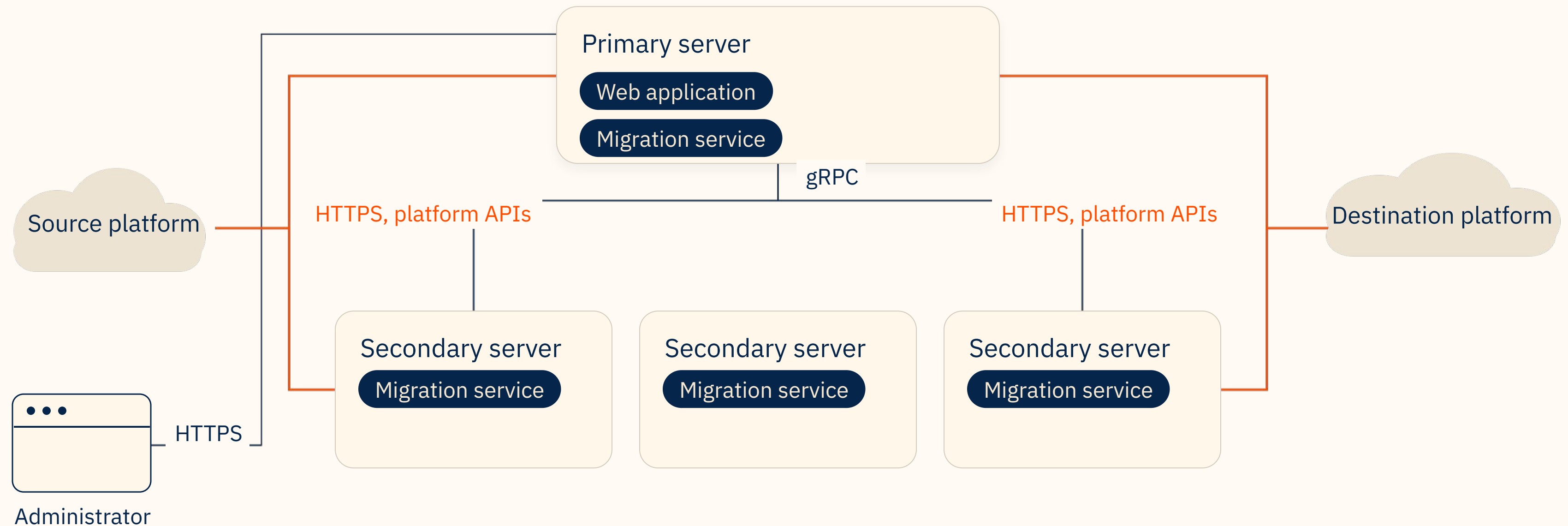


# CloudM Migrate Self-Hosted Architecture

Migrate 5.0 and later, September 2

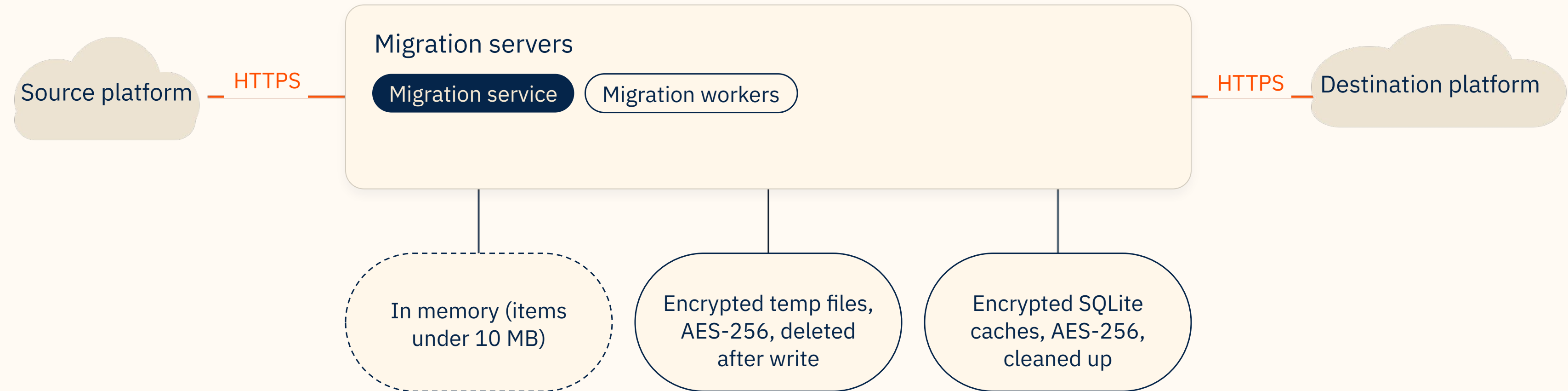
# One primary, as many secondaries as you need, nothing in between you and the platforms



