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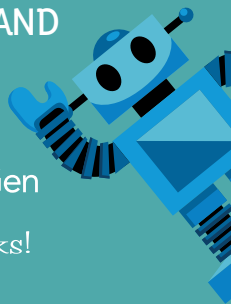
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Executive
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Corporate
Vice President,
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SCOTT HANSELMAN
Principal Community
Architect, Web Platform
and Tools, Microsoft



KIMBERLY L. TRIPP
President/Founder,
SQLskills



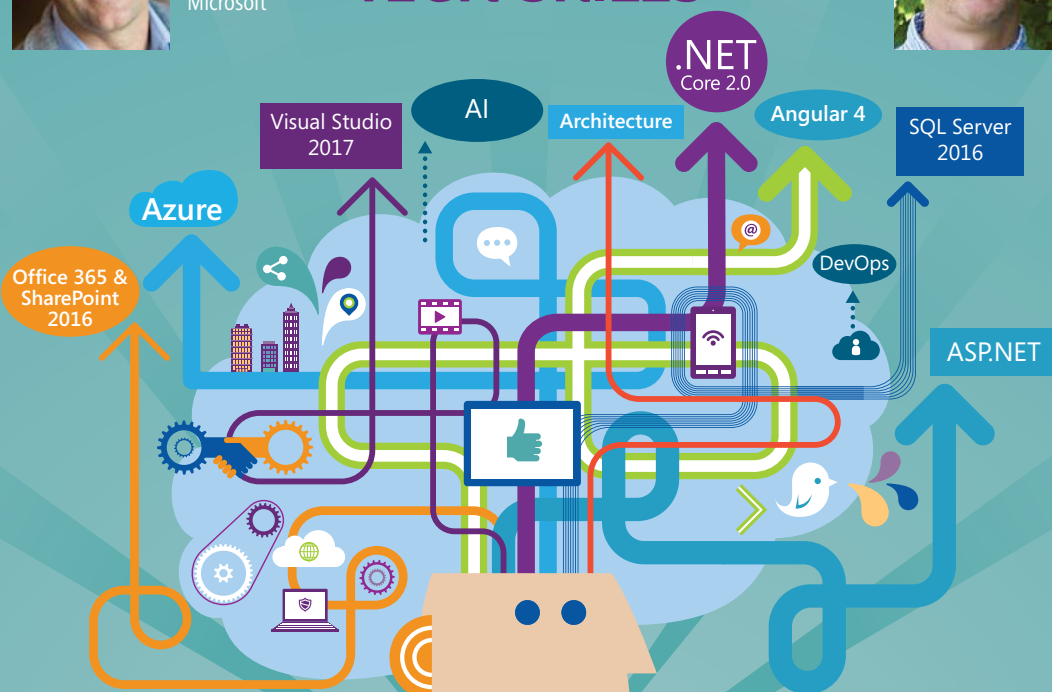
MADS TORGERSEN
Program Manager,
Microsoft



DAN HOLME
Director of
Product
Marketing for
SharePoint,
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**POWER UP
YOUR
TECH SKILLS**

SCOTT HUNTER
Principal
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Manager,
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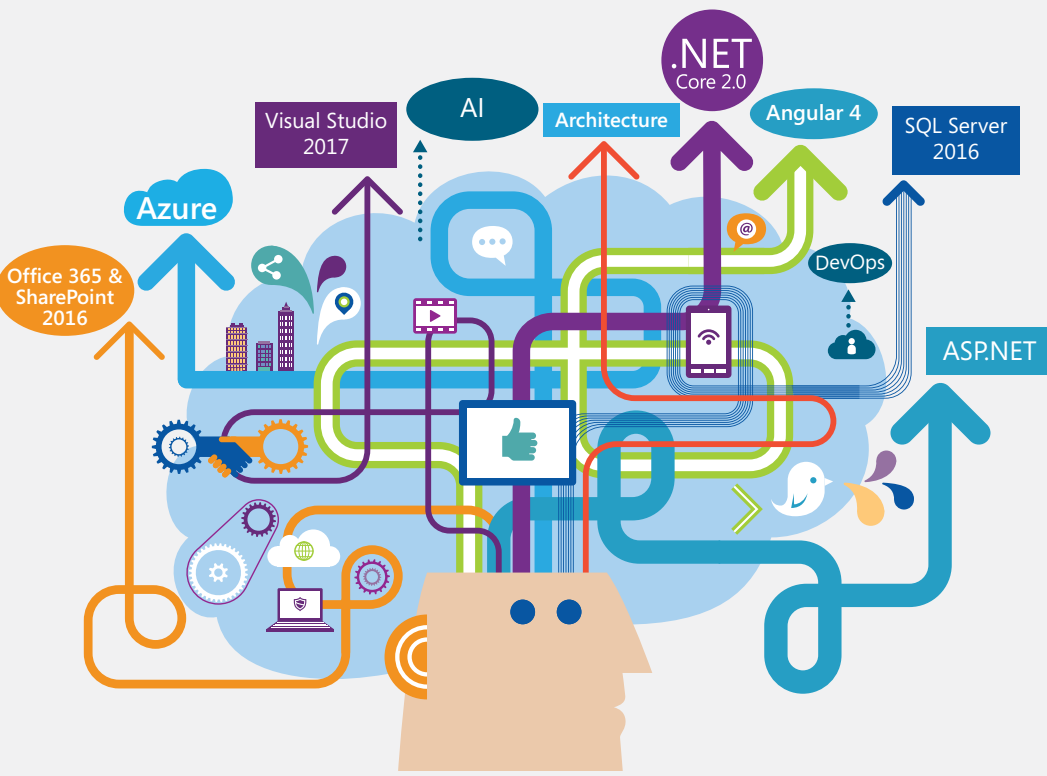
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Many paths to choose and changes to embrace.
Your favorite experts will help you sort it out and make the journey easy!
Shirley Brothers

A sampling of our Keynote & General Session Speakers, Panelists



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SCOT HILLIER
Office 365 MVP,
Independent Consultant



DAN HOLME
Director of
Product Marketing for
SharePoint, Microsoft



JES BORLAND
Premier Field Engineer,
Microsoft



TIM HUCKABY
Founder/Chairman,
InterKnowledge



KASEY UHLENHUTH
Program Manager,
Microsoft



JASON HIMMELSTEIN
Office 365 Advisory
Services Manager,
Rackspace



KATHLEEN DOLLARD
Microsoft



AARON BERTRAND
Senior Consultant,
SentryOne



JOHN PAPA
Principal Developer
Advocate, Microsoft



DAN WAHLIN
Founder,
Wahlin Consulting

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REGISTER for a WORKSHOP PACKAGE and receive a choice of Xbox One S, hotel gift card, or the Acer Mixed Reality Developer Edition Headset! See website for details.



SUNDAY, OCTOBER 29, 2017	
7:30am	Workshop Registration Opens
9:00am–4:00pm	Pre-Conference Workshops
MONDAY, OCTOBER 30, 2017	
7:30am–4:00pm	Workshop Registration Opens
9:00am–4:00pm	Pre-Conference Workshops
6:00pm	Keynote
TUESDAY, OCTOBER 31, 2017	
7:30am–5:00pm	Conference Registration
7:30am–8:30am	Continental Breakfast
8:30am–9:45am	Keynote
9:45am–10:15am	Coffee Break, Expo Hall Opens
10:15am–11:30am	Breakout Sessions
11:30am–11:45am	Break
11:45am–1:00pm	Breakout Sessions
1:00pm–2:30pm	Lunch
2:30pm–3:30pm	Breakout Sessions
3:30pm–3:45pm	Break
3:45pm–4:45pm	Breakout Sessions
4:45pm–6:15pm	Expo Hall Opening Reception
WEDNESDAY, NOVEMBER 1, 2017	
7:30am–5:00pm	Conference Registration
7:30am–8:30am	Continental Breakfast
8:30am–9:30am	Keynote
9:30am–10:00am	Coffee Break, Expo Hall Open
10:00am–11:00am	Breakout Sessions
11:00am–11:15am	Break

WEDNESDAY, NOVEMBER 1, CONTINUED	
11:15am–12:15pm	Breakout Sessions
12:15pm–1:30pm	Lunch, Expo Hall Open
1:30pm–2:30pm	Breakout Sessions
2:30pm–3:00pm	Snack Break, Expo Hall
3:00pm–4:00pm	Breakout Sessions
4:00pm–4:15pm	Break
4:15pm–5:15pm	Keynote/Breakout Sessions
5:15pm–6:30pm	Expo Hall Open
7:00pm	Evening Events
THURSDAY, NOVEMBER 2, 2017	
7:30am–4:00pm	Conference Registration
7:30am–8:30am	Continental Breakfast
8:30am–9:30am	Keynote
9:30am–10:00am	Coffee Break
10:00am–11:15am	Breakout Sessions
11:15am–11:30am	Break
11:30am–12:45pm	Breakout Sessions
12:45pm–1:45pm	Lunch
1:45pm–2:45pm	Keynote/Breakout Sessions
2:45pm–3:15pm	Ice Cream Break
3:15pm–4:15pm	Panels
4:15pm–4:30pm	Break
4:30pm–5:00pm	Closing and Prizes
FRIDAY, NOVEMBER 3, 2017	
7:30am–10:00am	Registration Open
9:00am–4:00pm	Post-Conference Workshops

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We invite you to join us in Las Vegas to learn about the new wave of technology available today. Learn about Visual Studio 2017, .NET Core 2, modern web development, the latest services in Azure and many other exciting new products that continue to change the world with software. You have the opportunity to learn about these tools from the Microsoft engineers that built them and many of the top industry experts that use them in the field.

KEYNOTE Microsoft Cloud

Scott Guthrie Microsoft

KEYNOTE Microsoft's Open Source Journey

Scott Hanselman Microsoft

KEYNOTE Microsoft AI – From Research to Solutions

Steven Guggenheimer Microsoft

.NET Code Style: Code your Way in Visual Studio 2017

Kasey Uhlenhuth Microsoft

Visual Studio 2017 allows teams and individuals to enforce and configure their own coding conventions. Come learn how you can help make your codebases consistent and readable and how you can control live code analysis to give you feedback when you want it. For those perfectionists out there, come learn how you can prevent people from checking-in code that doesn't adhere to your team rules!

.NET For Developers in 2017

Scott Hunter Microsoft

With the release of Visual Studio 2017 and Visual Studio for Mac as well as .NET Core 2.0 framework, a lot has changed in for the .NET frameworks and tools. In this demo-filled session, Scott will highlight the most important new features in the .NET frameworks, languages and tools that will make you a more productive developer in the year ahead.

.NET Framework Improvements, Tips, and Tricks

Jeff Fritz Microsoft

There's a lot of talk about the .NET Core framework, but what about the .NET Framework for Windows? With the 4.7 release of .NET and the Windows 10 Creators Update, there are lots of improvements that you can use in your existing applications. Join Jeff Fritz as he demos many of the cool updates in the .NET Framework that you can use in your ASP.NET and windows applications.

.NET Language Updates in Visual Basic and F#

Mads Torgersen Microsoft

.NET isn't just C#, but also F# and Visual Basic. Mads will show some of latest features in these beloved languages and talk about the design, community, and future features planned for VB and F#.

.NET Standard: The Easy Route to Platform Independence

Kathleen Dollard Microsoft

Microsoft is moving to an Open Source and cross platform world, and they've created .NET Standard as a super-highway to get you there. With the .NET Standard 2.0 release, the specification includes most of the API's you depend on in the .NET full framework (.NET 4.n). Because .NET Standard, .NET Core, Xamarin and UWP are all embracing this standard, your class libraries can easily be cross-platform. In this session, you'll learn more about the goals of .NET Standard and how it differs from PCLs (Portable Class Libraries). You'll also see how to use the .NET Portability Analyzer to find any changes your app needs. To show that .NET Standard is not actual magic, you'll learn a little about how redirects support binary compatibility. And, you'll learn what happens when an API just doesn't make sense on a particular platform and other potential pitfalls. You'll leave this session understanding why you care about .NET Standard and the path to move your applications to it.

5 Popular Choices for NoSQL on a Microsoft Platform

Matthew D. Groves Couchbase

If you are thinking of trying out a NoSQL document database, there are many good options available to Microsoft-oriented developers. In this session, we'll compare some of the more popular databases, including: DocumentDB, Couchbase, MongoDB, CouchDB, and RavenDB. We'll look at the strengths and weaknesses of each system. Querying, scaling, usability, speed, deployment, support and flexibility will all be covered. This session will include a discussion about when NoSQL is right for your project and give you an idea of which technology to pursue for your use case.

ASP.NET Web API Best Practices

Steve Smith Ardalis

It seems like most web apps these days require at least some web APIs. This session covers best practices on designing, versioning, testing, and securing your ASP.NET Core Web APIs.

Adding Real-time Features to Your Applications with SignalR

Javier Lozano Lozanotek, Inc.

Ever wondered how hard is to add real-time eventing to your ASP.NET application? SignalR is a new library that makes bi-directional communication easy and fun. In this session, we'll cover the features and approaches SignalR offers on both client and server sides. If you're interested in adding real-time eventing to your applications today, you don't want to miss this session.

An Introduction to React

Elijah Manor LeanKit

Facebook's React library has received quite a bit of attention lately. In this session, we will describe what React is, who uses it, and why it's a compelling technology to use.

After a high-level overview, we will unpack the ins and outs of React components (creation/JSX/props/state/etc) and then discuss some of the gotchas when first starting development.

"My favorite part of React is what I loved about MooTools: to use it effectively you learn JavaScript, not a DSL: useful your whole career." *Ryan Florence*

React by itself is fairly small and not overly complex. For a more comprehensive Single Page Application you need much more than just React. To address this concern we will discuss Facebook Flux architecture, introduce the concept of Isomorphic JavaScript,

and identify other libraries that are common when building a full application.

And Now, EF Core 2!

Julie Lerman The Data Farm

Entity Framework Core is rapidly evolving and EF Core 2.0 brings a slew of important new capabilities, improvements and additional parity with features you relied on in EF6. Julie Lerman, one of the most trusted authorities on Entity Framework, will give you a tour through features you really shouldn't miss as you plan the data access for software you are building. You may discover that EF Core is ready for your solutions.

Angular Applications with ASP.NET Core: Part 1 – Getting Started

Rick Strahl West Wind Technologies

Want to find out more about using Angular and ASP.NET Core together? In this session, Rick gives an introduction to Angular and what you need to get started from scratch and how to also set up an ASP.NET Core application and run it as a backend for the Angular front end. This session goes through the basics of setting up an Angular application with Angular CLI, creating a few starter components and accessing remote data. For the ASP.NET Core bits Rick demonstrates how to create a new project, run and debug the application both from the command line and using Visual Studio. This session focuses on the fundamentals to get you started with these two technologies in combination. Part 2 covers a more realistic example, and best practices, for creating Angular applications with ASP.NET Core.

Angular Applications with ASP.NET Core: Part 2 – Putting It All Together

Rick Strahl West Wind Technologies

This session builds on the basic concepts of Part 1 by creating a more involved Angular application using ASP.NET Core as a backend. In this session we'll look at separating application concerns cleanly both in Angular and in ASP.NET, and setting up your project for easy development of both technologies. Rick describes some of the best practices for setting up your ASP.NET Core and Angular projects, adding important core features like CORS support, authentication and application caching, and demonstrates how to run your Angular and ASP.NET Core app on Windows and Linux, and deploying the application to IIS on Windows and on Linux with Docker.

Angular Dynamic Pages

Ward Bell IdeaBlade

The Angular pages you know have static layout, fully described by their component templates.

In Angular, a component template and its class are inseparable, compiled into a single execution unit during the build. It's hard to imagine an Angular application that generates layout dynamically from data-driven logic. Can it be done?

It is done! This session shows how the official angular.io docs open-source, Angular documentation viewer dynamically generates each document page from a blend of HTML content and Angular components. The documentation viewer itself has no idea what these pages look like.

The components embedded in HTML content come from a widget toolbox. We'll leverage this idea in a dashboard example app in which users drag-and-drop panels from a dashboard toolbox onto their personalized dashboard canvas. We'll look at using lazy loading to manage the toolbox and keep the initial dashboard light.

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Angular in 60ish Minutes

Dan Wahlin Wahlin Consulting

Angular provides a robust new way to build Single Page Applications (SPAs) that can run on a variety of devices. With the framework adding many new features, ranging from ES6 and TypeScript support to a more efficient way to bind data, there are a lot of new concepts to learn. In this session, you'll learn about core features and concepts such as data binding, components, directives, using ES6/TypeScript languages, decorators and more. If you're interested in getting a jump start on the Angular 2 framework, then this session is for you!

