

[Get Started for Free](#)[Contact Us](#)

Amazon OpenSearch Service ▾

[Overview](#)[Features ▾](#)[Pricing](#)[Getting Started ▾](#)[Resources ▾](#)[Migrations](#)[Partners](#)[FAQs](#)[Products](#) / [Analytics](#) / [Amazon OpenSearch Service](#)

Amazon OpenSearch Service FAQs

General

Q: What is Amazon OpenSearch Service?

Amazon OpenSearch Service is a managed service that makes it easy for you to perform interactive log analytics, real-time application monitoring, website search, and more.

[OpenSearch](#) is an open source, distributed search and analytics suite derived from Elasticsearch. Amazon OpenSearch Service offers the latest versions of OpenSearch, support for 19 versions of Elasticsearch (1.5 to 7.10 versions), as well as visualization capabilities powered by OpenSearch Dashboards and Kibana (1.5 to 7.10 versions). Amazon OpenSearch Service currently has tens of

**Q: Which OpenSearch and Elasticsearch versions does Amazon OpenSearch Service support?**

Amazon OpenSearch Service offers the latest versions of OpenSearch and support for 19 versions of Elasticsearch (1.5 to 7.10 versions). For more details refer our [documentation](#).

Q: What is an Amazon OpenSearch Service domain?

Amazon OpenSearch Service domains are Elasticsearch (1.5 to 7.10) or OpenSearch clusters created using the Amazon OpenSearch Service console, CLI, or API. Each domain is an OpenSearch or Elasticsearch cluster in the cloud with the compute and storage resources you specify. You can create and delete domains, define infrastructure attributes, and control access and security. You can run one or more Amazon OpenSearch Service domains.

Q: What does Amazon OpenSearch Service manage on my behalf?

Amazon OpenSearch Service manages the work involved in setting up a domain, from provisioning infrastructure capacity in the network environment you request to installing the OpenSearch or Elasticsearch software. Once your domain is running, Amazon OpenSearch Service automates common administrative tasks, such as performing backups, monitoring instances and patching software. Amazon OpenSearch Service integrates with Amazon CloudWatch to produce metrics that provide information about the state of the domains. Amazon OpenSearch Service also offers options to modify your domain instance and storage settings to simplify the task of tailoring your domain based to your application needs.

Q: Does Amazon OpenSearch Service support the open-source Elasticsearch and OpenSearch APIs?

Amazon OpenSearch Service supports most of the commonly used OpenSearch and Elasticsearch APIs, so the code, applications, and popular tools that you're already using with your Elasticsearch (up to version 7.10) or OpenSearch environments work seamlessly. For a full list of supported operations, see our [documentation](#).

Q: What are the Availability Zone (AZ) deployment options available on Amazon OpenSearch Service?

Amazon OpenSearch Service offers customers the option to deploy their instances across one, two, or three AZs. Customers running development or test workloads can pick the single AZ option. Those running production-grade workloads should use two or three AZs. Three AZ deployments are strongly recommended for workloads with higher availability requirements.



Amazon OpenSearch Service supports three AZ deployments in all regions in which the service is available, except US West (N. California), where we support two AZs only.

Q: How can Amazon OpenSearch Service be used for resources running on premises or on other clouds?

Amazon OpenSearch Service is a fully managed service that lets you run and scale OpenSearch clusters without having to worry about managing, monitoring, and maintaining your infrastructure, or having to build in-depth expertise in operating OpenSearch clusters. As a fully managed service, Amazon OpenSearch Service currently runs on AWS. However, OpenSearch is a distributed, community-driven, Apache 2.0-licensed, 100% open-source search and analytics suite that you can run on premises or in [hybrid and multicloud environments](#). For example, there are partners who provide OpenSearch on other cloud platforms, or use OpenSearch in their applications. OpenSearch helps you more easily ingest, secure, search, aggregate, view, and analyze data for a number of use cases such as log analytics, application search, enterprise search, and more. OpenSearch provides a highly scalable system for providing fast access and response to large volumes of data with an integrated visualization tool—OpenSearch Dashboards—that makes it easier for users to explore their data. OpenSearch is powered by the Apache Lucene search library, and it supports a number of search and analytics capabilities such as k-nearest neighbors (KNN) search, SQL, Anomaly Detection, Machine Learning Commons, Trace Analytics, full-text search, and more.

Setup and configuration

Q: Can I create and modify my Amazon OpenSearch Service domain through the Amazon OpenSearch Service console?

Yes. You can create a new Amazon OpenSearch Service domain with the Domain Creation Wizard in the console with just a few clicks. While creating a new domain you can specify the number of instances, instance types, and EBS volumes you want allocated to your domain. You can also modify or delete existing Amazon OpenSearch Service domains using the console.

