BCNET

Shared IT Services for Higher Education & Research

Conference 2017

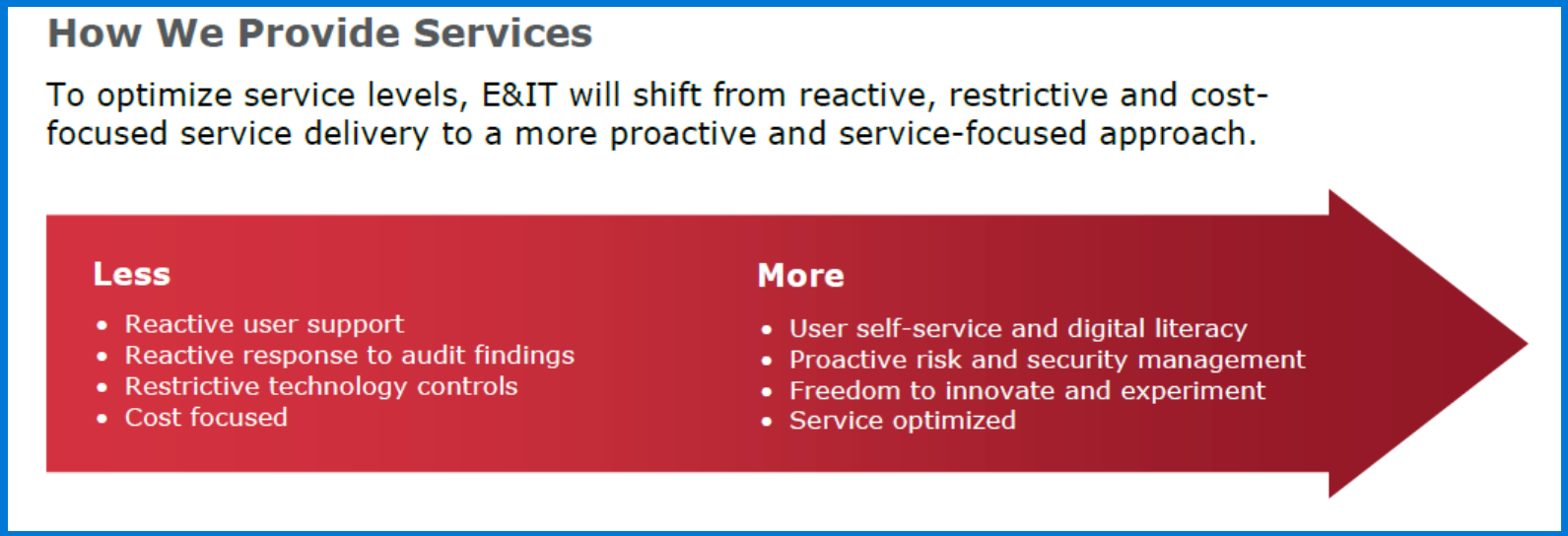
Azure for Today and Tomorrow

Karen McGregor

What if you could

  - Of what you wanted to do when you got into IT: Make new things work.
- Do less
  - Of the tasks that take time but don’t make an impact.
- Empower your staff
  - To try new things with less risk.
- Do things that aren’t possible with your current tools.

Said another way …. IT Strategic Direction



That's the whole point of Azure

Our topics today …

- Why Azure for Education customers?
- Azure and Security – a word from our friends from Gartner
- Azure for today/tomorrow – Operations Management Suite

Hybrid use Benefit -- Bring your own licenses to Azure

- If you have Software Assurance on your Microsoft licenses, you can move them to Azure at no cost.
  - Major savings on Windows, Sharepoint and SQL licenses vs. pre-built images in Azure.
  - Also available on Windows Server. Details at -- https://blogs.msdn.microsoft.com/azureedu/2016/04/13/how-can-i-use-the-hybrid-use-benefit-in-azure/
    - The Azure marketplace has images that use HUB licenses.
- From a licensing standpoint, with your Windows Server licenses covered by Software Assurance you can get on Azure:
- - 1 VM up to 16 cores
- - OR 2 VMs up to 8 cores each
- For Windows Server Standard edition, you can either use the license on-premises or on Azure. Instead, for Datacenter edition, you can use your license on Azure AND on-premises at the same time (the Azure benefit is “on top”).
- Even works for Azure Site Recovery VMs (https://azure.microsoft.com/en-us/blog/hybrid-use-benefit-migration-with-asr/)

