

A large, powerful blue wave is crashing over a surfer. The surfer is a person in a dark wetsuit, crouching on a white surfboard, riding the base of the wave. The water is a deep blue, and the wave's crest is white with foam. The background is a vast expanse of the ocean under a clear sky.

# Introduction to Altinity.Cloud

A platform for real-time analytics on ClickHouse

Robert Hodges and Alexander Zaitsev

# Let's make some introductions

## Us

Database geeks with decades of experience in DBMS and applications

## You

App developers looking to build real-time analytics to solve business problems



# Altinity

ClickHouse support and services including [Altinity.Cloud](#)  
Authors of [Altinity Kubernetes Operator for ClickHouse](#)  
and other open source projects

# What's Altinity.Cloud?

# Altinity.Cloud is a zero-maintenance SaaS for ClickHouse

Complete automation  
of operations with  
baked in DBA support



Cost and performance  
optimized for real-time  
analytics

Supports all versions and  
features of ClickHouse  
(also experimental ones!)

Run in any AWS/GCP  
region or your own  
Kubernetes clusters

# ClickHouse is a real-time analytic database

Understands SQL

Runs on bare metal to cloud

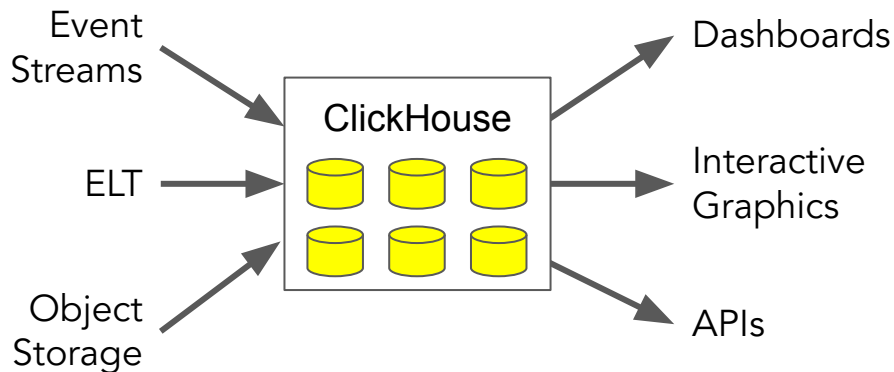
Shared nothing architecture

Stores data in columns

Parallel and vectorized execution

Scales to many petabytes

Is Open source (Apache 2.0)

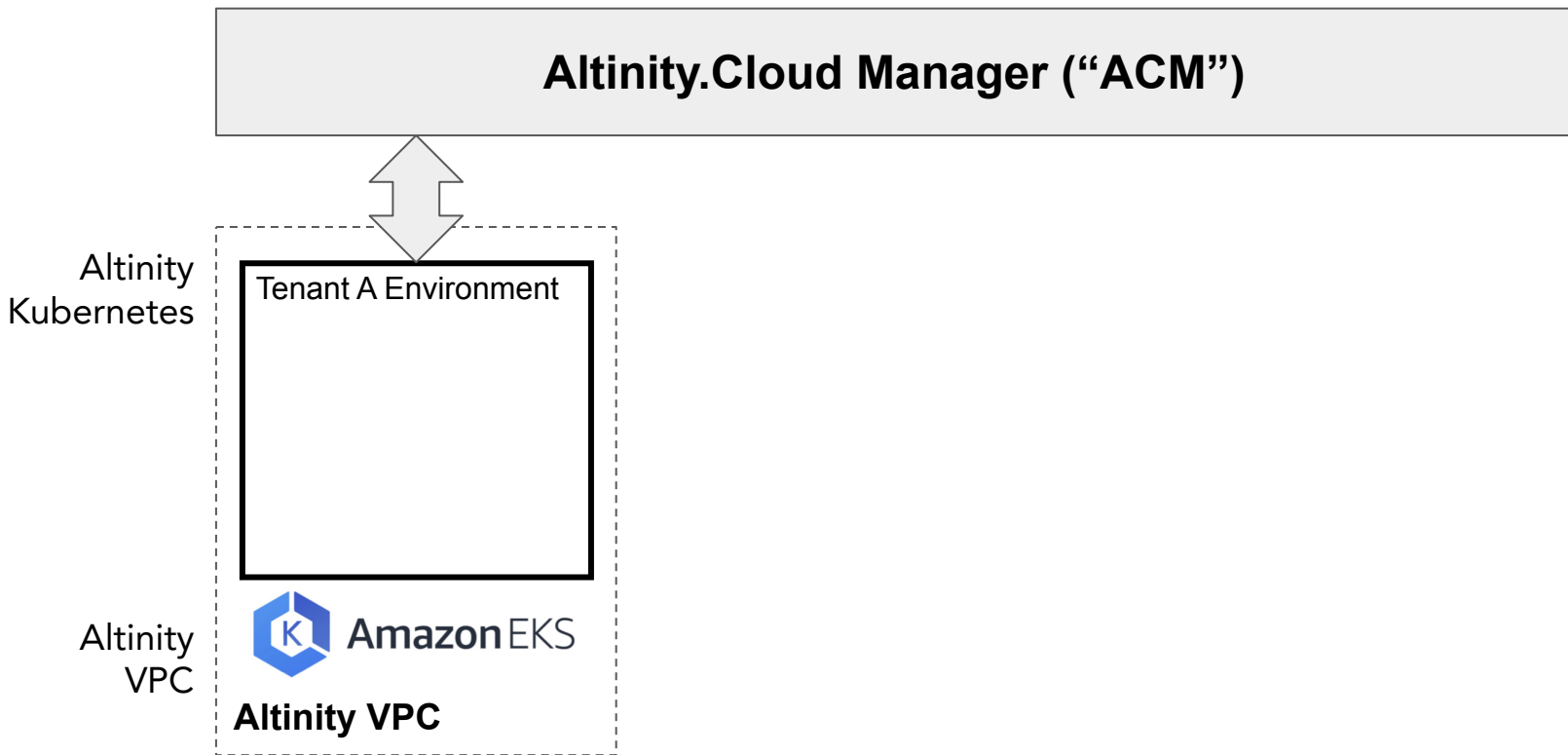


It's the core engine for  
low-latency analytics

# DEMO TIME!

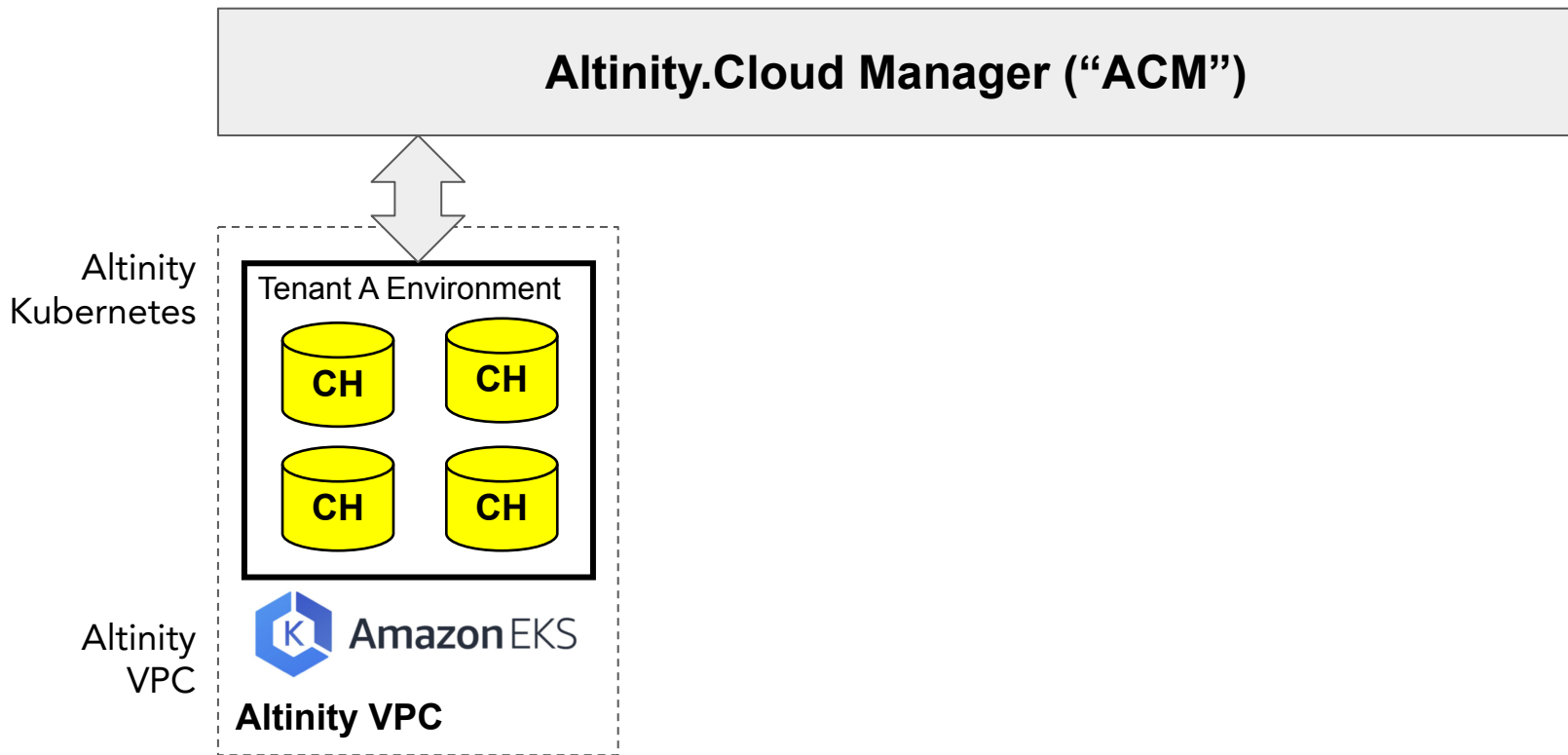
# How does Altinity.Cloud work?

