ORACLE

Oracle B2C Service Platform Technical Brief

The foundation and capabilities for a best-in-class customer experience.

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PURPOSE STATEMENT

This document provides an overview of Oracle B2C Service Platform. It is intended solely to help you assess the business benefits of planning your Platform.

DISCLAIMER

This document is for informational purposes only and is intended solely to assist you in planning for the implementation and upgrade of the product features described. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described in this document remains at the sole discretion of Oracle.

Due to the nature of the product architecture, it may not be possible to safely include all features described in this document without risking significant destabilization of the code.

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Companies that aim for exceptional customer service seek out and embrace the tools and technology that integrate through open standards with their existing systems and which can adapt to rapidly-changing business requirements. Oracle B2C Service Platform is built on the bedrock practices of security, reliable distributed architecture, and first-class cloud operations. This provides companies with the foundation for meaningful and unequaled customer service experiences.

INTRODUCTION

Oracle B2C Service is a suite of capabilities that allow organizations to connect with their customers and facilitate the experience in the customer's channel of choice. Oracle B2C Service continues to evolve to meet the ever-growing demands of the market, made possible by the platform on which it is architected. Oracle B2C Service Platform is the foundation that enables great customer experience. Built on proven Oracle Cloud Infrastructure, the Platform offers customers robust security, scalability, extensibility, and demonstrated upgradability. Oracle's global commitment to the Cloud ensures the Platform is designed to be resilient with high availability using open standards-based integrations.

Intended Audience

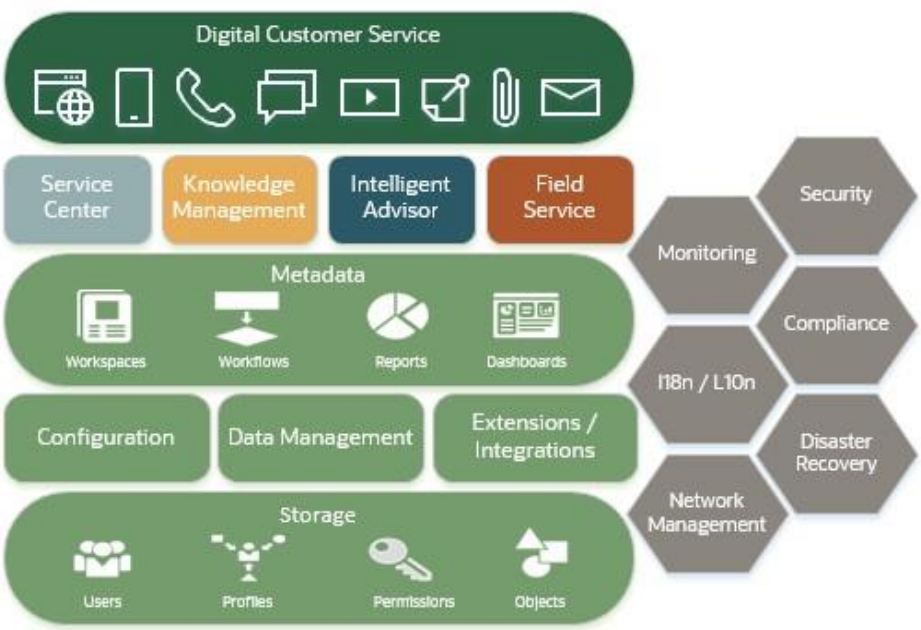
This publication is aimed at members of IT and Customer Care organizations who expect best-in-class capabilities that optimize their customers' experiences.

ORACLE B2C SERVICE

To provide customer experience excellence, companies require the ability to rapidly adapt to evolving business needs, provide consistent and insightful customer interactions, and have the confidence of proven, reliable delivery. Oracle B2C Service is designed for this with the flexibility of open standards integration, business administration extensibility, transparent cloud management, and security.

Oracle B2C Service is comprised of Digital Customer Service, Service Center, Knowledge Management, and Intelligent Advisor, all integrated and running on the best-in-class Service Platform which this technical brief describes in detail.

Figure 1. Oracle B2C Service



ORACLE B2C SERVICE PLATFORM

The B2C Service Platform is a unique and extensive foundation purposely built for service from the ground up on a time-tested and proven technology stack with security, extensibility, enterprise integration, and performance. New service development efforts are focused on micro-service applications on top of Oracle Cloud Infrastructure platform, with all development efforts following Continuous Integration/Continuous Delivery (CI/CD) adhering to Oracle's product lifecycle planning process.

Hosting Architecture

The Oracle B2C Service Platform is available on Oracle Cloud Infrastructure (OCI). In this Cloud technology, the hardware is no longer a constraint; everything is on a virtual network. The Tenancies include Compartments that logically contain the resources for which the Platform executes. Compute instances are defined for the function they serve, giving B2C Service the elasticity and performance to meet its customers' needs.

