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The **REEMERGENCE** of **ORACLE ANALYTICS CLOUD**

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What is Oracle Analytics Cloud?

Oracle Analytics Cloud (OAC) is the culmination of Oracle legacy, on-premises Oracle BI (OBIEE), BI Cloud (BICS), Data Visualization Cloud (DVCS) and Essbase (multi-dimensional database from Hyperion or OLAP cubes) all coming together into a complete analytics platform. It includes options for traditional reports and dashboards with structured analytics models. It includes the latest data visualization capabilities with unstructured data. New machine learning and data profiling features, easy connectivity to dozens of sources and the incorporation of “Essbase as a Service” make Oracle Analytics Cloud a one-stop shop.

Recently, Oracle also introduced the “autonomous” version, or Oracle Autonomous Analytics Cloud (OAAC), and refers to the original OAC as “customer-managed.” From a feature perspective, OAC and OAAC are the same product. OAAC is essentially a SaaS offering, whereby Oracle manages everything, including the underlying Oracle database that houses the metadata, and applies the product updates automatically during the advertised maintenance periods. With “customer-managed” OAC, the updates are pushed into the customer’s OAC environment, but the customer must decide and initiate when the updates are applied. Moreover, within a “customer-managed” OAC environment, the customer has access to many more back-end configurations, though most changes would not survive a patch/update.

Why Consider Oracle Analytics Cloud?

Oracle has taken its lumps over the last several years in the BI area, as the strategy to migrate OBIEE (and BI Applications) customers to the cloud was incomplete and the early BICS offerings were not equivalent to the competition. Also, the subscription models for BICS and DVCS being user-based made those solutions quite pricey for large organizations.

When OAC was released at Oracle OpenWorld in 2014, it was more of a repackaging and rebranding of BICS and DVCS, but oh how it has changed. It took a few years, but OAC matured, and both customers and partners began to embrace the platform beginning in 2016. The subscription model changed to processor-based (Oracle CPUs), making the solution a much better value. “Essbase as a Service” was incorporated, giving new OLAP capabilities to end users. Oracle BI Publisher was added recently and, overall, the self-service features saw refinement that matched or exceeded those of the competition. I highly recommend having a look at Oracle’s Cloud Investment Plan for Oracle Analytics (bit.ly/2RnN3zh), as it highlights the product strategy and direction.

The efforts paid off with Oracle being recognized prominently in the The Forrester Wave™ “Enterprise BI Platforms with Majority Cloud Deployments, Q3 2017” report (bit.ly/2h3pMSz), which states that OAC distinguishes itself within the marketplace with a broad and deep large-enterprise-grade BI portfolio that includes self-service analytics, the Essbase MOLAP Engine for complex requirements, hybrid deployment options, a “Common Enterprise Information Model” for security and governance, and increased licensing flexibility (**Figure 1**).

Since then, the momentum of Oracle and OAC in the analytics market has sky-rocketed. If you have OBIEE or Oracle BI Applications, consideration of OAC is a must. If you have any of the Oracle ERP, HCM, EPM or CX Cloud solutions, consideration is also a must. Especially for Oracle ERP and HCM, if you want more than what the delivered Oracle Transactional BI (OTBI) modules offer, let Oracle Analytics extend those capabilities. Ultimately, if your organization



Figure 1: From the The Forrester Wave™ “Enterprise BI Platforms with Majority Cloud Deployments, Q3 2017” report (bit.ly/2h3pMSz).

is looking for a complete analytics platform to build upon, Oracle Analytics must be considered.

