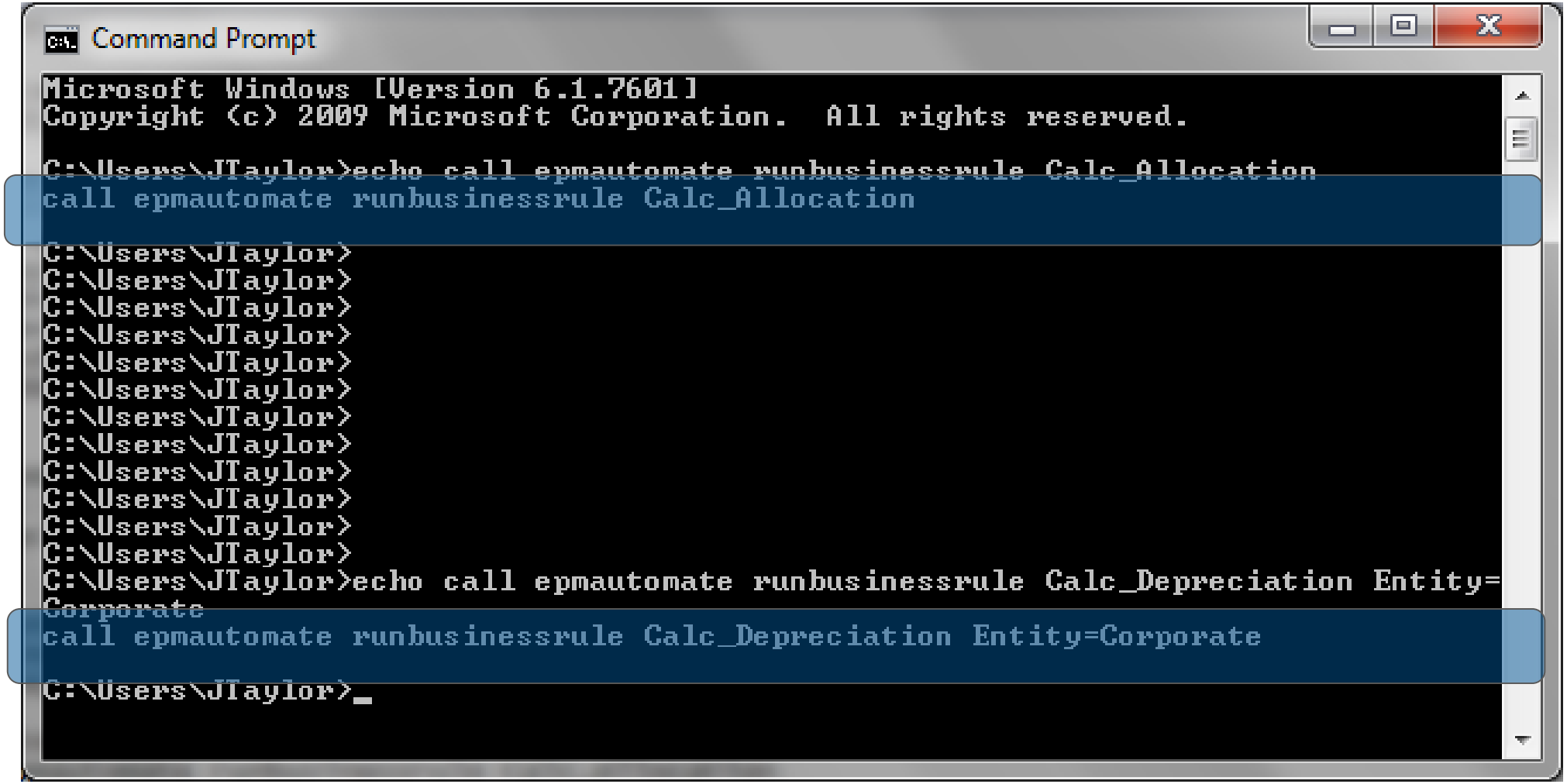
- epmautomate runbusinessrule *RULE_NAME* [*PARAMETER=VALUE*]

Notes:

- Business RuleSets can now be executed from EPM Automate

RUNNING BUSINESS RULES IN THE EPM CLOUD

- Run Business Rule
- Run Business Rule with variable for Entity



RUNNING DATA MANAGEMENT LOADS IN THE EPM CLOUD

Data Management Load process must be created with

- sources/targets
- import formats
- locations
- load rules
- load mappings
- batch definitions (only required for batches)

