



Multi-Cloud Magic:

Leveraging Multi-Cloud Clusters in the Real World



@adriennetacke



What is Multi-Cloud?



What is
Multi-Cloud?

Do we really need a
Multi-Cloud Option?

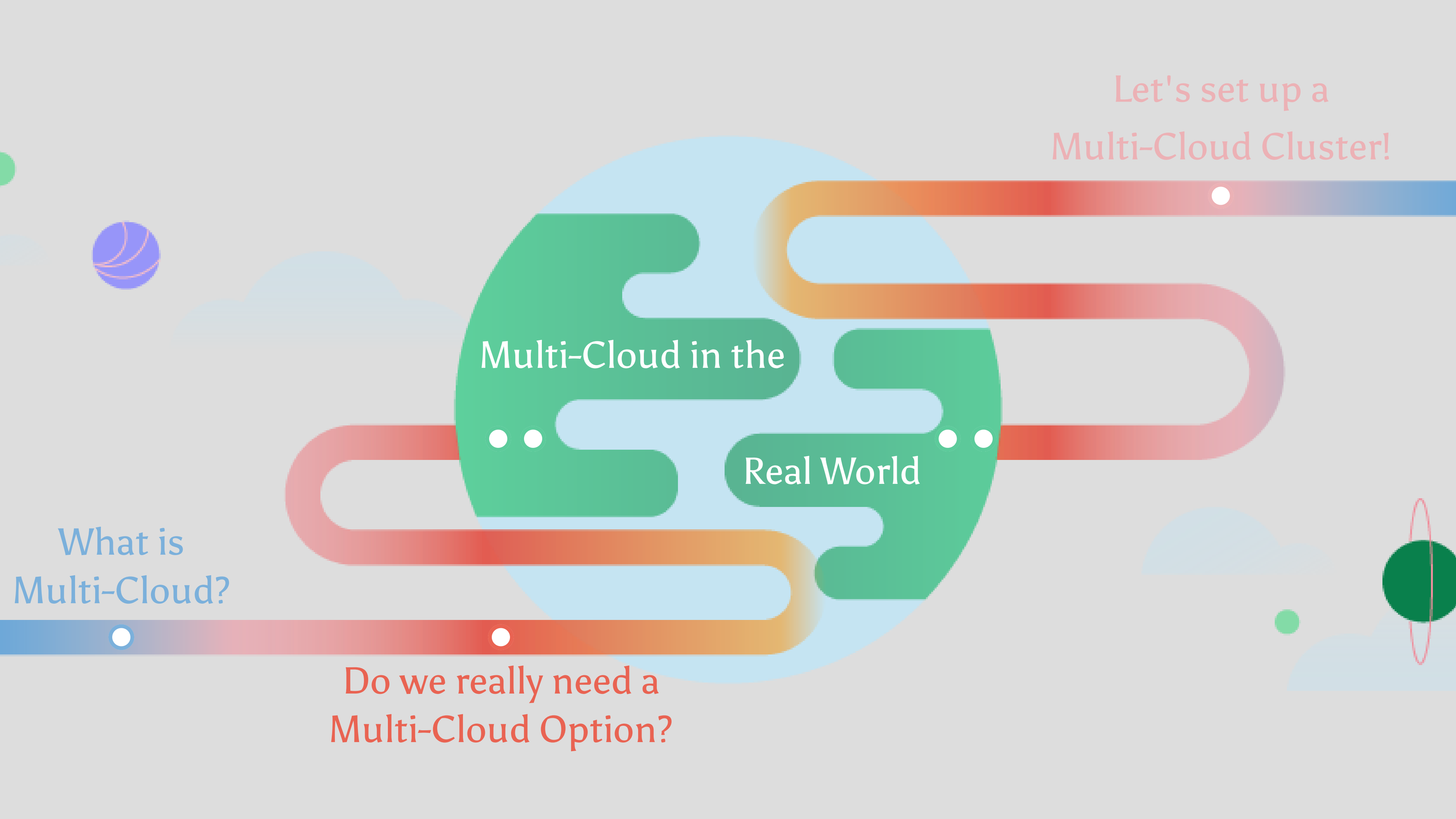


What is
Multi-Cloud?

Multi-Cloud in the

Real World

Do we really need a
Multi-Cloud Option?



Let's set up a
Multi-Cloud Cluster!

Multi-Cloud in the

Real World

What is
Multi-Cloud?

Do we really need a
Multi-Cloud Option?



What is
Multi-Cloud?

Multi-Cloud

Any single architecture that
uses two or more cloud
providers



Multi-Cloud

Mixture of clouds, public and private



Do we need a
Multi-Cloud Option?



WIRED

The Catch-22 That Broke the Internet

A Google Cloud outage that knocked huge portions of the internet offline also blocked access to the tools Google needed to fix it.

BRIAN BARRETT

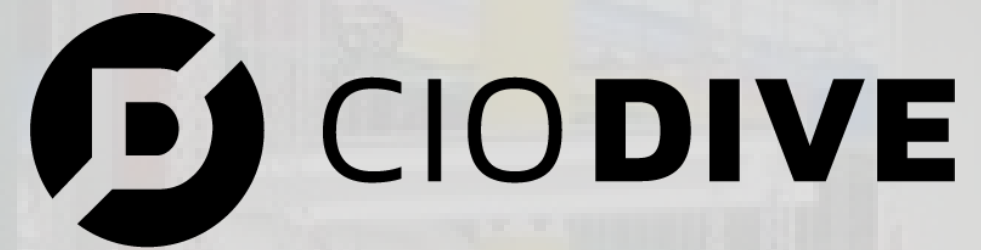
SECURITY

06.07.2019 12:26 PM



When Things go Awry in the Cloud: A Closer Look at a Recent AWS Outage

29th OCTOBER 2019



Understanding Google Cloud's recent service hiccups

By Roberto Torres Published March 27, 2020

A background image showing a person's hands plugging a cable into a server rack. The image is slightly blurred and has a soft, warm light effect.

ComputerWeekly.com

Coronavirus: Microsoft Azure suffers datacentre capacity shortages in Europe

Microsoft is working to “expedite” additional datacentre capacity after reports of users struggling to access resources due to coronavirus demand surge. But how easy will that be amid a global pandemic?

By Caroline Donnelly, Senior Editor, UK Published: 07 Apr 2020 9:02



Azure Goes Down in APAC, as Infrastructure Bottlenecks Continue to Trouble Microsoft

15th JUNE 2020

THE VERGE

Prolonged AWS outage takes down a big chunk of the internet

AWS has been experiencing an outage for hours

By Jay Peters | @jaypeters | Updated Nov 25, 2020, 5:39pm EST




JUN 2019

OCT 2019

MAR 2020

JUN 2020

NOV 2020



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BRIAN BARRETT SECURITY



CBR

aws

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aws



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No cloud is spared from outages



CIO Think Tank Roadmap Report:

Setting the Multi-cloud Agenda

 IDG in partnership with  Dell Technologies



The main driver is what our clients are asking for.
We have banks who have an Azure preference; we have banks who have an AWS preference, Google Cloud, and on and on. We don't really get to choose.



Gregory Scher - VP Business Platform Technology, Fiserv



We have to be native AWS because of...their advanced capabilities in analytics. And we have to be in Azure because, frankly, developers love that ecosystem, and productive developers are probably the best thing.



Mohan Putcha - Vice President, Architecture & Digital Strategy, Aon

Multi-Cloud in the Real World

Canada: Direction for Electronic Data Residency

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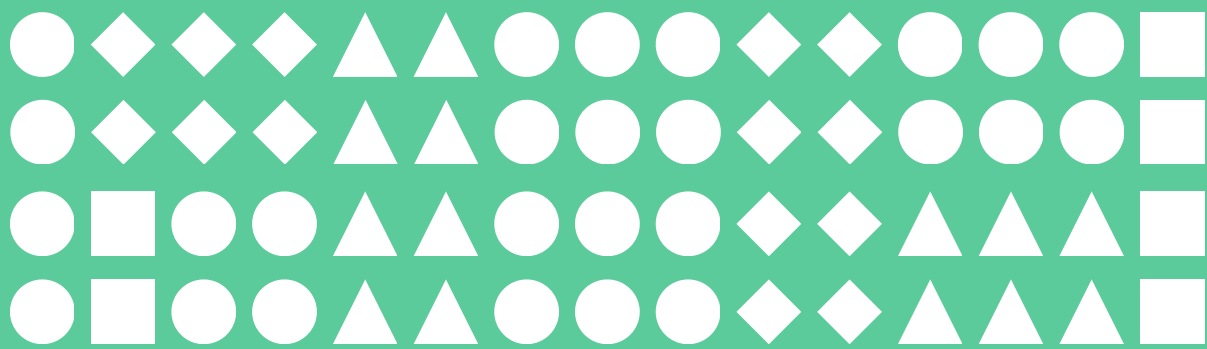
<https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/cloud-services/direction-electronic-data-residency.html>