# Environments allow ClickHouse to run anywhere

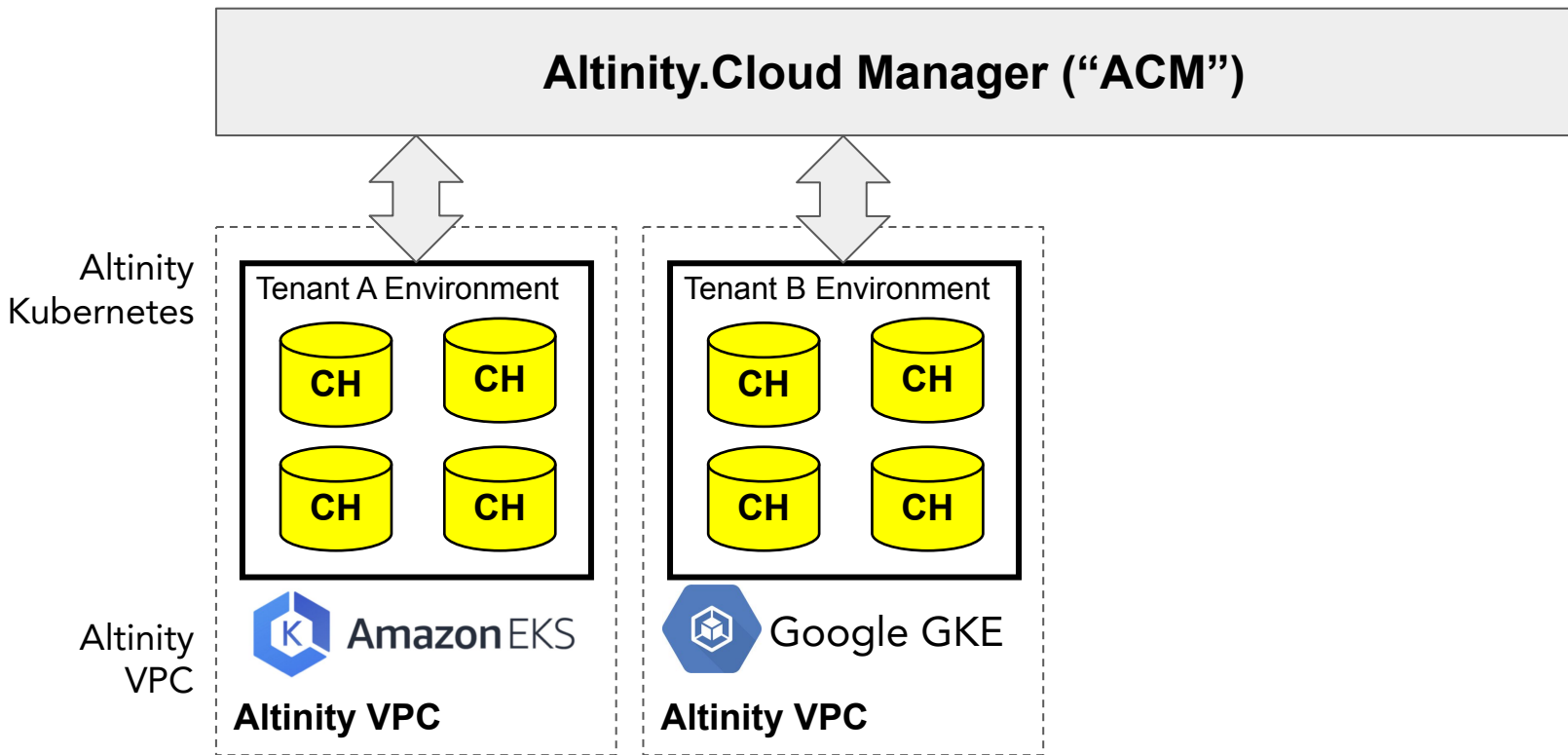




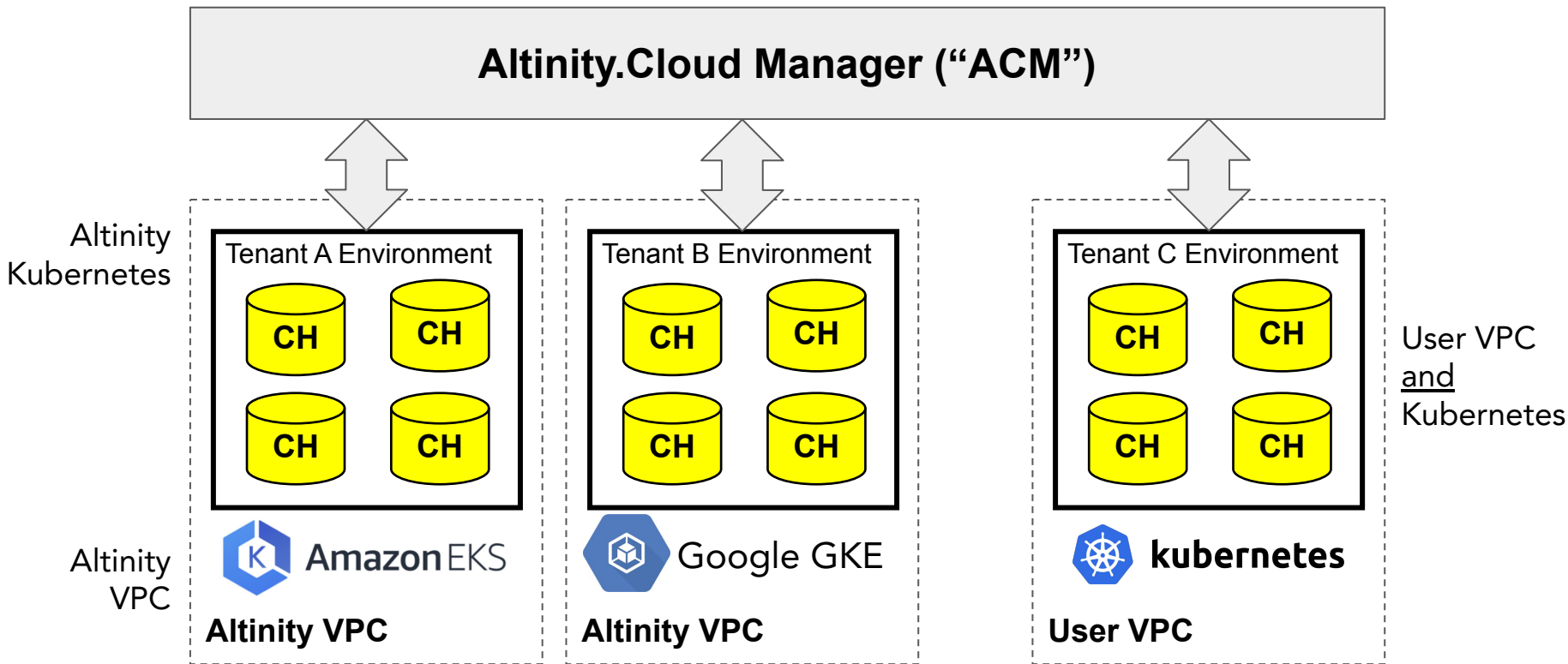
# Environments allow ClickHouse to run anywhere



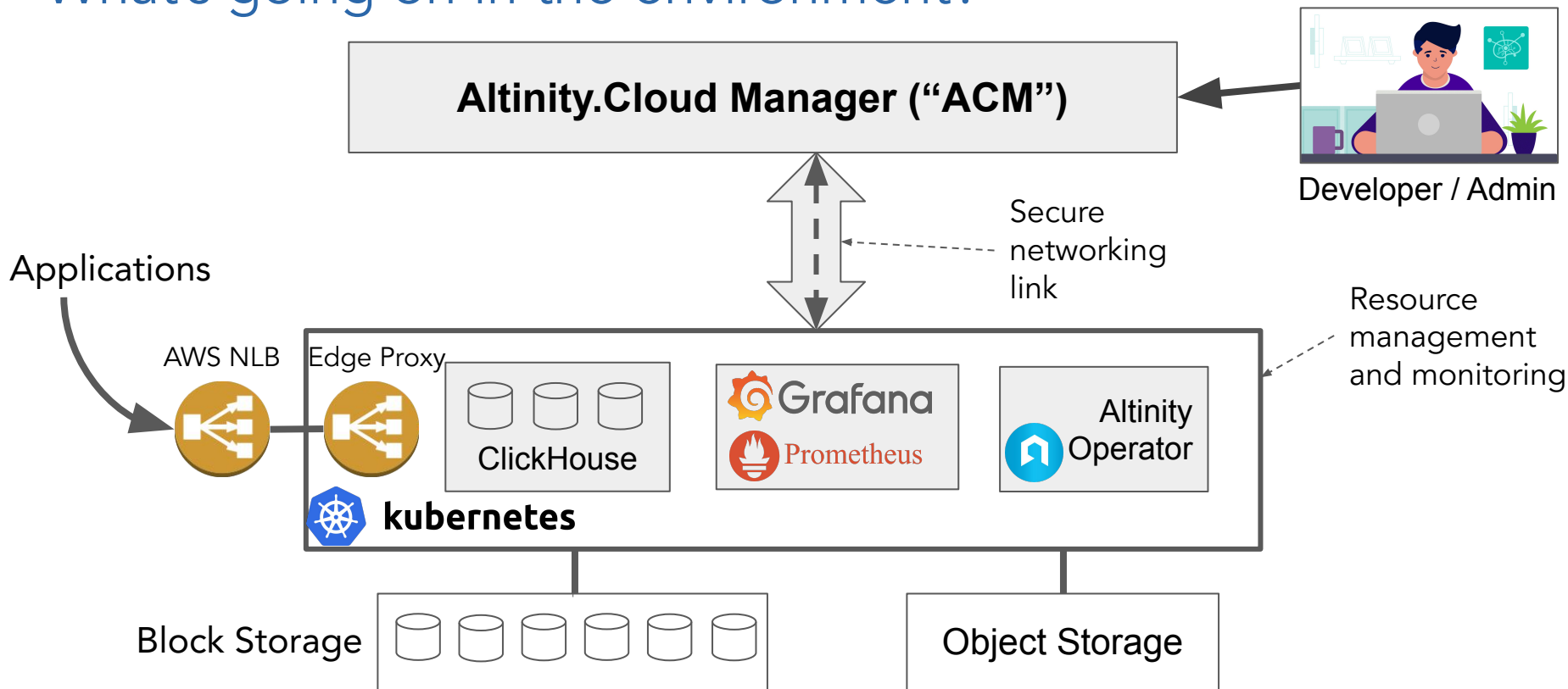
# Environments allow ClickHouse to run anywhere



# Environments allow ClickHouse to run anywhere



# What's going on in the environment?



# Altinity.Cloud operates the way you do at home!

- The analytic stack is 100% open source
- Run any version of ClickHouse
  - Use community versions to get new features during development
  - Use Altinity Stable builds for production deployments
- Use virtually all features
  - Including experimental features like Live Views and many others
- ClickHouse client libraries must support TLS with Server Name Indications (SNI)

