

Collibra Data Intelligence Cloud

Edge Infrastructure



Collibra Data Intelligence Cloud - Edge Infrastructure

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You can find the most up-to-date technical documentation on our Documentation Center at https://productresources.collibra.com/docs/collibra/latest/Content/Edge/to_edge.htm

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Introducing Edge

Edge is a cluster of Linux servers for accessing and processing data close to where it resides. It helps to connect to data sources and process information within your data landscape.

Edge enables Collibra Data Intelligence Cloud to safely connect to your data sources hosted in an on-premise or cloud environment. It processes the data source information on the Edge site and sends the process results to Collibra Data Intelligence Cloud.

Edge components

Edge consists of three main components:

- An Edge configuration page in Collibra Data Intelligence Cloud to create and install Edge sites.
- An Edge integration capability repository that resides on the Collibra Platform and contains all capabilities that can run on an Edge site.
- An Edge site that is installed close to a data source in the customer's environment, whether it's in the cloud or on the customer's premises.

Integration steps

The following table shows which steps you have to take to set up Edge.

Step	Description	Required permissions
1	Create an Edge site via Collibra Data Intelligence Cloud Settings.	You have a global role with the Manage Edge sites global permission in Collibra Data Intelligence Cloud.

Step	Description	Required permissions
2	Install the Edge site close to the data source you want to access. You can only install an Edge site on a Linux system that meets the necessary system requirements.	You have a global role with the Install Edge sites global permission in Collibra Data Intelligence Cloud.
3	Update the credentials of the Edge site user.	You have a global role with the Connect Edge sites to Collibra global permission in Collibra Data Intelligence Cloud.

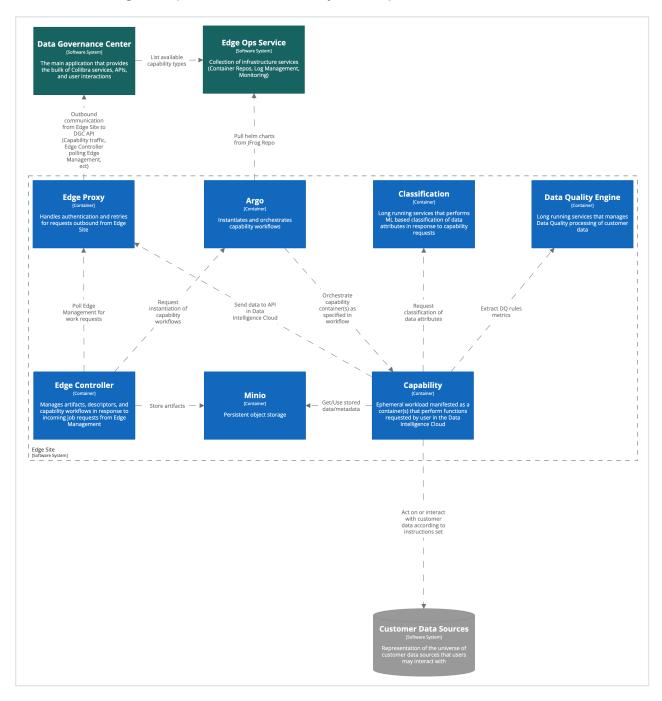
Chapter 3

Edge security

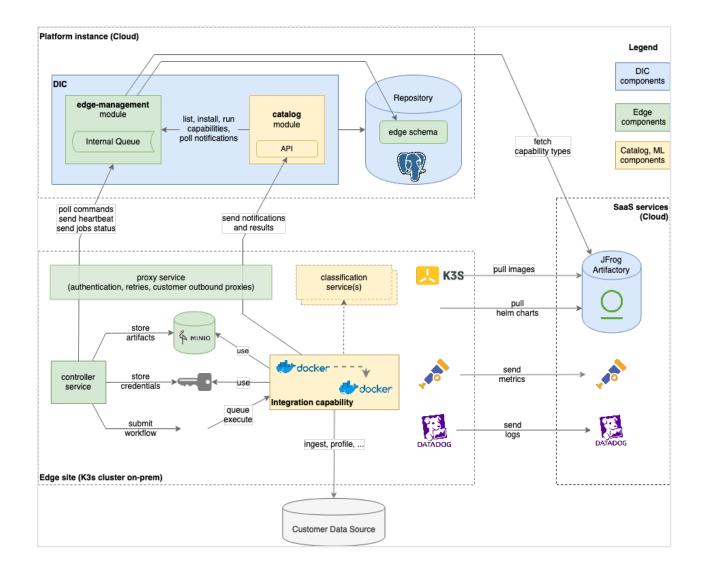
Edge is built with security first approach. All communication channels are secured by TLS and all endpoints outside Edge are accessible only via authentication. Edge does not send or store any customer data, its purpose is to host capabilities that process the data in its own environment and to send only processing results to Collibra Data Intelligence Cloud.

Edge components

In the following overview, you see a detailed overview of the different communication flows between the Edge components and what they are responsible for.

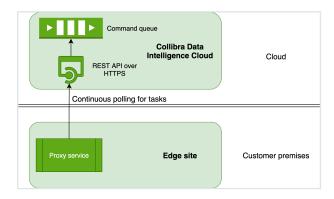


In the following overview, you see the interaction between Edge and the other systems such as Collibra Data Intelligence Cloud or third-party components.



Communication between Edge and Collibra

Edge does not need incoming access - it executes tasks as commands stored in the Edge management queue in Collibra. Communication to Collibra uses basic authentication over TLS 1.2. User account for communicating to Collibra is generated on each Edge site installer download, and it is unique for each Edge site. It is possible to change the password of this user account through a documented procedure.



- Edge sites always use REST API endpoints to establish connections.
- Edge does not store data after the data is processed on the Edge site, not even sample data.
- Edge manages Collibra Data Intelligence Cloud and data source credentials. This
 has the following consequences:
 - Credentials are not accessible outside of Edge.
 - Credentials used on an Edge site are encrypted with a key that is secured in Collibra.
 - Credentials of data sources and Collibra can be updated if necessary.
- All configuration parameters, files or strings marked as secret are stored on the Edge site encrypted with a public key that resides in Collibra. The private part of that key is encrypted with a public key from the Edge site. As a result, secrets can only be decrypted with both key pairs, one residing on the Edge site and the other on Collibra.
- An Edge site communicates in a secure way with your Collibra environment using certificates, issued by a Collibra-chosen Certificate Authority (CA). However, if there is a forward proxy server between the Edge site and Collibra, you have to use the proxy server's CA.

Authentication to data sources

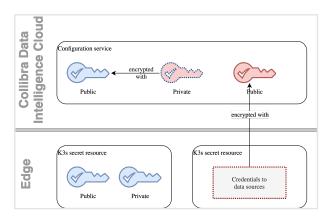
Edge connections and capabilities use different ways to connect to data sources The required level of privileges or security greatly depends on the data source type and supported Catalog Connectors.

Collibra regularly adds and certifies Catalog connectors. To understand the authentication methods and the level of security, consult the Catalog connector documentation.

Storing secrets

Secrets for connections and capabilities are stored solely on the Edge site. While at rest, secrets are using envelope encryption where the secret is encrypted by a key, which on its turn is encrypted by another key.

An Edge site owns the Blue key pair, with the Blue private key stored on Edge. Similar to that, Collibra Data Intelligence Cloud owns the Red key. Every secret on Edge is encrypted with the private Red key, which is sent to the Edge site for each capability execution, encrypted with the Blue public key. Once on the Edge site, Red private key is decrypted, and secrets needed to execute a connection or a capability are decrypted and injected into the capability container.



Data samples in Edge

Edge by design doesn't send any samples. Edge capabilities such as Profiling and Classification use data in memory to execute, after which data is discarded.

It is not possible to view data samples in Collibra Data Intelligence Cloud. We are currently developing a new capability for this. You will have the choice to install it after the Edge deployment.

Edge service repository

To keep Edge synchronized with your Collibra Data Intelligence Cloud version, we deploy core Collibra services and business capabilities in the Collibra repository of your environment. An Edge site uses token-based authentication with read privileges to download services for each release. The authentication and endpoint to access the Collibra repository are stored in the **registries.yaml** file as part of the Edge site installer.

Collibra uses XRay scanning for image scanning on every build, as well as Contrast scanning for dependency in runtime scanning. Every critical vulnerability automatically fails the build.

For 2-day vulnerability, you can edit **registries.yaml** and access the registry independently, and download images for Edge to scan them. Currently there is no SLA for vulnerabilities that you may find. The standard support SLAs are applied.

Monitoring and logging

We monitor and log all interaction between an Edge site and Collibra Data Intelligence Cloud, as well as the Edge site infrastructure health. All logs are kept in the Collibra Datadog account.

Note We don't send Catalog connector logs to your environment. These Catalog connector logs are by default turned off. If they are enabled, they are kept on the Edge site itself. If you have Catalog connector issues, you have to extract these logs and send them to Collibra Support via a support ticket.

Installing an Edge site

An Edge site is a component installed in a customer's environment. Each Edge site has a unique identifier and hosts an Edge capability that can access a data source.

This section contains the information that you need to know to install an Edge site.

About an Edge site installation

After creating the Edge sites in Collibra Data Intelligence Cloud, you have to install the Edge software on either K3S or EKS. You typically install Edge sites within the same secure environment as the relevant data source. A customer usually has several Edge sites, depending on his requirements. The required amount of Edge sites is can be based for example on the number of networks and secure environments but it can also on the technical and legal spread of data sources.

