



AWS
re:Invent

ENT311-R2

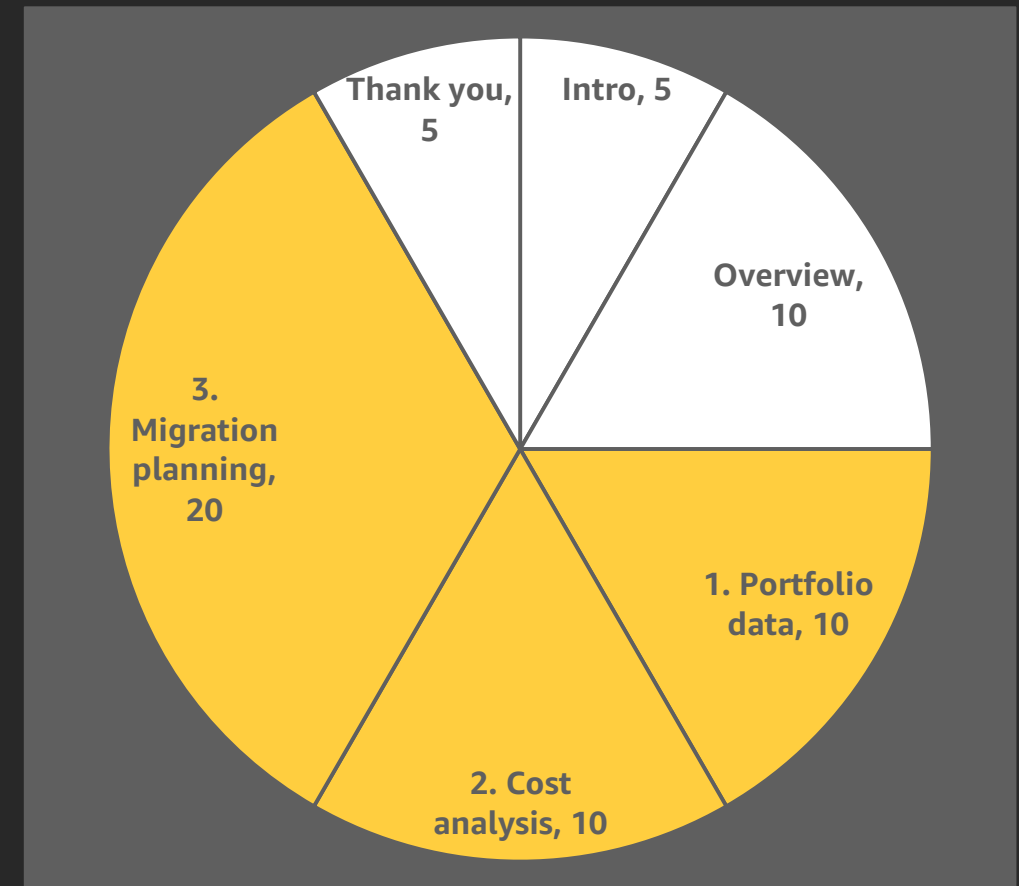
Accelerate migration planning using automated processes

