

Optimize your Azure cloud costs

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www.powershell.no

MVPDAGEN

En konferanse der
MVPer deler sin
kunnskap med deg

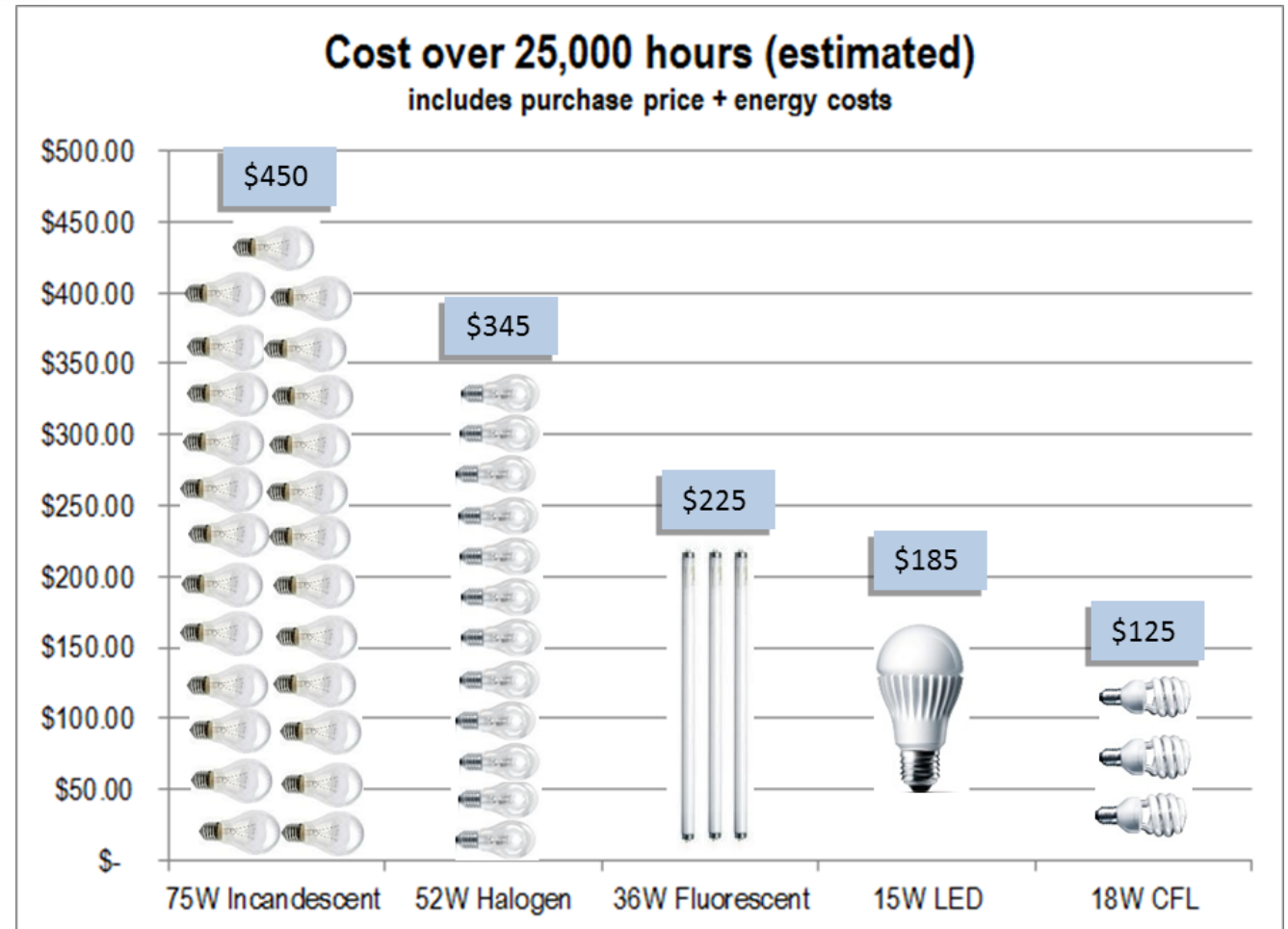
MVPdagen – 5 års jubileum
Fra oss til deg



Agenda

- Introduction
- Built-in tools
- Cost saving offerings
- Tips & tricks

Introduction



Built-in tools

- [Azure Cost Management & Billing](#)
 - Budgets & limits
 - Cost Alerts
- [Azure Advisor](#) - Identify unused VMs and receive recommendations about Azure reserved instance purchases.
- [Azure Pricing Calculator](#) - Use this tool to estimate your up-front cloud costs.
- [Azure Migrate](#) - Assess your current datacenter workload for insights about what's needed from an Azure replacement solution.
- [Total Cost of Ownership \(TCO\) Calculator](#) – Estimate the cost savings you can realize by migrating your workloads to Azure

Demo

- Azure Advisor
- Azure Cost Management & Billing

Azure Advisor – Example 1

Total recommendations

6

Recommendations by impact

6

High impact

0

Medium impact

0

Low impact

Impacted resources

161

Potential yearly savings

3,203,304 NOK

For more cost management and optimization capabilities, visit [Azure Cost Management](#)

Impact	↑↓	Description		↑↓	Potential yearly savings		↑↓	Impacted resources		↑↓	Last updated	↑↓
High		Buy virtual machine reserved instances to save money over pay-as-you-go costs			2,667,667.14 NOK			115 Virtual machines (37)			11/16/2021, 09:01 PM	
High		Right-size or shutdown underutilized virtual machines	Quick fix					43 Virtual machines			11/16/2021, 03:22 PM	
High		Consider Azure Synapse Analytics (formerly SQL DW) reserved instance to save over your pay-as-you-go costs			65,738.00 NOK			1 Subscription			11/16/2021, 03:50 PM	
High		Consider SQL PaaS DB reserved instance to save over your pay-as-you-go costs			349,010.00 NOK			2 Subscriptions			11/16/2021, 09:50 AM	
High		Consider Cache for Redis reserved instance to save over your pay-as-you-go costs			46,215.00 NOK			1 Subscription			11/16/2021, 08:33 PM	
High		Consider Database for MySQL reserved instance to save over your pay-as-you-go costs			74,674.00 NOK			1 Subscription (2)			11/16/2021, 02:35 PM	