Some examples (assuming you have Windows Server Data Centre + SA)

VM Size	With Windows License	Using HUB	Savings
A4, 8 Core/14 Gb	$739.08	$439.65	40%
D3V2 4 Core/14Gb	$564.49	$276.82	50%
F4 4 Core/8 Gb	$445.98	$242.44	46%
A4V2 4 Core/8 Gb	$280.44	$186.35	33%
A8M V2 8 Core/64 Gb	$1,017.71	$671.24	34%

All prices in C$ for VMs in Canada Central DC
You can compare other VM sizes at https://azure.microsoft.com/en-ca/pricing/calculator/#virtual-machines-1 (compare prices for Windows vs. Linux VMs).

Step 1 - Pre-purchase Azure VMs

- Good option for VMs with
  - Well known sizing requirements.
  - Limited need to scale up/down.
  - Running most of the time.
  - In a specific data centre with a specific OS.
- How does this work?
  - You pay for a VM on your EES agreement at a reduced rate.
  - All costs for that VM get removed from your Azure bill.

Some pre-purchase examples

VM Size	With Windows License	Using HUB	Using CPP AND HUB	Total savings
A4, 8 Core/14 Gb	$739.08	$439.65	$238.08	68%
D3V2 4 Core/14Gb	$564.49	$276.82	$168.12	70%
F4 4 Core/8 Gb	$445.98	$242.44	$139.88	68%

All prices C$ in Canada Central DC.
Note – not all VM sizes have pre-purchase options.

Other ways to save on Azure - via EES

- Education customers get a discount on ExpressRoute (private network connectivity to Azure) when you buy on your EES.
  - Talk to me offline for more details
- You get the best discounts that customers can get with the greatest flexibility when you buy Azure services on your EES agreement.
  - At the lowest pre-commit up-front.
- Education customers get data egress from Azure at no cost – data can move in/out from Azure without charge.
  - Must be on an EES agreement to get this.
- Free Azure onboarding via 1:1 concierge sessions, book at http://aka.ms/AzureEntSupport (select Onboarding).

Programs that unlock Azure Discounts for Education Customers

- Any program that is an ‘add-on’ to an on-premises license has major benefits for Education customers (based on the low cost of your on-premises licenses).
  - For example – Operations Management Suite (OMS), available as an add-on to System Centre.
- Azure Active Directory Premium – education programs
  - Ask your AM if you are eligible for this – pay for all staff and get students at no cost.
  - Pioneered in Canada!
- Intune – student advantage pricing.
  - Pay for staff and get students at no cost.