CK Tan

Enterprise Migration Architect
Amazon Web Services

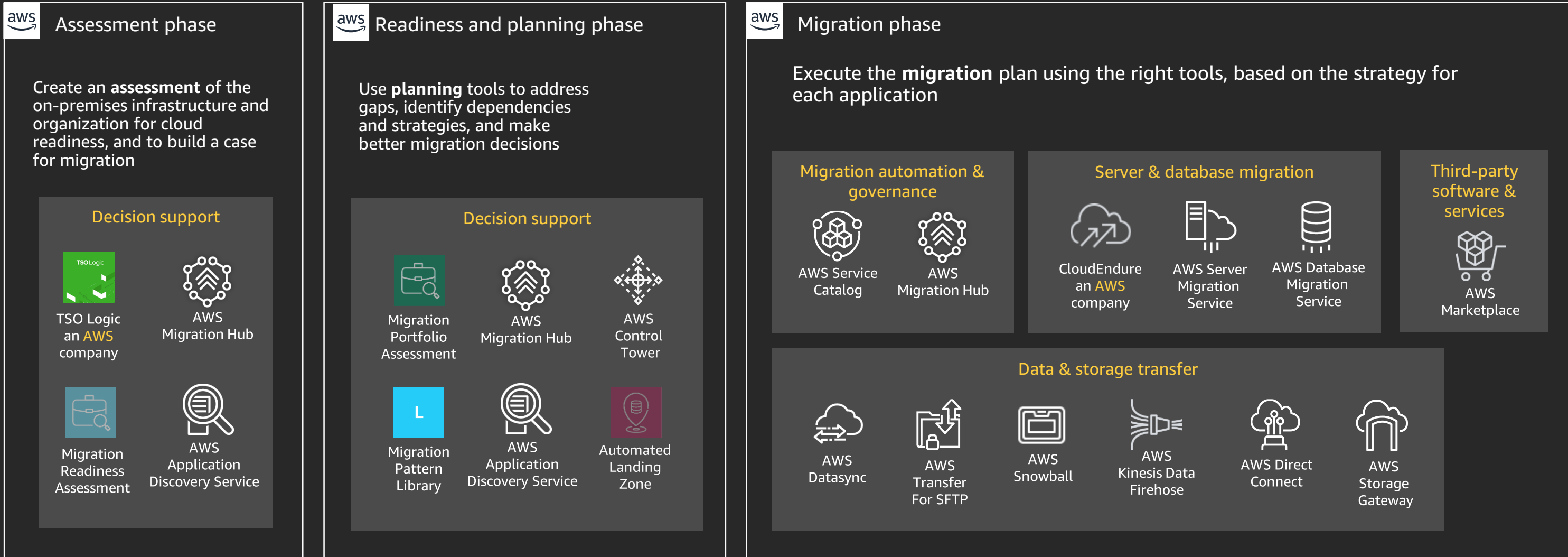
Agenda

- Introduction – 10 minutes
 - Migration automation overview
 - Customer scenario
 - Introduction to migration portfolio assessment
- Demo and hands-on walkthrough – 40 minutes



AWS migration automation supports all phases of the journey

Tools accelerate the migration process by providing guidance and automating steps



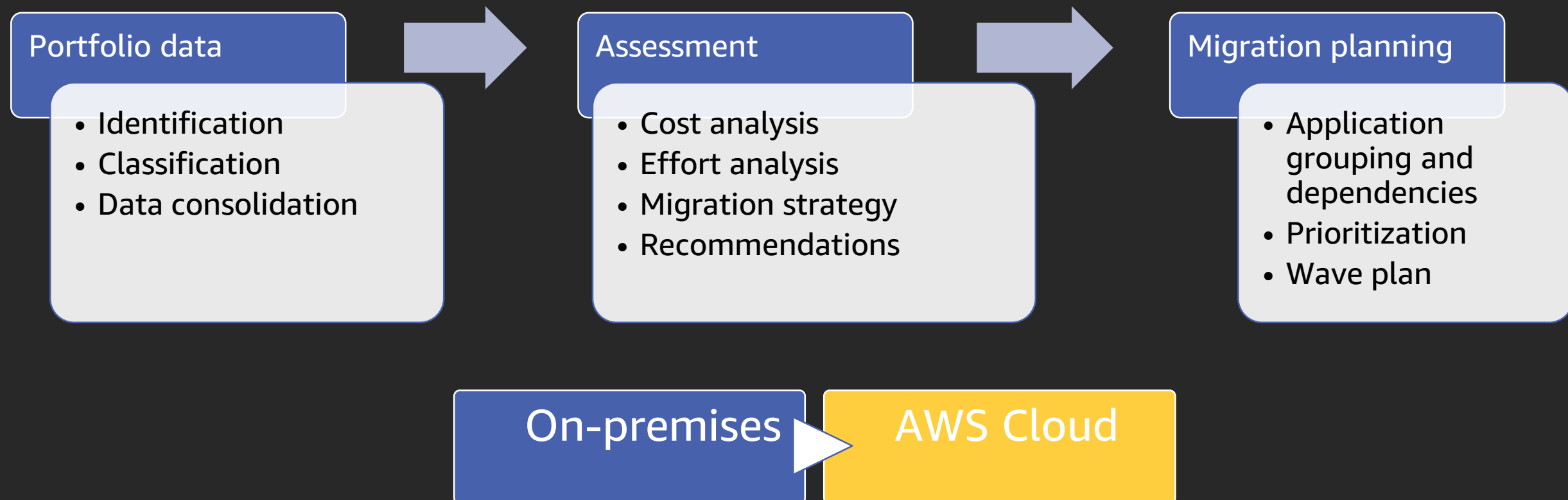
Customer scenario

Customer scenario

- Objective
 - Accelerate your cloud journey by migrating your IT portfolio to AWS. Later modernize and optimize in the AWS Cloud.
- The challenge
 - Your IT portfolio is large, with 1,000s of servers and 100s of applications
 - You need to quickly understand the current and to-be states and decide on the cheapest and fastest migration strategy
 - You need to evaluate application dependencies and build a plan that is feasible and optimal

Migration Portfolio Assessment (MPA) tool

- AWS offers Migration Portfolio Assessment as an accelerator for assessing the IT portfolio, understanding costs, and planning migration
- The tool is available to consultants (AWS and partner consultants) working for AWS customers



Portfolio data – required input

- Discovery
 - AWS Application Discovery Service
 - AWS partners' discovery tools
- Data content
 - Servers
 - Applications
 - Databases
 - Dependencies
 - Storage
 - Network


Demo, hands-on walk-through

Walk-through Section 1: Login and data ingestion

Login

<https://mpa-proserve.amazonaws.com>

Login with AWS Partner Central



Accelerate your AWS journey with AWS Tooling. To continue, please log in.

