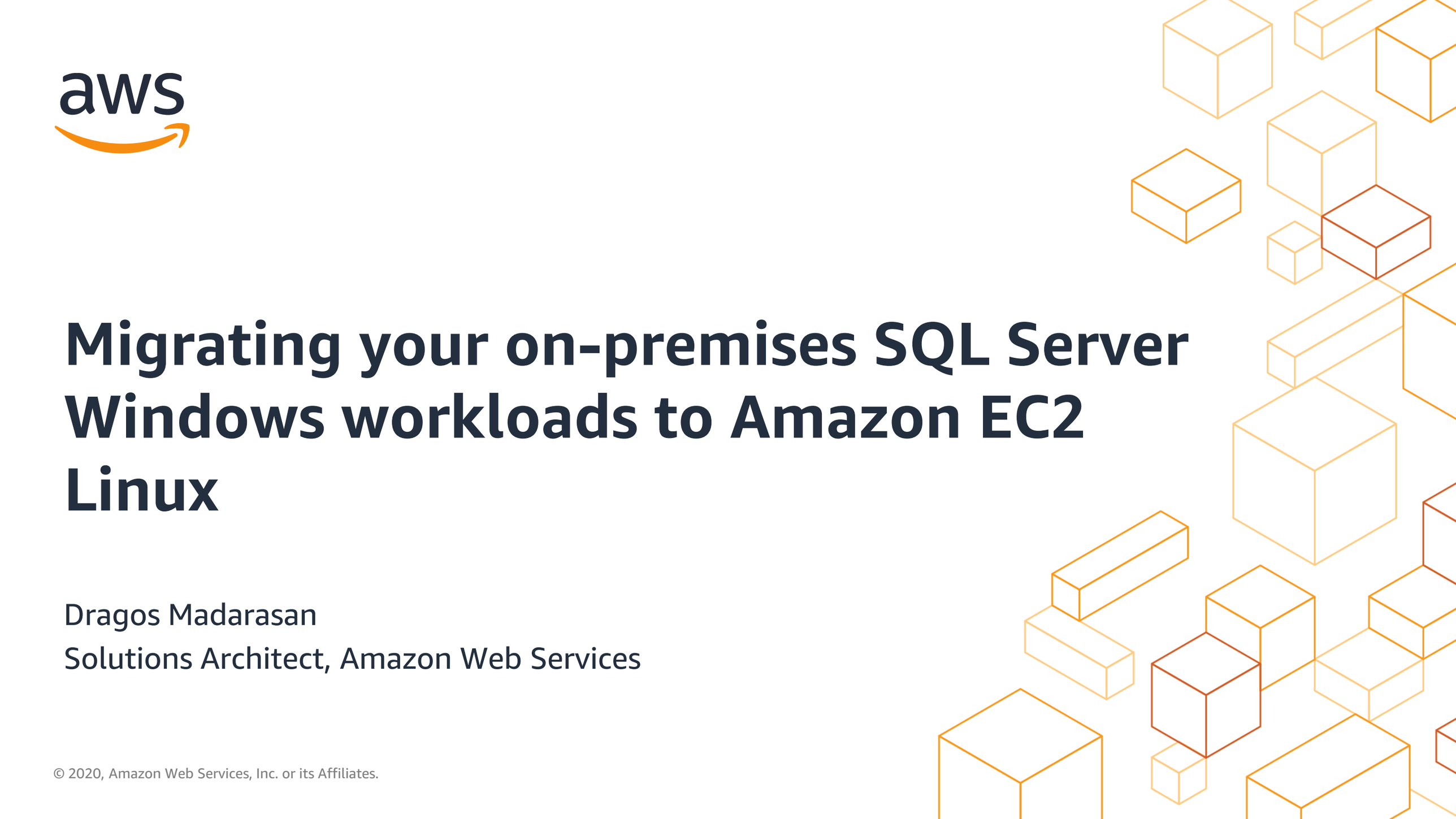

Migrating your on-premises SQL Server Windows workloads to Amazon EC2 Linux

Dragos Madarasan
Solutions Architect, Amazon Web Services

Table of contents

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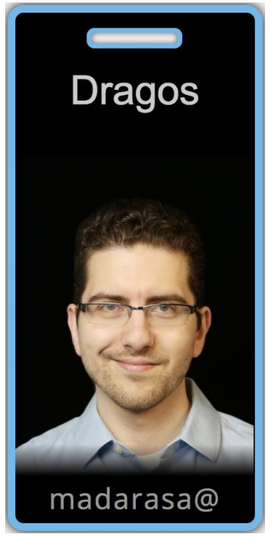
About me