An Edge site can have:

- Zero or more predefined connections to data sources via a JDBC driver.
- One or more integration capabilities to process data on site and send the results to Collibra.

An Edge site is a compute runtime on K3S or EKS, that executes capabilities close to your data but that is configurable from the Collibra Data Intelligence Cloud settings. It has a dedicated unique identifier and handles data sources that it can reach within its network. You can have more than one Edge site, depending on the number of networks, security domains, regions or VPCs that you have.

Properties

Property	Description
Name	The name of the Edge site. Use a meaningful name, for example NetherlandsDataCentre1. Do not use spaces or special characters. This field is mandatory and the name must be globally unique.
Status	The status of the Edge site. The status is automatically shown when you create an Edge site.

Property	Description
ID	The unique ID of the Edge site, which is created automatically when you created the Edge site.
Description	The description of the Edge site. We recommend to put at least basic location information of the Edge site. This field is mandatory.
Installer and property files	A section where you can download the installer and property files to install an Edge site on a server. This section is only visible when the Edge site has status To be installed .

Statuses

The status of an Edge site indicates if the Edge site can be used or not. The status is shown on the **Edge** settings page of the Collibra settings. An Edge site can have one of the following statuses:

Status	Description
To be installed	The Edge site is created, but not installed yet.
Offline	Collibra cannot reach the Edge site. This can be caused by an unsuccessful installation or a lost connection. See the installation logs for more information.
Unhealthy	Collibra can connect to the Edge site, but some functions don't work correctly. This is typically caused by problems during the installation. See the installation logs for more information.
Healthy	The Edge site installation was successful.

Installation directories on K3S

The Edge site installer installs files in the following directories on your host server:

- /var/lib/rancher/
- /var/log/
- /etc/
- /usr/local/bin/

System requirements of an Edge site

If you want to use Edge, you must make sure that the following system requirements are met.

Software requirements

- You can install the Edge software on CentOS/RedHat Enterprise Linux 8.x
- The **sudo** package is installed on the Linux host.
- The user who installs Edge has full sudo access (ALL= (ALL) ALL)

Tip If you are an early adopter or you use Edge for beta testing purposes, we highly recommend to disable SELinux.

Hardware requirements

You need the following minimum hardware requirements:

- 64 GB memory
- 16 core CPU with x86_64 architecture
- You have at least 50 GB of free storage on the partition that will contain /var/lib/rancher/k3s or its symlink target.

Warning Any data in this location is fully managed by the Edge site, do not save any other data in here as it can be removed by Edge without notification.

 You have mounted at least 500 GB of dedicated storage for the Edge site data on a freely chosen mountpoint, for example /var/edge/storage.

```
mkdir -p /var/edge/storage
mkfs.xfs /dev/<block-device-name>
mount /dev/<block-device-name> /var/edge/storage
echo '/dev/<block-device-name> /var/edge/storage xfs
defaults 0 0' >> /etc/fstab
```

Note Change <block-device-name> to the name of the device that contains the storage.

Warning This dedicated storage should not be shared with other services because Edge can delete and overwrite files on this location without notice, so don't use /home/<username> or /var.

 If you run the Linux server on AWS or GCP, disable the services nm-cloudsetup.service and nm-cloud-setup.timer.

```
systemctl disable nm-cloud-setup.service nm-cloud-
setup.timer
reboot
```

Warning When new capabilities are added in the future, the hardware requirements may change.

Network requirements

- An Edge site needs outbound connections to all of the following:
 - The URL of your Collibra Data Intelligence Cloud environment
 - https://*.datadoghq.com

Note If wildcard whitelisting is not accepted:

- https://http-intake.logs.datadoghq.com
- https://7-30-1-app.agent.datadoghq.com
- https://agent-http-intake.logs.datadoghq.com
- https://api.datadoghq.com
- https://*.repository.collibra.io

Note If wildcard whitelisting is not accepted:

- https://repository.collibra.io
- https://edge-docker-delivery.repository.collibra.io
- https://otlp-http.observability.collibra.dev/
- Your Edge site has to be able to connect to port 443.
- The resolve configuration file of your Linux host has maximum three search domains and two name servers.

Note If a firewall is enabled, run the following commands to add the cni0 and loopback interfaces to a trusted zone, so that Kubernetes can use it between its services:

```
firewall-cmd --zone=trusted --change-interface=cni0 --
permanent
firewall-cmd --zone=trusted --change-interface=lo --
permanent
firewall-cmd --reload
```

EKS requirements

You can install the Edge software on managed Kubernetes clusters.

Important A managed Kubernetes cluster must be fully dedicated for Edge, do not use the cluster for other purposes.

- AWS EKS 1.21 (only with --container-runtime containerd)
- AWS EKS worker nodes use the EKS optimized Amazon Linux 2 AMI
- EKS cluster has IRSA enabled
- AWS EKS worker nodes need to be in the same (one) Availability Zone!
 This can be implemented by creating just one node group for the EKS cluster,
 which limits the subnets to just one subnet, that is one of the subnets of the EKS cluster.

```
module "eks" {
                 = "terraform-aws-modules/eks/aws"
= "17.24.0"
  version
 source
  cluster name
                 = "${var.vpc name}-${var.cluster_
name}-eks"
   cluster version = "1.21"
  vpc_id = var.vpc_id
subnets = data.aws su
              = data.aws subnet ids.public_subnet_
ids.ids # Subnets specified must be in at least two
different AZs
  worker additional security group ids = [aws security
account, for later use
  worker groups = [
                           = "${var.vpc name}-${var.cluster
          name
name}-eks-workers"
         instance type = var.worker type
         asg_desired_capacity = var.instance_count_workers
         key name
                            = aws key pair.cluster-ssh-
keypair.key name
         bootstrap extra args = "--container-runtime
containerd" # mandatory to run with containerd if on
1.21
         subnets
                            = [subnet1]
```

Software requirements

 A Linux server with bash available. This is the server from which you install the Edge software on EKS.

Tip This server will also contain the Edge tools.

- Plain cluster_admin kubectl access to the EKS cluster using its kubeconfig. With this kubeconfig, you must be able to use the kubectl command to communicate with the Kubernetes API server with full cluster access.
- Kubectl client version 1.21.6, supports EKS 1.20 and 1.21.

Hardware requirements

You need an operational EKS cluster with at least 1 worker node. The cluster must meet the following requirements:

- The total cluster capacity has at least 16 core CPU and 64 GB memory, for example 4 worker nodes with each 4 core CPU and 16 GB.
- Each worker node needs at least 100 GB free disk space to store Docker images.

 Ability to create EBS-based persistent volumes as a default storage class, at least 500 GB in total.

Network requirements

- An Edge site needs outbound connections to all of the following:
 - The URL of your Collibra Data Intelligence Cloud environment
 - https://*.datadoghq.com

Note If wildcard whitelisting is not accepted:

- https://http-intake.logs.datadoghq.com
- https://7-30-1-app.agent.datadoghq.com
- https://agent-http-intake.logs.datadoghq.com
- https://api.datadoghq.com
- https://*.repository.collibra.io

Note If wildcard whitelisting is not accepted:

- https://repository.collibra.io
- https://edge-docker-delivery.repository.collibra.io
- https://otlp-http.observability.collibra.dev/
- Your Edge site has to be able to connect to port 443.
- The resolve configuration file of your Linux host has maximum three search domains and two name servers.

Note If a firewall is enabled, run the following commands to add the cni0 and loopback interfaces to a trusted zone, so that Kubernetes can use it between its services:

```
firewall-cmd --zone=trusted --change-interface=cni0 --
permanent
firewall-cmd --zone=trusted --change-interface=lo --
permanent
firewall-cmd --reload
```

Create an Edge site

You create an Edge site to have a processing runtime at your premises.

Prerequisites

- You have a global role that has the System administration global permission.
- You have a global role that has the Manage Edge sites global permission.
- You have enabled database registration via Edge in Collibra Console.

Note You must restart the Data Governance Center service when you have enabled this option.

Steps

- 1. In the main menu, click ##, then Settings.
 - » The Collibra settings page opens.
- 2. Click Edge
 - » The Edge sites overview appears.
- 3. Above the table, to the right, click **Create Edge site**.
 - » The Create Edge site wizard starts.
- 4. Enter the required information.

Field	Description
Name	The name of the Edge site. Use a meaningful name, for example NetherlandsDataCentre1. Do not use spaces or special characters. This field is mandatory and the name must be globally unique.
Description	The description of the Edge site. We recommend to put at least basic location information of the Edge site. This field is mandatory.

5. Click Create.

» The Edge sites overview appears, including the new Edge site with the status **To** be installed.

What's next?

You can now install the Edge site.

Configure a forward proxy

For security reasons, it is possible that an Edge site has to connect via a forward HTTP proxy. In that case, you have to update **proxy.properties** before installing the Edge site.

If the forward proxy server is responsible to decrypt TLS traffic, you also have to use the proxy server's CA certificate during the installation.

Steps

- 1. Download the Edge site installer:
 - a. Open an Edge site.
 - a. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
 - b. Click Edge
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
 - b. In the **Installer and properties files** section, click **Download**.
 - c. Depending on your operating system and browser, follow the regular steps for downloading files.
 - » The installer file is a TGZ archive that contains the files **proxy.properties**, **properties.yaml** and **registries.yaml**.

Note If you download an installer, all previously downloaded installers become invalid.

