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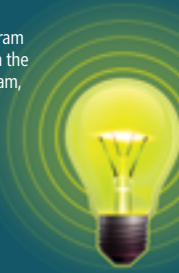


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Our roster also features your favorite industry experts who work out in the field, create solutions, train, consult and author books you've come to trust. They will help sort out the plethora of new technology so you know what works today and what to plan for tomorrow. They will share tips, techniques and solutions on the software your company uses now. There will be many opportunities to cross over product tracks and understand the importance of the intersection of tools, teams and technologies.

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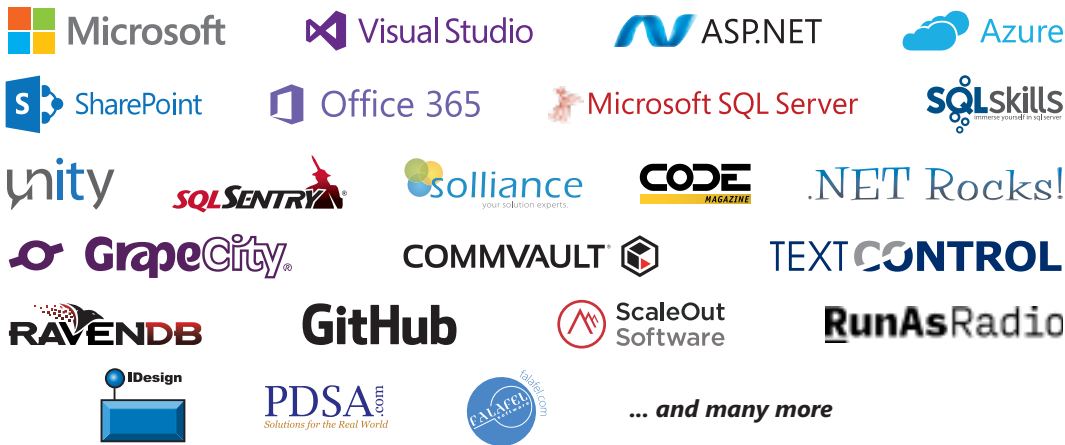


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SATURDAY, APRIL 16, 2016	
9:00am – 4:00pm	Pre-Pre-Conference Workshops
SUNDAY, APRIL 17, 2016	
9:00am – 4:00pm	Pre-Pre-Conference Workshops
MONDAY, APRIL 18, 2016	
7:30am – 4:00pm	Registration Opens
9:00am – 4:00pm	Pre-Conference Workshops
TUESDAY, APRIL 19, 2016	
7:30am – 5:00pm	Conference Registration
7:30am – 8:30am	Continental Breakfast
8:30am – 9:45am	Keynote
9:45am – 10:30am	Coffee Break, Expo Hall opens
10:30am – 11:45am	Breakout Sessions
11:45am – 12:00pm	Break
12:00pm – 1:00pm	Breakout Sessions
1:00pm – 2:15pm	Lunch
2:15pm – 3:30pm	Breakout Sessions
3:30pm – 4:00pm	Break
4:00pm – 5:00pm	Breakout Sessions
5:00pm – 6:30pm	Expo Hall Open
6:30pm	Evening Events
WEDNESDAY, APRIL 20, 2016	
7:30am – 5:00pm	Conference Registration
7:30am – 8:30am	Continental Breakfast
8:30am – 9:30am	Keynote
9:30am – 10:15am	Coffee Break, Expo Hall open

WEDNESDAY, APRIL 20, CONTINUED	
10:15am – 11:30am	Breakout Sessions
11:30am – 11:45am	Break
11:45am – 1:00pm	Breakout Sessions
1:00pm – 2:15pm	Lunch, Expo Hall open
2:15pm – 3:15pm	Breakout Sessions
3:15pm – 3:45pm	Snack Break, Expo Hall
3:45pm – 5:00pm	Keynote/Panel
5:00pm – 6:30pm	Expo Hall Raffle
6:30pm	Evening Events
THURSDAY, APRIL 21, 2016	
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	Breakout Sessions
2:45pm – 3:15pm	Ice Cream Break
3:15pm – 4:15pm	Keynote & Panels
4:15pm – 4:30pm	Break
4:30pm – 5:00pm	Closing and Prizes
FRIDAY, APRIL 22, 2016	
9:00am – 4:00pm	Post-Conference Workshops

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Amazing event with cool things happening in the white spaces.