A brief interlude - Cloud and Security

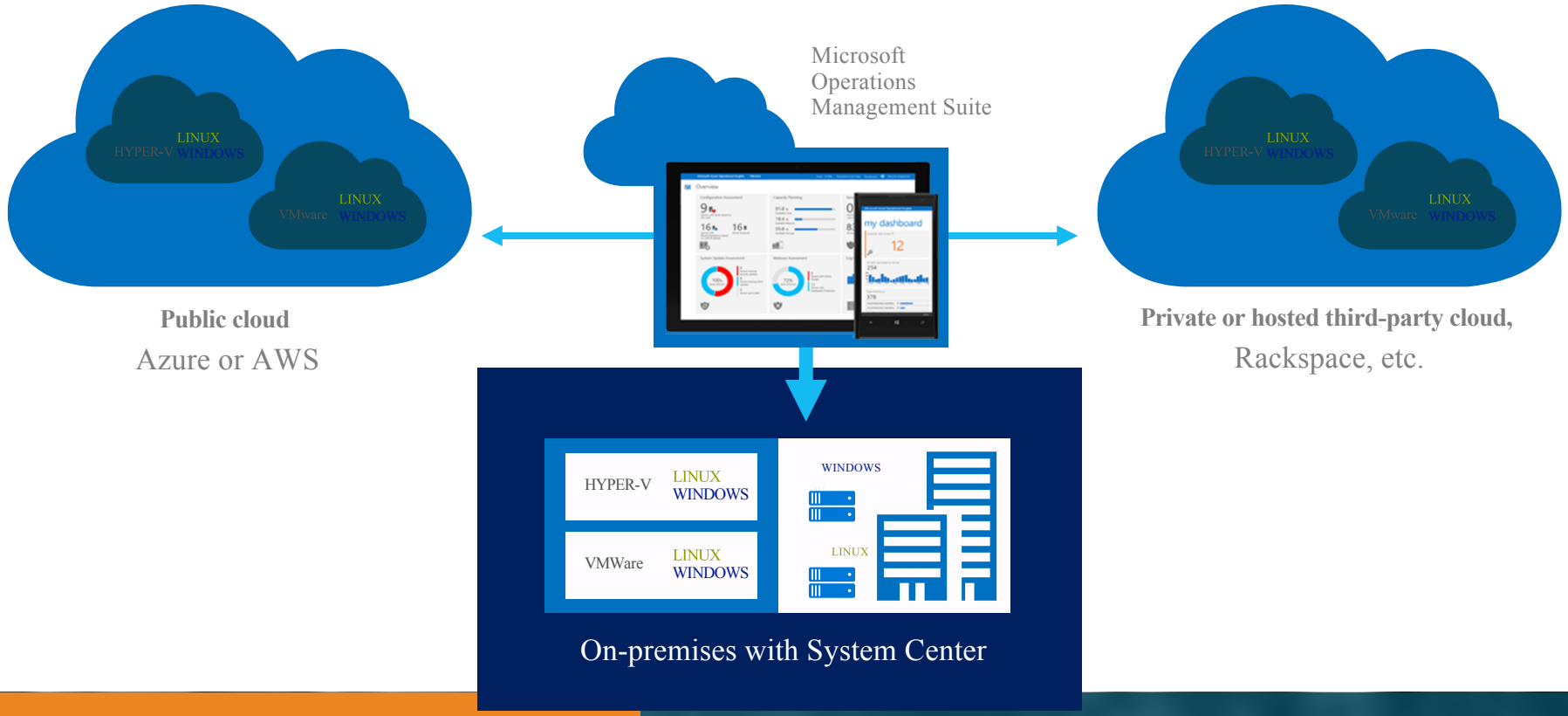
A perspective from Gartner on public sector and Cloud

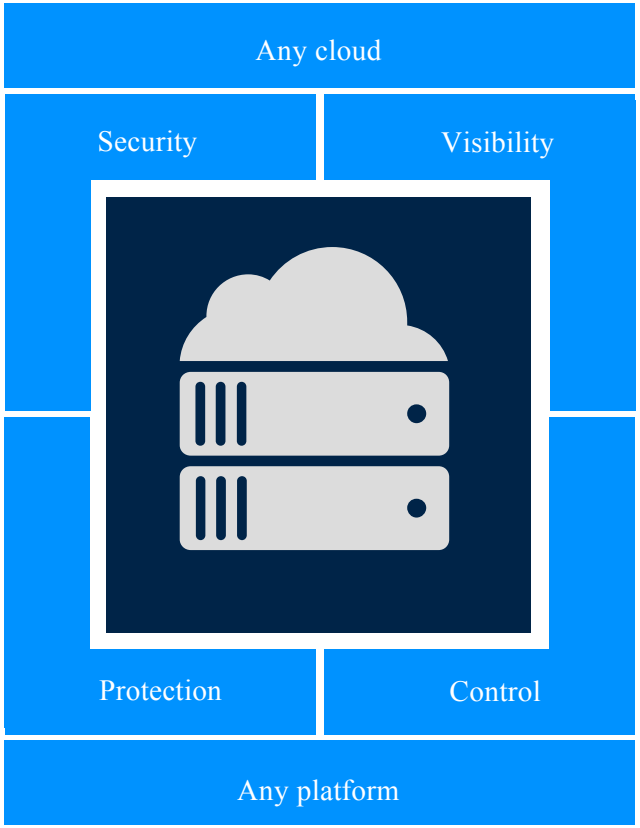
Gartner predicts that by 2018, increased security will displace cost savings and agility as the primary driver for government agencies to move to public cloud within their jurisdictions. "Many cloud service providers … invest heavily in incorporating higher levels of security into their products to continue building confidence that their data is more secure. Many of these providers can invest more than what most nations could afford, let alone the average government agency."