Many of the OCI available services are utilized in the architecture, such as, Audit Service, Block Storage, Compute, File Storage Service, Load Balancer, Object Storage, and Vault.

Locations of Hosting Facilities

The Oracle B2C Service Platform is deployed in many hosting facilities distributed across the globe, and it is possible for data to be stored in-country or in-region. Current locations are illustrated below. Typically, customers will be hosted in the facility nearest their home region. Customers who must comply with PCI or governmental regulations will be hosted in a facility specially configured to support these specific requirements.

Figure 2. Global Footprint

The table below lists current data center locations, highlighting the offerings available in each data center.

	LOCATION	COMMERCIAL	PCI	GOVERNMENT
AMERICAS	Phoenix	✓	✓	
	Ashburn	✓		
	US Gov		✓	✓
	DoD			✓
	Toronto	✓		
	Sao Paulo	✓		
EEA	London	✓		
	UK Gov			✓
	Amsterdam	✓		
	Frankfurt	✓		
APAC	Japan	✓		
	Australia	✓		

Infrastructure Configuration

The Oracle B2C Service Platform is centrally administered and built to be scalable and achieve fault isolation. With this in mind, components are redundant and protected by a defense-in-depth architecture. Compute instances are optimally designed for web services, database clusters and arrays for Chat, Email, Utility, and File Attachments. Every compute instance is protected by a firewall. When logically viewed as an application

offering, each virtual cloud network environment is known as a “pod” which houses multiple customers. A customer’s presence on a pod is called a customer instance. One or more pods exist in each physical data center, and each pod will have a corresponding disaster recovery – or DR – pod to which its data is replicated and which can be activated in the event of fault in the primary pod.

Oracle B2C Service can be expanded quickly to scale with the customer base and handle large surges of traffic. Pods can quickly be expanded in order to host more customers or instances as needed.

Capacity of the environment is continually monitored. New services are brought online as specific thresholds are approached. If the web pool is heavily loaded, more compute instances can be added. If a database cluster is approaching maximum connections allowed, additional database nodes and clusters can be added.

HMS

The Hosting Management System, or HMS, is the heart of the Oracle B2C Service Platform. HMS is used by Operations personnel to manage all aspects of the environment. HMS serves as the register for all instances and services in the environment. A highly-automated and customized suite of tools, HMS is responsible for instance and service provisioning, comprehensive instance and service administration, customer-controllable upgrades, and multi-tenancy management capabilities that span all data centers. As capabilities in the Oracle B2C Service Platform grow, the HMS framework allows integration of new products and features.

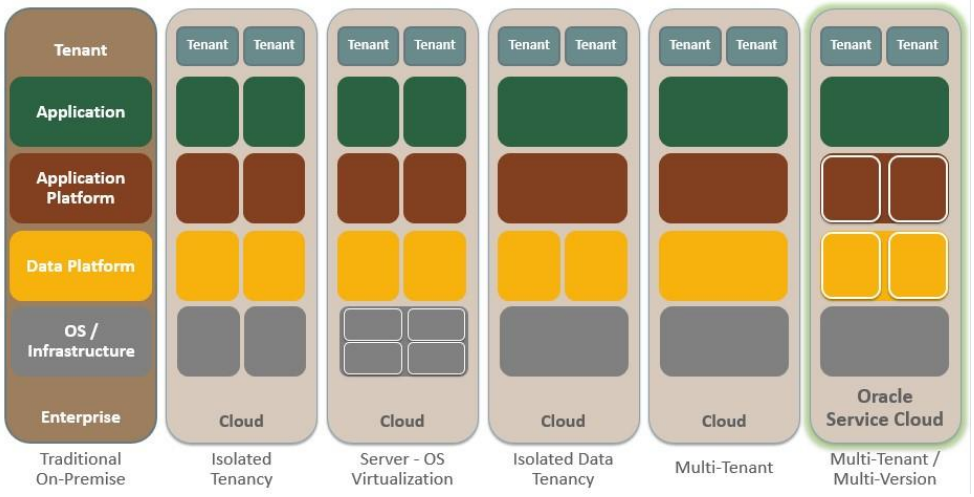
Multi-Tenancy / Multi-Version Innovation

Multiple customers exist per database cluster and each customer has their own database schema, which is isolated and secured from other customers’ data with schema-specific user accounts solely managed by the customer. Web sites are secured and isolated for each customer's configuration, look, and feel.