Q: Does Amazon OpenSearch Service support Amazon VPC?

Yes, Amazon OpenSearch Service is integrated with Amazon VPC. When choosing VPC access, IP addresses from your VPC are attached to your Amazon OpenSearch Service domain and all network traffic stays within the AWS network and is not accessible to the Internet. Moreover, you



Yes. [AWS CloudFormation](#) supports Amazon OpenSearch Service. For more information, see the [CloudFormation Template Reference](#) documentation.

Q: Does Amazon OpenSearch Service support configuring dedicated master nodes?

Yes. You can configure dedicated master nodes for your domains. When choosing a dedicated master configuration, you can specify the instance type and instance count.

Q: Can I create multiple Elasticsearch or OpenSearch indices within a single Amazon OpenSearch Service domain?

Yes. You can create multiple Elasticsearch or OpenSearch indices within the same Amazon OpenSearch Service domain. Elasticsearch and OpenSearch automatically distribute the indices and any associated replicas between the instances allocated to the domain.

Q: How do I ingest data into my Amazon OpenSearch Service domain?

Amazon OpenSearch Service supports three options for data ingestion:

- For large data volumes, we recommend Amazon Kinesis Data Firehose, a fully managed service that automatically scales to match the throughput of your data and requires no ongoing administration. It can also transform, batch and compress the data before loading it.
- Amazon OpenSearch Service supports integration with Logstash. You can configure your Amazon OpenSearch Service domain as the data store for all logs arriving from your Logstash implementation.
- You can use native Elasticsearch (up to version 7.10) or OpenSearch APIs, such as the index and bulk APIs, to load data into your domain.

Q: Does Amazon OpenSearch Service support integration with Logstash?

Yes. Amazon OpenSearch Service supports integration with Logstash. You can set up your Amazon OpenSearch Service domain as the backend store for all logs coming through your Logstash implementation. You can set up access control on your Amazon OpenSearch Service domain to either use request signing to authenticate calls from your Logstash implementation, or use resource based IAM policies to include IP addresses of instances running your Logstash implementation.

Q: Does Amazon OpenSearch Service support integration with Kibana?



You can choose between local on-instance storage or EBS volumes. During domain creation, if you select EBS storage, you can increase and decrease the size of the storage volume as necessary.

Q: What types of EBS volumes does Amazon OpenSearch Service support?

You can choose between Magnetic, General Purpose, and Provisioned IOPS EBS volumes.

Q: Is there a limit on the amount of storage that can be allocated to an Amazon OpenSearch Service domain?

Yes. Amazon OpenSearch Service deploys storage based on the choice of instance and/or the size of the associated EBS volume. The maximum storage per node is 24 TB with R6g.12xlarge instances with EBS gp3 storage. With the default maximum of 80 data nodes allowed per Amazon OpenSearch Service domain, you can allocate about 1920 TB of storage to a single domain. You can request a service limit increase up to 200 instances per domain by creating a case with the [AWS Support Center](#). With 200 instances, you can allocate about 3 PB of storage to a single domain.

Q: How are dedicated master instances distributed across AZs?

If you deploy your data instances in a single AZ, your dedicated master instances are also deployed in the same AZ. However, if you deploy your data instances across two or three AZs, Amazon OpenSearch Service automatically distributes the dedicated master instances across three AZs. The exception to this rule occurs if a region only has two AZs or if you select an older-generation instance type for the master instances that is not available in all AZs. For more details, refer to our [documentation](#).

Q: What is the recommended AZ configuration for production workloads?

For production workloads, we recommend deploying your data instances across three AZs since it offers better availability. Also, we recommend provisioning instances in multiples of three for equal distribution across AZs. In regions where three AZs are not available, we recommend using a two AZ deployment with an even number of data instances. In all cases, we recommend provisioning three dedicated master instances.

Q: How can I configure my domain for three AZ deployment?



No. Amazon OpenSearch Service does not charge anything for enabling three AZ deployment. You only pay for the number of instances in your domain, not the number of AZs to which they are deployed.

Q: I no longer see the “zone awareness” option in my console. Is my domain no longer zone aware?

All domains configured for multiple AZs will have zone awareness enabled to ensure shards are distributed across Availability Zones. In the console, you can now explicitly choose two or three AZ deployments. Domains previously configured with “Zone Awareness” will continue to be deployed across two AZs unless they are reconfigured. For more details, refer our [documentation](#).

Q: How does Amazon OpenSearch Service handle instance failures and AZ disruptions?

If one or more instances in an AZ are unreachable or not functional, Amazon OpenSearch Service automatically tries to bring up new instances in the same AZ to replace the affected instances. In the rare event that new instances cannot be brought up in the AZ, Amazon OpenSearch Service brings up new instances in the other available AZs if the domain has been configured to deploy instances across multiple AZs. Once the AZ issue resolves, Amazon OpenSearch Service rebalances the instances such that they are equally distributed across the AZs configured for the domain. For more details refer our [documentation](#).