- 2. Open the **proxy.properties** file.
- 3. Uncomment and update the outbound-proxy properties by removing "#" at the beginning of the following lines:

```
#noProxy=<host IP addresses>,<host DNS names>,<k8s-svc-ip-
addresses>,<k8s-pod-ip-addresses,<others>
#proxyHost=<proxy domain name or IP address>
#proxyPort=<proxy-port>
```

#proxyUsername=proxy username>
#proxyPassword=proxy password>

Setting	Value
noProxy	A comma-separated list of IP or DNS addresses that can bypass the proxy server.
	This list must include at least the Kubernetes cluster's internal IP addresses and the Kubernetes nodes' IP and DNS addresses.
	The list may not contain spaces.
	Tip To get the values for this setting, you can use the edge- get-noproxy.sh script, which you can find in the extracted installer directory under /resources/tools. However, make sure that your network administrator reviews these values.
	where:
	 <host-ip-addresses>: for example 172.20.0.0/16.</host-ip-addresses> <host-dns-names>: for example *.compute.internal.</host-dns-names> <k8s-svc-ip-addresses>: is by default 10.43.0.0/16, but this can differ for other k8s flavors or configurations.</k8s-svc-ip-addresses> <k8s-pod-ip-addresses>: is by default 10.42.0.0/16, but this can differ for other k8s flavors or configurations.</k8s-pod-ip-addresses> <others>: other IP addresses that don't need to be proxied. Add at least 169.254.169.254. for AWS.</others>
	Example noProxy=172.20.0.0/16,*.compute.internal,10.43.0 .0/16,10.42.0.0/16,169.254.169.254

Setting	Value
proxyHost	The IP or DNS address of the proxy server.
	<pre>Example proxyHost=site4- proxy.shared.edge.collibra.dev</pre>
proxyPort	The TCP port of the proxy server. This value must be a quoted string and not an integer value.
	Example proxyPort=3128
proxyUse rname	The username to authenticate at the proxy server.
	Example proxyUsername=edge
proxyPas sword	The password to authenticate at the proxy server.
	Example proxyPassword=la;fs90jpo4j3rR%

```
#noProxy=<host IP addresses>,<host DNS names>,<k8s-svc-ip-
addresses>,<k8s-pod-ip-addresses,<others>
#proxyHost=<proxy domain name or IP address>
#proxyPort=<proxy-port>
#proxyUsername=<proxy username>
#proxyPassword=<proxy password>
```

Setting	Value
noProxy	A comma-separated list of IP or DNS addresses that can bypass the proxy server.
	This list must include at least the Kubernetes cluster's internal IP addresses and the Kubernetes nodes' IP and DNS addresses.
	The list may not contain spaces.
	Tip To get the values for this setting, you can use the edge-get-noproxy.sh script. However, make sure that your network administrator reviews these values.
	where:
	 <host-ip-addresses>: for example 172.20.0.0/16.</host-ip-addresses> <host-dns-names>: for example *.compute.internal.</host-dns-names> <k8s-svc-ip-addresses>: depends on your EKS installation. Typically this is 10.100.0.0/16 or 172.20.0.0/16.</k8s-svc-ip-addresses> <k8s-pod-ip-addresses>: depends on your EKS installation. Typically they are the same subnets as in the VPC, for example 172.20.0.0/16.</k8s-pod-ip-addresses> <ohero-ohers>: other IP addresses that don't need to be proxied, for EKS, always add 169.254.169.254</ohero-ohers>
	Example noProxy=172.20.0.0/16,*.compute.internal,10.10 0.0.0/16,169.254.169.254
proxyHost	The IP or DNS address of the proxy server.
	Example proxyHost=site4- proxy.shared.edge.collibra.dev

Setting	Value
proxyPort	The TCP port of the proxy server. This value must be a quoted string and not an integer value.
	Example proxyPort=3128
proxyUsern	The username to authenticate at the proxy server.
ame	Example proxyUsername=edge
proxyPass	The password to authenticate at the proxy server.
word	Example proxyPassword=la;fs90jpo4j3rR%

Important When you add a new node to a cluster, review and update, if necessary, the noProxy and implicitly forward proxy settings, unless the subnet used for nodes and their DNS suffix are added to noProxy.

4. If you use a forward proxy that decrypts TLS traffic, a so-called man-in-the-middle proxy or MITM proxy, then on-the-fly TLS certificates that are generated by the MITM proxy, must use the subjectAltName (SAN) extension. To enable Edge via a MITM proxy, perform also the following steps.

If the proxy server does not decrypt the TLS traffic, you can skip the following steps.

- a. Export your proxy server's CA certificate in PEM format.
- b. Save this certificate as **ca.pem** in the same directory as the Edge site installer.

Note If you save the certificate in another directory, use the --ca argument in the Edge site installation command.

What's next?

Install the Edge site

If you want to update the forward proxy afterwards, you can use the update script.

Install an Edge site

After you have created the Edge site in Collibra Data Intelligence Cloud, you have to install the Edge software on a server.

Tip

Every time you download an Edge site installer, the previously downloaded Edge site installer becomes outdated. If you use this outdated installer, the Edge site cannot communicate with Collibra.

Prerequisites

- You have a global role with the Install Edge sites and the User Administration global permission, for example Edge site administrator
- You have a global role that has the System administration global permission.
- You have created an Edge site.
- You have configured the forward proxy, if a forward proxy is required for Edge to connect to Collibra, Datadog, OpenTelemetry and jFrog. Contact your network administrator if this is applicable.
- Your server meets all system requirements.

Tip If you are an early adopter or you use Edge for beta testing purposes, we highly recommend to disable SELinux.

Steps

- 1. Download the installer:
 - a. Open an Edge site.
 - a. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.

b. In the **Installer and properties files** section, click **Download**.

Tip When you download the installer, an Edge user is automatically created in Collibra.

- c. Depending on your operating system and browser, follow the regular steps for downloading files.
 - » The installer file is a TGZ archive that contains the files **proxy.properties**, **properties.yaml** and **registries.yaml**.

Warning If you download an installer, the previously downloaded Edge site installer becomes invalid.

2. Extract the TGZ archive on the server on which you are going to install the Edge site software.

```
tar -xf <edge-site-id>-installer.tgz
```

Tip Keep the installer or the content of the extracted installer somewhere safe on your server. It contains various tools that you may need later, for example to troubleshoot issues.

3. Execute the installation. Use the correct path to the mounted storage as described in the prerequisites.

Important If the Edge site has to connect via a forward HTTP proxy, then first configure the forward proxy before executing the installation.

a. Clean installation:

```
sudo sh install-master.sh --storage-path
/path/mounted/storage properties.yaml -r
```

```
registries.yaml
for example:
sudo sh install-master.sh --storage-path
/var/edge/storage properties.yaml -r registries.yaml
```

b. Installation with classification enabled:

```
sudo sh install-master.sh --storage-path
/path/mounted/storage properties.yaml -r
registries.yaml

for example:

sudo sh install-master.sh --storage-path
/var/edge/storage properties.yaml -r registries.yaml
--set collibra_
edge.collibra.classification.enabled=true
```

- » In the Edge sites overview, you can see the status of the deployment.
- 4. Run the following commands to verify the status of the installation.
 - To ensure that Kubernetes is running and that there is an existing node:

```
sudo /usr/local/bin/kubectl get nodes
```

To ensure the state of all pods are installed and running:

```
sudo /usr/local/bin/kubectl get pods --all-namespaces
```

Tip If you already installed Edge site and you want to enable classification afterwards, see this article.

- 1. Download the installer:
 - a. Open an Edge site.
 - a. In the main menu, click **;**, then **Settings**.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
 - b. In the **Installer and properties files** section, click **Download**.

Tip When you download the installer, an Edge user is automatically created in Collibra.

- c. Depending on your operating system and browser, follow the regular steps for downloading files.
 - » The installer file is a TGZ archive that contains the files **proxy.properties**, **properties.yaml** and **registries.yaml**.

Warning If you download an installer, the previously downloaded Edge site installer becomes invalid.

2. Extract the TGZ archive on the server on which you are going to install the Edge site.

```
tar -xf <edge-site-id>-installer.tgz
```

Tip Keep the installer or the content of the extracted installer somewhere safe on your server. It contains various tools that you may need later, for example to troubleshoot issues.

- 3. Execute the installation.
 - a. Clean installation:

```
./run-installer-job.sh properties.yaml --repositories repositories.json --set collibra_ edge.collibra.minio.persistence.size=120Gi
```

b. Installation with classification enabled:

```
./run-installer-job.sh properties.yaml --repositories repositories.json --set collibra_ edge.collibra.minio.persistence.size=120Gi --set collibra_edge.collibra.classification.enabled=true
```

- » In the Edge sites overview, you can see the status of the installation.
- 4. Run the following commands to verify the status of the installation.
 - To ensure that Kubernetes is running and that there is an existing node:

```
kubectl get nodes
```

To ensure the state of the installation is either running or finished:

```
kubectl get pods --all-namespaces
```

Tip If you already installed Edge site and you want to enable classification afterwards, see this article.

Enable or disable classification on an Edge site

If you have an existing Edge site installation without classification, you can enable it afterwards. Similarly, you can disable classification on installation where it is enabled.

Note Enabling or disabling classification can take a couple of minutes before the changes are in effect.