Canada: Direction for Electronic Data Residency

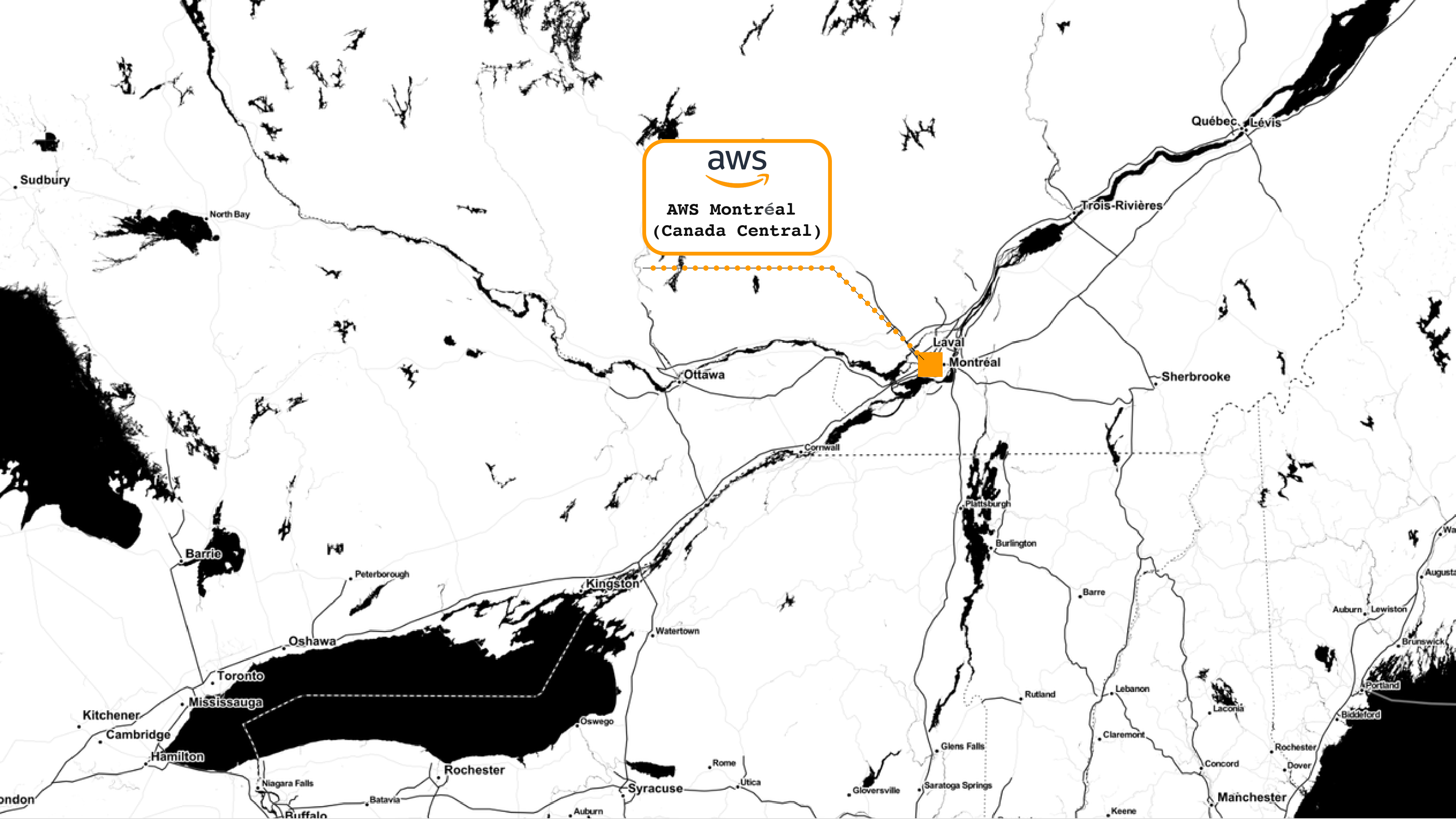


British Columbia & Nova Scotia

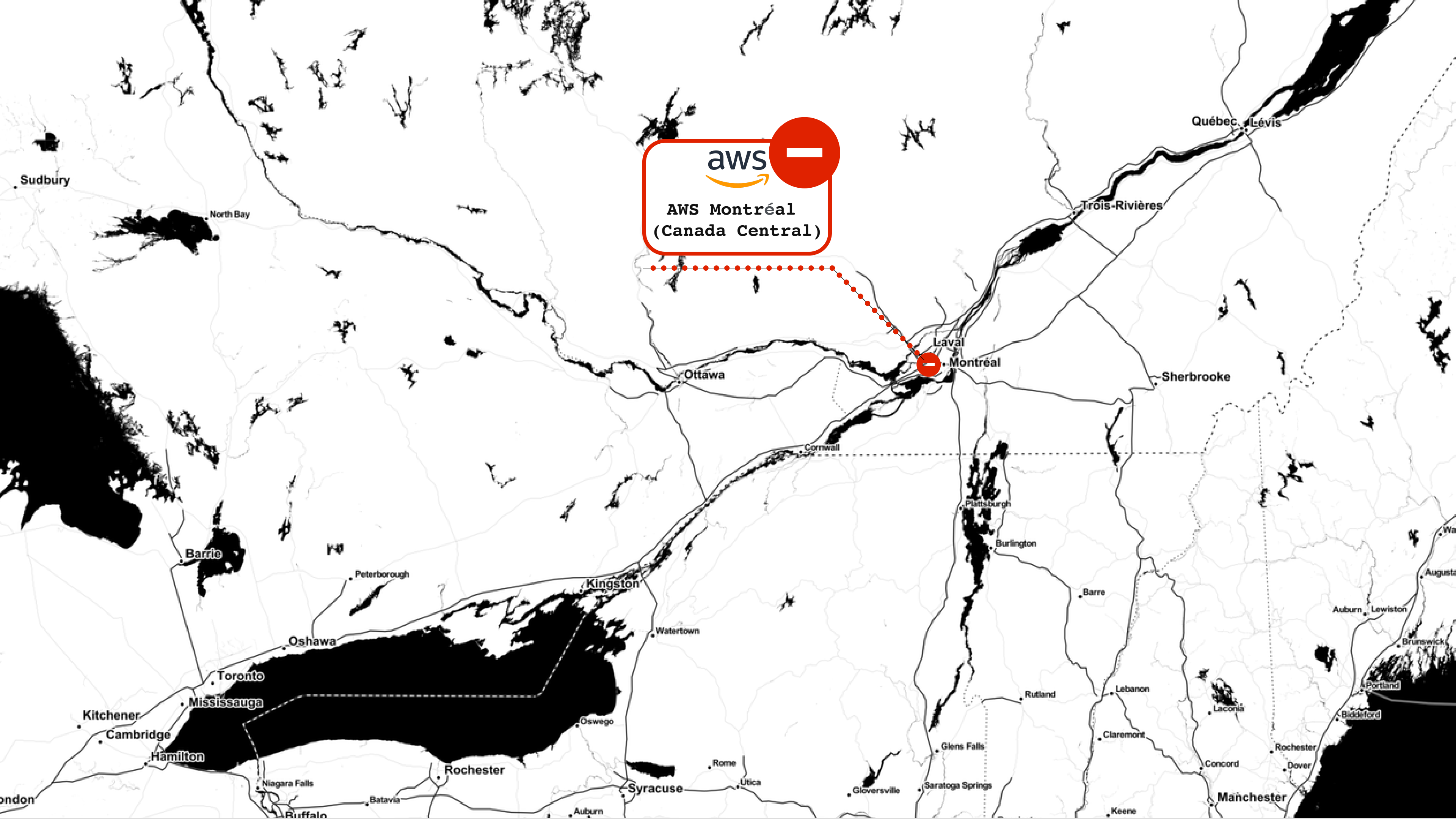


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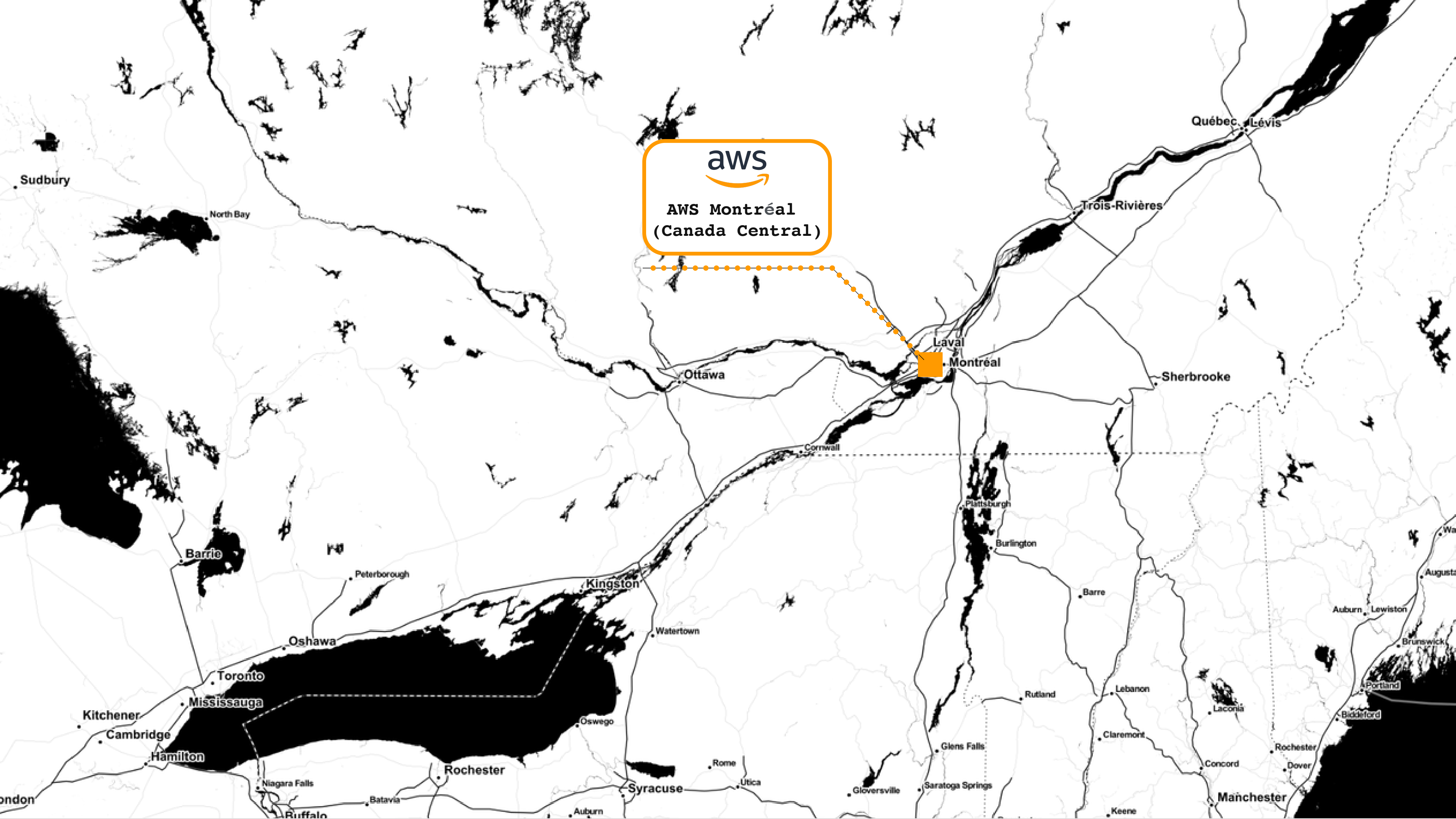


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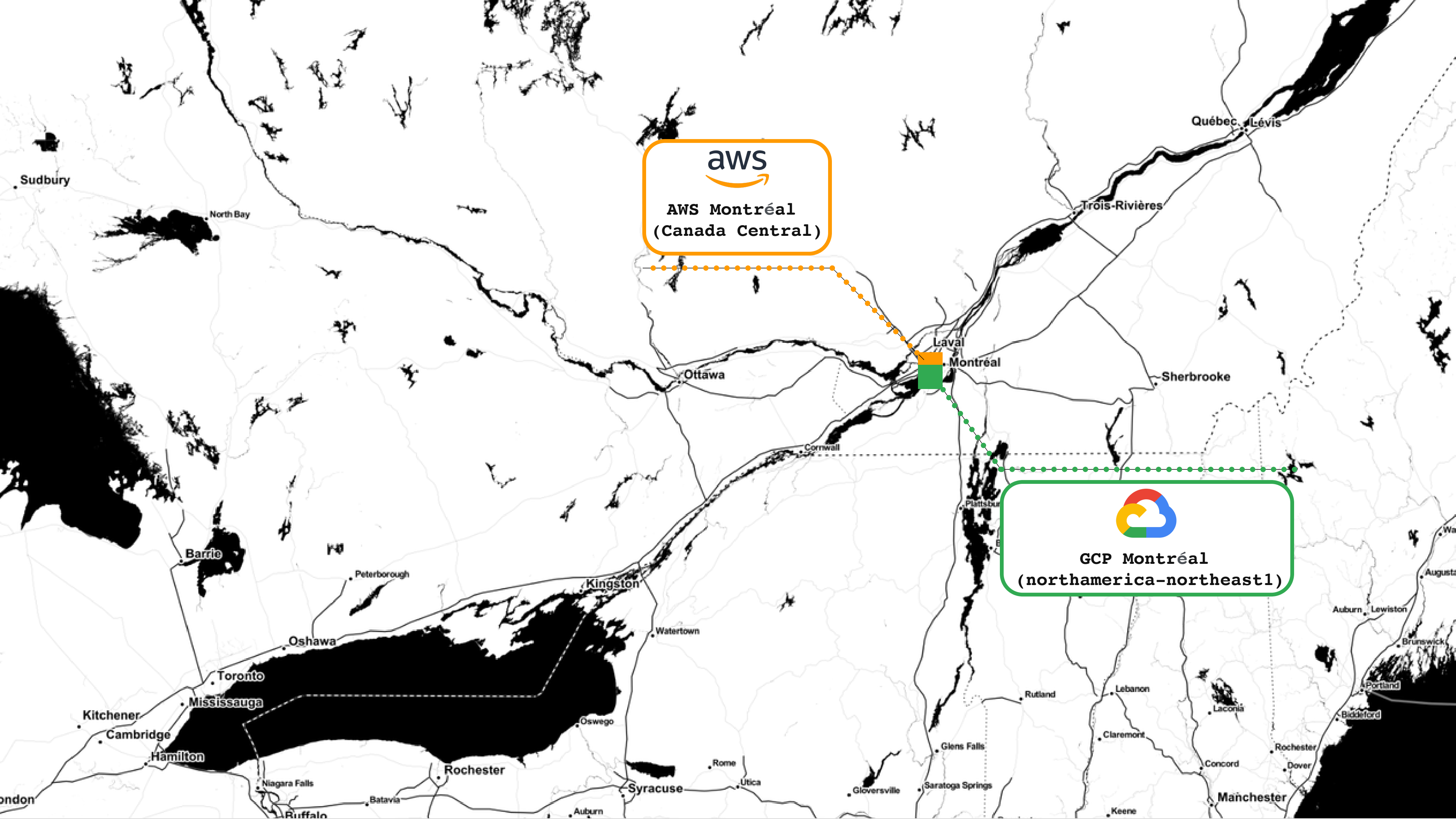


