

TECHNICAL GUIDE

Migrating Workloads Securely: A Guide to Using Cirrus Data Migration with zCompute

Migrating workloads to a new cloud environment requires careful planning, especially when data security and network speed are top priorities. Sending data over the public internet might be fine for some scenarios, but many enterprise migrations require the data path to stay local and strictly private.

If you're preparing to migrate virtual machines to a zCompute cloud using Cirrus Data Migration, getting the underlying configuration right is crucial. Before diving into the technical setup, it's worth pausing to clearly define the objective of your migration, where you're going from, and where you're going to, because that shapes every decision that follows.

In this guide, we'll walk through the entire process: portal setup and licensing, architecting a secure data path, and launching a fast, secure, and non-disruptive data migration with built-in automation recipes to simplify the entire program.

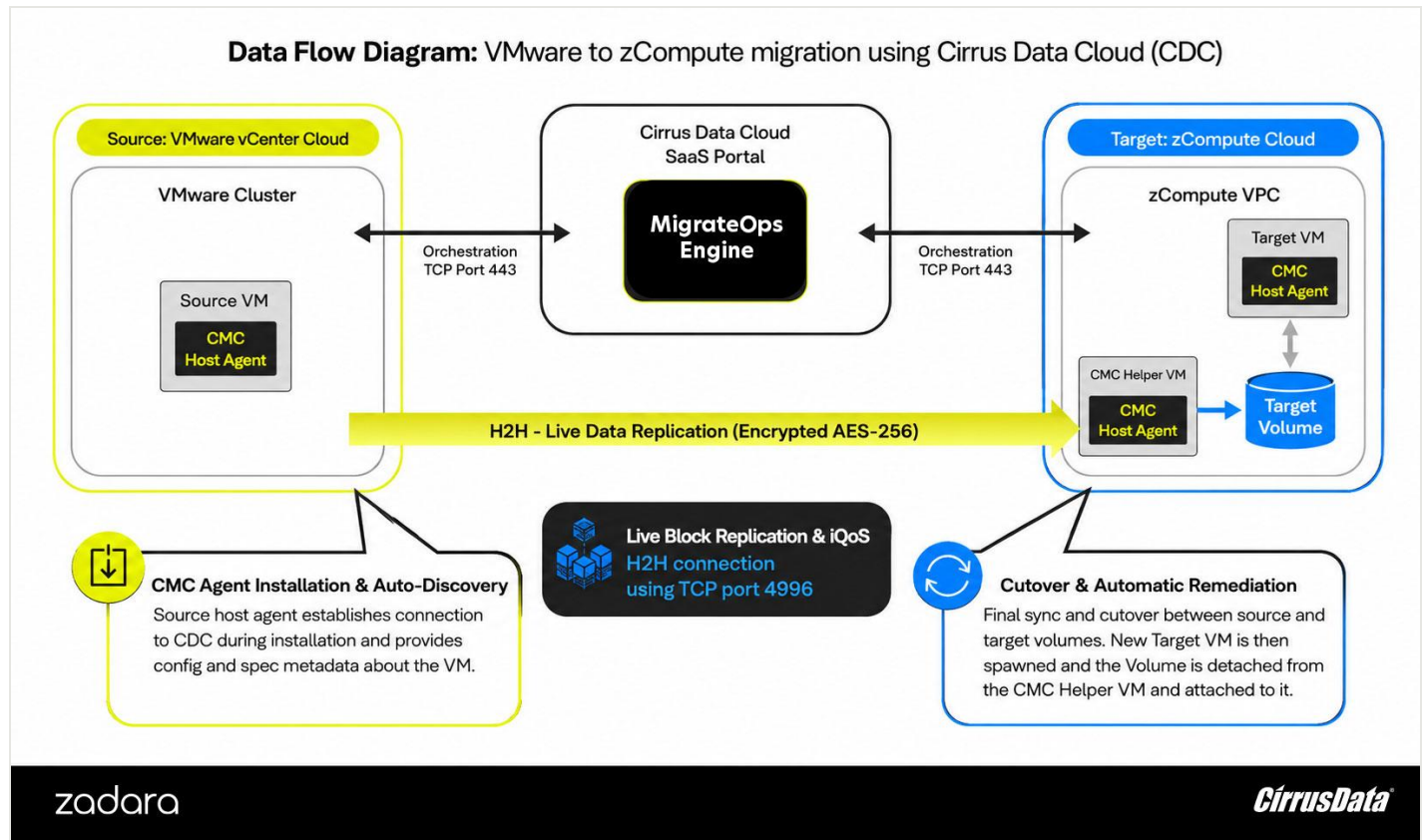
● Prerequisites

- **Storage space:** Source VMs need sufficient space for agent installation (1–2GB)
- **Network ports:** The Security Group for the CMC Helper VM must allow traffic on TCP port 4996 for the H2H connection.
- **zCompute credentials:** The relevant Account, Project, and User must already exist in zCompute.

● Getting Started

- 1 **Sign up** for an account on the [Cirrus Data Cloud website](#).
- 2 Once logged in, check whether a license is already assigned to your profile (top right → **My License Key**). You can purchase a license by contacting Cirrus Data or purchasing one through the portal. To sign-up for a trial, please apply on the Cirrus Data website: <https://action.cirrusdata.com/www.cirrusdata.com/try-cirrus-migrate-cloud-free>
- 3 **Create a Project:** *My Projects* → *Create New Project*.
- 4 Assign some or all of your licence capacity to the Project ([instructions here](#)), and check the license status any time via **View License Info** on the Project dashboard.
- 5 **Create the Integration** in the Portal with the zCompute cloud you're migrating to. You'll need the relevant Account, Project, and User already set up in zCompute and note that currently only **VPC** project types are supported.

The diagram below shows the high-level connectivity: port 443 handles admin/setup/configuration between the source VM, the zCompute cloud, and the CDC Portal, while the VM volume data itself migrates over your configured network path.