Azure Advisor – Example 2

Shut down or resize your virtual machine

[Feedback](#) [Download as CSV](#) [Download as PDF](#) [+ Create alert](#) [Configure recommendation rule](#)

Impacted resources


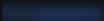
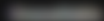










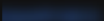


24 selected subscriptions

No grouping

Active (43)

Postponed & Dismissed (1)

[Quick Fix \(Preview\)](#) [Postpone](#) [Dismiss](#)

Select	Virtual machine	Recommended actions	Potential savings*	Subscription	Recommendation rule	Additional details**	Last updated	Action
<input type="checkbox"/>	 	<div>Resize Standard_DS3_v2 to Standard_DS11-1_v2</div> View Usage Patterns			CPU utilization < 5%	CPU (%) - 2 Network (%) - 0 Memory (%) - 28	11/16/2021, 03:24 PM	Postpone Dismiss
<input type="checkbox"/>	 	<div>Resize Standard_DS5_v2 to Standard_DS3_v2</div> View Usage Patterns			CPU utilization < 5%	CPU (%) - 1 Network (%) - 0 Memory (%) - 6	11/16/2021, 03:22 PM	Postpone Dismiss
<input type="checkbox"/>	 	<div>Resize Standard_D4s_v3 to Standard_B4ms</div> View Usage Patterns			CPU utilization < 5%	CPU (%) - 4 Network (%) - 0 Memory (%) - 62	11/16/2021, 03:19 PM	Postpone Dismiss
<input type="checkbox"/>	 	<div>Resize Standard_D4s_v3 to Standard_B4ms</div> View Usage Patterns			CPU utilization < 5%	CPU (%) - 3 Network (%) - 0 Memory (%) - 75	11/16/2021, 03:21 PM	Postpone Dismiss

Cost saving offerings

- [Azure Hybrid Benefit](#) - Use your current on-premises Windows Server or SQL Server licenses for VMs in Azure to save.
- [Azure Spot Virtual Machines](#)
 - Take advantage of unused capacity at a significant cost savings
 - No SLA for Azure Spot Virtual Machines and they can be evicted at any time.
- [Reservations](#) - save money by committing to one-year or three-year plans for multiple products.

News from Ignite (Nov 2.-4. 2021)

Availability: GA

Azure Spot Virtual Machines



Improved runtime and ease of use



Try/Restore

Automatically try and restore evicted VMs

Available now on Virtual Machine
Scale Sets



Simulate Evictions

Using REST API

Available now

Demo

- Create a Spot Virtual Machine with Hybrid Benefit enabled

Azure Reservations



- Reserved instances
- On-demand capacity reservations for Azure Virtual Machines (preview)

Difference between On-demand Capacity Reservation and Reserved Instances

Differences	On-demand Capacity Reservation	Reserved Instances
Term	No term commitment required. Can be created and deleted as per the customer requirement	Fixed term commitment of either one-year or three-years
Billing discount	Charged at pay-as-you-go rates for the underlying VM size*	Significant cost savings over pay-as-you-go rates
Capacity SLA	Provides capacity guarantee in the specified location (region or availability zone)	Does not provide a capacity guarantee. Customers can choose "capacity priority" to gain better access, but that option does not carry an SLA
Region vs Availability Zones	Can be deployed per region or per availability zone	Only available at regional level

*Eligible for Reserved Instances discount if purchased separately



New VM series & reservations

Announcing

Azure Virtual Machines

Now generally available

Dv5 – series

intel

General purpose workloads
Up to 384 GiB of RAM

Dasv5 - series

AMD

General purpose workloads
Up to 384 GiB of RAM

Ev5 – series

Memory intensive workloads
Up to 672 GiB of RAM

Easv5 – series

Memory intensive workloads
Up to 672 GiB of RAM

New VMs for data-intensive workloads

Availability: PREVIEW
COMING SOON



Up to 300% increase in remote storage performance compared to Ev4 VMs. Ideal for large databases and data analytics applications.



Ebs and Ebds v5 – Series

Memory intensive workloads requiring higher storage throughput
Up to 120,000 IOPS and 4,000 MB/s of remote disk storage throughput.

From 2 to 64 vCPUs featuring 3rd Generation Intel® Xeon® Platinum 8370C (Ice Lake)



Demo

- Azure Reservations

News from Ignite (Nov 2.-4. 2021)

Virtual machines selector: Demo

Learn more about
aka.ms/vm-selector

Virtual machines selector

Find the right VMs for your needs and budget



Ready when you are—let's find your VMs

Find VMs by workload type

Select your workload and requirements.

[Start here >](#)

Find VMs by OS and software

Select the operating system and software that you'd like to run on the VM.

[Start here >](#)

Find VMs by deployment region

Select the region where you'd like to deploy the VM.

