

Service Description

IBM Master Data Management on Cloud Managed Service

This Service Description describes the Cloud Service. The applicable order documents provide pricing and additional details about Client's order.

1. Cloud Service

IBM Master Data Management ("MDM") on Cloud Managed service ("Cloud Service") manages master data for single or multiple domains – Clients, suppliers, locations, products, services offerings, accounts and more – for improving application and business process effectiveness. IBM manages the infrastructure (network, storage and compute resources), applies fixes to the application and maintains the IBM software, infrastructure and applicable security and privacy controls.

Several key features include:

- a. A services-oriented architecture delivers functionality through intelligent, pre-packaged web services that can be used to integrate MDM into existing business processes and technical architectures.
- b. Interfaces to the Cloud Service include HTTPS (for application access via REST APIs), Web Services, JMS over HTTPS (for on-premises application to Cloud IIS/MDM integration) and a secure file transport service for loading data into MDM.
- c. The ability for Clients to deploy Client customized MDM and IS solutions and Extensions within the Cloud environment through a support ticket process.
- d. Client's choice of integration method to Cloud Service to consume these services via an Application Programming Interface ("API"); Web Services or JMS.
- e. Full auditing capabilities to record who requested access to what data and when.
- f. Business process management capabilities enable Client to implement policies and coordinate multi-step / multi-role workflows for data stewardship and data governance.
- g. Stewardship Center allows business users, data stewards, and IT teams to collaboratively improve master data quality by resolving possible duplicate master data records and creating master data in compliance with corporate governance policies.
- h. Matching and search engine employs advanced statistical techniques to automatically resolve and manage data quality issues via probabilistic or deterministic options.
- i. The Cloud Service is provisioned in select data centers in a VLAN based single-tenant environment.
- j. IBM will provide application log files upon request through the support ticketing interface.
- k. IBM will provide a Secure File Transport service in order to facilitate file transfers for loading and/or extracting data from MDM or Information Server.

1.1 Offerings

The Client may select from the following available offerings

Each Cloud Service configuration represents the capacity to process certain amounts of data volume and user operations in the specified time period as described below. The capacity descriptions are intended to be guidelines to help a Client select an appropriate configuration for intended workloads. Actual results may vary based on Client workload specifics.

The details and specifications of the below offerings are available in the MDM on Cloud Managed User Guide found here <https://www-01.ibm.com/support/entdocview.wss?uid=ibm10880279> these configurations may undergo revision from time to time. The welcome letter shared with the Client provides the exact configuration of the offering purchased.

1.1.1 IBM Master Data Management on Cloud Managed Small

- Rated for a scale of approximately 5 million party individual records and 35 Transactions Per Second ("TPS") in steady state usage.
- Provides 2TB of Object Storage.
- High availability configuration

- Deployed on virtual machines inside the IBM Cloud environment.
- Seven (7) day Recovery Time Objective and (1) day / 24 hours Recovery Point Objective

1.1.2 IBM Master Data Management on Cloud Managed Medium

- Rated for a scale of approximately 30 million party individual records and 100 TPS in steady state usage.
- Provides 5TB of Object Storage.
- High availability configuration
- Deployed on virtual machines inside the IBM Cloud environment. Seven (7) day Recovery Time Objective and (1) day / 24 hours Recovery Point Objective.

1.1.3 IBM Master Data Management on Cloud Managed Large

- Rated for a scale of approximately 50 million party individual records and 250 TPS in steady state usage.
- Provides 10TB of Object Storage.
- High availability configuration
- Deployed on bare metal servers inside the IBM Cloud environment.
- Seven (7) day Recovery Time Objective and (1) day / 24 hours Recovery Point Objective

1.1.4 IBM Master Data Management on Cloud Managed Extra Extra Large ("XXL")

- Rated for a scale of approximately 250 million party individual records and 1000 TPS in steady state usage.
- Provides 30TB of Object Storage for backups.
- Deployed on bare metal servers inside the IBM Cloud environment.
- High availability configuration
- Seven (7) day Recovery Time Objective and (1) day / 24 hours Recovery Point Objective

1.1.5 IBM Master Data Management on Cloud Managed Dev/Test Small

Provisioned on virtual machines inside the IBM Cloud environment, this Cloud Service provides an environment where Clients can develop and test MDM customizations and/or extensions to meet business requirements. The Cloud Service includes two (2) MDM developers' machines, WebSphere Application Server ("WAS"), Db2, and Rational Application Developer ("RAD") with MDM Workbench.