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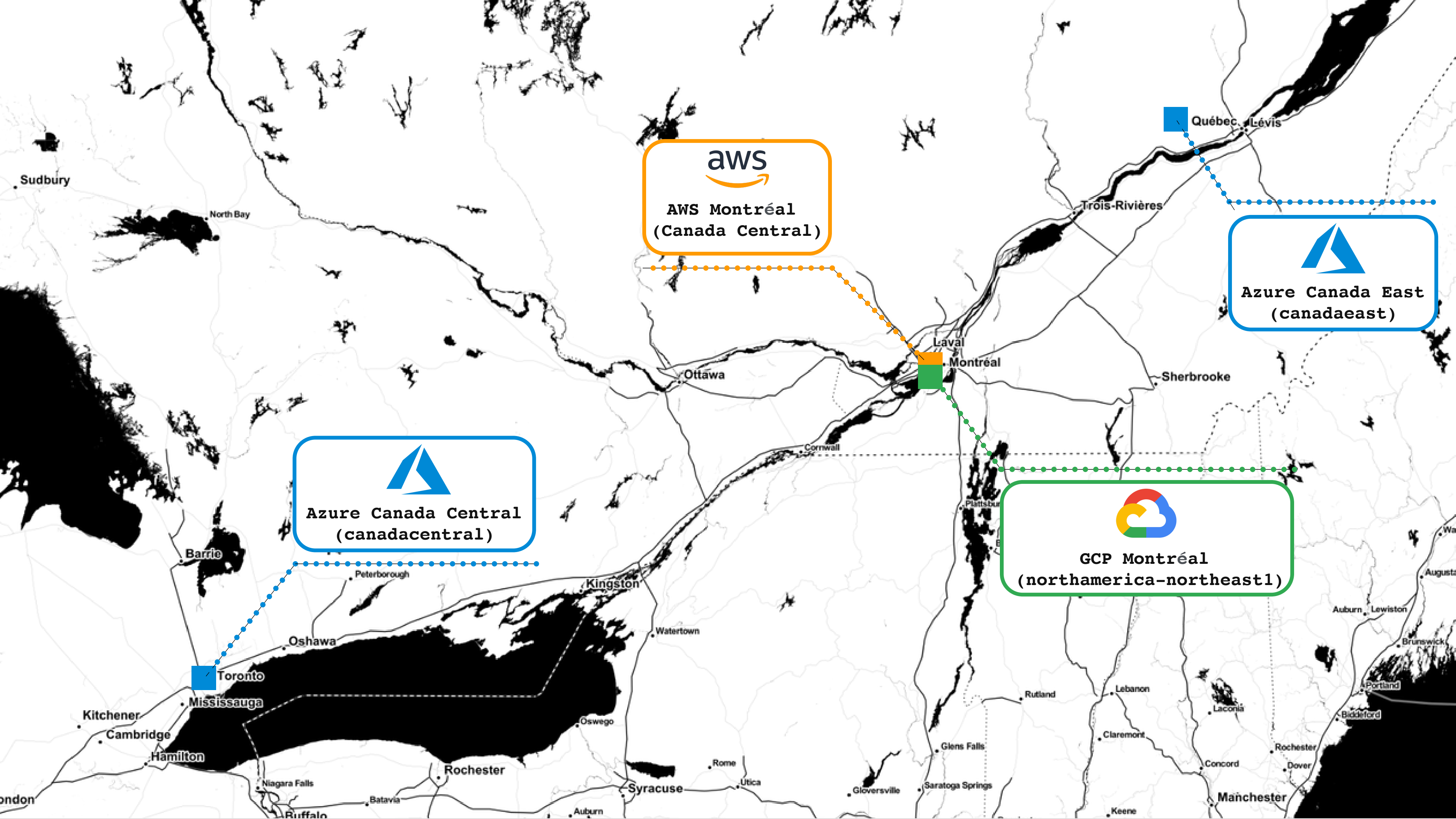
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**AWS Montréal
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**GCP Montréal
(northamerica-northeast1)**



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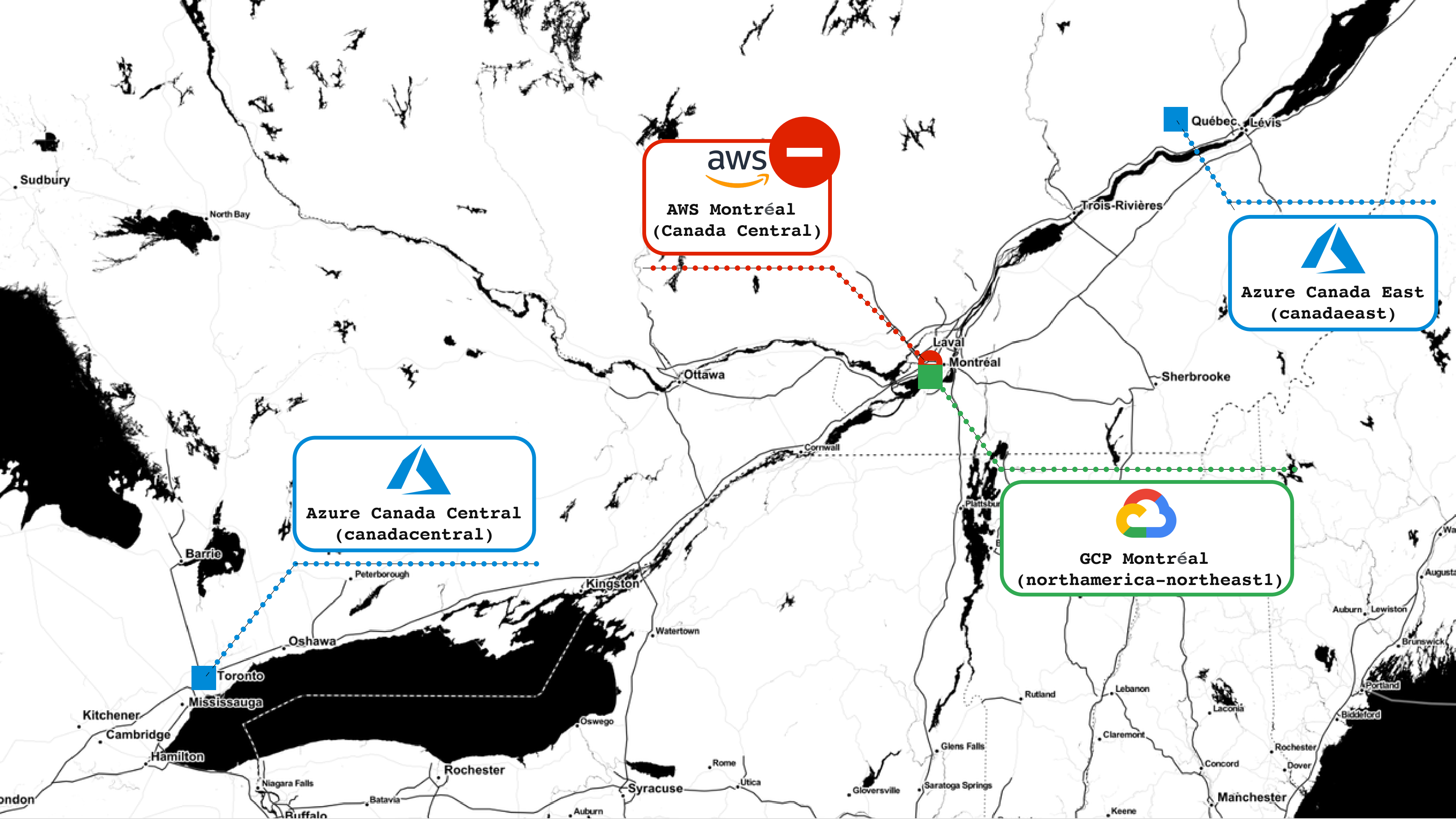
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(canadaeast)**