Azure for today/tomorrow - OMS

Azure for Tomorrow - hybrid clouds

Simplified guest and workload management, both on-premises and in the cloud





Operations Management Suite

Key Scenarios

- **Insight and Analytics**
- **Configuration and Automation**
- **Application Management**
- **Security**
- **Backup**
- **Disaster Recovery**

System Center

On-premises

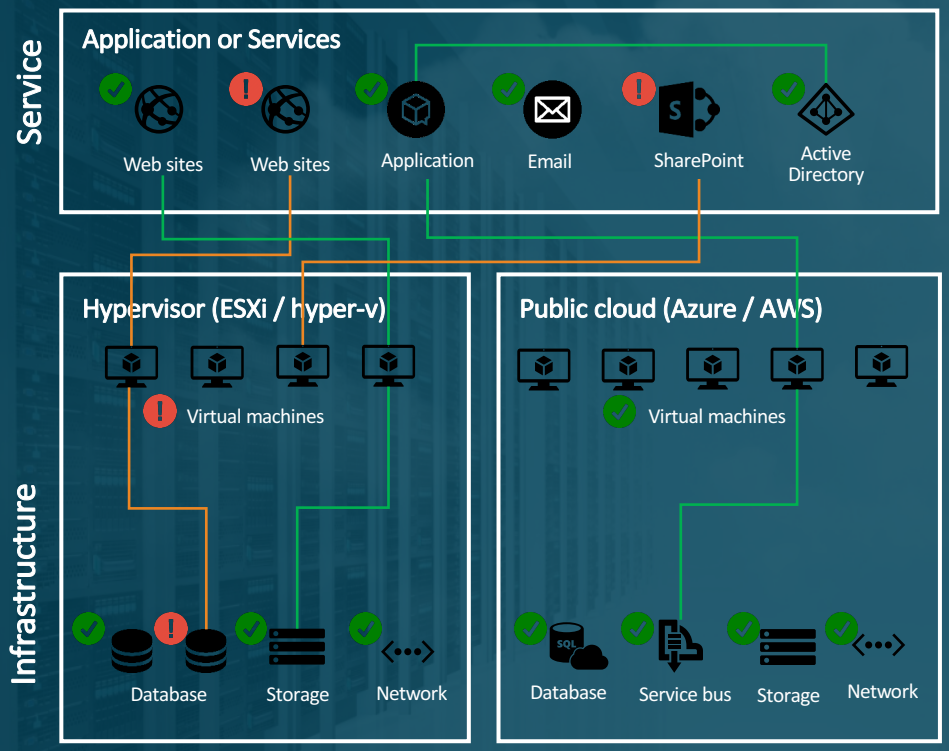
What's distinctive about OMS?

- Cross platform/cross cloud.
- Built for integration from the ground up.
- Ease of deployment and speed to value.
- Dynamic roadmap.
- Easily extensible/customizable via PowerBI.
- Automation as a first-class feature.