# Developing real-time analytics on Altinity.Cloud

# Introducing the Altinity.Cloud cluster view

Create a new cluster

A stopped cluster

An active cluster

The screenshot displays the Altinity.Cloud cluster management interface. At the top, there is a navigation bar with buttons: LAUNCH CLUSTER (highlighted with a red dashed box), DISCOVER, IMPORT, TOOLS, SHARE, and a menu icon. Below the navigation bar, four cluster cards are shown: meetup, clickhouse101, github, and posthog. Each card displays cluster details and a table of health metrics. The 'github' cluster is highlighted with a red dashed box. Annotations point to the 'LAUNCH CLUSTER' button, the 'github' cluster, and the 'posthog' cluster.

| Cluster Name  | Status           | Nodes Online | Health            | Shards | Replicas | Storage       | Memory        | CPU       | Version        | Backup              |
|---------------|------------------|--------------|-------------------|--------|----------|---------------|---------------|-----------|----------------|---------------------|
| meetup        | stopped          |              | 0/6 checks passed | 1      | 1        | 100 GB / node | 7 GB / node   | 2 / node  | 21.8.13.1.a... | 2022-05-07 05:11:06 |
| clickhouse101 | 1/1 nodes online |              | 6/6 checks passed | 1      | 1        | 350 GB / node | 7 GB / node   | 2 / node  | 22.8.6.71      | 2022-12-08 05:14:16 |
| github        | 1/1 nodes online |              | 6/6 checks passed | 1      | 1        | 1 TB / node   | 122 GB / node | 32 / node | 22.9.3.18      | 2022-12-08 06:02:03 |
| posthog       | stopped          |              | 0/6 checks passed | 1      | 1        | 100 GB / node | 7 GB / node   | 2 / node  | 21.8.13.1.a... | 2022-01-31 06:28:25 |

# Deciding between Community and Altinity Stable Builds

## ClickHouse Community Builds

Monthly builds

LTS builds every 6 months  
(1 year of support)

<https://clickhouse.com>

Rapidly evolving; great  
for development and  
experimentation

## Altinity Stable Builds

Prod-ready LTS builds only  
(3 years of support)

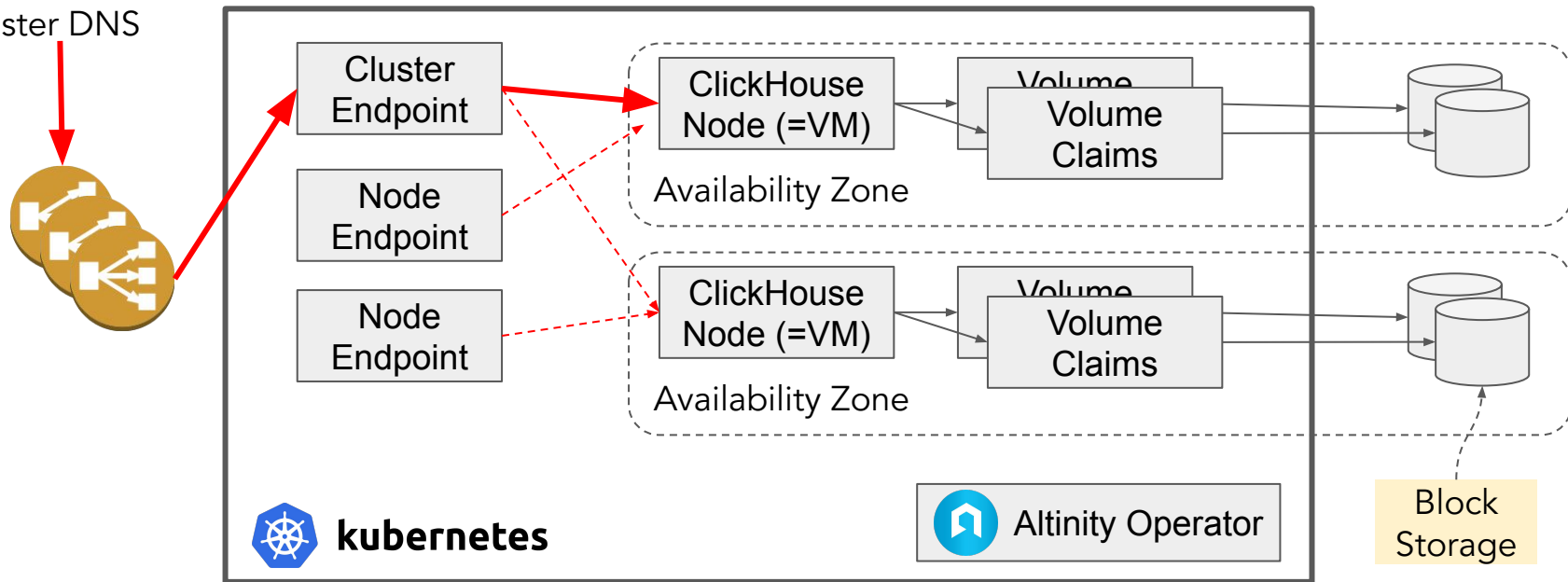
<https://docs.altinity.com>

Slower-moving; certified for  
production operation with  
tested upgrade

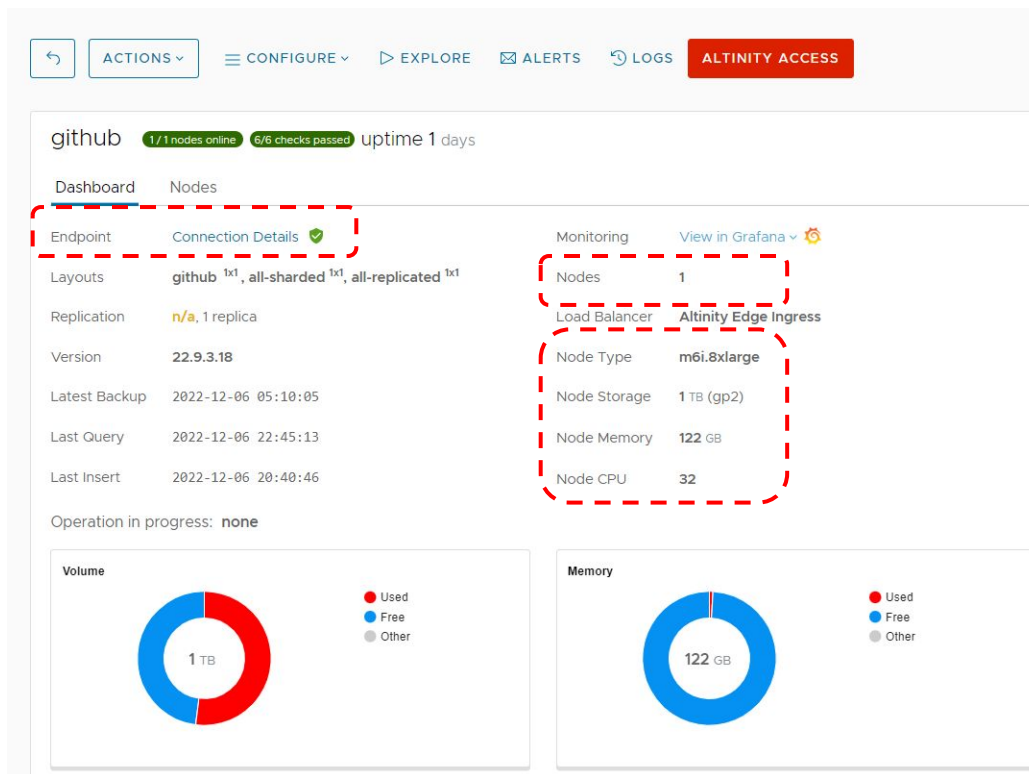


# What's going on under the covers in a ClickHouse cluster?

Connection to  
Cluster DNS



# Key information on the cluster dashboard



# Getting cluster connection details

Connection info for cluster

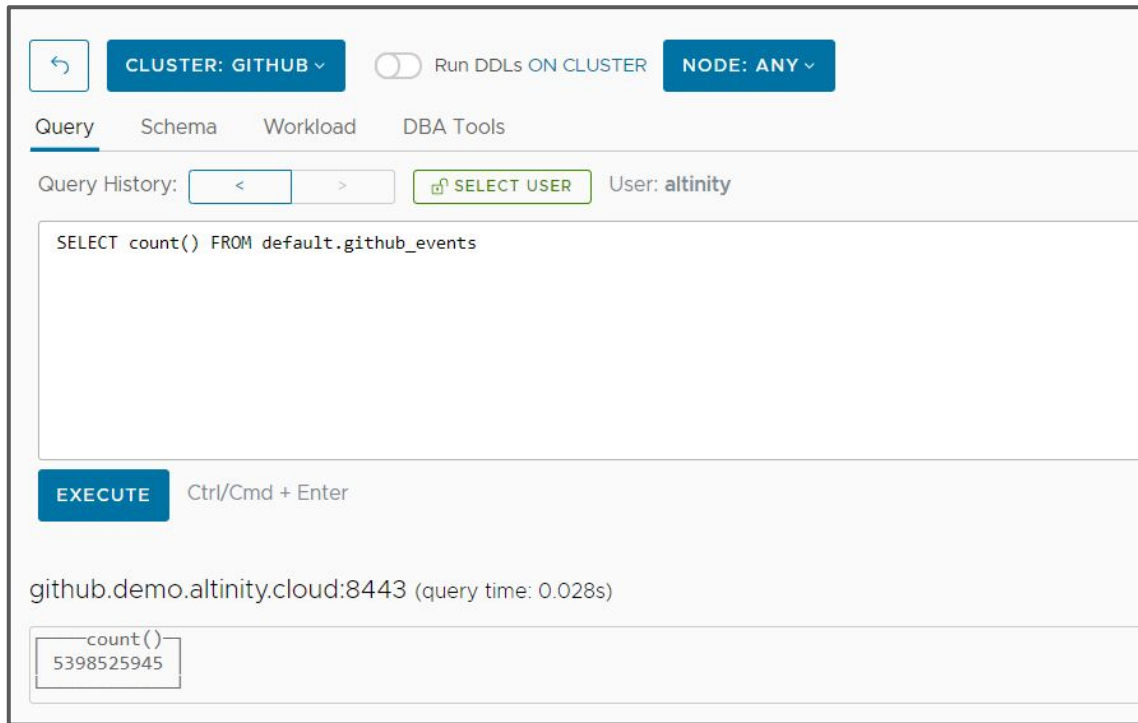
Connection info for nodes

The screenshot displays the Altinity Cloud console interface. At the top, there's a navigation bar with buttons for ACTIONS, CONFIGURE, EXPLORE, ALERTS, LOGS, and a prominent ALTINITY ACCESS button. The main content area shows the 'github' cluster status: 1/1 nodes online, 6/6 checks passed, and uptime 1 days. Below this, a 'Dashboard' tab is active, showing a table of cluster details. A red dashed box highlights the 'Connection Details' link in the table. A callout arrow points from a yellow box labeled 'Connection info for cluster' to this link. Another callout arrow points from a yellow box labeled 'Connection info for nodes' to the 'Nodes' tab. The 'Connection Details' modal is open, showing the following information:

| Connection Details (Cluster: github) |   |
|--------------------------------------|---|
| Host:                                | github.demo.altinity.cloud  |
| TCP Port:                            | 9440  |
| HTTP Port:                           | 8443  |
| Copy/Paste for client connections:   |   |
| clickhouse-client                    | -h github.demo.altinity.cloud --port 9440 -s --user=admin --password  |
| jdbc:                                | clickhouse://github.demo.altinity.cloud:8443?ssl=true   |
| https:                               | admin:<PASSWORD>@github.demo.altinity.cloud:8443  |
| Python:                              | <pre>from clickhouse_driver import Client client = Client('github.demo.altinity.cloud', user='admin', password=&lt;PASSWORD&gt;, port=9440, secure='y', v</pre> |

At the bottom of the modal is a 'DONE' button. In the background, the 'Volume' section shows a donut chart for 1 TB.

