IBM Bluemix

1. Cloud Service Description

IBM Bluemix is an application development environment that delivers the speed and flexibility of a platform-as-a-service (PaaS). It allows developers to more quickly compose and build enterprise-grade applications for the cloud era by providing access to IBM's vast software portfolio as composable services.

1.1 Bluemix UI

Upon acceptance by IBM you will be enabled to access the Cloud Service environment, you will have the ability to access the Cloud Service portal, use available API and command line interfaces to deploy available applications, and leverage IBM APIs to build applications. The Bluemix online user interface, APIs, and command line interface are collectively referred to as the “Bluemix UI” and may be presented only in English. A catalog of additional services will be provided that you can add to your account via the Bluemix UI.

Through the Bluemix UI, you can authorize other users to collaborate with you on your applications. That authorization may include the ability for those users to deploy applications, select additional services, and otherwise incur expenses associated with your account. You are responsible for any actions of users you have authorized and any associated charges.

1.2 Bluemix Services

Additional services are subject to the Cloud Services Agreement and this Service Description. A service may provide its own Service Description, available through the Bluemix UI, which may provide additional or different terms that override inconsistent provisions in this Service Description. For example, a Service Description may provide a different service level commitment, unique security provisions, or identification of enabling software. Some non-IBM services will be subject to their own license terms and not be subject to the Cloud Services Agreement. Deployment and use of additional services constitutes agreement with the terms associated with the relevant services in the Bluemix UI.

The documentation for Bluemix and any additional services may include usage guidelines and/or limitations to preserve the performance, responsiveness, or integrity of the Bluemix platform. You agree to use Bluemix and the additional services in compliance with those guidelines and understand that applications that violate these guidelines may be terminated automatically by the system or by Bluemix system administrators.

The Bluemix Cloud Service, and the individual services available through it are offered on a month-to-month basis. IBM will provide you at least 30 days notice on the Bluemix site of any changes to the Cloud Services Agreement, this Service Description, the Service Description for an additional service, or withdrawal of an additional service. Your continued use of Bluemix or the additional service after the change effect date constitutes acceptance of the changed pricing or terms.

1.3 Your Applications

You may not resell access to the Cloud Service or any additional services to any third party. However, you may use the Cloud Service and any additional services to create and make available your applications based on these services to your users. IBM may use cookies and tracking technologies to collect information in gathering usage statistics and information designed to help improve user experience and/or to tailor interactions with users in accordance with http://www-01.ibm.com/software/info/product-privacy/index.html. You are responsible to have appropriate agreements in place with your users and are responsible for their use of your applications, including content they provide. Except to the extent that such is part of a valid indemnity claim under the “Liability and Indemnity” Section of the Cloud Services Agreement, you are solely responsible for any liability for damages or losses your users may incur as a result of using your applications.

1.4 Compliance with Laws

You are responsible for compliance with all laws, regulations, and contractual terms applicable to any services you utilize, applications you develop, or data you access or distribute. To the extent that IBM
requires rights to process content or data as requested by you or your users, you are responsible for
obtaining those rights prior to providing that content or data. For your applications where you permit your
users to log into your application using Facebook, Google, or other third party user credentials, these
rights include permission from your user for IBM to receive and process their email address, account ID,
display name, telephone number, a URL to their profile picture, or other identifying information that is
provided by that third party service. You understand that IBM may use global resources (non-permanent
residents used locally and personnel located world-wide) to remotely support the delivery of Bluemix and
the additional services. You agree not to provide any content or data which is controlled as a defense
article under the US International Traffic in Arms Regulations (ITAR) or under any other country’s laws or
regulations or which requires an export license or is otherwise restricted from export to any personnel
under applicable export control laws.

2. Security Description
IBM Bluemix applies layered security controls across network, infrastructure, and applications.

2.1 Statement of Good Security Practices
IT system security involves protecting systems and information through prevention, detection and
response to improper access from within and outside your enterprise. Improper access can result in
information being altered, destroyed or misappropriated or can result in misuse of your systems to attack
others. No IT system or product can be made completely secure and no single product or security
measure can be completely effective in preventing improper access. IBM systems and products are
designed to be part of a comprehensive security approach, which will necessarily involve additional
operation procedures, and may require other systems, products or services to be most effective. IBM
DOES NOT WARRANT THAT SYSTEMS AND PRODUCTS ARE IMMUNE FROM THE MALICIOUS OR
ILLEGAL CONDUCT OF ANY PARTY.

2.2 Security Policies
IBM maintains privacy and security policies that are published and communicated to IBM employees. IBM
requires privacy and security education training to individuals worldwide who support IBM data centers,
and we maintain a security team that is uniquely focused on information security. IBM security policies
and standards are reviewed and re-evaluated annually. IBM security incidents are handled in accordance
with an incident response procedure.