- One IBM Infosphere Information Server ("IIS) virtual machine
- One IBM Business Process Manager ("BPM") Process Center & Process Server on one virtual machine
- Two Windows client machines with MDM Workbench, BPM Designer and IIS Client installed.

1.1.6 IBM Master Data Management on Cloud Managed Dev/Test Medium

Provisioned on virtual machines inside the IBM Cloud environment, this Cloud Service provides an environment where Clients can develop and test customizations and/or extensions to meet business requirements. The medium offering includes all the same architecture/servers as the small with the addition of one (1) larger size MDM development machine and three (3) additional Windows client machines. For a detailed specification, see the MDM on Cloud Managed User Guide.

1.2 Optional Services

1.2.1 IBM Master Data Management on Cloud Managed Disaster Recovery Small

This Cloud Service may be added to the IBM Master Data Management on Cloud Small Configuration. The purchase of this add-on provides an improvement to recovery objectives for business continuation with four (4) hours Recovery Time Objective and one (1) hour Recovery Point Objective. This Cloud Service also adds 2 additional MDM application servers and 2 additional Identity Manager ("IdM") servers and moves the second Db2, BPM and IIS HA servers over to a secondary DR data center, creating an integrated HADR solution. An Annual validated business continuity and disaster recovery test is included. Additional frequency testing and validation greater than on an annual basis can be performed under a separate Statement of Work for an additional charge.

1.2.2 IBM Master Data Management on Cloud Managed Disaster Recovery Medium

This Cloud Service may be added to the IBM Master Data Management on Cloud Medium Configuration. The purchase of this add-on provides an improvement to recovery objectives for business continuation with four (4) hours Recovery Time Objective and one (1) hour Recovery Point Objective. This Cloud Service also adds 2 additional MDM application servers and 2 additional IdM servers and moves the second Db2, BPM and IIS HA servers over to a secondary DR data center, creating an integrated HADR solution. An Annual validated business continuity and disaster recovery test is included. Additional frequency testing and validation greater than on an annual basis can be performed under a separate Statement of Work for an additional charge.

1.2.3 IBM Master Data Management on Cloud Managed Disaster Recovery Large

This Cloud Service may be added to the IBM Master Data Management on Cloud Large Configuration. The purchase of this add-on provides an improvement to recovery objectives for business continuation with four (4) hours Recovery Time Objective and one (1) hour Recovery Point Objective. This Cloud Service also adds 2 additional MDM application servers and 2 additional IdM servers and moves the second Db2, BPM and IIS HA servers over to a secondary DR data center, creating an integrated HADR solution. An Annual validated business continuity and disaster recovery test is included. Additional frequency testing and validation greater than on an annual basis can be performed under a separate Statement of Work for an additional charge.

1.2.4 IBM Master Data Management on Cloud Managed Disaster Recovery Extra Extra Large ("XXL")

This Cloud Service may be added to the IBM MDM on Cloud XXL Configuration. The purchase of this add-on service provides an improvement to recovery objectives for business continuation with a near real time Recovery Time Objective and fifteen (15) minute Recovery Point Objective. The addition of this Cloud Service provisions an identical XXL cloud service environment in a secondary (different from the primary) data center providing an integrated HADR solution and automated failover in the event of a disaster. An Annual validated business continuity and disaster recovery test is included. Additional frequency testing and validation greater than on an annual basis can be performed under a separate Statement of Work for an additional charge.

1.2.5 IBM Master Data Management on Cloud Continuous Availability Extra Extra Large ("XXL")

This Cloud Service may be added to the IBM MDM on Cloud XXL Configuration. The purchase of this add-on service enhances the primary XXL cloud service availability from 99.9% to 99.99%. This is accomplished by provisioning a second identical XXL service within the same data center. This deployment allows for continuous operations of MDM by providing an MDM & Db2 replicated environment with automated failover between the Cloud Services. Per environment entitlement, this service also removes the need to schedule downtime for maintenance and/or updates.