The Oracle B2C Service Platform is also multi-version. Customers who update to the most current software version have consistent access to the most advanced product capabilities. By standardizing on a release lifecycle of 12 months, Oracle offers a predictable upgrade path to facilitate each customer's upgrade planning. While this approach requires customers to periodically update, it still offers customers substantial flexibility and control over the timing of their updates.

The illustration below shows how multi-tenancy / multi-version architecture differs from other types of cloud implementations. With Oracle B2C Service, tenants get both application and database isolation. This isolation means customers enjoy the benefits of having their updates performed on a per-customer basis with no impact from other customers.

Figure 3. Multi-tenancy / Multi-version Architecture



Types of Clouds

The Oracle B2C Service Platform supports six distinct types of clouds, each tailored to specific needs to ensure our customers' environments are fine-tuned to deliver to their business needs.

Commercial Cloud

The Commercial Cloud is the default cloud, delivering a secured and robust environment that serves thousands of customers globally throughout our geographically dispersed data centers. It supports important environments complete with backups, redundancy, disaster recovery, and scalability.

PCI Cloud

Safeguarding credit card information and maintaining compliance with the PCI Data Security Standards (PCI DSS) is a requirement for many organizations that process, transmit, or store credit card information.

For customers with these compliance requirements or for customers who want the additional benefits of a PCI audited instance, the Oracle B2C Service Platform is assessed annually by an independent third party. B2C Service out-of-the-box is attested for compliance with PCI DSS Service Provider Level 1.

HIPAA Cloud

The Health Insurance Portability and Accountability Act (HIPAA) sets the standard for protecting sensitive health data. Oracle offers customers a solution that helps organizations that handle protected health information (PHI) meet all the privacy and security requirements under the HIPAA regulation. Implementation controls and compliance status are independently verified and documented by a third party auditor annually.

U.S. Government Cloud

Oracle offers federal agencies a hosting environment that is designed to help them align with specific government programs that meet a variety of National Institute of Standards and Technology (NIST) Special Publication 800-53 (Federal Information Systems) security controls. Primarily this environment has accreditation for the Federal Risk and Authorization Management Program (FedRAMP) Moderate Baseline. It has also received DoD Impact Level 2 authorization based on FedRAMP Moderate.

There are additional controls related to security and privacy of U.S. government data that have been assessed and documented as part of the annual independent third party audit. Beyond FedRAMP, the current programs B2C Service meets are:

- Criminal Justice Information Services (CJIS) Security Policy – Technical Controls Assessment
- Minimum Acceptable Risk Standards for Exchanges (MARS-E)
- NIST 800-171 /Defense Federal Acquisition Regulation Supplement (DFARS) 252,7012
- Federal Information Processing Standard (FIPS) Publication 140-2
- Internal Revenue Service (IRS) 1075

DoD Cloud

Oracle is a pioneer in bringing the SaaS delivery model to government agencies and has successfully served the U.S. government for well over a decade. Many public sector customers – including members of the Department of Defense – rely on the Oracle B2C Service Platform to deliver information.

Built to the original DIACAP standards, now NIST Risk Management Framework (RMF 800-37), the DoD Cloud is hosted at a government-approved data center location that has been implemented using the NIST 800-60 security categorization to follow the DoD Security Requirements Guideline (SRG) FedRAMP plus NIST 800-53 control baseline to meet DoD impact level 4. Implementation controls and compliance status are independently verified and documented by a third party.

U.K. Government Cloud

Oracle offers U.K. government customers a hosting option certified to ISO27001 and aligned with HMG Cloud Security Principles and Cyber Essentials Plus. This pod and its DR pod are located and accessed from within the United Kingdom. Implementation controls and compliance status are independently verified and documented by a third party. An annual assessment is performed by an independent third party auditor.

Comparison of Offerings

Here is a side-by-side comparison of the various Oracle B2C Service offerings:

FEATURE	COMMERCIAL	HIPAA	PCI	U.S. GOVERNMENT	U.S. DOD	U.K. GOVERNMENT
IaaS, PaaS, SaaS – Service Management	✓	✓	✓	✓	✓	✓
Disaster Recovery – Data Redundancy, Backups, Remote Hot Site	✓	✓	✓	✓	✓	✓
Logically-Isolated Customers	✓	✓	✓	✓	✓	✓
Cloud Elasticity – Scalability on Demand	✓	✓	✓	✓	✓	✓
Monitored 24x7x365	✓	✓	✓	✓	✓	✓
Full-time CISO and Dedicated Security Team	✓	✓	✓	✓	✓	✓
Cloud Portal – Operational Transparency	✓	✓	✓	✓	✓	✓
HIPAA Attestation	✓	✓	✓	✓	✓	✓
PCI DSS Service Provider Level 1 Attestation			✓	✓		
FISMA / NIST 800-53 Controls				FedRAMP + DoD IL2	DoD SRG, RMF + DoD IL4	
.mil Domain and connectivity with DoD CAP					✓	
DoD Security Clearance for Staff				✓	✓	
UK Nationals for Operational Support & Customer Care						✓
Pod Dedicated to Hosting Only Government Customers				✓	✓	✓
SOC-1 and SOC-2 Reports	✓	✓	✓	✓	✓	✓
ISO27001 Certified Data Center	✓	✓	✓	✓	✓	✓