AWS Partners can sign in with AWS Partner Central

Login with AWS Partner Central

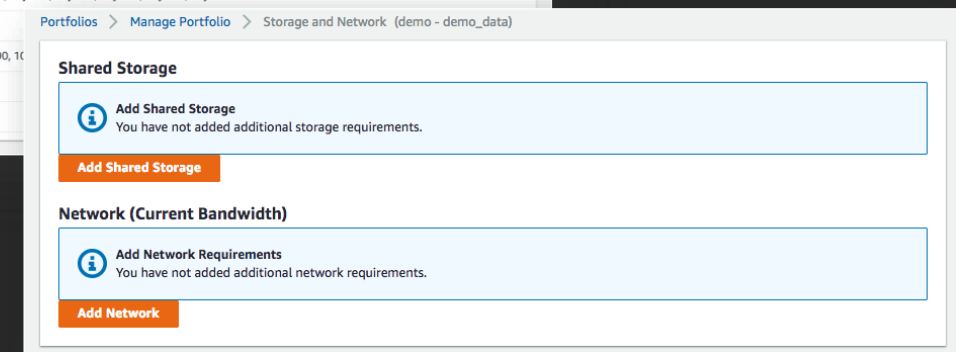
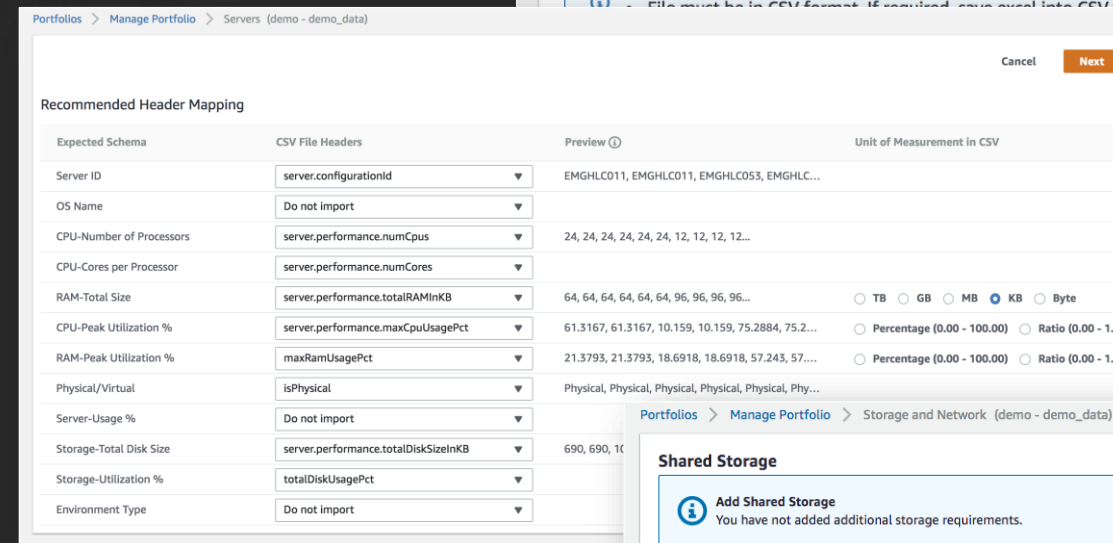
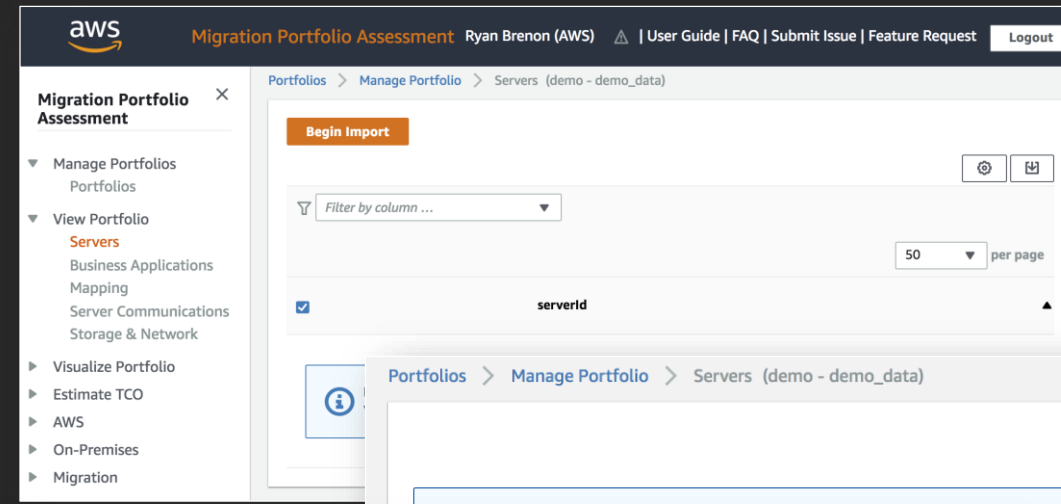
The AWS Partner Network (APN) is the global partner program for AWS. It is focused on helping Partners build successful AWS-based businesses or solutions by providing business, technical, marketing and go-to-market support. To learn more about AWS Partner Program, please visit <https://aws.amazon.com/partners>. AWS Partner Central is a collection of resources available to AWS Partners Network.