Data is read from the source and written to the destination through each platform's own APIs.

Everything runs on Windows servers you own, on premises or in your cloud tenant.

# Content passes through; only metadata stays

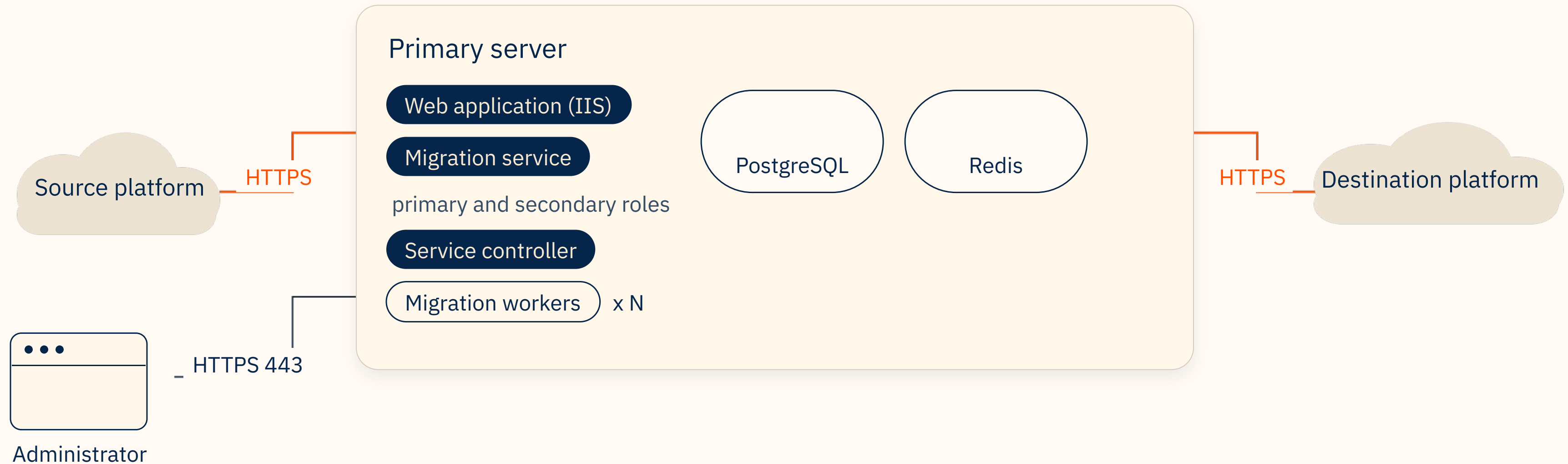


In transit: HTTPS to and from Google Workspace, Microsoft 365 and other platforms, TLS 1.2 or higher.

During processing: item content is held in memory, or in AES-256 encrypted temporary storage for larger items, and removed once the item has been written to the destination.

Retained: project configuration and migration results in PostgreSQL, and migration history (item identifiers and hashes) so that delta runs know what has already moved. No message bodies or file contents are kept.