Integrations

Upping the ante – with Service Map

Moving from monitoring resources to services



Automatically discover all dependencies for any Windows or Linux system

View all TCP-connected processes, their bound ports and connections

View dynamic maps of your system topology, live and historical

Visualize any alerts or change events across all dependencies for a given machine

Introducing Service Map

Discovery

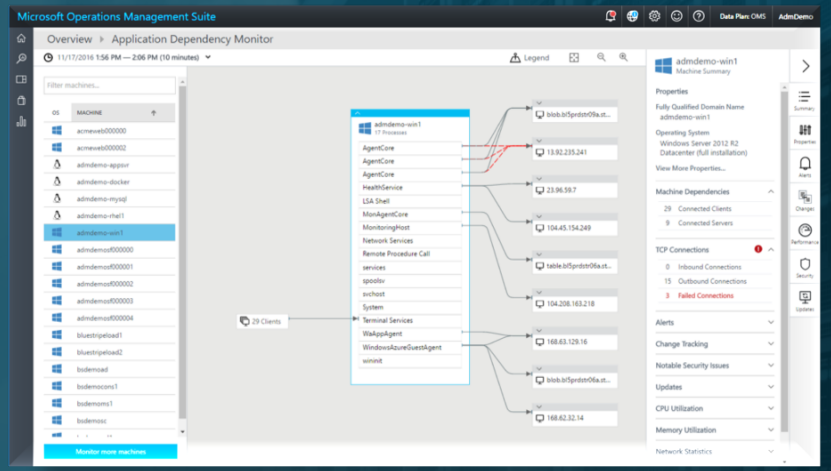
Automatically build a common reference map of dependencies across servers, processes, and 3rd party services

Incident management

View cascading alerts, failed connections, load balancing issues, and rogue clients

Migration assurance

Identify connectivity failures, view computer and process inventory, and identify systems for decommissioning.



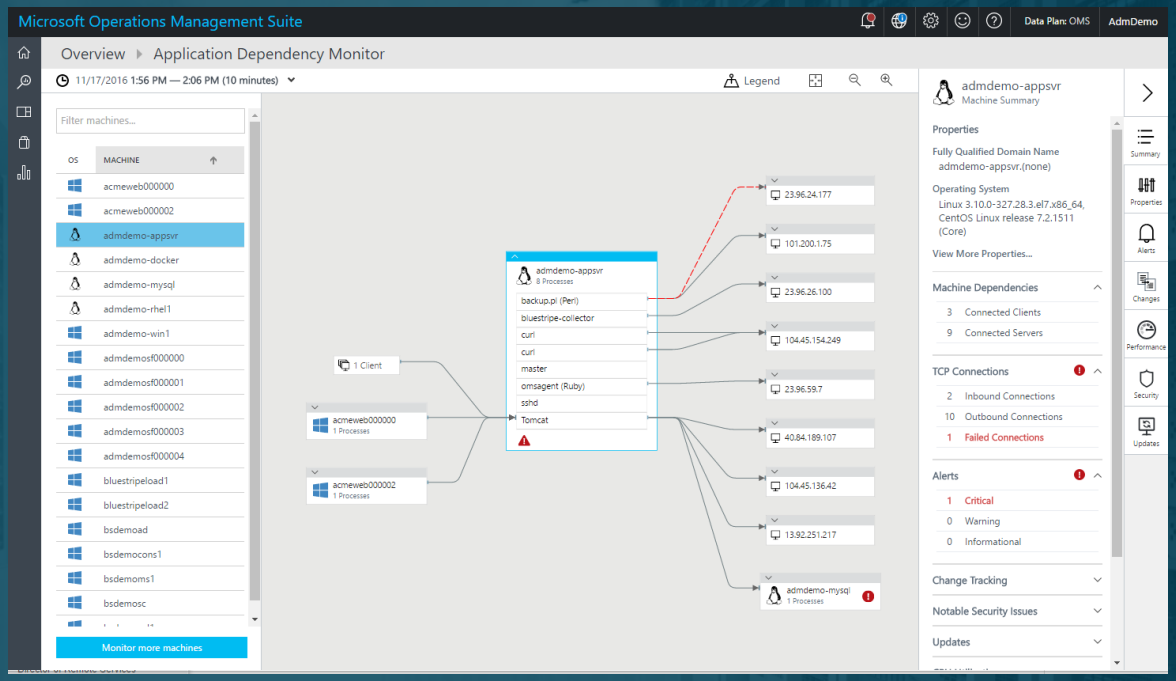
Features

- Server, process, and port dependency maps
- Computer and Process Inventory in Log Analytics
- Log Analytics Alert correlation
- Change Tracking correlation
- Security event correlation
- Update correlation
- Historical queries
- ARM API
- SCOM integration