Q: If I have only one replica for the indices in my domain, should I use two or three AZs?

Even when you configure one replica, we recommend three AZs. If an AZ disruption occurs in a three AZ domain, you only lose one-third of your capacity but if the disruption occurs in a two AZ domain, you lose half your capacity, which can be more disruptive. Also, in a three AZ domain, when an AZ is disrupted, Amazon OpenSearch Service can fall back to the two remaining AZs, and still support cross-AZ replication. In a two AZ domain, you lose cross-AZ replication if one AZ is disrupted, which can further reduce availability. For more details refer our [documentation](#).

Q: How do I leverage three AZ deployment for my VPC domain?

The number of AZs your domain is deployed to corresponds to the number of subnets you have configured for your VPC domain. You need to configure at least three subnets in your VPC

[Get Started for Free](#)[Contact Us](#)

Administration

Q: Can programs running on servers in my own data center access my Amazon OpenSearch Service domains?

Yes. The programs with public Internet access can access Amazon OpenSearch Service domains through a public endpoint. If your data center is already connected to Amazon VPC through Direct Connect or SSH tunneling, you can also use VPC access. In both cases, you can configure IAM policies and security groups to allow programs running on servers outside of AWS to access your Amazon OpenSearch Service domains. [Click here](#) for more information about signed requests.

Q: How can I migrate data from my existing OpenSearch/Elasticsearch cluster to a new Amazon OpenSearch Service domain?

To migrate data from an existing Elasticsearch or OpenSearch cluster, you should create a snapshot of an existing cluster, and store the snapshot in your Amazon S3 bucket. Then you can create a new Amazon OpenSearch Service domain and load data from the snapshot into the newly created Amazon OpenSearch Service domain using the restore API.

Q: How can I scale an Amazon OpenSearch Service domain?

Amazon OpenSearch Service allows you to control the scaling of your Amazon OpenSearch Service domains using the console, API, and CLI. You can scale your Amazon OpenSearch Service domain by adding, removing, or modifying instances or storage volumes depending on your application needs. Amazon OpenSearch Service is integrated with Amazon CloudWatch to provide metrics about the state of your Amazon OpenSearch Service domains to enable you to make appropriate scaling decisions for your domains.

Q: Does scaling my Amazon OpenSearch Service domain require downtime?

No. Scaling your Amazon OpenSearch Service domain by adding or modifying instances, and storage volumes is an online operation that does not require any downtime.

Q: Does Amazon OpenSearch Service support cross-zone replication?

Yes. If you enable replicas for your OpenSearch/Elasticsearch indices and use multiple Availability Zones, Amazon OpenSearch Service automatically distributes your primary and



Yes. Amazon OpenSearch Service exposes several performance metrics through Amazon CloudWatch including number of nodes, cluster health, searchable documents, EBS metrics (if applicable), CPU, memory and disk utilization for data and master nodes. Please refer to the service documentation for a full listing of available CloudWatch metrics.

Q: I wish to perform security analysis or operational troubleshooting of my Amazon OpenSearch Service deployment. Can I get a history of all the Amazon OpenSearch Service API calls made on my account?

Yes. AWS CloudTrail is a web service that records AWS API calls for your account and delivers log files to you. The AWS API call history produced by AWS CloudTrail enables security analysis, resource change tracking, and compliance auditing. Learn more about AWS CloudTrail at the [AWS CloudTrail detail page](#), and turn it on via [CloudTrail's AWS Management Console home page](#).

Q: What is a snapshot?

A snapshot is a copy of your Amazon OpenSearch Service domain at a moment in time.

Q: Why would I need snapshots?

Creating snapshots can be useful in case of data loss caused by node failure, as well as the unlikely event of a hardware failure. You can use snapshots to recover your Amazon OpenSearch Service domain with preloaded data or to create a new Amazon OpenSearch Service domain with preloaded data. Another common reason to use backups is for archiving purposes. Snapshots are stored in Amazon S3.

Q: Does Amazon OpenSearch Service provide automated snapshots?

Yes. By default, Amazon OpenSearch Service automatically creates hourly snapshots of each Amazon OpenSearch Service domain and retains them for 14 days.

Q: How long are the automated daily hourly snapshots stored by Amazon OpenSearch Service?

Amazon OpenSearch Service will retain the last 14 days' worth of automated hourly snapshots.

Q: Is there a charge for the automated daily hourly snapshots?