Data Management / Data Custodians

Oracle facilitates access to customer data acting only as a data processor, claiming no ownership of customer data. As a processor, Oracle provides encrypted data access to customers to modify their data securely through the Oracle B2C Service product and B2C Service APIs. Oracle handles customer data only per the customer's instructions as reflected in the Data Processing Agreement, Security Policies and any additional instructions within the scope of services.

RELIABILITY

Availability

Availability of customer environments and data is a high priority, and B2C Service Platform's web services are configured into load-balanced clusters in the always-available OCI Regions. If a compute instance experiences a failure the remaining instances can continue to service requests. Network paths into and out of data centers are redundant and provided by multiple carriers.

Disaster Recovery

Oracle maintains a B2C Service DR Plan designed to protect customer productivity and Oracle's commitment to customer support in the event that all, or part, of its hosting operation is rendered "unusable". If a disaster is declared, each primary instance can be recovered at a disaster recovery data center. The RTO is 12 hours from the disaster declaration, and RPO is 1 hour, excluding any data loads that may be underway. Snapshots are taken every 4 hours of each customer's custom environment and placed into their DR environment.

The plan incorporates recovery strategies that address varying levels of failure and are intended to reduce risk. These strategies include:

- Backups stored encrypted at both the primary and DR facilities
- Near real-time replication of data from the primary facility to the DR facility
- 24 hour automated monitoring service
- Re-routable data transmissions
- High availability configurations
- Remote employees at all data center locations

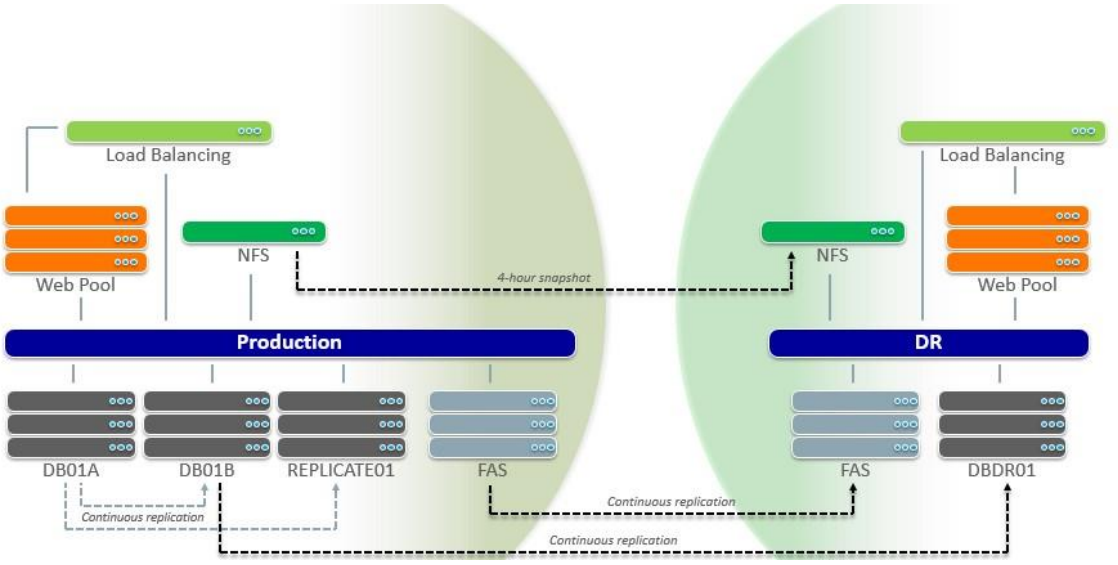
The Oracle B2C Service DR Plan is tested at least annually. Testing is carried out with the intention of minimizing impact to the production hosting environment. The results of each test, including criteria and details, are documented and reviewed by Operations and Customer Support staff.

As part of our proprietary Data Center standard, Oracle utilizes an advanced data replication system that is designed to keep customer data in sync with online disaster recovery systems in our Disaster Recovery location. Continual data replication also allows us to pull the same data from numerous servers and spread the load across the environment. The Platform is designed to write data to one database but read data from multiple copies. Long running reports can be processed on other servers to reduce impact on primary operations.

