



IBM Terms of Use – SaaS Specific Offering Terms

IBM BigInsights on Cloud

The Terms of Use (“ToU”) is composed of this IBM Terms of Use - SaaS Specific Offering Terms (“SaaS Specific Offering Terms”) and a document entitled IBM Terms of Use - General Terms (“General Terms”) available at the following URL: www.ibm.com/software/sla/sladb.nsf/sla/tou-gen-terms/.

In the event of a conflict, the SaaS Specific Offering Terms prevail over the General Terms. By ordering, accessing or using the IBM SaaS, Client agrees to the ToU.

The ToU is governed by the IBM International Passport Advantage Agreement, the IBM International Passport Advantage Express Agreement, or the IBM International Agreement for Selected IBM SaaS Offerings, as applicable (“Agreement”) and together with the ToU make the complete agreement.

1. IBM SaaS

The following IBM SaaS offerings are covered by these SaaS Specific Offering Terms:

- IBM BigInsights on Cloud Small Data Node with IBM Open Platform (IOP)
- IBM BigInsights on Cloud Medium Data Node with IOP
- IBM BigInsights on Cloud Large Data Node with IOP
- IBM BigInsights on Cloud Small Management Node with IOP
- IBM BigInsights on Cloud Medium Management Node with IOP
- IBM BigInsights on Cloud Large Management Node with IOP
- IBM BigInsights on Cloud Analyst Module
- IBM BigInsights on Cloud Data Scientist Module

IBM Bluemix, IBM’s open standards cloud platform for building, running, and managing apps and services, is a technical pre-requisite for the IBM SaaS. New users can register for access via the online registration form: <https://console.ng.bluemix.net/registration>.

2. Charge Metrics

The IBM SaaS is sold under the following charge metric(s) as specified in the Transaction Document:

- a. Instance is a unit of measure by which the IBM SaaS can be obtained. An Instance is access to a specific configuration of the IBM SaaS. Sufficient entitlements must be obtained for each Instance of the IBM SaaS made available to access and use during the measurement period specified in Client’s Proof of Entitlement (PoE) or Transaction Document.

3. Charges and Billing

The amount payable for the IBM SaaS is specified in a Transaction Document.

3.1 Partial Month Charges

A partial month charge as specified in the Transaction Document may be assessed on a pro-rated basis.

4. IBM SaaS Subscription Period Renewal Options

Client’s PoE will set forth whether the IBM SaaS will renew at the end of the Subscription Period, by designating one of the following:

4.1 Automatic Renewal

If Client’s PoE states that Client’s renewal is automatic, Client may terminate the expiring IBM SaaS Subscription Period by written request to Client’s IBM sales representative or IBM Business Partner, at least ninety (90) days prior to the expiration date as set forth in the PoE. If IBM or its IBM Business Partner does not receive such termination notice by the expiration date, the expiring Subscription Period will be automatically renewed for either one year or the same duration as the original Subscription Period as set forth in the PoE.

4.2 Continuous Billing

When the PoE states that Client’s renewal is continuous, Client will continue to have access to the IBM SaaS and will be billed for the usage of the IBM SaaS on a continuous basis. To discontinue use of the

IBM SaaS and stop the continuous billing process, Client will need to provide IBM or its IBM Business Partner with ninety (90) days written notice requesting that Client's IBM SaaS be cancelled. Upon cancellation of Client's access, Client will be billed for any outstanding access charges through the month in which the cancellation took effect.

4.3 Renewal Required

When the PoE states that Client's renewal type is "terminate", the IBM SaaS will terminate at the end of the Subscription Period and Client's access to the IBM SaaS will be removed. To continue to use the IBM SaaS beyond the end date, Client will need to place an order with Client's IBM sales representative or IBM Business Partner to purchase a new Subscription Period.

5. Technical Support

Technical support for the IBM SaaS is provided via email, online forums, and an online problem reporting system which is available via the Bluemix Client portal at <https://support.ibmcloud.com>. Technical support is included with the IBM SaaS and is not available as a separate offering.

Information on upcoming maintenance windows are published at least 24 hours in advance on the Bluemix Service Status page (<https://developer.ibm.com/bluemix/support/#status>) and updated with the latest information until completion of the service update.

Response time objectives described herein are intended to describe IBM's goals only, and do not represent a guarantee of performance.