2.3 Service Integrity and Availability
Modifications to operating system resources (OSRs) and application software are governed by IBM’s
change management process. Changes to firewall rules are governed by the change management
process and are separately reviewed by the IBM security staff before implementation. IBM data center
resources are monitored 24x7 by IBM staff. Vulnerability scanning is regularly conducted by authorized
administrators to help detect and resolve potential system security exposures. Malware detection
(antivirus, vulnerability scanning, and intrusion prevention) systems are in place throughout IBM data
centers.

2.4 Physical Security and Data Centers
Bluemix’s cloud infrastructure is hosted and managed within IBM Softlayer’s data centers. It relies on
Softlayer capabilities for physical security.

2.5 Network and Infrastructure Security
Bluemix uses firewalls to restrict access to the Bluemix network. It uses dedicated intrusion protection
appliances to monitor and detect network intrusion. It regularly scans the firewalls to verify that they are
configured properly. It has implemented penetration testing procedures to detect vulnerabilities so they
can be addressed. It uses application vulnerability scanning to detect application vulnerabilities so they
can be mitigated. Bluemix operations team verifies that patches for operating systems are applied at
appropriate frequencies, depending on the complexity and urgency of fixes.

2.6 User Authentication and Access Control
All application developer users of Bluemix are required to obtain an IBM Web Identity in order to have
access to Bluemix platforms and services. Bluemix performs authorization checks based on the logged in
user identity to restrict access only to authorized applications. Bluemix uses open standards such as
OpenID and OAuth to enable single sign on for the application developer to the Bluemix environment.
2.7 Audit Logs
Bluemix performs period audits of access logs to enable visibility into who logged into various systems, failed authentications, etc. to detect potentially unauthorized access or network attacks.

2.8 Identities
Bluemix governs access to privileged identities, including approvals and recertification of accesses every few months.

2.9 Application Isolation
Bluemix builds on Cloud Foundry technology. Each application built on Bluemix executes in its own application container. These containers are limited in terms of CPU usage, memory usage, and disk usage.

2.10 Data Security
Bluemix does not provide any guarantee of the security of customer data or the prevention of data loss.

3. Service Level Objective
IBM provides the following service level objective (“SLO”) for the Cloud Service, after IBM makes the Cloud Service available to you.

IBM will provide an SLO of 99.9% service availability measured by the following:

a. The ability to deploy an application either through the portal or command line
b. The ability to connect to an application service
c. The availability of an individual service instance

There are no service level credits or reporting offered at this time.

4. Entitlement and Billing Information

4.1 Charges and Billing

4.1.1 Pay As You Go
There is no charge for access to the Bluemix platform. Additional services available through Bluemix may have charges associated with them. If they do, the pricing metric (the unit measured by the service) will be described in the services Service Description. The service may identify a “Free Tier”, which is a level of use or a configuration of the service for which no charge is made. Use above that level or use of other configuration will incur the charges identified for the service.

Certain services charge on a monthly usage metric which bases the fee on a unit of service that is used for an entire month. Use or deployment of that service for less than a month will be pro-rated based on the number of days in the month. For all other metrics, all partial usage is rounded up to a full unit of measure.

4.1.2 Subscription
In addition to Pay As You Go, Bluemix offers a Subscription through which, in exchange for a committed usage level on the Bluemix platform over the chosen Subscription period, you can obtain a discount off the usage charges incurred for eligible Bluemix services. Usage charges for Bluemix services over and above the committed usage level will be billed, in arrears, as a Subscription overage.

To provide usage flexibility, Subscription periods are divided into 12 month cycles (or if less than 12 months remain on the Subscription period, the remaining number of months as a cycle). Usage credits that are paid in advance or are associated with that cycle can be used any time during that cycle. Subscription overages will not be billed until all usage credits that are prepaid or are associated with that cycle are consumed. Usage credits unused at the end of a cycle are forfeited.

Subscriptions for Bluemix may not be canceled during their term and auto-renew at the end of their term at the same usage commitment for the same Subscription period. To prevent automatic renewal, you must provide IBM ninety days written notice of cancellation prior to the end of the current Subscription period.

4.2 Trial Period
Your account may be eligible for a 30 day Trial period during which charges for IBM provided services are waived. If you have administrative authority over an account, you may upgrade it from Trial to production
at any time. If an account is not upgraded prior to the expiration of the Trial period, the account will be disabled until it is upgraded. Service Level Commitments, if any, do not apply during the Trial period. Otherwise, all other terms apply.