The DR system's capabilities include:

- Duplication of production data in a geographically diverse carrier class data center
- Combining continual data replication and periodic storage snapshots designed to keep customer data up-to-date
- DR pods are updated during every maintenance window with the changes applied to the production pods to keep them current and ready with the same software versions as production
- Backup schedule:
  - Every 24 hours: Full, kept offsite at DR location
  - Every 7 days: Full, kept for 1 year

Figure 4. Disaster Recovery Architecture



OPERATIONAL EXCELLENCE

Global Operation Centers

The state-of-the-art operation centers follow the sun to provide operational support 24 hours a day every day. These global centers are staffed 24x7x365 and are connected to production pods worldwide, providing up-to-the-minute visibility into components of the environment, making hand-offs between people simple and easy.

Oracle's operations teams are responsible for monitoring and ensuring stability of the pods and customer instances, managing customer events, and handling proactive communications with customers. Detection and prevention capabilities are marked by a dedicated team of database and systems administrators. Multiple individuals on the team have U.S. government clearance or are U.K. government nationals to support appropriate government instances.

Service Maintenance

Oracle is committed to providing a reliable hosting service for the Cloud Platform. Efforts to improve the value customers receive from the Platform sometimes involves system maintenance that could result in planned down-time for a customer's instance.

Scheduled maintenance can occur on any Friday evening; typically without downtime. In the rare case where a change would require downtime, this is reserved for a specific time once a month. Additionally, since Oracle assigns customers to the pod most geographically aligned for them, maintenance is performed to coincide with off hours.

Announcements for maintenance are distributed if there is a potential or expected downtime according to the following schedule. Communications indicate date, time and expected impact to customers.

- Standard maintenance: 7 days in advance
- Emergency maintenance: 24 hours in advance

Emergency maintenance is sometimes necessary to apply critical updates or security patches in order to prevent security breaches or service interruption.

The Cloud Operations team adheres to a multi-level change management process in which all changes world-wide are tracked centrally in a single system. All changes are categorized into one of six levels based on the change's expected impact and the deployment complexity where L6 is the smallest impact and complexity and L1

is the highest. The number of approvals required and visibility increases as the impact and complexity rises. L1 and L2 changes require two levels of management review as well as approval from the Change Advisory Board.

CAB APPROVAL REQUIRED	LEVEL	DESCRIPTION	WHEN DEPLOYED	EXAMPLE
✓	1	Change with elevated risk during deployment and some customer downtime	Major Window	Legacy hardware replacement
✓	2	Change with elevated risk during deployment	Major Window	Software upgrade
	3	Non-standard change with no risk to the environment	Minor Window	DR environment work
	4	Pre-confirmed non-impacting changes	Any Time	Security list update
	5	Site-level change with no customer impact	Any Time	Database balancing
	6	SaaS change made at customer's request	Any Time	Maintenance pack application

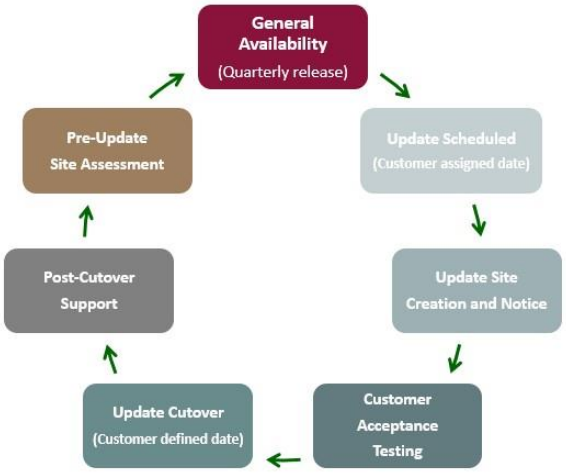
The maintenance windows are split into 3 regions. If there are approved changes for environments within a region the maintenance would occur as follows:

- AMER Pod maintenance starting at 9pm US Central (UTC -6/-5)
- EMEA Pod maintenance starting at 9pm London time (UTC +0/1)
- APAC datacenter maintenance starts at midnight Sydney time (UTC +10:00 / +11:00)

Service Updates

When innovative new features and performance improvements become available on B2C Service, Oracle wants customers to be able to take advantage of them quickly. To support that interest, an Auto Update Program is available. For the quarterly released portion of the product, customers enrolled in the Auto Update Program update automatically to the latest product release. With the Auto Update Program, an update can be completed more quickly so you can spend more of your time delivering value to your customers instead of engaging in the update process.