Severity	Severity Definition	Response Time Objectives During Support Hours	Response Time Coverage
1	<p>Critical business impact/service down: Business critical functionality is inoperable or critical interface has failed. This usually applies to a production environment and indicates an inability to access services resulting in a critical impact on operations. This condition requires an immediate solution.</p> <p>Severity 1 issues require that Client is available to help IBM diagnose issues during the 24X7 period otherwise the issue is downgraded to Severity 2.</p>	Within 1 hour	24x7
2	Significant business impact: A service feature or function is severely restricted in its use or Client is in jeopardy of missing business deadlines.	Within 2 business hours	M-F business hours
3	Minor business impact: Indicates the service or functionality is usable and it is not presenting a critical impact on operations.	Within 4 business hours	M-F business hours
4	Minimal business impact: An inquiry or non-technical request.	Within 1 business day	M-F business hours

After Hours Support

After Hours Support (outside of the regular operating hours stated above) is available only for Severity 1 issues on business days, weekends, and holidays. Severity 1 issues require that Client is available to help IBM diagnose issues during the 24X7 period otherwise the issue is downgraded to Severity 2.

6. IBM SaaS Offering Additional Terms

6.1 Derived Benefit Locations

Where applicable, taxes are based upon the location(s) Client identifies as receiving benefit of the IBM SaaS. IBM will apply taxes based upon the business address listed when ordering an IBM SaaS as the

primary benefit location unless Client provides additional information to IBM. Client is responsible for keeping such information current and providing any changes to IBM.

6.2 Twitter Data

6.2.1 Definitions

“Analysis Report” means the results or output created by Client’s applications on the IBM SaaS from the process of analyzing and deriving information from the Twitter Content. Such results may not contain Twitter Content, but may contain content that is duplicative to that in the Twitter Content, such as search terms and references to the subject matter of the Tweets.

“Tweet ID” means the unique identification number generated by Twitter for each Tweet.

“Tweets” means a public posting with a text body of no more than 140 characters made by any end user of the Twitter service “Twitter Content” means Tweets and Tweet IDs, Twitter end user public profile information, and any derivative works thereof.

6.2.2 Access and Use of Twitter Content

The IBM SaaS provides a means for Client to select and access Twitter Content for Client’s use solely within the IBM SaaS. Twitter Content is neither owned nor controlled by IBM. Twitter Content may include materials that are illegal, inaccurate, misleading, indecent, or otherwise objectionable. IBM or its suppliers have no obligation to review, filter, verify, edit or remove any Twitter Content. However, IBM or its suppliers may, at their sole discretion, do so. Client agrees, upon IBM’s request, to promptly delete or modify any Tweet that may be stored on the IBM SaaS.

6.2.3 Volume of Twitter Data

If Client has acquired entitlements to an IBM SaaS configuration that includes a minimum of fifteen (15) nodes as part of the IBM SaaS, then Client may be given access to Twitter Content.

6.2.4 Restrictions on Twitter Content

Client shall not:

- a. Use Twitter Content in violation of any applicable law including but not limited to privacy laws or for any unauthorized or improper purposes.
- b. Download or remove Twitter Content from the IBM SaaS. However, Analysis Reports may be downloaded or removed from the IBM SaaS.
- c. Make available to any third party any Twitter Content included in the IBM SaaS.
- d. Use the Twitter Content for any other purpose except for the limited purpose allowed for in the IBM SaaS.
- e. Aggregate, cache, or store location data or geographic information contained in the Twitter Content separately from the Tweet to which it is associated, or use the location data or geographic data included in the Twitter Content for any reason except to identify the location tagged in the Tweet.
- f. Comingle Twitter Content with other data, unless the Twitter Content will always be clearly attributable to Twitter.
- g. Use Twitter Content provided as part of the IBM SaaS to perform analysis on a small group of individuals or a single individual for any unlawful or discriminatory purpose.
- h. Display the Twitter Content that Client receives access to as a part of IBM SaaS.
- i. Use the Twitter Content or analysis therefrom in the IBM SaaS as part of an advertising network.
- j. Use the Twitter Content for the purpose of performing analysis that is a regularly-produced, time-based series of measurements made using the same, or similar, methodologies for the purpose of comparing television program performance over time, or against a defined set or subset of other television programs.
- k. Use any aggregate Twitter user metrics, such as number of users or accounts, obtained while accessing and using the Twitter Content as part of the IBM SaaS for any purpose.

6.2.5 Termination by IBM

Client’s access and use of the Twitter Content shall cease upon termination of the IBM SaaS.

