

# Monitoring

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# Overview

**What you need to think about to be successful**

**Diagnostics and metrics**

**Log search**

**Alerting**



# Exercise Files

Timothy

...

## Getting Started with Azure Machine Learning

by Jerry Kurata

Machine learning helps predict the weather, route you around traffic jams, and display personalized ads on your web pages. In this course, you will learn how to use Azure machine learning in order to create, deploy, and maintain predictive solutions.

[Resume Course](#) [Bookmark](#) [Add to Channel](#)

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Description

**Exercise files**

Discussion

Recommended

These exercise files are intended to provide you with the assets you need to create a video-based hands-on experience. With the exercise files, you can follow along with the author and re-create the same solution on your computer. We find this to be even more effective than written lab exercises.

[Download exercise files](#)

### Course author

**Jerry Kurata**

Jerry Kurata is a Solutions Architect at InStep Technologies.

### Course info

Level	Beginner
Rating	★★★★★
My rating	★★★★★
Duration	2h 14m
Released	2 Nov 2016

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# What You Need to Think About to Be Successful



# Things to Keep in Mind Regarding Azure VM Monitoring

You're free to use  
native tools  
(PerfMon, ps)

Take Azure into  
account when  
evaluating mon.  
solutions

Learn about  
webhooks, REST,  
and SQL

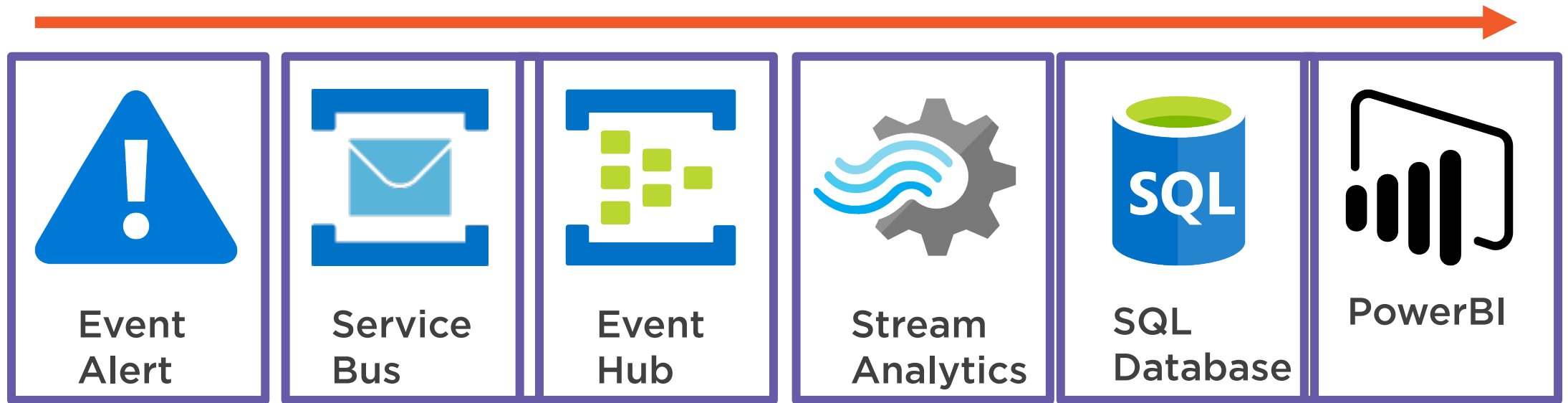
With hybrid cloud,  
you can use  
System Center