Enable classification

To enable classification on an existing Edge site, deployed on K3S, run this command:

```
DEPLOYMENT_NAME=$(sudo /usr/local/bin/kubectl get deployment -n collibra-edge -l app.kubernetes.io/component=application-controller -o name)

sudo /usr/local/bin/kubectl -n collibra-edge exec -it
${DEPLOYMENT_NAME} \
-- bash -c 'argood admin cluster kubeconfig
https://kubernetes.default.svc \
/tmp/config --namespace collibra-edge ; env
KUBECONFIG=/tmp/config argood app set collibra-edge --
core -p collibra.classification.enabled=true'
```

To enable classification on an existing Edge site, deployed on EKS, run this command:

```
DEPLOYMENT_NAME=$(kubectl get deployment -n collibra-edge -l app.kubernetes.io/component=application-controller -o name)

kubectl -n collibra-edge exec -it ${DEPLOYMENT_NAME} \
-- bash -c 'argood admin cluster kubeconfig

https://kubernetes.default.svc \
/tmp/config --namespace collibra-edge ; env

KUBECONFIG=/tmp/config argood app set collibra-edge --
core -p collibra.classification.enabled=true'
```

Disable classification

To disable classification on an existing Edge site, deployed on K3S, run this command:

```
DEPLOYMENT_NAME=$(sudo /usr/local/bin/kubectl get deployment -n collibra-edge -l app.kubernetes.io/component=application-controller -o name)

sudo /usr/local/bin/kubectl -n collibra-edge exec -it ${DEPLOYMENT_NAME} \
-- bash -c 'argood admin cluster kubeconfig https://kubernetes.default.svc \
/tmp/config --namespace collibra-edge ; env 
KUBECONFIG=/tmp/config argood app set collibra-edge -- core -p collibra.classification.enabled=false'
```

Tip The only difference with enabling classification is the last argument being false instead of true.

To disable classification on an existing Edge site, deployed on EKS, run this command:

```
DEPLOYMENT_NAME=$(kubectl get deployment -n collibra-edge -l app.kubernetes.io/component=application-controller -o name)

kubectl -n collibra-edge exec -it ${DEPLOYMENT_NAME} \
-- bash -c 'argood admin cluster kubeconfig

https://kubernetes.default.svc \
/tmp/config --namespace collibra-edge ; env

KUBECONFIG=/tmp/config argood app set collibra-edge --
core -p collibra.classification.enabled=false'
```

Tip The only difference with enabling classification is the last argument being false instead of true.

Reinstall an Edge site using backup and restore

You can reinstall an Edge site by keeping previous Edge site data.

- 1. Back up your current Edge site (optionally): edge backup -o backup.yaml
- 2. If you are reusing the same server as your current Edge site, uninstall the current installation: uninstall-edge.sh
- 3. Download the new installer and save it on your server.
- 4. Extract the installer and ensure that your custom setup, for example **proxy.properties** and **ca.pem**, is available as in the previous setup.
- 5. Reinstall with the new installer, optionally with backup and/or classification:

```
./install-master.sh --storage-path <storagepath> -b backup.yaml
--set collibra edge.collibra.classification.enabled=true
```

- 1. Back up your current Edge site (optionally): edge backup -o backup.yaml
- 2. If you are reusing the same server as your current Edge site, uninstall the current installation: <extracted installer>/resources/tools/installer-job/uninstall-edge-on-managed-k8s.sh
- Download the new installer and save it on your Linux server that has kubectl access to the k8s cluster.
- 4. Extract the installer and ensure that your custom setup, for example **proxy.properties** and **ca.pem**, is available as in the previous setup.
- 5. Reinstall with the new installer, optionally with backup and/or classification: ./run-installer-job.sh -b backup.yaml --set collibra_edge.collibra.classification.enabled=true

Upgrade the operating system of an Edge site

When you have a running Edge site, you can safely upgrade the operating system by following the procedure in this article.

Steps

1. Back up the Edge site.

The backup is not mandatory, but highly recommended in case the upgrade of your OS would fail.

- 2. Upgrade your OS.
- 3. Restart the OS.
- Wait until the Edge site becomes healthy in the Collibra Data Intelligence Cloud user interface.

Troubleshooting

If the Edge site does not become healthy after the OS upgrade, then reinstall the Edge site with a new Edge installer and the backup that you created before the OS upgrade.

- 1. In Collibra, go to the Edge site you want to reinstall.
 - a. In the main menu, click ##, then Settings.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
- 2. In the top right corner, click **Actions** → **Redownload installer**.
 - » A new Edge installer is downloaded.

3. Install the Edge site with the backup that you created earlier.

```
install-master.sh properties.yaml --storage-path
/var/edge/storage properties.yaml -r registries.yaml -b
/<path to backup file>/edge-backup.yaml
```

4. Wait until the Edge site becomes healthy in the Collibra Data Intelligence Cloud user interface.

Chapter 5

JDBC connections

JDBC connections, or simply connections, define how an Edge capability accesses a data source.

To create a connection to your data source, you need to select a connection provider, which determines the available properties of the connection, such as the authentication method and connection string and driver.

Example If you want to ingest data from an Amazon Redshift data source, you need a specific JDBC driver for Amazon Redshift. You use that driver to create a connection between your Edge site and your Amazon Redshift data source.

Tip Collibra provides a selection of certified JDBC drivers on Collibra Marketplace. We highly recommend to only use JDBC drivers that are certified for Edge.

Data sources supported by Edge

You can register, profile and classify several data sources via Edge. Depending on your data source, you can use a Collibra-provided Catalog connector, or your own JDBC driver when you create a JDBC connection.

The following data sources have been tested for registering, profiling and classifying via Edge.

Create a JDBC connection

You can create a JDBC connection from an Edge site to a data source. You can then register the data source via Edge.

Warning Currently, Data Catalog does not support registering Oracle and data sources without schemas via Edge.

Available Catalog connectors

Edit a JDBC connection

You can edit a JDBC connection, for example if you want to change one of its connection properties. You can then register the data source via Edge.

Warning Currently, Data Catalog does not support registering Oracle and data sources without schemas via Edge.

Available Catalog connectors

Delete a JDBC connection

You can delete an JDBC connection from an Edge site to a data source if you no longer need it.

Prerequisites

- You have a global role that has the System administration global permission.
- You have a global role that has the Manage connections and capabilities global permission.
- You have created and installed an Edge site.
- You have created a JDBC connection.

Steps

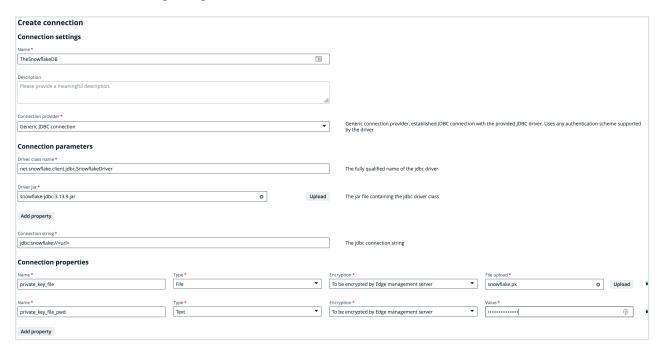
- 1. Open an Edge site.
 - a. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
 - b. Click Edge
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
- 2. In the JDBC Connections section, click the name of a JDBC connection.
 - » The Connection settings page appears.
- 3. At the bottom of the page, click **Delete**.
 - » The Delete confirmation dialog box appears.
- 4. Click Delete Connection.

Τ

Use keys to access a database

It is possible that, to access a database, the JDBC driver requires a private key. In this case, you have to manually add extra connection properties when you create a JDBC connection.

For example, the Snowflake driver exposes **private_key_file** and **private_key_file-pwd** properties. You can use these connection properties for the connection with Snowflake as shown in the following image.



Chapter 6

Edge capabilities

An Edge capability is an application that runs on an Edge site to extract and process data. It delivers the results to Collibra Data Intelligence Cloud.

About Edge capabilities

An Edge capability is an application that runs on an Edge site. The Edge capability can access a data source to extract and process data and usually runs as a scheduled job. It delivers the output to Collibra Data Intelligence Cloud in a secure and reliable way.

An Edge capability has a capability template that defines a specific use case, for example data source ingestion.

Capability templates

A capability template is developed for a specific task on a specific data source type. The capability template also determines which properties are available to configure the Edge capability.

Currently, the following capability templates are available:

- Catalog JDBC ingestion: A capability template you use to register a data source and synchronize schemas from a data source via a JDBC connection.
- JDBC Profiling: A capability template you use to profile and classify data from a registered data source.
- DQ Connector: A capability template you use to ingest Data Quality user-defined rules, metrics, and dimensions into Collibra Data Catalog.
- S3 synchronization: A capability template you use to connect to Amazon S3.

Important While these capability templates are available for all customers, the features that you use them for might still be in beta.

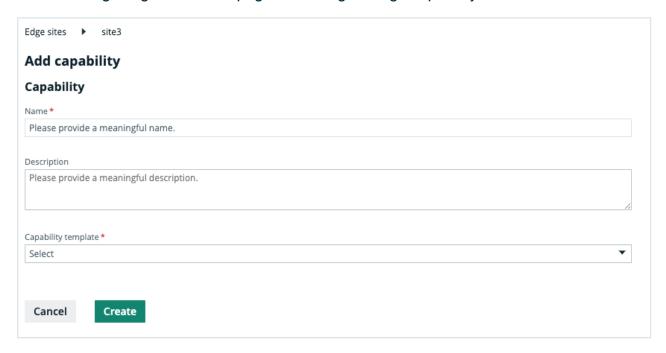
Capability template structure

Each Edge capability template contains the following:

File	Description
A manifest file (YAML)	This file contains the capability metadata and input parameter requirements.
A workflow file (YAML)	This file defines the workflow and binds the parameters to capability containers.
Docker images	One or more Docker images that implement the business logic.

Page layout

The following image shows the page for adding an edge capability.