Notwithstanding the foregoing, in addition to the rights of suspension and termination in the Agreement, IBM may cease providing access to the Twitter Content at any time without notice and without the obligation to provide Client a refund, credit, or other compensation.

6.2.6 Warranty and Indemnification Disclaimer for Twitter Content

NOTWITHSTANDING THE WARRANTY SET FORTH IN THE AGREEMENT, THE TWITTER CONTENT IS PROVIDED SOLELY "AS IS", "AS AVAILABLE" WITH ALL FAULTS, AND CLIENT'S USE OF THE TWITTER CONTENT IS AT ITS SOLE RISK. IBM DOES NOT MAKE, AND HEREBY DISCLAIMS, ANY AND ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, PERFORMANCE, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, TITLE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING, USAGE, OR TRADE PRACTICE, IN CONNECTION WITH THE TWITTER CONTENT. IBM DOES NOT WARRANT THAT THE ACCESS TO THE TWITTER CONTENT WILL BE UNINTERRUPTED, OR ERROR-FREE. THIS DISCLAIMER OF WARRANTY MAY NOT BE VALID IN SOME JURISDICTIONS AND CLIENT MAY HAVE WARRANTY RIGHTS UNDER LAW WHICH MAY NOT BE WAIVED OR DISCLAIMED. ANY SUCH WARRANTY EXTENDS ONLY FOR THIRTY (30) DAYS FROM THE EFFECTIVE DATE OF THIS AGREEMENT (UNLESS SUCH LAW PROVIDES OTHERWISE).

ANY OBLIGATION FOR IBM TO INDEMNIFY CLIENT UNDER THE AGREEMENT DOES NOT APPLY IN ANY WAY TO CLIENT'S ACCESS AND USE OF THE TWITTER CONTENT.

6.2.7 United States Government Use

The Twitter Content is a "commercial item" as that term is defined at 48 C.F.R. 2.101, consisting of "commercial computer software" and "commercial computer software documentation" as such terms are used in 48 C.F.R. 12.212. Any use, modification, derivative, reproduction, release, performance, display, disclosure or distribution of the Twitter Content by any government entity is prohibited, except as expressly permitted by the terms of this ToU. Additionally, any use by U.S. government entities must be in accordance with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4. If Client uses the Twitter Content in Client's official capacity as an employee or representative of a U.S., state or local government entity and Client is legally unable to accept the jurisdiction, venue or other clauses herein, then those clauses do not apply to such entity, but only to the extent as required by applicable law. Contractor/manufacturer is Twitter, Inc. 1355 Market Street, Suite 900, San Francisco, California 94103

6.3 Client Obligations

Client is responsible for:

- following IBM's initial configuring of the IBM Open Platform components and any BigInsights modules selected, monitoring, configuring and managing the IBM Open Platform components which run under Ambari as well as the BigInsights modules. Examples of these components and software include, but are not limited to, HBase, Hive, Zookeeper, Oozie, BigSQL, BigSheets, Big R etc. Client has flexibility to choose which components to run, but is therefore responsible for monitoring and stopping or starting those components.
- limiting access to members of their organization to the IBM SaaS by sharing the URL, username and password available after the IBM SaaS cluster is provisioned and also granting and revoking access (through entries in LDAP)
- developing, as necessary or required, programs and applications on the service to analyze data and obtain insights from it. Client is also responsible for the quality and performance of such programs or applications developed.
- use and maintenance of any permissible software or data that is added by or on behalf of Client to the cluster. IBM may provide assistance, but will not maintain, move or remove Client added permissible software and data that fills a partition or affects the functioning of the service.
- Using the Hadoop data encryption feature available on the SaaS to encrypt data as per business requirements.
- Checking the following link periodically to be informed about a scheduled non-disruptive or disruptive downtime - <https://developer.ibm.com/bluemix/support/#status>
- backing up all data, metadata, configuration files and environment parameters as per business requirements so as to ensure continuity
- restoring data, metadata, configuration files and environment parameters from any backup to ensure continuity, in an eventuality of cluster failure of any type including but not limited to data center or pod failure, server failure or hard disk failure or software failures.

- ensuring continuity, compatibility and performance of the IBM SaaS platform after installing permissible software (including any open source packages), or upgrading IBM Open Platform components or BigInsights software.

Client may:

- only install and run software on the IBM SaaS which is required to perform or support analysis of data through the pre-installed IBM Open Platform or BigInsights software. Client is prohibited from installing or using any other software of any kind on the IBM SaaS.
- install additional open source packages for use with the IBM SaaS on the nodes. IBM is not obligated to support these packages and is not responsible for impacts to the performance of the IBM SaaS due to any such additional packages. If Client installed software is determined by IBM to compromise security or security compliance guidelines of the infrastructure, server or environment, it may be disabled or removed by IBM.