If you do not have an existing Partner Central Account or remember your credentials, please visit [AWS Partner Central](#).

Portfolio data ingestion

Ingestion process:

1. Import your data file
2. Transform it
 - a) Map the required data fields
 - b) Map supplemental data fields—unique to the business
3. Resolve duplicates
4. Update missing data and fix data issues



Walk-through Section 2: Cost analysis

TCO summary

MPA calculates and compares annual on-premises run cost to estimated AWS cost

Total Cost of Ownership for 3 Years in US East (N. Virginia) Region*

\$50,848,440

Your Total Estimated AWS Cost (Peak Utilization)**

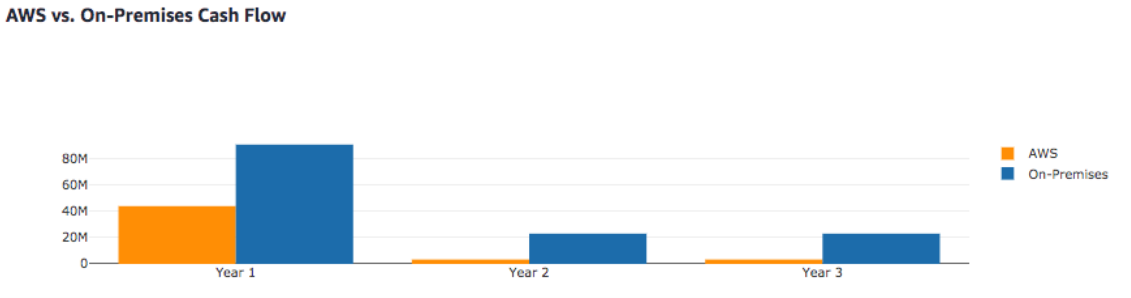
63%

Estimated Savings on AWS

\$137,196,671

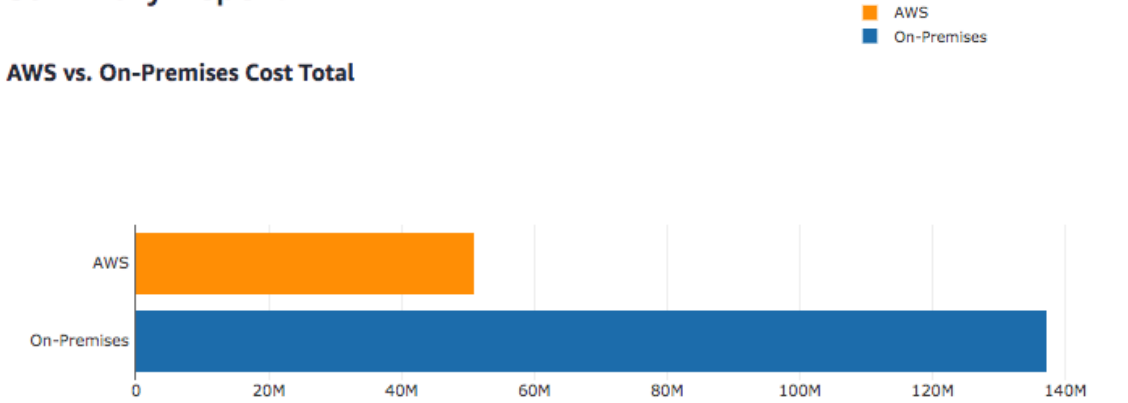
Your Total Estimated On-Premises Cost

Download

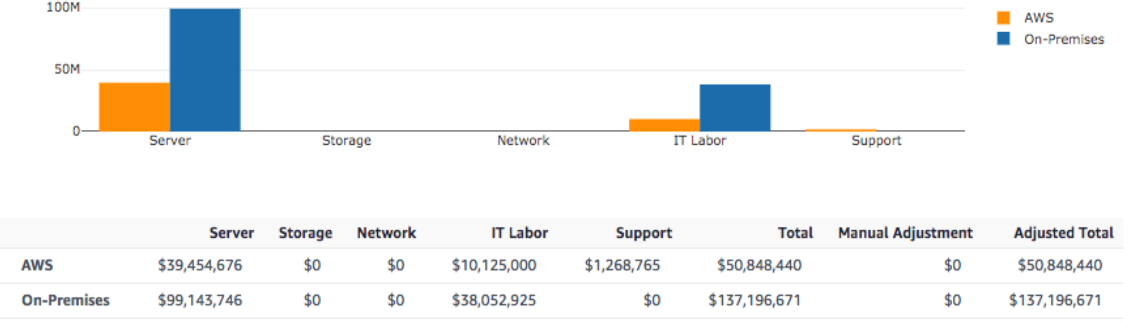


Summary Report

AWS vs. On-Premises Cost Total



AWS vs. On-Premises Cost Breakdown



Cash Flow Summary		Year 1	Year 2	Year 3
AWS	Server	\$39,452,152	\$1,262	\$1,262
	Network	\$0	\$0	\$0
	Storage	\$0	\$0	\$0
	IT Labor	\$3,375,000	\$3,375,000	\$3,375,000
	Support	\$1,266,365	\$1,200	\$1,200
	Total	\$44,093,516	\$3,377,462	\$3,377,462
On-Premises	Server	\$31,642,858	\$0	\$0
	Server Maintenance	\$4,746,429	\$4,746,429	\$4,746,429
	Rack Infrastructure	\$9,304,021	\$0	\$0
	Facilities	\$5,667,876	\$5,667,876	\$5,667,876
	Software and License	\$26,953,953	\$0	\$0
	Storage	\$0	\$0	\$0
	Network	\$0	\$0	\$0
	IT Labor	\$12,684,308	\$12,684,308	\$12,684,308
	Total	\$90,999,445	\$23,098,613	\$23,098,613
	Gain / Loss	\$46,905,929	\$19,721,151	\$19,721,151

Migration strategy

Re-host

Move servers as-is to Amazon Elastic Compute Cloud (Amazon EC2)

Re-platform

Upgrade operating system

Change operating system

Change database platform

Relocate

Move to VMware Cloud (VMC)