Field	Description	Required
Capability	This section contains the general information about the o	capability.
Name	The name of the Edge capability.	✓ Yes

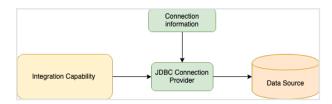
Chapter 6

Field	Description	Required
Description	The description of the Edge capability.	× No
Capability template	The capability template, which determines the next available sections.	✓ Yes
Custom properties	Custom properties as required by the capability template.	✓ Yes
	You see the custom properties after you select a capability template.	

About Edge capabilities connecting to data sources

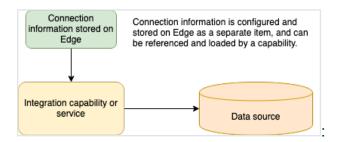
A connection on an Edge site identifies a unique system, whether it's a database, a file share or a REST service.

For JDBC (Java Database Connectivity), you can connect directly from the Edge user interface. Capabilities don't have to resolve different ways to authenticate to the JDBC service. When a capability uses JDBC connection provider libraries to connect, the capability becomes connection agnostic.



If an integration capability does not connect to a JDBC data source, it has to connect on its own, by using the information provided by Edge. The connection information is defined and stored as a Connection instance. The connection properties are shown on the Connections configuration page within Edge user interface.

Capability that does not use JDBC to connect



Connection types

All supported connection types are bundled in Edge. You cannot add new connection types, for example Tableau or S3.

Add an Edge capability to an Edge site

After you created and installed an Edge site, you can add an Edge capability to perform specific tasks on a data source. For example, you can register a data source using a JDBC connection that belongs to an Edge capability.

Prerequisites

- You have a global role that has the System administration global permission.
- You have a global role with the Manage connections and capabilities global permission, for example Edge integration engineer.
- You have a global role with the Register profiling information global permission.
 (optional)
- You have created and installed an Edge site.
- You have created a JDBC connection.

Steps

Tip For more information about all fields in the capability, go to the online version of the documentation.

- 1. Open an Edge site.
 - a. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
 - b. In the tab pane, click **Edge**.
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site with the status **Healthy**.
 - » The Edge site page appears.
- 2. In the Capabilities section, click Add capability.

- » The Add capability page appears.
- 3. Enter the required information.

Field	Description	Requir- ed
Capability	This section contains the general information about the capa	ability.
Name	The name of the Edge capability.	✓ Yes
Descripti on	The description of the Edge capability.	× No
Capabilit	The capability template, which determines the next available sections.	✓ Yes
template	Select the Catalog JDBC ingestion capability template to register a data source.	
	Select the JDBC Profiling capability template to profile and classify your data.	
	Select the DQ Connector capability template to ingest Data Quality user-defined rules, metrics, and dimensions into Collibra Data Catalog.	
	Important Data Quality is only available in beta. Please create a support ticket to get access.	
	Select the S3 synchronization capability template to connect to Amazon S3.	
Custom properties	Custom properties as required by the capability template. You see the custom properties after you select a capability template.	✓ Yes

Field	Description	Requir- ed
Connection	This section contains information to connect to the data sou	rce.
JDBC connecti on	The connection to the data source.	✓ Yes
JDBC data source type	The data source type of the data source that you want to ingest.	✓ Yes
Support s schema s	A text field where you have to enter <i>True</i> to enable database registration of data sources that have no schema. If the data source has schemas, you can ignore this field.	× No
	Tip If the data source does not have a schema, Data Catalog creates a Schema asset with the same name as the full name of the database.	

Field	Description	Requir- ed	
Others	This section can contain additional capability properties. Warning Adding additional properties can have a significant impact on your Edge site. Only add or update them together with Collibra Support.	× No	
	Click Add property to add a property. The possible properties are: Show properties		

Name	Description	Typ- e	Encryp- tion	Value
ingest- schem- a- garba- ge- col- lector	The garbage collector that is used by the capability. The default garbage collector is - XX:+UseParallelGC. For information about other possibilities, see AZUL documentation.	Tex-	Not encryp- ted (plain text)	For example: - XX:+UseSer-ialGC
ingest- schem- a- reques- ts-cpu	CPU com-	Tex-	Not encryp- ted (plain text)	For example: 100
ingest- schem-	The maximum amount of	Tex-	Not encryp-	For example:

Field	Description	Requir- ed
DQ	This section contains information about the Collibra Data Que connection.	uality
Base URL	Your Collibra Data Quality URL	
Userna me	The Collibra Data Quality username for this connection.	✓ Yes
Passwor d	The Collibra Data Quality password for this connection.	
Encr yptio n optio ns	Select the type of encryption to use. Default: To be encrypted by Edge management server.	
Issuer of the JWT	If you have selected <i>Encrypted with public key</i> , enter your JWT issuer.	× No
Collibra metadata model	This section contains information about where to ingest Dat ity assets.	a Qual-
DQ Rules domain id	The UUID of the Rulebook Domain for the ingested Data Quality rules.	✓ Yes

Field	Description	Requir- ed
DQ Metrics domain id	The UUID of the Business Asset Domain for the ingested Data Quality metrics.	✓ Yes
DQ Dimensi ons domain id	The UUID of the Business Asset Domain for the ingested Data Quality dimensions.	✓ Yes
Default DQ Dimensi on name	The default Data Quality Dimension , for example Accuracy, Completeness, Consistency and so on. Default: Completeness.	✓ Yes
DQ Metric classifie d by DQ Dimensi on relation type id	The UUID of the Data Quality Metric classified by / classifies Data Quality Dimension relation. If left unspecified, this relation will not be added.	× No
Assets are imported in batches of this size	The batch size of the ingestion. Default: 5000.	✓ Yes

Field	Description	Requir- ed
S3 service account	This section contains the information on how to connect to A S3.	Amazon
AWS Connect ion	The AWS connection to be used.	✓ Yes
IAM role	The IAM role used by AWS Glue crawlers.	✓ Yes
Encr yptio n optio ns	Select the type of encryption used to store the IAM role. Default: To be encrypted by Edge management server.	✓ Yes
General	This section contains general information about logging.	
	Note This section only applies to JDBC capabilities.	
Debug	An option to automatically send Edge infrastructure log files to Collibra Data Intelligence Cloud. By default, this option is set to <i>false</i> .	× No
	Note We highly recommend to only send Edge infrastructure log files to Collibra Data Intelligence Cloud when you have issues with Edge. If you set it to <i>true</i> , it will automatically revert to <i>false</i> after 24h.	
Log level	An option to determine the verbosity level of Catalog connector log files. By default, this option is set to <i>No logging</i> .	× No

- 4. Click Save.
 - » The capability is added to the Edge site.
 - » The fields become read-only.

What's next?

You can now register a data source via Edge.

Edit an Edge capability of an Edge site

You can edit an Edge capability of an Edge site, for example to change the custom properties.

Prerequisites

- You have a global role that has the System administration global permission.
- You have a global role with the Manage connections and capabilities global permission, for example Edge integration engineer.
- You have a global role with the Register profiling information global permission.
 (optional)
- You have created and installed an Edge site.
- You have added an Edge capability to the Edge site.

Steps

Tip For more information about all fields in the capability, go to the online version of the documentation.

- 1. Open an Edge site.
 - a. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
 - b. In the tab pane, click **Edge**.
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site with the status **Healthy**.
 - » The Edge site page appears.
- In the Capabilities section, click the name of an Edge capability.
 - » The Capability page appears and shows a read-only overview of the capability.
- 3. Click Edit.
- 4. Enter the required information.

Field	Description	Requir- ed
Capability	This section contains the general information about the capa	ability.
Name	The name of the Edge capability.	✓ Yes
Descripti on	The description of the Edge capability.	× No
Capabilit y	The capability template, which determines the next available sections.	✓ Yes
template	Select the Catalog JDBC ingestion capability template to register a data source.	
	Select the JDBC Profiling capability template to profile and classify your data.	
	Select the DQ Connector capability template to ingest Data Quality user-defined rules, metrics, and dimensions into Collibra Data Catalog.	
	Important Data Quality is only available in beta. Please create a support ticket to get access.	
	Select the S3 synchronization capability template to connect to Amazon S3.	
Custom	Custom properties as required by the capability template.	✓ Yes
	You see the custom properties after you select a capability template.	
Connection	This section contains information to connect to the data sou	rce.

Field	Description	Requir- ed
JDBC connecti on	The connection to the data source.	✓ Yes
JDBC data source type	The data source type of the data source that you want to ingest.	✓ Yes
Support s schema s	A text field where you have to enter <i>True</i> to enable database registration of data sources that have no schema. If the data source has schemas, you can ignore this field.	× No
	Tip If the data source does not have a schema, Data Catalog creates a Schema asset with the same name as the full name of the database.	