OMS is a tightly  
integrated  
solution

Consider  
streaming data via  
Event Hub



# The Azure Event Hub Workflow



# Monitoring – A Layered Approach

## Resource level

- Internal tools
- Metrics, alert rules

## Resource Group level

- Monitor blade

## Enterprise level

- Hybrid nodes
- Log Analytics
- Azure Automation



# Diagnostics and Metrics





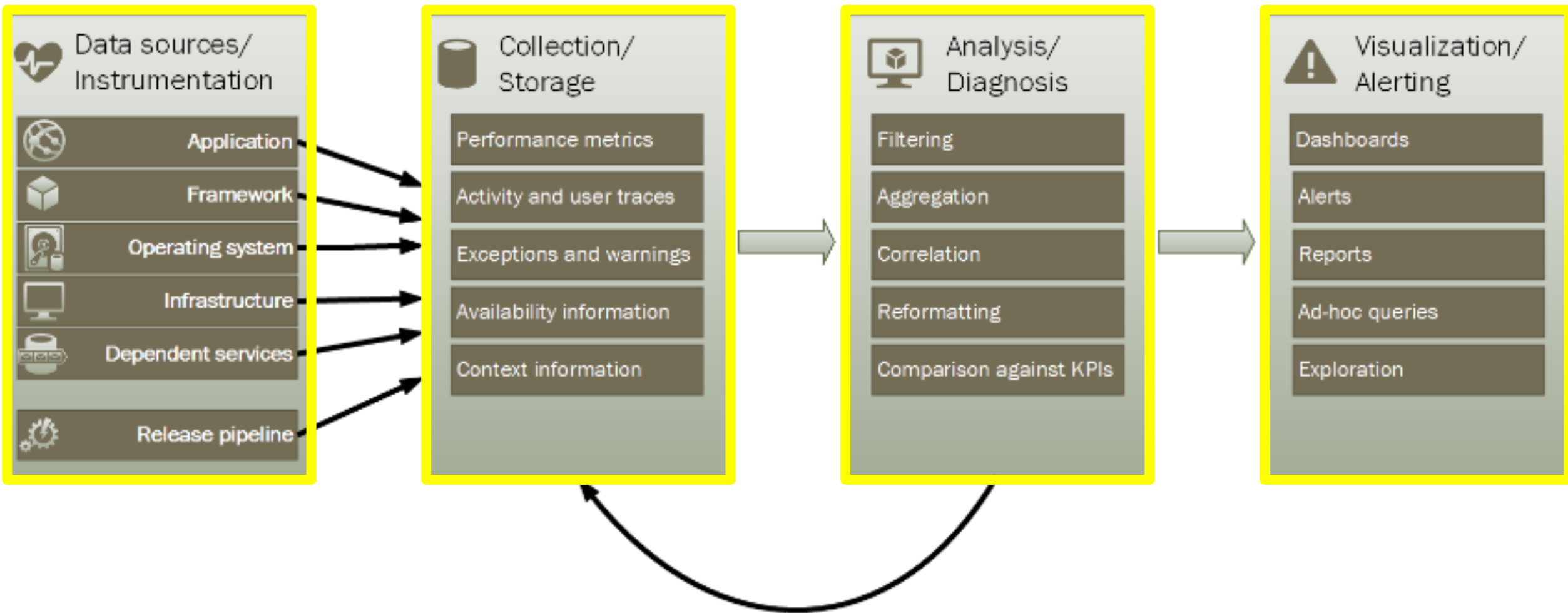
W

# Telemetry

An automated communications process by which measurements and other data are collected at remote or inaccessible points and transmitted to receiving equipment for monitoring



# Monitoring and Diagnostics Pipeline



# Azure Diagnostics Data

## Event tracing

Configured by app  
developers

## Performance counters

The 4 traditional  
subsystems

## Event logs

You likely have  
experience here

## Application logs

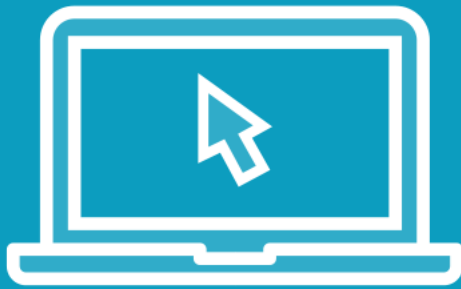
Configured by app  
developers

## Azure Diagnostics logs

Table and/or blob  
storage



# Demo



# 1

Enable monitoring for VMs

Start with Portal

Then show PowerShell



# Log Search



# Monitoring – Questions of Scale and Intelligence

## Log flood

- So many data sources
- How to quickly extract value?

## Predictive analytics

















- How to know what to look for?

## Automation

- Immediate remediation



# OMS Log Analytics

Pricing tier		
Get additional services with Operations Management Suite (OMS). <a href="#">Learn more</a>		
The free and standalone Log Analytics tiers are per-GB ingestion models. OMS offerings are priced per-node.		
F Free	S Standalone	O OMS
 500 MB Daily upload limit	 Unlimited Daily upload limit	 Insight + Analytics
 7 days Data retention	 31 days Data retention	 Automation + Control
 90 days Activity log	 90 days Activity log	 Security + Compliance
 500 min/month Runbooks	 10+ Management solutions	 Unlimited Daily upload limit
	 Unlimited Azure metrics	 31 days Data retention
	 Unlimited Azure diagnostics logs	 Unlimited min Runbooks
0.00 (USD)	2.30 COST PER 1GB (USD)	10.00 STARTING COST PER NODE (USD)



# OMS Insight & Analytics

## Log Analytics



## Log Search





Demo



2

Visit OMS Pricing page

OMS Log Analytics

Server Explorer in Visual Studio

Storage Explorer



# Alerting



# The Need for an Alerting Solution

**Avoiding surprises**

**Email, SMS**

**Third-party Security and  
Event Management (SIEM)**

**Azure integration is eminently  
possible**





# Webhook

A way for an app to provide other applications with real-time information. Also called a web callback or an HTTP push API. The payload is ordinarily JSON.