- Get a jump start on the TypeScript language.
- Learn about the role of components in Angular apps.
- Understand key new features that Angular provides and how they can be used in SPAs.

Automated Delivery for .NET Applications

Javier Lozano Lozanotek, Inc.

Implementing an automated delivery process for your applications could seem like a daunting, complicated task. In this session, we will cover how you can create, build, and deploy processes that will help you streamline delivery, and most importantly, make things predictable. If you're currently in the process of setting up a delivery process for your applications, you'll want to attend this session and participate in the conversation!

Azure Diagnostics: Fixing Cloud Applications Issues and Performance on Azure

Paul Yuknewicz Microsoft

If you want to be 10x more efficient solving cloud reliability and performance issues, this session is for you. We'll cover top issues we encounter in your application and infrastructure, and provide you with modern tools and techniques to effectively monitor, diagnose and fix these issues in all your environments, from dev-test to production at-scale. The session will cover our modern APM metrics and logging technology, Application Insights Profiler, and using the new Snapshot Debugger in production. Put on your seatbelts for this one!

Azure for ASP.NET Developers

Javier Lozano Lozanotek, Inc.

Microsoft Azure is a simple, flexible, and open platform that makes developing Web applications extremely easy. In this session, we'll cover the features, practices, and patterns ASP.NET developers should consider when targeting the Azure platform. If you're curious about how you can take your applications, current and future, to the next level with ease, you won't want to miss this presentation.

Azure IoT Edge in the Real World

Bret Stateham Microsoft

Microsoft has been a leader in cloud-based IoT services for a number of years. The heart of Azure's IoT offering is IoT Hubs. IoT Hubs provide a secure bidirectional communication service with devices in the field using standard protocols like HTTPS, AMQPS, and MQTTS. The open standards make it possible for many, but not ALL, devices in the field to communicate directly with IoT Hubs. For devices that don't have TCP/IP connectivity, but may have Bluetooth, RF, or other communication capabilities,

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Sessions and speakers are subject to change.

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a gateway device is needed. In this session, we'll see how Azure IoT Edge (formerly the Azure IoT Gateway SDK) can be used to connect "edge" devices in the field to Azure IoT Hubs, as well as how to move some of the analytics and filtering to the edge, helping to reduce latency, bandwidth and costs when a round-trip to the cloud can be avoided.

Azure Search Blended with AI: The Key to Improving the Customer's Search Experience

Vineet Arora WinWire Technologies

How to best serve customers and anticipate what they require even before they realize the need for it? By leveraging Microsoft's AI capabilities smartly coupled with Azure Machine Learning processing power, now you can easily predict and recommend items your customers' need by optimizing Azure Search content to improve your customers' search experience.

In the session, we will talk about Azure Search powered by AI and a robust cloud infrastructure that can help you to learn from previous transactions and predict which items are more likely to be of interest to your customer, and how to coherently condense actionable information into conversational and easy-to-navigate answers.

Take a quick peek around the beauty of Azure Search and AI to understand how it delivers value in a decoupled fashion.

Build Your First Xamarin App in 75 Minutes

Robert Green Microsoft

Xamarin enables C# developers to reuse their skills and build native mobile apps that run on iOS, Android and Windows. In this session, we will build a mobile app from scratch. You will see how to build the UI, handle navigation, connect to Azure, work with data when offline and how to deploy the app to multiple devices.

Building and Deploying Angular to Azure

John Papa Microsoft

You did it! You wrote the code and the app works ... locally. But how will you get it to work in the cloud? We'll explore how to build Angular for optimal performance, push it to GitHub, use CI tooling to perform custom builds, and host in Azure hitting serverless functions.

Building ASP.NET Apps on Google Cloud

Mete Atamel Google

With high performance Virtual Machines (VM) and networking, blazing fast VM provisioning and autoscaling and a rich set of services, Google Cloud is a great platform to deploy and run your traditional ASP.NET and new containerised ASP.NET Core applications. In this session, we will cover:

- How to run traditional Windows and SQL Server based ASP.NET apps on Compute Engine.
- How to run the new Linux based containerised ASP.NET Core apps App Engine and Kubernetes/ Container Engine.
- How to integrate with Google Cloud services such as Cloud Storage and use machine learning APIs such as Vision API and Speech API.
- How to use Google Cloud PowerShell cmdlets and Visual Studio extension to manage your projects.

This is your opportunity to learn about what Google Cloud offers for your ASP.NET app!

Building Cross-Platform Server-Side Data APIs

Julie Lerman The Data Farm

Front ends are cool but mostly useless without data. Sure, some of your data sources provide REST APIs so you can just write queries directly against them but that is so old school. Instead, you can build back end APIs that address the specific data needs of your web application and relieve front end devs from tangling with database schema, query syntax and other distractions. In this session, you'll learn the basics of creating a back end API to make moving data between your front end and your data store. We'll use cross platform tools (dotnet and Visual Studio Code) and Azure CosmosDB's document database to do the job.

Building Enterprise Bots – Yes You Can and Should

Daniel Egan Microsoft

While many of the bots that you have seen can help you buy tickets to a movie, or book flights, or even add a mustache to a picture, bots can also be integrated into the enterprise. From bots that integrate with Jenkins to help you manage your build process, to handling first level support in a call center, conversation bots can be deployed in an enterprise in a very effective way. Let your users interact with systems in the communication channels they prefer (Facebook, Slack, Kik, Skype, email, sms) in one integrated solution. In this session, we will show you how to utilize the BotFramework to build bots for your enterprise.

Bulletproof Transient Error Handling with Polly AppsVNext

Connected applications only work when connected. What happens if the network breaks temporarily? Will your system recover smoothly or pitch a fit? Using an OSS project called Polly (available on GitHub) you can handle this and many other transient situations with elegance and fluency. Polly let's you define retry policies using standard patterns such as retry, retry forever, wait and retry, and circuit breaker. Learn how to make your system bulletproof with Polly and a little know-how.

Clean Architecture with ASP.NET Core

Steve Smith Ardalis

ASP.NET Core provides better support for clean, testable, maintainable architectures than any of its predecessors. Learn how to create an ASP.NET project from scratch, and break it up into separate projects to maximize testability, maintainability, and modularization.

Cortana Intelligence for the Impatient Developer

Zoiner Tejada Solliance, Inc.

Curious how machine learning, Cortana, the Bot Framework and the Cognitive Services fits into the overall architecture of an Azure Solution? Machine learning usually does not stand by itself in the solution...whether you are using Azure Machine Learning as the foundation for a data mining effort, using it as web service to inform automated processes, or simply employing ML directly to realize new, untapped values in your data, Azure ML sits as an important and integrated component of your solution architecture. New services, such as those provided with Microsoft Cognitive Services, speed your development time by providing you with sophisticated, fully trained models for performing speech, text, vision, and recommendation functions, with the ease of integrating a REST API, and along with Cortana and the Bot Framework, can yield richer and deeper interactive

user experiences than was possible without having a specialized team and huge development budgets. Learn to bring intelligence to your solutions by attending this session!

Creating Intelligent Bots

Zoiner Tejada Solliance, Inc.

Bots are powering a new way to converse and interact with users, whether you are ordering pizza with an emoji via text, remotely checking into your hotel room or searching for information. Bots can power both text based and voice activated conversations so users can leverage the mode most convenient to them. In this session we'll take a journey building a solution that leverages Cortana, the Microsoft Bot Framework and Microsoft Cognitive services to make an application come alive to spoken and typed conversations.

Debugging in Node.js and Azure

Brian Clark Microsoft

Debugging your application is a critical part of the development process and can aid in discovering why the application may be behaving differently than expected. Doing this using JavaScript server-side with Node.js can be quite elusive. In this session, we'll talk about the typical hurdles developers run into while debugging and look at better ways to approach it. We'll go over the various techniques and tools that are available to help making debugging Node.js an easy task. We'll also see how we can remote debug an application running in Azure.

Debugging Tips and Tricks with Microsoft Visual Studio

Joseph Guadagno Independent Consultant

Debugging an issue with an application is hard! In this session, we'll walk through all of the powerful debugging features that Visual Studio provides. We'll cover how to use breakpoints; introduce data tips; show how you can share your debugging information; work with the different debugging windows like Locals, Autos, and Watch. Then we'll look at ways we can follow or step through the code to find issues using the call stack and IntelliTrace.

Describing API Functionality Using Swagger

Shayne Boyer Microsoft

Understanding the capability of an API can be frustrating as a developer. Without good documentation, writing a consuming front-end application amounts to a lot of guess work and loss of productive time. Using Swagger (OpenAPI Specification) is a fast way to self-document, setup testing harnesses and lead to more productive development for your ASP.NET Web API and Azure Functions consuming apps.

Discover the .NET Core CLI

Shayne Boyer Microsoft

Tired of the full IDE Visual Studio Experience with all of the bells and whistles? What if you only had a bash terminal and an editor – could you create a .NET Core application? Come find out how to get this done like war games..."Want to play a game?"

Dynamic Dashboards in XAML Applications

Billy Hollis Independent Consultant

The dynamic, compositional nature of XAML makes it a great platform for interfaces such as dashboards. But most app developers have not needed to use XAML for dynamic, pluggable UI, and don't know how to leverage the platform's capabilities in that area. This session will present a simple architecture for a dashboard that allows pluggable panels, with options for the

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user to select panels and determine their position. If your business users have been clamoring for a place to put important visual components in a customized arrangement for their jobs, this session can give you a large jumpstart.

Entity Framework Core 2.0 – Data on Server, Cloud, Mobile and more

Diego Vega Microsoft
Andrew Peters Microsoft

Entity Framework (EF) Core is a lightweight, extensible, and cross-platform version of the popular Entity Framework data access technology. In this demo filled session we'll look at what's new in EF Core and what the team has planned for upcoming releases.

Exploring the Azure CLI

Shayne Boyer Microsoft

Come check out the Azure CLI and see how to quickly get resources created, learn some cool scripting tricks, set defaults, automate deployments and more.

Faster, Smaller, Better – Visual Studio 2017

Scott Hunter Microsoft

Visual Studio 2017 is now available for developers, and it is packed with new features to help you. From improved web tools and new unit testing capabilities, to improved profiling and language features, Scott will show you all of the cool features that make developing with Visual Studio an amazing experience. You'll learn tips and tricks that will help improve your applications immediately.

Flying High with Xamarin!

Sam Basu Progress

BCross-platform mobile development has been democratized for .NET developers – thanks to Xamarin & Microsoft. Let's build a cool aviation app together – targeting all platforms from the comforts of Visual Studio on Windows or Mac. Real world apps need cloud data connectivity, navigation, storage, lifecycle management, plugins and polished UI – let's do all that. Let's take a look at some must-have tooling for professional Xamarin developers. Let's dip into device capabilities, reuse libraries and elevate the user experience. Oh, and we will throw in some passion for aviation in the app, like private jets and supersonic possibilities. Loads of fun while learning cutting-edge mobile development – you in?

Full Stack Development with .NET and NoSQL

Matthew D. Groves Couchbase

What is different about this generation of web applications? A solid development approach must consider latency, throughput, and interactivity demanded by users across mobile devices, web browsers, and IoT. These applications often use NoSQL to support a flexible data model and easy scalability required for modern development.

A full-stack application (composed of Couchbase, WebAPI, Angular2, and ASP.NET/ASP.NET Core) will be demonstrated in this session. The individual parts of a stack may vary, but the overall design is the focus.

Functional Techniques for C#

Kathleen Dollard Microsoft

You are effective with the imperative, object oriented core of Java or .NET but you look longingly at the winsome smile of functional languages. If you play with your language's functional features, never quite sure you're getting it right or taking full advantage of them. This session is for you. You'll learn which code to attack with

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functional ideas and how to do it. You'll look at code similar to what you write every day and see it transform from long difficult to follow code to short code that's easy to understand, hard to mess up and straightforward to debug. Better yet, functional approaches ensure that patterns like async, logging and exception handling are consistent and transaction usage is clear. Apply these techniques while leveraging delegates, lambda expressions, base classes and generics.

Fundamentals of Test-driven Design

Jesse Liberty Independent Developer

This session assumes no prior experience with unit testing and dives into the principles and practical aspects of TDD. A real-world demonstration will bring these concepts together.

Get Started ASP.NET Core 2.0

Maria Naggaga Microsoft

Building high-performance cross-platform web applications has never been better than with ASP.NET Core. We will look at some of the new features of ASP.NET Core 2.0 and learn how our applications can benefit. We'll also look at some performance tips and how you can take advantage of them.

Get Started with Git

Robert Green Microsoft

Git is a free, open-source distributed version control system. It is fast becoming the version control of choice for developers. In this session, you will get familiar with Git and see how to use it to manage code. You will learn about repos, committing changes, branching and merging, pull requests and more. You will see how to use Git with both GitHub and Visual Studio Team Services and see how to use Git with Visual Studio, as well as with Visual Studio Code and Visual Studio for Mac.

Getting Started Developing .Net Cloud Applications on Azure Using Visual Studio

Andrew Hall Microsoft
Paul Yuknewicz Microsoft

How easy is it to get .NET application to run in Azure? Do .NET applications run better in Azure, and how? In this talk we will walk through the unique enhancements we have built in to Azure for giving your .NET applications the best fit in the cloud. We'll show you a fast path to get existing apps up on Azure. We'll also show you how to build modern scalable cloud app patterns for Web App and worker microservices using Docker containers. We'll also show you how to be incredibly productive building, monitoring and debugging your app using Visual Studio.

Getting Started with Ionic v3

Joseph Guadagno Independent Consultant

Ionic lets you build mobile apps using only JavaScript. The Ionic framework is a free and open source library of mobile-optimized HTML, CSS and JS components along with tools for building highly interactive native and progressive web apps. Built with Sass, optimized for AngularJS.

In this session, we'll introduce you to the Ionic Framework. We'll cover what the framework is, how you set up your development environment, what makes up the framework and the pieces of the framework. After this, you'll be well on your way to building your first mobile application with the Ionic Framework.

Go Serverless with Azure Functions

Brian Clark Microsoft

You've heard the "serverless" buzzword, but do you know why it matters? In this session, you'll learn about Azure Functions and how you can build applications more quickly than ever before. With Functions, you pay per execution, which can substantially lower your costs. The platform automatically scales up and down based on the number of incoming events. Serverless is useful for data transformation, cron processing, IoT, and even integrating with Office 365. In this session, we'll describe the concepts behind serverless computing and show how easy it is to run Functions on your local machine. Using Visual Studio or Visual Studio Code, you can even debug and trigger on events in Azure. This demo-rich session will teach you how to create your own functions using our best-in-class tooling.

Going Serverless With React

Burke Holland Web Developer

In this session, we'll walk through building a blog with React that is completely serverless. Serverless means that our blog will use hosted services, such as a database and a web application server. Serverless applications are fascinating since most of us have to worry about all the pieces of an application that we build, not just the user interface. Serverless doesn't mean "no server;" it just means you don't have to worry about that piece of your application anymore, and we'll take a look at why that is a beautiful thing.

Good and Bad UX – Examples and Analysis

Billy Hollis Independent Consultant

We are surrounded by user experiences in web apps, native apps, mobile apps, ranging from good to mediocre to bad to rage inducing. In this session, Billy Hollis shows some of his favorite examples of user experiences all over that range, along with analysis of the principles and reasons why a UX works or doesn't. If you create screens for users, this session is a fun way to find out how to do it better and give you some solid ways to avoid bad UX.

Hack-proofing Your Modern Web Applications

Adam Tuliper Microsoft

Secure your modern Web apps now. Developers are notoriously lax with including security in their applications. In an age of hacking, this session aims to arm the developer with an arsenal of protections to use while developing. This presentation explores the most common attacks on Web applications, how they work to exploit your app, and most importantly, how to protect against them.

Hello? Is It Me You're Looking For? (Face and Voice Recognition)

Daniel Egan Microsoft
Dr. Adnan Masood UST Global

Are there things you want to secure? A house, a business, an app? Why not do it with face and voice recognition? In this session, we will be using Azure Cognitive Services' face and voice recognition, along with a Raspberry Pi and camera with VSCode, to authenticate and verify the person trying to gain access. We will be using Node.js, running on Raspbian that connects to the cloud. Come join the fun and see how you can add this to your own app.

How to Build a Massively Scalable Globally Distributed App in Minutes with Azure Cosmosdb

Kirill Gavrylyuk/TBD Microsoft

Earlier this year, we announced Azure Cosmos DB - the first and only globally distributed, multi-model database system. In this session, we will show you how you can take advantage of Azure Cosmos DB as your backend database, covering data replication across any number of regions, scaling for any number of reads/writes, and much more.