[Start here >](#)



Find the right VMs for your needs and budget

[Find your VM](#) > [Workload type](#) > [Disk storage](#) > [Operating system](#) > [Region](#) > [Results page](#)

Tell us about your workloads

Workload type

Azure provides cloud infrastructure for every workload. Select the type of workloads you'd like to deploy and we'll help you find the best VMs for your purpose. (Unselect any that don't apply to your scenario)

- ☒ Select all/none
- ☒ General-purpose workloads
- ☒ Compute-intensive workloads
- ☒ Memory-intensive workloads
- ☒ Storage-intensive workloads
- ☒ GPU-enabled workloads
- ☒ High-performance computing (HPC) workloads

[Back](#)[Next](#)

Your selections

312

Current eligible VMs

Workload type

General-purpose workloads
Compute-intensive workloads
Storage-intensive workloads
Memory-intensive workloads
GPU-enabled workloads
High-performance computing (HPC) workloads

Disk storage

OS Disk
Premium SSD
Standard SSD
Standard HDD
Ephemeral OS Disk

Data Disk
Ultra Disk Storage
Premium SSD
Standard SSD
Standard HDD

Operating system

OS: Windows
Type: (OS Only)



Tips & tricks

Stop services when not in use

- VMs*
 - Based on tags/uptime policies
- Azure Functions/Azure Automation
 - Auto-shutdown
- Azure Kubernetes Service
- Application Gateway

Right-sizing

- Virtual Machines, App Service Plans, etc
- Leverage Azure Monitor
- We often size for peaks – take advantage of cloud native features like VM Scale Sets & App Service Autoscaling instead

Storage

- Tiering of storage - Azure Archive Storage (recently available in Norway East)
- Re-evaluate Geo Redundant Storage (GRS)

Additional tools

- Azure Workbooks
- [Cost Management Power BI App for Enterprise Agreements \(EA\)](#)

* Make sure to deallocate. A stop from within the OS is not sufficient to stop billing.

Azure Cost Management PowerBi App

The Cost Management Application provides insights into which subscriptions or resource groups consume the most resources. It also provides visibility into spending trends and overall usage.

Windows Server AHB usage report

This Windows Server Azure Hybrid Benefits usage report shows how many VMs have AHB enabled, and of those VMs how many AHB vCPUs or cores are being utilized.

For more information around Azure Hybrid Benefit see: <https://azure.microsoft.com/en-us/pricing/hybrid-benefit/>

Windows Server AHB enabled (last day)

6

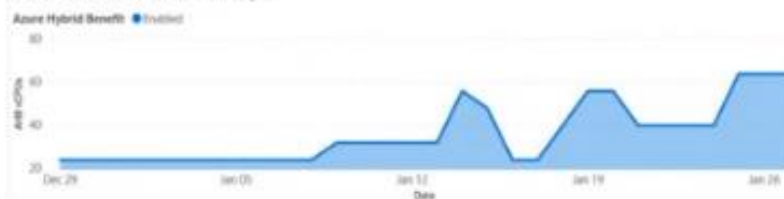
Windows Server AHB vCPUs used (last day)

64

Resource Details (last day)

Date	SKU	VCPUs	AHB vCPUs	Azure Hybrid Benefit	SubscriptionId	SubscriptionName	ResourceGroup	ResourceName
1/17/2020 12:00:00 AM	Standard_F12s_v2	12	12	Not enabled	7303211-6719-4319-81aa-7453b546e6d	Sag Research France	ANRPER	Import3
1/17/2020 12:00:00 AM	Standard_F12s_v2	12	12	Not enabled	7303211-6719-4319-81aa-7453b546e6d	Sag Research France	ANRPER	Import2
1/17/2020 12:00:00 AM	Standard_A4cs_v4	24	24	Not enabled	581a93a-1107-4884-8799-fc0d5256988	Centros	USAGE	Import1
1/17/2020 12:00:00 AM	Standard_D13_v2	20	24	Not enabled	7303211-6719-4319-81aa-7453b546e6d	Sag Research France	ANRPER	Import1
1/17/2020 12:00:00 AM	Standard_A4cs_Proc	16	16	Enabled	581a93a-1107-4884-8799-fc0d5256988	Centros	ADPCCSTEST	Account1
1/17/2020 12:00:00 AM	Standard_D13_v2	16	16	Enabled	1caad3d-2548-4388-8ab4-bca37d18163d	Card Management Research	Formatica	DVM
1/17/2020 12:00:00 AM	Standard_D13_v2	8	8	Not enabled	4b47123a-cf89-4618-b091-d4177307548	Verba Toward Customer2	SummaDC	sgf-vn-6
1/17/2020 12:00:00 AM	Standard_D13_v2	8	8	Not enabled	7303211-6719-4319-81aa-7453b546e6d	Sag Research France	Gelbo	GelboPower
1/17/2020 12:00:00 AM	Standard_D13_v2	4	8	Not enabled	af0ea8b-0a58-4d79-b410-013b4d135469	SGC7581	MARKAM-SHAREDVC3-ADDS-RC	fabrikam-chassis1

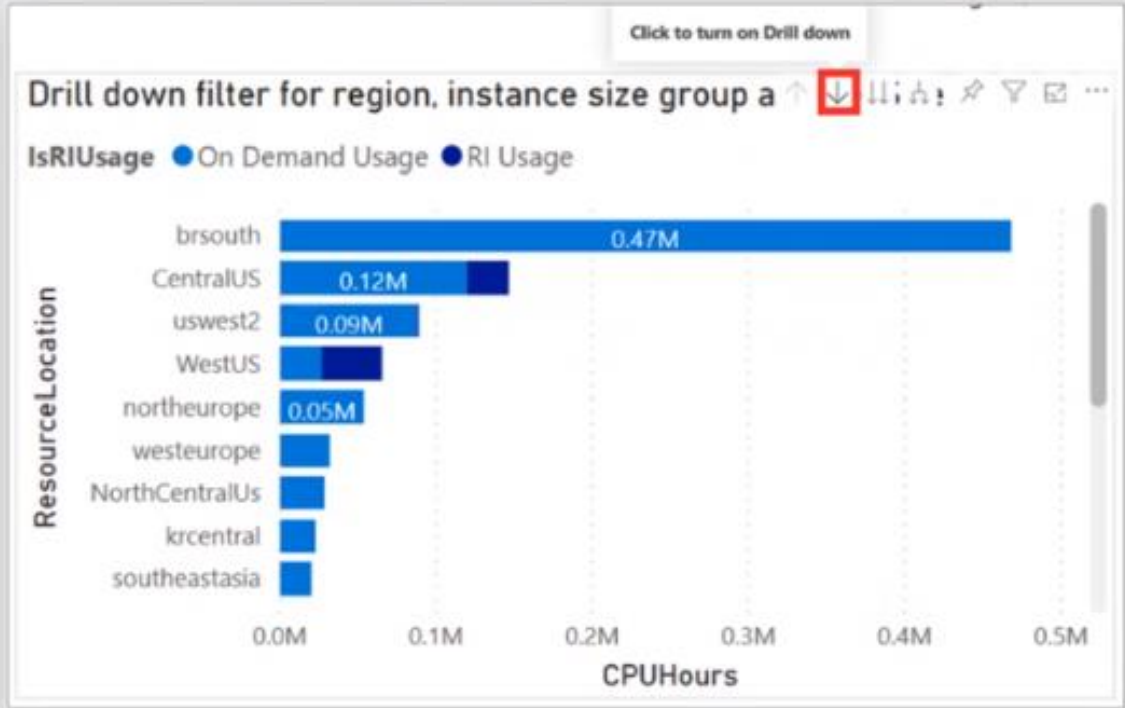
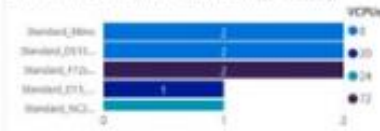
AHB vCPUs consumed (last 30-days)