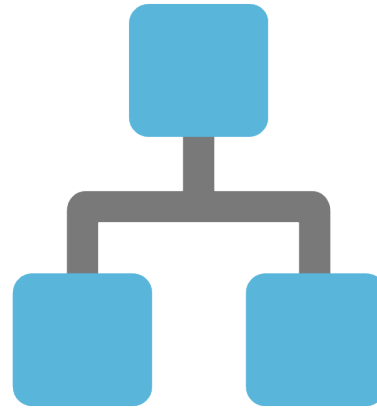


# What Can You Do with Webhooks?



## Third-Party Integrations

PageDuty, OpsGenie,  
VictorOps, Slack,  
HipChat, Campfire,  
etc...



## Script Execution Azure Automation runbooks



## SMS Text Twilio API



Demo



3

Show integration with....Datadog?



# For Further Learning

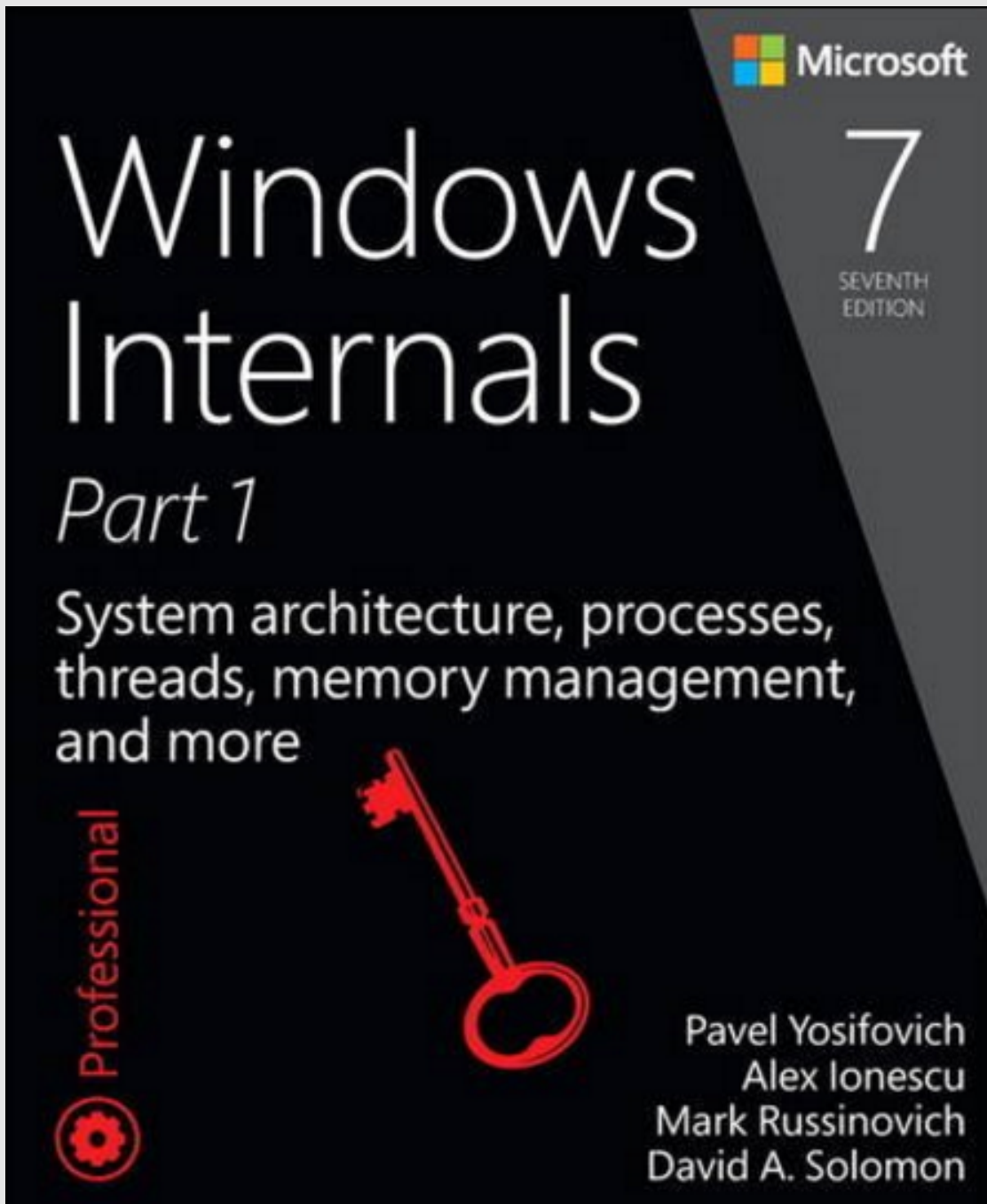
Windows Performance Monitoring Fundamentals  
(Bruce Mackenzie-Low)

A worthwhile four-hour investment

Web API Design (Shawn Wildermuth)

Even if you're not a developer, you should understand REST and APIs





## Book Reference

Published March 2017

Required reading for any professional who supports Windows (client or server)





# Summary



The question now isn't how to generate actionable data

- It's what to do with the data

Take advantage of Log Analytics and the centralization and intelligence it offers

Next module: **Troubleshooting and Support**