Figure 5. Auto Update Process Flow



SECURITY

Logical Security

The Oracle B2C Service Platform requires management authorization for employee access via HMS to any critical applications and systems, and additional approval levels are required for all Cloud Services access. Access is granted according to a user's role and business need, like Cloud Operations, Customer Care, and Engineering. Logical and physical access is promptly revoked from employees who have changed roles, reassigned or are terminated. The Oracle B2C Service environment audits system and network activities, including access, or attempted access, to customer data. This includes monitoring and auditing of systems for unauthorized or inappropriate access to customer data by Oracle employees.

Oracle employs software VPN, two-factor authentication, and encrypted protocols for systems administrators accessing the environments. Host administration is performed via either encrypted SSH or TLS, and multi-factor authentication is required for external command-line access to all systems. Oracle retains security logs for a year; with some exceptions related to regulatory requirements.

Auditing of the environments includes daily and weekly infrastructure and application scans, monthly patching and version reviews, quarterly formal access reviews that include justifying privileged access, and ethical hacking reviews both before and after GA release of new software versions. Third-party application security tests are performed for every new release, and advanced event correlation and vulnerability detection is done using a SIEM solution.

Data Security Standards

Oracle B2C Service implements various methods and practices to ensure world-class security of your data across external connections, including:

- Connections are negotiated for 256-bit encryption or stronger.
- Cipher key generation uses at least a 2,048-bit private key.
- Segregation in networks is deployed in a layered approach designed to protect customer data at the physical, data link, network, transport, and program levels.

Intrusion Detection & Anti-Virus

Oracle B2C Service utilizes Network Intrusion Detection Systems (NIDS) to protect the environment. Packet inspection is performed at the firewall layer. NIDS sensors are deployed in either Intrusion Prevention Mode or Intrusion Detection Mode on the network, to monitor and block suspicious network traffic from reaching the internal network. NIDS alerts are routed to a centralized monitoring system that is managed by the security operations teams 24x7x365. Oracle uses a SIEM solution to monitor events and respond to incidents.

For anti-virus protection, Oracle B2C Service employs industry standard anti-virus software to scan uploaded files. Virus definitions are configured to update daily. Attachments are scanned before being uploaded into the database. Infected attachments are automatically quarantined. Oracle B2C Service scans inbound email messages for viruses and spam, and any detected are quarantined. Customers have the ability to manage the email quarantine and to adjust their own spam controls.

Security Audits, Testing, and Assessments

The internal controls of Oracle B2C Service are subject to periodic testing by independent third party audit organizations. Such audits may be based on SSAE 18 (Statement on Standards for Attestation Engagements No. 18, Service Organization Controls), ISO/IEC 27000 family of standards, or other such third party auditing standards or procedures applicable to Oracle B2C Service to help manage the security of assets such as financial information, intellectual property, employee details or information entrusted to Oracle by customers. Audit reports are periodically published by Oracle's third party auditors, and customers may request a copy.

The audit reports of Oracle B2C Service, and the information they contain, are Oracle confidential information, and must be handled by customers accordingly. Such reports may be used solely by Customer to evaluate the design and operating effectiveness of defined controls applicable to Oracle B2C Service and are provided without any warranty.

As mentioned earlier, there are also environments abiding by specific regulations and standards to provide added assurance for the protection of customer data; such as, credit card data, protected health information, and classified government data. However, the customer is responsible for compliance related to their obligations as the Data Controller in its use of Oracle B2C Service.

For more information, see the Data Processing Agreement and Oracle Cloud Hosting and Delivery Policies.

Cryptographic Protection of User Passwords in Storage

Passwords are protected in storage by storing an industry-standard cryptographic hash in place of the plain-text password. Protections are also in place to ensure all hashes are unique. To discuss the specific protections in place, customers can contact their Account Executive or Client Success Manager.

Employee Screening

Beginning with recruiting and hiring, and throughout the tenure of employment, Oracle is committed to developing and retaining a dedicated and competent professional workforce. Ongoing training opportunities are provided to Oracle employees on a regular basis throughout their careers. This means that Oracle employees can stay abreast of the latest professional developments.

As further evidence of its commitment to ongoing compliance with both the law and fundamental principles of ethical conduct, Oracle employs full-time recruiting staff, as well as a highly-trained professional dedicated to EEO/AA compliance, both internally and externally.

EXTENSIBILITY

Oracle B2C Service Platform provides for many ways to extend the core product features. From a unified Agent Desktop leveraging workspace and workflow designers to extending the data model, the Platform offers the flexibility to customize the experience for the Agent and address custom business needs.

Custom Objects

Custom object and fields are enabled through a configuration-based approach to schema management. Whether it's a couple new fields or a new object, expanding Oracle B2C Service is easy to do. All additions are accessible throughout the product, including Digital Customer Service Portal, Reporting, APIs, Agent Desktop, Surveys and Marketing, as well as supported in the update process.