AHB enabled SKUs with less than 8 vCPUs (last day)



SKUs with 8+ vCPUs where AHB not enabled (last day)



Recommendations for shared scope. These recommendations are calculated by evaluating your last 7 days of usage.

Instance Flexibility Group	Location	SKU	Recommended Quantity	Normalized Size	Recommended Quantity Normalized	Term	Scope
B5 Series	centralus	Standard_B2s	1.00	Standard_B1ls	8	P3V	Shared
D5v2 Series	centralus	Standard_DS1_v2	1.00	Standard_DS1_v2	1	P3V	Shared
D5v2 Series	centralus	Standard_DS2_v2	2.00	Standard_DS1_v2	4	P3V	Shared
Dv2 Series	centralus	Standard_D1_v2	2.00	Standard_D1_v2	2	P3V	Shared
Dv2 Series	centralus	Standard_D3_v2	2.00	Standard_D1_v2	6	P3V	Shared
Dv2 Series High Memory	centralus	Standard_D14_v2	2.00	Standard_D11_v2	16	P3V	Shared
Total			10.00				



Tips & tricks

- Overview & insight
 - Azure community workbooks
 - Log Analytics workspace usage
 - Export to storage account based on threshold
 - Azure Application Gateway without backend pools
- [Cost allocation for shared services](#)
- [Azure dev/test pricing](#)
- Azure Well Architected Framework
 - Cost optimization module
- Cost Optimization is a continuous process
 - <https://azure.microsoft.com/nb-no/blog/tag/cost-management>

Prefill percentage to

Proportional to total cost

Total cost from sources:

\$234.00

[\(See target breakdown\)](#)

TARGETS

% TO ALLOCATE FROM SOURCE

ResourceGroup1

1

ResourceGroup2

38

ResourceGroup3

58

ResourceGroup4

3

Total **100%**

[Blogg](#) / Cost Management

Cost Management

Azure Cost Management and Billing updates – October 2021

fredag 26. oktober 2021

October ushers Cost Management and Billing into a new world – from coverage of Microsoft 365, Dynamics 365, and more to a new tool that helps you reduce cost and manage your on-prem licenses. You can also update your address or purchase order number on existing invoices or try an early preview of subscription cost anomaly detection. All this plus 12 new cost-saving options, 3 new videos, and 7 documentation updates. We hope you're as excited about what the future holds as we are!

[Michael Flanakin](#), Program Manager, Azure Cost Management

[Virtual Machines](#) [Storage, Backup & Recovery](#) [Database](#) [Management](#) [Updates](#) [Government](#) [Hybrid](#) [Azure Stream Analytics](#)
[Machine Learning](#) [Migration](#)

Azure Cost Management and Billing updates – September 2021

mandag 27. september 2021

This is an exciting month for organizations using Azure reservations – you can now scope your reservations to a management group for even more savings. You'll also find a new cost view optimized around the products and services you use, new previews in Cost Management Labs for scheduled emails and better multitasking, as well as 7 new savings opportunities and video and documentation updates. Read on for the details and let us know what you think!

[Michael Flanakin](#), Program Manager, Azure Cost Management

[Web](#) [Virtual Machines](#) [Storage, Backup & Recovery](#) [Networking](#) [Database](#) [Management](#) [Updates](#)

Azure Cost Management and Billing updates – August 2021

fredag 31. august 2021

As August comes to a close, you'll find new download options available from the cost analysis preview and quick access to common subscription and resource group operations in Configuration. You'll also see the general availability of Azure Government Top Secret and improved migration and modernization tools and programs as well as the 14 new cost saving options and 3 documentation updates. Lots of great stuff!

Demo

- Azure Automation runbook for managing uptime policies
- Start/stop Azure Kubernetes Service
- Start/stop Azure Application Gateway
- Azure Workbook (inventory)

FinOps



Cloud Solution Provider (CSP)

- Azure Cost Management & Billing currently supports the following types of billing accounts:
 - **Microsoft Online Services Program:** An individual billing account for a Microsoft Online Services Program is created when you sign up for Azure through the Azure website. For example, when you sign up for an [Azure Free Account](#), account with pay-as-you-go rates or as a Visual studio subscriber.
 - **Enterprise Agreement:** A billing account for an Enterprise Agreement is created when your organization signs an Enterprise Agreement (EA) to use Azure.
 - **Microsoft Customer Agreement:** A billing account for a Microsoft Customer Agreement is created when your organization works with a Microsoft representative to sign a Microsoft Customer Agreement.