Dragos Madarasan – https://dragos.madarasan.com

- Solutions Architect @ AWS, covering Central and Eastern Europe
- Work with and support clients, partners, NGOs, Public Sector
- Based in Munich, Germany, ~~travel often~~
- Previously ProServe Consultant @ AWS



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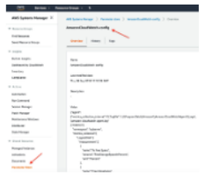
Dragos Madarasan

Solutions Architect
Amazon Web Services

Running Microsoft SQL on AWS

Make sure to checkout our AWS Database Blog

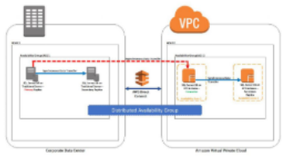


Monitor your Microsoft SQL Server using custom metrics with Amazon CloudWatch and AWS Systems Manager

by Nithin Reddy Cheruku | on 26 DEC 2018 | in Amazon CloudWatch | Permalink | Comments | Share

In this blog post, we show you how to configure the CloudWatch agent on Amazon EC2 Windows instances to capture custom metrics for SQL Server from Windows performance monitor. We also show you how to publish those custom metrics and monitor them on Amazon CloudWatch console. We also walk you through on how to store custom configuration in AWS Systems Manager Parameter Store used by CloudWatch agent to capture those metrics and reuse the same configuration across multiple fleets of SQL Server instances where similar kind of metrics are needed.

Read More



How to architect a hybrid Microsoft SQL Server solution using distributed availability groups

by Anup Sivadas | on 05 MAR 2018 | in Amazon EC2, AWS Quest, Database | Permalink | Comments | Share

Migrating monolithic mission-critical Microsoft SQL Server databases from on-premises to AWS (that is, to SQL Server based on Amazon EC2) is often a challenging task. The challenge comes mostly from the following: A prolonged downtime window during cutovers that can have an adverse impact on the business Challenges involved in keeping the databases (both on-premises […]

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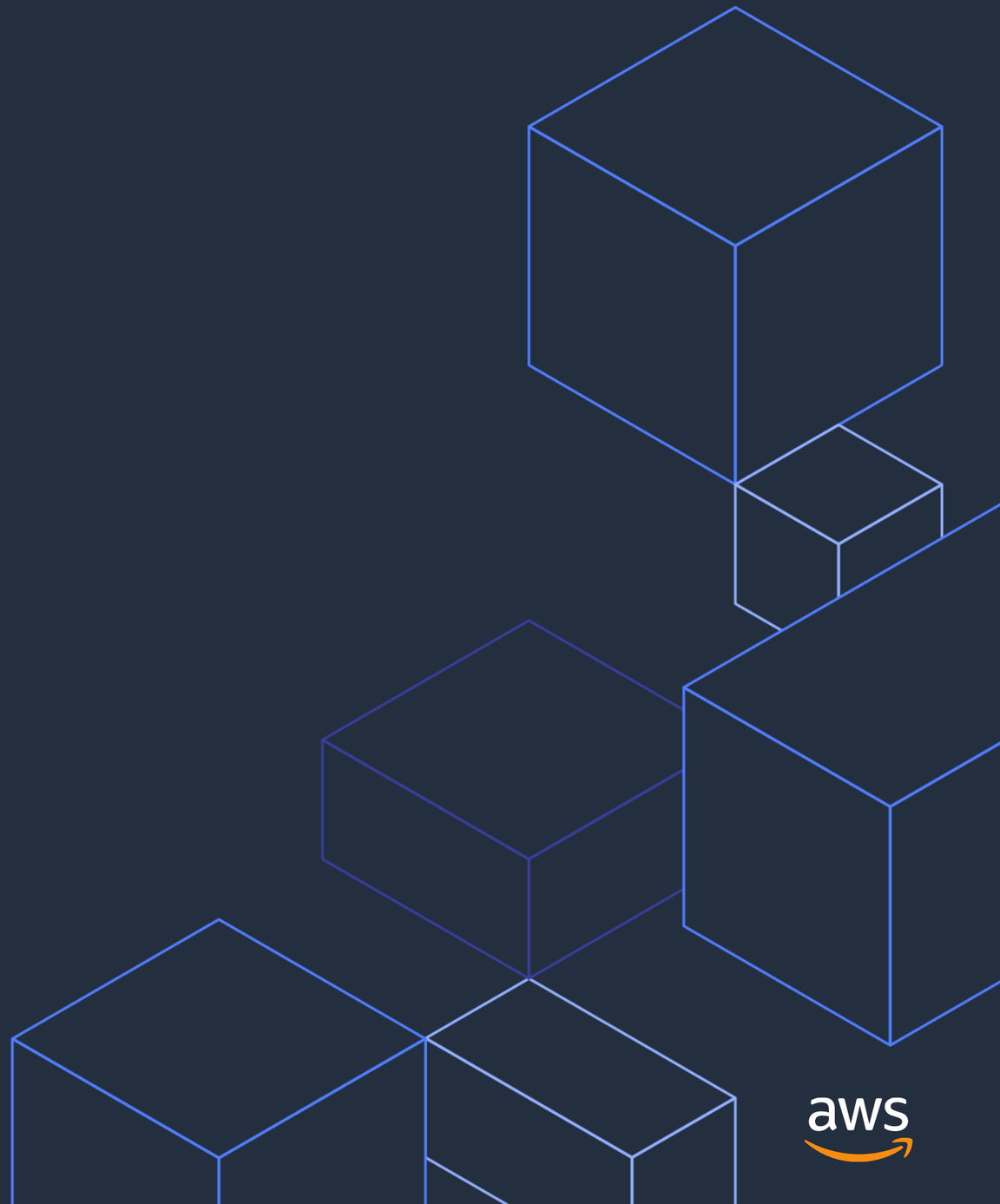
https://aws.amazon.com/blogs/database/tag/microsoft-sql-server/

