Operating in the Cloud

Best Practices and Lessons Learned from early OTM/GTM cloud implementations
OTM-GTM Cloud ‘Best Practices’ Agenda

- ISM Introduction
- Provisioning Process
- Service Request Processing
- Maintenance, Patching, Upgrades
- Other Topics
Implementation Success Program

How Implementation Success Managers actively influence Oracle Cloud projects

- Ensure the project is structured for success
- Help manage expectations and drive issue resolution
- Review SR info and participate in Oracle SR meetings
- Participate in Customer Project, Executive, and Stakeholder meetings
- Review Project artifacts and provide advice/guidance based upon application and Cloud best practices

Ensure successful go-live

Exceptional Customer Experience

KPIs:
- Customer Reference for OTM cloud
- Customer Implementation Experience
- Minimize Project Risk
Who are the OTM and GTM Implementation Success Managers?

- **Chris Knowlton**
  - Experienced transportation professional with extensive operations and IT experience
  - Over 10 years experience implementing OTM/GTM

- **Carol Overcash**
  - Career of experience in the transportation industry
  - Over 15 years experience with implementations of GLog/OTM
Cloud Specific Terminology

- **Provisioning** – the process of assigning customers to their piece of the cloud
- **Pods** – Customer environments in the cloud (could be test, stage, or prod)
- **Fleet** – a group of Pods that may be maintained simultaneously or reside in the same data center
- **P2T/T2T** – Production to Test or Test to Test environment copy
- **My Service** – a portal to allow customers to view details about their cloud environment
- **Patching** – maintenance performed (at least monthly) to ensure all cloud environments are in sync and equipped with all the latest updates
- **Cloud Ops** – Group within Oracle that maintains the environments from an operational perspective
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PROVISIONING PROCESS
Oracle Cloud Service

Key Customer Roles for Provisioning

Account Admin (Buyer)
- Buy service
- Upgrade, terminate subscription
- Manage billing
- Designate, remove account admins
- Activate the Service

Service Admin
- Monitor service
- Receives Welcome Email with URL and login information

Identity Domain Admin
- Reset passwords as required in Oracle
  My Account & My Service
- Designate additional Service and identity Admins

End Users
- Access Business application
- Reset self password

Account Admin will activate the initial order. They need to know who to designate as the Service Administrator and the Identity Domain Administrator. Often Customers choose to have the Service Administrator and Identity Domain Administrator be the same person.
Provisioning Overview – Customer kicks off Fully Automated Process

1. Order is successfully booked
2. Oracle Sales Rep notifies Customer’s Account Admin (Buyer) that activation email requires action and has been dispatched.
3. Activation Email sent to the Customer’s Account Admin
   • Account Admin is specified in sales process by Sales Rep.
   • Activation email requests key information about the Service Administrator, Identity Domain Administrator and service information.
4. Service Administrator receives Welcome Emails with URLs, login information, Customer Support Identifier, Getting Started Guide.
Step 1: Customer Account Admin receives an activation email

Activation Email is entitled “Welcome to Oracle Cloud. Complete your paid order” and comes from an oracle.com email address.

Customer clicks on “Complete My Order”, logs on to their Oracle.com account and is guided through a step by step activation wizard.
Step 2: Account Admin completes Service Details

Account Admin designates a Service Administrator and an Identity Domain Administrator for the Service. Advise customer to provide concise and meaningful Identity Domain and Service Names. They form part of the URL.

Fields required include:

- Default Language
- Identity Domain – Must be unique at Oracle (e.g. acme3 if co ACME and 3rd cloud app)
- Identity Domain Administrator Email, Name, User Name
- Service Name (e.g. otm or gtm) & Description
- Service Administrator Email and User Name
- Check if Id domain admin and service admin are same person
- Id domain & service name should be lower case, start with letter, can include number
Step 3: Review and confirm responses
Confirmation of order activation. Welcome emails will now be sent out to the Service Administrator with URL and login information.
Kickoff Checklist

• Customer and Partner Review the Welcome Email together
• Jointly log in to your OTM environments using the DBA.ADMIN login. Work together to create customer domains and other user ids so that the SI/Partner team members and other key configuration resources can login to OTM. See the Getting Started Guide for more info about roles in OTM cloud.
• Ensure SI Partner resources are associated with customer Support Identifier in My Oracle Support
• Work jointly to gain view access to MyService.
• Investigate the Oracle OTM Cloud Service community
• Follow the link in the welcome email to the Cloud Getting Started Guide.
• Read note Key Differences between Oracle Trade and Transportation On-Premise and Cloud (Doc ID 1926811.1).
Online resources

https://cloud.oracle.com/

https://support.oracle.com

http://www.otmsig.com/
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CLOUD RELEVANT TOPICS
Provisioned Environments

Production

- Environment for Production-level activities
- Limited testing/training is ok here prior to go-live. But have a plan to remove test data manually before go-live
- Sized for Production user loads
- Monitored closely by cloud operations once live

Non-Production

- Sometimes referred to as the Test or Stage environment
- Environment for training, configuration, and testing activities
- One Non-Production environment included with contract (additional environments can be purchased if desired)
- Test configuration and data prior to migrating to Production
- Once live, test the monthly patches here before they go to Prod

Optional Additional Non-Production
Best Practice Environments Usage

Automated Migration Requests

**P2T**
Production to Test

Use to update ‘Support Env’ after go-live. And to periodically re-update the Support Env.