1.2.6 IBM Master Data Management on Cloud Premium Performance Management Service

This Cloud Service may be added to the IBM MDM on Cloud XXL Configuration. The purchase of this premium add-on provides our Enterprise Clients the ability to capture and analyze additional performance management metrics beyond what is offered in the base Cloud Service. For this service, IBM will enable the MDM Service Activity Monitoring ("SAM") logging service. This service captures real time MDM internal services response times and performance metrics. On an hourly interval, IBM will generate summary reports from the SAM logs and analyze the results using automated log analysis tooling to determine if mutually agreed upon performance thresholds and objectives are met. In the event that the threshold are exceeded, alerts can be configured and generated to the IBM Cloud Operations and Support team for investigation and possible remediation activities. If remediation activities require investigation/changes to Client's application and/or data, IBM will work with the Client collaboratively to determine issues impacting the performance results. Client would then be responsible for any identified changes to their MDM application customizations or data. As part of this service, copies of the hourly summary SAM reports can also be provided to the Client.

1.2.7 IBM Master Data Management on Cloud Managed Add-on MDM Server Small

This Cloud Service may be added to the IBM Master Data Management Managed Small Service. The purchase of this add-on provides an additional set of MDM, Db2 and BPM servers in the same provisioned virtual machine as the managed small environment.

1.2.8 IBM Master Data Management on Cloud Managed Add-on MDM Server Medium

This Cloud Service may be added to the IBM Master Data Management Managed Medium Service. The purchase of this add-on provides additional MDM, Db2 and BPM servers in the same provisioned virtual machine as the managed medium environment.

1.2.9 IBM Master Data Management on Cloud Managed Add-on MDM Server Large

This Cloud Service may be added to the IBM Master Data Management Managed Large Service. The purchase of this add-on provides additional MDM, Db2 and BPM servers in the same provisioned bare metal machine as the managed large environment.

1.2.10 IBM Master Data Management on Cloud Managed Add-on MDM Server Extra Extra Large

This Cloud Service may be added to the IBM Master Data Management Managed XXL Service. The purchase of this add-on provides additional MDM, Db2 and BPM servers in the same provisioned bare metal machine as the managed XXL environment.

1.2.11 IBM Master Data Management on Cloud Managed Add-on Storage for Virtual Machines

This Cloud Service provides 1TB additional storage per Small or Medium environment. Based on Client direction, the total additional storage purchased may be distributed across the following components MDM Db2, MDM app server, BPM Db2, IIS Db2, IIS Working Storage and SFTP share. Limits may apply to the total amount of additional storage that can be applied to any one specific component.

1.2.12 IBM Master Data Management on Cloud Managed Add-on Storage for Bare Metal Machines

This Cloud Service provides 1TB additional storage per Large or XXL environment. Based on Client direction, the total additional storage purchased may be distributed across the following components MDM Db2, MDM app server, BPM Db2, IIS Db2, IIS Working Storage and SFTP share. Limits may apply to the total amount of additional storage that can be applied to any one specific component.

1.2.13 IBM Master Data Management on Cloud Managed Add-on Daily Backup Service for Dev/Test

This add-on Cloud Service provides the backup service for dev/test environments.

1.3 Acceleration Services

1.3.1 IBM Master Data Management on Cloud Managed Jump Start

This service provides up to 50 hours of remote consulting time for startup activities including:

- a. assistance with use cases;
- b. coaching on proven practices for reports, dashboards and other systems tooling;
- c. guided assistance and advice on preparation, execution and validation for initial data loading; and
- d. other administrative and configuration topics of interest (collectively, "startup activities").

This remotely delivered service is purchased per Engagement, and expires 90 days from the date of purchase of entitlement, as specified in Client's Proof of Entitlement, regardless of whether all hours have been used.

1.3.2 IBM Master Data Management on Cloud Managed Accelerator

This service provides up to 50 hours of remote consulting time to be used for performing activities including:

- a. assistance with use cases, including data movement use cases in support of a one-time, point in time, data movement;
- b. coaching on proven practices for reports, dashboards and other systems tooling;
- c. guided assistance and advice on preparation, execution and validation for initial data loading (including set-up of source and target environments and data movement as defined in data movement use case); and
- d. other administrative and configuration topics of interest (collectively, "Activities").