# Use dashboard EXPLORER tab to run queries



The screenshot displays the Altinity dashboard's EXPLORER tab. At the top, there is a navigation bar with a refresh icon, a dropdown menu set to 'CLUSTER: GITHUB', a toggle switch for 'Run DDLs ON CLUSTER' which is currently off, and another dropdown menu set to 'NODE: ANY'. Below this is a tabbed interface with 'Query', 'Schema', 'Workload', and 'DBA Tools'. The 'Query' tab is active. Under the 'Query' tab, there is a 'Query History' section with left and right navigation arrows, a 'SELECT USER' button, and a 'User: altinity' label. The main query editor contains the text: `SELECT count() FROM default.github_events`. Below the editor is an 'EXECUTE' button with the keyboard shortcut 'Ctrl/Cmd + Enter'. The execution status shows 'github.demo.altinity.cloud:8443 (query time: 0.028s)'. The result is displayed in a table with one row: 

| count()    |
|------------|
| 5398525945 |

# Add users with the CONFIGURE->Users panel

The screenshot displays the Altinity database management interface. The top navigation bar includes buttons for ACTIONS, CONFIGURE, EXPLORE, ALERTS, and LOG. The left sidebar shows a tree view with options like Dashboard, Node, Endpoint, Connections, Uptime Schedule, Monitoring, Layouts, Nodes, Replication, and Load Balancer. The main content area shows the 'github' cluster configuration, including node details and replication status. A dropdown menu is open under the CONFIGURE button, highlighting the 'Users' option. A callout box points to the 'Users' option in the dropdown menu, stating 'Enable SQL RBAC commands'. The 'User Details' dialog is open, showing fields for Login, Password, Confirm Password, Databases, Profile, and Access Management. The 'Access Management' toggle is highlighted with a red dashed box, indicating it should be enabled.

github 1/1 nodes

Dashboard Node

Endpoint Connections

Layouts github 1x1, all-sharded 1x1, all-replicated 1x1

Replication n/a, 1 replica

Monitoring

Nodes

Load Balancer

CONFIGURE

EXPLORE

ALERTS

LOG

Settings

Profiles

Users

Connections

Uptime Schedule

User Details

User adjustments for the Cluster **github**

Login \* root

Password \* .....

Confirm Password \* .....

Databases

Profile default

Access Management ☒

CANCEL OK

Enable SQL RBAC commands

# Create additional users using SQL RBAC commands

```
clickhouse-client -h github.demo.altinity.cloud --port 9440 -s  
--user=root --password
```

```
github :) CREATE USER IF NOT EXISTS example IDENTIFIED WITH  
SHA256_PASSWORD BY 'secret672355tzdb';
```

```
CREATE USER IF NOT EXISTS example IDENTIFIED WITH sha256_hash BY  
'5A746DBA1C3B5A4CBBAD60AEED64F164A8BA1AE1C13988A88CAAFBA46EE7C5B'  
SALT  
'463A7B30786D2108C3D56289875B3305BC034218C7A884F64C169A3B2F86882A'
```

Ok.

# Use EXPLORE->Schema tab to see current schema

←

CLUSTER: GITHUB ▾

☐ Run DDLs ON CLUSTER

NODE: ANY ▾

IMPORT DATASET

↺

Query

Schema

Workload

DBA Tools

☐ Show system tables

|   | Database ▾ | Table ▾                       | Engine ▾            | Rows ▾     | Bytes ▾      | Bytes per row ▾ | Partitions ▾ | Compression ▾ |
|---|------------|-------------------------------|---------------------|------------|--------------|-----------------|--------------|---------------|
| ⋮ | cloki      | <a href="#">samples</a>       | ReplicatedMergeTree | 0          | 0            | 0               | 0            | 0             |
| ⋮ | cloki      | <a href="#">time_series</a>   | ReplicatedMergeTree | 0          | 0            | 0               | 0            | 0             |
| ⋮ | default    | <a href="#">airports</a>      | MergeTree           | 7543       | 386780       | 51.28           | 1            | 2.1           |
| ⋮ | default    | <a href="#">dict_flat</a>     | Dictionary          | 0          | 0            | 0               | 0            | 0             |
| ⋮ | default    | <a href="#">dict_source_2</a> | MergeTree           | 10000000   | 489010194    | 48.9            | 1            | 5.89          |
| ⋮ | default    | <a href="#">github_events</a> | MergeTree           | 5400750907 | 349448591991 | 64.7            | 13           | 7.46          |

Data Size

Partitions

Compression Ratio

# Building your analytics stack on Altinity.Cloud



## Event streaming

- [Apache Kafka](#)
- [Apache Pulsar](#)
- [Vectorized Redpanda](#)

## ELT

- [Apache Airflow](#)
- [Rudderstack](#)
- [Apache Spark](#)

## Rendering/Display

- [Apache Superset](#)
- [Cube.js](#)
- [Grafana](#)

## Client Libraries

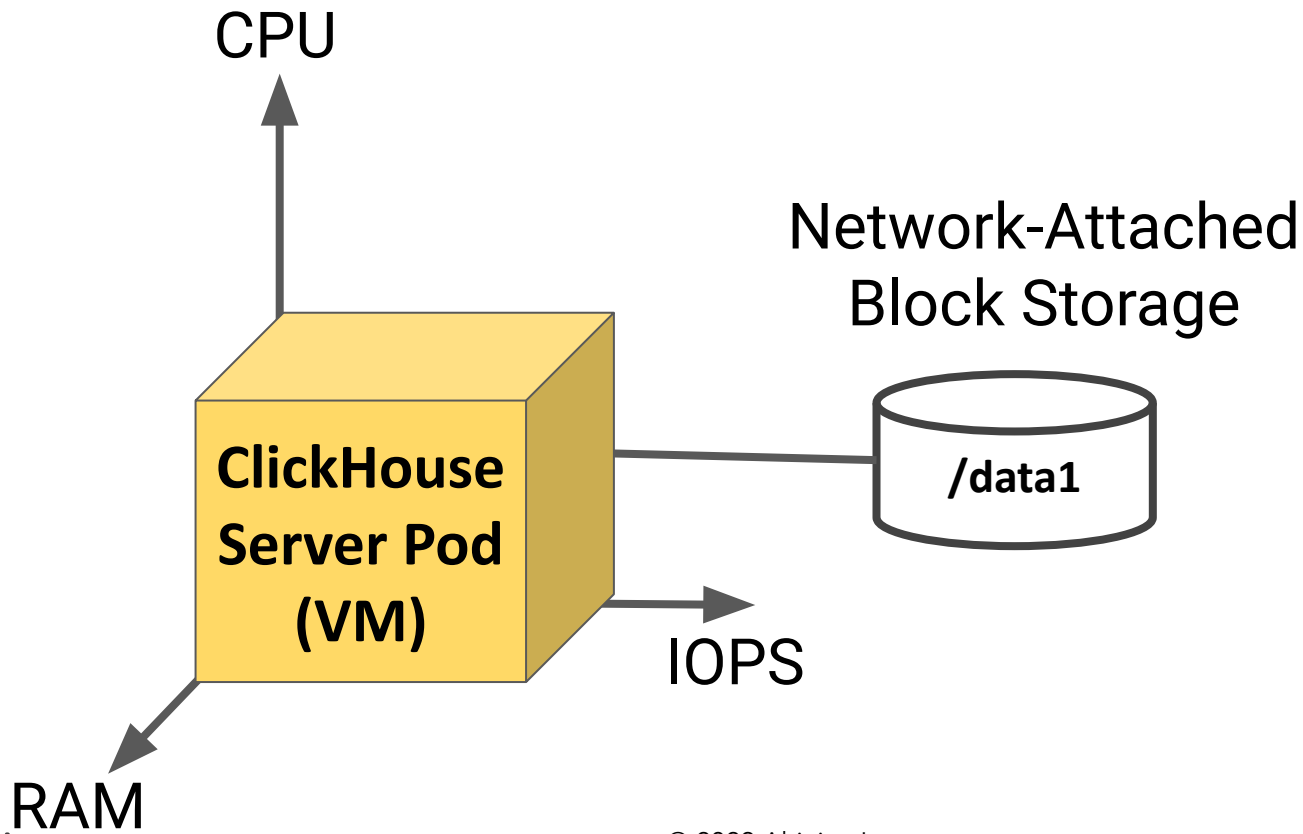
- C++ - [ClickHouse CPP](#)
- Golang - [ClickHouse Go](#)
- Java - [ClickHouse JDBC](#)
- Javascript/Node.js - [Apla](#)
- ODBC - [ODBC Driver for ClickHouse](#)
- Python - [ClickHouse Driver](#), [ClickHouse SQLAlchemy](#)

More client library links [HERE](#)



# Operating your application on Altinity.Cloud

# What does a ClickHouse server look like?



# Use ACTIONS drop-down to restart the server at any time

The screenshot shows the Altinity console interface. At the top, there is a navigation bar with a back arrow, an 'ACTIONS' dropdown menu, and links for 'CONFIGURE', 'EXPLORE', 'ALERTS', 'LOGS', and a red 'ALTINITY ACCESS' button. Below the navigation bar, the 'github' cluster is selected, showing '1/1 nodes online', '6/6 checks passed', and 'uptime 1 days'. A modal dialog titled 'Cluster Restart' is open, asking 'Are you sure you want to restart Cluster github?'. It includes a checkbox for 'Hard Cluster Reset (kill all CH pods)' and 'CANCEL' and 'OK' buttons. In the background, there are donut charts for storage usage (1 TB and 122 GB) and a list of components like 'Altinity Edge Ingress' and 'm6i.8xlarge'.