Crayon Cloud Economics

Case Studies

Azure Analysis with realization support

Shipping:

- Annual Azure spend: 18,0 MNOK
- Identified cost savings: 4,1 MNOK
- Optimization potential: 22,7 %
- Realized savings: 2,87 MNOK (16%)



Agriculture:

- Annual Azure spend: 5,8 MNOK
- Identified cost savings: 1,6 MNOK
- Optimization potential: 28,0 %
- Realized savings: 1,42 MNOK (24,5%)



Food Company:

- Annual Azure spend: 4,4 MNOK
- Identified cost savings: 1,05 MNOK
- Optimization potential: 23,9 %
- Realized savings: 1,28 MNOK (29,1%)



Azure Analysis

Risk management company:

- Annual Azure spend: 41,7 MNOK
- Identified cost savings: 10,2 MNOK
- Optimization potential: 24,5 %



Road safety solutions

- Annual Azure spend: 5,0 MNOK
- Identified cost savings: 1,25 MNOK
- Optimization potential: 25,0 %



Car dealership

- Annual Azure spend: 3,1 MNOK
- Identified cost savings: 0,56 MNOK
- Optimization potential: 17,8 %

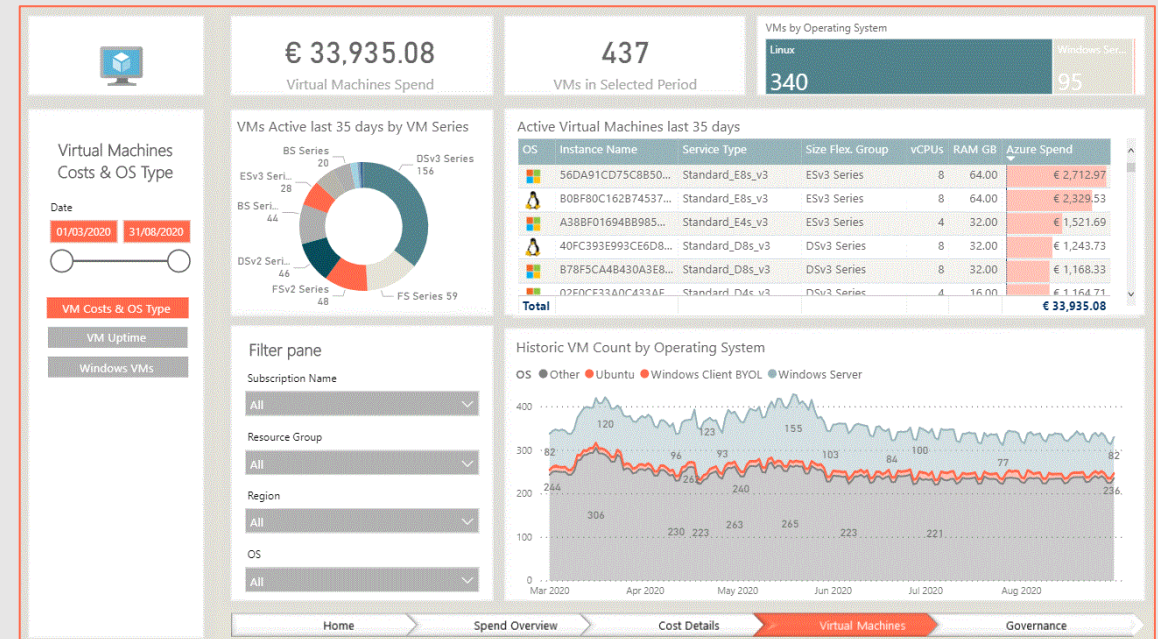
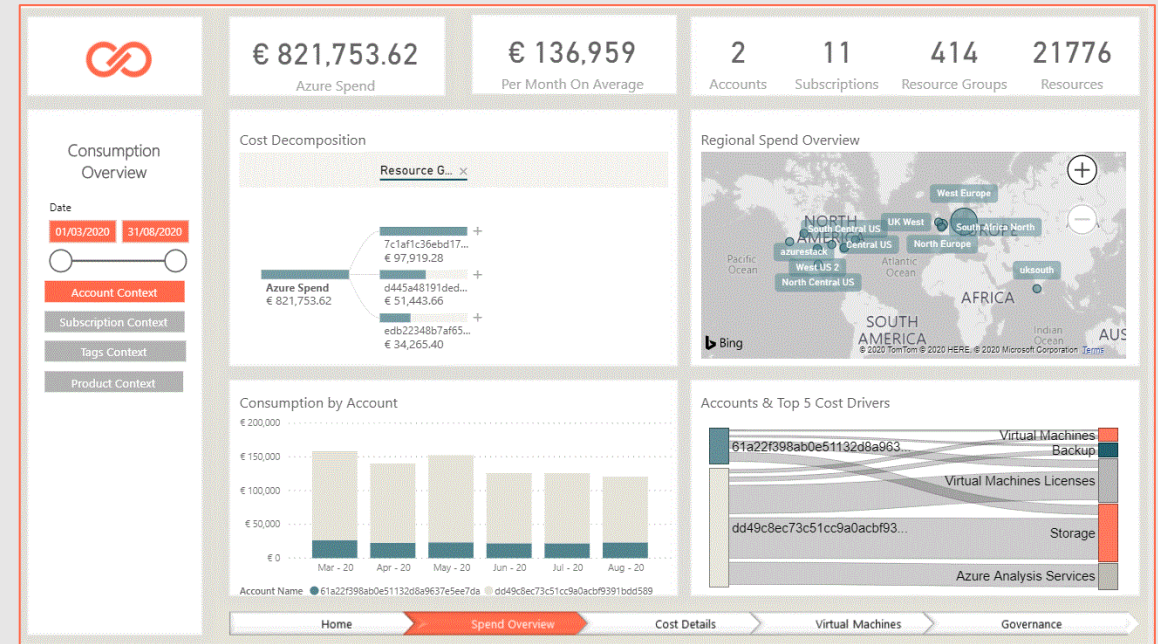


OUR DELIVERABLES

BI Reports and dashboards

A set of BI reports based on your cloud commitment

- Spend overview
- Cost details
- Virtual machines overview
- Governance overview



OUR DELIVERABLES

Full Analysis Report

Full study with in-depth analysis (typically quarterly)

- Spend overview
- Cost optimization details
- Governance
- Recommendations and detailed list of actions

4. Executive Summary

This report presents findings from Crayon's analysis of CUSTOMER's running services in Azure. The report provides insight into cloud consumption and presents cost saving opportunities along with other recommendations, based on historic usage from January 2020 until July 2020.