How Using DevOps Practices Can Make You a Better Developer

Robert Green Microsoft

Improved deployment frequency. Faster time to market. Lower failure rates. Faster fixes and recovery time. These are some of the promises of DevOps. Whether you are an individual developer or working in a team, you can take advantage of DevOps practices. In this session, aimed at developers who are new to DevOps, you'll see how you can leverage the concepts of agile development, continuous integration, and continuous delivery to build better software. And you'll see how to do this all from within Visual Studio and Visual Studio Team Services.

Increasing Productivity by Moving Dev/Test to the Cloud

Jay Schmelzer Microsoft

Development and Test organizations should be spending their time developing, testing and shipping applications – not managing and configuring infrastructure, diagnosing environment differences, or waiting for resources to become available. In this session, you'll see how Azure Dev/Test Labs provides the ability to quickly provision development and test environments across Linux and Windows, ensure consistency via shared artifacts and templates, and minimize waste with quotas and policies.

Introducing RazorPages for ASP.NET Core 2.0

Jon Galloway Microsoft

ASP.NET Core 2.0 comes with the MVC framework that we are already familiar with, but you can also build your applications quickly and easily with the new RazorPages feature. RazorPages allow you to build your application by focusing on the markup and content, and adding server-side features easily. Join us and learn how to get started building a cross-platform application with RazorPages.

Introduction to IdentityServer for ASP.NET Core

Brock Allen BrockAllen.com

IdentityServer is a popular open source security token service framework written in ASP.NET Core that implements the OpenID Connect and OAuth2 protocols. It is used to authenticate users via single sign-on and to secure web APIs. It is designed for extensibility and customization and allows applications to satisfy their custom security requirements. It can be used stand-alone or in conjunction with other identity providers (such as Google, Facebook, AAD, ADFS, Auth0, and others). Come to this session to be introduced to the basics of using, hosting, and configuring IdentityServer to secure your applications.

Check the conference website for the latest information, DEVintersection.com
Sessions and speakers are subject to change.

SESSIONS

ASP.NET Visual Studio
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Lessons Learned in Porting Legacy ASP.NET Applications to ASP.NET Core

Adam Tuliper Microsoft

Are you looking to migrate any of your legacy ASP.NET applications to ASP.NET Core? Our team at Microsoft worked porting an application that consisted of several frameworks (SignalR, Entity Framework, Nancy, MVC, and custom middleware) to ASP.NET Core. We went in with little expectations and came out with many solid lessons learned. In this session, I'll walk you through various items we ported and considerations and challenges we hit at each part. While our experience may be different based on the types of applications you are porting, this session should give you immediate insight into porting an application over to ASP.NET Core also running on .NET Core.

Lessons Learned Building a Real-world Electron Application

Bret Stateham Microsoft

Electron is popular framework for creating cross-platform applications. Microsoft Visual Studio code is a great example of the rich types of applications that can be developed on top of Electron. In this session, we'll review the lessons we learned developing an Electron-based application that helps IoT developers configure their Azure IoT Edge gateway solutions graphically. The application was developed with the intent to run on all popular desktop platforms (Windows, Mac and Linux) as well as to configure Azure IoT Edge installations on remote gateway devices. We'll show you how far we got, what hurdles we encountered, and tips and tricks learned in the trenches.

Localizing your ASP.NET Core Applications

Rick Strahl West Wind Technologies

A lot has changed in ASP.NET Core localization as ASP.NET Core has completely overhauled the localization mechanism of classic ASP.NET. There's a brand new localization mechanism based on dependency injection and a convention based localization service that make it easier to add localization to your ASP.NET Core applications. In this session you find out the basic constructs of localization and how localization is managed at a low level in .NET and ASP.NET in general, as well as the native localization features that ASP.NET Core provides to abstract the low level features. We'll look at a number of different approaches you can use to localize your content as well as some useful tooling to help you localize your resources interactively

Making CSS Fun with SASS

Todd Anglin Progress

After years of back-and-forth debate, one CSS pre-processor has emerged as the clear winner: SASS (or Syntactically Awesome Style Sheets). With SASS, writing and maintaining CSS can actually be FUN, not tedious and error-prone. In this session, you'll learn the basics of SASS and how it can be immediately applied to your projects for instant productivity and happiness gains. We'll also take a look at the current state of modern CSS standards aiming to bring the power of SASS and other CSS pre-processors natively to browsers, examining what can, and what can't, be used safely today.

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Managing Software Projects with Visual Studio Team Services

Microsoft VS Team

Microsoft

Visual Studio Team Services (VSTS) provides tools for you to plan, build, and ship software across a variety of platforms. In this session, you will see how to use VSTS to track work and manage your backlog with Agile planning tools. You will see how to use backlogs to keep track of work items, how to use Kanban boards to turn data into visual signboards, how to use scrum boards to help you run effective stand-ups, how all of your code changes are linked to the story, bug or task driving the work. In sum, you will see how to use VSTS to run your Agile team.

Microservices, Angular, ASP.NET Core and Docker

Dan Wahlin

Wahlin Consulting

Learn about how Microservices can help you build more agile applications that can handle change (in business rules and technologies) more easily.

Modern Security Architecture with OpenID Connect and OAuth2

Brock Allen

BrockAllen.com

Modern applications require modern security and the OpenID Connect and OAuth2 security protocols are designed to meet this need. To achieve a modern security architecture you must use something called a "security token service" that implements these protocols. In this session we will look at how applications are now architected to incorporate and use a token service for authentication thus providing single sign-on. We will also see how this same token service also provides tokens for securing Web APIs. We will be using ASP.NET Core and the popular open source .NET framework "IdentityServer" to illustrate these concepts.

Moving Application Development and Testing to the Cloud

Jay Schmelzer

Microsoft

Not every organization and application is ready to move to cloud for production for a variety of reasons. In this session we'll show you how organizations that have on-premise deployments are still able to take advantage of the cloud to create a productive and consistent environment for developing and testing their applications.

My Top 10 Azure ServiceFabric Features

Michele Leroux Bustamante

Solliance, Inc.

Azure ServiceFabric provides a unique offering for microservices that can greatly reduce the overall effort to develop, deploy, manage and scale microservices solutions. In this session you will get a taste of some of the best features offered by ServiceFabric, and how solutions can take advantage of some of its unique capabilities such as stateful and stateless services, leveraging the actor model, deploying containers and guest processes, and other benefits related to the development lifecycle of a microservices solution.

React Patterns and Practices

Elijah Manor

LeanKit

Getting started with React doesn't take very long, but there are a variety of other patterns and practices that you, as a developer, will need to understand and tackle.

After this session, you will be exposed to the following concepts that are helpful when creating a large front-end React application:

- Knowing the difference between container and presentational components
- Using high order components or function as children
- Assessing performance bottlenecks
- Integrating immutability into your application
- Unit testing your components
- Creating your own React pattern library

Rock Your Microservices Event Streaming Strategy with Azure Event Hubs

Michele Leroux Bustamante

Solliance, Inc.

Microservices are not for everyone, but there are some incredible benefits to employing microservice architecture principles to enable co-evolution of services and features and reduce friction during the DevOps cycle. The growth of moving parts, however, does require tight DevOps procedures, and visibility into system operations including diagnostics, application events and audit trail. Event streaming can enhance your solution enabling async processing and scale, but also enhancing visibility to the solution as a whole. The good news is that if you are already designing a solution based on microservice principles, you are already positioned to incorporate events with less pain. Services that "fit in your head" lead to a manageable approach to introducing event-based strategies. In this session you'll learn how to design a microservices solution that relies on event streams to produce workflow state, history and full audit. You'll see patterns for structuring your solutions, managing events and payloads, and producing full history and audit logs for the solution. Event streaming will be implemented with Azure Event Hubs to compliment a microservices solution hosted in Azure Container Service.

RxJS Observables in Angular

Ward Bell

IdeaBlade

Client web applications are rich in events. Button clicks, keystrokes, and mouse moves are events. The data returned from an HTTP request arrives as an event. App components can send and receive messages through an event bus. Every page navigation is an event. Animations emit start and stop events. Events are everywhere.

RxJS Observables are the preferred way to manage events in Angular applications and many Angular APIs return RxJS Observables.

This session covers the basics of RxJS observables for Angular developers. You'll learn how to work with Angular observable APIs, which RxJS operators you should know, and how to write your own observable APIs.

Securing Angular and Node.js Apps in Azure

Brian Clark

Microsoft

We all agree security is important, but did you know how easy it is to thwart some of the most common attacks? In this session we'll shed light on how secure application development practices can be easily overlooked. We'll learn the simple steps we can take to secure our web applications from the threat of dangerous vulnerabilities using Node.js, Express and Angular running in Azure. The best defense is a good offense. Learn to go on the offensive to protect your web apps in the cloud.

Simplify and Improve your Code with the New Features of C# 7.1

Mads Torgersen

Microsoft

Join Mads as he takes you on a tour of the latest features in C# and shows you key scenarios where you can improve your applications while reducing the amount of code you need to write. Mads demo-filled session will offer keen insight into the design of the C# language and how the features were chosen to be shipped.

Software Project Design

Juval Lowy

IDesign, Inc.

Much as the need to design the system, you must also design the project: from scheduling resources behind the services, the staffing distribution, examining the planned progress and even to validating your plan, and accommodating changes. This requires understanding the inner dependencies between services and activities, the critical path of integration, the available floats, and the risks involved. All of these challenges stem from your design and addressing them properly is a hard core engineering task – designing the project. In this intense session Juval Lowy shares his approach software project design, along with his unique insight for delivering software on schedule and budget. You will also see how to deal with common misconceptions, typical roles, and responsibilities in the team.

Spinning Up Node.js for .NET Developers

Jeremy Foster

Microsoft

Most of us are familiar with .NET, but what's this Node.js thing? Node.js is taking the world by storm and developers can no longer afford to avoid it entirely. So, maybe it's time to at least get the concepts in mind and see what sort of value it can bring to your business. Who knows? You may even end up loving Node.js as much as I do.

In this session, I'll very clearly describe the anatomy of Node.js itself and the anatomy of a Node.js project. I'll do some concept mapping to .NET so you'll understand it quickly.

Besides sample code, I'll speak to the massive and growing node community and I'll show you some fun productivity shortcuts and tooling!

WOMEN IN TECHNOLOGY LUNCHEON WEDNESDAY, NOVEMBER 1



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Come to network and spend some quality time with our speakers and other attendees.

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In this session you'll learn:

- Anatomy Node.js and a Node.js project
- When to use it. When not to.
- Installing and using Node.js
- The REPL
- Hello world
- Packages and modules
- Node tooling FTW!

SQL Server Containers for Developers

Julie Lerman

The Data Farm

Thanks to Docker and Windows Containers, it's now possible to have a no-fuss, full SQL Server instance on your development, test or QA machine. You can use SQL Server for Linux in a Docker container on any platform that supports a Docker engine or SQL Server in Windows Containers. The containers allow you to instantly spin up one or more SQL Servers as needed, wipe them out, then restart a clean instance when the time is right. This makes for a killer developer environment to have the full power of SQL Server without the fuss. It also is a boon for automated test environments where you need to run integration tests against SQL Server. This session will focus on using Docker to get, run and manage SQL Server for Linux instances. You'll also learn about persisting data and how to create and share an image with your own database already on it. Bonus lessons will include using command line SQL and the mssql extension for Visual Studio Code.

The 7 Ds of Development: Deliver with Confidence

John Papa

Microsoft

Are you done delivering that code? What is done? Are you confident it will stay up and running? Are you confident that the bug you fixed didn't break something else? Are you confident someone else could pick up your code and run with it? Writing code is the easy part, everything after it is the hard part. Following the 7 Ds of development will help you deliver higher quality product and make you feel more confident about saying "it's done."

The Missing Piece

Juval Lowy

IDesign, Inc.

Over the past decades, the software development industry has carved out a massive core body of knowledge of software architecture and design patterns. And yet, fundamentally, our industry is not better off because of it, as it falls behind trying to cope quickly with ever changing requirements and increased complexity, coupled with dwindling budgets and outsourcing constraints. A dissonance exists between the ivory tower theoretical world of best practices and the grim reality in the trenches. In this visionary session, Juval Lowy will articulate the root causes of the problem, propose contemporary solution comprising of tools, process and a new profession, literally a missing piece in the puzzle he calls the business architect. Finally, Juval will predicate the impact and inflection adopting his approach will have on the livelihood and prosperity of every software architect and developer.

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The Power of Roslyn: Improving Your Productivity with Live Code Analyzers

Kasey Uhlenhuth

Microsoft

Three years ago we open sourced the C# and Visual Basic compilers and exposed their functionality through APIs as the Roslyn project. The Roslyn analyzer API empowers the developer community to be more productive by lighting up their own features in the editor in real-time—meaning anyone can write a refactoring, code fix, code style rule, or code diagnostic. Come learn more about the Roslyn project and what these live analyzers mean for you and your productivity.

The Rise of JavaScript-driven Native and NativeScript

Todd Anglin

Progress

Struggling to create high performance mobile apps with JavaScript? Wish you could use your web development skills to create truly native mobile apps? Struggle and wish no more. A new wave of next-generation platforms promises to radically improve the state of the art for web developers trying to build high-quality mobile apps. “JavaScript-driven Native” platforms, like NativeScript, finally combine the skill and code portability of the web with the unlimited power of native platform UI. Put an end to your cross-platform app development woes and join this session to learn about JavaScript-driven Native and the open source platforms like NativeScript leading the way.

Roll Out Self-Service BI Successfully

Bhupesh Malhotra

GrapeCity

After many years of self-service BI initiatives started by organizations to empower their business users, most still fail user adoption and revert to the traditional BI processes, albeit with new tools. Recent surveys have shown a decline in user adoption even with the new tech available. Why? In this session Bhupesh will discuss the reasons behind the inconsistency in self-service initiatives and their successful adoption. We will uncover the key missing pieces in today's implementations and what you need to look out for in your initiative to roll out self-service BI for your end users. This session will give you a checklist to guide you through a successful self-service BI roll-out.

TypeScript for C# Developers

Jesse Liberty

Independent Developer

C# developers come to TypeScript from a very different perspective than JavaScript developers. In this session, we will cover TypeScript as a first-class language and show its similarities (and differences) to C#.

Using npm Scripts as Your Build Tool

Elijah Manor

LeanKit

If you are building a JavaScript application, then chances are you're already using npm to install your dependencies. In this session, we'll take an example project and slowly start to leverage npm scripts to handle all of our various build needs.

We will start by using existing npm scripts, creating our own custom script, having our scripts run in series and in parallel, using various npm script lifecycle hooks, passing arguments from one script to another, piping data from one process to another, and using environment or config variables within our scripts.

In addition, we will look at several node packages that enable us to use shorthand and wildcard syntax, that will run scripts when either the file system changes or when certain git hooks are triggered, and will provide us various ways to easily find and execute the scripts we want.

We will examine several techniques to split out npm scripts to external files once they get large or complicated. And finally we will address the various things you need to consider when trying to run npm scripts across different environments (Mac, Linux, Windows).

Using VS Code Like a Boss!

Jeremy Foster

Microsoft

VS Code is an amazing IDE. Somehow, Microsoft managed to create a highly capable coding tool that's not too heavy and not too light.

On the surface, Code appears to be a simple, but there are a lot of hidden and extended features each of which has the potential of carving wasted minutes off of your dev day.

In this session, we'll look at keyboard shortcuts, extensions, customizations, and other tips and tricks.

Whether you're editing text files or C++ projects, come learn how to use VS Code like a boss!

Vue.js – The Next Big Thing In JavaScript

Burke Holland

Web Developer

If you feel like modern web development with Angular and React has gotten way too complicated, Vue.js might be the JavaScript framework for you. With over 10K stars on GitHub, Vue.js has vaulted out of relative obscurity to find companies such as GitLab choosing to use it over React. In this session, we'll take a look at why Vue.js is so popular, what makes it different from Angular and React, and how easy it is to stand up and deploy a simple Vue.js application. Vue.js is a brilliant piece of JavaScript engineering, and it just might make you rethink your next app.

SESSIONS

AI

Artificial Intelligence is a primary focus at Microsoft today, including Cognitive Services, Azure Machine Learning, the Bot Framework and more. Join the AI experts from Microsoft along with industry experts to explore this huge new development opportunity. Don't miss the AI keynote with Steve Guggenheimer and the AI workshop.

Artificial Intelligence technologies open the door to new product opportunities, new interfaces to your existing software and the ability to understand your organization's data more deeply than ever before.