Scott Hanselman



Sessions

## Keynote

**Scott Guthrie**

Description coming soon

## Keynote: The State of .NET, ASP.NET, and Open Source at Microsoft in 2016

**Scott Hanselman**

A lot has happened in Open Source at Microsoft this last few years. We've all accomplished a lot. Let's look at the highlights and lowlights of open source in ASP.NET and .NET. Where have we been and where are we headed?

## Keynote: Go To There and Back Again

**Douglas Crockford**

The March of Progress is not a stable thing. It moves in fits, and frequently changes direction. N steps forward. M steps back. Can we get there from here? Are we there yet?

JavaScript has become incredibly popular, and yet is little loved and much hated. And it is trying to change while petrified by its own popularity. We'll look at the history of some current controversies in language design, starting with Dijkstra's letter to the editor. A go-to technology is sometimes useful and so must be eliminated.

## Introduction to ASP.NET Core 1.0

**Scott Hunter**

**Scott Hanselman**

ASP.NET Core 1.0 is a lean and composable framework for building web and cloud applications. ASP.NET Core 1.0 is fully open source and available on GitHub. In this technical talk The Lesser Scotts will put it all into context. What does that ASP.NET Core 1.0 mean for compatibility? What powerful new cloud scenarios does ASP.NET Core 1.0 enable? We'll cover ASP.NET Core 1.0 both inside and outside the IDE, on Windows, Mac, and Linux. ASP.NET Core 1.0 is released and it's in production!

## The Seif Project

**Douglas Crockford**

The web was originally imagined to be a simple, distributed-document retrieval system. It is now being used for applications that go far beyond the system's original capabilities and intentions. We have found ways to make it work, but they are difficult and far too fragile. Many times companies have offered to replace the web with superior proprietary systems, but we rejected them. We have been adding features to the web, but this does little to correct the deep, underlying deficiencies, increasing instead of reducing its complexity.

This session shows a way forward, taking inspiration from our successful transition from NTSC to HDTV. This is a plan to make the web simpler, safer, easier, and as good as we desire.

## My Favorite Azure Security Features – and Why You Should Care

**Michele Leroux Bustamante**

Companies tend to worry more about security up front when they move toward cloud-enabled solutions. Interestingly, platforms such as Azure provide a secure environment beyond what self-managed co-location operations can achieve without significant effort - with a plethora of platform features that help you secure your solutions end to end. In this latest and greatest

session, Michele will discuss the mini-avalanche that comprises Azure security across features. Taking the architect's view of the platform, with illustrations and demos, she'll cover best practices for securing Azure solutions end to end and discuss the tangential benefits of moving to Azure and how it can help you with checking the boxes on those pesky security surveys. Topics will include Azure Security Center, Key Vault, data encryption, data masking, Azure AD, secure network topologies and solution design, compliance and more.

## Aurelia: Next Generation Web Apps

**Rob Eisenberg**

Aurelia is a next generation JavaScript framework for building apps for the browser, desktop and mobile devices. It's easy to learn and use, extremely powerful and built on modern Web Standards. There's no other framework quite like it.

Come join us in this session to learn the basics of Aurelia and get a taste of its simplicity and power. We'll walk through a series of demos showing some unique and powerful capabilities of Aurelia unmatched by other technologies.

## TypeScript and ES6 in 60-ish Minutes

**Dan Wahlin**

The next version of JavaScript (ES6/ES2015) is here but is it ready to use in today's applications? The short answer is "yes"! In this session, Dan Wahlin will walk you through several key features in ES6 and TypeScript and explain how you can leverage these languages in your new and existing applications.

## Angular 2 Testing

**Ward Bell**

Unit and End-to-End testing of Angular 2 applications can be easy with the right tools (jasmine, karma, protractor) and a few tips and tricks gleaned from testing the Angular documentation samples.