5. Technical Support

Technical support for IBM Bluemix is available three ways:

5.1 Free Support

All customers of Bluemix are provided Free Support. A consumer of resources provided by the platform can go to the DeveloperWorks Forum (https://developer.ibm.com/bluemix) and post a question about any item found in the Bluemix product. Questions posted to the forum are not provided an SLA for response or a commitment to fix. Free Support does not entitle access to our Support Ticket System. All questions or issues are addressed in the Forum.

If you have not purchased support and find an issue which you feel is a defect, you can email support@bluemix.net. These issues will be taken on a first come basis and there is no guaranteed response.

5.2 Standard Support

Standard Support is priced at a standard percentage of your Bluemix usage charges (exclusive of any discount which is available through a Subscription offering) with a minimum per-month fee, as more fully described on the Bluemix website.

Customers have access to Standard Support through two ways.

- 30 Day Trial user
- At any point after the 30 day Trial, by ordering Standard Support for your account, by contacting your IBM Sales Representative. Support subscriptions auto-renew at the end of their term for the same term. To prevent automatic renewal, you must provide IBM ninety days written notice of cancellation prior to the end of the current Support subscription period.

Standard Support customers can open tickets in IBM's Support Ticketing System. Our dedicated support team will triage the ticket based on the initial severity defined by the customer, subject to IBM's confirmation of the actual severity level.

All tickets opened by Standard Support customers are investigated with the purpose of identifying root cause. When problem diagnostic data is needed to isolate an issue, you will be asked if we do have your approval to access logs and other problem determination data from your application to help determine root cause. Not providing access to this data may delay problem resolution. Once root cause analysis is complete, the team will take one of the following actions:

a. Root cause is an IBM Generally Available Service

If a ticket is opened and the root cause analysis determined that this is a defect in the IBM provided Generally Available service, the ticket will be provided attention based on the severity set by the customer and as confirmed by IBM.

b. Root cause is an IBM Beta Service

IBM will release services that are classified as Beta. This helps the development and Marketing teams assess the value of the service in the market and make adjustments before making the service Generally Available. If a ticket is opened and the root cause analysis determines that there is a defect in an IBM provided Beta service, then IBM is not obligated to provide a fix. Additionally, the ticket would be handled with a severity 3 or 4 where applicable.

c. Root cause is an Experimental Services

IBM will release services that are classified as Experimental. These services are maybe unstable, change frequently and maybe discontinued with short notice. Services identified as Experimental will be support via our Bluemix forum only.

d. Root cause is a Third Party Service

Third party services are provided by vendors outside of IBM. They can be provided by individual software entities, partners or ISVs. If a ticket is opened and the root cause analysis determines that there is a defect in a Third Party Service, then IBM is not obligated to provide a fix.

e. Root cause is an Open Source or Community Service
Open Source or Community services are provided by open source communities outside of IBM. If a ticket is opened and the root cause analysis determines that there is a defect in a Community Service, then IBM is not obligated to provide a fix. Additionally, IBM will close the ticket and refer the customer to the community or forum for support.

5.2.1 Technical Support Details
Technical Support hours are defined in the SaaS Support Handbook on the Client Success Portal at: https://cloudeoe.support.ibmcloud.com/ics/support/mylogin.asp?splash=1
After Hours Support (outside of the regular operating hours stated above) is available only for Severity 1 issues.
To get assistance:
- Click the Support link under accounts when logged into Bluemix
- **Support web portal:** https://support.ibmcloud.com
- **For existing tickets, Email:** support@bluemix.net (include “5377#ticket” in the subject line, where ticket is the ticket number)
The Client defines the severity of the issue based on their business needs, subject to confirmation by IBM that the severity level is accurate.

<table>
<thead>
<tr>
<th>Severity</th>
<th>Severity Definition</th>
<th>Response Time Objectives</th>
<th>Response Time Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>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. Severity 1 issues require that the client will be available to help us diagnose issues during the 24X7 period otherwise, they are downgraded to severity 2.</td>
<td>Within 1 hour</td>
<td>24x7</td>
</tr>
<tr>
<td>2</td>
<td>Significant business impact: A service business feature or function of the service is severely restricted in its use or you are in jeopardy of missing business deadlines.</td>
<td>Within 2 business hours</td>
<td>M-F business hours defined above</td>
</tr>
<tr>
<td>3</td>
<td>Minor business impact: Indicates the service or functionality is usable and it is not a critical impact on operations.</td>
<td>Within 4 business hours</td>
<td>M-F business hours defined above</td>
</tr>
<tr>
<td>4</td>
<td>Minimal business impact: An inquiry or non-technical request</td>
<td>Within 1 business day</td>
<td>M-F business hours defined above</td>
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5.3 Premium Support
If you have purchased Standard Support and need more focused support you can purchase Premium Support. Premium Support includes a Named Support Engineer to work with your company, either full or half time, to help your team develop and deploy your applications in the Bluemix Environment. Those interested in this option can talk with their sales representative, send email to sales@bluemix.net or call 1-844-BLUEMIX or 1-267-238-3490.