Built on breakthrough advances in AI research the cloud, Microsoft is delivering a flexible platform for organizations and developers to infuse intelligence into their products and services using tools and services like Microsoft's Cognitive Services, Azure Machine Learning and the Bot Framework. Microsoft's transparent approach to AI puts your privacy first. Built with enterprise-grade security practices, it helps protect your information and puts you in control. Microsoft's AI principles lead with ethics, accountability, and inclusive design to empower people and organizations, and to drive a positive impact on society.

Microsoft believes that ethics and design go hand-in-hand. AI technology should not only be transparent, secure, inclusive, and respectful—but also maintain the highest degree of privacy protection. At all times, users are educated about how AI technology recognizes and analyses information. Cultural commitments and empowering diversity are key design priorities. This includes protections that secure personal and organizational information in ways that earn trust. Microsoft AI architecture encourage algorithmic accountability that accepts and assesses expected and the unexpected outcomes. The tools guard against bias to ensure proper, representative research so that the wrong heuristics aren't used to discriminate. Ultimately AI technology provides a means to augment human capabilities and assist humanity while respecting human autonomy.

Humanity is at an inflection point in the development and application of AI technologies. The upswing in AI competencies, fueled by data, computation, and advances in algorithms for machine learning, perception, planning, and natural language, promise great value to people and society. However, with successes come new concerns and challenges based on the effects of those technologies on people's lives. These concerns include the safety and trustworthiness of AI technologies, the fairness and transparency of

systems, and the intentional as well as inadvertent influences of AI on people and society.

On another front, while AI promises new capabilities and efficiencies, the advent of these new technologies has raised understandable questions about potential disruptions to the nature and distribution of jobs. While there is broad agreement that AI advances are poised to generate great wealth, it remains uncertain how that wealth will be shared broadly. Microsoft believes that there will be great opportunities to harness AI methods to solve important societal challenges.

The Partnership on AI is a collaboration between AI companies including Microsoft, IBM, Facebook, Google, Apple and Amazon, designed, in part, to invest more attention and effort on harnessing AI to contribute to solutions for some of humanity's most challenging problems, including making advances in health and wellbeing, transportation, education, and the sciences. The partnership is excited about the prospect of coming together to collaborate on addressing concerns, rough edges, and rising challenges around AI, as well as to work together to pursue the grand opportunities and possibilities of the long-term dream of mastering the computational science of intelligence.

Microsoft sees great things ahead for AI, with the potential for these technologies to improve the quality of people's lives throughout the world. The activities of the Partnership on AI will be determined by its partners, but from the outset the hope has been to create a place for open critique and reflection. It is the intention that the Partnership on AI will be collaborative, constructive, and work openly with all. Crucially, the Partnership on AI has been explicitly designed to bring together researchers, academics, businesses, policy makers, and all with an interest in this endeavor, in a structure that ensures balanced governance by diverse stakeholders. We are delighted that you are considering joining us, and look forward to working with you in the years ahead.

Artificial Intelligence (AI) is everything high-tech and cool at Microsoft: Cognitive Services, Azure Machine Learning, HoloLens Mixed Reality and the Bot Framework. And there is so much more. Join the AI experts from Microsoft's other top companies navigating the new AI technologies. Attend the AI keynote and workshop.

We will have quite a lineup of sessions to be given by the best of the best in AI at MSFT, and Microsoft RD & MVPs experts too.



**Evening events Wednesday,
November 1, 2017, 7:00pm**

**SECURITY
after Dark**

Hosted by
**Michele Bustamante
& Brock Allen**

Sponsored by
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SQL after Dark

Join the
**SQLintersection
speakers and attendees
for a drink, trivia,
and prizes.**

Sponsored by
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& SentryOne**

Introduction to the Microsoft CNTK Machine Learning Library

Dr. James McCaffrey

Microsoft

The Microsoft CNTK machine learning library version 2.0 was released in 2017. CNTK allows developers to create powerful machine learning systems to make predictions. In this lively and informative session, Dr. James McCaffrey from Microsoft Research will explain exactly what the CNTK library is, and what CNTK can, and cannot, do. Topics covered include: installing CNTK v 2.0, creating deep neural network prediction models using CNTK, and integrating CNTK with other systems and applications. Join the artificial intelligence revolution with CNTK!

A Lap Around Microsoft Cognitive Services Vision APIs

Tim Huckaby

InterKnowlogy

How would you like to learn how to leverage machine learning in countless Computer Vision use cases the easy way? Recently, Computer Vision Technologies have skyrocketed. Why? Machine Learning and a number of brilliant people working on Computer Vision.

Machine Learning is currently a hot topic and holds a bold promise yet to be truly exploited. But, no matter what your level of understanding of Machine Learning is, we all can agree that it is a broad technology whose pioneers and leaders have a very specific expertise in. In other words, it just does not make sense for all developers to be experts in machine learning. It is more important for developers to understand how to leverage machine learning in your applications.

The Vision APIs of Microsoft Cognitive Services are easy to implement, free to prototype and inexpensive to scale in production. There is a rich set of services and a comprehensive SDK. And best of all the Vision APIs leverage billions of dollars spent in Microsoft Research and cloud infrastructure.

The Vision of Microsoft Cognitive Services (formerly Project Oxford) is for more personal computing experiences and enhanced productivity aided by systems that increasingly can see, hear, speak, understand and even begin to reason.

Microsoft Cognitive Services are a set of APIs, SDKs and services available to developers to make their applications more intelligent, engaging and discoverable. Microsoft Cognitive Services expands on Microsoft's evolving portfolio of machine learning APIs and enables developers to easily add intelligent features – such as emotion and video detection; facial, speech and vision recognition; and speech and language understanding – into their applications. Take a lap around the features and functionality of the Microsoft Cognitive Services Vision APIs with Tim Huckaby to see how powerful these services are and how easy they are to implement in your own applications.

HoloLens Reality Augmentation Using Image Recognition

Robert Alexander
Mario Bourgoin

Microsoft
Microsoft

Say hello to the HoloLens! In this session, we will explore the intersection of augmented reality on the HoloLens and the Microsoft Computer Vision API. We will begin by sharing our vision for the future, and the role that Microsoft Cognitive Services can play, in the growing area of augmented reality. Then, through a series of demos and shared code, you will see how to build from scratch a HoloLens application that recognizes any number of

people, places, and things and superimposes information about them in the user's field of view.

Coming out of this session, you will gain a better understanding of how Computer Vision API can enable augmented reality and write your own HoloLens application – no device required, works on the emulator!

Using Microsoft Visual Studio Code Tools for AI to Create Data Science Solutions that Scale

Ahmet Gyger

Microsoft

This session will cover the full data science lifecycle, from data acquisition to creating a web-service for scoring new dataset, highlighting some of the new features from Azure Machine Learning like versioning, run history, reproducibility. We will use multiple deep-learning frameworks, like Microsoft CNTK and Google TensorFlow, and machine learning packages to illustrate how to infuse AI and ML into your application.

Surveying Wildlife Using Machine Learning

Olga Liakhovich

Microsoft

Estimating population trends, detection of rare species, and impact assessment are just few things that are top of mind for biologists across the world. In this talk, an overview of wildlife monitoring projects that a team from Conservation Metrics and Microsoft is working on and what ML approaches they adopt will be discussed. The talk will dive deeper into the kittiwake birds detection task showing how Azure ML Workbench, The Microsoft Cognitive Toolkit and Tensorflow were used to accomplish that.

Deep Dive – Predicting Subsurface Pump Failures

David Crook

Microsoft

This session will dive into the technical details (IoT, Deep Learning, AI) of how to predict abnormalities and failures in subsurface pumps early enough to prevent catastrophic issues using deep learning techniques. We will begin with a 30,000 foot view of the problem from a use case perspective, move into the architectural and technological component details, and finish with the gritty deep learning based machine learning details.

Azure Bot Service Overview

Paul Stubbs

Microsoft

The Azure Bot Service enables you build, connect, test, and deploy intelligent bots. Bots are apps that users interact with in a conversational way. Bots can communicate conversationally with text, cards, or speech. Bots can leverage Microsoft Cognitive Services to provide advanced AI capabilities around vision, speech, language, and knowledge. Bots can connect with users on over a dozen different messaging applications such as Skype or Facebook Messenger. Bots can extend intelligent agents such as Cortana with new skills. In this session, you will learn about all the new capabilities of the Azure Bot Service and learn how to build intelligent bots.

Active Voice! Using Cognitive Services Speech API's to Put Your Words into Action

John Alexander

Microsoft

Until recently, accurate speech recognition, translation, verification, and processing was the stuff of Science Fiction. Well, it's time to make that reality! In this highly informative and entertaining session, you'll understand how Microsoft Cognitive Services Speech API's enable natural and contextual interaction within your applications and infuse them with artificial intelligence capabilities

for Converting spoken audio into text, using voice for verification, real time translation, or speaker recognition, just like the rest of the Galaxy! You'll learn about speech recognition and how to get started. You'll explore practical applications of Cognitive Services Speech API's including the Translation API to allow our users to communicate in their native language, and then understand a translated app response in real time. You'll also leave with some great tips and next steps to make your apps conversational.

Let's Talk about Conversation Design

Vishwac Sena Kannan

Microsoft

Conversational digital affordances are fast becoming a norm for users everywhere – from the office, to the kitchen; the car to the living room – we can type, tap or talk to all manner of devices, apps, bots and agents to do all manner of things. When designed well, conversational experiences are natural, intuitive and efficient. In this session, we'll provide practical guidance for designing for conversation. We'll cover best practices for creating a great conversationalist and we'll put the guidance to work using the Bot Framework SDK, Cognitive Services such as LUIS.ai and QnAMaker.ai, and show you a preview of Bot Framework's new visual Conversation Designer.

What's New with the Cortana Skills Kit?

Dorrene Brown

Microsoft

Swadheen Shukla

Microsoft

The Cortana Skills Kit helps you easily build intelligent, personalized experiences for millions of users. In this session, you will learn about the Cortana Skills Kit, and how to build skills for Cortana that work across multiple platforms, starting with Windows 10, Android and iOS. You will also learn how the Cortana skills platform works and how to use the new features to build rich, engaging experiences for your users.



WIN a Microsoft Surface Laptop



Visit our Expo Hall, complete the card, and you could win a Surface Book!

SESSIONS SQL



SESSIONS SQL

Our SQLIntersection Fall 2017 line-up is packed with nine full-day workshops over 3 days (2 pre-conference days and 1 post-conference day) as well as over 40 technology-focused (NOT marketing) sessions from which to choose. You'll learn proven problem-solving techniques and technologies you can implement immediately as well as learn about the future of SQL Server. Our primary conference focus is around performance monitoring, troubleshooting, designing for scale and performance, cloud, as well as new features in SQL Server 2012, 2014, and 2016. It's time to determine your 2008 migration strategy – should you upgrade to 2016 directly? This is the place to figure that out!

And, unlike some other conferences, SQLIntersection speakers are all real-world consultants, members of the Microsoft product development or Microsoft customer service / support teams who are also known as the best speakers in the SQL Server community! If you want practical development from REAL experts, this is the place to be!

KEYNOTE **SentryOne Tools for Productivity and Performance** SentryOne

Level: 200

Whether you are hosting in your office, in a data center, or in the cloud, SentryOne covers monitoring, alerting, and tuning to help you get the most out of your servers – including servers that aren't running SQL Server. In this session, your hosts will guide you through time saving strategies for managing performance across hybrid environments - whether you are running physical or virtual servers, SQL Server, Azure SQL Database, APS, or Azure SQL Data Warehouse. You will see demonstrations of SentryOne software highlighting configuration and performance pitfalls, and leave with a better understanding of performance problems you may be currently missing.

KEYNOTE **SQL Server: The Intelligent Database** Jes Borland

Level: 200
Microsoft

You need a database that can quickly help you make decisions for your business. Microsoft is developing many new features, and improving existing features, to create an intelligent database. Automatic tuning, adaptive query processing, and operational analytics are transforming the relational database you know, while Cosmos Database is pushing new boundaries. Join me to learn what investments we're making to make your databases smarter, enabling you to do more.

Advanced Query Store in SQL Server 2016/2017 David Pless

Level: 300
Microsoft

Query Store is a new feature as of SQL Server 2016/Azure SQL Database V12. Query Store is designed to help with query performance troubleshooting by making it easier to identify poorly performing statements and finding scenarios where performance regresses. In this session, we will cover how Query Store can help you identify the changes in query plans and figure out when performance regressions occur.

We will discuss how Query Store collects and presents detailed historic information and how it can be used to reduce the time it takes to diagnose and resolve issues in both SQL Server Management Studio and the DMVs. If a query generates different plans, you can use Query Store to analyze the plan changes, identify possible performance degradation, and even force the query processor to use a particular plan for your query. Additionally, we will show the new Query Store capabilities available in SQL Server 2017 with new QDS reports, wait statistics analysis, and the new execution plan information available in SQL Server Management Studio.

We will also cover automatic detection and tuning in SQL Server 2017 where you can be notified when a potential performance issue is detected by the Database Engine to automatically correct performance problems. Automatic tuning in SQL Server 2017 enables you to identify and fix performance issues caused by SQL plan choice regressions.

Azure Database Options Jes Borland

Level: 100
Microsoft

Database choices in Azure have expanded beyond the SQL Server-like SQL Database. There are several PaaS choices now, including SQL Database, CosmosDB, MySQL, and PostgreSQL. What type of data is most easily stored in each? What are the best features of each? What are the limitations of each? Come to this session so you understand which data store to choose for your application's data and why.

Azure SQL Database for the Production DBA Tim Radney

Level: 200
SQLskills

Have you been wondering what Azure SQL Database is and what it means for you as a production DBA? Azure SQL Database has become an Enterprise-worthy database platform that provides relational database-as-a-service. In this session, you'll get a grounding in the fundamentals of Azure SQL Database from a DBA perspective. First, we'll cover how to create an Azure SQL Database using the Azure Portal and an approach for sizing a new Azure SQL Database. Then we'll cover some of the similarities and differences between on-premises SQL Server and Azure SQL Database. Finally, we will cover how monitoring and performance tuning Azure SQL Database differs from on-premises SQL Server. If you've been considering Azure SQL Database for your organization, this session is for you!

Azure SQL Database Performance Tuning Jes Borland

Level: 200
Microsoft

When using Azure SQL Database, you're paying for performance. In this session, you'll learn what tools and techniques are now available to help you be cost-effective. You'll see how to use features such as scaling, in-memory OLTP, and real-time operational analytics to minimize query run times and optimize resource use. Query Performance Insight and Automatic Tuning will be covered so you know how to monitor your environment and automate tuning. You'll be ready to get the most performance for the least amount of money from SQL Database.

Common SQL Server Mistakes and How to Avoid Them Tim Radney

Level: 200
SQLskills

Making mistakes is natural, but learning from them and avoiding them in future takes effort. There's no substitute for experience or the shared wisdom of others to help you learn what mistakes

to avoid. In this session, Tim will share with you a ton of what he's learned over the years from working and consulting at multiple Fortune-level companies. You'll hear about real-world environments he has worked on where there was a high impact from administrators making mistakes in how SQL Server was configured and administered. You'll learn many proven and accepted best practices for installing, configuring and supporting SQL Server to help your environment run as smoothly as possible and you'll leave with a checklist of items to take home to make sure your SQL Server environment is configured properly.

Conquering Columnstore Indexes Tim Chapman

Level: 300
Microsoft

Introduced in SQL Server 2012, Columnstore Indexes have the power to completely transform a reporting environment. These indexes offer a solution for your reporting workload with an order of magnitude better data compression and query performance over traditional tables and indexes. SQL Server 2016 significantly enhances these indexes so that you can take advantage of them with your OLTP workload to enable something known as Operational Analytics. This session will dig into what Columnstore Indexes are, how they are implemented, and the advantages of using this technology in SQL Server 2016.

Conquering Concurrency Tim Chapman

Level: 300
Microsoft

There is so much more to writing faster SQL Server applications than just tacking on a NOLOCK hint to queries. This session will thoroughly discuss what isolation levels mean in the SQL Server universe, how interaction between resources occurs in each isolation level as well as different adverse effects to each isolation level. The session will include the common SQL Server isolation levels as well as the lesser-known optimistic isolation levels as well as how multi-version concurrency control works with In-Memory OLTP.

Corruption Survival Techniques Paul Randal

Level: 200-300
SQLskills

Your database is corrupt – what do you do? Well, it depends! How critical is the data? Do you know what's really wrong with the database? What does all that DBCC CHECKDB output mean? Should you restore or repair? It's all about limiting downtime and data-loss when a corruption occurs - from knowing the tools to understanding the implications of choices you make. In this demo-heavy session, Paul will give you insight into how to recover from corruption without making things worse. Most importantly you'll get step-by-step instructions for dealing with the more common scenarios.