## ASP.NET Core 1.0 Deep Dive

**Glenn Condron**

This session will take you deep into the internals of the all-new ASP.NET Core 1.0 framework. This new, fully open source web framework sits on top of the new composable cross-platform .NET Runtime – the Core CLR. We will show you how ASP.NET Core 1.0 enables more choice than ever before. ASP.NET Core 1.0 gives you more choices for platforms, tools, libraries, runtimes, and more.

## Visual Studio Web Tooling

**Mads Kristensen**

Learn how Visual Studio 2015 integrates with popular modern web tools and client-side frameworks to provide a better and more powerful development experience than ever. Join Mads as he walks you through the use of Gulp, Bower and npm and see how Visual Studio 2015 works with these tools to bring new and better workflows to web development.

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## IoT Means Fast Data

**Zoiner Tejada**

Big Data has three forms- volume, variety and velocity. IoT is unique in that tends towards data that is small, but comes predominantly at high speed. How can you build a solution that can handle data arriving this way? How do you manage which devices are allowed to send data to your solution? How do you analyze and report on this data? Come to this session to learn how to apply Azure IoT Hub in connection with Azure Stream Analytics and PowerBI to build your backend to your Internet of Things on Azure.

## Adding Realtime Features to Your Applications with SignalR

**Javier Lozano**

Ever wondered how hard is to add real-time eventing to your ASP.NET application? SignalR 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 interesting in adding real time eventing to your applications today, you don't want to miss this session.

## Getting Started with the Web Development Toolchain

**Shayne Boyer**

Bower, gulp, and npm may or may not be new terms to you when sitting down for your next application. Getting an understanding of what these tools can do to help inside and outside of your IDE will streamline your development team to a faster path to production. Check out this session for a quick intro into these tools.

## Securing Client JavaScript Apps

**Brian Noyes**

One topic often pushed to the side when talking about SPAs is security. Whether you are talking Angular, Aurelia or some other framework, the short answer is "you can't secure the client side." However, the reality is you still need to secure your application as a whole. In this session, you will learn about what you can and can't do with security in Angular and Aurelia, and how you can protect the application as a whole with a combination of securing the files that compose your application, providing a good user experience for login and authorization in your client-side app, and securing the Web API calls that your Angular app depends on to access the sensitive parts of your application—the data. You'll also learn about other aspects of security that the client side has to participate in, including CSRF/XSRF protection and CORS support. You'll learn all this primarily in the context of using ASP.NET for your hosting environment of your Angular or Aurelia app, but the session will also touch on what the corresponding options are and what support is needed for other back-end hosts such as Node.js.

## Creating Cross-Platform Native Mobile Apps with NativeScript

**Todd Anclin**

There are three primary ways to build apps for mobile screens: web, hybrid and native. While web and hybrid apps share many of the same core concepts and programming languages, building native apps has always required different tools and languages.

Until now. NativeScript is an open source framework that re-uses the skills of the web developer (JavaScript/CSS) to create 100% native apps that run on iOS, Android and Windows. In this session, you'll learn about the NativeScript project, how NativeScript apps work and see how easy it is to begin building cross-platform native apps using JavaScript and CSS.

## ASP.NET 5 Moved My Cheese! How Do I Find It?

**Chris Klug**

ASP.NET 5 is not just the current ASP.NET with a new version number and some new features. It is a complete re-write of the ASP.NET stack. And it has moved the cheese completely. There is a new framework, a new runtime, a new development process and a new IDE. And it is cross-platform and open source...!? And it has new versions numbers that not even Einstein would have been able to figure out! So what does that mean to you? How do you get started? In this session, you will get a walkthrough of the major changes, a run-through of the new versioning, and an introduction to the new way to build ASP.NET applications. It might be different, and it might take some time to get used to, but it is the future of ASP.NET, so understanding it is probably important.

## Azure for ASP.NET Developers

**Javier Lozano**

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 session.

