Migrate Your On-Premises Data Warehouse to Amazon Redshift with AWSSCT

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Agenda

- Workshop Introduction
- Lab architecture
- Lab environment setup
- AWS Schema Conversion Tool overview
- Migration considerations
- Workshop lab

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Workshop Introduction

- Workshop duration
  - Proposed solution and AWS services presentation - 20 minutes
  - Hands-on workshop - 1.5 hours
- Requirements and expectations
  - Students use their own AWS accounts to run the lab with IAM admin permissions
  - Basic knowledge of AWS services (Amazon RDS, Amazon Simple Storage Service (Amazon S3), AWS Database Migration Service, AWS SCT, Amazon Redshift)
  - Comfortable working on the AWS console and configure AWS services
  - Working knowledge of relational databases (Oracle)

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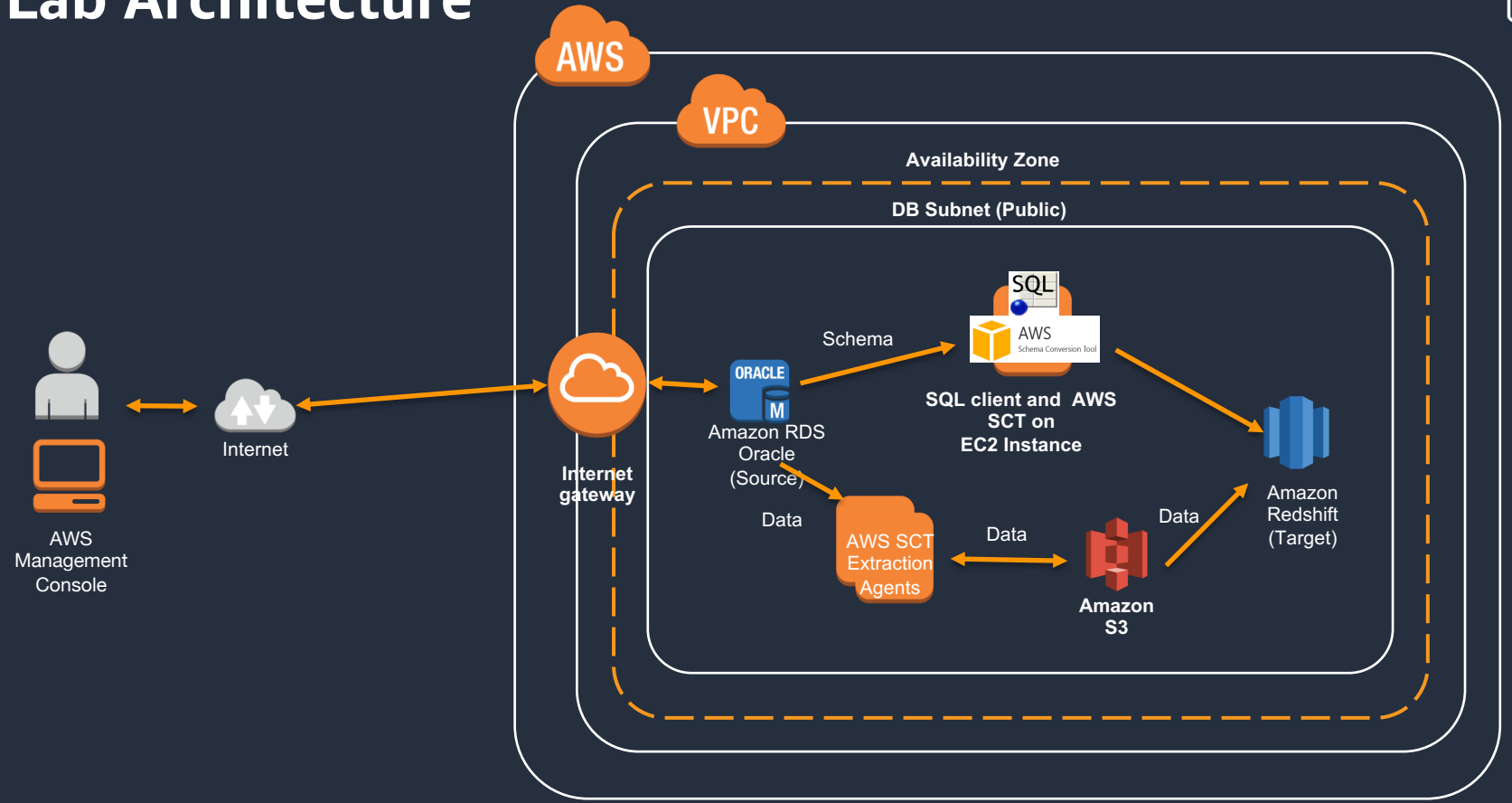
Lab Architecture