This remotely delivered service is purchased per Engagement and expires 12 months from the date of purchase of entitlement or on the last day of the initial Cloud Service subscription term, whichever is earliest, regardless of whether all hours have been used. Additional consulting hours may be purchased separately under an additional services agreement.

2. Data Processing and Protection Data Sheets

IBM's Data Processing Addendum at <http://ibm.com/dpa> (DPA) and the Data Processing and Protection Data Sheet(s) (referred to as data sheet(s) or DPA Exhibit(s)) in the links below provide additional data protection information for the Cloud Services and its options regarding the types of Content that may be processed, the processing activities involved, the data protection features, and specifics on retention and return of Content. The DPA applies to personal data contained in Content, if and to the extent i) the European General Data Protection Regulation (EU/2016/679) (GDPR); or ii) other data protection laws identified at <http://ibm.com/dpa/dpl> apply.

<https://www.ibm.com/software/reports/compatibility/clarity-reports/report/html/softwareReqsForProduct?deliverableId=3FC503E0646911E89B7C7F20C63AA31F>

3. Service Levels and Technical Support

3.1 Service Level Agreement

IBM provides the Client with the following availability service level agreement (SLA). IBM will apply the highest applicable compensation based on the cumulative availability of the Cloud Service as shown in the table below. The availability percentage is calculated as the total number of minutes in a contracted month, minus the total number of minutes of Service Down in the contracted month, divided by the total number of minutes in the contracted month. The Service Down definition, the claim process and how to contact IBM regarding service availability issues are in IBM's Cloud Service support handbook at https://www.ibm.com/software/support/saas_support_overview.html.

Availability	Credit (% of monthly subscription fee*)
Less than 99.9%	2%
Less than 99.0%	5%
Less than 95.0%	10%

The following SLA applies when Client has obtained entitlements to IBM Master Data Management on Cloud Continuous Availability Extra Extra Large.

With Continuous Availability Add-on	Credit (% of monthly subscription fee*)
Less than 99.99%	5%
Less than 99%	10%
Less than 95.0%	20%

* The subscription fee is the contracted price for the month which is subject to the claim.

3.2 Technical Support

Technical support for the Cloud Service, including support contact details, severity levels, support hours of availability, response times, and other support information and processes, is found by selecting the Cloud Service in the IBM support guide available at <https://www.ibm.com/support/home/pages/support-guide/>.

4. Charges

4.1 Charge Metrics

The charge metric(s) for the Cloud Service are specified in the Transaction Document.

The following charge metrics apply to this Cloud Service:

- Instance is each access to a specific configuration of the Cloud Services.
- Engagement is a professional or training service related to the Cloud Services.
- Terabyte (TB) is 2 to the 40th power bytes of data processed by, analyzed, used, stored, or configured in the Cloud Services.

5. Additional Terms

For Cloud Service Agreements (or equivalent base cloud agreements) executed prior to January 1, 2019, the terms available at <https://www.ibm.com/acs> apply.

5.1 Cloud Service Environment Updates

Maintenance

- Cloud Service Major and Minor updates and/or patches will be evaluated for installation within a monthly maintenance window. Two weeks prior to the maintenance window, IBM will publish the list of Major and Minor updates being applied along with a brief description of the updates. During the maintenance window, the Cloud service may be unavailable. If required, IBM will notify the Client that the Cloud Services will not be available during the maintenance window. Where possible, IBM will minimize Service disruptions for maintenance activities, with a monthly downtime goal to not exceed four (4) hours. For environments with entitlement to the IBM Master Data Management on Cloud Continuous Availability XXL, the monthly maintenance will occur in the secondary environment and a maintenance downtime window is not applicable.
- Client is responsible for testing and compatibility of all Client Extensions and Client specific use of the Cloud Service with proposed updates.
- Client may provide a request to delay Major and Minor updates once notified. IBM will use commercially reasonable efforts to coordinate the implementation of the update with the Client. Requests for Major update delays must be provided within 30 days of original notification and requests for Minor update delays must be provided within 7 days of original notification. Client acknowledges and agrees that IBM will deploy Major updates within 6 months of the original notification and will deploy Minor updates within 45 days of notification. In the event of Client's failure to allow an IBM-initiated update to be promoted into the Cloud Service, additional monthly charges could occur.