CUSTOMER's monthly spend in July 2020 was approximately \$3.1 million. Monthly spend has remained at a steady level throughout the period, representing an estimated annual spend of \$37 million for the next 12 months.

Crayon has identified annual potential savings of \$11.4 million, i.e. 30 % of CUSTOMER's estimated spend for the next 12 months (see Table 1).

Potential savings relate to changes in database tier, reuse of SQL and Windows Server licenses and reserved capacity across multiple products. In addition to these quantified savings, Crayon has identified other areas of potential future cost optimization, such as block blob tiering and app service rightsizing.

Throughout the period in scope, CUSTOMER has used 21 resource tags in Azure and the fraction of costs tagged was 16 % in July 2020. Crayon recommends that defining resource standards and resource tags.

After implementing RI and AH, CUSTOMER needs to effectively manage these cost optimization activities. Crayon recommends that CUSTOMER implement governance processes to ensure that current and future cloud economics tasks are implemented, monitored and followed up according to company standards.

Crayon's recommendations are based on historical data, and savings can be materialized when future plans for the environment have been taken into account.

Table 1: Potential Savings. *Only applicable if AH is applied to SQL Databases.

Product Category	Cost Saving Measure	Annual Savings 1 year RI (\$)	Annual Savings 3 year RI (\$) (if applicable)
Virtual Machines	Reserved Instance	948 000	1 530 000
Virtual Machines	Azure Windows Server	1 111 000	1 411 000
SQL Database	DTU to vCore + AH	4 100 000	4 100 000
SQL Database	Reserved Instance*	1 000 000	3 000 000
Managed Block Blob	Reserved capacity	250 000	450 000
Cloud Services	Reserved capacity	632 000	862 000
Total Savings		9 381 000	11 415 000

5. Action List

Crayon has prepared a list of specific actions for CUSTOMER to execute in order to materialize the potential savings presented in this report.

#	Area	Action	Reference
1	SQL Databases	1. Migrate 6 / 7 Premium DTU databases to vCore based pricing model. 2. Apply Azure Hybrid use Benefit to those databases. 3. Purchase reserved capacity for the number of vCores migrated, for a period of 1-3 years.	Section 8.3
2	Virtual Machines	1. Standardize on machine series and reduce number of use flexibility groups. 2. Purchase reserved instances for 1 - 3 years for VMs with an expected lifetime of 1-3 years.	Section 9.3.1
3	Storage	1. Evaluate potential for utilizing lower service tiers for blob blobs. 2. Implement lifecycle policy for blob blobs. 3. Commit to reserved capacity according to findings in 1). E.g. purchase 2 x 100 TB reservations for North Europe in the Hot access tier.	Section 10.3
4	Cloud Services	1. Evaluate expected lifetime of running instances. 2. Commit to reserved instances for 1-3 years.	Section 9.3.1
5	Azure App Service	1. Downgrade reserved app service plans to less expensive tiers.	Section 11.3
6	Governance	1. Evaluate reporting needs and introduce tagging accordingly.	Section 13.1

7. Spend Overview & Trends

CUSTOMER's monthly spend in July 2020 was \$ 3 056 248. Monthly spend has increased by \$387k year to date, i.e. an increase of 14.5 %. Current spend represents estimated annual costs of nearly \$37 million over a 12 months period.



Figure 1: Azure spend YTD 2020.

Five product categories account for 90 % of CUSTOMER's total consumption in July 2020. Table 2 lists these categories along with category spend July 2020. These categories constitute the focus area for Crayon's analysis and reporting.

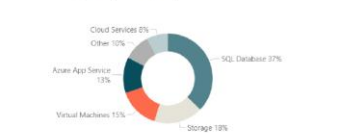


Table 2: Azure Spend Overview

Product Category	Spend July 2020 (\$)	% of spend	Est. Annual spend (\$)
SQL Database	1 139 678	37 %	13 265 136
Virtual Machines	552 143	18 %	6 665 716
Storage	504 393	16 %	6 052 716
App Service	358 917	12 %	4 319 004
Cloud Services	203 060	7 %	2 436 628
Total	2 734 200	90 %	32 870 400

8.3. Recommendations

If qualifying SQL licenses are available for reuse in Azure, 6 / 7 of CUSTOMER's Premium DTU databases should be migrated to the vCore based pricing model (a few clicks in the Azure portal).

The migration will make databases eligible to Azure Hybrid use Benefit discounts and capacity reservations, which can reduce the annual overall database cost by up to \$7.1 million.

Table 5 shows estimated annual savings from the following actions:

1. Migrate 6 / 7 SQL databases from DTU to vCore based pricing model
2. Rightsize / Validate that mapped vCore databases meet performance requirements
3. Enable Azure Hybrid use Benefit on the databases to cut license costs
4. Purchase reserved instance for up to 30 - 32 vCores in North Europe region within the Business Critical tier, with 1 - 3 year commitment.

Table 5: Databases with most saving potential from AH and RI. *Indicates monthly cost of premium SSD storage by the included payables in the DTU based model.