Getting Started and Setting Up Oracle Analytics

Obviously, you’ll need to purchase Oracle Analytics Cloud subscriptions to use the solution. Oracle makes this fairly easy with free trials currently available which amount to 300 USD of credits. Also, for existing OBIEE or BI Applications customers, there is a “Bring Your Own License” or BYOL program that allows you to try out the Cloud without diving completely in - it provides a significant discount and gives you 90 days to try (or migrate to) Oracle Analytics. Moreover, the online cost estimator (bit.ly/2CM2xZN) can help you size and price preliminary options. Aside from the OAC or OAAC product choice, you’ll notice the need to also order Oracle Compute Block Storage (to house the binaries, Essbase cubes and logs) and Oracle Storage Cloud - Object Storage (for the service level backups, datasets, etc.). For the “customer-managed” OAC, you’ll need to order an Oracle Database Cloud Service (for the OAC system data) and required Oracle Database Backup Cloud Service. Your Oracle sales representative will help you along with this process as well.

Once you have ordered the OAC service, you’ll get an email to activate the service, and away you go. You’ll first need to set up an Oracle Analytics instance. The steps differ slightly between OAC and OAAC, as there are fewer options/requirements for OAAC. This screen shot in **Figure 2** is for OAC (the “customer-managed” version), so you’ll notice additional specifics. For the “customer-managed” OAC option, one must create the Database Cloud first – it is a