Data Science – SQL Server R, A Rapid Introduction for SQL Pros! Shep Sheppard

Level: 200
Data Science 2 Go LLC

In this session, using readily available sample data you will see demos that you can go through during the session or take home and practice to get a jump start in SQL Server R. You will learn basic R commands to get you started, basic statistics in R, a walkthrough of simple linear regression and linear regression model interpretation from R Studio. Once the model is perfected, using SQL and Revolution R we will create, store and execute the trained model in SQL 2016. R and T-SQL Scripts will be provided.

Check the conference website for the latest information, DEVintersection.com
Sessions and speakers are subject to change.

Data Science – Visualization and Story Telling Shep Sheppard

Level: 100-200
Data Science 2 Go LLC

One of the four pillars of Data Science is Visualization! You can have all of the data in the world at your fingertips with lightning fast access speeds, but if you cannot represent the data to the consumer in a meaningful way and use it to tell a story, it is of zero value to anyone, and possibly misleading. The principles of visualization are independent of any product or technology so we will stick to principles vs focusing on any software package.

This is a fun interactive session where we will review some very important visualizations in history and the principles behind what makes a good and bad visualization. Some visuals are truly worth a thousand words, or even a thousand lives if done well. By the end of this session you will be able to identify why a visualization is bad or good and how data to ink ratio, chart junk, and the lie factor impact and influence the consumers.

Data Science – Visualizing SQL Server with R Graphics Tools Shep Sheppard

Level: 200-300
Data Science 2 Go LLC

In addition to R's ability to be one of the most flexible statistical learning software packages, it is also an impressive graphics tool for visualization. SQL Server 2016 with R has the ability send data to R and have R drop an image onto a local or shared disk, but this does not even remotely scrape the surface of R's capability, nor is this a convenient way to generate a graphic.

In this session, you will learn how to connect R to any version of SQL using a common ODBC package. You will get an introduction to GGplot, one of the most popular R graphics packages for visualization. We will visualize a few common system queries and a few troubleshooting queries to demonstrate how you can do this on your own. From this session, you will gain the skills to connect R to your SQL Server and send queries to SQL to create graphics. T-SQL Scripts and R Markdown file will be made available to you.

Data Science, the Field – An Introduction for the SQL Professional Shep Sheppard

Level: 100
Data Science 2 Go LLC

The term Data Science and predictive analytics is perched at the top of the Gartner Hype Scale which means, from a marketing and publicity perspective it's as high as it can possibly get – so, what does that mean to you? Data Science has been labeled the sexist job of the new millennium, but what is it exactly, and who is the sexy job jury? This session will discuss the real every day uses of "Data Science" what is the makeup of the field from an education perspective, and a job perspective as company's race commoditize Data Science and demand you get it.

There is a role in the Data Science field for the SQL Server professional, I will break down those barriers and show you where you can fit in, if you so desire. You will leave this session having a better understanding of what Data Science is, what it means to you and your company, and how you can get your foot in the door if you are interested in expanding your skills, from feature engineering, data engineering to model design, or maybe even full-fledged Data Scientist one day.

Dating Responsibly in SQL Server Aaron Bertrand

Level: 200
SentryOne

No, this isn't a session about romance, but it is a topic I am very passionate about: dealing with date and time data within SQL Server. We'll discuss ways to ensure your date-related predicates are arguable and produce accurate estimates, how to

be confident that your date range queries are precise, and the most efficient methods to generate date/time series for reports. There is also a bonus quiz that will make you think twice about using shorthand when dealing with date/time functions.

DBA Mythbusters*Level: 200-300***Paul Randal****SQLskills**

It's amazing how many myths and misconceptions have sprung up and persisted over the years about SQL Server – after 18 years helping people out on forums, newsgroups, and customer engagements, Paul's heard it all. Are temporary tables always a good idea? Does using SSDs mean no fragmentation issues? Should you really plan a backup strategy? Should you add more memory to your server? These are just a few of many, many myths that Paul will debunk in this fast-paced session on how SQL Server operates and should be managed and maintained.

**Developing a Data Warehouse Framework:
Pros and Cons of Common Approaches
with SSIS***Level: 200***Stacia Varga****Data Inspirations**

The good news about SSIS is that it has the flexibility to perform a set of tasks in a variety of ways. This flexibility is also the bad news because there are multiple choices available. When it comes to building an SSIS solution to load dimension and fact tables, there are many approaches you can take. Do you rely totally on native SSIS components, do you use database objects such as views and stored procedures, or some combination of these approaches? In this session, we review common implementation methods and discuss the related pros and cons.

Going Asynchronous with Service Broker*Level: 200***Jonathan Kehayias****SQLskills**

Do you have complex operations that have already been tuned for optimum performance, but still run too long for a good end user application experience? If you do, Service Broker may be the solution. This session will explain the benefits of asynchronous processing in Service Broker compared to other options like SQL Agent jobs or SSIS packages, and how to implement the basic components required. Even in SQL Server 2014, Service Broker lacks a UI integration. Not to worry, this session will show you how to configure Service Broker correctly the first time so you can develop easy, foolproof deployments to solve complicated problems.

**Index Fragmentation: Internals, Analysis,
and Solutions***Level: 200-300***Paul Randal****SQLskills**

As soon as you have more than one index on a table, you're going to start seeing fragmentation. Many people know that this fragmentation is bad, but why is it bad? And what is the best way to get rid of it? Come find out from the person who wrote the tools for detecting and removing index fragmentation. In this session, you'll learn how fragmentation occurs and why the process that leads to it can often be as damaging to performance as the fragmentation itself. You'll also learn how to test for fragmentation, the different methods of removing it, and everything you need to consider when putting together an appropriate fragmentation-management strategy.

**Introduction to High Availability and Disaster
Recovery with SQL Server***Level: 200***Tim Radney****SQLskills**

Are you looking to build a High Availability (HA) and/or Disaster Recovery (DR) strategy for your SQL Server environment? If so, you may be struggling to understand what an HA/DR plan should look like and what options are available to you natively within SQL Server. In this session, Tim will go over the fundamentals of HA and DR technologies built into SQL Server such as Database Mirroring, Log Shipping, Replication, Availability Groups as well as the benefits of Failover Clustering. After attending this session, you will have a better understanding of when to use each HA/DR feature, which version of SQL Server supports which feature, as well as the pros and cons of each.

**Introduction to Performance Troubleshooting
Using Wait Statistics***Level: 200-300***Paul Randal****SQLskills**

One of the first things you should check when investigating performance issues are wait statistics – as these can often point you in the direction for further analysis. Unfortunately, many people misinterpret what SQL Server is telling them and jump to conclusions about how to solve the problem – what is often called 'knee-jerk performance tuning'. In this session, you will learn what waits are, how to analyze them, and potential solutions to common problem patterns.

**Measuring and Managing SSIS Package
Performance***Level: 200***Stacia Varga****Data Inspirations**

Data management and business intelligence solutions require you to quickly transform and move data between systems. When SSIS packages start slowing down, how do you recognize this change in behavior and how do you determine the root cause of the problem? Come to this session to learn how to use log data and other tools to troubleshoot performance problems. You'll also learn how to set up a monitoring solution to capture data for benchmarking purposes before problems arise and for diagnostic purposes when packages start slowing down.

**New T-SQL Capabilities in SQL Server 2016
& Azure***Level: 200***Aaron Bertrand****SentryOne**

Discover the ins and outs of some of the newest capabilities of our favorite data language. From JSON to COMPRESS/DECOMPRESS, from SESSION_CONTEXT() to DATEDIFF_BIG(), and new query hints like NO_PERFORMANCE_SPOOL and MIN/MAX_GRANT_PERCENT, you'll walk away with a long list of reasons to consider upgrading to the latest version.

**Optimizing for OSFA: Catch-All-Queries in
One-Size-Fits-All Procedures***Level: 200***Kimberly L. Tripp****SQLskills**

Do you have generic procedures that address many options all at once? Specifically, do you have just one stored procedure handle many input parameters? It's not impossible to do but the common strategy used (see below) does not optimize work!

```
WHERE (col1 = @param1 OR @param1 is NULL)
```

```
AND (col2 = @param2 OR @param2 is NULL)
```

```
AND ...
```

Come to this fast-paced session to understand how to write generic yet more optimal (and scalable) code. Kimberly will discuss stored

procedure caching and optimization as well as the performance problems that come from OSFA complexities! There are some common solutions (for example, adding OPTION (RECOMPILE) to your code) and while it can drastically improve performance in the short-term, it can also cause other problems in the long-term. Ideally, a hybrid solution is needed. Attend this session and you'll learn (and see!) the best way to write procedures that find the right balance between recompiling too often and not recompiling enough! In the end, this gives you the most optimal performance without wasting resources such as CPU.

**Power BI Premium and Power BI Report Server
– Features and Capabilities***Level: 200-300***David Pless****Microsoft**

Power BI has been an important self-service technology in the hybrid alignment of Microsoft's cloud and on-premises reporting capabilities. In this session we will cover the new Power BI Premium release as a scalable business intelligence solution where you can design reports to analyze data and share insights with performance in mind. Power BI allows users to analyze data and obtain answers quickly with rich dashboards available on any device. We will cover how Power BI expertise will transfer across reporting modalities so you can mix and match on-premises/cloud components and benefit from unique business scenarios.

Some of the key areas we will focus on is leveraging Power BI for report creation and building dashboards, publishing to PowerBI.com from MS Office and SSRS, leveraging custom visualizations, visualizing and operationalizing data with R scripting, and more.

We will also cover how Power BI can further allow you to extend your existing hybrid reporting investments with Power BI Report Server.

**Reporting and Analysis in Your Transactional
Database***Level: 300***Jes Borland****Microsoft**

Everyone wants to run reporting queries in the active transactional database, so they can have access to real-time data. They may not realize the impact this has on performance, but you do. What strategies can you use to combine these workloads and avoid long-running queries, blocking, and frustrated users? In this session, I'll cover using indexes, isolation levels, operational analytics, and even Availability Group readable secondary replicas to deliver the data your users need without negatively impacting transactional performance.

Securing SSIS from the Inside Out*Level: 200***Stacia Varga****Data Inspirations**

How well do your SSIS development and deployment practices protect your data? SSIS connections and components enable access to servers and data sources which in turn opens your environment to potential security vulnerabilities. In this session, you see how data can be compromised from an insecure SSIS configuration and leave with specific steps you can take to mitigate those risks.

SQL Server 2016 In-Memory OLTP Tables*Level: 200***Justin Randall****SentryOne**

In-Memory OLTP in SQL Server 2016 has been reborn. Many limitations within the previous versions have been removed, making it a viable option for a variety of workloads. In this session, we will highlight critical issues in implementing and managing

SQL Server 2016 instances and databases containing In-Memory tables. The bulk of this session will be spent walking through the process of identifying candidate In-Memory tables, migrating an on-disk table to an in-memory table and comparing performance.

**SQL Server 2016/2017 AlwaysOn Availability
Groups: Windows and Linux Deployments***Level: 300***David Pless****Microsoft**

Introduced in SQL Server 2012, Always On Availability Groups is an enterprise-level high-availability and disaster-recovery solution. Always On Availability Groups maximizes the readiness of a set of user databases as an availability group that can fail over as a unit. In this session we will discuss the improvements available in SQL Server 2016/2017 and how these improvements increase the viability to leverage AlwaysOn Availability groups as a High Availability/Disaster Recovery solution for reporting and OLTP workloads across Windows and Linux environments.

We will demo SQL Server 2016 use cases of 'increased number of secondaries' and the improved diagnostic capabilities (fn_hadr* functions, AlwaysOn cluster DMVs).

We will cover SQL Server 2016 specific capabilities such as improved log performance, multiple replica automatic-failover, failover based on database failure, readable secondaries for 'round robin' load-balancing, and basic AlwaysOn 'Availability Groups' for Standard edition.

Finally, we will cover SQL Server 2017 on Linux using Pacemaker clustering and read-scale Availability Group deployments.

In SQL Server 2017 there are now two different architectures for availability groups. Always On availability groups can now provide high availability, disaster recovery, and read-scale balancing.

In Windows, failover clustering provides the cluster manager while in Linux, you can use Pacemaker.

The other new architecture is a clusterless, read-scale availability group. We will discuss how a read scale availability group provides support for non-HADR, read-only workloads.

**SQL Server 2016/2017: Enterprise Reporting
and Mobile Capabilities***Level: 200-300***David Pless****Microsoft**

SQL Server 2016/2017 is packed with new capabilities with SQL Server Reporting Services, Mobile Report Publisher, and the new Power BI Report Server. In this session we will outline the new features and capabilities of SQL Server 2016/2017 Reporting Services and Power BI Report Server that puts the power of data in the hands of everyone. We will cover the alignment of Microsoft's hybrid reporting solutions.

We will dive into paginated and interactive mobile reporting, KPIs, dashboards, and other new features in both SQL Server 2016/2017 and Power BI Report Server.

We will focus on the new capabilities of 'Mobile Report Publisher' and web based deployment which allows for greater consumption of your report capabilities across the enterprise.

We will finally cover Power BI integration, improvements to report design, and the new SSRS 2016/2017 Reporting Services portal.

SQL Server Backup and Restore*Level: 200***Tim Radney****SQLskills**

Everyone knows that it's critical to have backups but it's amazing how few people make sure those backups can be restored properly! Too many times to count, Tim has been brought in by organizations to help recover failed systems where administrators

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simply didn't know how to properly restore SQL Server backups when they have to. In this session, Tim will explain the various types of backups that can be taken and demonstrate how to restore each of them. Apart from covering the common full, differential and log backups, Tim will also cover partial, filegroup, and COPY_ONLY backups, backing up to and restoring from a URL, backup encryption, and how to perform a hack attach for the ultimate tail log restore. There's something here for everyone to learn!

SQL Server Indexing: Strategies for Performance

Kimberly L. Tripp

Level: 200
SQLskills

SQL Server has clustered and nonclustered b-tree indexes, clustered and nonclustered columnstore indexes, and even a few other specialized types of indexes. It can be hard to know the correct direction to take for your data? Join Kimberly in this session to get an overview of when and why you should use combinations of these with emphasis on answering these main questions:

- How does SQL Server version affect indexing choices / strategy?
- What criteria should you look for in data access patterns and usage patterns?
- What makes a good base table structure (clustered b-tree v. clustered columnstore)?
- What can you do now? What are your plans for migration?

If you want to know the RIGHT way to index your tables – from DESIGN to TEST to PRODUCTION – this is the place to be!

SQL Server Performance Tuning: Eliminating Low Hanging Fruit

Jonathan Kehayias

Level: 300
SQLskills

You know they are there, those small issues that affect performance and are easy to fix, but finding them can be a challenge. This session will show you how to find the low hanging fruit in your environment, explain why the problem exists, and step through how you can make the necessary changes to boost your SQL Server's performance with a minimal amount of effort. Jonathan will show you how to find common schema and code design problems that help you get the most bang for your buck when performance tuning SQL Server. By focusing on real-world examples with reproducible workloads, you will easily be able to see the impact of common problems and learn how to fix them quickly for improved performance from the least amount of effort.

SQL Server Performance Tuning: Plan Cache Analysis

Jonathan Kehayias

Level: 300
SQLskills

The plan cache in SQL Server has a wealth of information available to assist developers and DBAs with performance tuning. This session will show how to query the plan cache to find plan information and then how to parse the XML plans contained in the cache to identify missing indexes by query, high cost parallel queries with high usage counts, implicit column conversions caused by data type mismatches, and other interesting information about how queries have executed in the system.

Statement Execution and the Plan Cache

Kimberly L. Tripp

Level: 300
SQLskills

How you execute your data requests can have a profound effect on performance and reuse. Did you ever wonder where that

estimate (in the showplan) comes from? Is it correct or, is it way off? Why? You've probably heard that many of your problems are related to statistics. Potentially, you've even updated statistics only to find that it "fixes" the problem. However, what you might be seeing is a false positive. And, it doesn't always work. Come to this session to find out how you should be executing your statements for the best performance, caching, and reuse! We'll look at ad hoc statements, dynamically constructed statements, and sp_executesql (e.g. forced statement caching) and I'll debunk the mysteries around estimates so that you can solve performance problems the RIGHT way! If you want to demystify SQL Server's decisions used for statement execution, query plans, and plan caching – this is the place to be!

Statistics and Estimates: What You NEED to Know!

