IBM

IBM Block Storage as a Service 2.0 for DS8000

Client: {Client Full Legal Name} (Client)

Agreement Number: {nnnnn}

The terms of this Service Description (SD) modify or are in addition to those of the IBM Client Relationship Agreement or equivalent agreement in effect between Client and IBM (Agreement). Client accepts these terms by signing this SD.

This Service Description describes IBM Block Storage as a Service (STaaS or the Service). The applicable Transaction Document (TD) provides pricing and additional details about Client's order. Described Services only apply in the country in which the Service is purchased.

STaaS addresses Client's storage requirements by providing, at a location of Client's choosing, a committed amount of base storage capacity (Base Capacity Commitment), coupled with the ability for variable consumption above the Base Capacity Commitment (Variable Use). Client may select one of the Service Tiers as defined in the TD, each providing associated service-level objectives (SLOs) such as Base Capacity and system performance.

For all Service Tiers:
a. The Service is available on a periodic subscription basis over a selected committed period (Term of Coverage) as specified in the Transaction Document (TD). Client selections will be documented in the TD;
b. Availability Objective is 99.9999%;
c. Encryption is optional at no charge*;
d. Power Cord choice at no charge;
e. Advance functions included (Base Function, Copy Services, Z Synergy Services); and
f. IBM Storage Insights Pro, an analytics-based storage management solution, is included.

* If encryption option permitted by law in the country where the Service is acquired or provided.

1.   Service Infrastructure
IBM will install one or more IBM owned storage Machines and associated software (STaaS Infrastructure), as determined by IBM to satisfy the selected SLOs and to meet Client's immediate Base Capacity Commitment level. Further, IBM will also install additional (Variable Use capacity) to align with Client's projected growth up to approximately 30% additional capacity (Variable Use Capacity) above the Base Capacity Commitment level. IBM may expand, modify, substitute, replace, or remove STaaS Infrastructure to continue to satisfy Client's SLOs. To achieve SLOs, Client is required to operate STaaS Infrastructure under IBM approved configuration settings.

1.1   STaaS Charges
a. The TD defines a rate (Charge Rate) for each TB of capacity per month (Rate/TB/Month). The same Charge Rate is used to determine charges for both the Base Capacity Commitment and for Variable Use.
b. For the Term of Coverage Client pays, on a periodic basis (Subscription Period) as specified in the TD, Client pays an upfront subscription charge for the Base Capacity Commitment at the start of each Subscription Period.
c. Monthly Variable Use (the excess of STaaS Total Monthly Usage over the Base Capacity Commitment) is billed on a quarterly basis, in arrears. If the Term of Coverage starts or ends within a given month, the Charge Rate for such partial month is prorated. **STaaS Total Monthly Usage** is the higher of 1) the daily usage averaged over one month or 2) 85% of the 4 highest daily measured capacity points in the month, rounded up to nearest whole TB across all STaaS Infrastructure deployed to a single site to support the ordered STaaS.

1.2   Non-Payment
For any payment not made by its due date, IBM, in its sole discretion, may elect to charge, and Client agrees to pay, late fees of 1.5% of the unpaid amount per month (subject to any maximum limitations under applicable law), such late charge to be pro-rated for any part month unpaid. IBM may, for example, forgo late charges in the case where late payment was caused by a good faith administrative delay. IBM may suspend support or terminate the Service for a TD due to unremedied non-payment with 30 days written notice.

1.3   When StaaS is acquired from an IBM Business Partner (BP)
For acquisitions through an IBM Business Partner (BP), the BP establishes the price at which they market the Service, payment related terms (e.g., payment due dates, late fees, and termination fees), and communicates the terms for each BP transaction directly to Client. The BP will invoice Client directly. Whenever a party is required to provide notification to the other, each agrees to notify the applicable BP. Unless separate accommodations are reached between IBM and Client, termination of the Service between Client and BP will trigger applicable termination provisions under this Service Description between IBM and Client.