Cluster Restart

Are you sure you want to restart Cluster **github**?

☐ Hard Cluster Reset (kill all CH pods)

CANCEL OK

1 TB

122 GB

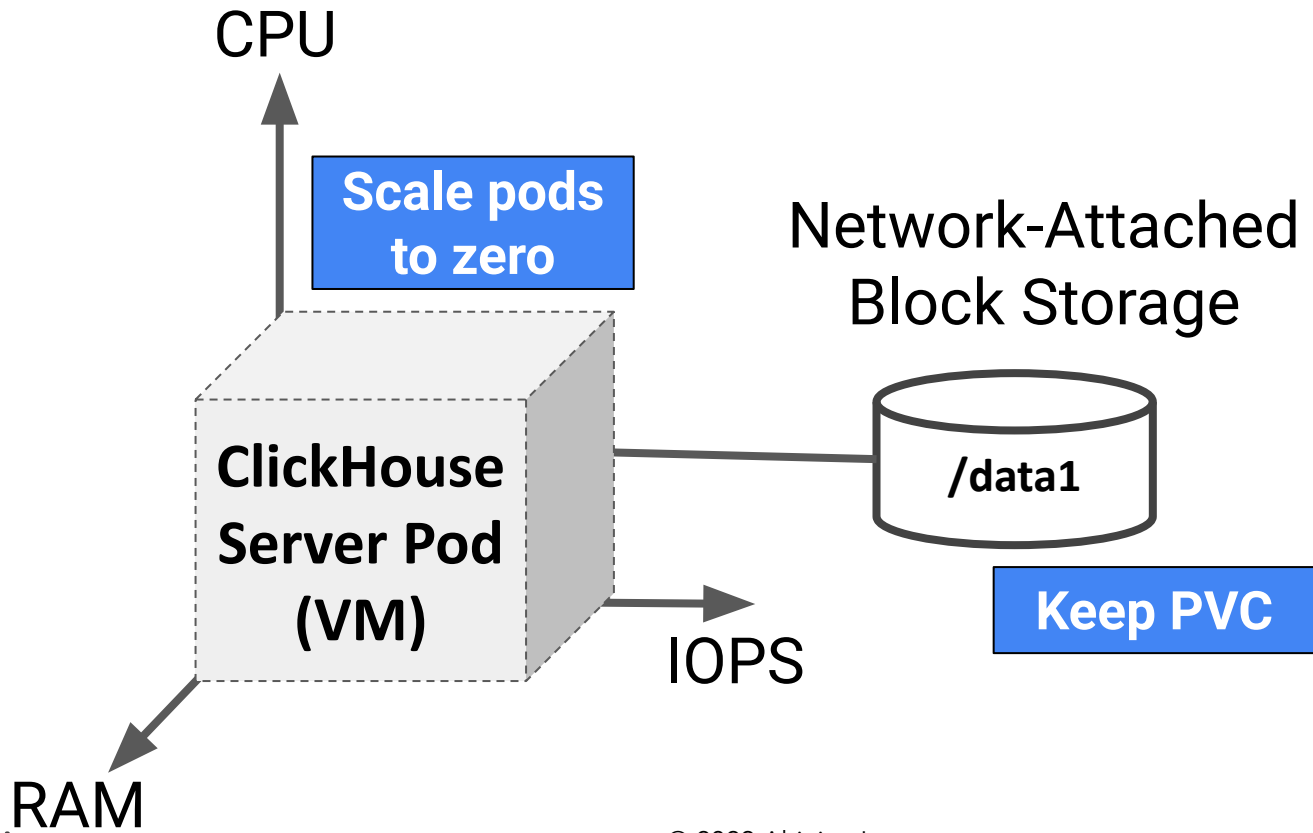
Used

Free

Other

Kill without waiting for queries to complete

# We can also turn off compute to save money



# Use ACTIONS drop-down to stop and resume manually

The screenshot shows the Altinity console interface. At the top, there is a navigation bar with a back arrow, an 'ACTIONS' drop-down menu, and links for 'CONFIGURE', 'EXPLORE', 'ALERTS', 'LOGS', and a red 'ALTINITY ACCESS' button. Below the navigation bar, the main content area displays the status of a cluster named 'github'. It shows '1/1 nodes online', '6/6 checks passed', and 'uptime 1 days'. There are two tabs: 'Dashboard' and 'Nodes'. The 'Nodes' tab is selected, showing a table with columns 'Endpoint', 'Connection Details', 'Layouts', 'Replication', 'Version', 'Latest Backup', and 'Last Query'. The 'Layouts' column shows 'github 1x1, all-sharded 1x1, all-replicated 1x1'. The 'Replication' column shows 'n/a, 1 replica'. The 'Version' column shows '22.9.3.18'. The 'Latest Backup' column shows '2022-12-06 05:10:05'. The 'Last Query' column shows '2022-12-06 22:45:13'. To the right of the table, there is a 'Monitoring' section with a 'View in Grafana' link and a 'Nodes' section with a '1' node count. Below the 'Nodes' section, there is a 'Load Balancing' section with a 'Node Type' dropdown menu. Two modal dialogs are overlaid on the console. The first modal, titled 'Stop Cluster', contains the text 'You are about to suspend the Cluster github. Are you sure?' and has 'CANCEL' and 'CONFIRM' buttons. The second modal, titled 'Resume Cluster', contains the text 'You are about to resume the Cluster github including its 1 nodes' and has a 'Node Type' dropdown menu showing 'm6i.8xlarge (CPU x32, RAM 122 GB)' and 'CANCEL' and 'CONFIRM' buttons. Arrows point from the 'ACTIONS' drop-down menu to the 'Stop Cluster' and 'Resume Cluster' modals.

github 1/1 nodes online 6/6 checks passed uptime 1 days

Dashboard Nodes

Endpoint Connection Details

Layouts github 1x1, all-sharded 1x1, all-replicated 1x1

Replication n/a, 1 replica

Version 22.9.3.18

Latest Backup 2022-12-06 05:10:05

Last Query 2022-12-06 22:45:13

Monitoring View in Grafana

Nodes 1

Load Balancing

Node Type m6i.8xlarge (CPU x32, RAM 122 GB)

Stop Cluster

You are about to suspend the Cluster **github**. Are you sure?

CANCEL CONFIRM

Resume Cluster

You are about to resume the Cluster **github** including its 1 nodes

Node Type m6i.8xlarge (CPU x32, RAM 122 GB)