**Q: Can I create additional snapshots of my Amazon OpenSearch Service domains as needed?**

Yes. You can use the snapshot API to create additional manual snapshots in addition to the daily-automated snapshots created by Amazon OpenSearch Service. The manual snapshots are stored in your S3 bucket and will incur relevant Amazon S3 usage charges.

Q: Can snapshots created by the manual snapshot process be used to recover a domain in the event of a failure?

Yes. Customers can create a new Amazon OpenSearch Service domain and load data from the snapshot into the newly created Amazon OpenSearch Service domain using the OpenSearch/Elasticsearch restore API.

Q: What happens to my snapshots when I delete my Amazon OpenSearch Service domain?

The daily snapshots retained by Amazon OpenSearch Service will be deleted as part of domain deletion. Before deleting a domain, you should consider creating a snapshot of the domain in your own S3 buckets using the manual snapshot process. The snapshots stored in your S3 bucket will not be affected if you delete your Amazon OpenSearch Service domain.

Q: What types of OpenSearch/Elasticsearch logs are exposed by Amazon OpenSearch Service?

Amazon OpenSearch Service exposes three Elasticsearch or OpenSearch logs through Amazon CloudWatch Logs: error logs, search slow logs, and index slow logs. These logs are useful for troubleshooting performance and stability issues with one's domain.

Q: What are slow logs?

Slow logs are log files that help track the performance of various stages in an operation. OpenSearch and Elasticsearch exposes two kinds of slow logs:

- **Index Slow Logs** – These logs provide insights into the indexing process and can be used to fine-tune the index setup.
- **Search Slow Logs** – These logs provide insights into how fast or slow queries and fetches are performing. These logs help fine tune the performance of any kind of search operation on OpenSearch or Elasticsearch.

For complete details on slow logs, please refer to [OpenSearch documentation](#).

**Q: Can I only enable slow logs for specific indices?**

Yes. You can update the settings for a specific index to enable or disable slow logs for it. For more details refer to our [documentation](#).

Q: Does turning on slow logs in Amazon OpenSearch Service automatically enable logging for all indexes?

No. Turning on slow logs in Amazon OpenSearch Service enables the option to publish the generated logs to Amazon CloudWatch Logs for indices in the given domain. However, in order to generate the logs you have to update the settings for one or more indices to start the logging process. For more details on setting the index configuration for enabling slow logs, please refer to our [documentation](#).

Q: If I turn off the slow logs in Amazon OpenSearch Service, does it mean that log files are no longer being generated?

No. The generation of log files are dependent on the index settings. To turn off generation of the log files you have to update the index configuration. For more details on setting the index configuration for enabling slow logs, see our [documentation](#).

Q: Can I change the granularity of logging?

You can only change the granularity of logging for slow logs. OpenSearch and Elasticsearch expose multiple levels of logging for slow logs. You need to set the appropriate level in the configuration of your index. For more details on setting the index configuration for enabling slow logs, please refer to [OpenSearch documentation](#).

Q: Will enabling slow logs or error logs cost me anything?

When slow logs or error logs are enabled, Amazon OpenSearch Service starts publishing the generated logs to CloudWatch Logs. Amazon OpenSearch Service does not charge anything for enabling the logs. However, standard [CloudWatch charges](#) will apply.

Q: What kinds of error logs are exposed by Amazon OpenSearch Service?

OpenSearch uses [Apache Log4j 2](#) and its built-in log levels (from least to most severe) of TRACE, DEBUG, INFO, WARN, ERROR, and FATAL. If you enable error logs, Amazon OpenSearch Service



Error logs can be enabled via the click of a button from the AWS Console or via our CLI and APIs. For more details please refer to our [documentation](#).

Q: Can I enable error logs for only specific indices?

No, error logs are exposed for the entire domain. That is, once enabled, log entries from all indices in the domain will be made available.

Q: Are error logs available for all versions of Elasticsearch supported by Amazon OpenSearch Service?

No, error logs are available only for Elasticsearch versions 5.x and above.

Q: Is there any limit on the size of each log entry?

Yes. Each log entry made into CloudWatch will be limited to 255,000 characters. If your log entry is bigger than that, it will be truncated to 255,000 characters.

Q: What is the recommended best practice for using slow logs?

Slow logs are only needed when you want to troubleshoot your indexes or fine-tune performance. The recommended approach is to only enable logging for those indexes for which you need additional performance insights. Also, once the investigation is done, you should turn off logging so that you don't incur any additional costs on account of it. For more details, see our [documentation](#).

Q: How can I consume logs from CloudWatch Logs?

CloudWatch offers multiple ways to consume logs. You can [view log data](#), [export it to S3](#), or [process it in real time](#). To learn more, see the [CloudWatch Logs developer guide](#).

Q: Are slow logs available for all versions of OpenSearch and Elasticsearch supported by Amazon OpenSearch Service?