Retire

Sunset and free up redundant or unused resources

Re-architect

Change application architecture, component design

Re-factor

Redeploy to AWS with automated pipelines

Change application code to optimize for AWS

Repurchase

Replace with an alternate service or cloud solution

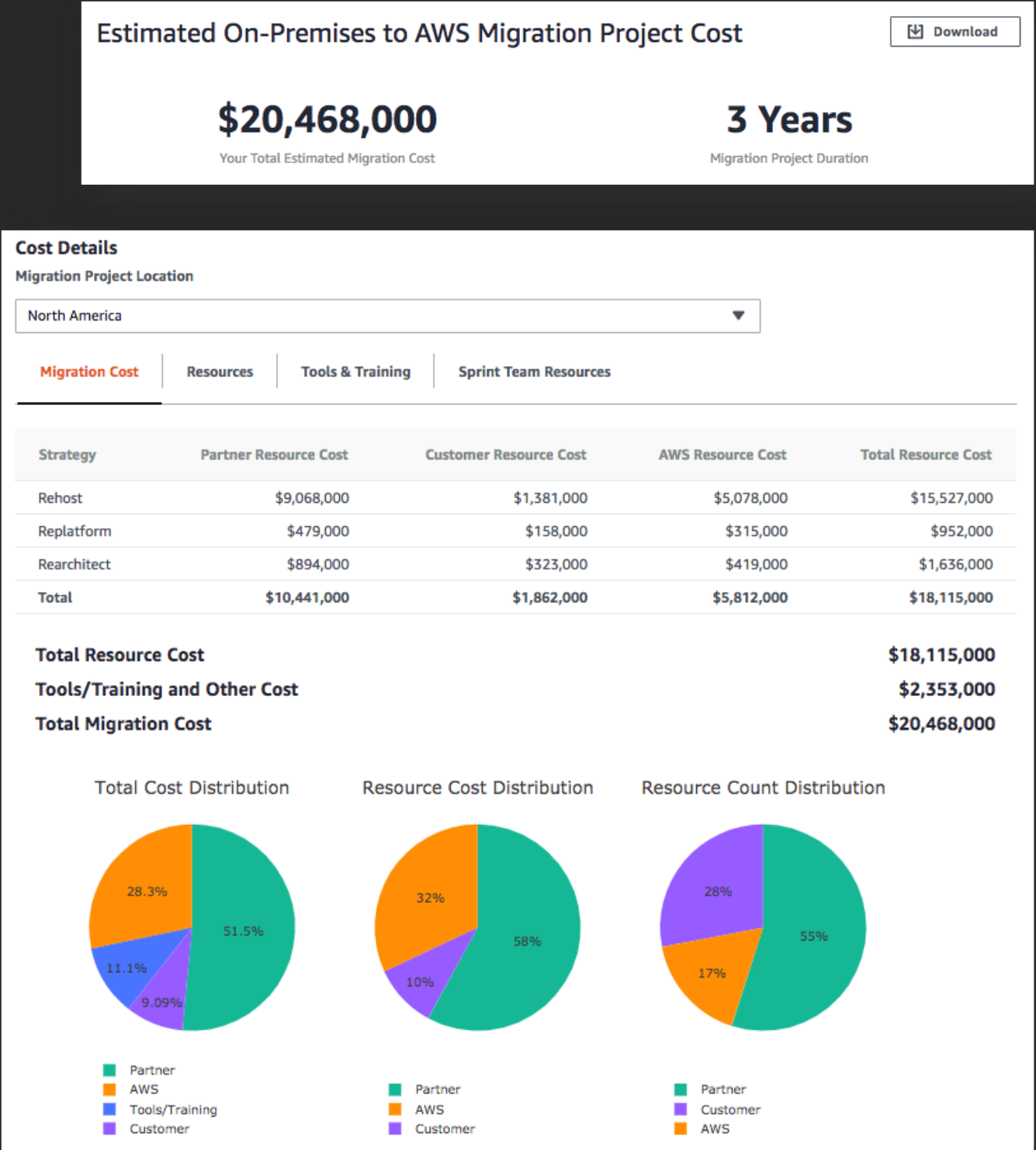
Migrate data and configurations

Review migration cost

MPA estimates migration costs

- Analyze and assign migration strategy, or provide a rolled-up view of the on-premises environment
- Structure the migration teams' resource composition (customer resources, consultant resources)
- Adjust applicable resource rates
- Include cost of procuring migration tools
- Estimate training costs

Cost Details				
	Year 1	Year 2	Year 3	Total
AWS Cost with Migration	\$15,125,796	\$16,297,920	\$17,434,829	\$48,858,545
On-Premises Cost with Migration	\$38,104,089	\$22,847,819	\$7,596,122	\$68,548,030
Migration Cost	\$6,828,125	\$6,828,125	\$6,811,750	\$20,468,000
Total Cost with Migration	\$60,058,010	\$45,973,864	\$31,842,702	\$137,874,575
Total On-Premises Cost without Migration	\$45,732,224	\$45,732,224	\$45,732,224	\$137,196,671



Migration cash flow

MPA analyzes the data to recommend right-sized EC2 instance and storage

Optimizing infrastructure spend:

- Provision what you need
- Turn off resources you don't need
- Select the right payment options

Details

▼ Override EC2 Recommendation

Recommendation Type ▼

Q List of Instance Type

Update 0 item(s)

Filter by column... ▼

1 to 50 of 10,000

50 per page