Real-time dependency discovery and mapping

Automatically discover ***every*** connection without any pre-definition in ***real-time***

- Discover every connection with no pre-definition required
- Understand complex interactions no matter how short-lived
- See dependencies before and after migrations
- Mitigate complications of planned maintenance

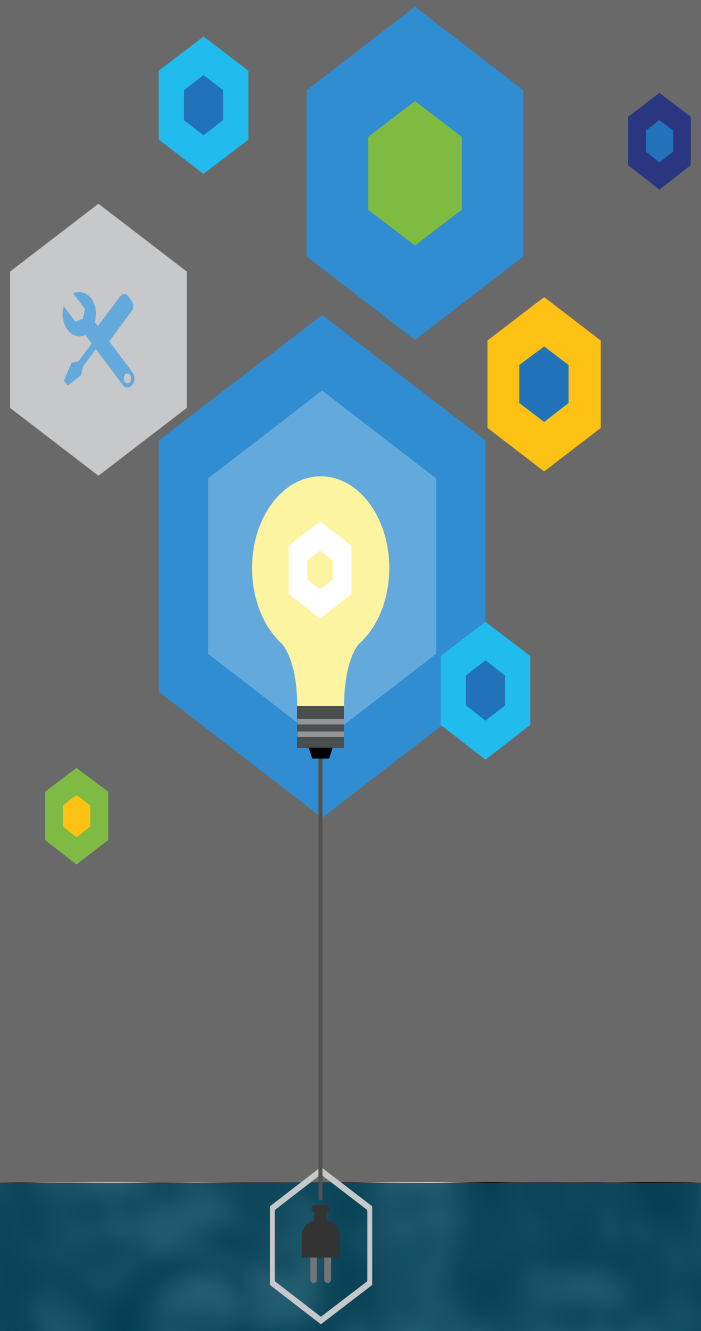


Demo of Service Map

Choose your own OMS adventure

- If you just want to see what OMS looks like …
  - There's a fully-functional OMS hands-on demo with 'real world' experiences/services at https://experience.mms.microsoft.com/.
  - Good for personal learning and showing the potential.
- If you want to see what your data looks like in OMS, there's a free trial at http://oms.Microsoft.com.
  - Fully-functional OMS workspace, limited to 500 Mb/day of data uploaded.
  - Good way to see how deployment works.
- The Windows 10 Upgrade Analytics tool is a free OMS service.

Q & A



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