Yes, slow logs can be enabled for all versions of OpenSearch and Elasticsearch supported by Amazon OpenSearch Service. However, there are slight differences in the way log settings can be specified for each version of Elasticsearch. Please refer to our [documentation](#) for more details.

Q: Will the cluster have any down time when logging is turned on or off?

**Q: Which Elasticsearch and OpenSearch versions does the in-place upgrade feature support?**

Amazon OpenSearch Service currently supports in-place version upgrade for domains with any OpenSearch version or Elasticsearch versions 5.x and above. The target versions that we support for the upgrade are 5.6, 6.3, 6.4, 6.5, 6.7, 6.8, 7.1, 7.4, 7.7, 7.8, 7.9, and 7.10. For more details refer our [documentation](#).

Q: My domain runs a version of Elasticsearch older than 5.x. How do I upgrade those domains?

Please refer to our [documentation](#) for details on migrating from various Elasticsearch versions.

Q: Will my domain be offline while the in-place upgrade is in progress?

No. Your domain remains available throughout the upgrade process. However, part of the upgrade process involves relocating shards, which can impact domain performance. We recommend upgrading when the load on your domain is low.

Q: How can I check if my domain's Elasticsearch version can be upgraded?

In-place version upgrade is available only for domains running Elasticsearch 5.x and above. If your domain is of version 5.x or above, you can run the upgrade eligibility check to validate whether your domain can be upgraded to the desired version. Please refer to our [documentation](#) to learn more.

Q: What are the tests done by Amazon OpenSearch Service to validate my domains upgrade eligibility?

For detailed list of the tests we run to validate upgrade eligibility, please refer to our [documentation](#).

Q: Can I update my domain configuration while the version upgrade is in progress?

No. Once the in-place version upgrade has been triggered, you cannot make changes to your domain configuration until the upgrade completes or fails. You can continue reading and writing data while the upgrade is in progress. Also, you can delete the domain, in which case the upgrade is terminated and the domain deleted.



actual upgrade if the snapshot succeeds. If the upgrade is in progress when the automated snapshot's start time is reached, the automated snapshot is skipped for that day and continued on the next day.

Q: How does Amazon OpenSearch Service safeguard against issues that can crop up during version upgrades?

Amazon OpenSearch Service runs a set of tests before triggering the upgrade to check for known issues that can block the upgrade. If no issues are encountered, the service takes a snapshot of the domain and starts the upgrade process if the snapshot is successful. The upgrade is not triggered if there are any issues encountered with any of the steps.

Q: What happens if the system encounters issues while performing the in-place version upgrade?

If encountered issues are minor and fixable, Amazon OpenSearch Service automatically tries to address them and unblock the upgrade. However, if an issue blocks the upgrade, the service reverts back to the snapshot that was taken before the upgrade and logs the error. For more details on viewing the logs from the upgrade progress, please refer to our [documentation](#).

Q: Can I view the history of upgrades on my domain?

Yes. You can view the upgrade logs from the AWS console or request them using the CLI or SDKs. Please refer to our [documentation](#) for more details.

Q: Can I pause or cancel the version upgrade after it has been triggered?

No. After the upgrade has been triggered, it cannot be paused or cancelled until it either completes or fails.

Q: Can I run in-place version upgrade on multiple domains in parallel?

Yes. However, if you want to keep all of your domains on the same version, we recommend running the upgrade eligibility check on all domains before upgrading them. This extra step can help catch issues with one domain that might not be present on others.

Q: How long does the in-place version upgrade take?



No. With in-place version upgrade, all the data in your cluster is also restored as part of the upgrade process. If you only wish to upgrade the domain alone, you can take a snapshot of your data, delete all your indexes from the domain and then trigger an in-place version upgrade. Alternatively, you can create a separate domain with the newer version and then restore your data to that domain.

Q: Can I downgrade to previous version if I'm not comfortable with the new version?

No. If you need to downgrade to an older version, contact AWS Support to restore the automatic, pre-upgrade snapshot on a new domain. If you took a manual snapshot of the original domain, you can perform this step yourself.

Multi-AZ with Standby

Q: What is Multi-AZ with Standby?

Multi-AZ with Standby is a new deployment option for Amazon OpenSearch Service that enables high-availability and consistent performance for business-critical workloads. With Multi-AZ with Standby, OpenSearch Service managed clusters are resilient to infrastructure failures like node drops, or a single Availability Zone failure, assuring no impact to performance or availability, even in the event of a single Availability Zone failure. Multi-AZ with Standby provides the added benefit of simplifying cluster configuration and management by enforcing best practices and reducing complexity.

Q: What are the pre-requisites for creating or updating a cluster with Multi-AZ with Standby?