1.4   STaaS Infrastructure Setup

IBM will perform the setup or installation of the STaaS Infrastructure and diagnostic testing in accordance with the IBM approved installation requirements which include:

a.   physical racking and basic initialization of designated enclosures; and

b.   connecting host cables and Serial Attached SCSI (SAS) expansion cabling as required, provided that host cabling is planned and provided by Client in advance of the installation with clear instructions.
Setup for STaaS Infrastructure does not include installation of the rack, Power Distribution Units (PDUs), or configuring of storage volumes. Client is responsible for installation planning, and site preparation as documented in the installation planning section of the applicable IBM Knowledge Centers at:
https://www.ibm.com/support/pages/ibm-ds8900f-introduction-and-planning-guide

1.5   Client Responsibilities for STaaS Set Up

The successful and timely completion of STaaS Infrastructure Setup depends on the following Client responsibilities. IBM is not responsible for any delays caused by, or within the reasonable control of, Client. Client agrees to:

a.   provide free physical access for IBM personnel to the locations where Service is to be performed, including free and safe parking and any required access to restricted areas, if applicable;

b.   provide suitable connectivity to the internet, and other facilities, as reasonably requested and, if applicable outside of working hours, network access for IBM personal to perform their responsibilities at Client premises;

c.   ensure that the designated location conforms to the IBM installation requirements for the STaaS Infrastructure; and

d.   specify a suitable date and time for setup, including any installation planning requirements, and be prepared for the setup appointment. If IBM representatives arrive for the setup appointment and Client responsibilities are not fulfilled, IBM will invoice Client for travel expenses, travel time, and wait time, as applicable.

2.   Storage Insights Pro

Storage Insights Pro is included with all Service Tiers of the STaaS. Storage Insights Pro collects information about STaaS Infrastructure and sends that information to the cloud to provide insights into the STaaS environment.

a.   IBM Storage Insights Pro uses a cloud-based delivery model to:
   • Identify and categorize storage assets within the provided STaaS Infrastructure;
   • Monitor capacity and performance of STaaS Infrastructure;
   • Support capacity forecasting precision using historical growth metrics;
   • Reclaim unused storage space; and
   • Optimize data placement within STaaS Infrastructure.

b.   In addition to providing insights to Client, Client acknowledges that Storage Insights Pro will collect capacity usage, performance, alerts, and other telemetry data for pay-for-use capacity tracking and STaaS support. Storage Insights Pro may not be deleted or disabled.

c.   Storage Insights Pro follows the IBM Data Security and Privacy Principles (DSP) as referenced in the CRA. Additional information on Storage Insights security is available at https://www.ibm.com/docs/en/SSQRB8/pdf/IBM_Storage_Insights_Security_Sheet.pdf . Any change to IBM's data security policies will not degrade the security of the Storage Insights Pro.

d.   Use of the included Storage Insights Pro is limited to use with provided STaaS Infrastructure.

3.   Concierge Level Support

IBM will maintain and support all STaaS Infrastructure, including any internal software and IBM programs in conformance with published specifications. Client will be assigned a Technical Account Manager (TAM), as defined below. Technical support for the Service is provided via telephone, email, online forums, and an online problem reporting system. IBM will make available technical support contact information and other information and processes. Technical support offered with the Service is not available as a separate offering. Support offered for Severity Level 1 and Severity Level 2 problems (each as described at: https://www.ibm.com/support/pages/what-are-severity-levels-and-how-do-i-know-which-one-use) has an enhanced response time objective of thirty minutes. Response time is the elapsed time between IBM technical support's receipt of Client's problem submission and IBM's acknowledgement of the submission.

IBM is not responsible for:

a.   improperly maintained or damaged STaaS Infrastructure;

b.   damage caused by unsuitable physical or operating environments;

c.   any failure caused by a move of a STaaS Infrastructure by non-IBM personnel (change of location). IBM may inspect the STaaS Infrastructure for damage after such move, such inspection to be provided as a billable service. IBM will restore the STaaS Infrastructure to its official published specifications as a billable service;

d.   failures caused by a product for which IBM is not responsible;

e.   service of features, parts, or devices not supplied by the STaaS Infrastructure's manufacturer, or IBM during the performance of service; or

f.   Client's use of software provided as part of the STaaS Infrastructure in other than their specified operating environment.

IBM does not warrant uninterrupted or error-free operation or that IBM will correct all defects or prevent third party disruptions or unauthorized third party access.

4.   Support Services further include:

4.1   Technical Account Manager (TAM)

The TAM is a critical product-based support role that will serve as the key Client interface for in scope hardware and software, delivering partnership and consultancy, as well as direct engagement on high priority support cases. The TAM:

a. Leads direct engagement on support cases, drives case trajectory, and complex issue resolution.
b. Delivers relationship management including welcome calls, support plan, monthly reporting, and quarterly meetings.
c. Coordinates activity on Client's behalf with support teams.
d. Consults with Client on change management.
e. Informs Client if the STaaS Total Monthly Usage reaches level where IBM needs or is prepared to add more capacity.
f. Coordinates with Client on timing for additional capacity, STaaS substitution or technology refresh.
g. Helps accelerate response times.
h. Assists with enablement of call home functionality and Storage Insights Pro.