Emergency Maintenance

In addition to Major and Minor updates, IBM may determine that an emergency environment update is required to address significant vulnerabilities or regulatory requirements and cannot wait for a scheduled maintenance window. In this situation, IBM may update the environment at any point in time with no advance notice to the Client.

5.2 LDAP Directory

A standalone Identity Management ("IdM") LDAP configuration is provisioned as part of this Cloud Service. Additionally, IBM provides the ability to leverage IdM's native capability to synchronize the Cloud based LDAP service with Clients' on-premises Active Directory("AD").

The following on-premises AD synchronization approach can be implemented on request, after provisioning has been completed and the environment has been turned over to Client:

- a. Support for synchronization of specified user credentials and attributes stored in one of the Clients' on-premises AD domain(s) with credentials and attributes stored in the Cloud Service IdM domain.
- b. Support for Security Assertion Markup Language ("SAML") authentication from the Clients' on-premises AD via Active Directory Federation Services ("ADFS").
- c. Support for Identity Provider ("IdP") authentication where the user is first authenticated with the Clients' on-premises AD domain via ADFS for SAML authentication to the Cloud Service IdM domain.
- d. Support for Service Provider ("SP") initiated logins where the user identity is requested by the Cloud Service IdM domain for SAML authentication.

5.3 Monitoring

For all environments, the following proactive monitoring will be performed as part of the Cloud Service:

- a. The health of the MDM software services and Db2 integrity issues.
- b. Failures and alerts on the infrastructure, OS.

For environments not designated as dev/test, IBM will proactively monitor middleware components that are part of the Cloud Service.

Clients are responsible for monitoring and remediating issues within their application customizations and / or their data.

5.4 WebSphere Message Queue ("MQ")

Upon request, IBM will enable connectivity to the WebSphere MQ client in the managed service environment.

5.5 Backup and Restore

For environments not designated as dev/test, or when Clients have obtained entitlements to IBM Master Data Management Add-on Daily Backup Service for Dev/Test, routine scheduled file system backups (recommended files) and periodic (daily / weekly) data base backups are provided. Periodically, backup files will be archived to IBM Cloud Object Storage and retained for up to 28 days. Client will be able to perform 2 backup restores per month. Additional restores or increased system backup frequency greater than on a daily basis can be performed under a separate Statement of Work for an additional charge. Snapshot Backup is not provided.

5.6 Virtual Private Network (VPN)

Client may select to utilize a software VPN connection for securely connecting to the Cloud Service.

- a. Configuration of one (1) VPN endpoint (gateway) is provided as part of this Cloud Service. Additional endpoints may be quoted separately and can be added through an additional services agreement.
- b. The IBM Cloud Integrated Analytics VPN Connectivity service uses Site-to-Site IPsec VPN technology.

5.7 Use Restrictions and Limitations

The Cloud Service is limited regarding LDAP, MDM, BPM and Information Server programmatic and client user interfaces as follows:

- a. User Interface functionality is limited to HTTPS access to LDAP, Information Server, MDM and BPM user functionality.
- b. For environments not designated as dev/test, IBM is not providing access or interfaces to any of the MDM, BPM and Information Server development tooling as part of this Cloud Service. IBM will provide Clients with the ability to deploy MDM, BPM and Information Server customizations, including development artifacts, into the managed environment through the support ticketing service.
- c. For environments not designated as dev/test, IBM is not providing direct access to the individual servers, OS level, or application admin consoles for MDM, WebSphere Application Server, BPM, Information Server, LDAP or Db2.
- d. Inbound and outbound JMS interfaces access is limited to running over an HTTPS protocol for both MDM and Information Server. Support for other protocols, interfaces or connectors can be evaluated but will require an additional services agreement.
- e. MDM Web Services interfaces are limited to running over an HTTPS protocol.