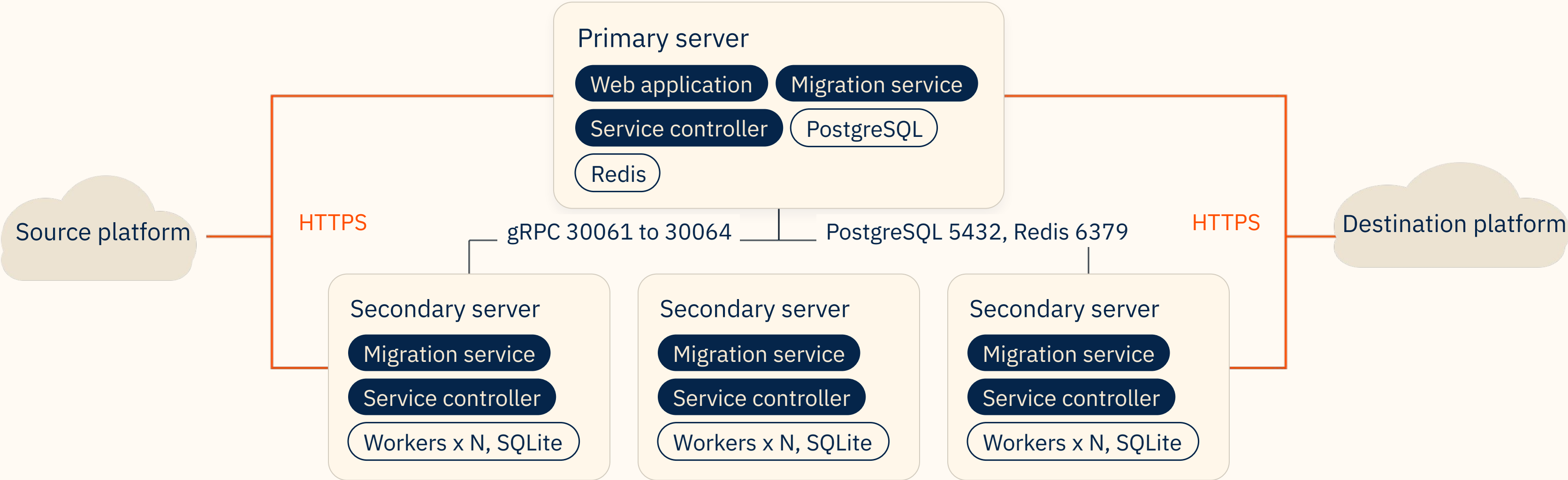
# The default install puts everything on one server



Basic install: one server, all components, up to 20 users migrating at once by default.

Suitable for pilots and smaller migrations. Add secondaries when you need more concurrency.

# Add secondary servers to run more users at once

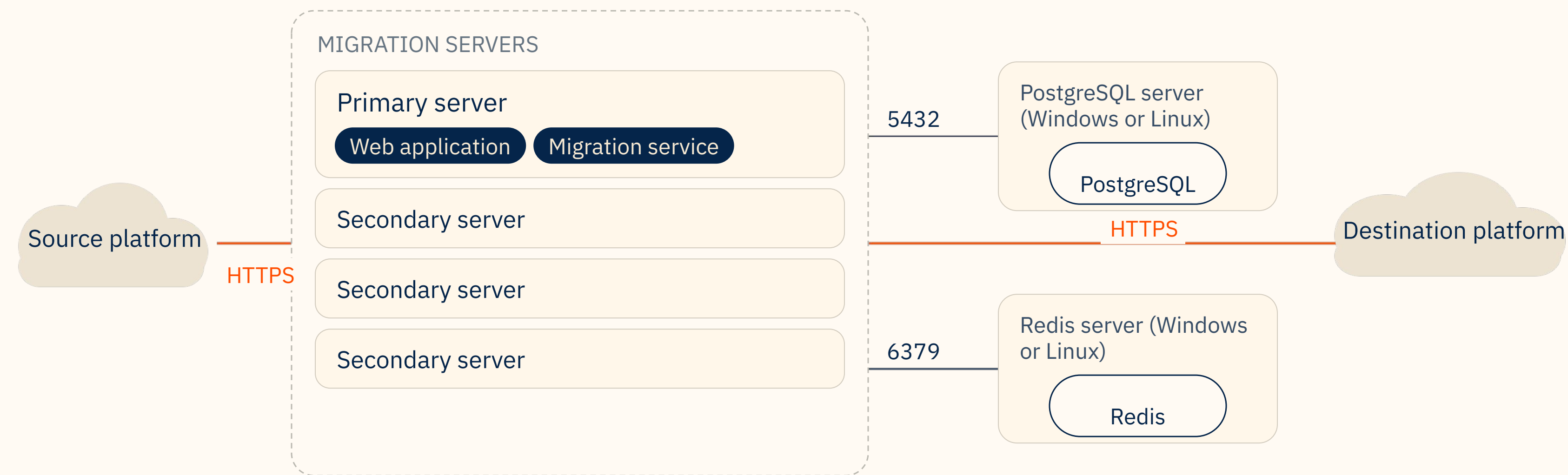


Each secondary handles a configurable number of users concurrently (default 20). Three secondaries at the default means 60 users at once.