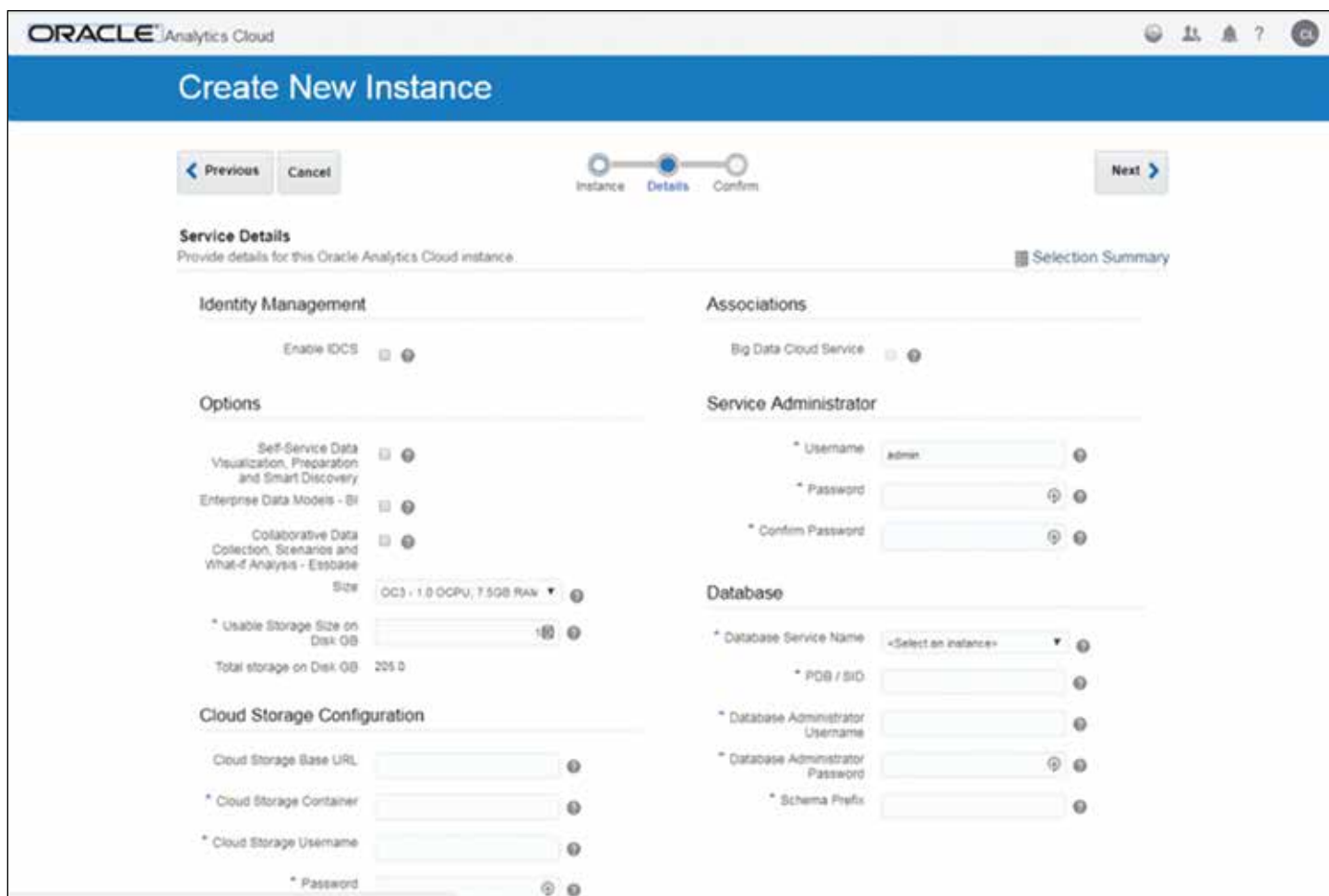


Figure 2: Setting up an Oracle Analytics instance.

prerequisite, though very simple to do. Importantly, one must ensure that the instance “shape and size” aligns with your subscription plans, as overages will occur if you use more than planned. Also important is the decision to use Identity Cloud Service (IDCS) or the embedded security. When planning to authenticate or synchronize with an external LDAP or setup SSO, choose IDCS. OAC comes with IDCS “Foundation,” but check the pricing tiers and features (bit.ly/2QgHH88), as you may also need to subscribe to IDCS.

Once the instance is set up, all that is left is to target the data that you want to use and start building content.

Connecting To and/or Bringing in Data

When rolling out any analytics platform, one must determine how to access the data, either from within the system in which it resides or brought into the platform for easier access. For this, Oracle has many options:

- **Supported Connectors**

- o These allow for direct connections to many Oracle Cloud (SaaS) applications, Amazon, Google and Salesforce to just name a few. The current list of supported data sources (bit.ly/2RnNYQf). can be

found in the Oracle Help Center. There are also “Smart Connectors” for select Oracle SaaS applications that provide access to business entities; respects security, business rules and governance on source systems; and leverages calculations and business logic in reports.

- **Remote Database Connect or VPN**

- o Some customers choose to set up a VPN tunnel between their in-house applications and databases, though Oracle is now advising against this as the latency can be a challenge. Instead, Oracle is recommending the use of Remote Database Connect or RDC – this leverages a small deployment on a WebLogic server within the organization’s firewall.

- **Connections, Data Sets and Data Prep**

- o Using the above connectivity options, “Connections” are easily created. With a connection in place, one can create “Data Sets” that primarily align with either a database table (all or select columns) or a query. Security can be applied to connections and data sets, data sets can be refreshed as needed and joins can be created between data sets, making this functionality much more usable than the earlier “mashup” features of BICS and DVCS. Moreover, data flows within the



Figure 3: Creating Data Sets.

“Data Preparation” area can be created to group values, join data sets, sub-select rows/columns, aggregate, define calculated fields, etc. (Figure 3).

• **DataSync or Replication**

- o Ever since the early days of BICS, Oracle has been providing a free utility called Oracle DataSync that was helpful to push data into the cloud. This utility, which must be installed on a client or server, can be considered to offer “lite” ETL capabilities – as such, Oracle customers have started to use it for many purposes, some unrelated to Oracle Analytics.
- o In the latest release/update of Oracle Analytics (October 2018), replication capabilities have been incorporated into the Oracle Analytics front-end that allow for “view objects” from many of the Oracle Cloud (SaaS) applications to be more easily replicated into the analytics environment, generally on a scheduled basis. This is extremely helpful since direct database access is not allowed and often row limits exist for reports/dashboards within those applications (Figure 4).

Leveraging Analytics, Visualizations and Essbase

By default, when logging into Oracle Analytics you’ll find yourself within the Data Visualization (DV) area where data sets are assumed with DV projects anticipated to visualize your data. The “Classic” BI area is also available; this aligns with the legacy OBIEE features. These broad capabilities include the following:

• **Data Visualizations**

- o There are so many options and much to learn around visualizations (Figure 5). I find people often fall back to the visualization types that they recognize – and these are the old ones. I recommend looking at what’s possible; for this, Oracle’s Analytics Library (bit.ly/2CN-WLr8) gives you beginner, intermediate and advanced examples and tutorials.