CANCEL CONFIRM

# Use CONFIGURE->Uptime Schedule to stop automatically

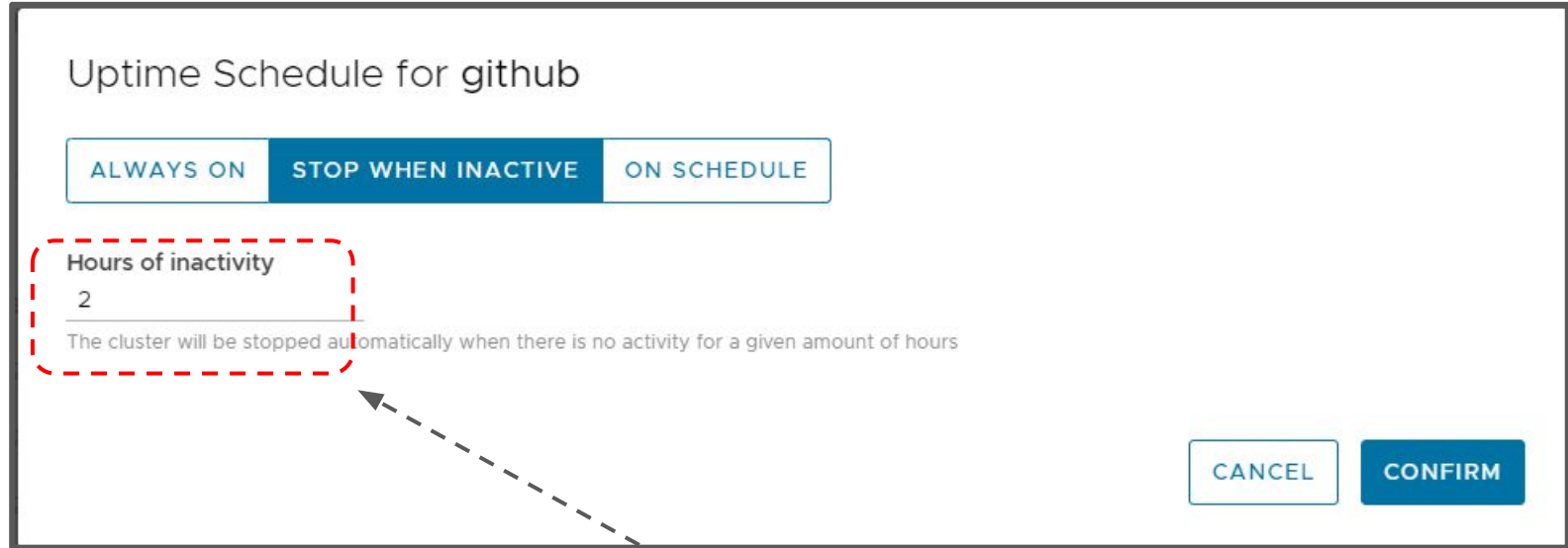
Uptime Schedule for github

**ALWAYS ON** **STOP WHEN INACTIVE** ON SCHEDULE

Hours of inactivity  
2

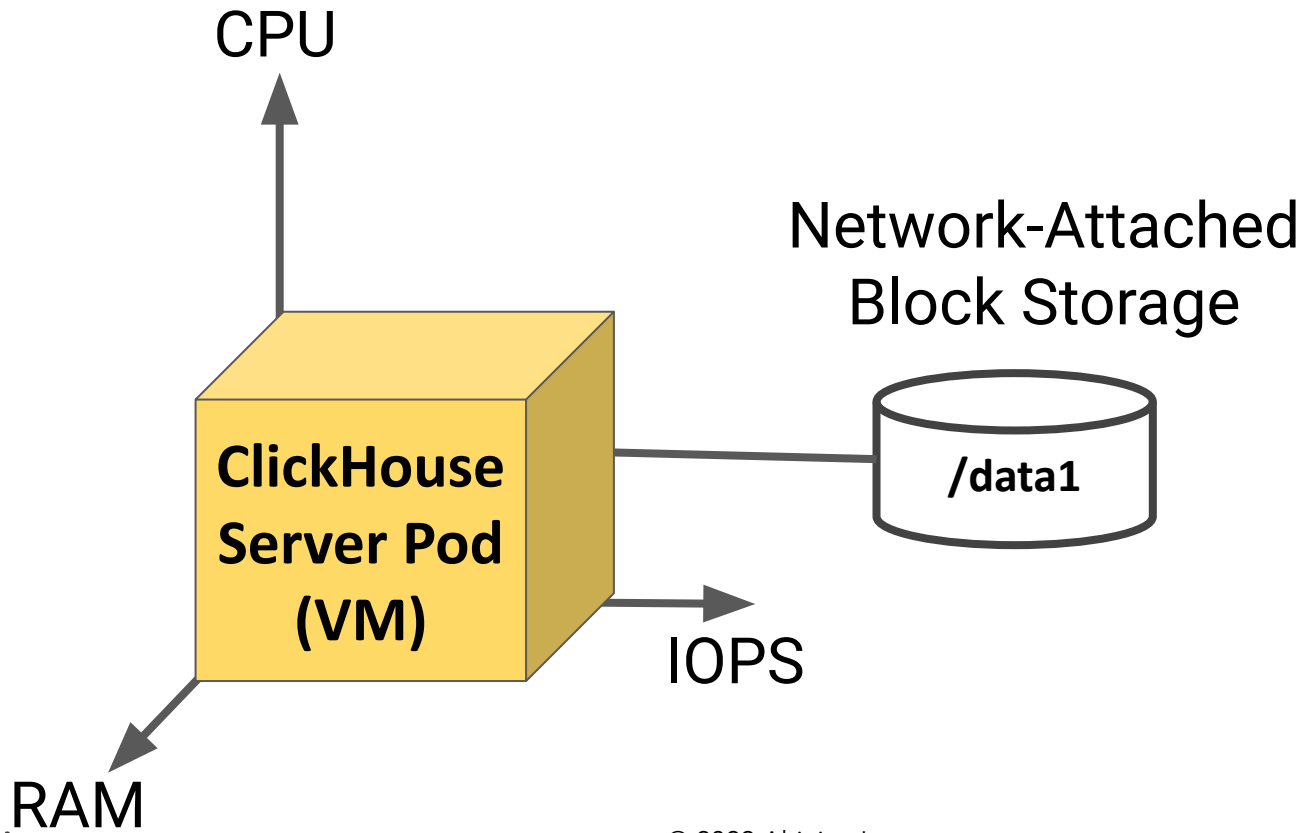
The cluster will be stopped automatically when there is no activity for a given amount of hours

CANCEL CONFIRM



Pause idle cluster after two hours

# Altinity.Cloud makes it easy to scale clusters



# Use ACTIONS->Rescale to scale clusters up and down

The screenshot shows the Altinity console interface. At the top, there is a navigation bar with buttons for 'ACTIONS', 'CONFIGURE', 'EXPLORE', 'ALERTS', 'LOGS', and a red 'ALTINITY ACCESS' button. Below this, the 'github' cluster is selected, showing status '1/1 nodes online', '6/6 checks passed', and 'uptime 1 days'. A sidebar on the left lists various metrics like Endpoint, Layouts, Replication, Version, Latest Backup, Last Query, and Last Insert. A 'Volume' section at the bottom left shows a donut chart for '1 TB'. A large modal window titled 'Rescale Cluster' is open, showing 'Rescale options for the Cluster github'. It displays 'Current Cluster Size' (1 shard, 1 replica) and 'Current Node Size' (m6i.8xlarge, 1050 storage, 3 volumes). On the right, 'Desired' settings are shown in a red dashed box, including 'Desired Cluster Size' (1 shard, 1 replica) and 'Desired Node Size' (m6i.8xlarge, 1050 storage, 3 volumes). A yellow box labeled 'Horizontal scaling' points to the cluster size settings, and another yellow box labeled 'Vertical scaling' points to the node size settings. The 'Apply to new nodes only' toggle is currently off. 'CANCEL' and 'OK' buttons are at the bottom right of the modal.

**ACTIONS** **CONFIGURE** **EXPLORE** **ALERTS** **LOGS** **ALTINITY ACCESS**

github 1/1 nodes online 6/6 checks passed uptime 1 days

**Dashboard** Nodes

Endpoint Connection Details ✓

Layouts github 1x1, full-sharded 1x1

Replication n/a, 1 replica

Version 22.9.3.18

Latest Backup 2022-12-06 05:10:00

Last Query 2022-12-06 22:45:13

Last Insert 2022-12-06 20:40:46

Operation in progress: none

Volume

1 TB

### Rescale Cluster

Rescale options for the Cluster github

Current Cluster Size

|                     |   |
|---------------------|---|
| Number of Shards:   | 1 |
| Number of Replicas: | 1 |

Current Node Size

|                    |                           |
|--------------------|---------------------------|
| Node Type:         | m6i.8xlarge (CPU x32, R4) |
| Node Storage:      | 1050                      |
| Number of Volumes: | 3                         |

#### Horizontal scaling

Desired Cluster Size (edit to make changes)

|                     |   |
|---------------------|---|
| Number of Shards:   | 1 |
| Number of Replicas: | 1 |

Desired Node Size (edit to make changes)

|                         |                           |
|-------------------------|---------------------------|
| Node Type:              | m6i.8xlarge (CPU x32, R4) |
| Node Storage:           | 1050                      |
| Number of Volumes:      | 3                         |
| Apply to new nodes only | <input type="checkbox"/>  |

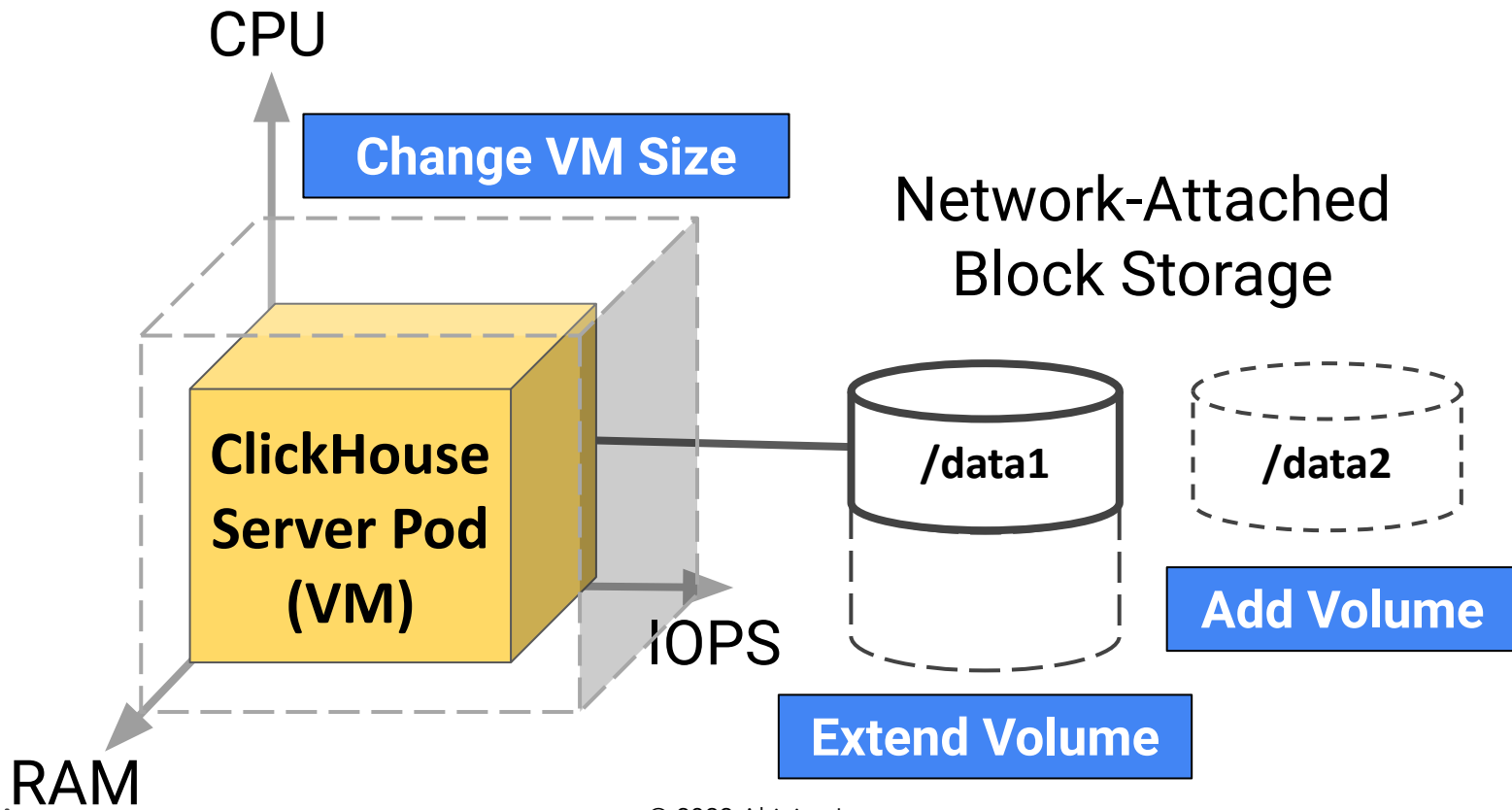
Node storage can only be extended. The minimum increase is 20%