Secondaries can be added or removed during a migration and are managed from the web interface on the primary. Nothing to install or configure on them beyond the installer.

Running workers on the primary is optional. Turn it off for large migrations to keep the UI responsive.

# For large migrations, move PostgreSQL and Redis to their own servers



Guideline: consider this at 25,000 or more users, or 10 million or more objects.

PostgreSQL 17.4 or later on the existing server; the installer points at it during setup. Redis location is set in the web Service Manager after install.

# Two Windows services, a web tier, and worker processes

## Primary server

Web application, hosted in IIS: .NET 10 API plus browser interface. Live progress is pushed to the browser. The same tier exposes the REST API.

Migration service (CloudMigratorService): runs the primary role, and the secondary role if enabled.

Service controller (CloudMServiceController): carries out start, stop, restart and upgrade commands from the web Service Manager. New in 5.0.

Worker processes: one migration worker per user being migrated, plus results generator, environment scan and statistics processes.

PostgreSQL 18: configuration, results, users. Redis: migration history, live statistics, retry state, locks and heartbeats.

## Secondary server

Migration service (secondary role)

Service controller

Worker processes, with encrypted SQLite caches

No web application, no database

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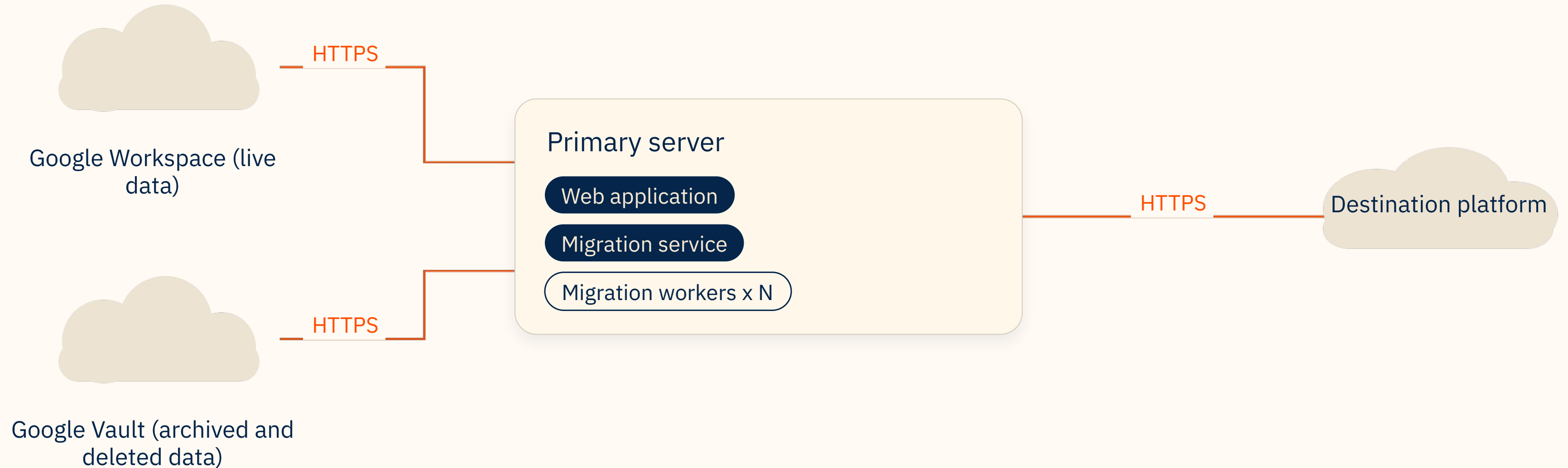
The Migrate 4.x desktop Service Manager application no longer exists. All servers are managed from the web interface on the primary.