Run Data Load Rule

- epmautomate rundatarule *RULE_NAME START_PERIOD END_PERIOD IMPORT_MODE EXPORT_MODE [FILE_NAME]*

Run Batch

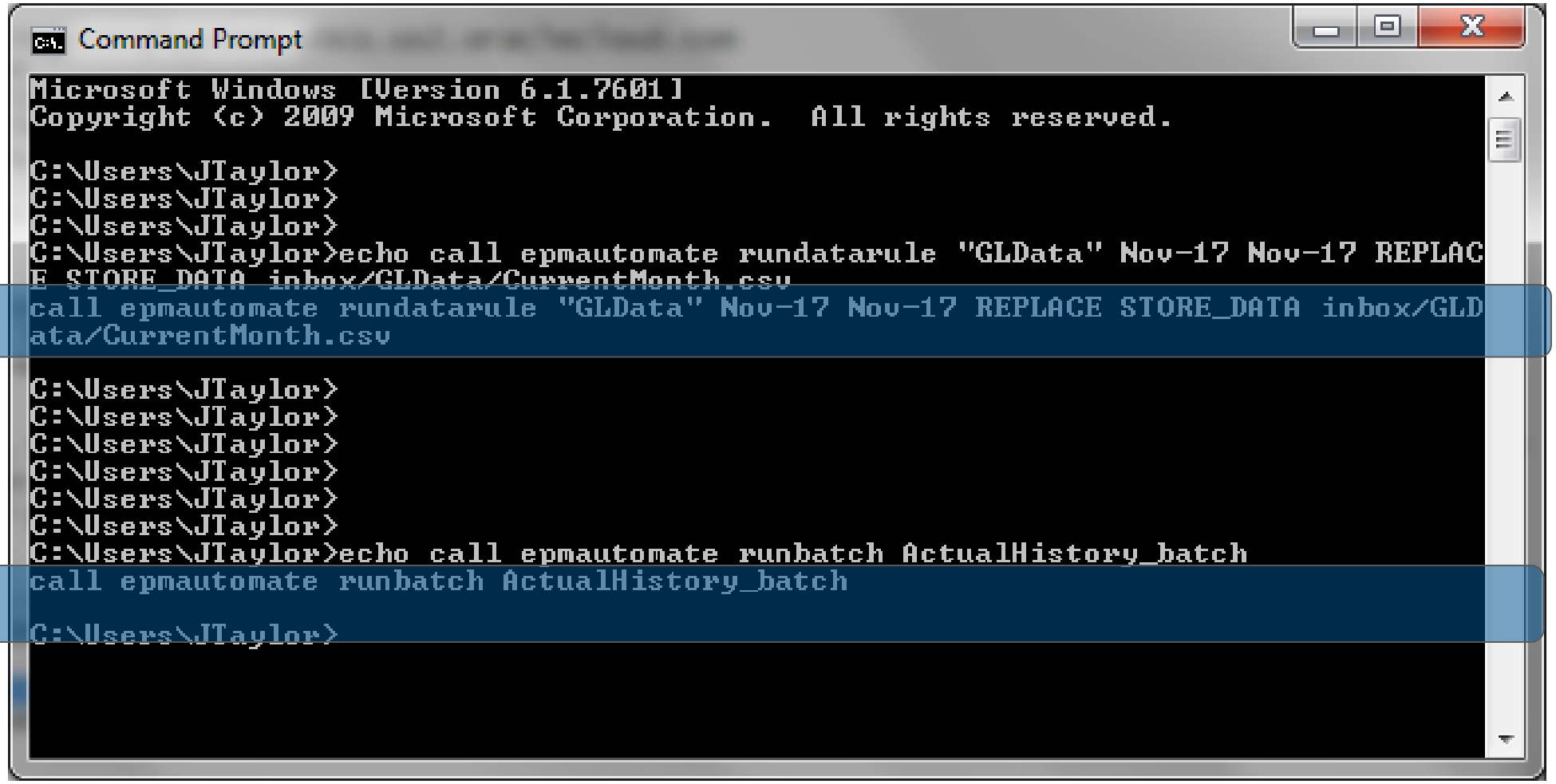
- epmautomate runbatch *BATCH_NAME*

Notes:

- For Flat File data loads, the file must be loaded to the cloud before executing the load rule
- Batch Files must be uploaded to the cloud in order for the batch to have load to execute

RUNNING DATA MANAGEMENT LOADS IN THE EPM CLOUD

- Run Data Load Rule
- Run Batch



RUNNING APPLICATION SNAPSHOTS IN THE EPM CLOUD

Pre-existing snapshot must been defined in order to execute EPM Automate snapshot

Create New Snapshot

- epmautomate exportsnapshot *SNAPSHOT_NAME*

Import Snapshot to the Application

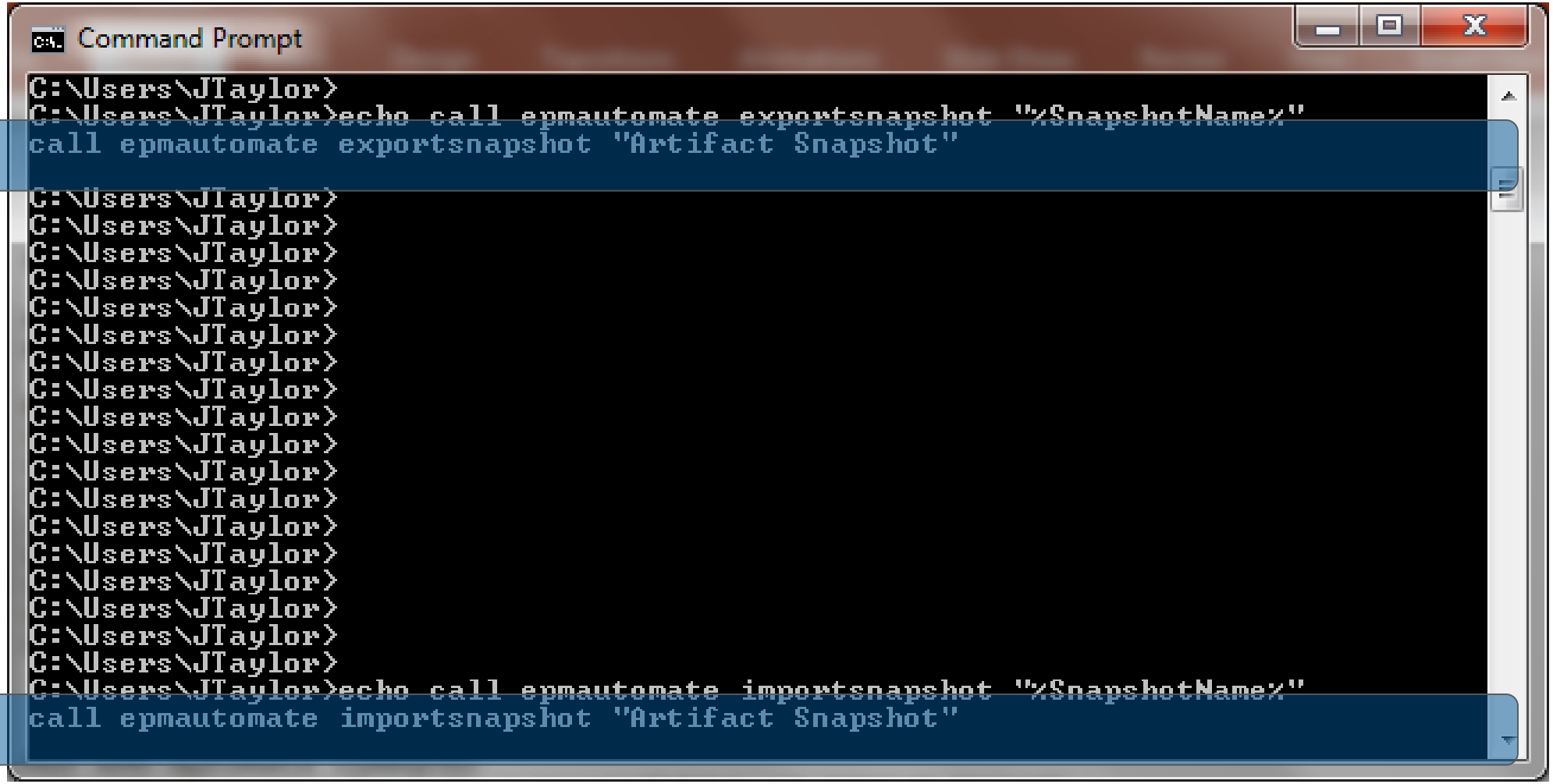
- epmautomate importsnapshot *SNAPSHOT_NAME*