● Choosing Your Migration Path

Before jumping into your data migration and automation configuration, it is worth deciding which scenario applies to you:

- **Public internet:** the simplest option, used when it's the only choice available or when speed/security aren't a concern. Straightforward to configure in the YAML recipe.
- **Local and private:** (likely the most common case) requires more upfront planning to ensure data flows across the intended network path. This is the focus of this guide.
- **Fully private/offline:** requires **CDC Private Edition**, which is outside the scope of this document.

In every case, the goal is the same: use the fastest available network path for migrating VM volumes. That's where the **CMC Helper VM** comes in.

● Understanding the CMC Helper VM

The CMC Helper is a temporary VM created as part of the MigrateOps operation:

- It's created in the target environment (the zCompute project).
- It gets an EBS volume attached (by default, matching the size of the source VM's OS volume – additional volumes may be created depending on requirements).
- The **H2H connection** uses TCP port 4996, so the CMC Helper's Security Group must allow this traffic.
- VM volume data is copied at the block level, from source to destination volume.
- At the end of the process, the volume is detached from the CMC Helper VM, which is then deleted. A new VM is created to the requested spec, the volume is attached, and the VM boots completing the migration.

CONTROLLING THE DATA PATH

- To control the data path for the data copy, **only one vNIC** should be configured on the CMC Helper VM. (The final VM's config is applied separately in the YAML recipe and can have multiple vNICs.)
- This vNIC must attach to the subnet/VLAN set up for your intended network path, for example a **Direct Subnet** in zCompute, using the same subnet/VLAN as the source hypervisor side, assigned to the destination VPC.
- It may also be worth creating new Port Groups on a separate VLAN in the ESXi hosts' vSwitches to segregate this traffic from production VLAN traffic – adding an extra vNIC (with its own IP) to each VM being migrated.

A GOTCHA WORTH KNOWING

Assigning a single, private vNIC and IP to the CMC Helper VM means it has no access to the outside world – including the public URL of the zCompute Cloud used for the Integration in the CDC Portal.