**CANCEL** **OK**

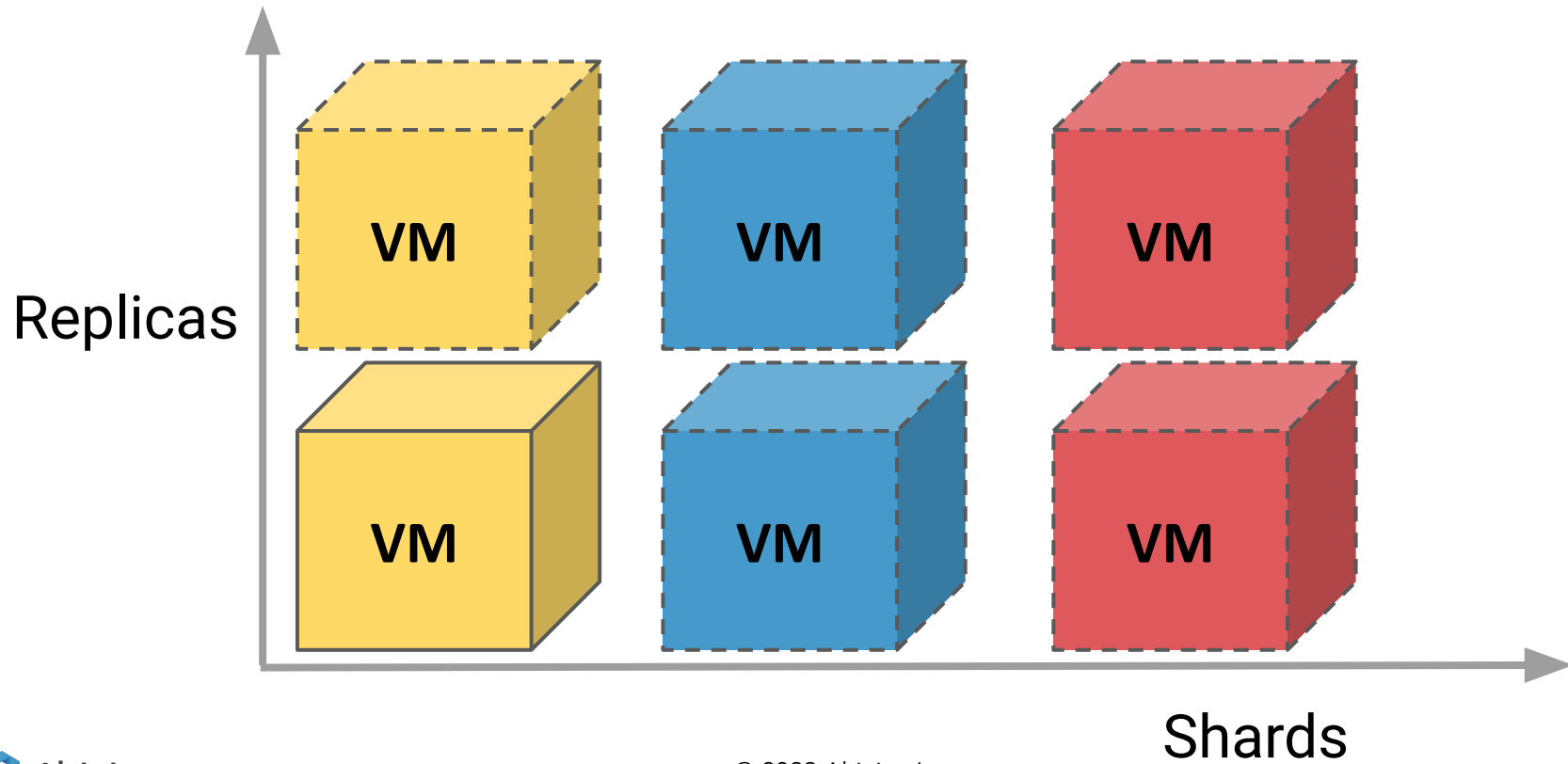
#### Vertical scaling



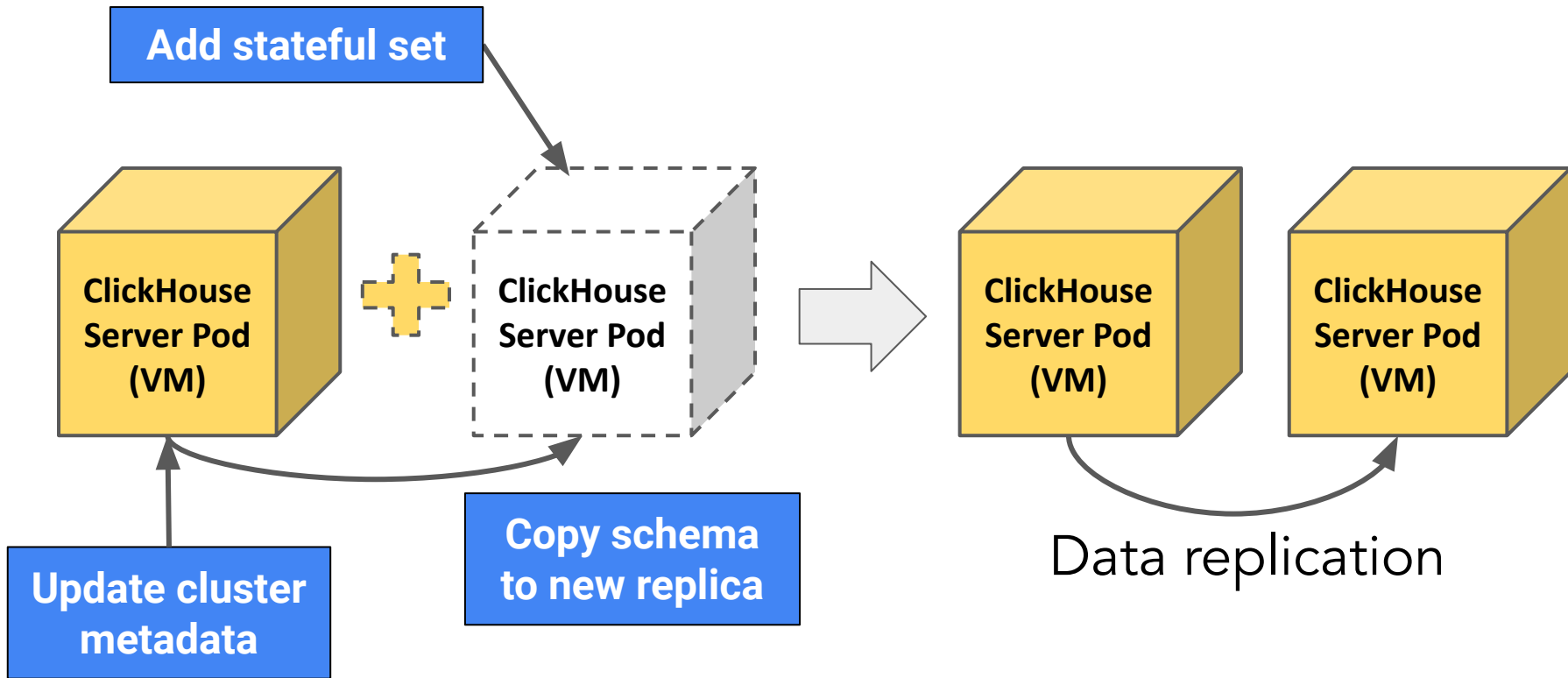
# We can scale individual replicas vertically



# We can scale clusters horizontally



# Altinity.Cloud magic to add a ClickHouse replica



# Altinity.Cloud backups run every 24 hours or on demand

The screenshot displays the Altinity.Cloud management interface. On the left, a sidebar menu includes options like 'Upgrade', 'Rescale', 'Stop', 'Restart', 'Export Configuration', 'Publish Configuration', 'Launch a Replica Cluster', 'Restore a Backup', 'Create Backup', and 'Destroy'. The 'Create Backup' option is highlighted. In the center, a 'Cluster Restore Wizard' is shown with steps: 1. Backup location, 2. Source Cluster, 3. Source Backup (selected), 4. Destination Cluster, and 5. Restore Summary. To the right, a 'Backup Information: demo/github' table lists various backups with columns for Tag, Size, Timestamp, and Configuration. Below the table, there are 'CANCEL', 'BACK', and 'NEXT' buttons. At the bottom, a 'Cluster Backup' dialog box is open, stating: 'The Backup procedure for the Cluster github has been scheduled. It will require some time to finish the procedure.' and includes a 'Note' about backup file handling and an 'OK' button.

Cluster Restore Wizard

- 1 Backup location
- 2 Source Cluster
- 3 Source Backup
- 4 Destination Cluster
- 5 Restore Summary

Backup Information: demo/github

Note: It is possible to restore a complete Cluster's configuration only if a given backup contains it

|                       | Tag            | Size     | Timestamp           | Configuration |
|-----------------------|----------------|----------|---------------------|---------------|
| <input type="radio"/> | 20221208060201 | 24.6 GB  | 2022-12-08 06:02:01 | ✓             |
| <input type="radio"/> | 20221208051411 | 523.5 GB | 2022-12-08 05:14:11 | ✓             |
| <input type="radio"/> | 20221207051903 | 522.9 GB | 2022-12-07 05:19:03 | ✓             |
| <input type="radio"/> | 20221206051003 | 522.4 GB | 2022-12-06 05:10:03 | ✓             |
| <input type="radio"/> | 20221205051204 | 521.9 GB | 2022-12-05 05:12:04 | ✓             |
| <input type="radio"/> | 20221204051639 | 521.6 GB | 2022-12-04 05:16:39 | ✓             |
| <input type="radio"/> | 20221203050233 | 521.4 GB | 2022-12-03 05:02:33 | ✓             |
| <input type="radio"/> | 20221202050916 | 521.1 GB | 2022-12-02 05:09:16 | ✓             |

CANCEL BACK NEXT

Cluster Backup

The Backup procedure for the Cluster **github** has been scheduled. It will require some time to finish the procedure.

**Note:** Backup files are handled by ACM and stored separately from the cluster instances. These backup files will remain available even if you accidentally delete the cluster.

OK

# Altinity.Cloud also automates upgrade/downgrade

The screenshot displays the Altinity.Cloud management interface. On the left, a sidebar contains a list of actions: Upgrade, Rescale, Stop, Restart, Export Configuration, Publish Configuration, Launch a Replica Cluster, Restore a Backup, Create Backup, and Destroy. An arrow points from the 'Upgrade' action to a modal window titled 'Upgrade Cluster'.

The 'Upgrade Cluster' modal contains the following information:

- Title:** Upgrade Cluster
- Message:** You are about to upgrade ClickHouse version on Cluster **github**.
- Current Version:** 22.9.3.18
- Upgrade Version:** A dropdown menu is open, showing '22.3.12 Altinity Stable Build' selected. Above the dropdown are tabs for 'ALTINITY BUILDS' and 'COMMUNITY BUILDS'. Below the dropdown, it states: 'ClickHouse Version will be the same across all Cluster nodes'.
- Warnings:** Two warnings are displayed in a red dashed box:
  - WARNING: ClickHouse servers will be upgraded one by one. It may result in temporary downtime
  - WARNING: You are going to downgrade by at least one major version. This is sometimes not possible without manual tweaking
- Confirmation:** A checkbox labeled 'I understand' is present.
- Buttons:** 'CANCEL' and 'UPGRADE' buttons are at the bottom right.