Kimberly L. Tripp

Level: 200
SQLskills

When SQL Server processes a query, it can be difficult to understand "why" it chose the method it did. In this session, Kimberly will define and demo when statistics are used and why it's so important to have accurate and up-to-date statistics. If you've been confused about how SQL Server comes up with the estimates that it does – this is the place to be!

T-SQL: Bad Habits & Best Practices

Aaron Bertrand

Level: 200
SentryOne

In this session, you will learn about various anti-patterns and why they can be bad for performance or maintainability. You will also learn about best practices that will help you avoid falling into some of these bad habits. Come learn how these habits develop, what kind of problems they can lead to, and how you can avoid them - leading to more efficient code, a more productive work environment, and, in a lot of cases, both.

From its early beginnings, SQL Server has been touted as "self-tuning, yet you've heard there are a variety of knobs and switches available to impact performance. Are you curious to know what they are, what they do, and when to use them? In this session, you will learn about server and database configuration options and trace flags that can impact performance, alter default behaviors, and help your troubleshooting efforts.

TempDB Configuration, Monitoring, and Troubleshooting for Performance

Justin Randall

Level: 200
SentryOne

TempDB is a critical shared resource on every SQL Server instance. In this session, DBAs and Developers will learn the role of TempDB in query processing and SQL Server maintenance tasks, and leave with a checklist of essential items covering configuration, monitoring and performance troubleshooting.

Understanding Logging and Recovery

Paul Randal

Level: 300
SQLskills

Just what is the transaction log and why is it there? Some of the most misunderstood parts of SQL Server are its logging and recovery mechanisms. The fact that the transaction log exists and can cause problems if not managed correctly seems to confound many DBAs. In this in-depth session you will learn the mysteries of the transaction log – its architecture and behavior under different recovery models- as well as how logging and recovery work in SQL Server. This is essential knowledge you need for understanding how backup, restore, log-shipping, database mirroring, and other technologies work.

Using Service Broker, Encryption, and Replication with Availability Groups

Jonathan Kehayias

Level: 300
SQLskills

Availability Groups have become incredibly popular since being introduced in SQL Server 2012 as an HA/DR solution. However, the interoperability of AGs with other common features in SQL Server like Service Broker, Transparent Data Encryption, standard encryption, and more isn't just a simple deployment. In this session you'll learn the compatibility requirements for using common SQL Server features with Availability Groups, the problems you'll likely run into, and how to have a successful deployment. Everything you'll learn is based on extensive experience working with clients using Availability Groups in a variety of production scenarios.

Why All SQL Developers Should Use Perfmon Counters

Tim Chapman

Level: 300
Microsoft

Performance Monitor is one of the most misunderstood tools for any SQL developer or administrator. Mastering this tool can unlock secrets that no other toolset can easily expose. In this session, we will look at not only how to effectively capture and measure perfmon counters, but we will also look at which counters are important for troubleshooting, when to use them, important combinations of counters, and how to use these counters to troubleshoot common SQL Server issues.

Writing Faster Queries

Tim Chapman

Level: 300
Microsoft

CPUs are running faster now than ever before, solid-state drives are replacing spinning disks, and database servers have terabytes of RAM. And yet we still suffer from poor database performance. Why? Because a poorly written query will bring even the best hardware to its knees. For truly great performing systems there

is no substitute for properly written queries, good indexes, and a database design that takes advantage of all SQL Server has to offer. And for this we rely on the skills and expertise of DBAs and database developers. Join Microsoft SQL Server Certified Master, Tim Chapman to learn how to spot common query performance killers and how you can take advantage of new features in SQL Server 2014 to make your queries as fast as possible.

SQLIntersection Closing Panel & RunAs Radio Recording

Level: All

Hosted by Richard Campbell of RunAs Radio and featuring Paul S. Randal, and Kimberly L. Tripp with cameos from other SQLIntersection speakers

Bring your remaining questions to our closing panel and have some great fun with this highly interactive and always entertaining session hosted by Richard Campbell of RunAs Radio. Check out our past show recordings:

- Fall 2013 SQLIntersection here: <http://runasradio.com/default.aspx?showNum=341>
- Spring 2014 SQLIntersection here: <http://www.runasradio.com/default.aspx?showNum=369>
- Fall 2014 SQLIntersection here: <http://www.runasradio.com/default.aspx?showNum=397>
- Spring 2015 SQLIntersection here: <http://www.runasradio.com/default.aspx?showNum=423>
- Fall 2015 SQLIntersection here: <http://www.runasradio.com/Shows/Show/447>
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A sampling of sponsors and exhibitors:



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Interested in sponsoring or exhibiting? There are some **great opportunities available!**

Please contact Rod Dunlap at 480.917.3527 or rod@devintersection.com.

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SharePoint Office 365



Come learn about SharePoint 2016 and its new features with on-premises as well as all the additional upgrades that focus on easier integration with cloud-based Office 365 services. This one of a kind event will provide you information on content management, team collaboration, user experience across devices and how the cloud can be blended into existing on-premises scenarios in new and exciting ways.

KEYNOTE

Office 365 & SharePoint: The Journey Continues

Dan Holme

Microsoft

Build Your Customized Intranet with Modern Communication Sites in Office 365

Dave Feldman

Modern Communication Sites in Office 365 make it easy for users to generate professional looking intranet sites in Office 365 that look great on any device. Dave will share real-world tips and tricks from a real-world enterprise deployment of communication sites. We will build a complete communication site together showcasing what's new and different. Join this brand new session and leave creating bold, branded, responsive sites with no coding or customization skills required.

Building Applications for Office 365 and SharePoint with ReactJS

Scot Hillier

Independent Consultant

ReactJS is a JavaScript framework for building user interfaces. This popular framework is at the heart of the new SharePoint Framework (SPFX). In this session, ReactJS and TypeScript will be used to build client-side web parts for Office 365 and SharePoint; both on-premises and in the cloud. Attendees will exit the session with new ideas for building client-side web parts for Office 365 and SharePoint.

Building Real-world solutions with PowerApps, Flow and Azure Functions

Dave Feldman

Shire

Come learn how to quickly create new SharePoint app user experiences with PowerApps and have them available on your user's mobile devices. If that's not enough excitement, we'll explore how Flow can enable us to orchestrate processes across platforms and clouds. This demo-heavy session will build a number of application scenarios that you can start using right away.

Building Your First App with the Microsoft Graph (Office 365 APIs)

Rob Windsor

The Microsoft Graph is to Office 365 what the REST API and CSOM are to SharePoint. It is a unified endpoint that provides access to a set of RESTful web services (the Office 365 APIs) that enable you to build applications that work with users, groups, calendars, files, tasks, people, notes and more. This session shows you how you can use free tools and resources to build an application that uses the Microsoft Graph. The topics discussed in the session include: using the API explorer, registering an app with Azure Active Directory, Visual Studio tooling, using the REST services, and using the SDK.

“Caching-in” for SharePoint Performance

Sean McDonough

Cardinal Solutions

Caching is a critical variable in the SharePoint scalability and performance equation, but it's one that's oftentimes misunderstood or dismissed as being needed only in Internet-facing scenarios. In this lively and fast-paced session, we'll build an understanding of the caching options that exist within the SharePoint platform: object caching, BLOB caching, page output caching, the Office Web Applications' cache, and SharePoint 2013's Distributed Cache service. We'll examine each option in detail, discuss how it works, identify how it can be controlled, and cover common pitfalls that may impact its use. We'll also step through a handful of “what if” scenarios at the end of the presentation to test audience knowledge (just for fun, of course!) Those who attend this session will leave with the knowledge needed to leverage and control caching in their own SharePoint environments.

Converting Your Existing JavaScript Solutions to the SharePoint Framework

Mark Rackley

PAIT Group

For years now client side developers have been creating amazing applications by embedding scripts into pages in SharePoint. While powerful, this process has created a lot of headaches including security concerns, broken pages, deployment limitations, and unsupported altering of the page. Enter the awesomeness of the SharePoint Framework! The SharePoint Framework brings Client Side Development to the enterprise and addresses the issues with script injection and cowboy coders. But what are you going to do with all those customizations you created by putting script on a page using Content Editor Web Parts, Script Editor Web Parts, and SharePoint Add-ins? Tabs, Sliders, Charts, Graphs, DataTables, Reports! How can you possibly get started? Do you have to rewrite all your scripts as TypeScript?

Never fear! Well... fear less! Join client side development veteran Mark Rackley as he walks you through the step by step process for converting a legacy solution built using jQuery , JavaScript and a Content Editor Web Part to a SharePoint Framework Client Web Part. In this session attendees will learn essential SPFx skills including:

- How to reuse existing JavaScript with little to no modifications of existing files and without having to learn TypeScript!
- How to correctly reference third party libraries and load external css
- How to take your solutions to the next level by taking advantage of properties
- How to overcome common obstacles and hurdles for creating SPFx Client Web Parts.
- How to package and deploy your solutions to the CDN of your choice

Customizing SharePoint with the SharePoint Framework Extensions

Scot Hillier

Independent Consultant

The SharePoint Framework (SPFX) has already been used by developers to create compelling web parts for use with SharePoint online and is coming soon to SharePoint 2016 on-premises. Recently, Microsoft announced support for deeper customizations with SharePoint Framework Extensions. SharePoint Framework Extensions add new capabilities to extend the user experience of SharePoint within modern pages and document libraries. This session will cover the different types of extensions developers can create and show practical examples of extensions in action.

Attendees will leave the session with lots of new ideas for customizing SharePoint.

Deep Dive into Designing a SharePoint 2016 Physical Architecture

Vlad Catrinescu

Independent Consultant

SharePoint Server 2016 is the latest release of SharePoint Server and includes awesome features for business users, but quite a few changes for SharePoint IT Professionals. New features such as MinRole, combined with new requirements such as mandatory Office Online Server configuration for Business Intelligence, will change the way that SharePoint Administrators will design their SharePoint farm. In this course, you will learn how to design your SharePoint Server 2016 Farm according to your business needs and Microsoft Best Practices.

Designing for Optimal Performance in SharePoint Online

Sean McDonough

PAIT Group

In the last several years, the growth in popularity and compelling value of Office 365 have resulted in many organizations adopting SharePoint Online rather than building an on-premises implementation. Developing for SharePoint Online shouldn't be approached with the same mind-set as developing for SharePoint on-premises, though. In this session, we'll take a look at how SharePoint Online is implemented and how it differs from a typical on-premises implementation. We'll examine why developing for the cloud is different, identify common development concerns, and demonstrate some good (and bad) development approaches. We'll also look at some hands-on troubleshooting techniques that are available for diagnosing common SharePoint Online performance problems, as well as some solutions that can be applied. At the conclusion of this session, participants will have a greater understanding of SharePoint Online, how to develop for it, and how to perform basic performance troubleshooting in the cloud.

eDiscovery and Compliance Options for Protecting Your Intellectual Property in Office 365

Stephanie Donahue

PAIT Group

Microsoft has finally done it- there is finally enough security and protection in the cloud that even the largest companies are moving workloads to Office 365. As the person responsible for implementing Office 365, you may also be responsible for proving you can protect your organizations intellectual property as well. Come to this session to find answers to frequently asked questions on eDiscovery, security and compliance.

Getting Started with PowerBI

Dave Feldman

Shire

Microsoft Power BI makes it easy to create interactive data visualizations on a diverse number of data sources in the cloud or hybrid and deliver them to any device. Come to this demo-heavy session to learn how to get started today and bring greater visibility to the data that matters to you.

Introduction to the Office Dev PnP Core Libraries

Rob Windsor

The Office 365 Developer Patterns and Practices (PnP) team have released two libraries focused on increase developer productivity by reducing the amount of code needed when building remote applications. The Office 365 Developer PnP Core Component is a

SESSIONS

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managed code library that extends and encapsulates commonly used Client Object Model operations. The Office 365 Developer PnP JavaScript Core Library is a JavaScript library that simplifies the use of the REST API. After a brief discussion of the Office 365 Developer Patterns and Practices project as a whole we'll move to demos showing how you get started using the Office 365 Developer PnP Core libraries.

Managing Data Recovery in SharePoint

Brian Alderman

MicroTechPoint

SharePoint Server includes several content recovery options for SharePoint administrators, site collection administrators, and end users. Educating your users, and site collections and lighten the burden on your SharePoint farm administrators. Using Central Administration or PowerShell you can backup and restore your entire farm or components of your farm. You can also perform more granular content backups by exporting site collections, site, libraries, and list. SharePoint also provides the option of recovering site collections, sites, list and libraries from content databases that are no longer part of the SharePoint farm. With a vast majority of your SharePoint content stored in SQL Server it is imperative that you have an efficient way to recover items or entire databases as quickly as possible. This discussion will introduce the Best Practices framework that will allow your SharePoint administrator to configure SharePoint and SQL Server for quick content recovery minimizing the downtime and providing shorter yet achievable Service Level Agreements (SLAs).

Optimizing SQL Server for SharePoint

Brian Alderman

MicroTechPoint

A vast majority of the content accessed via SharePoint is stored in SQL Server. Knowing that an incorrect configuration of SQL Server can have a detrimental impact on the performance of SharePoint, it is important to understand the integration of these two products. Often DBAs are familiar with how to manage SQL Server, but may not be familiar with some nuances that SQL Server has when integrated with SharePoint. In this session, we will demonstrate how some default SQL Server settings negatively impact SharePoint and what changes can be made in SQL Server at both the instance and database level to improve the performance of SharePoint. This session will introduce the Best Practices framework that will allow your SharePoint administrator, and/or your DBA, to configure SharePoint and SQL Server to provide optimal performance for your SharePoint.

Planning for Office 365 Mobile Access

Stephanie Donahue

PAIT Group

The mobile landscape for Office 365 is vast and quickly changing. A year ago our focus was on simply getting to the cloud. Today many of us have already deployed Exchange, Skype, and SharePoint in Office 365 and are beginning to wonder what's next as we begin to look at mobile access to Office 365. Join this session to learn about:

- Overview of available Office 365 Applications and real world use scenarios
- Discussing SharePoint Responsive Design vs using an App
- Learn about the latest offerings for Microsoft's Enterprise Mobility & Security Suite
- The future of mobile forms and workflow with PowerApps and Flow

PowerApps and SharePoint for the Win

Cathy Dew

Microsoft

Building business applications is never easy. There are always conflicting priorities between IT and business and most apps

SESSIONS

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don't merit the time and cost of traditional software development. PowerApps is an enterprise application platform for delivering line-of-business apps without writing code. It fundamentally transforms and accelerates how organizations provide employees seamless access to business apps and information. The PowerApps and SharePoint Online story is constantly expanding and integration makes it easier than ever to build line-of-business apps using your SharePoint data.

PowerApps, Microsoft Flow and the Common Data Service Empower Your Business

Cathy Dew **Microsoft**

Modern application developers can create powerful solutions. But now information workers can create productivity apps without code that can deliver immediate business impact. Join me to learn more about how to build custom solutions for enhanced collaboration, data analysis, account processing, business intelligence and mobile integration – using Microsoft Flow, PowerApps, and the CDS.

Practical PowerShell Patterns for Office 365

Seb Matthews **Independent Consultant**

You've seen a gazillion sessions bringing you 'An Introduction to PowerShell & Office 365' but there's more to it than the basics, right?

PowerShell provides a seriously powerful (ahem!) platform for leveraging the scale of possibility within Office 365. Now that the Office 365 Professional no longer has to focus on infrastructure, he or she can focus their energy on making light work of even tenant-wide requirements that would take lots of time and be prone to error if executed in the Admin Center.

Looking through a slightly different lens, this session brings ideas from the wider world of DevOps into the Office 365 space and looks at how automation and orchestration can be brought to bear in Office 365 to great effect.

Walking through topics including:

- Provisioning (Sites, Teams, Groups, etc.)
- Licensing
- User Management *and more*

This session will take you in a different direction from your average PowerShell for Office 365 journey.

The Modern Office 365 IT Pro

Seb Matthews **Independent Consultant**
Jason Himmelstein **Rackspace**

With the advent and widespread adoption of Office 365, SharePoint admins are now expected to deliver much more than just feeding and watering a SharePoint farm.

Added functionality of SharePoint Online, the ever marching Modern experience and the raft of other new SharePoint functionality now means that the SharePoint Professional is expected to know much more about much more.

Looking across the Office 365 stack, this session walks you through the nuts and bolts of what it means to be an IT Pro in the brave new world of Office 365. A world where you'll be expected to be part admin, part developer, part network guru and part Shaman.