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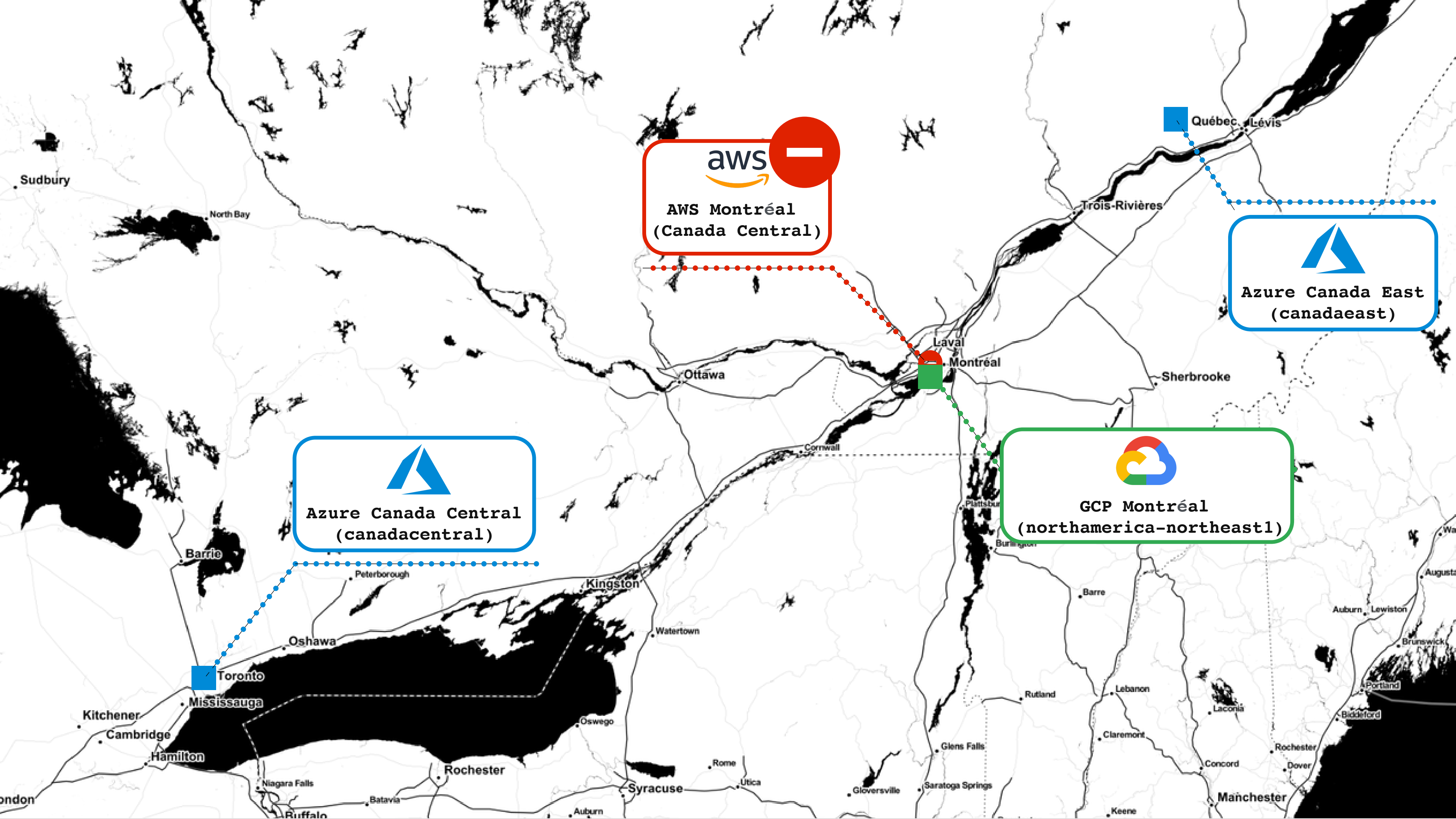
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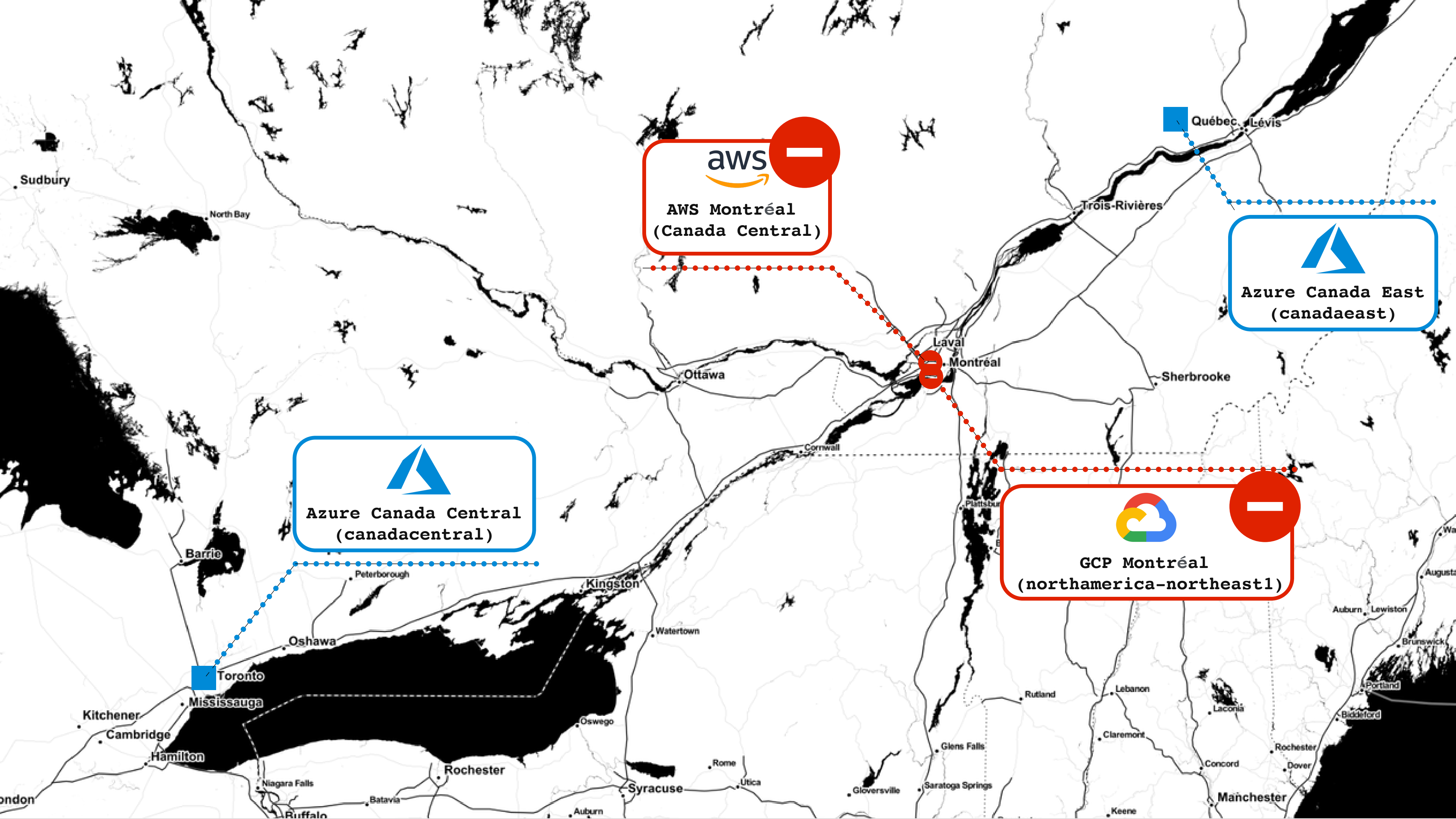
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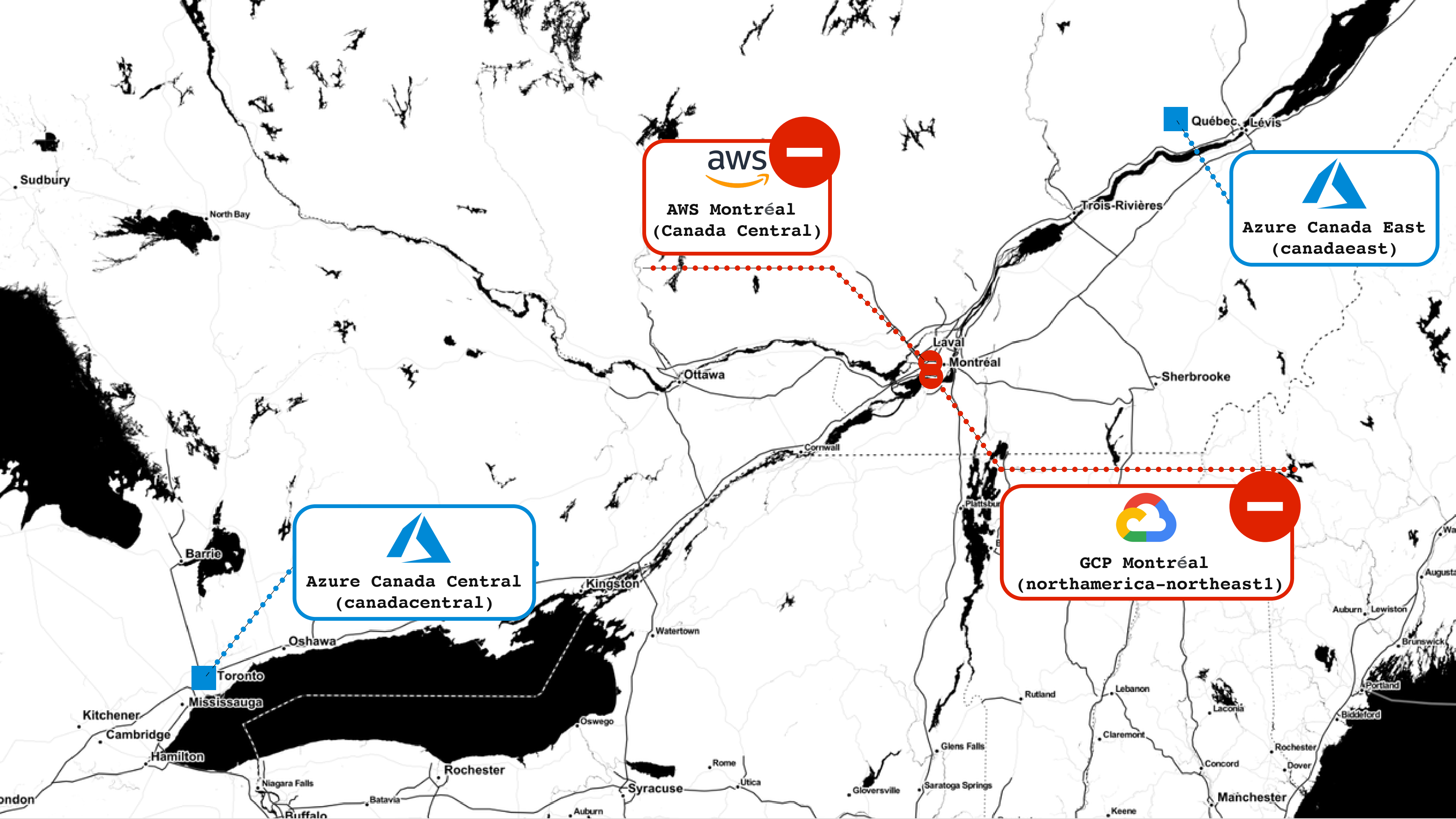
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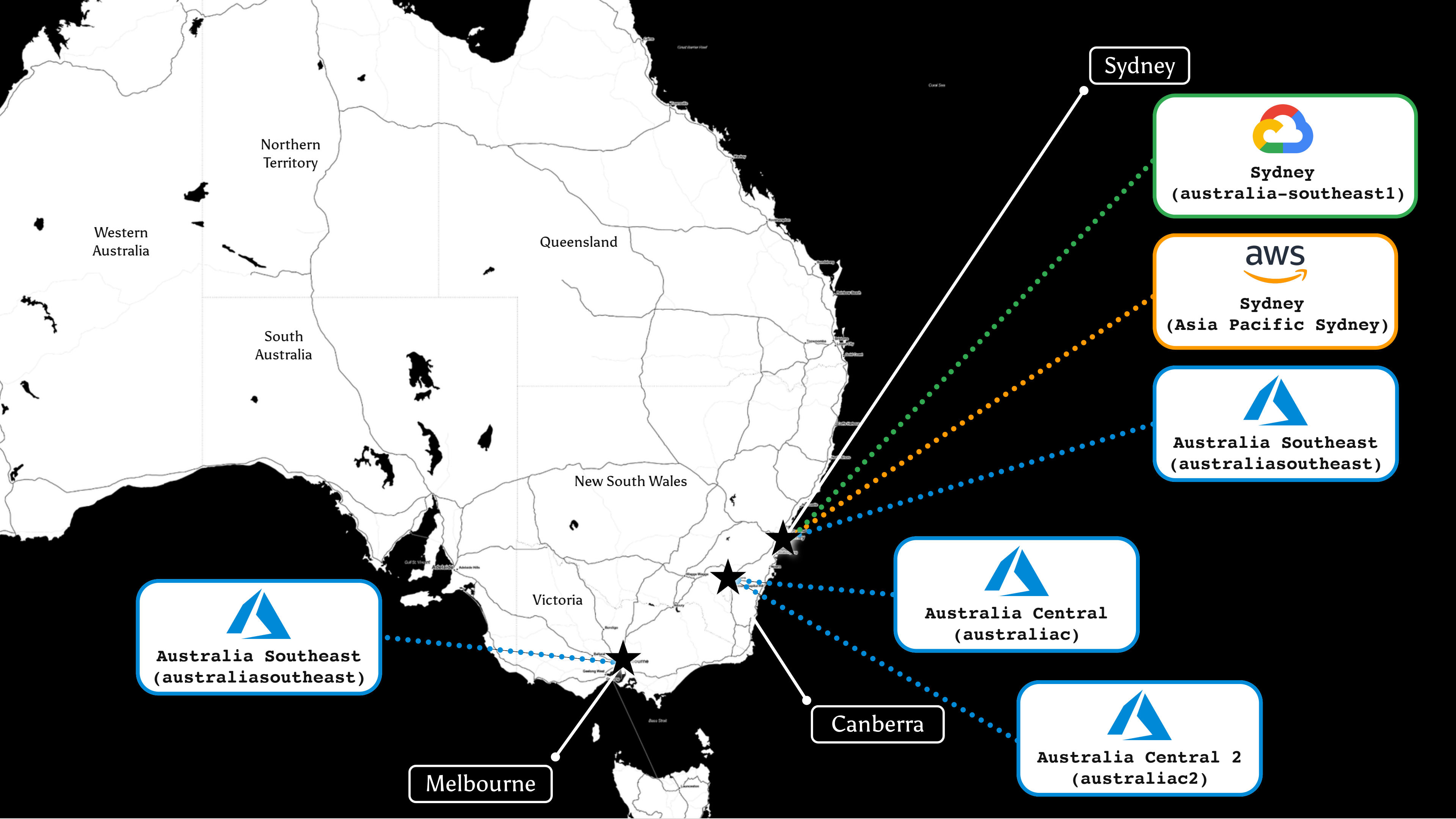
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Australia: My Health Records Act 2012

<https://www.legislation.gov.au/Details/C2020C00372>



Sydney



Sydney
(australia-southeast1)



Sydney
(Asia Pacific Sydney)



Australia Southeast
(austaliasoutheast)



Australia Central
(australiac)



Australia Central 2
(australiac2)

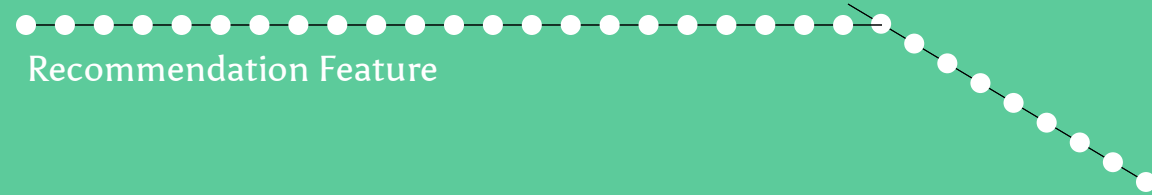


Australia Southeast
(austaliasoutheast)