4.2   Predictive Support

IBM provides predictive alerts for performance, space capacity, and other problems leveraging data from Storage Insights Pro. Predictive alerts will be collected and analyzed by IBM representatives on a regular basis. If there is a significant need for immediate action to be taken to avoid or prevent an incident, an action plan will be discussed with Client.

IBM will leverage IBM Storage Insights Pro where Client and IBM can access detailed information regarding Client's IT environment, based on the data collected. The dashboard can be accessed after Client has 1) completed registration, and 2) enabled IBM Storage Insights Pro to receive the detailed information and reports regarding system performance, alerts, and anticipated failures.

4.3   Remote Code Load

Remote Code Load (RCL) allows hardware and software code updates for STaaS Infrastructure. Code updates will be performed by remote IBM support personnel. IBM has implemented a remote capability to upgrade code on STaaS Infrastructure. RCL is the preferred code delivery, proven to be efficient and secure for both IBM and Client.
IBM will implement updates of the code levels on STaaS Infrastructure using installed RCL capabilities. **By providing an update of the code level on STaaS Infrastructure, IBM does not provide any further warranty concerning STaaS Infrastructure, its code, or its performance.**
Client agrees:

a. to provide remote access to STaaS Infrastructure requiring code updates,
b. to provide IBM with all information requested, this may include STaaS Infrastructure configuration and an outline of Client's network topology; and
c. to provide IBM with the necessary access to enable IBM to perform updates simultaneously across all the installed STaaS Infrastructure, at once, if possible, to reduce waiting times.

4.4   Monitoring and Installation of Additional Capacity

IBM will monitor STaaS Total Monthly Usage. IBM installation of additional capacity is available to Client when STaaS Total Monthly Usage reaches 80% utilization relative to total STaaS usable capacity deployed or as requested by Client and agreed to by IBM for a pending need that requires more capacity than currently available across the deployed STaaS Infrastructure. This request is made to the TAM. If the STaaS Total Monthly Usage grows to greater than 1.5 times the Base Capacity Commitment, IBM may require Client to increase the Base Capacity Commitment to 80% of the latest STaaS Total Monthly Usage. No capacity increases will be made twelve (12) months prior to the end of term unless otherwise agreed to by IBM. In addition, IBM may limit total additional capacity to no more than 10% more than the total Projected Capacity over the Term of Coverage. Projected Capacity is the estimated capacity growth over the Term of Coverage, where the estimated capacity growth is the estimated year-over-year capacity usage growth over the initial Base Capacity Commitment. Estimated capacity growth will be documented in the TD.
.

4.5   Technology refresh

IBM will perform technology refreshes as needed at IBM's discretion to meet the Client capacity and STaaS SLOs. IBM will deploy the replacement technology with up to a 90 day overlap to permit time for Client to migrate data. IBM will notify Client six months in advance and will work cooperatively to set a mutually agreeable start date. If more time for migration is required, Client may request a one-time 90 day extension and will be required to pay two times the Base Capacity Commitment rate during that extension period (3 months). Client is responsible for data migration.

5. **Additional Terms**

Client agrees as follows:

a. STaaS Infrastructure, including any Machines, Machine Code, and Programs are owned or licensed by IBM and not sold under this SD;

b. IBM is granting Client the right to use the STaaS Infrastructure during the duration of the STaaS Term of Coverage for the purposes set forth herein;

c. Client may not physically modify STaaS Infrastructure unless directed to do so by IBM;

d. **Substitution:** At any time during the Term and at no additional cost to Client, IBM shall, if it so chooses and in its sole discretion, expand, modify, substitute, refresh, or replace the STaaS Infrastructure, in whole or in part, to address changing capacity consumption levels and to maintain the service level objectives, or for any other reason. If whole storage Machines are refreshed, Client is responsible for data migration;

e. **Title:** IBM or a third party retains all rights, title, and interest in all STaaS Infrastructure. Client will have no options during or at the end of the term to acquire any of the STaaS Infrastructure deployed as part of the Service. Client agrees to return STaaS Infrastructure and components thereof as instructed by IBM;

f. Client will keep STaaS Infrastructure in good condition and working order, ordinary wear and tear excepted, at the Client owned or leased business location set forth in the order, in a proper environment as defined by IBM and in compliance with all applicable laws and regulations. Client shall not relocate STaaS Infrastructure without written permission from IBM;