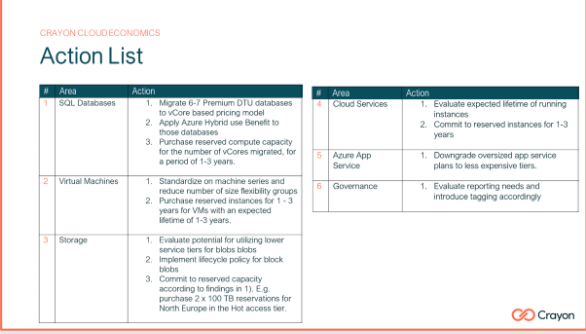
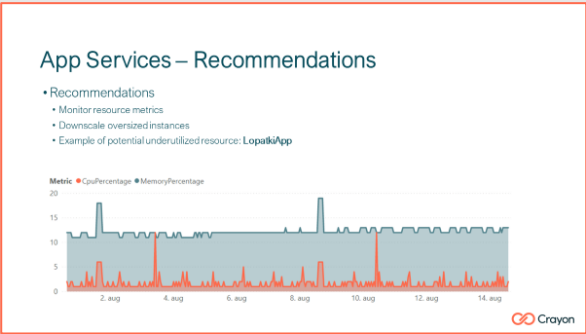
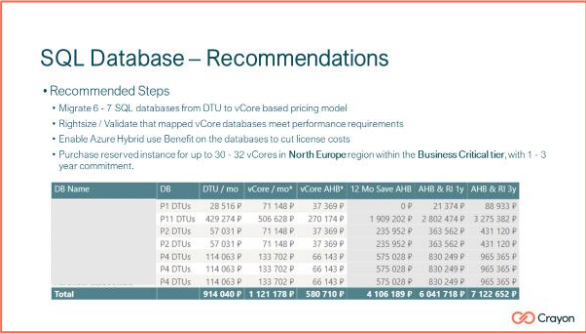
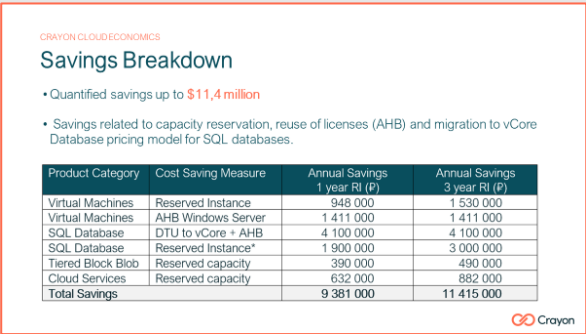
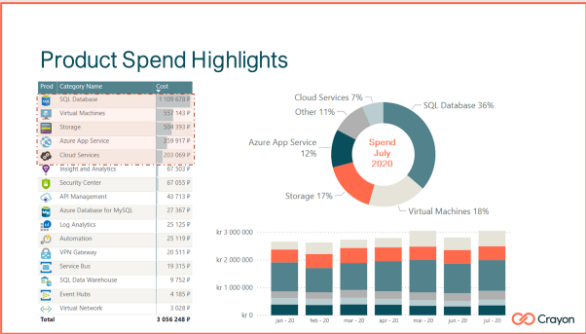
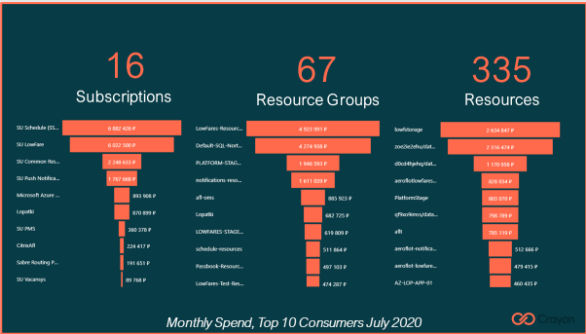
DB Name	DTU	DTU to vCore	vCore / month	vCore / month	12 Mo. Save	AH & RI 1y	AH & RI 3y
DTU001	12	12	12	12	0.00	25.000 P	88.500 P
DTU002	12	12	12	12	0.00	25.000 P	88.500 P
DTU003	12	12	12	12	0.00	25.000 P	88.500 P
DTU004	12	12	12	12	0.00	25.000 P	88.500 P
DTU005	12	12	12	12	0.00	25.000 P	88.500 P
DTU006	12	12	12	12	0.00	25.000 P	88.500 P
DTU007	12	12	12	12	0.00	25.000 P	88.500 P
DTU008	12	12	12	12	0.00	25.000 P	88.500 P
DTU009	12	12	12	12	0.00	25.000 P	88.500 P
DTU010	12	12	12	12	0.00	25.000 P	88.500 P
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DTU012	12	12	12	12	0.00	25.000 P	88.500 P
DTU013	12	12	12	12	0.00	25.000 P	88.500 P
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DTU015	12	12	12	12	0.00	25.000 P	88.500 P
DTU016	12	12	12	12	0.00	25.000 P	88.500 P
DTU017	12	12	12	12	0.00	25.000 P	88.500 P
DTU018	12	12	12	12	0.00	25.000 P	88.500 P
DTU019	12	12	12	12	0.00	25.000 P	88.500 P
DTU020	12	12	12	12	0.00	25.000 P	88.500 P
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DTU023	12	12	12	12	0.00	25.000 P	88.500 P
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DTU025	12	12	12	12	0.00	25.000 P	88.500 P
DTU026	12	12	12	12	0.00	25.000 P	88.500 P
DTU027	12	12	12	12	0.00	25.000 P	88.500 P
DTU028	12	12	12	12	0.00	25.000 P	88.500 P
DTU029	12	12	12	12	0.00	25.000 P	88.500 P
DTU030	12	12	12	12	0.00	25.000 P	88.500 P
DTU031	12	12	12	12	0.00	25.000 P	88.500 P
DTU032	12	12	12	12	0.00	25.000 P	88.500 P
DTU033	12	12	12	12	0.00	25.000 P	88.500 P
DTU034	12	12	12	12	0.00	25.000 P	88.500 P
DTU035	12	12	12	12	0.00	25.000 P	88.500 P
DTU036	12	12	12	12	0.00	25.000 P	88.500 P
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DTU039	12	12	12	12	0.00	25.000 P	88.500 P
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DTU045	12	12	12	12	0.00	25.000 P	88.500 P
DTU046	12	12	12	12	0.00	25.000 P	88.500 P
DTU047	12	12	12	12	0.00	25.000 P	88.500 P
DTU048	12	12	12	12	0.00	25.000 P	88.500 P
DTU049	12	12	12	12	0.00	25.000 P	88.500 P
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DTU051	12	12	12	12	0.00	25.000 P	88.500 P
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DTU107	12	12	12	12	0.00	25.000 P	88.500 P
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DTU109	12	12	12	12	0.00	25.000 P	88.500 P
DTU110	12	12	12	12	0.00	25.000 P	88.500 P
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DTU116	12	12	12	12	0.00	25.000 P	88.500 P
DTU117	12	12	12	12	0.00	25.000 P	88.500 P
DTU118	12	12	12	12	0.00	25.000 P	88.500 P
DTU119	12	12	12	12	0.00	25.000 P	