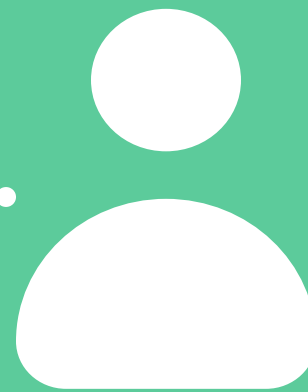
Canberra

Melbourne

Best of All Clouds

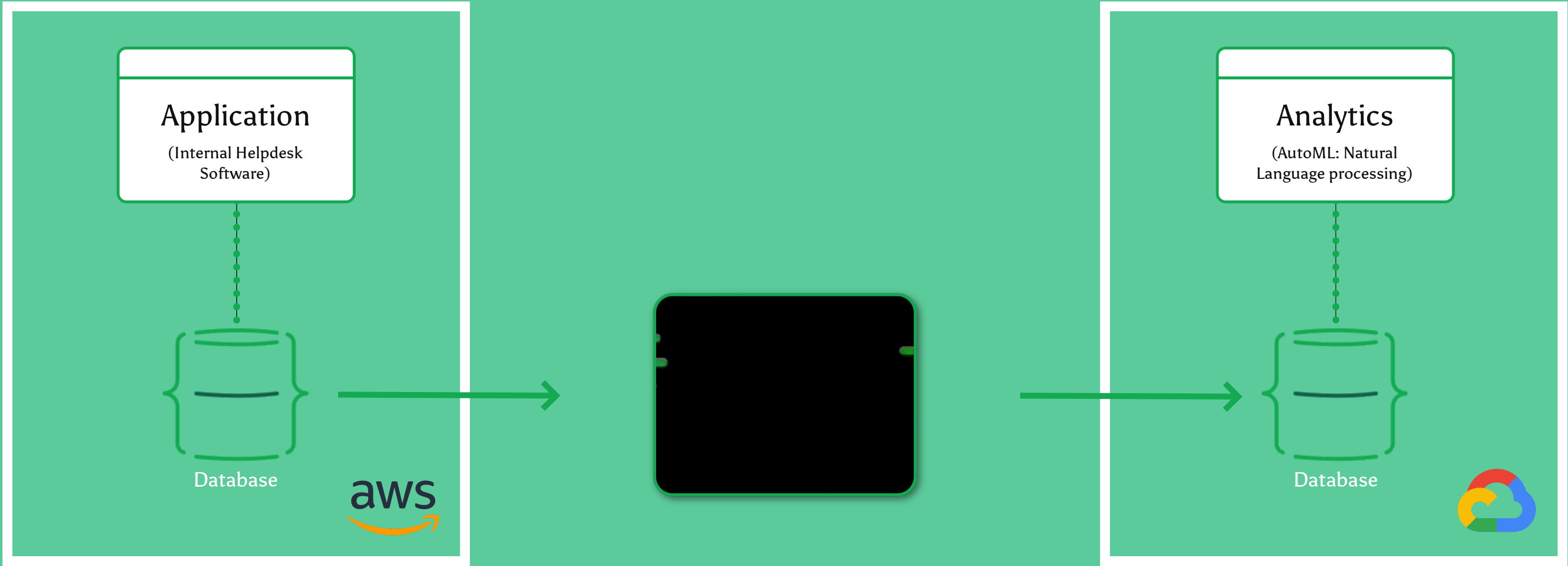


Recommendation Feature



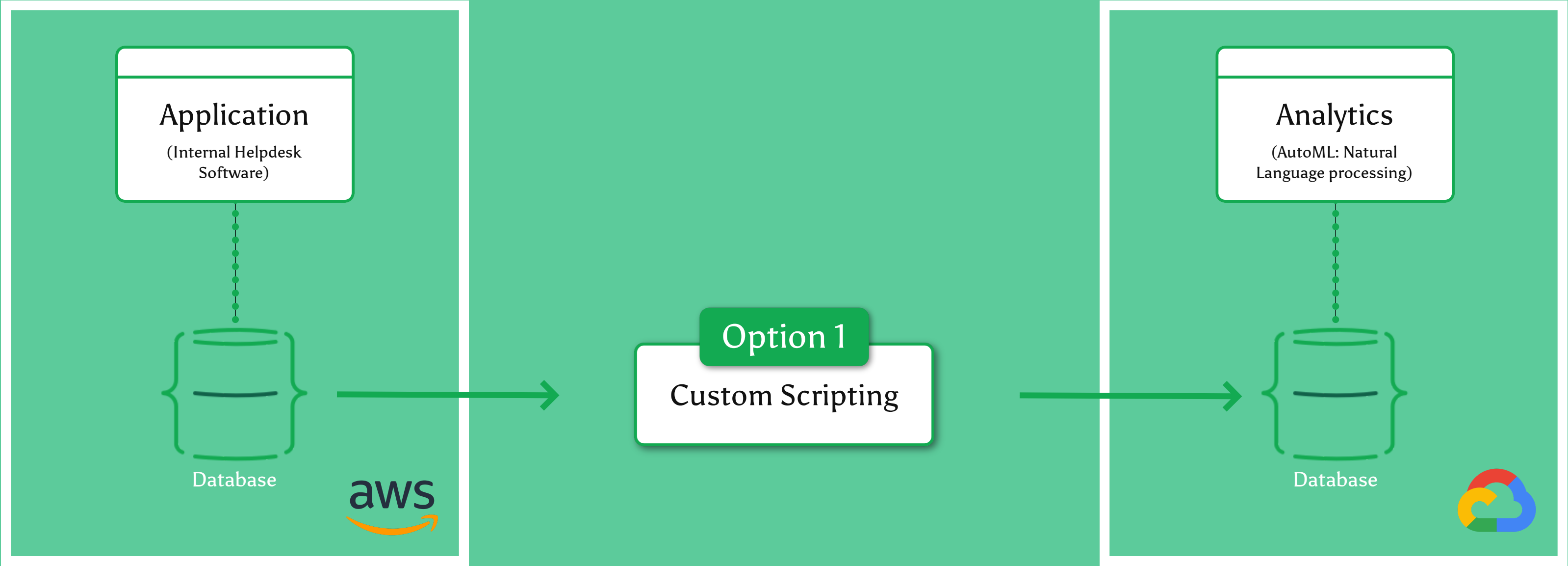
Best of All Clouds

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Recommendation Feature



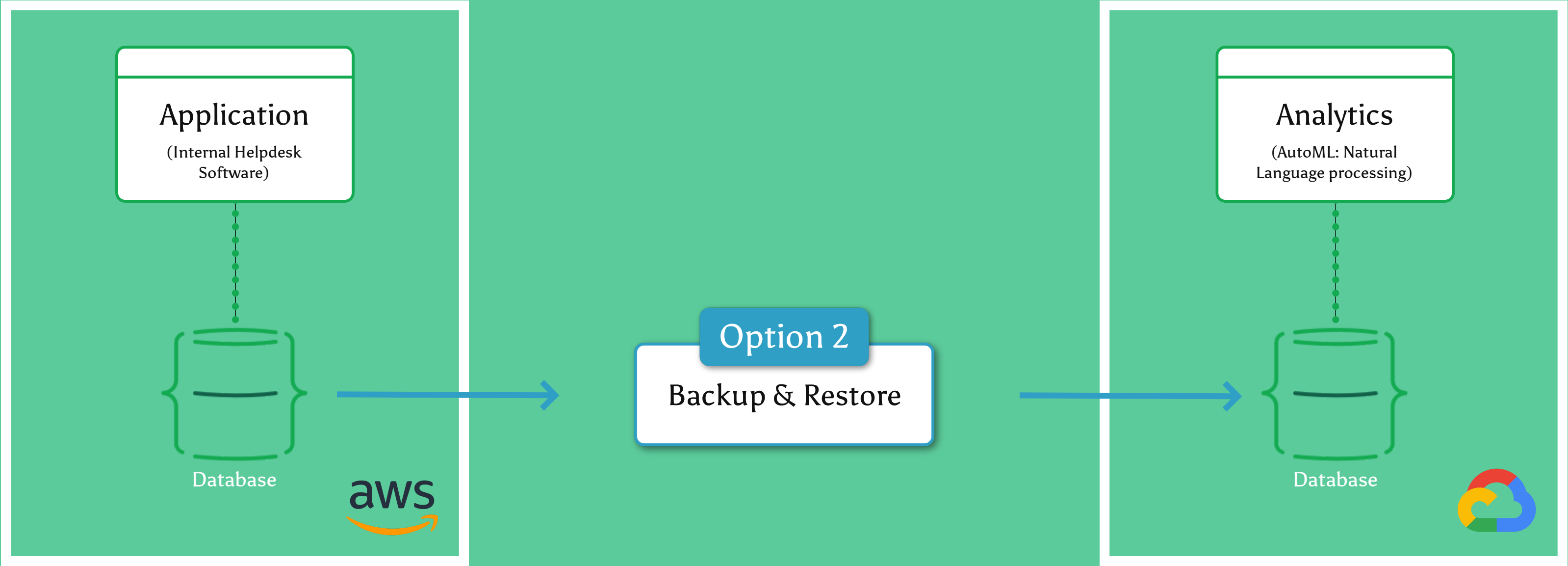
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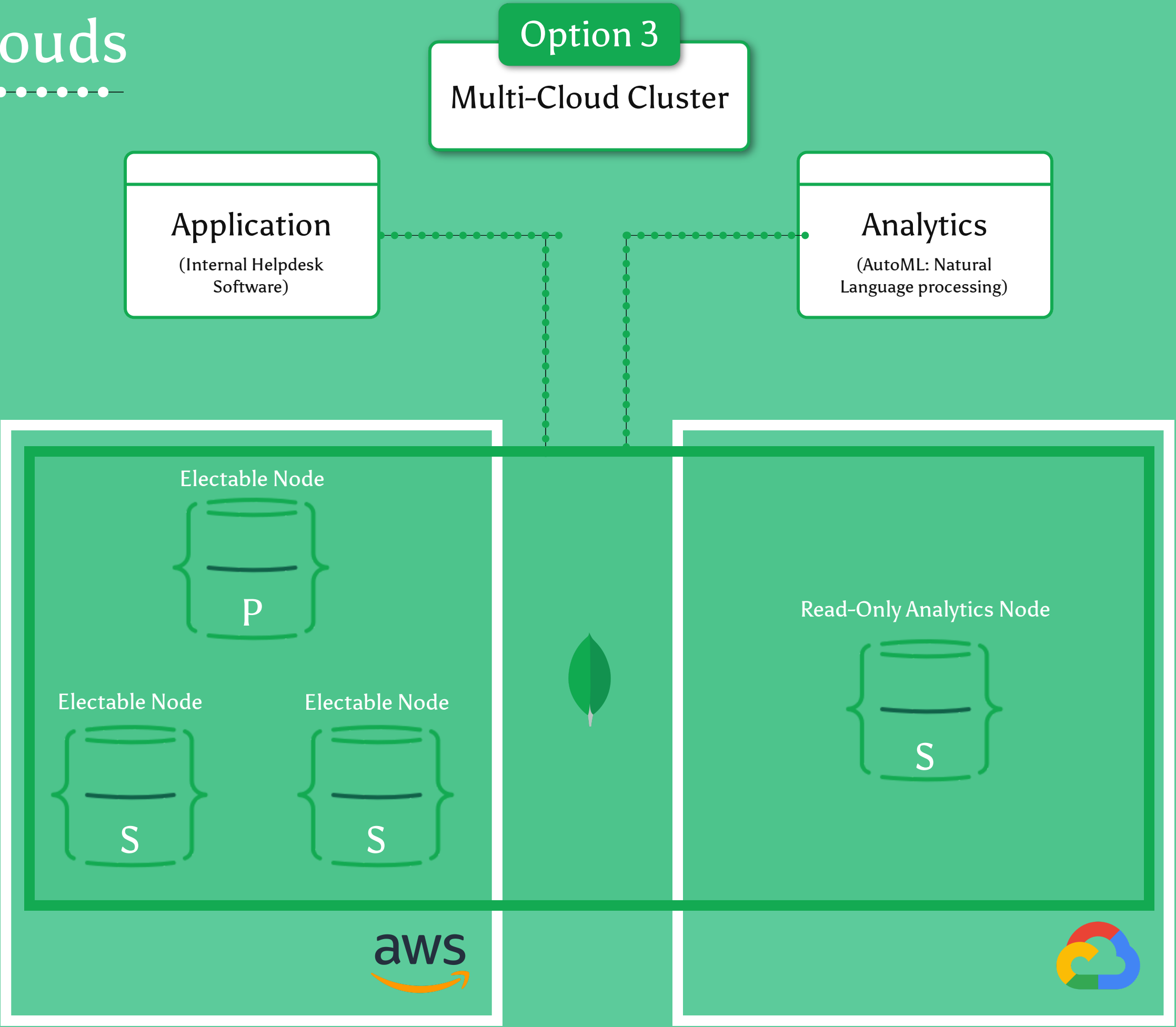