https://cloud.pass.org/MeetingDetails.aspx?EventID=14608

Overview



Overview

- For organizations that are comfortable with Linux and are looking to save on Windows licensing costs, this represents an opportunity to run SQL Server workloads using the Linux operating system and save on Windows Server licensing costs, without drastically altering system architecture

- To help customers who want to run their SQL Server workloads on Linux, AWS has introduced a new tool, the Windows to Linux replatforming assistant for Microsoft SQL Server.

The challenge

- Organizations are looking to expedite the move to Linux
- Reduce the Windows license cost burden
- Insufficient in-house AWS knowledge to perform cloud migrations
- Manual migration can lead to downtime and possible migration errors

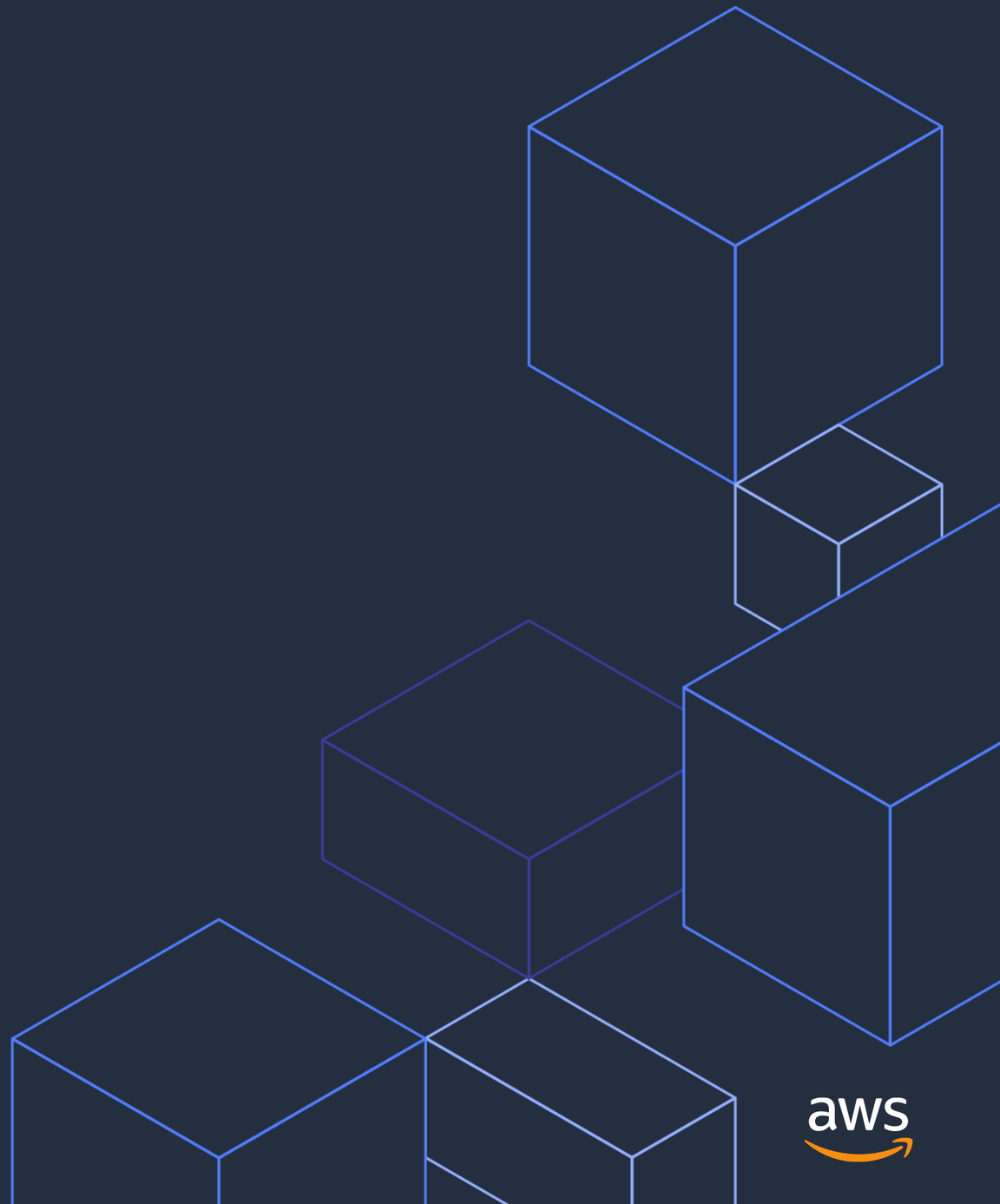
Outcome

- We will leverage the Windows to Linux replatforming assistant for Microsoft SQL Server to help you migrate your SQL Server workloads from Windows Server to Linux

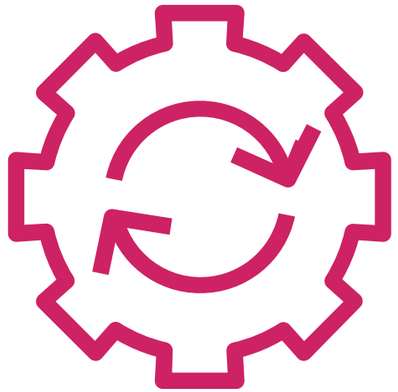
- The replatforming assistant allows you to test running your SQL Server workloads in Amazon EC2 Linux—it is an automated and low-commitment solution that uses native AWS Tools for PowerShell and doesn’t cause source database downtime

- Automation of the replatforming is performed by AWS Systems Manager

Systems Manager automation



What is AWS Systems Manager Automation?



- Platform to orchestrate operation workflows
- Build and execute DevOps & IT workflows
- Manage any AWS resource across accounts and regions
- Orchestrate dynamic workflows using conditional branching
- Safe at-scale operations using rate control
- Standardize and share best practices across organization

Use cases & benefits

- Remediation and patching workflows
- Security orchestration
- Incident response
- Data backup, snapshots, and disaster recovery
- Amazon Machine Images (AMI) baking
- Operational tasks

Automation document

Document name: AWS-CreateImage

Description | Parameters | Permissions | Content | Versions | Tags

Document version

1 (Default)

The content of this document is as follows:

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Header

parameters

mainSteps

outputs

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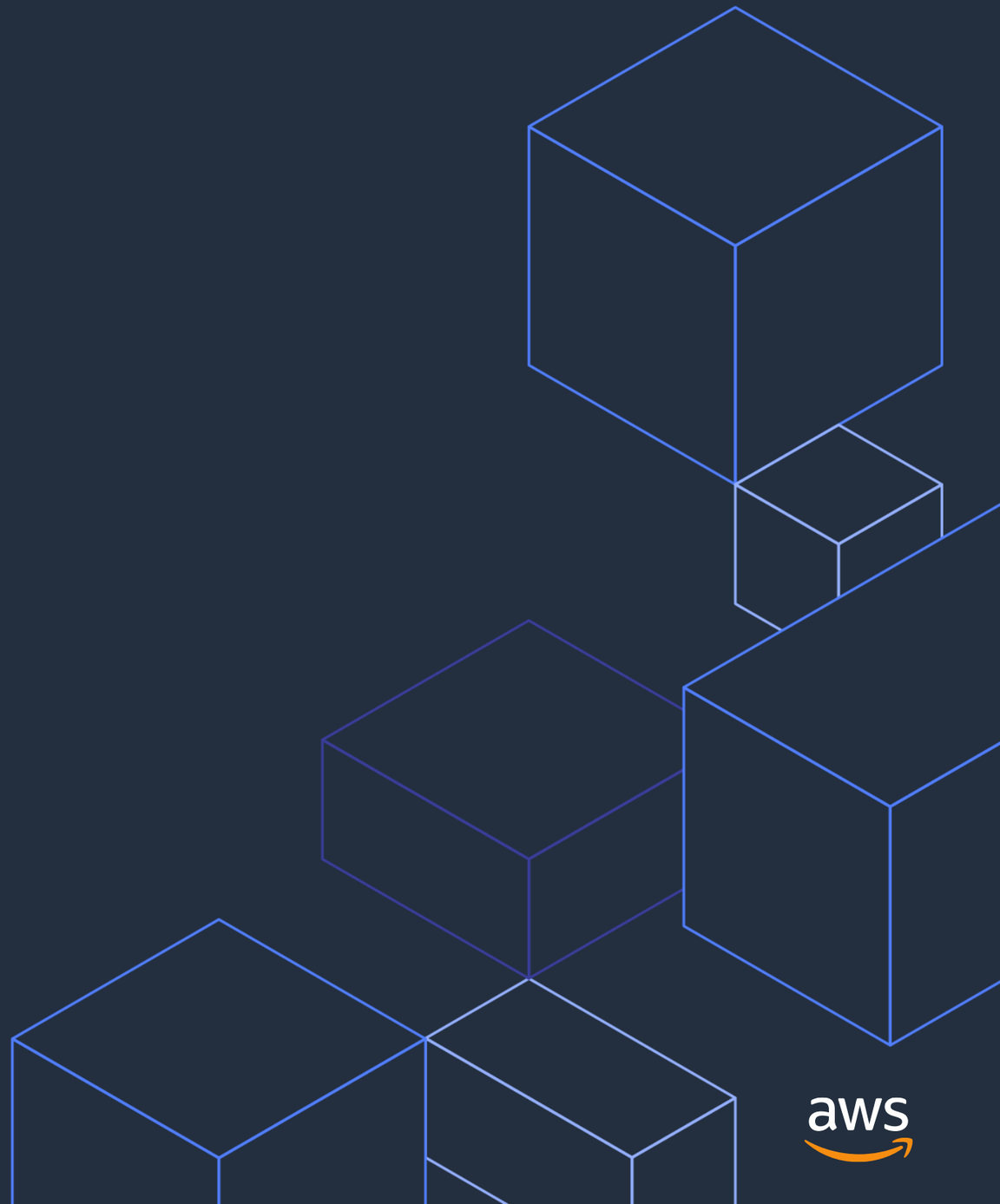
Amazon Linux 2



What is Amazon Linux?

- Linux distribution optimized for use on AWS
- Updated monthly
- On-time security updates
- Provided at no additional cost
- Amazon Linux released in September 2011
- Amazon Linux 2 released in June 2018

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Windows to Linux replatforming assistant