Once created, custom objects can be leveraged as native objects within B2C Service. They can be configured as a parent or child of other objects. Standard reports are automatically created for custom objects. By creating custom objects, organization-specific data can seamlessly integrate with B2C Service, allowing management and reporting on the data in the same way as with incident, contact, and other standard objects. Because custom object data is stored in the database, custom objects can be added to any workspace, desktop workflow, custom report, and navigation set.

Custom fields can be defined as part of standard objects too. By adding custom fields, information can be collected to best meet the organization's needs. After adding custom fields, they can used to extend business processes, integrations and/or data synchronization, by including them in workspaces and scripts, and as search filters in reports. Additionally, these modifications can be completed in real time or scheduled and performed in the background. Staff members and customers can continue working on the organization's site while the background operation is in progress.

An example where custom object and fields might be used is RMA processing. End users might initiate a product return via Digital Customer Service, and that request can be processed by an agent via the Agent Desktop with a customized workspace integrated into already familiar workflows. It would also be easy to allow end users to query status of their RMA from the Portal.

Another powerful feature enables the ability to combine data from other sources with B2C Service data, rather than duplicating, using External Objects. This is another way to integrate without the impact of data synchronization with external applications. Create real-time reports from data sources through clicks, not code.

Business Rules

Business rules allow automation of common business tasks. They link data across Oracle B2C Service, resulting in a responsive and consistent customer experience. Business rules can route incidents to the most suitable support person, notify an engineer when answers in the knowledge base should be reviewed, and automatically answer some customer questions. They can send marketing emails and surveys, escalate overlooked opportunities and set strategies based on conditions you define. Rules can also be written to update contacts and organizations, set custom fields, and assign tasks.

Besides the many advantages of keeping data accurate and current, business rules also let staff members work efficiently and consistently. Routine customer questions can be answered with predefined rules and customers enjoy an immediate response. At the same time, staff members work more productively without the distraction of repetitive tasks. As a result, agents can deliver more responsive customer service and follow-up.

A Business Rule is simply an “if-then-[else]” statement: If these conditions apply, then take this action, else (optionally) take some other action. Some examples of Business Rules might include if a customer has a billing question, then route the incident to an accounting staff member, else route it to technical support; or, if a new contact is from the East coast, then send a marketing email about the grand opening of a New York store.

Custom Process Models

Custom processes can be described as a script in a Custom Process Model (CPM) to implement specialized business logic associated with object events. CPMs are predefined triggers (aka Object Event Handlers) related to create/update/destroy events on a standard or custom object. Object event handlers take Business Rules a step further, enabling automation of several custom tasks or communicating with external systems based on the events that trigger them. For instance, an Object Event Handler can be written to create a contact in an external system whenever a contact is created in the Oracle B2C Service.

Platform Extensibility Framework

Oracle B2C Service Platform provides the core capabilities for extending the Agent Desktop with custom features and capabilities which may be important to an organization's business. The power and flexibility offered by the Framework enables developers to create custom solutions that allow company specific functionality into workspaces, dynamic information to display, and even create reports with data from external tables.

The Platform Framework also supports Digital Customer Service delivering self-service experiences through a portal framework and/or widgets that can be incorporated into an organization's web presence. End Users are automatically directed to the appropriate experience based on configuration without duplication of effort.

Customers extend the reference implementation to meet organization specific needs using the IDE of their choice. Within a single administrative console, development, staging and production environments may be managed.

ENTERPRISE INTEGRATION

Integration Frameworks

At its core, the Oracle B2C Service Platform is standards-based and not proprietary, so it can be integrated with your existing IT landscape. Whether simple or complex, integrations can be assessed, developed, and implemented by customers themselves, by Oracle Partners/Solution Integrators, by Oracle Consulting Services (OCS), or a combination of the three. Knowing how to capitalize on Oracle B2C Service's native integration capabilities, pre-built services and APIs is essential to developing a solution while reducing risk and adhering to industry best practices. If working with OCS or an Oracle Partner, customers are likely to take advantage of pre-designed and pre-built integrations to other Oracle applications because OCS works closely with Oracle Product Development to bring new packaged integration solutions in areas like quoting, sales planning, data quality, marketing automation, ERP, and compensation management, but customers are also enabled to develop and manage integrations independently.