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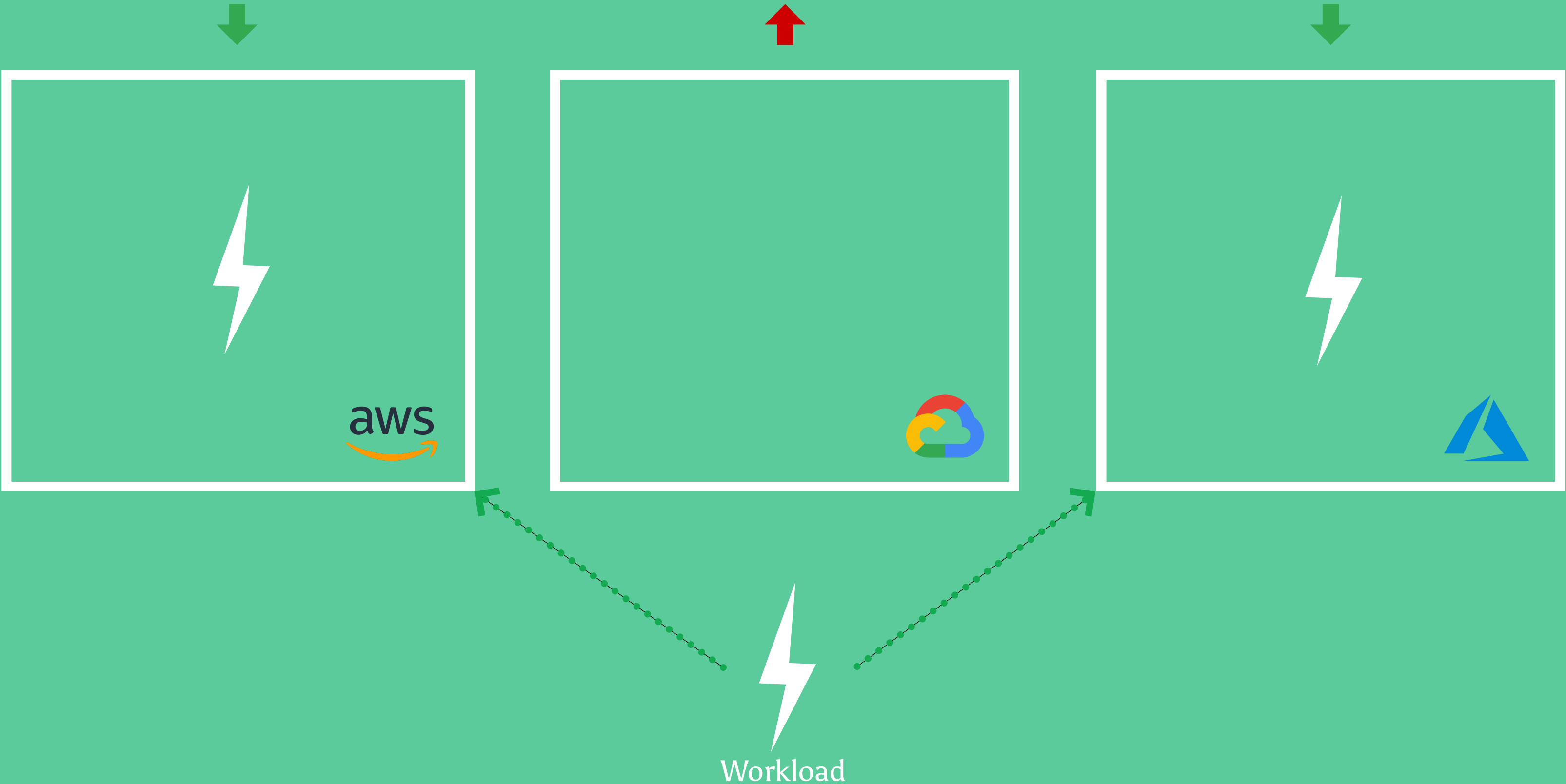
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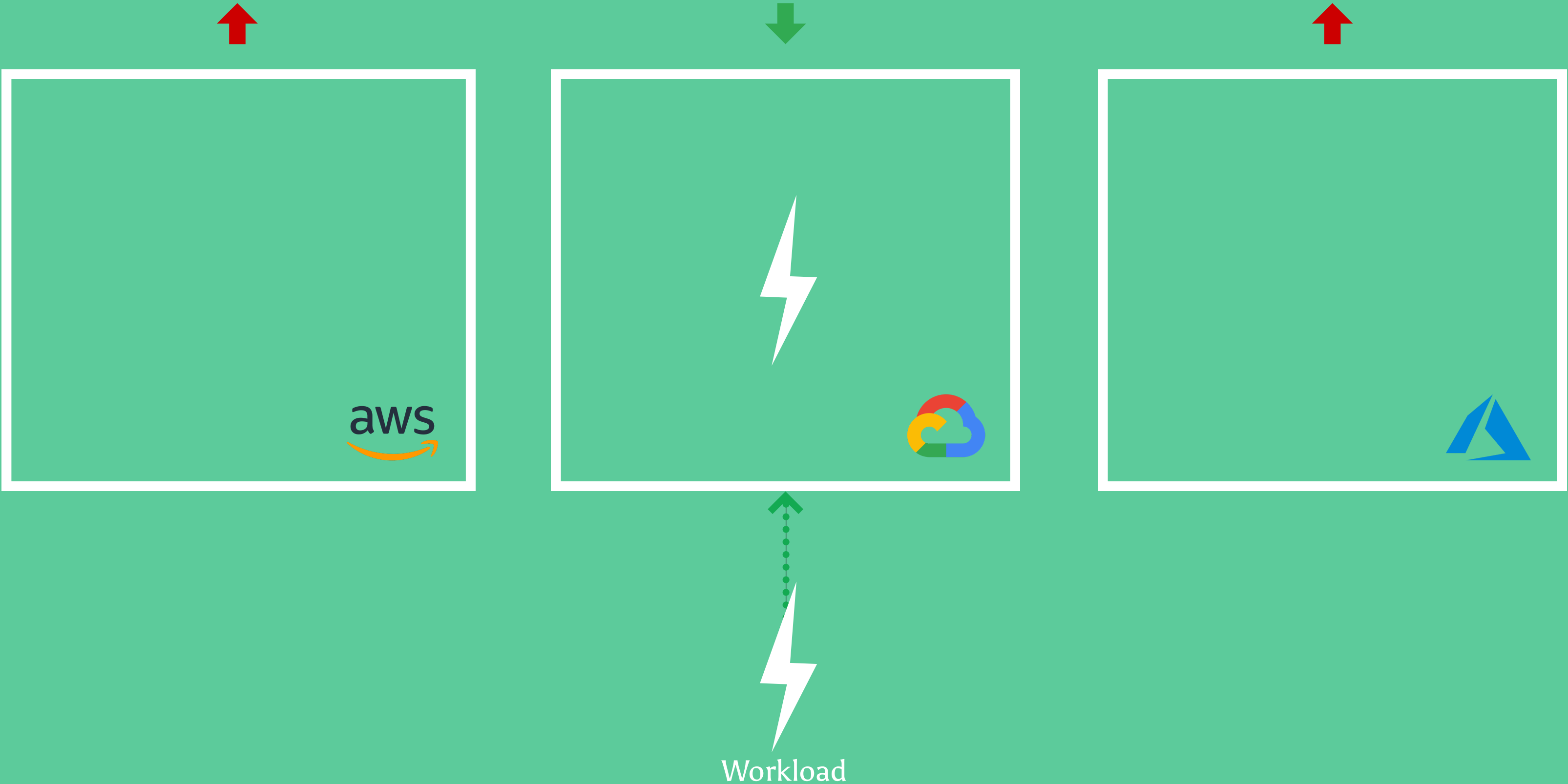
Best of All Clouds

Cloud Arbitrage / Cost Optimization



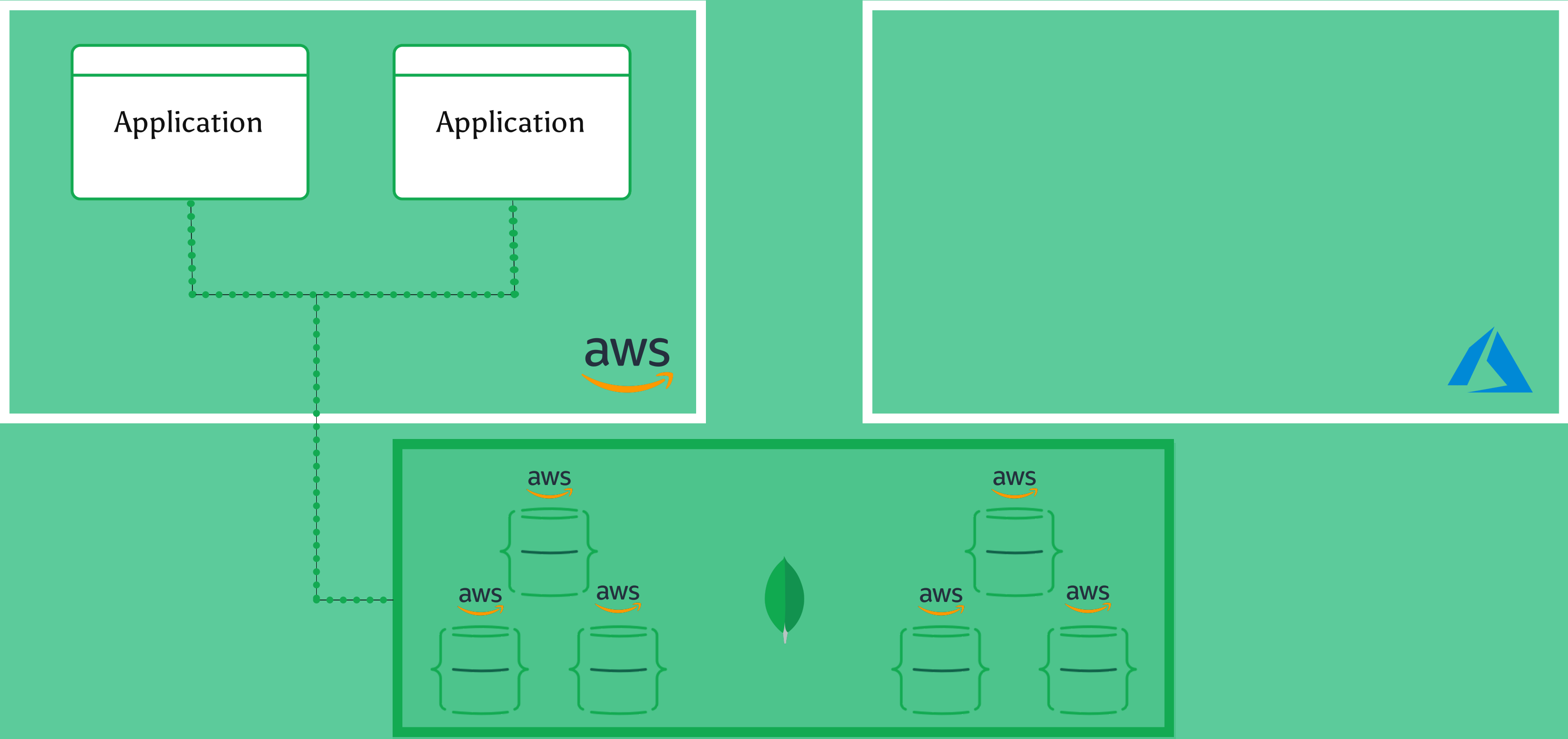
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Cloud Arbitrage / Cost Optimization