Notes:

- The pre-existing Snapshot will be replaced with the new Snapshot during export
- A daily Snapshot is created and retained for one day during the Oracle Maintenance Window

RUNNING APPLICATION SNAPSHOTS IN THE EPM CLOUD

- Create new Snapshot



- Import existing Snapshot to Application

JOBS IN EPM CLOUD

Jobs are defined actions that can be repeated in the applications

Jobs can triggered to run immediately or scheduled to run on a recurring basis

Once jobs are defined they can be triggered by EPM Automate to run specific commands for:

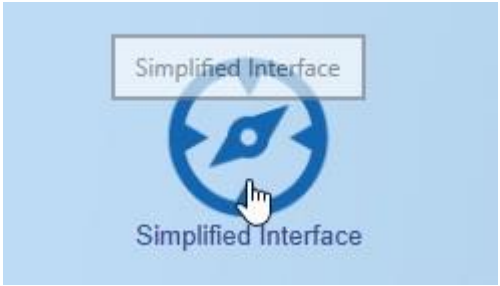
- Metadata Import/Export
- Direct File Import/Export
- Database Refresh
- Database Cell Clearing
- Data Mapping

Notes:

- The defined Jobs are different from the Job History. Job History includes a record of recent actions the were performed in the application, including the execution of defined jobs.