Field	Description	Requir- ed
Others	This section can contain additional capability properties. Warning Adding additional properties can have a significant impact on your Edge site. Only add or update them together with Collibra Support.	× No
	Click Add property to add a property. The possible properties are: Show properties	

Name	Description	Typ- e	Encryp- tion	Value
ingest- schem- a- garba- ge- col- lector	The garbage collector that is used by the capability. The default garbage collector is - XX:+UseParallelGC. For information about other possibilities, see AZUL documentation.	Tex-t	Not encryp- ted (plain text)	For example: - XX:+UseSer-ialGC
ingest- schem- a- reques- ts-cpu	The minimum amount of CPU computing power requested by the capability. The amount is expressed in milliCPU.	Tex-	Not encryp- ted (plain text)	For example: 100
ingest- schem-	The maximum amount of	Tex-	Not encryp-	For example:

Field	Description	Requir- ed
DQ	This section contains information about the Collibra Data Que connection.	uality
Base URL	Your Collibra Data Quality URL	✓ Yes
Userna me	The Collibra Data Quality username for this connection.	✓ Yes
Passwor d	The Collibra Data Quality password for this connection.	✓ Yes
Encr yptio n optio ns	Select the type of encryption to use. Default: To be encrypted by Edge management server.	
Issuer of the JWT	If you have selected <i>Encrypted with public key</i> , enter your JWT issuer.	× No
Collibra metadata model	This section contains information about where to ingest Data Quality assets.	
DQ Rules domain id	The UUID of the Rulebook Domain for the ingested Data Quality rules.	✓ Yes

Field	Description	Requir- ed
DQ Metrics domain id	The UUID of the Business Asset Domain for the ingested Data Quality metrics.	✓ Yes
DQ Dimensi ons domain id	The UUID of the Business Asset Domain for the ingested Data Quality dimensions.	✓ Yes
Default DQ Dimensi on name	The default Data Quality Dimension , for example Accuracy, Completeness, Consistency and so on. Default: Completeness.	✓ Yes
DQ Metric classifie d by DQ Dimensi on relation type id	The UUID of the Data Quality Metric classified by / classifies Data Quality Dimension relation. If left unspecified, this relation will not be added.	× No
Assets are imported in batches of this size	The batch size of the ingestion. Default: 5000.	✓ Yes

Field	Description	Requir- ed	
S3 service account	This section contains the information on how to connect to Amazon S3.		
AWS Connect ion	The AWS connection to be used.	✓ Yes	
IAM role	The IAM role used by AWS Glue crawlers.	✓ Yes	
Encr yptio n optio ns	Select the type of encryption used to store the IAM role. Default: To be encrypted by Edge management server.	✓ Yes	
General	This section contains general information about logging.		
	Note This section only applies to JDBC capabilities.		
Debug	An option to automatically send Edge infrastructure log files to Collibra Data Intelligence Cloud. By default, this option is set to <i>false</i> .	× No	
	Note We highly recommend to only send Edge infrastructure log files to Collibra Data Intelligence Cloud when you have issues with Edge. If you set it to <i>true</i> , it will automatically revert to <i>false</i> after 24h.		
Log level	An option to determine the verbosity level of Catalog connector log files. By default, this option is set to <i>No logging</i> .	× No	

- 5. Click Save.
 - » The fields become read-only.

Delete an Edge capability from an Edge site

You can remove an Edge capability from an Edge site if you no longer need it.

Warning If you delete a JDBC Profiling capability and synchronize previously profiled and classified schemas again, the profiling and classification results are removed.

Prerequisites

- You have a global role that has the System administration global permission.
- You have a global role with the Manage connections and capabilities global permission, for example Edge integration engineer.
- You have created and installed an Edge site.
- You have added an Edge capability to the Edge site.

Steps

- Open an Edge site.
 - a. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
- 2. In the **Capabilities** section, click the name of a capability.
 - » The Capability page appears and shows a read-only overview of the capability.
- 3. Click Delete.
- Click Delete Capability.
 - » The capability is deleted from the Edge site.

Edge Jobs page

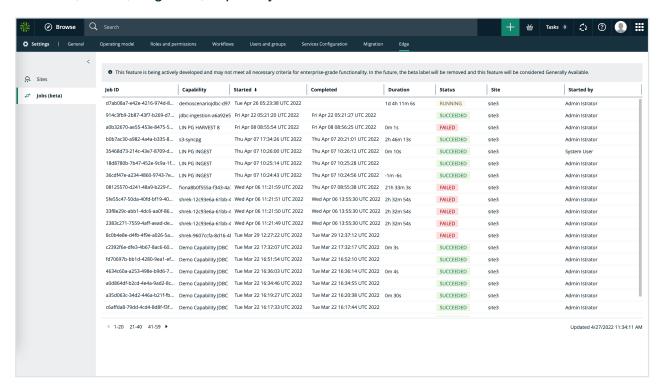
The Edge Jobs page gives you an overview of all jobs that are executed by an Edge site.

When enabled in Collibra Console, you find the Edge Jobs page in the Collibra Data Intelligence Cloud settings.

Important This is a beta feature.



On the Edge Jobs page, you find an overview of all jobs that are running or have run. Each job is a row in the table and contains basic information such as start and completion date and time, status, Edge site, capability and so on.



Chapter 7

Maintaining Edge sites

In this section, you get to know how you can maintain your Edge site installations, such as taking backups or updating credentials.

Running Edge tools

This section contains an overview on how to use the Edge tools, for example to create a backup of your Edge site.

Prepare the Edge tools on K3S

On k3s, the Edge tool is downloaded at the end of a successful installation.

Alternatively, you can download it from the cluster:

```
TOOLS_POD=$(sudo /usr/local/bin/kubectl -n collibra-edge get pod -l edge.collibra.com/contains=tools -o jsonpath='{.items [0].metadata.name}')

sudo /usr/local/bin/kubectl cp collibra-edge/$TOOLS_POD:edge /usr/local/bin/edge

sudo chmod +x /usr/local/bin/edge
```

The Edge command is in /usr/local/bin on the host, that is your first worker node, so you run the Edge command on the actual host where k3s runs.

Overview Edge commands on K3S

Edge tool	Command for K3S
Uninstall Edge	/usr/local/bin/uninstall-edge.sh
Create Edge diagnostics file	 Edge site is not yet installed: <extracted directory="" installer="">/resources/tools/edge-diagnostics.sh -d <file name="">.tgz</file></extracted> Edge site is up and running: edge diagnostics -d <file name="">.tgz</file>

Edge tool	Command for K3S
Create an Edge site backup	edge backup -o / <path folder="" to="">/<backup-name>.yaml</backup-name></path>
Set Edge storage cache ttl	edge cachettlttl <value days="" in=""></value>
Retrieve logs from a catalog connector	<pre>edge catalog-connectorjobid <edge id="" job=""> \ dst <path destination="" to=""></path></edge></pre>
Update Collibra credentials	 Interactive way: edge update-dgc-creds -i Explicit update: edge update-dgc-creds <username> <password> <url collibra="" environment=""></url></password></username>
Update forward proxy settings	edge update-outbound-proxyupdate-outbound-proxy /path/to/proxy.properties
Get help to set up no_proxy configuration	 Edge site is not yet installed: <extracted directory="" installer="">/resources/tools/edge-get-noproxy.sh k3s</extracted> Edge site is up and running: edge get-noproxy k3s

Prepare Edge tools on EKS

Edge is installed from a Linux machine that has access to the actual k8s cluster.

There is no automatic download of Edge tool after installation, because we don't want to enforce it in some location. Therefore, you have to download the Edge tool to your Linux machine, for example in your current folder:

```
TOOLS_POD=$(kubectl -n collibra-edge get pod -l edge.collibra.com/contains=tools -o jsonpath='{.items [0].metadata.name}')

kubectl cp collibra-edge/$TOOLS_POD:edge edge

chmod +x edge
```

You can now run Edge commands from your current folder.

Note As you are not on the worker node itself, you cannot collect worker node diagnostics. If you need these diagnostics, create a support ticket.

Overview Edge commands on EKS

Edge tool	Command for EKS
Uninstall Edge	<pre><extracted directory="" installer="">/resources/tools/installer-job/uninstall- edge-on-managed-k8s.sh</extracted></pre>
Create Edge diagnostics file	 Edge site is not yet installed: <extracted directory="" installer="">/resources/tools/edge-diagnostics.sh -d <file name="">.tgz</file></extracted> Edge site is up and running: edge diagnostics -d <file name="">.tgz</file>
Create an Edge site backup	edge backup -o / <path folder="" to="">/<backup-name>.yaml</backup-name></path>
Set Edge storage cache ttl	edge cachettl <value in="" seconds=""></value>

Edge tool	Command for EKS
Retrieve logs from a catalog connector	<pre>edge catalog-connectorjobid <edge id="" job=""> \ dst <path destination="" to="">/<file name="">.txt</file></path></edge></pre>
Update Collibra credentials	 Interactive way: edge update-dgc-creds -i Explicit update: edge update-dgc-creds <username> <password> <url collibra="" environment=""></url></password></username>
Update forward proxy settings	edge update-outbound-proxyupdate-outbound-proxy /path/to/proxy.properties
Get help to set up no_proxy configuration	 Edge site is not yet installed: <extracted directory="" installer="">/resources/tools/edge-get-noproxy.sh eks <clustername></clustername></extracted> Edge site is up and running: edge get-noproxy eks <clustername></clustername>

Edit an Edge site

You can edit a Edge site to give it another name or description.

Prerequisites

- · You have created an Edge site.
- You have a global role that has the System administration global permission.
- You have a global role that has the Manage Edge sites global permission.

Steps

- 1. Open an Edge site.
 - a. In the main menu, click ##, then @ Settings.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
- 2. In the top right corner, click **Actions** → **Edit**.

The **Edit Edge site** wizard starts.

3. Enter the required information.

Field	Description
Name	The name of the Edge site. Use a meaningful name, for example NetherlandsDataCentre1. Do not use spaces or special characters. This field is mandatory and the name must be globally unique.
Description	The description of the Edge site. We recommend to put at least basic location information of the Edge site. This field is mandatory.

- 4. Click Save.
 - » The Edge sites overview appears with the new name and description.

Update Edge user password

When you download the Edge site installer, a dedicated user is created in Collibra Data Intelligence Cloud. This user has always "Edge" as first name and the "Edge site name" as last name.