	Server ID ▲	Avg. Utilization ▲	Peak Utilization ▲	On-Premise Capacity ▲	Overridden ▲
<input type="checkbox"/>	HOST0000	r5.large	r5.large	t2.2xlarge	No
<input type="checkbox"/>	HOST0001	t3.small	t3.small	t3.medium	No
<input type="checkbox"/>	HOST0002	t3.small	t3.small	t3.medium	No
<input type="checkbox"/>	HOST0003	r5.large	r5.large	t2.2xlarge	No
<input type="checkbox"/>	HOST0004	m5.xlarge	m5.xlarge	t3.2xlarge	No
<input type="checkbox"/>	HOST0005	t3.medium	t3.medium	t3.large	No
<input type="checkbox"/>	HOST0006	r5.large	r5.large	r5.xlarge	No
<input type="checkbox"/>	HOST0007	m5.xlarge			
<input type="checkbox"/>	HOST0008	r5.large			
<input type="checkbox"/>	HOST0009	z1d.3xlarge			
<input type="checkbox"/>	HOST0010	r5.large			

AWS Server Recommendations

Instance Type ▲	vCPU ▲	Memory ▲	Operating System ▲	Tenancy ▲	Recommended Payment Option ▲	Count ▲
r5.large	2	16 GiB	Windows	Shared	Standard 3yr - All Upfront	95
r5.large	2	16 GiB	Windows	Shared	On Demand	2
r5.large	2	16 GiB	SUSE	Shared	Standard 3yr - All Upfront	29
					Standard 3yr - All Upfront	148
					Standard 3yr - All Upfront	10
					On Demand	1
					Standard 3yr - All Upfront	296
					Standard 3yr - All Upfront	415
					Standard 3yr - All Upfront	87
					Standard 3yr - All Upfront	15

AWS Server Cost

Type	Description	Cost
EC2	10000 instance(s) - Peak Utilization	\$43,588,108
Reserved Instance	Volume Discount	-\$4,133,432
Residual value	Residual value of Reserved Instance(s)	\$0
Total Cost		\$39,454,676
Manual Adjustment		\$0
Adjusted Total		\$39,454,676