Open Standard APIs

The ability to integrate with other applications is one of the important benefits of the Oracle B2C Service Platform. The Platform provides a robust set of backwards-compatible open standards-based public APIs to build integrations on both the server side and the client side. Connect REST API allows customers and partners to integrate with the Oracle B2C Service Platform using representational state transfer (REST) web services. Similarly, Connect Web Services for SOAP provides for integration with Oracle B2C Service using the latest SOAP and WSDL specifications. Both SOAP and REST APIs utilize the Common Object Model, providing a unified developer experience and accessibility to customer's data stored in the Platform's extensible schema. In addition, a SQL like query subsystem – ROQL (RightNow Object Query Language) – also available through these services, allows developers to extract data from Oracle B2C Service's database using simple queries.

It is with these standard APIs that B2C Service provides additional integrations with sample code that can be implemented with a few extra clicks. Examples include:

- Standardized questionnaires and interactive policy/process driven content can be delivered by building Intelligent Advisor into the solution.
- Create opportunities and sales leads in Oracle CX Sales directly from incidents in B2C Service for contacts with the Sales Accelerator.
- An out-of-the-box bi-directional integration between Oracle B2C Service and Oracle Customer Data Management (CDM) Cloud to quickly leverage the data cleansing and enrichment capabilities of CDM. When any insert or update event occurs on an organization or contact, B2C Service shares those details with CDM Cloud asynchronously. The received data is then subjected to rules and algorithms (either manually or automatically or both) to detect potential duplicates.

Cross-Channel Integrations

Oracle B2C Service recognizes the value of integrating with various channels used by end users and gives companies the ability to communicate with those end users regardless of the particular channel. We do this by providing numerous integration capabilities directly out of the box as well as through 'Accelerators'.

An Accelerator provides step by step guidance using design patterns and sample code to enable rapid deployment of typical integration scenarios. Learn the rationale for suggested approaches and reasons for alternative choices in the associated Accelerator documentation. The sample code and configuration setup demonstrates how to leverage platform capabilities to meet unique integration needs.

Some examples of integrations include:

Support for Omnichannel customer and agent experiences through a set of consistent routing and service rules deployable across all modern digital channels. These are built into a unified agent desktop that provides

automated workflow and access to knowledge sources for consistent treatment across all consumer engagements. All interactions and tool usage history are stored with agents' notes into a universal customer experience record. Agent staffing across channels can be predicted and re-staffing can occur more quickly, improving service levels. deliver a superior problem identification and resolution experience.

Oracle Co-browse capability is a powerful online collaboration tool that enables agents to see what the end users/consumers see. By creating an instant screen sharing experience without the installation required by other co-browsing products, companies further improve the experiences of their customers.

Telephony and messaging can also be facilitated with an available integration with Twilio. The sample code provided as an Accelerator enables many typical inbound and outbound calling features, such as notifications and IVR management as well as incident assignment through SMS messages.

Control over proactive and reactive chats while end users/consumers are navigating a company's website can be accomplished by defining rules in Engagement Engine.

More information on integration capabilities and other integration capabilities can be found in the Technical Documentation and Sample Code Knowledge Article.

Identity Management Integration

As Cloud-based computing becomes more prevalent and relied upon, and as the number of integration points expands for a typical customer, single sign-on becomes more necessary for the efficiency of a business. The Oracle B2C Service Platform offers both Single Sign-On (SSO) as well as Single Log-Out (SLO) between Oracle B2C Service applications and any external applications.

When SSO is configured, a user can navigate from one application to any other application in the ecosystem. The Agent Desktop can become a unified gateway to other applications.

The Oracle B2C Service supports integration with Service Providers existing within the Cloud as well as those external to the Oracle Cloud, including those residing in other Clouds. This integration supports industry-standard key protocols, such as, SAML, OAUTH, and OpenID, for increased compatibility and, therefore, easier adoption. Setup is quick and easy, requiring just an exchange of metadata between the external Service Provider and the Oracle B2C Service as the Identity Provider (IdP), and some configuration settings to be made by the customer administrator.

In addition to SSO integration, using federated authentication with the Oracle B2C Service Platform also allows for coordinated log out, providing improved security, enhanced usability, and easy implementation. Logging out of an Oracle B2C Service session (IdP-initiated) can automatically terminate other sessions that were initiated by Oracle B2C Service. Logout setup with external SPs is similar to and just as easy as setting up SSO.

Oracle B2C Service can also act as a Service Provider (SP), relying on a different application acting as the IdP. Simply stated, customers can continue to use their existing Identity Management system and access Oracle B2C Service with the same set of credentials.

CONCLUSION

The Oracle B2C Service Platform gives organizations a dynamic, best-in-class tool set for creating a great customer experience. The Platform is purposely built for exceptional customer experiences. From the well-designed global architecture, to the reliability and security controls, to the enterprise integration, extensibility, and operational maturity, the Oracle B2C Service Platform provides organizations with the value they desire and the service their customers deserve.

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