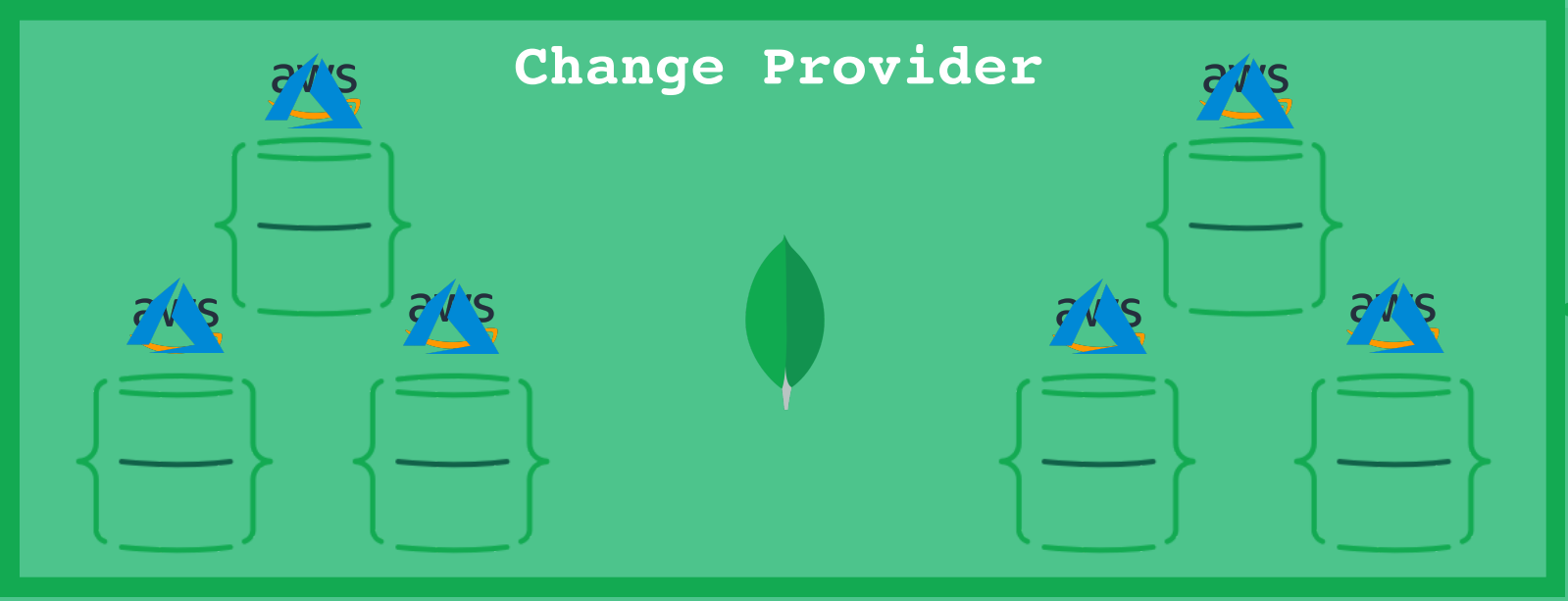
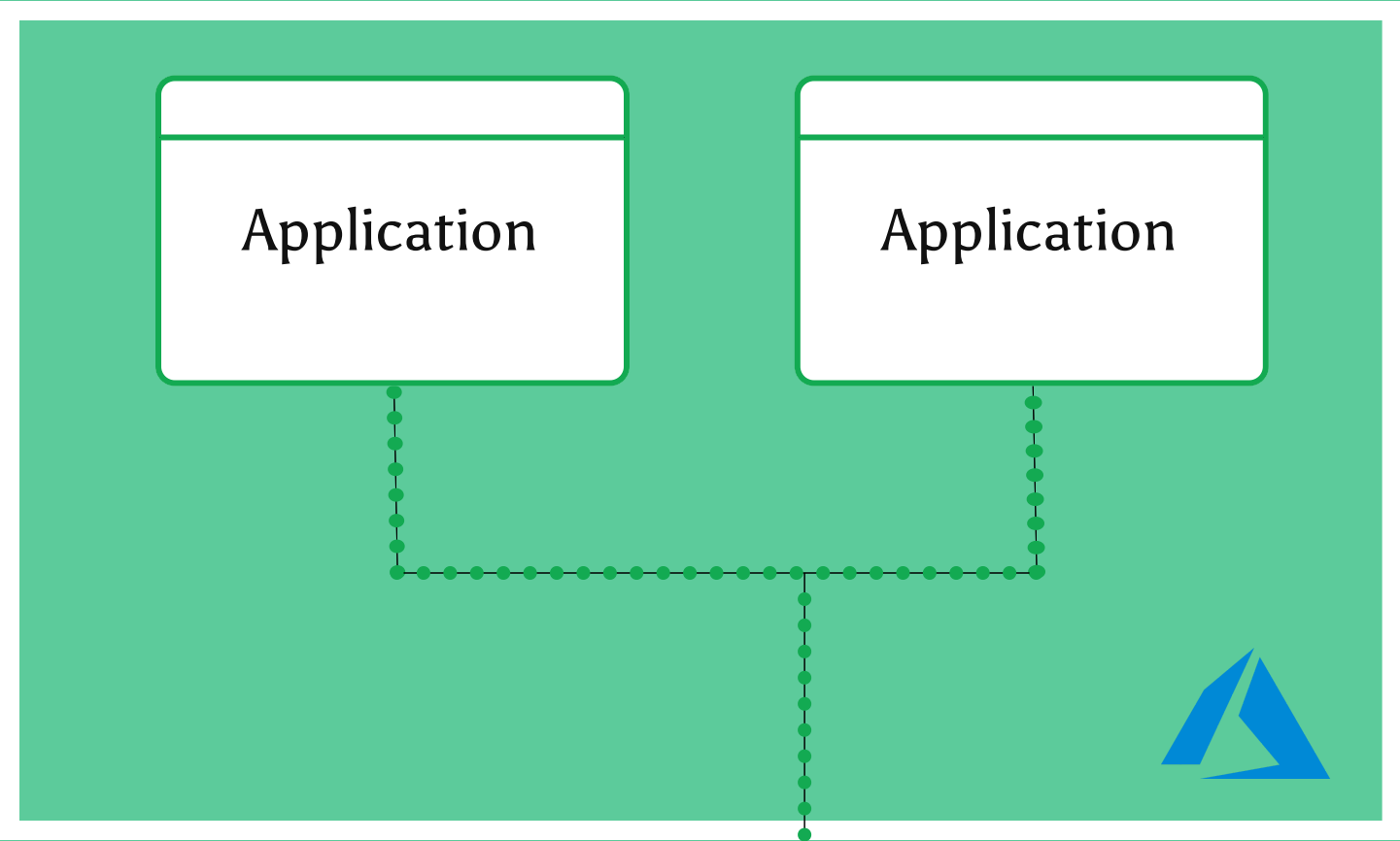
Best of All Clouds

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Best of All Clouds

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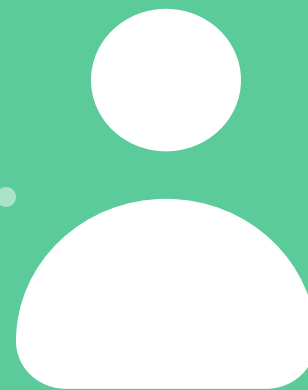