5.7.1 Business Process Manager

The Cloud Service includes IBM Business Process Manager functionality. Use of IBM Process Server and IBM Process Center is limited to Master Data Governance and Stewardship Processes only. A Master Data Governance and Stewardship Process may only pass these master data quality decisions to other systems for the purpose of master data synchronization.

5.7.2 Information Server

The Cloud Service includes the functionality of IBM Information Server. Use of Information Server in the Cloud Service is limited to supporting Master Data Management processes and Master Data Management related data. Additionally, Information Server services provided are limited in use to Data Stage, Information Governance Catalog and Quality Stage functionality.

5.7.3 Rational Application Developer

The Cloud Service environment designated as dev/test includes the functionality of Rational Application Developer. Its use is limited to MDM Workbench and customizing runtimes included in the Cloud Service.

5.8 Disaster Recovery

In the event of an IBM declared Disaster, IBM will communicate with Client on an hourly basis as to the status of the recovery process, including progress regarding the RTO and RPO.

IBM will provide a projected RTO and RPO, based on existing subscription, to perform recovery activities for Client's Cloud Service Environment.

5.9 Client Obligations

- a. Client will provide a single technical point of contact knowledgeable in the client enterprise network, VPN and security requirements.
- b. Client will complete the Virtual Private Network ("VPN") questionnaire and return it to IBM for review no later than 60 days from the date the order is placed ("Order Date"). If Client has not provided IBM with the required VPN questionnaire within 60 days of the Order Date, IBM will continue to engage Client to obtain the VPN questionnaire information. Once the VPN questionnaire has been completed and provided to IBM, IBM will notify Client with provisioning details upon completion of the environment VPN configuration, which may take several days.
- c. Client will ensure that a security and network administrator is/are available during the configuration and validation phase of the VPN configuration to work with IBM to complete VPN setup.
- d. Client is responsible for all administration, maintenance, modification, configuration and testing of hardware and software at the Client site used for the VPN.
- e. Client is responsible for user acceptance testing to validate the VPN configuration during implementation.
- f. Client will notify via the online problem reporting system of any changes required to VPN configuration.
- g. Client is responsible for the definition, setup and maintenance of all LDAP users and groups as they relate to any MDM application solutions deployed by the Client.

5.10 Extensions

Extensions permit the Client to configure the Cloud Service to meet Client's business requirements by creating software extensions to the Cloud Service application. Extensions are content provided in the use of the Cloud Service and are not part of the Cloud Service. Client is responsible for the development, management, maintenance and support of all Extensions. Client may contract separately with IBM or a third party contractor specifically authorized in writing by IBM to create Extensions. Client is responsible for ensuring that any such third party contractor complies with these terms.

- a. Client-created Extensions are subject to the following additional terms and conditions:
 - (1) IBM will have the right to review and approve or reject the design documents, testing plans, test results and object code for Extensions for compliance with the terms of the Agreement.
 - (2) IBM may require Client to perform performance tests specified by IBM. Client shall provide such design documents, testing plans and results, and object code to IBM for review a reasonable time in advance of the Cloud Service going live and shall co-operate with IBM in resolving issues identified by IBM.
 - (3) Client agrees to have in place and maintain a program to prevent malware, including viruses, Trojan horses, denial-of-service and other disruptive and covert technologies from being included in the Extensions.
 - (4) IBM may monitor and scan Extensions for security vulnerabilities and/or malware. IBM may remove the Extensions from any Cloud Service environment or suspend the Cloud Service until the security vulnerability or malware issue is resolved.
 - (5) Extensions will not include or add any third party commercial or packaged software product that operates independently of the Cloud Service, and the addition of any such third party commercial or packaged software is prohibited.
 - (6) Client is responsible to train and maintain staff with an appropriate knowledge and skill level to work with the Cloud Service and Extensions during the term of the subscription. Any training or educational assistance that is required is at the Client's expense. Should it be determined by IBM that the Client is not able to perform its required tasks with reasonable assistance,

IBM, at its sole discretion, may require that Client engage in hands-on knowledge transfer activities with IBM professional services personnel. Such knowledge transfer activities shall be, unless between IBM and its affiliates, at the Client's expense. IBM will provide such training to Client upon Client's request for an additional charge.