6.4 IBM Operational Responsibilities

As part of the IBM SaaS, IBM will:

- provide and manage servers, storage and networking infrastructure for the cluster.
- provide an initial configuration of the IBM Open Platform components and any BigInsights modules selected
- provide and manage an internet facing and internal firewall for protection and isolation.
- monitor and manage the following components on the IBM SaaS:
 - (1) Network components
 - (2) Servers and their local storage
 - (3) Operating System
 - (4) Hadoop Key Management Store
 - (5) LDAP on the Hadoop cluster
 - (6) Nagios
 - (7) Ganglia
 - (8) Ambari cluster manager
- provide maintenance patches, including appropriate security patches for the operating system, the IBM Open Platform, and any BigInsights modules selected (but not for any software or components separately added by the Client).

Regular maintenance that should not require any system downtime (“non-disruptive” maintenance) and maintenance that may require some system downtime and restarting (“disruptive” maintenance”), will be performed at the scheduled times published at <https://developer.ibm.com/bluemix/support/#status> . Any changes to the scheduled maintenance times will be posted with at least 24 hours advance notice. Client will be notified of additional scheduled downtimes at least 24 hours in advance.



Appendix A

IBM BigInsights on Cloud provides pre-installed baremetal servers with IBM Open Platform and optional modules, ready to use. The base offering includes the following infrastructure features:

- Hardware servers,
- Networking infrastructure
- Internet facing firewall
- An operating system
- An LDAP server
- Metadata DB
- Hadoop Key Management Store

The IBM SaaS is based on IBM Open Platform with Apache Hadoop which includes::

- Apache Hadoop including MapReduce, YARN and HDFS (Hadoop Distributed File System)
- Ambari cluster manager
- AvroHBase
- Hive
- Knox
- Oozie
- Open JDK
- Pig
- Parquet (Hadoop)
- Parquet (format)
- Spark
- Snappy
- Sqoop
- Slider
- Zookeeper

IBM BigInsights on Cloud provides data nodes and management node configurations. Both types of nodes are required for every cluster.

- a. Data nodes will hold data to be analyzed and run the programs developed by the Client to analyze the data. The data (with the exception of any data IBM may, but is not committed to, provide, as part of the IBM SaaS in the future and permitted software, programs and applications (see the Section entitled "Client Obligations" above) will be provided by Client.
- b. Management nodes are comprised of services (like NameNode, Job Tracker, Management console, HBase Master etc), which help in managing and monitoring service on all the data nodes (like datanode, Hbase region, task tracker etc)

IBM BigInsights on Cloud is offered based on the configuration that best meets the Client's needs. The available configurations of the nodes are:

Offering Type	Small Configuration	Medium Configuration	Large Configuration
Data Node	<ul style="list-style-type: none"> • 2 x 8 cores 2650 v2 Sandy bridge • 64 GB RAM 	<ul style="list-style-type: none"> • 2 x 8 cores 2650 v2 Sandy bridge • 128 GB RAM 	<ul style="list-style-type: none"> • 2 x 8 cores 2690 v2 Sandy bridge • 192 GB RAM

	<ul style="list-style-type: none"> • 16 TB (OS disks) • 20 TB (internal storage disks) 	<ul style="list-style-type: none"> • 16 TB (OS disks) • 28 TB (internal storage disks) 	<ul style="list-style-type: none"> • 16 TB (OS disks) • 32 TB (internal storage disks)¹
Management Node	<ul style="list-style-type: none"> • 2 x 8 cores 2650 v2 Sandy bridge • 64 GB RAM • 16 TB (OS disks) 	<ul style="list-style-type: none"> • 2 x 8 cores 2650 v2 Sandy bridge • 128 GB RAM • 16 TB (OS disks) 	<ul style="list-style-type: none"> • 2 x 8 cores 2690 v2 Sandy bridge • 192 GB RAM • 16 TB (OS disks)

2. Optional Services

2.1.1 IBM BigInsights on Cloud Data Scientist Module

This optional offering includes the following features:

- Big R
- Machine Learning
- Text Analytics
- Big SQL
- BigSheets

2.1.2 IBM BigInsights on Cloud Anayst Module

This optional offering includes the following features:

- Big SQL
- BigSheets