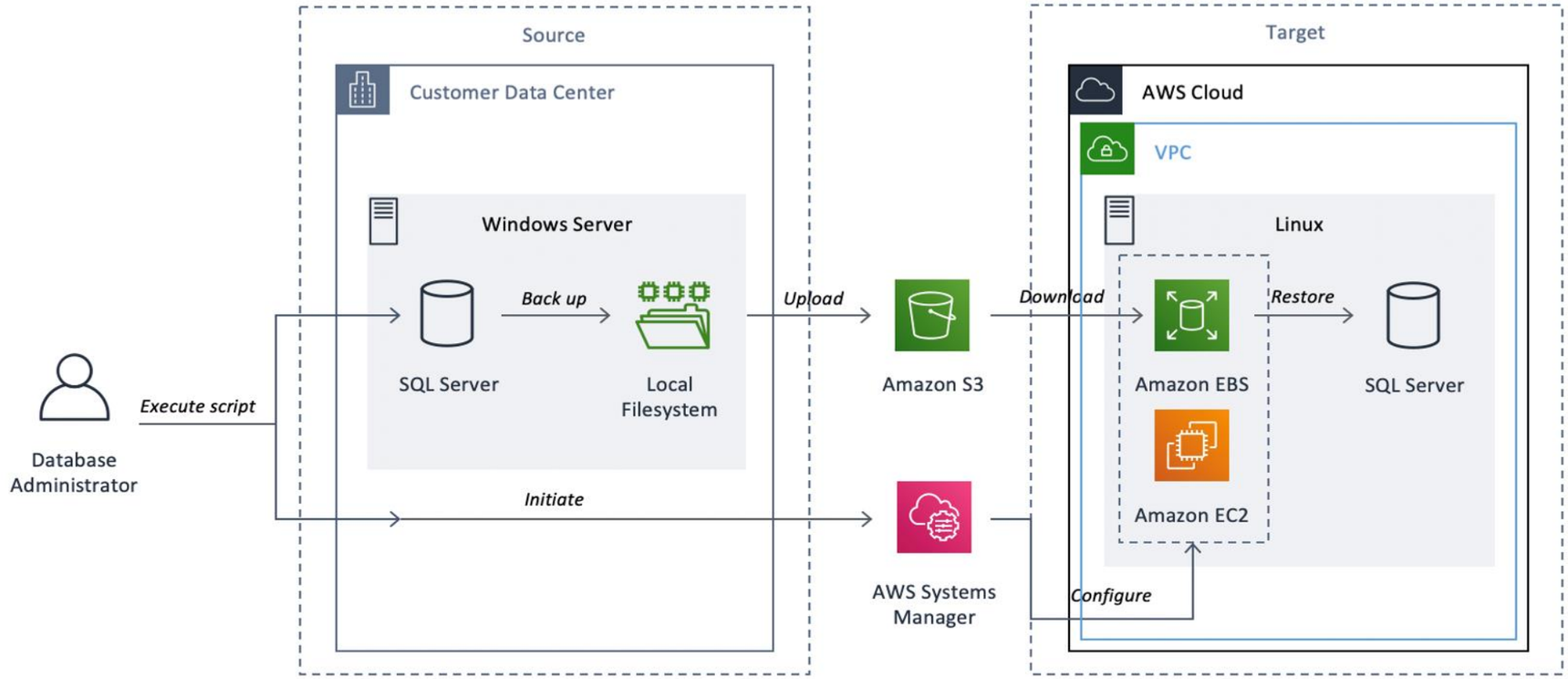
Replatforming assistant

Leverage locally installed replatforming assistant

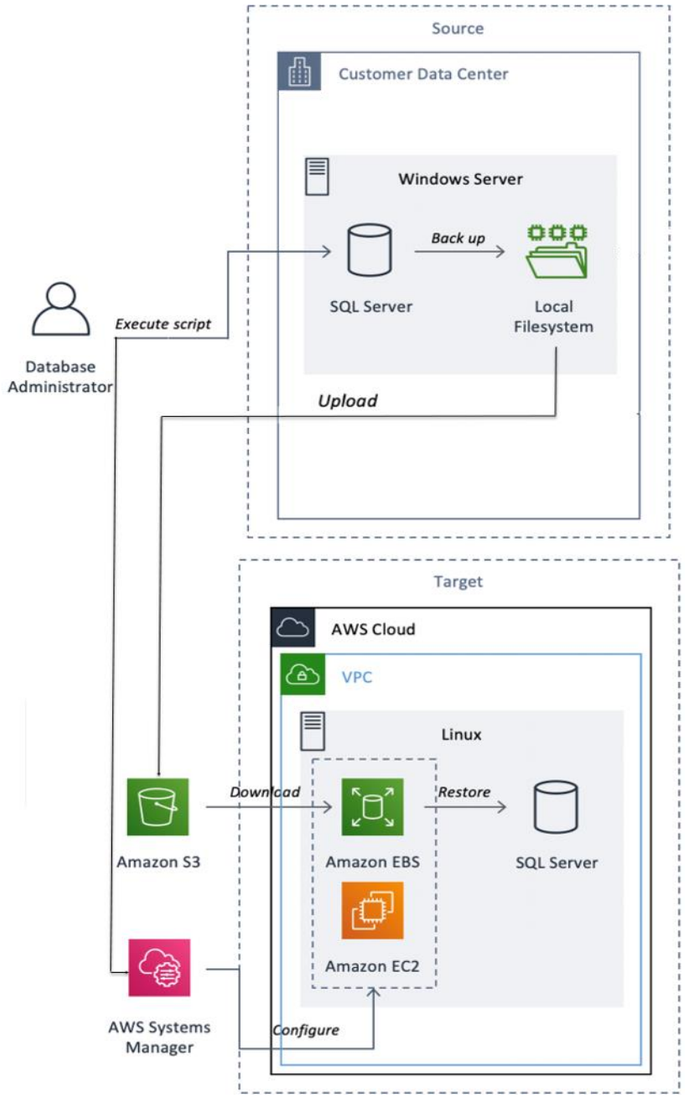
1. Creates local backups of your source SQL Server databases
2. Uploads them to an Amazon S3 bucket
3. Invokes the SSM automation AWSEC2-SQLServerDBRestore options:
4. Existing instance
   - The SSM automation will download the SQL Server database backups from Amazon S3 to the target Amazon EC2 Linux instance and then restore the databases
5. New instance
   - The SSM automation will launch and configure a new Amazon EC2 instance running SQL Server 2017 on Ubuntu 16.04, which the databases will then be restored to