- Migrates data from Production (including FTI) to Test
- Test will have some Prod data nulled (E.g. Contact, next scheduled job, external system, urls, etc). Customer should re-populate what’s right for Test after the P2T is done.
- All Test Users will be replaced by the Prod users, but the passwords will be made invalid in Test. The DBA.ADBIN user in Test must reset the login/passwords for the Test users. In Test the DBA.ADMIN current password will be preserved during a P2T.
- **There will be a document detailing OTM P2T data changes on MOS.**
- Production and Test environments must be identically patched
- Blackout Period for P2Ts in effect from 1st Friday to 3rd Friday of each month.

**T2T**
Test to Test

- Migrates data from one test environment to another to support testing cycles.
- Applies only to customers that have purchased additional non-production environments.
- Source and Destination environment must be identically patched
- **NOT** subject to Blackout Period as Test environments should be similarly patched
Miscellaneous Key Points

- All OTM users sign directly into OTM. Currently, OIM is not used to manage the creation and maintenance of OTM Cloud users.
  - There are plans in the future to migrate a lot of the cloud apps user management onto OIM

- Read only SQL access will be available to Admin role users. There will be access to other servlets with some limitations compared to what is allowed through non-cloud implementations. If they are on the current DBA.ADMIN menu, they should still be available

- See the OTM Cloud Getting Started Guide for processes around updating server property files
Key parameters around SLA’s

Oracle works to meet a Target System Availability Level of 99.5% of the production service, not including planned downtimes, for the measurement period of one calendar month, commencing at Oracle’s activation of the production environment. Cloud Service Agreements can contain key information as well.

Disaster Recovery

- Full DR is still being finalized, but typically
  - There will be secondary site that is a complete mirror image of the Primary site
  - The 2 sites will be maintained at exactly the same version and patch level
  - This ensures standby is always current and minimizes possibility of data loss.

- DR rehearsals are done once per year
  - RTO of x hours and RPO of y hours.
  - If DR is activated, included in our DR plan is regular communications to the customer for notification of a Severe Event, restoration of all stages and confirmation service is restored

- The test environment is typically not optimized or tuned to the same extent that Production is and there is no SLA for test.
Performance Tuning and Monitoring

- Continuously monitoring performance throughout the fleet (fleet of cloud environments)
- Oracle conducts extensive monitoring and reporting to ensure any inhibiting event is resolved way before it would impact a customer
- Once OTM/GTM is fully live the group will start to gather acceptable range KPIs
- Tracks over 200 metrics, including
  - Availability and SLA
  - External URL monitoring to mimic customer interface
  - Server level monitoring (CPU, mem, disk usage and I/O)
  - Component level monitoring (application queues)
  - Network and Storage monitoring
- Staff monitor alert tickets 24x7; worked on according to priority and severity
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SERVICE REQUEST PROCESSING
SR Submission and Processing

• Submit product SRs in My Oracle Support –or- from My Services
  – Use screen shots. Be clear so Support can replicate.
  – Select the correct Pod (Test or Prod) where problem occurs
  – Clearly state the impact of the problem. Particularly important if hoping to get an emergency patch. Don’t say “UAT will be stopped.” Do say “We can’t tender shipments which will stop 90% of our end-to-end UAT scenarios, causing a project delay, thus extending the project duration and cost by $ x per week.”
  – If Support requests logs for researching an SR
    • Some logs can be gathered by the user from the UI & submitted into the SR. This is same as with non-cloud.
    • Some logs can’t be retrieved from UI. For those Support will coordinate with Cloud Services and Project team as necessary to have steps performed and logs retrieved by Cloud Ops.
  – Alert the ISM if there is a priority SR created, or a lagging SR
Sample: Enter SR from Oracle Support Site
Enter an SR from Oracle Support (cont’d)

Always use the Cloud tab.
• Service Type – Start typing “Oracle Trans” then choose from the list
• Service - Choose your Prod or Test environment
• Use Problem Type to specify if it’s a cloud task (hosting service) or software issue (order, shipment, etc).
-Or- Enter an SR from My Services portal

cloud.oracle.com.