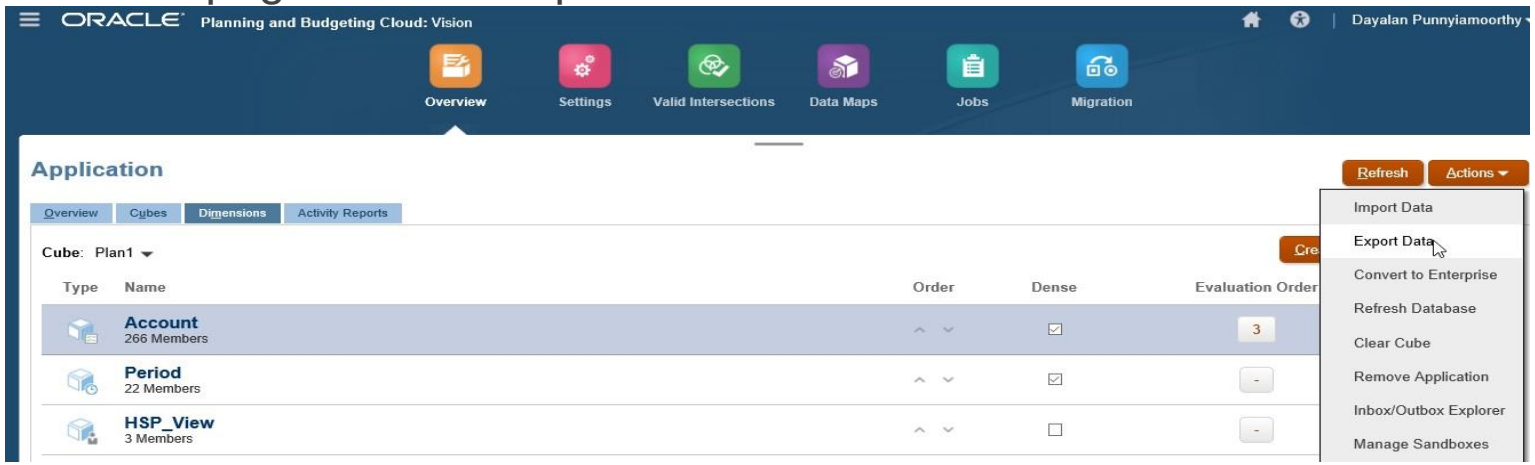
EXAMPLE JOB- CREATING A JOB FOR EXPORTING DATA

To create a job click on the “Simplified Interface” from the Home page



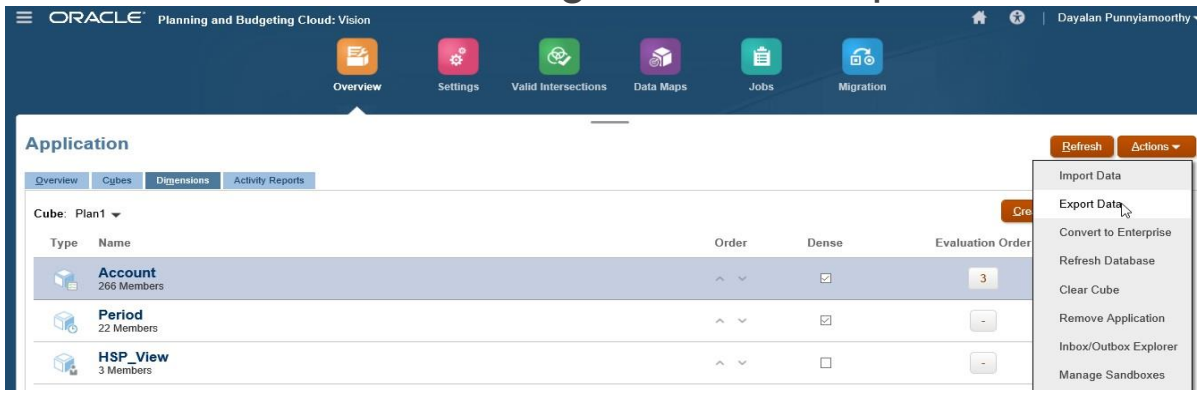
Click on the Application ->Overview

From the Dimensions page click on Export Data

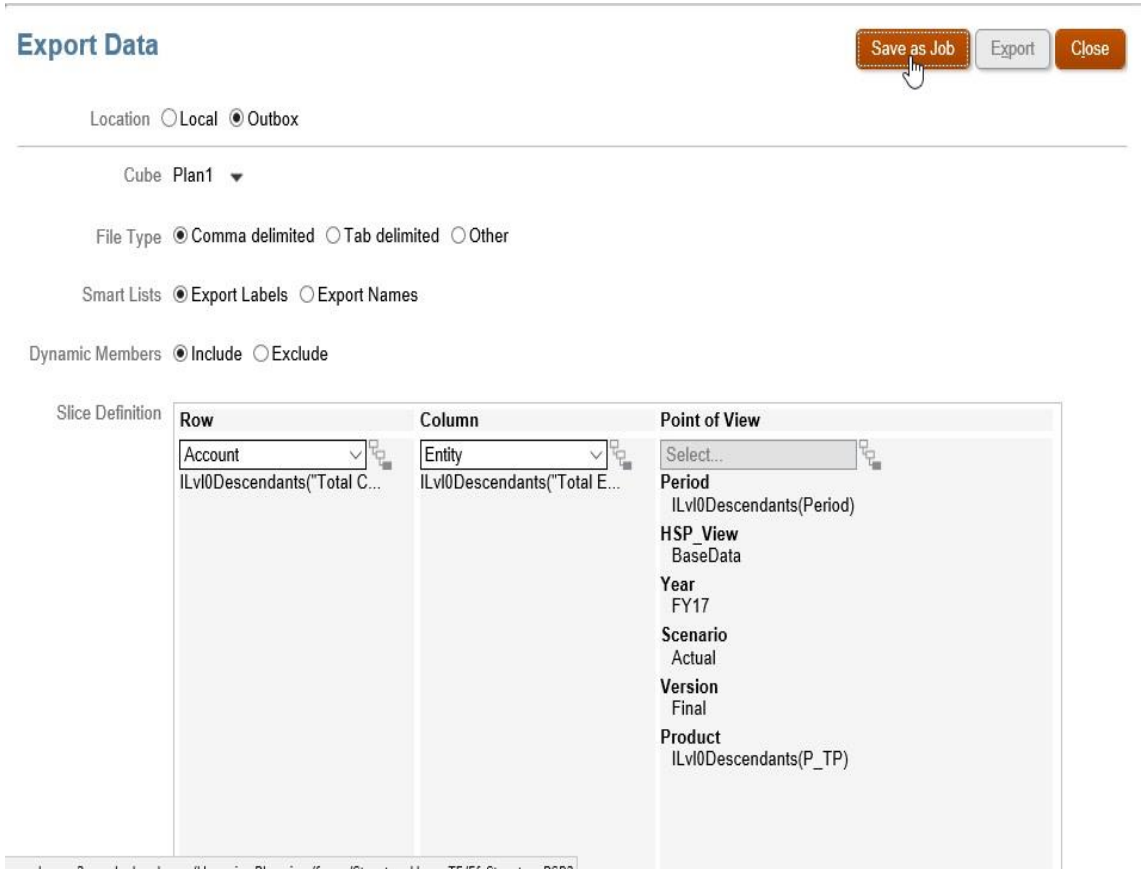


CREATING A JOB FOR EXPORTING DATA – CONTINUED…

From the Dimension Page click on “Export Data”