5.4 Expert Consulting Services
Expert Consulting Service (ECS) can help you speed your adoption of the Bluemix platform. Consulting services are negotiated individually with each customer where scope, duration and description of service will be agreed upon and a contract will be written.

6. Safe Harbor Framework
The Cloud Service does not comply with the US-EU and US-Swiss Safe Harbor Frameworks.

7. Enabling Software
Bluemix and the additional services may provide enabling software which is intended to be used to access the services. Unless other terms are provided in the individual service's Service Description, you
may use the enabling software only associated with your use of the Cloud Service in the manner
described in the documentation, for the length of the term of the Cloud Service. To the extent that the
enabling software contains sample code, you have the additional right to make derivative works of the
sample code and use them consistent with this grant. The enabling software is provided subject to the
Service Level Objective, if any, as a component of the Cloud Service, but is otherwise provided “AS IS”.

8. Derived Benefit Locations
Where applicable, taxes are based upon the location(s) you identify as receiving benefit of the Cloud
Services. IBM will apply taxes based upon the business address listed when ordering a Cloud Service as
the primary benefit location unless you provide additional information to IBM. You are responsible for
keeping such information current and providing any changes to IBM.

9. Beta / Experimental Services
Some of the services available within Bluemix may be provided as a Beta or as an Experimental Service.
Beta or Experimental Services will be identified as such in the Bluemix UI. Unless the Beta or
Experimental Service provides different terms, those Services are subject to the following:

a. The Beta / Experimental Service is a Cloud Service IBM is developing and testing. You are
authorized to use the Beta / Experimental Service during the specified period for the purpose of
evaluating its functionality and to provide feedback to IBM or the third party service provider. IBM
may provide additional supporting details and information that apply to your access and use of a
Beta or Experimental Service.

b. Beta / Experimental services may not comply with the normal Bluemix security practices and do not
comply with the US-EU and US-Swiss Safe Harbor Frameworks and are not designed to comply
with any specific governmental regulation or specific security measures. You agree not to input
content that may be subject to any such regulations or required additional security measures.

c. The Beta / Experimental Service may not be at a level of performance or compatibility of generally
available services IBM markets and is not fully tested, including any data protection and security
features. Beta / Experimental Services are not designed for use in a production environment or for
commercial purposes and any such use is at your own risk. IBM does not guarantee it will make a
Beta or Experimental Service or any similar services available, or if made available, it will be similar
to the Beta / Experimental Service. If a generally available service is offered, IBM is under no
obligation to offer migration capabilities or services.

d. Generally there are no charges for use of a Beta / Experimental Service unless specified otherwise
by IBM or a third party service provider. If any authority imposes a custom, duty, tax (including
withholding tax), levy or fee for the import or export, transfer, access or use of a Beta or
Experimental Service or third party service, then you are responsible to pay any such amount
imposed.

e. You may use a Beta / Experimental Service for the period IBM specified or until IBM withdraws or
terminates the Beta / Experimental Service. You may terminate use of a Beta / Experimental
Service at any time by notifying IBM. You are responsible to remove any of your proprietary content
you wish to retain prior to expiration or termination of a Beta / Experimental Service. IBM may at
any time suspend, revoke, limit or refuse participation in or use of a Beta / Experimental Service.
Content may be destroyed upon the expiration or cancellation of the Beta / Experimental Service
unless specific migration to the related generally available Cloud Services is available.

f. IBM may in its reasonable discretion, change the terms applicable to a Beta / Experimental Service,
modify the computing environment, or withdraw features of a Beta / Experimental Service, in whole
or in part by providing notice. Continued use is your acceptance of any such change. If you do not
accept a change, you are responsible to discontinue use upon such notice.

g. If there are no charges, IBM’s entire liability for all claims in the aggregate arising from your use of a
Beta / Experimental Service acquired hereunder will not exceed the amount of any actual direct
damages up to U.S. $1,000.00 (or equivalent in local currency). Beta / Experimental Services are
provided without warranties of any kind.

h. You agree IBM may use all feedback and suggestions you provide. IBM may use cookies and
tracking technologies to collect personally identifiable information in gathering usage statistics and
information designed to help improve user experience and/or to tailor interactions with users in
accordance with http://www-01.ibm.com/software/info/product-privacy/index.html. Where required by applicable law, you have notified the users and obtained their consent to do all of the above.