During the session we will take a practical look at:

- Sites, Groups, Teams and more
- Flow, PowerApps and PowerBI
- Interaction with Exchange
- Integration with Skype for Business

All through the lens of a Modern IT Pro. Bring your mind to this session as there is no option to 'switch back to Classic mode' once you've seen the future.

Transforming Your Organization into a Digital Workplace

Stephanie Donahue **PAIT Group**
Mark Rackley **PAIT Group**

Transforming into a digital workplace can seem like a daunting task, with outdated legacy apps to support, skeptical stakeholders who can't envision the benefits, and workforce that must be retrained. Where do you even start? Learn how a global manufacturing company is undergoing a digital transformation using Office 365. From simple steps like moving email to the cloud, to more complex collaboration needs with joint venture partners, you'll learn about the challenges, quick wins, and long term success of an organization committed to change. You will leave encouraged that no matter where your organization is starting from, that a digital transformation through Office 365 is possible!

Understanding and Leveraging Microsoft's Enterprise Mobility + Security (EMS) Suite

Sean McDonough **PAIT Group**

The Enterprise Mobility + Security (EMS) Suite is a product offering that receives a lot of attention and "air time" from Microsoft nowadays. Although many enterprise architects, technical decision makers, and IT Pros have heard about EMS, many don't know exactly what it is and what it does. In this session, we will be looking closely at EMS and the growing set of identity, security, data, and device management problems that it addresses. We will look at each of the workloads and capabilities within EMS, how they work, and some practical examples of solutions involving each. We will also clear-up the confusion that frequently arises in understanding where Office 365 ends and EMS begins. By the end of this session, you will understand what EMS is, the role that it plays in secure cloud solutions, and why it is a natural fit for consumers already leveraging Office 365 in their day-to-day operations.

What Do YOU Get from SharePoint Hybrid?

Vlad Catrinescu **Independent Consultant**

Every time you see a blog post about SharePoint 2016, you see the word hybrid. But what exactly is a hybrid infrastructure and what features does the business user get? In this session, we will look at SharePoint Hybrid from a business user point of view to understand what features we get out of it. We will look at Hybrid Team Sites, Hybrid Search, Hybrid Extranet sites and more!

What's New in the World of SharePoint & Office 365 (this month)

Jason Himmelstein **Rackspace**

Is SharePoint's breaking news breaking you? Having trouble keeping up with what is going where with all of the new features that are rolling out to SharePoint & Office 365? Join us for a group therapy... er... Tech Briefing on what's new in the world of SharePoint & Office 365 with Microsoft MVP, Jason Himmelstein. He will demo a few new & nifty things as well as discuss what has changed recently in the world of Office 365 & SharePoint. You never know what is going to be happening in the fast paced, Cloud First world of the Microsoft Collaboration space between when this abstract was written and the date of this event, so come get your learn on!

WORKSHOPS

All tracks

PRE-CONFERENCE Workshops Sunday, October 29, 2017 9:00am - 4:00pm

Developing Microservices Solutions on Azure Day 1

Michele Leroux Bustamante **Solliance, Inc.**

Microservices architecture is the current evolution of application and enterprise architecture that takes the principles we remember from service-oriented architecture and applies them more discretely. When you apply microservices architecture patterns and principles you decompose monolithic applications into smaller, more manageable and atomic parts - creating full-stack service silos - leveraging advances in containerization and DevOps culture. This approach enables teams to respond to rapidly changing business requirements more efficiently. Embracing microservices architecture also forces you into better practices related to design and operations – by necessity – arguably as it should be.

This workshop begins with a short journey through the evolution of microservices principles and patterns with design discussions of real applications and visual topologies. Following this comes the fun of exploring developing microservices for Azure and taking advantage of Azure-specific features and platforms that support this type of solution. Topics covered will include containerization with Docker, Azure Web Apps, Azure Container Service, Azure Service Fabric, Event Hubs and Azure Functions. You'll learn how each of these can be leveraged in a microservice solution targeting Azure, how to deploy simple microservices solutions through to large scale enterprise solutions that combine many of these features to handle different requirements. You see how to go through the process of design, development, deployment, upgrade, scale and operational use cases. By the end of this workshop you will have a taste of several types of microservices solutions and deployment topologies using Azure features - to inform how you might apply the same features in your own solutions.

Getting Started with DDD and ASP.NET Core

Steve Smith **Ardalis**

This is a hands-on workshop; please bring your own laptop with tools installed.

Link for setup instructions.

<http://bit.ly/AspNetCoreDDDLab0>

Writing SOLID, testable ASP.NET Core applications has never been easier, but it may require a change in the way you typically structure your projects and their dependencies. In this hands-on workshop, you'll build a working ASP.NET Core application, complete with unit and integration tests. Along the way, you'll learn the basics of Domain-Driven Development, and how to apply them to ASP.NET Core application development. The principles and patterns will apply to developers working with previous versions of ASP.NET MVC, as well. Presented by one of the primary authors of the official ASP.NET Core documentation (docs.asp.net).

Identity and Access Control for Modern Applications and APIs Using ASP.NET Core Day 1

Brock Allen
Workshop will have some hands-on aspects. Bring your own fully charged laptop.

Modern application design has changed quite a bit in recent years. "Mobile-first" and "cloud-ready" are the types of applications you

are expected to develop. Also, to keep pace with these demands, Microsoft has revamped their complete web stack with ASP.NET Core to meet these architectural demands.

Needless to say, you also have to secure these apps.

Multi-platform, multi-client, and highly-mobile users bring a new set of challenges, so the approaches of the past are no longer appropriate for modern applications. This three-day workshop is your chance to dive into all things security related to these new technologies. Learn how to securely connect native and browser-based applications to your back-ends and integrate them with enterprise identity management systems as well as social identity providers and services.

This workshop covers everything you need to know to build modern and secure web, native & mobile applications. The foundation will be Microsoft's latest technology stack, but will also include IdentityServer4, which is the officially recommended framework for building token services.

Introduction to XAML for the Universal Windows Platform

Billy Hollis **Independent Consultant**

Bring your own fully charged laptop with Visual Studio 2015 or 2017 (with all required bits installed for UWP apps)

XAML is Microsoft's primary platform for native Windows apps, and if you are going to be working in the Windows device ecosystem, you need to know it. If you have not started that journey, or if you began but did not feel you learned how to really use its power, this workshop should be your hands-on launch point. You'll start by building simple screens and progress through some of the most powerful capabilities of the platform. At each step, important concepts will be explained, and you'll put the pieces together to illustrate them, using building blocks with the key XAML syntax already written for you.

Ultimate Angular Workshop – Fundamentals

Dan Wahlin **Wahlin Consulting**
John Papa **Microsoft**

Workshop will have some hands-on aspects. Bring your own fully charged laptop.

Do you want to get a jumpstart on developing with Angular so you can build robust Web applications? Come join us for two fun and informational days of learning. Learn how to work with data binding, build components and services, send and receive data to and from a server using Http, RxJS and observables, lazy load modules with routing, best practices you can employ in your applications, and much more! You'll also learn how to get up and running quickly with the Angular CLI. Bring your laptop, as you'll be writing Angular code using what you learn in several hands-on exercises. What You'll Learn:

- ES2015/TypeScript core concepts
- Getting started with the Angular CLI
- Bootstrapping your application
- The Role of Components · Using Decorators · Binding data to views · Input and output properties
- Dependency injection and providers
- Managing remote data calls using services
- Http and RxJS Observables
- Routing and page navigation · Lazy loading and route guards
- Template-driven and reactive forms
- Tips, tricks and best practices
- **More! A second day of the Ultimate Angular Workshop is on Monday, October 30.**

WORKSHOPS

All tracks

Data Due Diligence – Developing a Strategy for BI, Analytics, and Beyond

Level 200

Stacia Varga Independent Consultant

For decades, traditional structured business intelligence solutions have enabled users to repeatedly ask and answer the questions that are well-known to the organization. In recent years, new technologies have emerged—predictive analytics, big data analytics, machine learning, among others. These technologies allow users to explore new sources of data in new ways and answer questions in ways that were never before possible.

Have these new options for using data sounded the death knell for the Enterprise Data Warehouse? How can you build a BI strategy that preserves the best of your existing investments and lays the groundwork for a future state of your data platform?

In this workshop, we discuss the process for assessing your organization's current level of BI maturity and identifying the future level of BI maturity that aligns technologies and best practices with your users' business needs. We explore the difference between traditional BI and data analytics solutions and review scenarios for expanding your BI capabilities to include analytics. We also evaluate how the following tools and capabilities in the Microsoft stack can support your data analytics requirements:

- Integration Services (SSIS) and Azure Data Factory for managing data transfers and transformations
- Analysis Services (SSAS) - Multidimensional and Tabular - for analytical calculations and KPIs
- Reporting Services (SSRS) for sharing analytic insights
- Power BI - on-premises and cloud service - for data transformations, modeling, analytical calculations, and sharing analytical insights
- R, Python, and Azure Machine Learning for advanced analytics

By the end of the workshop, you'll have some new ideas and inspiration to get started with your own BI and analytics roadmap and understand which technologies and skills are needed to build a foundation for your organization's next-generation BI.

This workshop is ideal for you if you are:

- A DBA that needs to support a technical infrastructure for BI, analytics, and data science
- A manager that needs a better understanding of how these technologies fit together to manage data as a strategic asset
- An IT professional with a data background that wants to learn how the BI space is evolving and wants to prepare for the future

Combine this workshop with the Data Science workshop on Monday and either the Partitioning or Reporting Workshops on Friday to create a conference agenda that prepares you for taking your data management skills to new levels!

Performance Troubleshooting Using Waits and Latches

Level 300-400

Paul Randal SQLskills

One of the first things you should check when investigating performance issues are wait and latch statistics, as these can often point you in the right direction for further analysis. Unfortunately, many people misinterpret what SQL Server is telling them and jump to conclusions about how to solve the problem - what is often called 'knee-jerk performance tuning'. In this full-day workshop, you'll learn how to investigate and interpret wait and latch statistics - practical techniques you can take home and start using immediately. You'll also learn what a myriad of wait and latch types actually mean and how you can investigate lightly-

documented types to gain insight into what causes them. Don't waste time when it comes to performance troubleshooting; wait statistics are the fastest route to understanding your problems and this workshop will help you get there faster.

SQL Server 2016 and 2017 New Features and Capabilities

Level 300-400

David Pless Microsoft
Tim Chapman Microsoft

Join Microsoft Field Engineers and MCMs Tim Chapman and David Pless as they discuss the exciting new SQL Server capabilities in SQL Server 2016 and SQL Server 2017. They will explore leveraging the In-Memory OLTP feature as well as a thorough overview of Columnstore Indexes. In-Memory OLTP, is a new engine for transaction processing, integrates into the SQL Server Engine improving database performance by 5-30x. Columnstore indexes, which are optimized for data-warehouse style queries, can provide up to 10x performance improvements for some of the most demanding decision support queries.

Also being explored will be the new database engine features included since SQL Server 2016, such as Query Store, Temporal tables, Always Encrypted, Dynamic Data Masking, and Row Level Security.

Finally, we will dig into SQL Server 2017 features with New Dynamic Management Views and functions, Improvements to Online Index Maintenance, TempDB management, Adaptive Query Processing, Improvements to Query Store and Automatic Database Tuning, Temporal Table Retention Policy support, improvements to SQL Server tools, and more!

Automate Your Business Processes with Tools from Today and Tomorrow

Level 100

Vlad Catrinescu Independent Consultant

One of the big advantages of implementing SharePoint in the enterprise is process automation. By using Out-of-the-box workflows as well as easy to create custom SharePoint Designer Workflows, Power Users are able to automate processes, avoid repetitive tasks, and boost team productivity. Furthermore, new tools such as Flow and PowerApps which are exclusive to Office 365 at the moment allow you to easily create workflow and forms, and integrate SharePoint with other systems.

In this full day workshop, you will learn how to use SharePoint Designer, Flow and PowerApps to automate your business processes in SharePoint On-Premises and SharePoint Online.

- Learn how to create SharePoint Designer Workflows to automate business processes in SharePoint On-Premises, or SharePoint Online
- See real-life demos of cool workflows made easy
- Learn about PowerApps and Flow, the latest and greatest tools developed by Microsoft to help you automate business processes.

PRE-CONFERENCE Workshops Monday, October 30, 2017 9:00am - 4:00pm

Introduction to .NET Core 2.0 and ASP.NET Core 2.0 Hands-on Workshop

Scott Hunter Microsoft
Workshop will have some hands-on aspects. Bring your own fully charged laptop.

Bring your laptop and you will learn about .NET Core and ASP.NET Core directly from the team that built it in this high-

powered workshop. .NET Core is the new open source, cross platform version of .NET that is available on GitHub. ASP.NET Core is a lean and composable framework for building web and cloud applications. ASP.NET Core is fully open source and available on GitHub. When should you consider .NET Core? How do you share your .NET code across .NET Framework, .NET Core and Xamarin. What does that ASP.NET Core mean for compatibility? What powerful new cloud scenarios does ASP.NET Core enable? We'll cover .NET and ASP.NET Core both inside and outside the IDE, on Windows, Mac, and Linux.

NativeScript: Cross-Platform Mobile Apps with Angular

Todd Anglin Progress

Do you want to build native mobile apps for iOS and Android? Are you a web developer? Then NativeScript is the perfect framework for you. NativeScript is an open source framework for creating native mobile apps using the skills of the web developer: JavaScript, CSS, and simple tag-based markup. Create rich, high-performance iOS and Android apps with 100% native UI using many of the skills you already have. In this full-day workshop, you will gain all of the skills you need to immediately begin creating cross-platform native apps using the free and open source NativeScript framework.

Topics covered include:

- NativeScript framework core concepts and getting started
- Accessing native device capabilities with JavaScript
- Building native mobile apps with Angular
- Common app patterns (login, settings, data bound list and more)
- Styling NativeScript with CSS
- Targeting specific devices and screens
- Debugging and deploying to devices

There has never been a better (and easier) way for web developers to create native mobile apps. Impress your co-workers, clients and boss by joining this workshop and becoming a cross-platform mobile app developer in a day!

Ultimate Angular Workshop – Routing, Guard, Performance, and Deployment

Dan Wahlin Wahlin Consulting
John Papa Microsoft
Workshop will have some hands-on aspects. Bring your own fully charged laptop.

Continued from Fundamentals on Sunday, October, 29.

Identity and Access Control for Modern Applications and APIs Using ASP.NET Core

Day 2 Day 2 will build upon Day 1

Brock Allen
Workshop will have some hands-on aspects. Bring your own fully charged laptop.

Modern application design has changed quite a bit in recent years. "Mobile-first" and "cloud-ready" are the types of applications you are expected to develop. Also, to keep pace with these demands, Microsoft has revamped their complete web stack with ASP.NET Core to meet these architectural demands.

Needless to say, you also have to secure these apps.

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WORKSHOPS

All tracks

enterprise identity management systems as well as social identity providers and services.

This workshop covers everything you need to know to build modern and secure web, native & mobile applications. The foundation will be Microsoft's latest technology stack, but will also include IdentityServer4, which is the officially recommended framework for building token services.

Developing Microservices Solutions on Azure Day 2

Michele Leroux Bustamante Solliance, Inc.
Day 2 builds upon Day 1

Microservices architecture is the current evolution of application and enterprise architecture that takes the principles we remember from service-oriented architecture applies them more discretely. When you apply microservices architecture patterns and principles you decompose monolithic applications into smaller, more manageable and atomic parts - creating full-stack service silos - leveraging advances in containerization and DevOps culture. This approach enables teams to respond to rapidly changing business requirements more efficiently. Embracing microservices architecture also forces you into better practices related to design and operations - by necessity - arguably as it should be.

This workshop begins with a short journey through the evolution of microservices principles and patterns with design discussions of real applications and visual topologies. Following this comes the fun of exploring developing microservices for Azure and taking advantage of Azure-specific features and platforms that support this type of solution. Topics covered will include containerization with Docker, Azure Web Apps, Azure Container Service, Azure Service Fabric, Event Hubs and Azure Functions. You'll learn how each of these can be leveraged in a microservice solution targeting Azure, how to deploy simple microservices solutions through to large scale enterprise solutions that combine many of these features to handle different requirements. You see how to go through the process of design, development, deployment, upgrade, scale and operational use cases. By the end of this workshop you will have a taste of several types of microservices solutions and deployment topologies using Azure features - to inform how you might apply the same features in your own solutions.

Zen of Architecture

Juval Lowy IDesign, Inc.