Best of All Clouds

Recommendation Feature, Cloud Arbitrage / Cost Optimization

Developers' Choice

All industries



Developers' Choice



All industries

We want to use the best tools for the job

We're responsible for even higher availability and lower-latency

We're striving to be cloud-agnostic



AWS Lambda
Amazon S3
Amazon CloudFront

25+ Geographic Regions



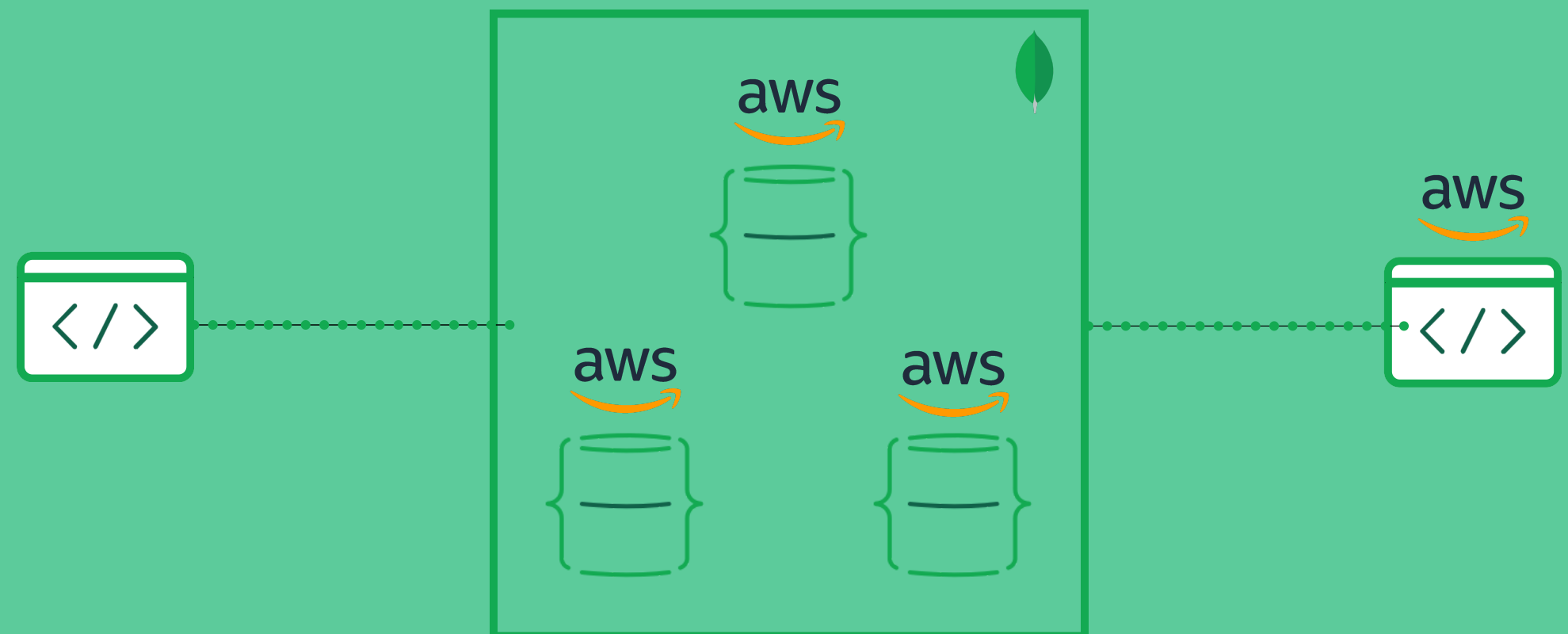
Auto ML
Vision AI
AI Platform

24+ Geographic Regions

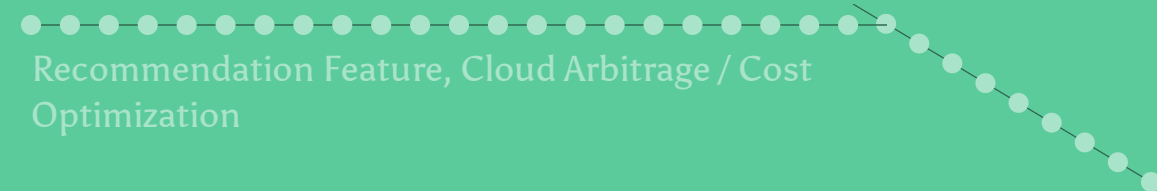


Azure DevOps
Azure VMs
Azure Active Directory

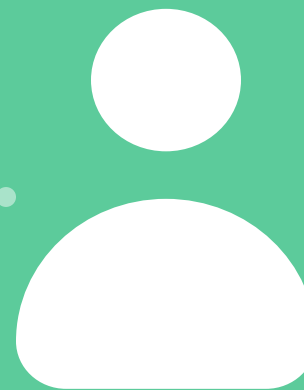
60+ Geographic Regions



Best of All Clouds

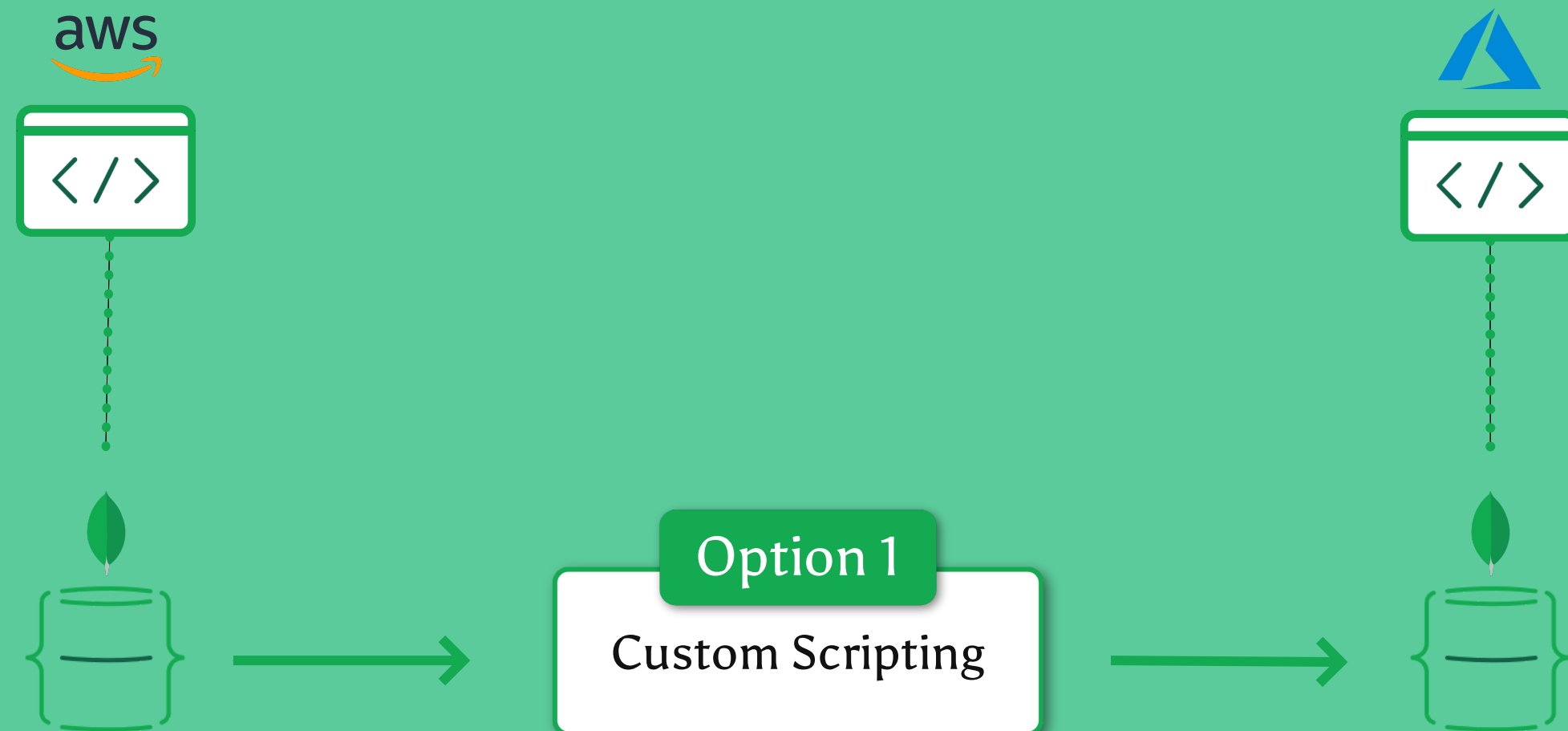


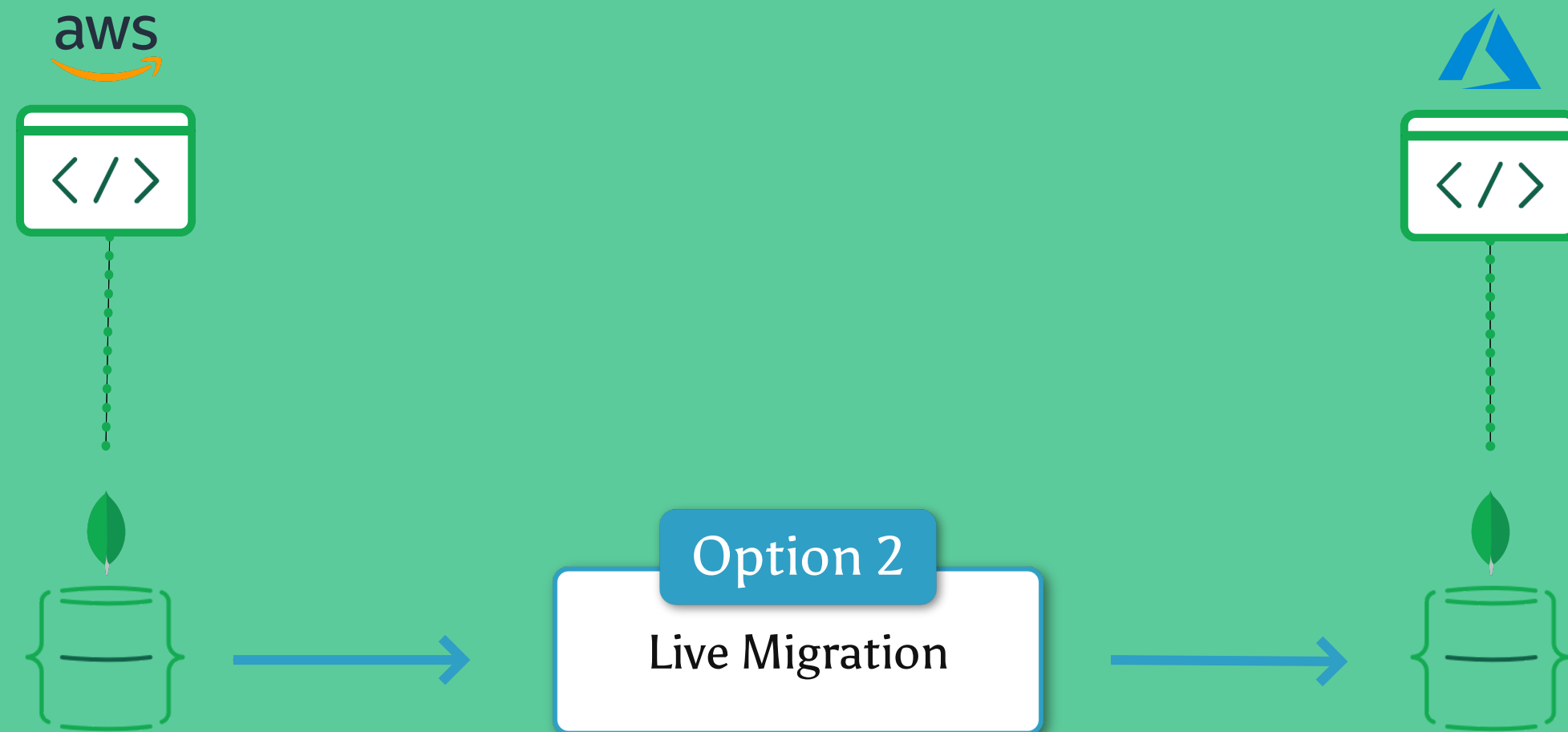
Developers' Choice



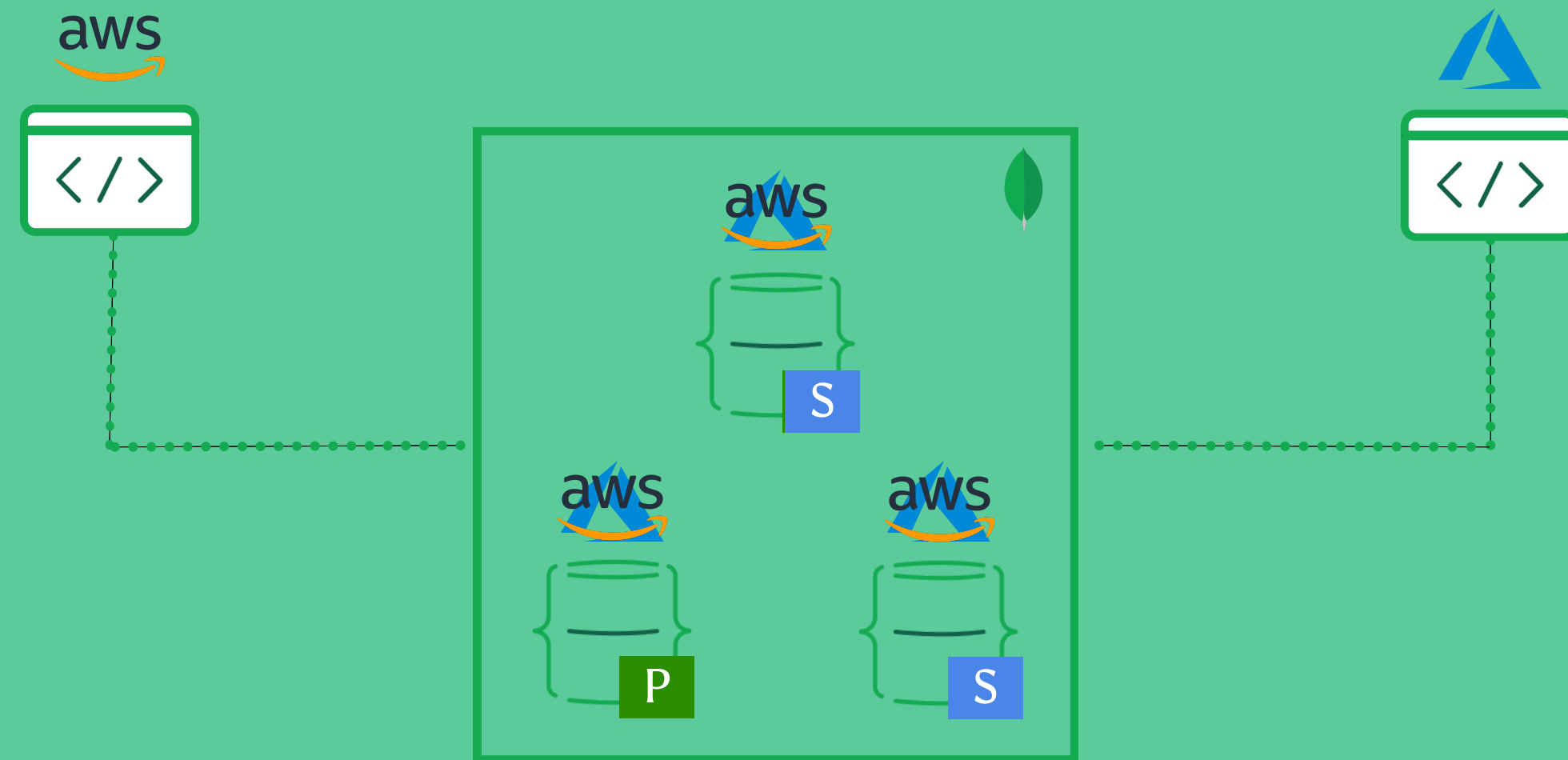
Future-proof

Mergers & Acquisitions





Option 3 Multi-Cloud Cluster



Best of All Clouds

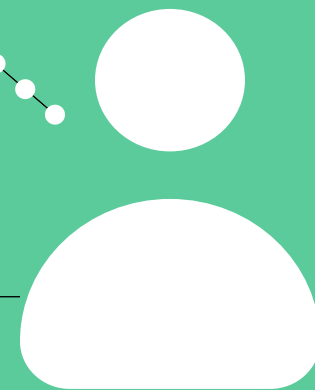
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All industries

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Multi-Cloud in the Real World



If you want to start to have true portability of applications, obviously, the data has to go with the application.



Bradd Lewis - VP & Global Lead, Business & IT Transformation, Dell Technologies

Building a Multi-Cloud Cluster

 Salammat!

 @adriennetacke



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