Details

Cost Per Instance Type

Cash Flow Per Server

Payment Options Per Server

Reserved Instance Volume Discount

Payment Type Summary

Payment Type Detail

Payment Type ▲	Total Upfront Cost ▲	Total Monthly Cost ▲	RI Tier Discount ▲	Total Cost ▲
Standard 3yr - All Upfront	\$43,594,139	\$0	-\$4,134,414	\$39,459,725
Standard 3yr - Partial Upfront	\$15,380,018	\$29,643,161	-\$4,277,318	\$40,745,861
Standard 3yr - No Upfront	\$0	\$47,038,937	-\$4,478,894	\$42,560,044

Walk-through Section 3: Migration planning

Prioritization

1. Define business drivers

Define the migration’s business drivers and assign points to specific characteristics

Apply pairwise weightage to business drivers and influence preferences when points are the same

2. Apply prioritization

Rank applications in the order of business drivers

Step 1: Rule ConfigurationsStep 2: Priority PairwiseStep 3: Application Ranking

Select application attributes

Clear AllRestoreSave

Select attributes

Business UnitBusiness Criticality

Assign score

ValueScore - 0-1000

ReloadReady for scoring

Step 1: Rule ConfigurationsStep 2: Priority PairwiseStep 3: Application Ranking

Business Unit

is ☐ much less critical ☒ less critical ☐ equally critical ☐ more critical ☐ much more critical than/to Business Criticality

Business Criticality

is ☐ much less critical ☐ less critical

Step 1: Rule ConfigurationsStep 2: Priority PairwiseStep 3: Application Ranking

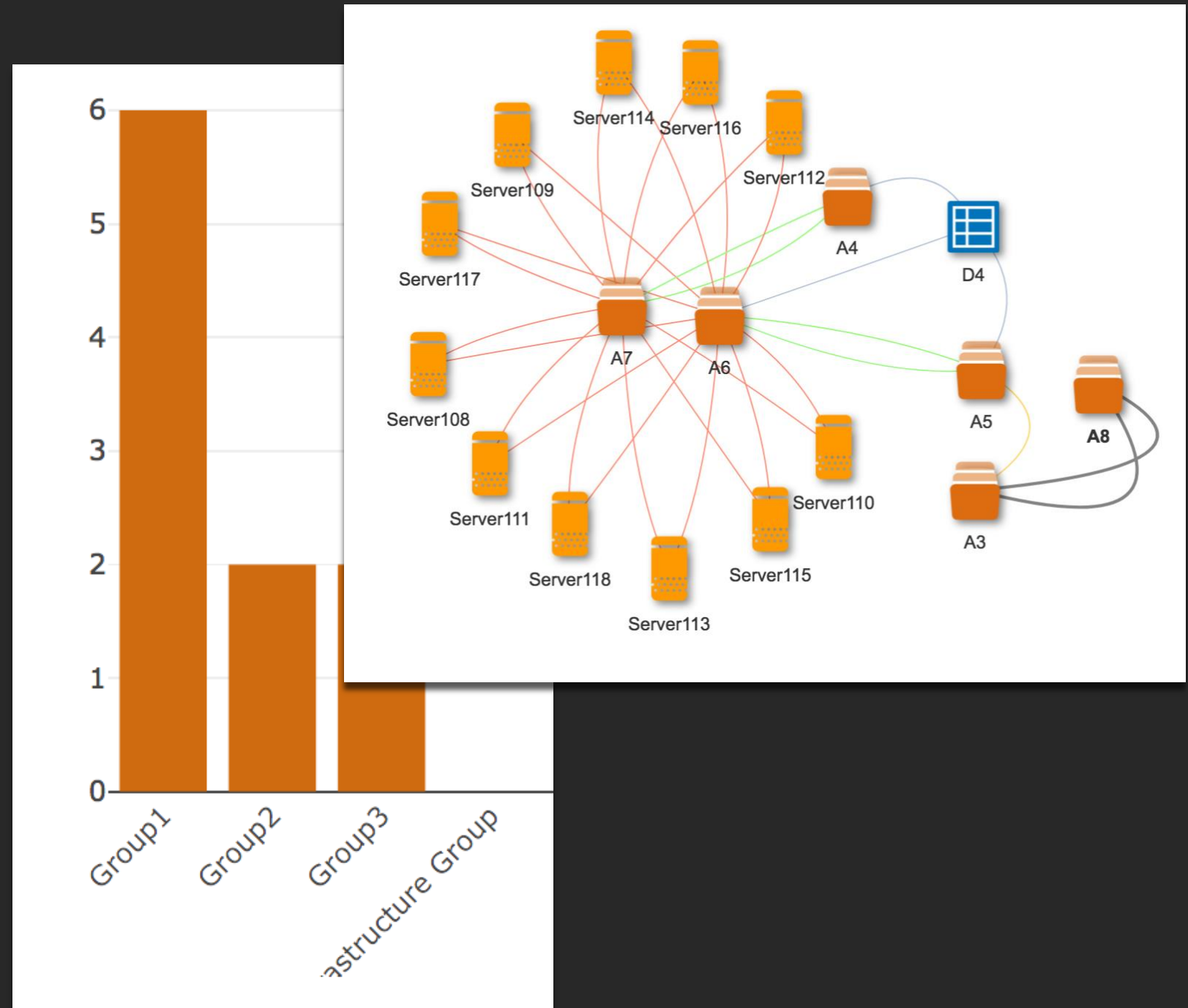
Prioritize Applications

Filter by column ...