g. **Risk of Loss:** Client is responsible for any loss or damage to IBM STaaS Infrastructure provided under the relevant TD until the STaaS Infrastructure is received by IBM under the Return of Infrastructure terms in the Return of STaaS Infrastructure Section below. Client will carry appropriate insurance sufficient to cover any such loss or damage. Upon IBM request, Client will provide evidence of the required insurance;

h. Replacement cost will be determined by IBM at the time of such loss to reflect IBM's internal replacement cost of the deployed STaaS Infrastructure. The occurrence of such loss or damage shall not relieve Client of any obligations hereunder;

i. Client indemnifies and, at IBM's request, shall defend IBM against any third party claims, including but not limited to environmental claims, which arise in connection with this SD or Client's possession and use of the STaaS Infrastructure hereunder, including all related liabilities, costs, and expenses; except to the extent that any claims are caused by an action or inaction of IBM; and

j. If this SD agreement is determined to be anything other than a service agreement from IBM to Client, then Client grants IBM a first priority security interest in the STaaS Infrastructure (and all proceeds thereof) and IBM retains the first lien and security interest in the STaaS Infrastructure and all proceeds. Client agrees that IBM may file protective documents with the government or other authorities in Client's jurisdiction of incorporation or other applicable locations in order to inform third parties and lenders that IBM owns the STaaS Infrastructure (including UCC-1 filings).

6. **Service Term**

The Term of Coverage will start when any STaaS Infrastructure is installed in support of the Service. Renewals start on the day after the prior Term of Coverage ends. If the installation date is delayed by Client request for more than 30 days after the STaaS order is accepted by IBM, then the Term of Coverage will start 30 days after IBM's order acceptance. The Term of Coverage will end 3, 4, or 5 years after the start date, depending on term ordered. The Term of Coverage is not cancellable. All rights to use STaaS Infrastructure and Services start and end based on the Term of Coverage.

7. **End of Term Options**

At the end of the Term of Coverage, Client may either stop using the Service and return the STaaS Infrastructure or, with 60 days' advanced written notice to IBM or Client's Business Partner:

a. request a new STaaS Term of Coverage (for 3, 4, or 5 years); or

b. request a three-month extension at the same current rates with the Base Commitment paid for three months (limited to four requests).

8. **Return of STaaS Infrastructure**

For STaaS Infrastructure to be returned at end of term, upon termination, or after a technology refresh, IBM will provide instructions and carrier contacts. IBM covers carrier costs for return to IBM. Client must return (provide to carrier) all STaaS Infrastructure no later than 30 days after end of term or 30 days after termination unless otherwise agreed to. If all STaaS Infrastructure and its components are not returned in accordance with this section, the rights to usage, Services, and support will have expired AND Client will be invoiced at the then current rate for 100% of the total usable capacity deployed by IBM each month beyond the agreed upon return date. In the case where Client acquires the Service from a Business Partner, Client agrees that IBM may invoice Client directly for unreturned Infrastructure, using the then current list price for the Service as the current rate.

Before STaaS Infrastructure or components thereof are returned to IBM, Client agrees to securely erase all non-IBM programs and all data (including confidential, proprietary, and personal data regarding any individual or entity) and ensure that any returned STaaS Infrastructure is free of any legal restrictions that would prevent its return.

IBM will provide rSDO (remote Secure Data Overwrite) Services for secure data erasure. A certificate will be provided as written verification of the full result of the overwrite operations.

The IBM Certified Secure Data Overwrite is a process that provides a secure overwrite of all data in a Block STaaS DS8K environment. Before IBM performs an rSDO you must remove all the logical configuration and any encryption groups that may be configured. rSDO service details are available in the following redbook: https://www.redbooks.ibm.com/redbooks/pdfs/sg248456.pdf

If Client requires additional levels of certified erasure, IBM will provide those Services under separate terms before any STaaS Infrastructure is returned to IBM. Any alternative method of erasure must be preapproved by IBM in writing.

9. Termination of Service

As this Service Description may cover separate STaaS engagements, each represented by a separate Transaction Document under this SD, a termination of Service refers to termination of the specific STaaS engagement under the appropriate TD.

After the initial twelve months of the Term of Coverage, with at least 60 days' prior written notice, Client may choose to terminate the Service. Client shall be responsible for payment of fifty percent (50%) of the remaining base subscription charges (tied to the current Base Capacity Commitment level) over the full Term of Coverage for the TD, unless otherwise specified in the TD. Upon IBM's receipt of Client's termination notice, that portion of the remaining base subscription charges will be invoiced to Client. Client agrees to pay the amount due under the payment terms.