Make the needed selection and click “Save as Job”



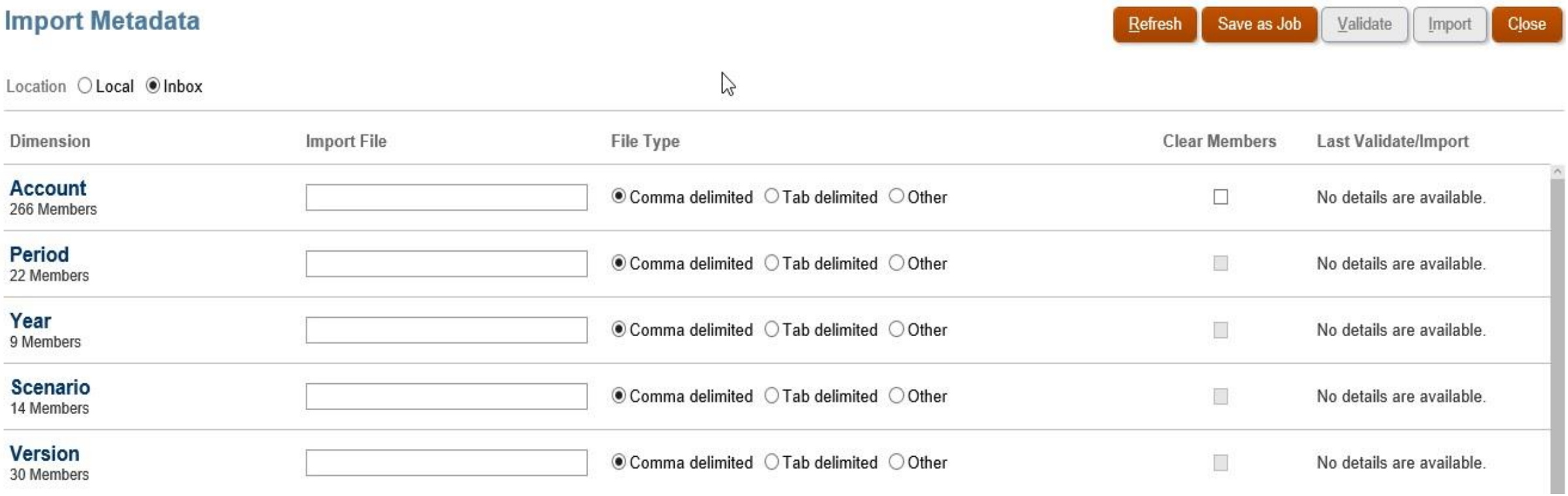
CREATING A JOB FOR EXPORTING DATA – CONTINUED…

Specify the name for the Job and click on Save

The saved job will be displayed under “Export Data”