- (7) Client, or their licensors retain all right, title, and interest or license in and to the Extensions provided to IBM for hosting with the Cloud Service. Client represents and warrants to IBM that Client has all rights necessary to provide the Client Extensions to IBM for the purpose of hosting with the Cloud Service and that neither the Client Extensions nor the hosting by IBM with the Cloud Service violate any third party patent or copyright.
- (8) Client grants to IBM, on a world-wide, royalty-free, fully-paid, revocable, sub-licensable basis, all rights and licenses to, and agrees to promptly obtain and keep in effect Required Consents for all Extensions, necessary for IBM and its subcontractors to host the Extensions and otherwise perform its obligations. Upon request, Client will provide to IBM evidence of any such rights, licenses, or Required Consents. IBM will be relieved of its obligations to the extent that they are affected by Client's failure to promptly obtain and provide to IBM any such rights, licenses, or Required Consents. In this paragraph, "Required Consents" means any consents, licenses or approvals required to give IBM and its subcontractors the right or license to access, use and/or modify in electronic form and in other forms solely as necessary to perform under this Service Description, including making derivative works, the Extensions, without infringing the ownership or intellectual property rights of the providers, licensors, or owners of such Extensions.
- (9) Client will ensure code, data and other artifacts introduced by Client through the Extensions, do not increase the security risk, or require additional certification requirements unless expressly agreed to by IBM through an amendment or addendum to this Service Description. Without limiting any of the foregoing, Client will: (a) perform web application and static code vulnerability scans on all Extensions to identify any security exposures; and (b) disclose to IBM in writing the existence of any exposures that were identified by a vulnerability scan that are included in or is provided in connection with the Extensions.

- b. Client is responsible for testing Extensions in all environments.

Any additional work to be performed by IBM in support of Extensions, such as creation of Extensions or activation of other integrated components, may be described in a separate statement of work between IBM and Client, and will be subject to separate fees invoiced in accordance with the terms and fees contained in such a statement of work.

5.11 Dev/Test Environment Restrictions

If the Cloud Service is designated as dev/test, the Client may only use the environment for non-production development activities, quality assurance, integration testing, fault diagnosis, internal benchmarking, and/or staging activities. In addition to IBM administrative system access, additional administrative access can be granted to Client to designated authorized users as mutually agreed upon between the Client and IBM.

IBM will treat dev/test environment availability issues as Severity 3 support cases and resolve the issue(s) by way of restoring to the last known working backup and/or reinstalling all affected software.

5.12 Performance Testing

Client accepts that the Cloud Service is modified by Extensions and integrates with third party services and Client's other applications. As a result, performance and response times cannot be guaranteed by and are not the sole responsibility of IBM. Client is responsible for performing any and all performance tests before and after activation of the Cloud Service Environment for use by the Client for normal business activities and/or use by the Client in servicing, in anyway, their customers and/or use by the Client in support of revenue generation. IBM will provide reasonable assistance to Client in the resolution of any performance as part of support services.

5.13 Definitions

- a. **Extensions** – are the software artifacts and configuration provided by the Client, or their authorized third party, to extend the Cloud Service by implementing the Client's business process flow, manage specific data needs, and provide Client specific integration processing, in support of the Client's

business requirements. This can be, but not limited to, software code, database extensions, scripts or files created to customize Client's utilization of the Cloud Service, including integrations to third party services or data sources. Extensions are the responsibility of the Client.

- b. **Major** – is defined as a maintenance update that IBM reasonably determines does require Client Extension and/or data remediation in order to insure compatibility. Examples might include major operating system or MDM/BPM/IS/IS version upgrades.
- c. **Minor** – is defined as a maintenance update that IBM reasonably determines does not require Client Extension and/or data remediation in order to insure compatibility. Examples might include minor operating system or MDM/BPM/IS/IS product patches.
- d. **Recovery Point Objective ("RPO")** – is the maximum tolerable period in which data might be lost from an IT service due to a Disaster.
- e. **Recovery Time Objective ("RTO")** – is the targeted duration of time, and a service level, within which a business process must be restored after a Disaster is declared in order to avoid unacceptable consequences associated with a break in business continuity.