To enable Multi-AZ with Standby, managed clusters need to meet the following conditions:

- Run OpenSearch 1.3 or more recent version.
- Deploy in AWS Regions with 3-AZ. Currently, AWS North California region does not support 3-AZ and are therefore not suitable for Multi-AZ with Standby.
- Number of data nodes needs to be in multiples of three.
- Number of data copies (primary + replica) should be in multiples of three.
- Follow sizing guidelines for the leader (recommended size based on number of nodes, number of shards, and number of mappings in your cluster).



from active to standby nodes in under a minute when any of the following events occur:

- Loss of one active AZ or all nodes in an active AZ
- Loss of connectivity to one active AZ
- Instance hardware failure in the active AZ
- Storage failure on a node in the active AZ

Currently Multi-AZ with Standby does not cover the following events:

- Loss of master Quorum, as recovery from this event can take several minutes
- Loss of multiple Availability Zones
- Loss of connectivity to a Region
- Loss of more than 50% nodes in more than one AZ
- Downtime caused due to insufficient compute or storage as a result of change in workload characteristics
- Downtime caused due to rouge queries
- Loss of one or more services that Amazon OpenSearch Service depends on like ARPS and ALB
- Downtime of OpenSearch Dashboard during version upgrades

Q: Do managed clusters that use Multi-AZ with Standby need to be sized differently? How do we size managed clusters for Multi-AZ with Standby?

No. In principle, the sizing guidelines remain the same. Multi-AZ with Standby has pre-requisites that simplify the mental model required to size the cluster. The way to think of sizing for managed cluster is that you should look at the capacity needed to service your workload and then add 50% for redundancy. The primary difference between the current 'Zone Awareness' option and the Multi-AZ with Standby option is how redundant or additional capacity is handled to maintain availability. Multi-AZ with Standby requires you have at least one copy of data in each AZ, so that Multi-AZ with Standby can explicitly reserve capacity in one AZ as standby. This standby capacity acts as a failover target during AZ disruption or instance failure. The existing model requires that you maintain an optimum levels of resources to serve your workload. You would continue to monitor your cluster for sizing issues and take corrective actions as the workload characteristics changes.



ensuring that your cluster is sized in accordance with your workload. Multi-AZ with Standby make the mental model of setting up your cluster simple. You should continue to monitor the error and latency metrics along with storage, CPU and RAM utilization for signals that the cluster is overloaded and may need to be scaled.

Q: Will I incur additional cost if I use Multi-AZ with Standby?

No. The feature Multi-AZ with Standby is available at no extra cost. You continue to pay for the resources deployed on the cluster to serve your workload. If your cluster already follows the **best practices** and has at least three copies of data for a 3-AZ cluster, you are unlikely to incur additional cost in moving to Multi-AZ with Standby. However, if your cluster is undersized or does not have enough redundant capacity to serve your workload, you will need to add capacity to move to Multi-AZ with Standby for enhanced availability and performance. The standby capacity is reserved from the configured total capacity.

Service Level Agreement

Q: What does the Amazon OpenSearch Service SLA guarantee?

Our Amazon OpenSearch Service SLA guarantees a Monthly Uptime Percentage of at least 99.9% for Amazon OpenSearch Service.

Q: How do I know if I qualify for a SLA Service Credit?

You are eligible for a SLA credit for Amazon OpenSearch Service under the Amazon OpenSearch Service SLA if multi-AZ domains on Amazon OpenSearch Service have a Monthly Uptime Percentage of less than 99.9% during any monthly billing cycle.

For full details on all of the terms and conditions of the SLA, as well as details on how to submit a claim, please see the [Amazon OpenSearch Service SLA details page](#).

Cross-cluster search

Q: What is cross-cluster search?

**Q: What are the minimum requirements for a domain to participate in cross-cluster search?**

Domains participating in a cross-cluster search needs to meet the following criteria:

- Participating domains should be on OpenSearch or Elasticsearch version 6.8 and above
- Participating domains need to have encryption in transit enabled
- Participating domains need to have Fine Grained Access Control (FGAC) enabled
- Participating domains versions should adhere to the same rules as rolling version upgrade

Q: What are the instance types that support cross-cluster search?

Cross-cluster search is currently supported on the following instance types

- i2, i3 family
- r3, r4, r5 family
- m4, m5 family
- c4, c5, family
- Graviton family

Q: What are the instance types that do not support cross-cluster search?

Cross-cluster search is not supported on the t2 and m3 family instances due to technical limitation.

Q: Can domains in two different AWS accounts participate in cross-cluster search?

Yes. Participating domains can belong to two different AWS accounts.

Q: Can domains in two different AWS regions participate in cross-cluster search?

No.

Q: How can I start using cross-cluster search?