• Remember to Select Data Center = US Commercial 2
Link to entry from My Service

• After you sign in to My Service, you’ll see a link to Create Service Request.
• That takes you to My Oracle Support, then it’s the same as the previous example.
Service Request Best Practices

• PLAN AHEAD! For Cloud projects SRs are required for ‘Cloud Ops activities’. These require scheduling and won’t be immediate.
  – System bounce
  – Installing security certificates for integration
  – Request a ‘P2T’ (Production to Test system copy) Could have 4+ week or longer lead time. Plus blackout periods apply. Discuss with your ISM for timing and more details.
  – Request to start or end Concurrent Patching. Cloud Operations requires that the SR be filed 10 days in advance of the date on which to start, amend or cancel concurrent patching.
MAINTENANCE, PATCHING, UPGRADES

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Patching

• Cadence
  – monthly application patching cycle (Bundle Patches – all OTM cloud environments have the same patch bundle applied.)
  – periodic application upgrade cycle (Releases)
  – periodic “tech stack” and infrastructure upgrades

• Change Window. OTM GTM will be down during maintenance.
  – Patch blackout periods are communicated via email notifications. E.g. Friday evenings 7:00pm to Sat 5:00am Pacific Time. The downtime may not last the entire scheduled period.
  – **First Friday of month for Non-Prod and Third Friday of month for Prod**
  – OTM Cloud patch notes are available on My Oracle Support at Oracle Transportation and Global Trade Cloud Update Bundle Documents (Doc ID 1987267.1)
  – Optional ‘concurrent patching’ before go-live. Both prod and non-prod get patched during the non-prod window.
Maintenance, patching, upgrade items of note

- **Patching and Upgrades affect Cloud Project Planning**
  - Consider the patching schedule & downtime into the project plan.
  - **Since patches are created monthly, there will likely be several weeks from the time your project finds a problem till a fix is included in a monthly patch bundle. Be prepared to workaround issues for numerous weeks.**
  - **Patches outside of the Monthly Bundle will be rare!**
  - **Once live, the customer team should plan to regression test on Test after each monthly patch.** That gives 2 weeks to discover if the patch causes any problems before it is installed on Prod.

- **Upgrades for major releases are available during a 2-4 month window**
  - Customer can schedule the upgrade during the window and will have longer to test the upgrade than a standard patch.
  - If also incorporating new functionality from a release, the Implementation Partner may be re-engaged to have a small Upgrade Project.
Data Load and Migration

• Thumbs up
  – Use the Standard Promote to Production functionality (AKA Migration Project) to move configuration & data from Test to Prod
  – Standard csv functionality can be used.
    • Clear cache after csvs instead of bouncing.
    • Use new functionality at Configuration and Administration > Process Management > Reset Sequences, to reset sequence numbers when needed after csv loads.
  – P2T copies the entire Prod environment (+ Prod FTI if in use) to Test.
    • Good for after go-live to get Test updated to use for Support or for a Phase 2. Also good prior to testing a new OTM release/upgrade
    • Requires an SR to Cloud Operations to complete. (Warning, can be a long lead time).
    • Test env will be unavailable for up to 48 hours
    • Check the note in My Oracle Support for details on what data needs reset after a P2T
• Don’t do this
  – Domain export isn’t supported on cloud and db scripts to ‘clean out test data’ are not allowed.
Integration

• Provide plenty of time for testing!! And start integration work early.
• Refer to the OTM Cloud Getting Started Guide.
• If VPN is a customer security requirement coordinate with the Sales Rep to order it.
• Connectivity might require installing new security certificates. This takes time on cloud.
• As soon as the environments are provisioned, work to get ‘handshake connectivity’ established between OTM and each relevant test environment for your project integration. Starting early increases the odds that connectivity is working when you have the integrations built and ready to unit test.
• Depending on the time needed to get Test connectivity, plan ahead to be sure Prod connectivity will be in place before go-live.
• If the customer is responsible to build the integrations, DO budget time/$ for the Implementer to provide training and troubleshooting expertise if problems arise establishing connectivity.
Overall Best Practices

• Go-Lives should be scheduled after the production patch and before the end of the month to ensure all environments are aligned
• Try to schedule P2T within a week after Go-Live and before the next test patch goes in
• Add key information found in this document and lessons learned into your project documentation
• Hold your customer’s hand and much as possible during provisioning and early project. Then teach them to own their system before the project ends. Customer needs skills to do monthly regression testing, update testing, production troubleshooting and know how to submit SRs.
• Ensure you are fully dialed in to patching, upgrades, and maintenance schedules when putting together your project plans
• Utilize your ISM’s to assist in managing issues and communication with Oracle
• **Know and Use the OTM Cloud Getting Started Guide!!**
OTM USER CONFERENCE
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