# What to open

| PORT           | BETWEEN                                  | PURPOSE                                                                     |
|----------------|------------------------------------------|-----------------------------------------------------------------------------|
| 443            | Administrator browser and primary server | Web interface (IIS, self-signed certificate replaceable with your own)      |
| 30061 to 30064 | Primary and secondary servers            | Migration services and service controller (gRPC)                            |
| 5432           | Migration servers and PostgreSQL         | Shared database                                                             |
| 6379           | Migration servers and Redis              | Migration state                                                             |
| 443 outbound   | Every migration server and the internet  | Platform APIs, CloudM licensing (tracker.cloudm.io), prerequisite downloads |

No inbound connections from the internet are needed. The installer adds Windows Firewall rules for the service and database ports, scoped to the local subnet.

# Vault data migrates alongside live data, or on its own primary



Live data for active users and Archived Users can be migrated in one configuration.

Deleted (trash) items from Vault use a second configuration.

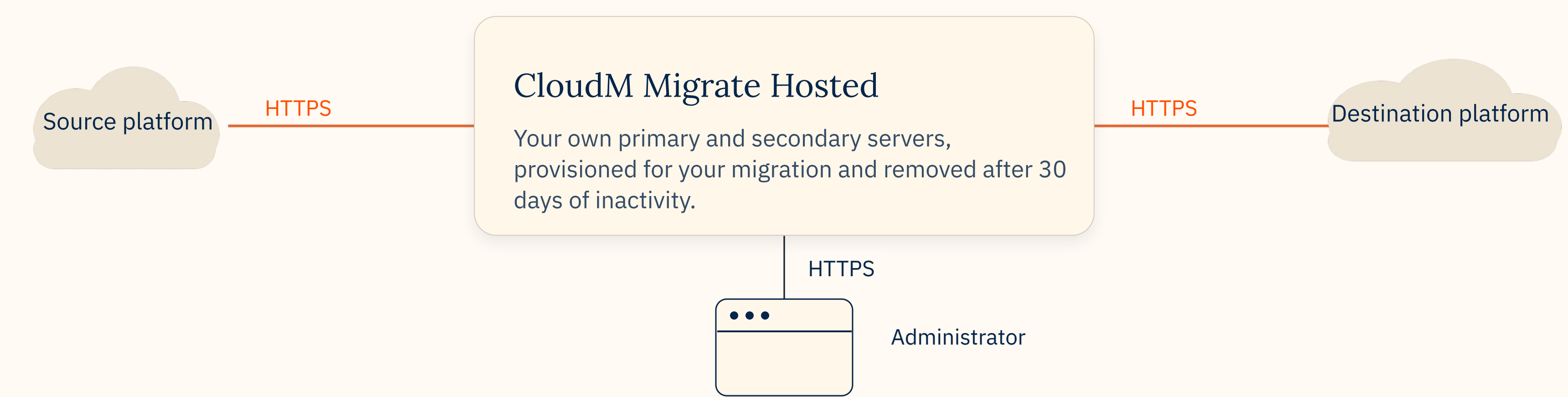
For large Vault exports, a second primary server dedicated to the Vault migration keeps it separate from the live migration.

# What the installer expects, and what it brings with it

| REQUIREMENT      | DETAIL                                                                             |
|------------------|------------------------------------------------------------------------------------|
| Operating system | 64-bit Windows Server 2022 or later                                                |
| .NET             | .NET 10 Desktop Runtime and Windows Server Hosting bundle, installed automatically |
| Web server       | IIS on the primary, features enabled by the installer                              |
| Database         | PostgreSQL 18 bundled, or an existing PostgreSQL 17.4 or later                     |
| Redis            | Bundled, installed on the primary                                                  |
| Primary server   | 8 cores, 16 GB, 200 GB recommended                                                 |
| Secondary server | 4 cores, 8 GB, 100 GB recommended                                                  |

Full requirements: [support.cloudm.io](https://support.cloudm.io), System Requirements article.

# The hosted service runs the same engine on CloudM's infrastructure



Nothing to install. Secondaries scale automatically up to 155 concurrent worker processes. Environments are removed after 30 days of inactivity.

Choose self-hosted when data must not pass through third-party infrastructure or when you need more concurrency than the hosted tier offers.