The background interface shows a cluster named 'github' with an uptime of 9 hours. It lists various components: Nodes (1), Load Balancer (Altinity Edge Ingre...), Node Type (m6i.8xlarge), Node Storage (1 TB (gp2)), Node Memory (122 GB), and Node CPU (32). At the bottom, there are two donut charts: 'Volume' (1 TB) and 'Memory' (122 GB), both showing 'Used' (red) and 'Free' (blue) status.

# Best practices for ClickHouse upgrade on Altinity.Cloud

Use Altinity Stable builds for production systems (not community builds!)

Check the upgrade notes carefully!

Test the upgrade before running on production systems

1. Restore cluster from backup
2. Upgrade to new version
3. Connect event streams and apps to the new cluster
4. Discard upgrade test cluster after use

Check with Altinity Support! (Let us know about major upgrades in advance.)

# Altinity.Cloud has lots of monitoring!

The screenshot displays the Altinity.Cloud monitoring interface for an environment named 'github'. At the top, navigation links include ACTIONS, CONFIGURE, EXPLORE, ALERTS, LOGS, and ALTINITY ACCESS. The main content area shows the environment's status: 1/1 nodes online, 6/6 checks passed, and an uptime of 9 hours. Below this, a table provides details about the environment's configuration, including the endpoint, layouts (github, all-sharded, all-replicated), replication status (n/a, 1 replica), and version (22.9.3.18). A sidebar menu on the right offers various user and system options. A red dashed box highlights the 'System Status' menu item and a 'View in Grafana' button with links to Cluster Metrics, Queries, and Logs. Yellow callout boxes point to these elements with descriptive text.

demo ▾ Robert Hodges

- My Account
- Notifications
- Billing
- System Status
- Documentation
- About
- Log out

Created by alz@altinity.com at 2021-09-01 10:00:00

github 1/1 nodes online 6/6 checks passed uptime 9 hrs

Dashboard Nodes

|             |  |               |
|-------------|--|---------------|
| Endpoint    | Connection Details <span>✓</span>  | Monitoring    |
| Layouts     | github <sup>1x1</sup> , all-sharded <sup>1x1</sup> , all-replicated <sup>1x1</sup> | Nodes         |
| Replication | n/a, 1 replica   | Load Balancer |
| Version     | 22.9.3.18  | Node Type     |

View in Grafana ⚙️

- Cluster Metrics 🔗
- Queries 🔗
- Logs 🔗

m6i.8xlarge

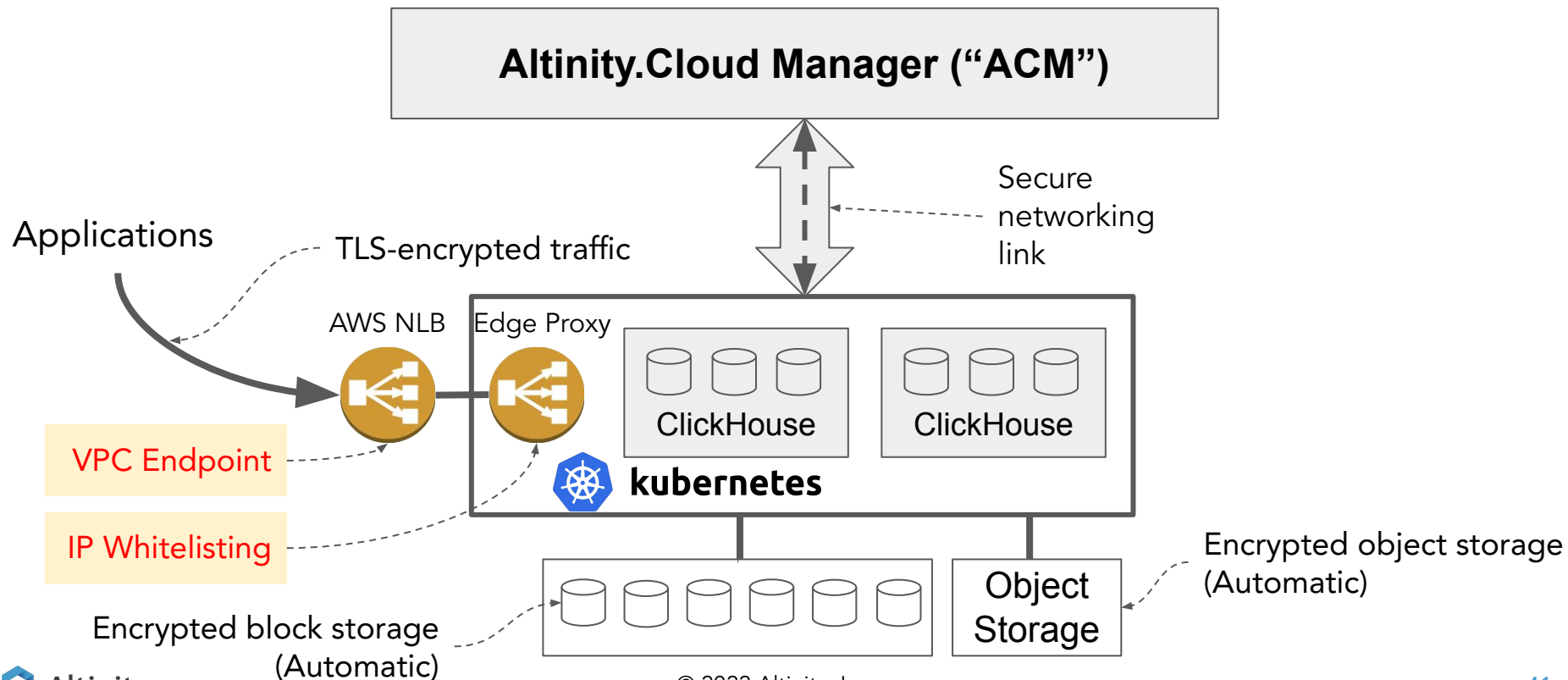
Link to environment status page

Monitoring pages

# Altinity.Cloud security model



# Security protection mechanisms for endpoints



# Restricting Altinity access to your data is easy

The screenshot displays the Altinity management interface. At the top, a navigation bar includes buttons for 'ACTIONS', 'CONFIGURE', 'EXPLORE', 'ALERTS', 'LOGS', and a prominent red 'ALTINITY ACCESS' button. A modal window titled 'Altinity Access for Cluster github' is open, showing configuration options for the 'github' cluster. The modal lists three access levels: 'No Access', 'System', and 'Read Only', each with a description of the permissions. The 'Full Access' option is selected with a radio button. Below the access levels, there are two checkboxes: 'Disable Cluster Configuration Management' and 'Disable Cluster Actions'. At the bottom of the modal are 'CANCEL' and 'CONFIRM' buttons. In the background, a sidebar shows cluster details for 'github', including 'Monitoring' (with a 'View in Grafana' link), 'Nodes' (1), 'Load Balancer' (Altinity Edge Ingress), 'Node Type' (m6i.8xlarge), 'Node Storage' (1 TB (gp2)), 'Node Memory' (122 GB), and 'Node CPU' (32). A red dashed box highlights the 'Monitoring', 'Nodes', and 'Node Type' sections. A curved arrow points from the 'ALTINITY ACCESS' button to the 'Full Access' option in the modal. At the bottom right, a 'Memory' section features a donut chart showing 122 GB of memory usage, with a legend for 'Used' (red), 'Free' (blue), and 'Other' (grey).

Altinity Access for Cluster github

**Access Level**

- ☐ No Access  
No access provided for the Altinity User
- ☐ System  
Altinity User will have **readonly** access to **system** database only
- ☐ Read Only  
Altinity User will have **readonly** access to **all** databases
- ☒ Full Access  
Altinity User will have full access to **all** databases

☐ Disable Cluster Configuration Management

☐ Disable Cluster Actions

**CANCEL** **CONFIRM**

**Monitoring** [View in Grafana](#)

**Nodes** 1

**Load Balancer** Altinity Edge Ingress

**Node Type** m6i.8xlarge

**Node Storage** 1 TB (gp2)

**Node Memory** 122 GB

**Node CPU** 32

**Memory**

122 GB

Legend: Used (red), Free (blue), Other (grey)

# Inviting new users to your Altinity.Cloud account

The screenshot displays the Altinity Cloud dashboard with several database clusters: **meetup** (stopped), **clickhouse101** (1/1 nodes online), **github** (1/1 nodes online), and **posthog** (stopped). The **SHARE** button in the top right navigation bar is highlighted with a red dashed box. An arrow points from this button to a modal window titled "Invite User to this Environment".

**Invite User to this Environment**

You are about to invite a user to the **tenant-a** environment as a member of **Altinity** organization.

**User Email \***

Enter email of the user you want to invite

User will receive email with the invitation link

**CANCEL** **INVITE**

The modal also shows a table of cluster details for the **github** cluster:

| Health   | 0/6 checks passed   |
|----------|---------------------|
| Shards   | 1                   |
| Replicas | 1                   |
| Storage  | 1 TB / node         |
| Memory   | 122 GB / node       |
| CPU      | 32 / node           |
| Version  | 22.9.3.18           |
| Backup   | 2022-12-08 06:02:03 |

# How enterprise support works

# Altinity.Cloud includes enterprise support!

- Schema design
- Performance optimization
- Troubleshooting
- Upgrades
- Capacity planning
- Integrations (Kafka, BI, librarise.)
- And random questions

## Ways to access support

- Slack - shared slack channel
- Zendesk - email to support at altinity dot com

# How to get the most out of Altinity.Cloud support

- Log production issues in Zendesk, not Slack
  - Makes it easier to track progress
- Contact us in advance prior to:
  - ClickHouse version upgrades
  - Scale-out operations that may require us to raise AWS or GCP quotas
- Don't wait for problems. We can help you with migration, design and capacity planning and many other topics
  - Just ask if you have questions!
  - We also can do regular check-in calls to help you make progress

# Thank you! Questions?

Website: <https://altinity.com>

Email: [info@altinity.com](mailto:info@altinity.com)

Slack: [altinitydbworkspace.slack.com](https://altinitydbworkspace.slack.com)

[Altinity.Cloud](#)

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