## Framework-Independent JavaScript Angular 2 in 60-ish Minutes

**Dan Wahlin**

Interested in learning about key features that Angular 2 offers and how they can be used to build Single Page Applications (SPAs)? In this session, Dan Wahlin will dive into features such as data binding, components, directives, using ES6/TypeScript languages, annotations and much more. If you're interested in getting a quick look at several of the key features, then this session is for you!

## Building Applications with Office 365

## Implementing Web Security in Your ASP.NET Applications

**Javier Lozano**

Implementing single sign-on or API security within your ASP.NET applications can seem like a daunting task. In this session, we'll cover how to quickly and easily implement single sign-on and API security features in your applications using open source tools. If you're currently trying to implement security in your apps, or are looking for ways to extend your current implementation, this is a session you'll want to check out.



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# Architecture becomes important in today's environment.

Juval Lowy



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## React to the Future

Elijah Manor

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 start unpacking 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's Flux architecture, introduce the concept of isomorphic JavaScript, and identify other libraries that are common when building a full application.

## CSS for Developers

Elijah Manor

If you relate to any of the following personas, you're not alone. CSS for Developers aims to bridge the gap between using CSS to authoring and understanding CSS.

Junior Jacob: Jacob is a junior developer who is new to front-end development and is trying to get his head around it. He just finished watching a PluralSight or Treehouse course on web development; he has learned most of the basics, but desires a deeper understanding of foundational concepts.

Back-End Brian: Brian is a back-end developer who has a strong software development background, but CSS makes no sense to him and usually tries to avoid it. When he has to use it, he gravitates towards drop-in solutions such as Twitter Bootstrap, instead of learning how CSS works.

Mid-Level Melissa: Melissa is a mid-level web developer who is proficient in using CSS, but hasn't kept her skills up-to-date. She has a solid foundation and can build most any site asked of her, but the CSS she authors isn't organized well and is not maintainable. She wants to learn newer and more advanced CSS.

The first part of the session is aimed at getting Jacob and Brian up to speed by introducing foundational concepts such as the Box Model, Specificity, Position, Cascading, and Sizing. Along the way, some advanced concepts that Melissa may have missed will be sprinkled in.

As the session progresses, we will cover newer concepts such as Flexbox, Sass (intro/docs/linting), Atomic Design, BEM, Autoprefixer, and the concept of including your styles in JavaScript. Each persona will walk away with a set of tips, tricks, and techniques that help make CSS easier to organize, understand, and maintain.

## Web Components: The Good, The Bad and The Ugly

Rob Eisenberg

The Web is undergoing a massive upgrade. You may have heard much about ECMAScript 6 and the new language features of JavaScript, but have you heard about what's happening with the DOM? Have you heard about Web Components and how they propose to enable truly cross-library, reusable UI widgets through the extension of HTML? In this session, we'll look at the core Web

Components specs and see examples of their usage. We'll find that it's not all roses, though, and we'll also dig deep into some of the new challenges and problems the current specifications may present us with.

## CSS Pre-Processors are Awesome

Todd Anclin

Let's face it. Browsers are not evolving the power of CSS fast enough to keep-up with the challenges of writing and maintaining modern style sheets. Fortunately, a 100% backwards-compatible solution exists to greatly enhance the power of CSS in the form of CSS pre-processors. It's "transpiling" for CSS that makes it possible to improve the way you write and maintain your code. In this session, you'll learn about the most common CSS pre-processor options (SASS and LESS), how they work, how they differ, and how to choose one for your next project. You'll also be introduced to the latest official CSS variable syntax coming to an evergreen browser near you.

## Zero to Production in 60

Sam Artioli

In this talk we will use leading edge technologies and services\* to go from an idea to a (very simple) production app in 60 minutes.

Along the way we will see some tips, tricks, and best practices for setting up a development, deployment, and production environment for a simple web app.

Technologies we will leverage include: Docker, Node, Angular, gulp, jspm, haproxy and mongo.

Services we will leverage include: Google, Digital Ocean, and Cloud Flare.

\*Leading edge technologies and services subject to change at the last minute.