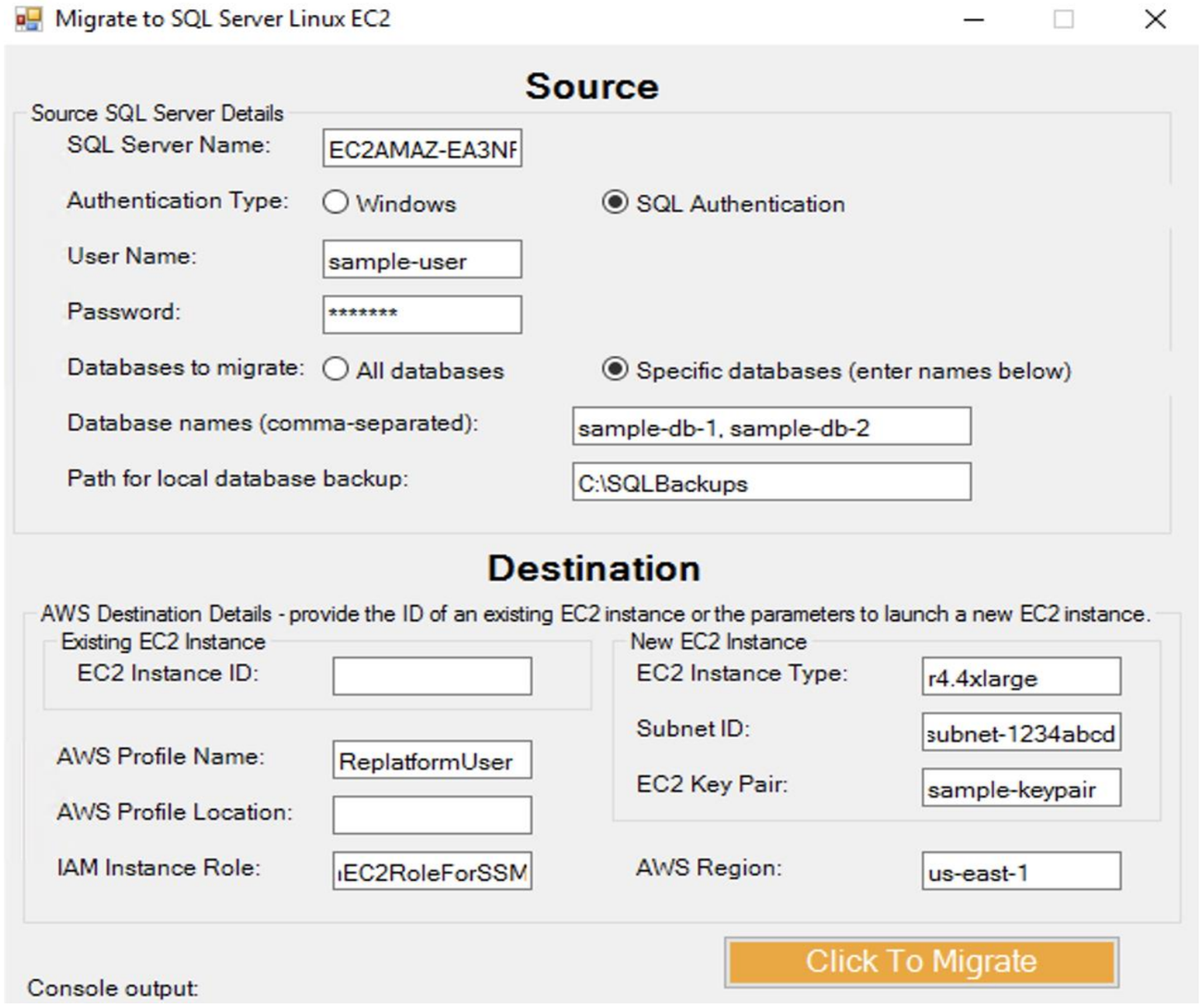
AWS automation process

The following diagram shows the actions taken by the Windows to Linux replatforming assistant for Microsoft SQL Server:



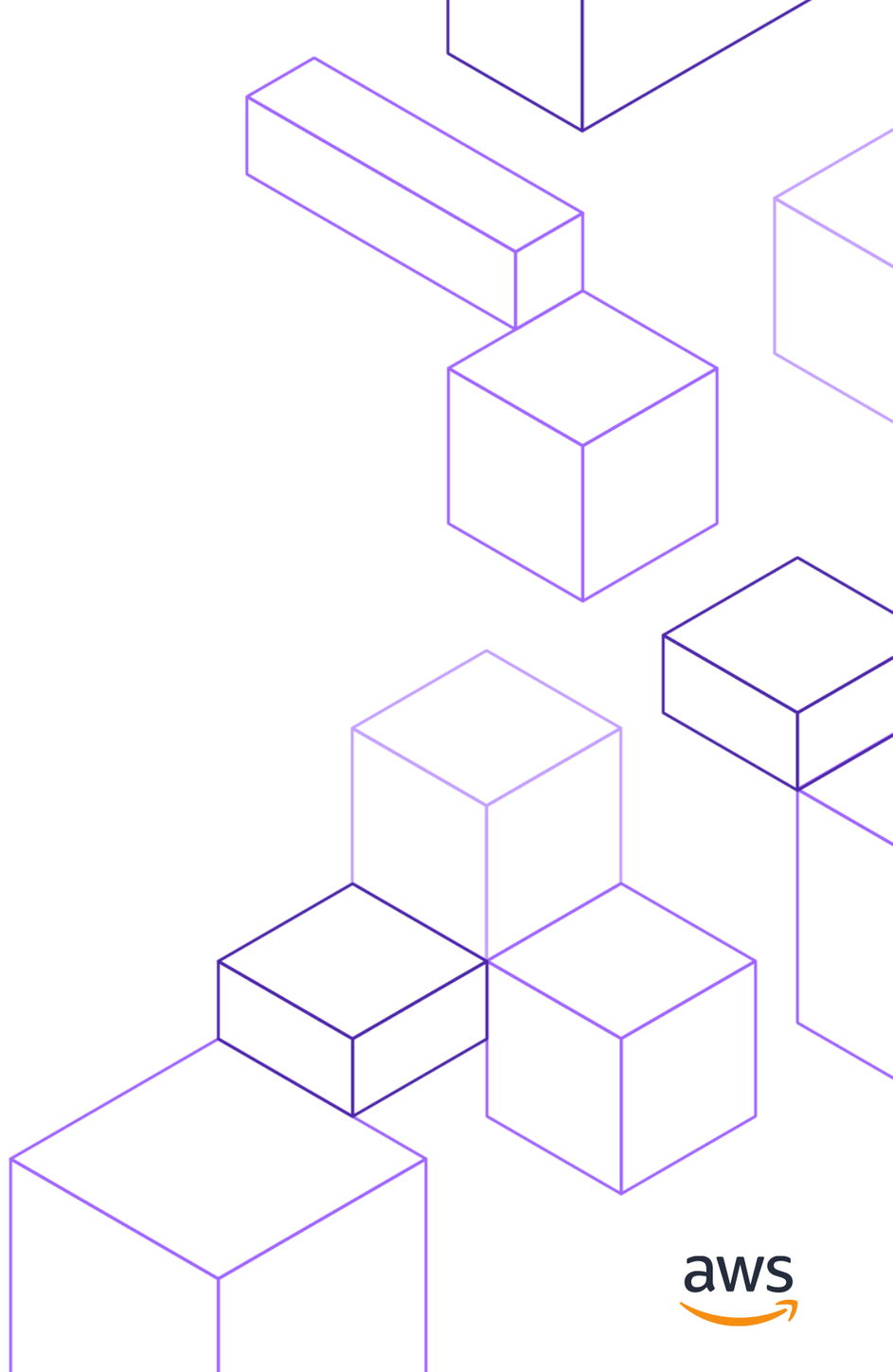
AWS automation process





Q&A

Dragos Madarasan



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Windows to Linux Replatforming assistant

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AWS Database blog

https://aws.amazon.com/blogs/database/tag/microsoft-sql-server/

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