A user will be created for each Edge site. This user is deleted when you delete the Edge site.

Note The Edge user must have the Connect Edge to Collibra global permission.

Steps

- 1. Reset the password of the Edge user in Collibra.
- 2. Connect to the Edge master node via SSH.
- 3. Run the following script: /usr/local/bin/edge update-dgc-creds -i
- 4. Enter the username and new password of the Edge user.

Update the outbound proxy configuration

If you have to change the outbound proxy configuration of a running Edge site, you can use Collibra's outbound proxy update script.

Steps

- Find the proxy.properties file on the server that you used during the configuration of the outbound proxy.
- 2. Update the file with the new property values and save the file.
- 3. Go to /usr/local/bin and run the following command:

```
./edge update-outbound-proxy -u /path/to/proxy.properties
```

Help file of the script

Back up and restore an Edge site

To avoid losing your Edge site configurations, you can back up an Edge site and later restore it, for example when you want to reinstall an Edge site with a new installer.

Note For privacy reasons, Edge site backups remain in your personal environment and are not sent to the cloud.

Back up an Edge site

On the server that runs your Edge site, execute the following command:

```
^{\rm $>$} ./edge backup -o /<path to folder where you want to save the backup file>/<backup-name>.yaml
```

» Edge creates a backup of your Edge site in the selected folder of the command.

Tip If the edge command is not available, you first have to download it.

On the server from which you manage your EKS cluster, execute the following commands:

```
^{\$} ./edge backup -o /<path to folder where you want to save the backup file>/<br/>/backup-name>.yaml
```

» Edge creates a backup of your Edge site in the defined folder of the last command.

Tip If the edge command is not available, you first have to download it.

Restore an Edge site

Restoring an Edge site is the same command as installing an Edge site but with an extra argument to use a backup.

- 1. Optionally, download a new Edge installer.
- 1. Open an Edge site.
 - a. In the main menu, click ##, then @ Settings.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
- 2. In the top right corner, click **Actions** → **Redownload installer**.
 - » A new Edge installer is downloaded.
- 2. Run the Edge installer and add the backup file as a parameter:

```
install-master.sh properties.yaml --storage-path
/var/edge/storage properties.yaml -r registries.yaml -b /<path
to backup file>/edge-backup.yaml
```

- 1. Optionally, download a new Edge installer.
- 1. Open an Edge site.
 - a. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
- 2. In the top right corner, click **Actions** → **Redownload installer**.
 - » A new Edge installer is downloaded.
- 2. Run the Edge installer and add the backup file as a parameter:

```
./run-installer-job.sh properties.yaml --repositories
repositories.json --set collibra_
edge.collibra.minio.persistence.size=120Gi -b /<path to backup
file>/edge-backup.yaml
```

Delete an Edge site

You can delete an Edge site if you no longer need it.

Prerequisites

- · You have created an Edge site.
- You have a global role that has the System administration global permission.
- You have a global role that has the Manage Edge sites global permission.

Steps

- 1. Open an Edge site.
 - a. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
- 2. In the top right corner, click **Actions** → **Delete Edge site**.
 - » The Delete Edge site wizard starts.
- 3. Click Delete Edge site.
 - » The Edge sites overview appears, without the deleted Edge site.
- 4. On the server that hosts the Edge site, go to /usr/local/bin where you can find the uninstall script uninstall-edge.sh, then run one of the following commands:

	Command
Delete Edge site but keep its data. The data consists of drivers, required files	/usr/local/bin/uninstall- edge.sh
for capabilities, and data that was saved by Edge capabilities	

	Command
Delete Edge site and its data.	/usr/local/bin/uninstall- edge.shremove-local- data
Delete Edge site without confirmation request, for example if you want to delete the site via a script.	/usr/local/bin/uninstall- edge.shremove-local- dataforce
You can use this in combination with removing the site data.	

Warning When you delete an Edge site, the EBS volumes containing the data are also removed. If you like to keep your data, first back up these EBS volumes.

- 1. Open an Edge site.
 - a. In the main menu, click **!!!**, then **! Settings**.
 - » The Collibra settings page opens.
 - b. Click **Edge**
 - » The Edge sites overview appears.
 - c. In the Edge site overview, click the name of an Edge site.
 - » The Edge site page appears.
- 2. In the top right corner, click **Actions** → **Delete Edge site**.
 - » The Delete Edge site wizard starts.
- 3. Click **Delete Edge site**.
 - » The Edge sites overview appears, without the deleted Edge site.
- 4. On the server from which you manage your EKS cluster, run this command:

<extracted installer>/resources/tools/installerjob/uninstall-edge-on-managed-k8s.sh

Troubleshooting Edge

In this section, you find some articles that help you to troubleshoot Edge issues.

General troubleshooting Edge

The following table shows how to solve issues you encountered while working with Edge. Select the tab of your installation type, k3s or EKS.

Issue	Proposed solution
You get the following error message:	You have to restart the Kubernetes pod in Edge.
Out of disk space	Run the following command:
	<pre>sudo /usr/local/bin/kubectl delete pod <pod_name> namespace <pod_namespace></pod_namespace></pod_name></pre>
	Tip For more information about Pods and namespaces, see the Kubernetes documentation.
You get one of the following error message:	You have to restart Edge.
Cannot allocate memory	Do the following:
• Error syncing pod	Run the following commands to remove all workflows:
	sudo /usr/local/bin/kubectl deleteall workflows namespace=collibra- capabilities
	sudo /usr/local/bin/kubectl deleteall workflows namespace=collibra-fast
	2. Run the following command to reboot Edge:
	sudo reboot

Issue	Proposed solution
You get the following error message: Out of disk space	You have to restart the Kubernetes pod in Edge. Run the following command:
	<pre>kubectl delete pod <pod_name> namespace <pod_namespace></pod_namespace></pod_name></pre>
	Tip For more information about Pods and namespaces, see the Kubernetes documentation.
You get one of the following error message:	You have to restart Edge.
Cannot allocate memory	Do the following:
Error syncing pod	Run the following commands to remove all workflows:
	<pre>kubectl deleteall workflowsnamespace=collibra- capabilities</pre>
	kubectl deleteall workflowsnamespace=collibra-fast
	2. Run the following command to reboot Edge:
	sudo reboot

Use an explicit resolv.conf file for Edge

Important This is only applicable for K3S installations.

The default resolver configuration file /etc/resolv.conf is in most cases picked-up by K3S and used successfully, but on Google Cloud Platform, where the default nameserver is 169.254.169.254, K3S generates another file with a nameserver pointing to 8.8.8.8.

Your firewall or network configuration may be filtering connections to 8.8.8.8, in which case the resolver file has to be explicitly configured with a reachable nameserver. If the default file /etc/resolv.conf is explicitly configured even on GCP nodes having nameserver 169.254.169.254, then K3S will successfully use it.

You can also explicitly indicate in **install-master.sh** to use /etc/resolv.conf by adding the argument --resolv-conf </path/to/resolv.conf>.

Example

sudo sh install-master.sh --storage-path /var/edge/storage
properties.yaml -r registries.yaml --resolv.conf
/etc/resolv.conf

Edge logging

When you encounter an issue in Edge, you can use diagnostic files and log files to provide a lot of indications about the issue. If you want to report a problem to Collibra support, you can include the diagnostics or log files in the support ticket. As a result, Collibra support will be able to determine what went wrong and find a solution to your issue.

You can create a diagnostics file which is a ZIP file with log files and information about the environment in which you install an Edge site. Edge also generates two types of log files that are not included in the diagnostics file:

- Edge infrastructure log files, which are sent to Collibra Data Intelligence Cloud immediately upon creation.
- Metadata connector log files, which can only be stored locally.

Edge diagnostics file

The Edge diagnostics file is a ZIP file that is created by running the diagnostics script in the Edge site installer folder. The diagnostics script checks amongst others:

- Your operating system setup
- Your firewall settings
- Connectivity information
- Edge cluster logs.

You can send the diagnostics file to Collibra support when you have an issue with the Edge site installation.

Edge infrastructure log files

Edge infrastructure logs contain Edge infrastructure information, for example Edge status updates, capability information. The logs can be used by Collibra Support to help solve a

general issue with Edge. The log files do not contain any database content or private information.

By default, the Edge infrastructure log files are always enabled on an information level. You can enable debug level logging per specific capability when you add or edit an Edge capability. As a result, Edge sends infrastructure log with more information about that capability to Collibra Data Intelligence Cloud. Edge infrastructure log files can contain the following information:

- Job execution phases
- · The Edge status
- Service updates
- · System upgrades

These log files can only be accessed by Collibra Support.

Note By default, **Debug** logging for an Edge capability is set to False. We highly recommend only enabling the **Debug** logging for an Edge capability if an issue arises.

Metadata connector log files

Metadata connector log files contain the logs of the JDBC connections between the Edge capability and your data source. These log files can be used by Collibra Support to help solve issues with processing or accessing data. The log files may contain information about your data source.

For security reasons, these log files are not automatically sent to your Collibra Data Intelligence Cloud environment. You can, however, create the log files, save and review them locally and then attach them to a Collibra support ticket.

Edge system monitoring

The system monitoring, executed via OpenTelemetry, sends the following information to your Collibra environment:

- CPU usage
- Memory usage
- Network statistics

Collibra Support can then analyze this information to troubleshoot potential anomalies. These data are only available to Collibra personnel.