Workaround: add the following to the CMC Helper section of the YAML recipe:

```
cmchelper:
  host_entries:
    - ip: "169.254.64.2"
      hostname: "compute-<your cloud name here>.zadara.com"
```

This forces the CMC Helper VM into resolving the public FQDN via the local **VPC API Endpoint** IP instead, allowing API authentication to succeed so the migration can proceed past Stage 7 (where the volume is created).

● Deploy Cirrus Migrate Cloud

With your plan in place, deploy the Cirrus Migrate Cloud software on the source VM(s):

- 1 In the Portal, go to **Registered Hosts** → **Deploy Cirrus Migrate Cloud**.
- 2 Copy the install command for your OS (Linux or Windows) and run it. (Uninstall commands are available the same way, if needed.)
- 3 On success, the client appears in your list of Registered/Deployed Hosts.

Double-check free space on the source VM at this point. At least 1-2GB is needed for the driver installation.

● The MigrateOps YAML Recipe

The key to a successful migration is precision in the YAML recipe. Under **MigrateOps Recipes**, there's a dedicated Zadara section. Once you're familiar with the options, click **Open Builder** to start.

Below is a working template for a migration that uses direct access to/from the CDC Portal (no Private Edition), routed over a known, private internal VLAN/Subnet (Direct Subnet in zCompute) configured for the fastest available network path.

This example uses **VLAN99** over the 25G/100G data network for the CMC Helper and data copy path, instead of the default internet path via an Elastic IP (which would use the 1G management network).

Note: In production, the Security Group assigned to the final VM should differ from the one used for the CMC Helper VM.

migrateops.yaml

```
operations:
  - name: "Cirrus Ubuntu-webapp to zCompute"
    recipe: "MIGRATEOPS_ZADARA_COMPUTE"
    config:
      system_name: "ubuntu-webapp"
      integration_id: 1234
      migrateops_zadara_compute:
        cmchelper:
          host_entries:
            - ip: "169.254.64.2"
              hostname: "compute-il-interoplav-01.zadara.com"
          no_public_ip: true
          image_id: "6ce00d3d-f9b8-41c6-ac54-8b30e9b6f13a"
          vpc_id: "1c21d3d5-2e68-4083-af5e-6bc793363f2a"
          subnet_id: "0fe84cf7-11cd-4c5c-81f9-39603206fa6d"
          security_group_name: "cmchelper"
          key_pair_name: "adykey"
        compute:
          instance_type: "z2.large"
          vm_name: "Ubuntu-webapp"
          key_pair_name: "ady_webapp"
          disable_delete: true
          keep_source_powered_on: false
        network:
          elastic_ip: false
          interfaces:
            - subnet_id: "840aeb19-5ca5-4453-8c34-2851f6d4d141"
              security_group_names:
                - "webapp"
            - subnet_id: "840aeb19-5ca5-4453-8c34-2851f6d4d141"
              security_group_names:
                - "default"
```

The two lines that keep traffic off the public internet: `no_public_ip: true` and `elastic_ip: false`.

During migration, you may also want to opt into assigning an appropriate OS type to the instance, however please note that this can only be done by a user with `msp_admin` permissions.

WRAPPING UP

With the network paths configured and the YAML recipe fine-tuned, migrating workloads to zCompute becomes a secure, predictable operation. The CMC Helper handles the heavy lifting, and once the copy completes, the temporary VM is cleaned up automatically as your new VM comes online.

FIND OUT MORE

ZADARA

Contact Us: <https://www.zadara.com/contact/>

Request a Demo: <https://www.zadara.com/demo/>

CIRRUS DATA

CDS has a webpage for Zadara: <https://cirrusdata.com/cloud-migration-to-zadara>

Or request a demo: <https://action.cirrusdata.com/data-migration-demo>

Video: [Automated Compute Migration from VMware to Zadara](#)