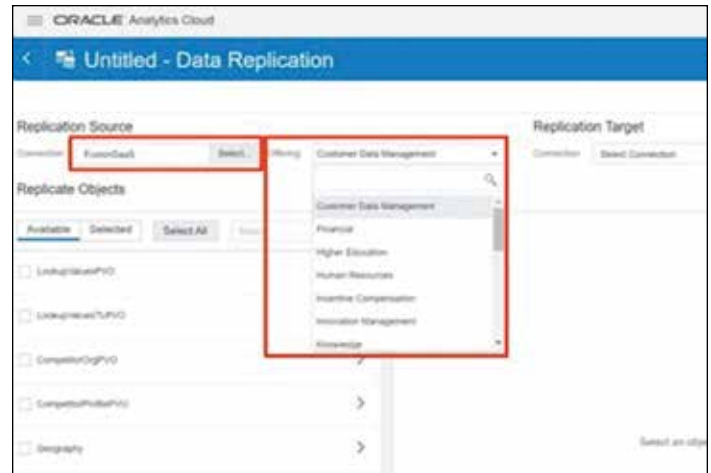


Figure 4: Data replication.

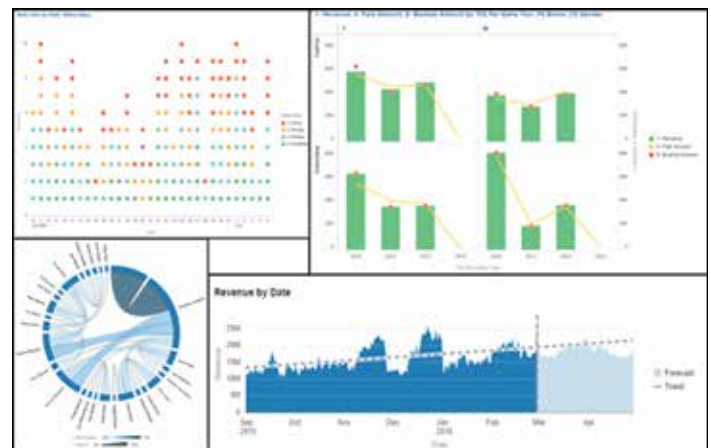


Figure 5: Examples of data visualizations.

• **Classic Analytics**

- o For this, I mean traditional charts/reports (analyses) and dashboards like OBIEE, with the common visualization options. An optional repository (RPD) deployment exists for the analytics model, typically needed when remote data sources are anticipated (via RDC or VPN) or when more sophisticated modeling is expected. For OBIEE cloud migrations, this option is hugely appreciated, though there are restrictions that apply. The online modeling tool (no RPD file) works well for simpler applications.

• **BI Publisher**

- o This “pixel-perfect” reporting option is commonly used by Oracle EBS and PeopleSoft customers. It leverages a layout (template) on top of a data model (query) that is often targeted for larger reports not suitable for dashboard display.

• **Essbase**

- o Legacy Essbase data sets can easily be migrated to Oracle Analytics, though some restrictions apply. However, the attractive Oracle Analytics features for Essbase are those that offer a one-click option to create a “what-if” model for a given data set. These features