Lab Setup and Environment

- Download zip file: https://tiny.amazon.com/1f34lh7i0/D1S04

  It contains following files:

  - AWS CloudFormation template
  - Lab guide
  - SQL file
  - Policy file

- Logon to AWS Management Console and choose AWS Region **eu-west-1** (Ireland)

- Lab instructions: https://tiny.amazon.com/1au15p9uc/D1S04LabGuide

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What are AWS DMS and AWS SCT?

AWS Data Migration Service (DMS) easily and securely migrates and/or replicate your databases *and* data warehouses to AWS

AWS Schema Conversion Tool (SCT) converts your commercial database and data warehouse schemas to open-source engines or AWS-native services, such as Amazon Aurora and Amazon Redshift

When to use AWS SCT?

Modernize

Modernize your database tier

ORACLE

Microsoft SQL Server

IBM DB2

PostgreSQL

MySQL

Modernize and **Migrate** your Data Warehouse to Amazon Redshift

Microsoft SQL Server

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TERADATA

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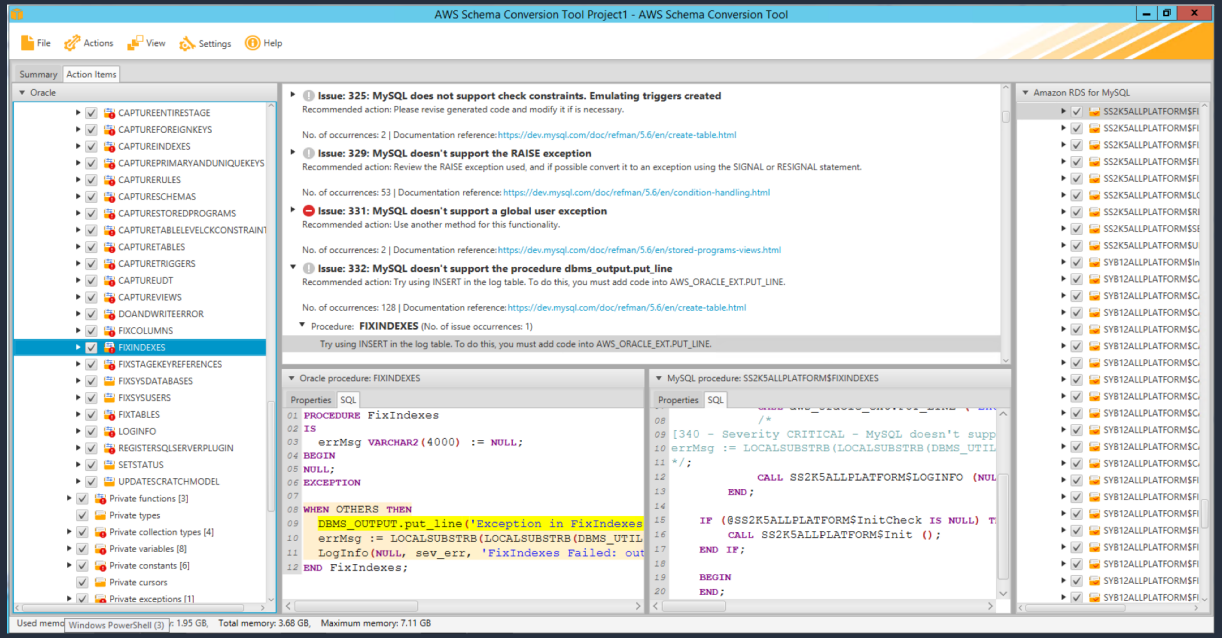
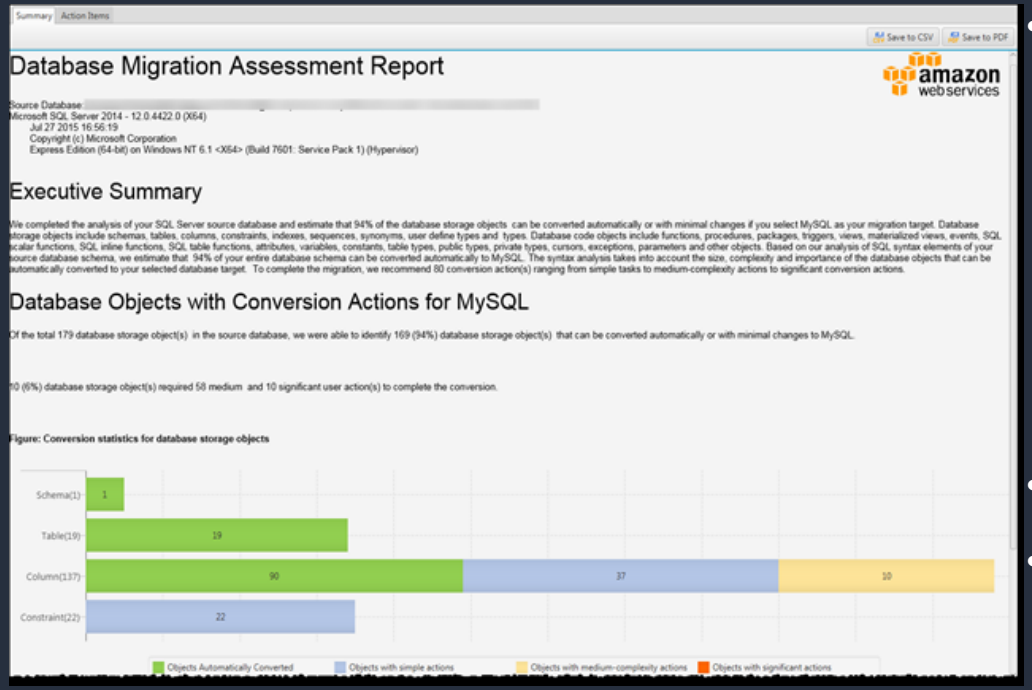
AWS SCT helps with converting Schemas