OUR DELIVERABLES

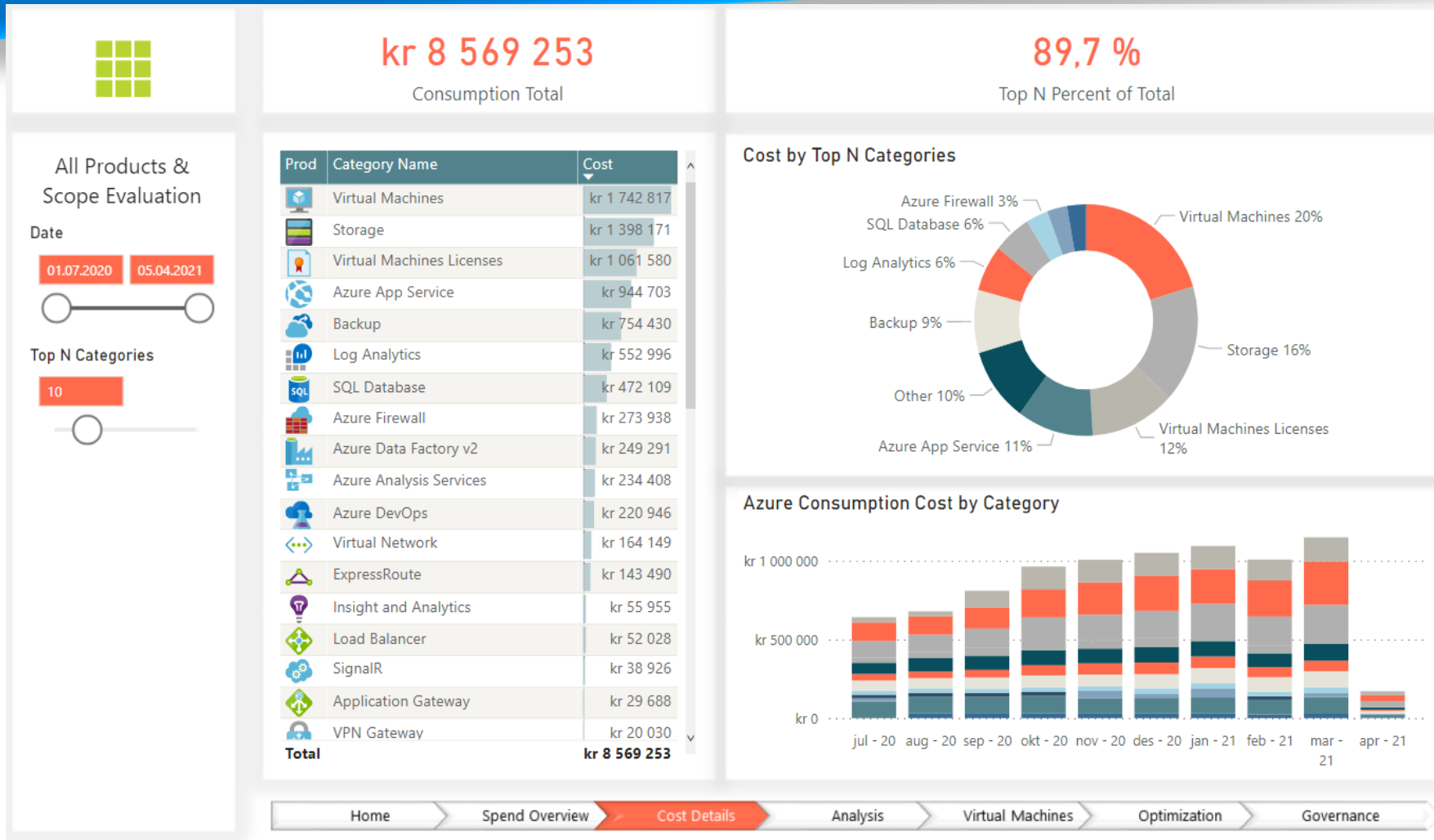
Cloud Board Meeting

A meeting of up to 2 hours where Crayon presents the findings, conclusions, recommendations and actions from the full analysis to internal management and key stakeholders.

Internal consensus and mandate is vital to secure governance and to actionize the recommendations for cost optimization.



Example of PowerBI CCMO Dashboard



Summary



- Built-in tools
 - Azure Advisor
 - Cost Management & Billing
- Cost saving offerings
 - Azure Hybrid Benefit
 - Azure Spot Virtual Machines
 - Reservations
- Tips & tricks
 - Stop services when not in use
 - Tiering of storage
 - Right sizing
 - Power BI App for Cost Management

Resources

- Slides & demos (link will also be shared via @JanEgilRing on Twitter)
 - <https://github.com/janegilring/Presentations>
- Cloud Economics v2.0: The FinOps Handbook
 - <https://sway.office.com/1qZwGxVuQnHoZMac>
- Azure Cost Management and Billing
 - <https://azure.microsoft.com/nb-no/services/cost-management>
- Monthly Azure Cost Management and Billing updates
 - <https://azure.microsoft.com/nb-no/updates/?product=cost-management>



Takk for meg!

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www.powershell.no

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MVPer deler sin
kunnskap med deg

MVPdagen – 5 års jubileum
Fra oss til deg