To get started with cross-cluster search, follow the documentation [here](#)



Cross-cluster replication, a new capability that allows Amazon OpenSearch Service customers to automate copying and synchronizing indices from one cluster to another at low latency in same or different AWS Regions.

Q: What are the minimum requirements for a domain to participate in cross-cluster replication?

Domains participating in a cross-cluster replications needs to meet the following criteria:

- Participating domains should be on Elasticsearch version 7.10
- Participating domains need to have encryption in transit enabled
- Participating domains need to have Fine Grained Access Control (FGAC) enabled
- Participating domains versions should adhere to the same rules as rolling version upgrade

Q: Can domains in two different AWS Regions participate in cross-cluster replication?

Yes. domains in two different AWS Regions can participate in cross-cluster replication.

Q: Does cross-cluster replication support Ultrawarm and Cold Storage?

No. Current implementation of cross-cluster replication does not support Ultrawarm or Cold Storage.

Q: What are the charges for cross-cluster replication?

Yes. You need to pay standard AWS [data transfer](#) charges for the data transferred in and out of Amazon OpenSearch Service.

Name change

Q: Why did the name change to Amazon OpenSearch Service from Amazon Elasticsearch Service?

We announced the OpenSearch project, a community-driven, open source fork of Elasticsearch and Kibana, on April 12, 2021. We committed to making a long-term investment in OpenSearch to ensure users continue to have a secure, high-quality, fully open source search and analytics suite with a rich roadmap of new and innovative functionality. This project includes OpenSearch



Along with OpenSearch 1.0, we continue to support legacy Elasticsearch versions until 7.10 on the service. Aside from the name change, you can rest assured that we will continue to deliver the same great experience without any impact to ongoing operations, development methodology, or business use. Learn more about OpenSearch here: <https://opensearch.org/>.

Q: Do I, as a customer, have to take any action as part of this name change?

We have strived to make this name change as seamless as possible for you. There are aspects, such as the new SDK/configuration APIs, that require your action to ensure you derive the best benefits from the service. While the existing SDK will continue to work from a compatibility perspective, any new functionality that requires new configuration APIs will only be implemented in the new SDK. Hence, we recommend that you move to the new SDK. In addition, irrespective of the new SDK, we strongly recommend that you move your existing IAM policies to use the renamed configuration APIs. As of now, your existing IAM policies will continue to work with the old API definition. However, we will move over to the new API-based permission validation and we will eventually require you to use the new APIs in your policies (specifically for the APIs where there is a name change; e.g. CreateElasticsearchDomain to CreateDomain). Please see the documentation for more details.

Q: Do I have to move to the new SDK to upgrade to OpenSearch 1.0?

No. From a backward compatibility perspective, we will ensure that your existing setup continues to work with OpenSearch 1.0. However, we recommend that you eventually move to the latest SDK for a cleaner and up-to-date experience, as mentioned above.

Q: Are there any changes to pricing with this name change?

No. There are no changes to pricing.

OpenSearch includes certain Apache-licensed Elasticsearch code from Elasticsearch B.V. and other source code. Elasticsearch B.V. is not the source of that other source code. ELASTICSEARCH is a registered trademark of Elasticsearch B.V.

Upgrades

Q: I'm using the Elasticsearch engine in Amazon OpenSearch Service. Why should I upgrade to the OpenSearch 1.x engine? What are the benefits for me?



detection, and more are all part of OpenSearch Service, with no additional licensing fees.

Q: Will I have downtime if I upgrade?

We use a blue/green (BG) deployment process during upgrade. During a BG, the service adds nodes to the OpenSearch Service cluster in the new configuration and version, migrates data from the old nodes, and drops the old nodes when the data migration is complete. During a BG, search and indexing APIs are available and function normally. Although BG is designed not to interfere with query and indexing requests, some changes (especially those involving changes to security-related settings) can cause dashboards to be unavailable during the period of change.

Q: Is AWS deprecating older versions of Elasticsearch Service?

AWS maintains 19 versions of Apache-2.0-licensed Elasticsearch. None of these versions are deprecated or planned for deprecation at this time.

Q: Will the upgrade trigger a BG? If not, what is the process for upgrading our nodes?

Yes, the upgrade will trigger a BG deployment process. Please review the upgrade preparation and steps [here](#).

Q: I want to move to Amazon OpenSearch Service 1.x to take advantage of AWS Graviton2 instances, but I am locked in with my existing reserved instances (RIs). How can you help?

Please work with your AWS account team for information based on your specific situation with RIs.

Q: What should I plan for before initiating an upgrade to Amazon OpenSearch Service 1.x or greater?