- Sequences
- User-defined types
- Synonyms
- Packages
- Stored procedures
- Functions
- Triggers
- Schemas
- Tables
- Indexes
- Views
- Sort and distribution keys

AWS SCT Migration Assessment Report



- Assessment of migration compatibility of source databases with open-source database engines – *Amazon RDS MySQL, Amazon RDS PostgreSQL and Amazon Aurora*
- Recommends best target engine
- Provides details level of efforts to complete migration

AWS SCT Data Extractors

Extract Data from your data warehouse and migrate to Amazon Redshift

- **Extracts** data through local migration agents
- Data is **optimized** for Amazon Redshift and saved in local files
- Files are **loaded** to an Amazon S3 bucket (through network or AWS Snowball) and then to Amazon Redshift

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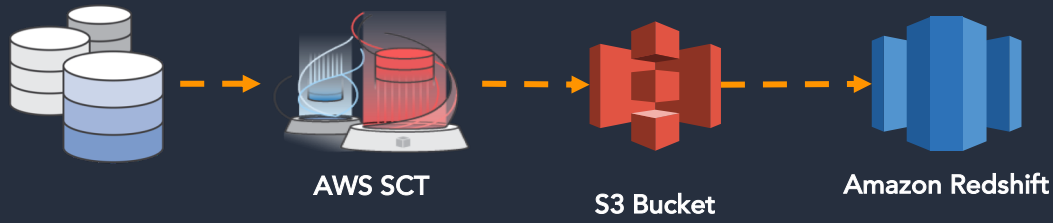

AWS DMS + Snowball

Common use cases

- Migrate large databases (over 5TB)
- Migrate many databases at once
- Migrate over slow network
- Push vs. Pull

Considerations for Migration

Data Movement – Source to DW	**One Time**: AWS SCT, AWS DMS **Incremental:** Informatica, Attunity, Talend, Alooma, Oracle DI
Star Schema & modeling	Amazon S3, Amazon Redshift, Amazon DynamoDB
Transformation Logic	AWS Data Pipeline, AWS Glue, Informatica, Talend
Aggregates, Snapshots	AWS Lambda function, ELT tools
Data refresh	Scheduling
Data Security.	Tokenization

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Lab

https://tiny.amazon.com/uvb6flg1/D1S04Lab

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Thank You!

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Everything and Anything Startups Need to Get Started on AWS

aws.amazon.com/activate

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