Application Id	Ranking	Name of Application	Description	Business Unit	Business Criticality
A1	1	Test Application 1	Test Application Description 1	Marketing	High
A4	1	Test Application 4	Test Application Description 4	Marketing	High
A2	2	Test Application 2	Test Application Description 2	IT	High
A3	3	Test Application 3	Test Application Description 3	Accounting	High
A6	3	Test Application 6	Test Application Description 6	Accounting	High
A10	4	Test Application 10	Test Application Description 10	Marketing	Medium

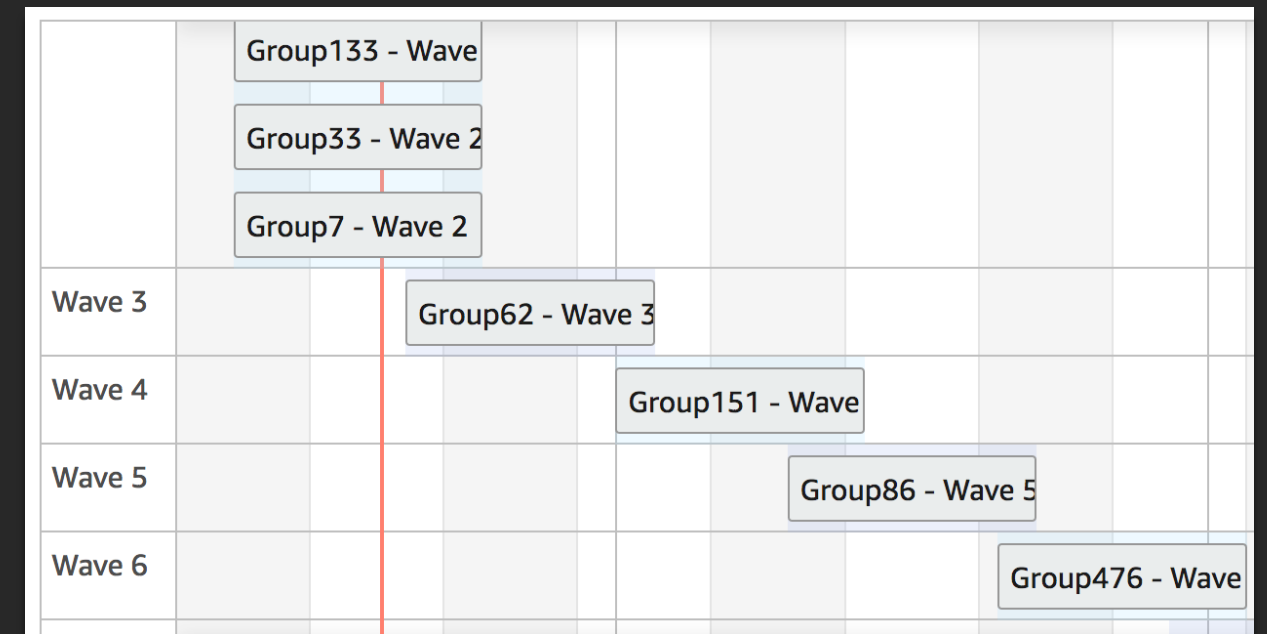
Application grouping

- Identify dependencies
 - Critical dependencies
 - Shared IT resources and infrastructure
 - Shared databases and servers
- Create application groups
 - Resolve dependencies
 - Manage dependencies



Wave planning

- Specify schedule and waves
- Drag and drop application groups to migration waves
- Lock migration wave when wave capacity is full
- Download the migration wave plan



▼ Assign application groups

☐ Show assigned groups

Unassigned groups: 471

Group195	Group117
Group193	Group473
Group392	Group58
Group306	Group413

Further training...

AWS Training and Certification for the enterprise

Resources to help your organization build cloud skills and achieve business objectives



Cost savings
(TCO)



Staff
productivity

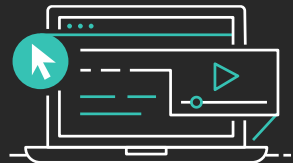


Operational
resilience



Business
agility

Comprehensive skill development plan for broad cloud fluency



Digital training



Classroom training



AWS Certification



Enterprise resources



Talent pipeline

Visit aws.amazon.com/training/enterprise

Thank you!

CK Tan

tanchin@amazon.com



Please complete the session
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