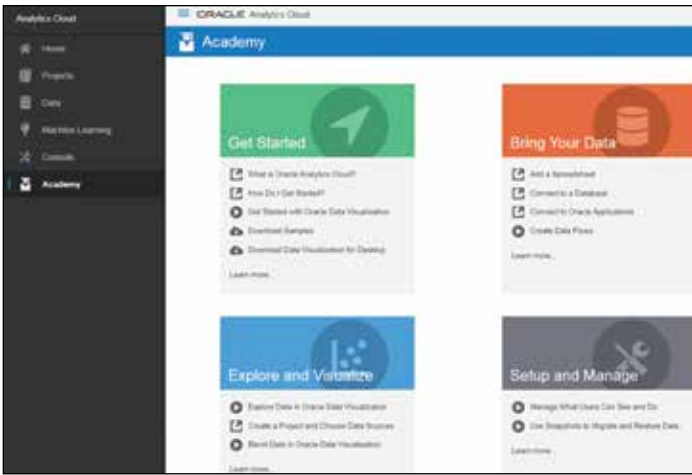


Figure 6: Oracle Analytics Cloud Academy.

exist within the SmartView (MS Office add-in) facilities available with Oracle Analytics.

- **Mobile Support**
 - o The DV content you produce can easily be viewed through just about any browser on any device. The newest/coolest “Day by Day” app actually learns what you are interested in by your usage pattern (when and where you are interested in it) and who you like to share/collaborate with. For your dashboards and reports, the Oracle Business Intelligence Mobile app optimizes your content for viewing on a mobile device and the Oracle Analytics Cloud Synopsis app allows you to quickly open and visually interact with spreadsheets and business data.
- **Additional Features, including Machine Learning**
 - o Smart Data Discovery offers automatic detection of data patterns; there are data profiling or “explain” features with automatic hierarchy detection and creation/scoring of models. Oracle Analytics has built-in Advanced Analytical functions (Trendline, Cluster, Outlier, Forecast) that are readily available to apply on data visualizations at the click of a button. Additionally, one can upload any R package script to the server and use it on reports. Finally, there are several built-in Machine Learning algorithms (Neural Network Classification, Naive Bayes, Random Forecast, etc.) that can be applied with minimal knowledge to “train” and then apply a model.

While some folks may still prefer other platforms, Oracle has filled all of the gaps in Oracle Analytics to ensure that it can compete and win in the marketplace.

Administration and Maintenance

For Oracle Autonomous Analytics Cloud (OAAC), there really is no administration or maintenance. Oracle manages the software patching and the backups, though the customer can take additional application backups or “snapshots” (aka BAR file) that can be leveraged for migrating content.

For the “customer-managed” OAC, backups are the customer’s responsibility; these primarily entail OAC “Service Level Backups” that are saved to Oracle Storage Cloud and contain all the runtime artifacts required to restore your service. These backups are tied to the specific OAC service instance, i.e., not designed to clone a service. Customers typically keep backup versions of the repository (RDP), catalog and the associated Oracle Database as well. For this, one can script and automate all of the backups in the “customer-managed” OAC deployment.

For OAAC, patches and updates are applied on Oracle’s advertised schedule. I recommend that all changes and enhancements be reviewed ahead of any patch/update. As we’ve seen with Oracle’s other SaaS solutions, select regression testing is recommended after accepting these patches/updates when the userbase relies on it.

For the “customer-managed” OAC, patches/updates are automatically delivered to My Services by Oracle, but the customer is responsible for applying patches/updates through a “single click” mechanism. Please note that the customer is responsible for patching the associated database service and OS patching also must be done by the customer via SSH onto the VM and running updates.

Now, Get Started!

I’m often asked how to get started. To me, the best way is to roll up your sleeves and dig in. In the “olden” days, you had to have servers readied and then do lengthy installs. Now, getting an Oracle Analytics instance up and running takes just minutes. Moreover, Oracle and the extensive Oracle community makes it easy. Partners, like AST and others, have many presentations and webinars available online. I highly recommend the Oracle Analytics channel on YouTube (bit.ly/2qhntAs), as well as Oracle’s online documentation, which is extensive with many of its own videos and tutorials. Within the Oracle Analytics environment, the “Academy” also offers helpful content on frequently-asked topics. (Figure 6).

Now, go ahead and give Oracle Analytics Cloud (or Oracle Autonomous Analytics Cloud) a try. You’ll be pleasantly surprised, if not amazed, at what it can offer. ♦



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