The OpenSearch project 1.0 is a fork of open source Elasticsearch 7.10.2. It is wire-compatible with Elasticsearch 7.10--you don't need to change your usage. To migrate, you can upgrade your domain to version Elasticsearch 7.10 from any prior version in the 6.x and 7.x series, take a snapshot, and restore that snapshot to a domain running OpenSearch Service 1.x. Some clients or tools include version checks that may cause the client or tool to not work with OpenSearch Service. When you [upgrade](#), enable compatibility mode to work around these version checks.

Q: Can I continue to use my existing clients, data collection, and data ingestion tools with Amazon OpenSearch Service 1.x?



your clients up to a minimum standard of support on 7.10.2 to ensure a smooth transition.

The OpenSearch project supports a broad range of clients that are specifically built to address the OpenSearch versions of the engine on Amazon OpenSearch Service. Check your client against [the list of the latest OpenSearch clients and supported programming languages](#) for those clients.

You can enable the [compatibility mode feature](#) to interoperate with clients from other vendors, but remember to check the version that OpenSearch reports. Enable this setting to ensure the service responds with version 7.10.2 to clients developed prior to the introduction of the OpenSearch Service engine.

Q: I'm running Elasticsearch version 5.x or earlier. What's my best upgrade path?

Elasticsearch 5.x indices are not compatible with Elasticsearch 7.10 or OpenSearch 1.x. You must create a new index and load data from your source. If you are running a log analytics workload, you can evaluate whether your data retention strategy supports running in parallel while you build up a full data set on the new domain.

Q: Are there any partners that can help me with my upgrade?

Yes, please contact opensearchmigration-si-support@amazon.com to request a list of partners for your region, industry, and project complexity. [AWS Partner Network \(APN\) partners](#) are trained and have the experience to assist you with upgrades.

Q: Will Amazon OpenSearch Service remain compatible with Elasticsearch in the future? What's the plan for the future?

OpenSearch 1.0 is a fork of Elasticsearch 7.10.2. OpenSearch and Elasticsearch are compatible. If you enable compatibility mode, Elasticsearch clients are also compatible with OpenSearch 1.0.

Amazon OpenSearch Service does not and will not offer versions of the Elasticsearch engine after version 7.10.2.

As [AWS announced when we forked Elasticsearch](#), we intended to build, and have built a thriving community around OpenSearch. We have published a [roadmap for OpenSearch](#), complete with community input and consensus on the feature priorities. We will make every reasonable effort

[Get Started for Free](#)[Contact Us](#)

6.8.0 to 7.10.2, and open distro for Elasticsearch (ODFE) 1.x. For rolling upgrades from ODFE to OpenSearch, we recommend first upgrading to ODFE 1.13, then upgrading to OpenSearch 1.0.

Migration resources are here:

[Analytics Migrations](#)[Migrating to Amazon OpenSearch Service](#)

Learn more about Amazon OpenSearch Service pricing

[Visit the pricing page](#)

Ready to build?

[Get started with Amazon OpenSearch Service](#)

Have more questions?

[Contact us](#)

Get Started with AWS

Learn how to start using AWS in minutes



What's New with AWS

Learn about the latest products, services, and more



Migrate to Cloud: AWS Webinar Series | June 27-29



[Get Started for Free](#)[Contact Us](#)[Sign In to the Console](#)

Learn About AWS

[What Is AWS?](#)[What Is Cloud Computing?](#)[AWS Inclusion, Diversity & Equity](#)[What Is DevOps?](#)[What Is a Container?](#)[What Is a Data Lake?](#)[AWS Cloud Security](#)[What's New](#)[Blogs](#)[Press Releases](#)

Resources for AWS

[Getting Started](#)[Training and Certification](#)[AWS Solutions Library](#)[Architecture Center](#)[Product and Technical FAQs](#)[Analyst Reports](#)[AWS Partners](#)


Developers on AWS



[Developer Center](#)[SDKs & Tools](#)[.NET on AWS](#)[Python on AWS](#)[Java on AWS](#)[PHP on AWS](#)[JavaScript on AWS](#)

Help

[Contact Us](#)[Get Expert Help](#)[File a Support Ticket](#)[Knowledge Center](#)[AWS re:Post](#)[AWS Support Overview](#)[Legal](#)[AWS Careers](#)[UK Modern Slavery Statement](#)[UK Carbon Reduction Plan](#)[Sign In to the Console](#)

Amazon is an Equal Opportunity Employer: *Minority / Women / Disability / Veteran / Gender Identity / Sexual Orientation / Age.*





Get Started for Free

Contact Us

English |

Español |

Français |

Italiano |

Português |

Tiếng Việt |

Türkçe |

Русский |

ไทย |

日本語 |

한국어 |

中文 (简体) |

中文 (繁體)

Privacy

|

Site Terms

|

Cookie Preferences

|

© 2023, Amazon Web Services, Inc. or its affiliates. All rights reserved.