Upon termination prior to the end of Term of Coverage, Client agrees:
a. to return all related STaaS Infrastructure in accordance with the Return of STaaS Infrastructure Section above, within 30 days of termination;
b. all amounts previously incurred are immediately due and payable promptly without further notice;
c. that the parties may pursue any other remedy available at law; and
d. in the event that STaaS Infrastructure is not returned to IBM, IBM may also, in its sole discretion, recover possession of the STaaS Infrastructure without demand or notice, or without any court order or other process of law, in accordance with Client's reasonable security procedures, and recover IBM's reasonable costs of deinstallation and repossession of the STaaS Infrastructure and any costs associated with any damage or loss of STaaS Infrastructure that occurred while in Client's possession.

10. Accounting Treatment

Neither IBM nor any IBM organization or affiliate makes any representation whatsoever regarding Client's accounting treatment applicable to this Service Description. Client is encouraged to consult its own advisors for accounting, legal, or tax advice.

This Service Description (SD) and the IBM Client Relationship Agreement (or equivalent agreement in effect between the parties), including applicable Attachments thereto, are the complete agreement regarding Block Storage as a Service and replace all prior oral or written communications, representations, undertakings, warranties, promises, covenants, and commitments between Client and IBM regarding this Service. In entering into this SD, neither party is relying on any representation that is not specified in this SD or the Agreement. Additional or different terms in any written communication from Client (such as a purchase order) are void.

Each party accepts the terms of this SD by signing this SD (or another document that incorporates it by reference) by hand or, where recognized by law, electronically. Once signed, (i) any reproduction of this SD made by reliable means (for example, electronic image, photocopy, or facsimile) is considered an original, and (ii) all Services ordered under this SD are subject to it. If there is a conflict among the various documents, 1) the terms of this SD prevail over those of the Agreement, and 2) the terms of a Transaction Document prevail over both documents.

Agreed to:	*Agreed to:*
(Client Legal Name} (Client)	**International Business Machines Corporation (IBM)**
By _____ Authorized signature	By _____ Authorized signature
Name: (type or print)	Name:
Date:	Date:
Enterprise number:	

Schedule - IBM Block Storage as a Service 2.0 for DS8000

Client: {Client Full Legal Name} (Client)

Agreement Number: {nnnnn}

Schedule Number: {nnn}

Date:

This Schedule details provision of STaaS Infrastructure under the IBM Block Storage as a Service agreement.

Service Tiers

IBM will perform and provide these SLOs as described herein.

	Extreme Tier 1	**Premium** Tier 2	**Balanced** Tier 3
IOPS/TB*	5500	2300	1200

*Per TB figures are based on full box capacity

Mainframe workload: The IOPS/TB performance characteristics are based on a 75/25 mixed read/write non-sequential workload (database) with 78% cache hits and a 4KiB IO size. The maximum throughput values are based on 100% read or write sequential workloads with 6 × 27K transfers. Remote replication may impact performance. Actual results will vary by workload; as such, these performance characteristics should be used only for the purpose of comparing the relative performance tiers.

Distributed workload: The IOPS/TB performance characteristics are based on a 70/30 mixed read/write non-sequential workload (database) with 50% read cache hits and 4 KiB I/O size. The maximum throughput values are based on 100% read or write sequential workloads with 256 KiB I/O size. Remote replication may impact performance. Actual results will vary by workload; as such, these performance characteristics should be used only for the purpose of comparing the relative performance tiers

Schedule (Note: example $ only)

STaaS Environment Number:	1	2	3
STaaS Environment Name:	New York City	Albany	Poughkeepsie
Service Tier:	Extreme	Extreme	Extreme
Base Capacity Commitment:	60	120	240
Charge Rate (Charge Per TB per Month):	$xx.xx	$xx.xx	$xx.xx
Subscription Period	Quarterly (example)	Quarterly	Quarterly
Base Capacity Commitment Subscription Charge: (Base Monthly Capacity Commitment x Charge Rate x months in Base Billing Period - Billed in Advance - Excludes Taxes)	$xxx,xxx.xx	$ xxx,xxx.xx	$ xxx,xxx.xx
Additional Variable Per TB per Month Charge as used: (Set at Charge Rate, Billed Quarterly in Arrears)	$xx.xx	$xx.xx	$xx.xx
Estimated Capacity Growth (year over year)	10%	10%	10%
Requested Installation (actual term start date will be based on actual install date):	July 1st, 2095	July 1St, 2095	July 1st, 2095
Service Term of Coverage:	5 Years	5 Years	5 Years
Termination Fee Percentage	50%	50%	50%

The quoted charges above are valid for 30 days from the date of this transaction document, after 30 days Client may request a current quote from IBM.