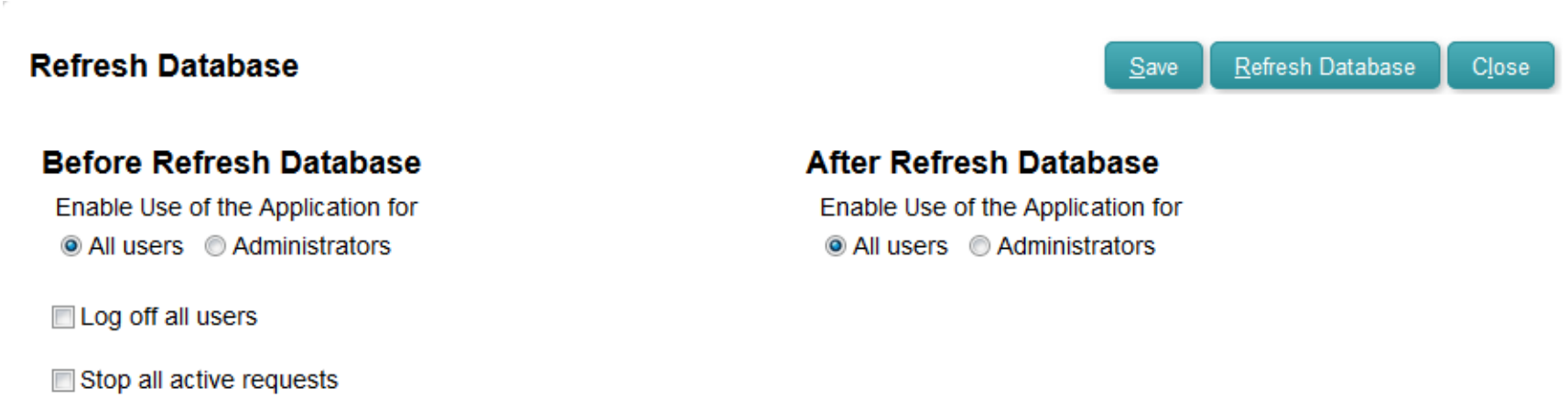
EXAMPLE JOB- CREATING A JOB FOR IMPORTING METADATA

For creating job for “Importing Metadata”



EXAMPLE JOB- CREATING A JOB FOR REFRESHING DATABASE

For creating job for “Database Refresh”



EXECUTING JOBS IN EPM AUTOMATE

Once the Jobs are defined, the EPM Automate commands generally just require for the job to triggered

Metadata Import/Export
- epmautomate exportmetadata *JOB_NAME* [*FILE_NAME*]
- epmautomate importmetadata *JOB_NAME [FILE_NAME]*

Direct File Import/Export
- epmautomate exportdata *JOB_NAME [FILE_NAME]*
- epmautomate importdata *JOB_NAME [FILE_NAME]*

Database Refresh
- epmautomate refreshcube *JOB_NAME*

Database Cell Clearing
- epmautomate clearcube *JOB_NAME*

Data Mapping
- epmautomate runplantypemap *JOB_NAME*

Notes:
- Metadata and Data Exports create zip files and save to the Inbox/Outbox Explorer Folder on the Cloud
- Metadata and Data Imports require for the files to be loaded to the cloud Inbox/Outbox Explorer Folder before executing the Import job

INTEGRATE MULTIPLE EPM AUTOMATE INTO A BATCH SCRIPT

EPM Automate commands be combined in a single Script to perform several actions against the applications

For Example, create a process to archive and import data to the application and run Business Rules:

call epmautomate exportdata BudgetBackup BudgetBackup.zip

call epmautomate downloadfile BudgetBackup.zip

call epmautomate uploadfile NewBudgetData.csv

call epmautomate importdata BudgetImport NewBudgetData.csv

call epmautomate runbusinessrule Calc_OverheadExpenses Entity=Corporate

call epmautomate runbusinessrule Allocate_Intl Entity=International

call epmautomate runbusinessrule Agg_Budget

INTEGRATE EPM AUTOMATE INTO COMPLETE AUTOMATION PROCESSES

EPM Automate commands be incorporated with Batch Scripts that perform other actions to create complete automation processes.

For Example, create a process to backup the application and retain multiple copies on a local drive:

```
call epmautomate exportsnapshot "%SnapshotName%"

call epmautomate downloadfile "%SnapshotName%"

copy "%SnapshotName%.zip" %ArchiveLocation%"%SnapshotName%.ZIP"

CD /d %ArchiveLocation%
Set Timestamp=%date:~4,2%_%date:~7,2%_%date:~10,4%_%time:~0,2%%time:~3,2%
ren "%SnapshotName%.zip" "%Env%_%SnapshotName%_%Timestamp%.zip"

REM Remove archive copies older than 30 days
echo forfiles /m %SnapshotName%* /D -30 /C "cmd /c del @path"
forfiles /m %SnapshotName%* /D -30 /C "cmd /c del @path"
```

BEYOND EPM AUTOMATE

EPM Automate is a good utility for doing a lot of tasks, but it does have some limitations when more advanced actions are needed.

EPM Automate is uses the REST API to perform actions based on the EPM Automate commands.

The REST API can be used directly for advanced commands if EPM Automate is not adequate.

The REST API has its set of commands and involves knowing JSON commands and programming in Java, Groovy, Perl, JavaScript, Powershell or other languages.

Questions from the Audience

For additional questions or information you can contact me at:

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- linkedin.com/in/essbasejohntaylor
- @EssbaseJT