Verbosity log levels

The verbosity log levels indicate how much information you want to see in the Catalog Connector log files. You can change the verbosity log levels in the Edge capability for which you want to create logs. The following verbosity log levels are available:

Verbosity log level	Description
No logging	The Catalog Connector logs are not created. This is the default.
Low	The Catalog Connector logs contain the following: • All connection query logs • Any errors
Middle	 The Catalog Connector logs include the Low logs and: All cache queries Additional information about the request
High	The Catalog Connector logs include the Middle logs and: The body of the request The response

Create an Edge diagnostics file

You can create an Edge diagnostics file to check issues with the Edge site installation in your environment.

Prerequisites

- You have created an Edge site.
- · You have downloaded the Edge installer.

Steps

Edge site is not yet installed

Running the diagnostics script without an installed Edge site, checks if your system meets all requirements to install the Edge site.

- 1. Extract the Edge installer.
- 2. On the command line, go to the folder with the extracted files.
- 3. In this folder, go to **resources/tools**.
- 4. Run the following command to create the diagnostics file:

```
edge-diagnostics.sh --diag-file <file name>.tgz
```

» A TGZ file with the given file name is created and contains all Edge diagnostics file.

Edge site is already installed

On the command line, run the following command to create the diagnostics file:

```
edge diagnostics --diag-file <file name>.tgz
```

» A TGZ file with the given file name is created and contains all Edge diagnostics file.

Tip If the edge command is not available, you first have to download it.

What's next?

You can send the diagnostics file to Collibra support to help you resolve your installation issues.

Create Metadata connector log files

If you have an issue with a JDBC connection, for example while registering a data source via Edge, you can create the Metadata connector log files and then save and review them locally. If you create a support ticket, you can attach the reviewed Metadata connector log files to Collibra support to help you with your issue.

Prerequisites

- You have a global role that has the System administration global permission.
- You have a global role with the Manage connections and capabilities global permission, for example Edge integration engineer.
- You have created and installed an Edge site.
- You have created a JDBC connection and an Edge capability.

Steps

- Edit the Edge capability that contains the JDBC connection for which you want to create a log file.
 - a. Click the name of the Edge capability to open it.
 - b. Click Edit.
 - c. In the **General** section, click the **Log level** drop-down menu.
 - d. Select the log verbosity level.

Tip The level must be at least low.

- e. Click Save.
 - » The fields become read-only.
- 2. Click **Run** to rerun the Edge capability.
- 3. Contact Collibra support to request the Edge job ID of the Edge capability.
- 4. Run the following command:

./edge catalog-connector --jobid <Edge job ID> --dst <path to
destination>

» The log file is created and stored in the predefined destination.

Tip If the edge command is not available, you first have to download it.

Prerequisites

- You have a Linux host with kubectl access to your EKS installation.
- You have mc (minio client) installed in /usr/local/bin:

```
sudo curl -L "https://dl.min.io/client/mc/release/linux-
amd64/mc" -o /usr/local/bin/mc
sudo chmod +x /usr/local/bin/mc
```

Steps

Execute the following commands:

```
kubectl -n collibra-edge port-forward service/minio 9000:9000 &

MC_ACCESSKEY="$(kubectl get secrets edge-minio -n collibra-edge
-o jsonpath="{.data.accesskey}" | base64 --decode)"

MC_SECRETKEY="$(kubectl get secrets edge-minio -n collibra-edge
-o jsonpath="{.data.secretkey}" | base64 --decode)"

export MC_HOST_edge="http://${MC_ACCESSKEY}:${MC_
SECRETKEY}@localhost:9000"

mc cp --quiet --recursive edge/cdata/<jobId> <destination_
directory>

pkill -f "port-forward"
```

Enable debug logging for Edge infrastructure logs

By default, the Edge infrastructure logs are always enabled on an information level. If you have an issue with Edge in general, you can enable Edge to create Edge infrastructure debug log files and send them to Collibra Data Intelligence Cloud. Collibra support uses these log files to solve Edge issues.

Prerequisites

- You have a global role that has the System administration global permission.
- You have a global role with the Manage connections and capabilities global permission, for example Edge integration engineer.
- You have created and installed an Edge site.
- You have created a JDBC connection and an Edge capability.

Steps

- 1. In the main menu, click #, then Settings.
 - » The Collibra settings page opens.
- 2. On the **Settings** page, click **Edge**.
 - » The Edge sites overview appears.
- Click the site that runs the capability with issues.
 - » The site details page appears.
- 4. On the **Capabilities** tab, click the name of the Edge capability.
- 5. Click Edit.
- 6. In the **General** section, click the **Debug** drop-down menu and select *true*.

Note This field is by default set to *false*. If you set it to *true*, it will automatically revert to *false* after 24 hours.

- 7. Click Save.
 - » The fields become read-only.

- 8. Click **Run** to rerun the Edge capability.
 - » The log files are automatically sent to Collibra Data Intelligence Cloud.

Disable OpenTelemetry

If you reinstalled an Edge site with a new version it is possible that the new setup is not working due to a missing network connectivity. You would have to request for OpenTelemetry to be added again. If this request takes days to be completed, you may want to disable OpenTelemetry to still have a running Edge site.

Disable OpenTelemetry at installation time

Add the flag --disable-otel when you run the installation script.

```
sudo sh install-master.sh --storage-path /var/edge/storage
properties.yaml \
   --disable-otel \
   -r registries.yaml
```

```
./run-installer-job.sh properties.yaml --repositories repositories.json \
--set collibra_edge.collibra.minio.persistence.size=120Gi \
--disable-otel
```

Chapter 9

Edge FAQ

The following table contains the most frequently asked questions about Edge that were not answered anywhere else in the Edge documentation.

Question	Answer
Who benefits from using Edge?	 All customers who want to ingest data into Collibra Data Intelligence Cloud benefit from Edge. Some of the benefits for using Edge are: Data is processed in the customer's secure environment and only the process results are sent to Collibra Data Intelligence Cloud. Edge can automatically anonymize sensitive profiling data before sending it to Collibra Data Intelligence Cloud. Edge can automatically classify the metadata and send the classification results together with the profiling results to Collibra Data Intelligence Cloud. Edge enables better profiling performance, because data no longer has to be copied or moved.
Where can I find Edge API documentation?	You can find the Edge API reference documentation in your Collibra environment on this URL: https:// <your_collibra_platform_url>/edge/docs/index.html</your_collibra_platform_url>

Question	Answer
Does Edge replace the Jobserver?	Customers can choose between Edge and Jobserver.
	The main differences between Edge and Jobserver are the following:
	 Edge is based on Kubernetes, a distributed runtime, which means: It can scale out. It offers built in resource management. It has out of the box high availability. It has reliable delivery of results to Collibra Data Intelligence Cloud. Edge is a Collibra service compatible with onpremises as well as cloud environments. Edge offers continuous delivery of capability types and updates will be installed on a regular basis. Edge updates are included in Collibra Data Intelligence Cloud releases. Jobserver features correspond to Edge capabilities, each one is developed and deployed independently of one another. In the future, we will provide a script for migrating features from Jobserver to Edge where applicable.
Can Edge run alongside Jobserver?	Yes. Both can even be installed on the same server as long as the server has enough resources to support both, though we recommend not to run both services on a single server.
What does the Edge architecture look like?	You can see how Edge interacts with other components in this architecture and components overview.

Question	Answer
Can Edge use Kubernetes provided by a Cloud vendor, for example GKE, AKS, Amazon EKS?	When the Edge site is installed in a Cloud environment, it does not use a managed Kubernetes provided by the Cloud vendor, because Kubernetes is already included in the Edge site installation process.
	Collibra manually manages the cluster on top of EC2 or similar machines in other platforms. In the first releases, we cannot benefit from seamless integration of various Cloud services offered by those platforms, for example, embedded authentication, auto-scaling and databases.
Can Edge be installed on top of a customer's provided Kubernetes cluster?	Yes, you can install Edge on EKS.
Can Edge be installed on Windows servers?	No, you cannot install an Edge site on Windows servers.
What are the supported data sources on Edge?	You can find the list of supported data sources in the Data sources supported by Edge section.
Can you connect using a cloud provider key manager such as AWS Secrets Manager, GCP Secret Manager or Azure Key Vault?	Not at this moment.

Question	Answer
How does Edge connect to Collibra Data Intelligence Cloud?	An Edge site is installed in the customer's environment, close to the data source. The Edge site communicates to Collibra Data Intelligence Cloud and other 3rd party systems using an HTTPS connection.
	Note The connection between an Edge site and Collibra Data Intelligence Cloud is outbound-only.
Who controls Edge?	Edge is controlled by the customer through local access via the Collibra Data Intelligence Cloud user interface. You can also use local access via the Linux shell for advanced troubleshooting when Edge is unable to connect.
Can an Edge site connect to more than one Collibra environment?	No. Every Edge site belongs and authenticates to only one Collibra Data Intelligence Cloud environment.
Can Edge use customer-provided certificates to connect to Collibra Data Intelligence Cloud?	Currently, we do not support this. Edge is a Collibra product that can run on the customer's on-premises or cloud environment. The authentication between the Edge site and Collibra Data Intelligence Cloud is controlled and secured by Collibra. The keys and credentials are generated when you install the Edge site.
Does Edge support mTLS when connecting to Collibra Data Intelligence Cloud?	Currently, we do not support this.

Chapter 9

Question	Answer
Is Edge horizontally scalable?	Currently, Edge is not horizontally scalable. You cannot add more nodes.
Can metrics data from an Edge site be sent to Collibra through a private link instead of over the Internet?	No, this data can only be sent over the Internet.