For the beginner architect, there are many options for doing pretty much anything. But for the Master architect, there are only a few. In this dense workshop Juval Lowy will explain his approach to large system analysis and design, using volatility to decompose a system into its comprising services. Juval will contrast it with the most common mistake done in architecture, using functionality to identify services. These are universal design principles, and Juval will use examples from software and non-software systems alike. You will also see how to overcome the real hurdles architects face pursuing volatility-based decomposing, simple and practical techniques for identifying areas of volatility, common telltale signs or "smells" when your design is still functional when using the Method, IDesign's approach for system architecture. You will learn how to literally mechanize software system design, how to do it quickly and effectively. Juval will also discuss logical tiers, security, interoperability, scalability, transactions, and other aspects of a modern application. The workshop concludes with discussion of how modern architecture fits into development processes such as Agile and how to design the development process for maximum productivity.

WORKSHOPS

All tracks

Building a Modern Database Architecture with Azure

Level 200

Jes Borland

Microsoft

Developers have many choices when deciding where to store application data. Options within Azure are maturing, making them more appealing than ever. In this workshop, you'll learn about SQL Database setup, scaling, security, and performance. Provisioning and scaling single databases and elastic pools, securing databases from logins to encryption, and performance tuning features such as Automatic Tuning and Query Store will be discussed. You'll also get a glimpse into newer data stores that have been introduced, such as Cosmos DB, MySQL, and PostgreSQL. Attend this workshop so you can confidently choose the right option for storing your data, and get maximum benefit from the tools provided with it!

Data Science: Introduction to Statistical Learning and Graphics with R and SQL Server

Level 200-300

Shep Sheppard

Data Science 2 Go LLC

Data science is dominating the hype cycle of every technology, R and Python integration are now in SQL Server and both languages have been the mainstay for many statisticians and data scientists since the early nineties. While it is convenient to have a PhD, it is certainly not a requirement to start taking advantage of R and the over 11,000 packages that can be added to expand R's functionality. In this workshop, we will start with a brief history of R and Revolution R, introduce the language of R, get you started with one of the more powerful graphics packages GGPlot, learn how to connect R to any version of SQL Server, connecting SQL Server 2016 to R and write visualizations to add to your SQL Server troubleshooting toolbox. No Data science and statistical learning workshop would be complete without some statistics 101 with linear regression, so we will wrap up the day with an introduction to statistics in R and linear regression model interpretation and the pitfalls of p-value.

Extended Events: WTF or FTW!

Level 200-400

Jonathan Kehayias

SQLskills

Let's cut to the chase: it's time to start using Extended Events (XE). We know you have your reasons for avoiding them, but it's time to leave SQL Trace and Profiler behind and enter the new world of XE. This full-day pre-conference session leaves nothing out. In order to be ready to fully use Extended Events when you walk back into the office, you'll spend the entire day learning what Extended Events are, how they work, and how to create XE sessions that capture the data you need while minimizing the impact on system performance. In addition, we'll step through complex issues using advanced troubleshooting so you can see how XE will help you solve problems that you couldn't with Trace. This is your opportunity to learn exactly what you need to start using Extended Events in your SQL Server 2012, 2014 and 2016 environments.

Managing Office 365 Masterclass (Manage like a Pro IT Pro!)

Jason Himmelstein

Rackspace

Seb Matthews

Independent Consultant

Office 365 is pushing the boundaries of knowledge of the traditional SharePoint IT Pro. We're being asked to work less with the infrastructure that we're familiar with and more with technologies that compliment SharePoint such as Azure, Active Directory, Networks and the other elements of Office 365.

In order to get the very best out of Office 365 we need to think less

like SharePoint people and more like the generalists that IT Pro's used to be in years gone by.

This Masterclass is a fast paced day packed with guidance on how to manage Office 365 effectively, efficiently and for the benefit of the user community you are servicing.

Through the day we will work through:

- What do we need to manage in Office 365?
- Managing through the Portal
- Managing with Mobile Devices
- Management with PowerShell

When you come to this Masterclass prepare to take part! The Masterclass is designed to be interactive and to provide some focus on the topics that you, the attendee, are interested in. Bring your questions, use cases and problems with you – we'll try to work them in as much as possible as real-world examples of how to effectively manage Office 365.

Building Applications for Office 365 and SharePoint with the SharePoint Framework

Level 300

Scot Hillier

Independent Consultant

SharePoint 2016 includes a new page and part development model called the SharePoint Framework that enables fully-supported client-side development for customizing SharePoint sites. The SharePoint Framework is based on modern client-side development technologies including Node, TypeScript, React, and WebPack. All of this means that there are many development options for Office 365 and SharePoint whether on premises or in the cloud. In this workshop, modern client-side technologies will be used to build customizations and applications for Office 365 and SharePoint. Attendees will exit the workshop ready to build Office 365 and SharePoint applications with the SharePoint Framework.

POST-CONFERENCE Workshops Thursday, November 3, 2017 9:00am - 4:00pm

ASP.NET with NoSQL Database Workshop

Matthew D. Groves

Couchbase

Workshop will have some hands-on aspects. Bring your own fully charged laptop.

The workshop will show developers how to build a full-stack CRUD application with Couchbase Server. Angular will be used for the front end, and application code will be written using ASP.NET WebAPI. Couchbase will be used as the backend database.

Attendees will learn:

- Different options to install Couchbase Server
- Basic configuration of Couchbase Server
- Data modeling for NoSQL applications
- Basic N1QL syntax to manipulate data
- How to use the Couchbase SDK to perform CRUD operations
- Couchbase SDK design patterns and anti-patterns
- Effective use of developer tools such as Query Workbench, Couchbase CLI, and REST API
- How to create a simple Couchbase cluster using Docker or cloud platforms such as Amazon and Azure

This workshop is intended for a broad range of developers interested in using Couchbase Server (or other NoSQL databases).

Prerequisites: In addition to good wifi access (hopefully not necessary, but just in case), basic development prerequisites

include: Visual Studio 2015+/Visual Studio Code, admin privileges to install software, Node/npm/Angular2 installed, 8gb RAM, plenty of hard drive space. (Optional: an Azure account already setup, Docker).

I Will Make You a Better C# Programmer – 2017 Edition

Kathleen Dollard

Microsoft

Kathleen's back with an all new round-up of deep dive topics and critical skills! If you're an intermediate to advanced .NET programmers ready to explore commonly misunderstood or overlooked aspects of C# and the .NET framework, this workshop is for you.

This year's workshop starts with a pragmatic look at the current state of the .NET roadmap. Then you'll dive into how execution transfers and data moves through your application. This deeper view of what the compiler and runtime do will help you understand performance implications and better predict generics, overloads and overrides behavior. You'll also get a deeper understanding of delegates and lambdas, learn how to read MSIL (Intermediate Language), and get an introduction to Roslyn compiler trees.

Then, you'll spend an hour working together on a series of puzzles focused on program execution, including inheritance, generics and performance. These puzzles also lay the groundwork for you to use unit tests to explore questions about the .NET framework on your own.

After lunch you'll learn more about functional approaches in C#. You can use the approaches you'll learn in almost any version of C# and this will build on the morning's discussion of delegates and lambdas. You'll see how you can apply functional refactoring to your own code to reduce redundancy and improve comprehension. You'll also see how C# 7 continues the trend toward more functional features in C#.

This day focused on program execution ends with a session about where execution matters most – your production applications. You'll learn more about logging and tracing systems and how to prepare your application for ongoing monitoring and those times you really need details about what just went wrong.

This workshop will make you a better coder. It's new material, so if you've come before, come back for new insight. You know how vast the .NET framework is and how subtle C# can sometimes be – get better at building great programs in this amazing environment.

Intelligence & Machine Learning in Microsoft Azure

Zoiner Tejada

Solliance, Inc.

Workshop will have some hands-on aspects. Bring your own fully charged laptop.

Most materials about machine learning focus on the details around model building. While that is important, as a developer what is really important to you is that you understand both model creation and model operationalization. Succinctly, this workshop is really about the end game of delivering a successful solution in Azure- how you operationalize the model and integrate intelligence into your solution architecture.

For those unfamiliar with machine learning concepts, we will provide a background so you that you understand the key tools in the toolbox (data transformation, supervised learning modules, unsupervised learning modules) and the value that Azure ML and R Server bring to the larger solution (such as classification, clustering and predictive analytics). As a developer, you will leave with a good sense of how models are programmed across

WORKSHOPS

All tracks

multiple languages including R, Scala and Python, as well as how they can be composed visually using the designer provided by Azure Machine Learning.

We will cover the pipeline of how you need to prepare your data, how you perform model training, and how to architect your solution so that the model training can be done with data at scale (e.g., exceeding 10 GB and reaching Terabyte scale) in the situations that require it. We cover the gamut of model creation from local training on your dev box to remote training with Azure ML, HDInsight and SQL R Services. You will learn how models are trained in Azure Machine Learning via training experiments, as well as via programs that leverage the parallel algorithms in HDInsight with Spark and the RxSpark context, and how you train a model without ever leaving your SQL database by using T-SQL to execute embedded R scripts against tabular data managed by SQL Server.

With your model in hand, we'll tackle an issue that surprises developers new to machine learning- how to leverage the trained model from their programs. Operationalizing your model is the critical last mile in getting value out of your effort. Here we'll cover the gamut of operationalization options from local prediction to remote prediction with Web Services and Stored Procedures. Not knowing your options for how to operationalize, or not having a plan for operationalizing and integrating into your application can mean significant delays in bringing the value of your model to your application because you will see wasted time in transcoding models to different productions languages (like converting from R to C#), questions about the parity of that converted model to the original, finding your solution for operationalization does not scale well or wasting money on approaches that are simply inefficient for hosting operationalized models.

After integrating our model into our solution, our journey continues. Here we will pause to reflect on and appreciate the build versus buy decision- in some cases we may not have to go through the trouble of building and operationalizing our own model at all because Microsoft Cognitive Services already provides what our solution needs, in a convenient REST API form.

With an end-to-end, intelligent solution in place we turn our attention to the subtle follow-on problems we need to address, such as how we ensure our model is continuing to perform and how we re-train the model with new information over time to keep it current and accurate. Come to this workshop and leave equipped to develop intelligent solutions end-to-end using Microsoft Azure.

React Fundamentals Workshop

Elijah Manor

LeanKit

This workshop will have some hands-on aspects. Please bring your own fully charged laptop.

Facebook's React library is one of the major choices when creating a Single Page Application (SPA). In this workshop, we will combine lecture along with hands-on labs to reinforce the concepts that we cover.

Initially, we will start by describing what React is, who uses it, and why it's a compelling choice to use. After taking a high-level overview of React components, we will start building an application over the duration of the workshop.

Unlike some of React's competitors, it's fairly small and not complex on its own. For a comprehensive SPA, you'll need much more than just React alone. We will introduce other libraries and technologies that complement React and that are readily used by the React community.

As we build our React application we will continue to add new features and refactor our approach as the app gets more

WORKSHOPS

All tracks

complex. In addition, we will address how to detect performance bottlenecks, talk about unit testing tools, build a basic pattern library, and discuss various approaches when styling components.

Developing Modern Cloud Applications in Azure

Paul Yuknewicz

Microsoft

You've heard about the benefits of developing cloud applications for Azure. Now you'll get your hands dirty and experience these for your self: developing, deploying, scaling, and debugging. Come join the Microsoft experts that built ASP.NET, Azure and Visual Studio and let's build some scalable cloud apps. We'll step you through a fast path to get existing apps up on Azure. We'll also show you how to build modern scalable cloud app patterns for Web App and worker microservices using Docker. We'll also show you our tips on how to be incredibly productive building and debugging your app using Visual Studio, and we'll share our experiences together. This abstract will be updated as the event approaches. Please check the website for additional information.

SQL Server 2016 / 2017 and Power BI Reporting Solutions

David Pless

Level 300-400

Microsoft

Join Microsoft Technical Specialist David Pless as we explore the capabilities of Power BI desktop, hybrid reporting, and the new capabilities of Power BI Premium and Report Server. In today's ever maturing world of enterprise reporting, self-service business intelligence, and data science we must be ready to quickly analyze and visualize data anywhere. With Power BI, self-service capabilities has expanded to all data-workers beyond enterprise reporting to mobile platforms, embedded application solutions, as well as advanced analytics.

With Power BI Premium and Report Server, we now have a scalable solution where dedicated hardware powers scheduled cloud-based reporting and where Power BI Report Server brings self-service cloud capabilities on-prem.

In this workshop, we will focus on these capabilities along with SQL Server Reporting Services and Mobile Report Publisher. We will cover improvements to paginated reporting, interactive and mobile reporting, KPIs, dashboards, and other new features in SQL Server 2016 / 2017. We will demo dashboard brand control, Microsoft Office integration, performance analysis and best practices, monitoring reporting performance, and High Availability and scale-out for reporting architectures. We will also cover application scenarios with Power BI embedded, Power BI Apps, and scenarios with Advanced Analytics including Twitter analysis, IoT, and Narrative Science.

Key areas include SSRS and Power BI Report Server features, Power BI reports and dashboards, report scheduling and deployment, custom visuals, and application use cases.

Common SQL Server Mistakes and How to Correct Them

Tim Radney

Level 100-300

Microsoft

Making mistakes is natural, but learning from them and avoiding them in the future takes effort. There's no substitute for experience or the shared wisdom of others to help you learn what mistakes to avoid and how to correct them. In this full-day workshop, aimed at developers working with SQL Server as well as junior/accidental DBAs, Tim will share with you a ton of what he's learned over the years from working and consulting at multiple Fortune-level companies. You'll hear about real-world environments he has worked on where there was a high impact from administrators making mistakes in how SQL Server

was configured and administered. We will cover key topics such as backups, recovering from disasters, database maintenance, consistency checks, security reviews, installation best practices, and monitoring and troubleshooting performance issues. By the end of the day you'll be more comfortable with your ability to support SQL Server because you will know what you need to do (and what not to do!) and have a checklist of items to take home to make sure your SQL Server environment is configured properly.

Very Large Tables: Optimizing Performance and Availability Through Partitioning

Kimberly L. Tripp

Level 200-400

SQLskills

Partitioning is really just a concept. In implementation there are many ways to "partition" a very large table (VLT). You can use table partitioning (introduced in 2005) and you can use partitioned views (introduced in 7.0). Of course, the table partitioning option must be better because it's newer, right? Actually, not always! However, PVs aren't always the best architecture either. To be honest, "partitioning" large data sets can be complicated. There are many pros and cons to each approach (individually) but combining these strategies can often yield phenomenal gains.

We'll start by discussing workloads, architectures, limitations, and design considerations. Is your database more OLTP-focused with management wanting more and more analysis done "real-time" (and, you're keeping more and more data around longer)? Or, is your system split – where data is regularly moved from OLTP to a purely relational data warehouse? Have you optimized these regular loads from production? Once we've categorized your system, then we can really dive into the appropriate architecture and how to get it right!

In this full-day, fast-paced workshop, Kimberly will show you the pros and cons to each architecture as well as the best architecture to solve all of the deficiencies in each individual approach to partitioning.

Topics covered:

- Partitioned Views
 - Pros/Cons
 - Design considerations/architecture
- Partitioned Tables
 - Pros/Cons
 - Design considerations/architecture
- Combining PVs & PTs
- Performance, statistics, and large tables frustrations
- Filtering v. Partitioning
- Maintenance considerations

SharePoint Online Development Options

Rob Windsor

Independent Consultant

Mark Rackley

PAIT Group

For the last few years innovation for SharePoint has been taking place exclusively in SharePoint Online. This innovation is happening at a very rapid pace; there seems to be something new or different every week or two. It can be tough for developers to keep up with these changes and understand the options they have when developing for SharePoint Online. In this workshop we will explore these options, see how they apply to different problem sets, and discuss their strengths and weaknesses. Over the course of the day we'll look client-side development with JavaScript, building add-ins with the SharePoint Add-In Model (a.k.a. App Model) and building client-side web parts with the SharePoint Framework. Note: while this workshop focuses on development for SharePoint Online, much of the content also applies to development for the on-premises versions of SharePoint.



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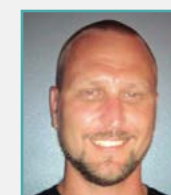
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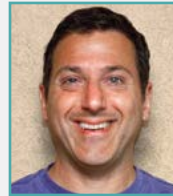
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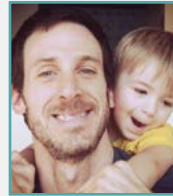
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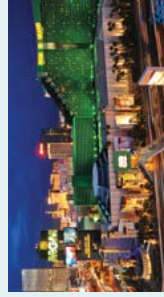
MICHELE L. BUSTAMANTE
CIO & Architect, Solliance



ROBERT GREEN
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