## All Your Logins Belong to Us

Chris Klug

Social logins are here to stay, and for good reason. They are easier to use, more secure (hopefully), and generally just better. Not to mention, that managing user accounts is boring. But having to integrate with each provider and manage changes they introduce over time is a pain. Luckily, this is greatly simplified using Azure Active Directory B2C. This service leaves all of the hassle for handling this up to Microsoft, while offering you all the benefits. In this session, you will get a walkthrough of how to set up your applications to use social logins using this service, as well as an insight into how easily you could offer social logins in your own applications.

## Building Web Apps with Python/Django

Kathleen Dollard

What happens when you toss .NET developers into Python/Django? Come to this session to see what happened when they were immersed into a dynamic language with different approaches to typing, inheritance and the strictness of syntax. You'll learn the benefits of Python with the Django framework, and how to work in it from both Windows and Mac. You'll see a couple of approaches to managing errors and how to replace default dictionaries for a more reliable application. You'll also see abstractions to access external services. You'll learn basics of the Python language and how to map the way you think about MVC into the Django framework. And for fun, we'll toss in PubNub to

create real-time client alerts accessed via JavaScript. This fast-paced session will introduce you to Python and Django and show you how to gracefully solve common issues. You'll walk away ready to decide whether these tools belong in your arsenal, and with a better idea of which .NET ideas are universal and which are unique.

## Building .NET Apps for Linux and Mac

Jay Schmelzer

.NET Core is the re-envisioned version of .NET designed to meet the needs of modern application patterns and development workflows. In this session, we'll discuss the motivations behind creating .NET Core and look at how it extends the reach of .NET and .NET application beyond Windows to Linux and Mac.

## What's Next for C# and VB.NET

Jay Schmelzer

C# and VB.NET are being designed in the open, with eager community participation on GitHub and elsewhere. We are still in the design cycle, but themes and features are emerging. In this session, we will discuss the design process and the language features that are taking shape, and you are invited to participate with ideas, questions and concerns.

## Software Project Design

Juval Lowy

Much as the need to design the system, you must also design the project: from scheduling resources behind the services, to tracking your progress across developers, services and phases of completion, 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, the staff distribution 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 to 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 and typical roles and responsibilities in the team.

## C# 6 (With a Peek at C# 7)

Kathleen Dollard

C# 6 offers features to help you write clean, concise code. Explore auto-property initializers and getter-only auto-properties. See the sometimes subtle effects of features, like using static members and exception filters. Simplify your code with index initializers and expression bodied members. Make your code more robust with await in catch/finally, null-conditional operators, the nameof operator, and string interpolation. Find out what #pragma does, and have a chance to ask about features that were cut. The team and community are already working on ideas for C# 7. The session closes with a discussion of the process and some of the exciting features being considered.

Check the conference website for the latest information, [DEVintersection.com](http://DEVintersection.com)  
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## Improving the Quality of Existing Software

Steve Smith

How do you improve the quality of your existing software, while continuing to add value for your customers? What are some heuristics and code smells you can look for, and principles and patterns you can use to guide you, as you make your software better over time instead of worse? How can we improve our skills and techniques so that writing high quality software becomes our default, fastest way of working?

## The Science of Great UI

Mark Miller

Get a big boost on your UI skills. If you believe you're not an artist, that UI is merely subjective, or that Great UI takes too much effort, then this session is for you. We'll learn the essence with simple, easy-to-retain guidelines. Regardless of whether you're building interfaces for watches, phones, tablets, desktops, elevators, automobiles, or interplanetary spaceships, you'll learn how to reduce visual noise, enhance clarity, lower barriers to entry, and make your interfaces a pleasure to use. It's all about making customers satisfied, and this entertaining and information-packed session will show you how.

## Advanced Techniques in Project Design

Juval Lowy

If project duration is of no consequence, you should design your project for lowest cost. But if cost is immaterial, you should design it for the least duration. The best solution for every project lies between these two extremes, yet finding it is a highly engineered design task. This session will provide you with the tools and techniques required to achieve a balanced and even optimal solution, enabling you to determine the best overall plan for your system while eliminating gambling, death marches, wishful thinking, and expensive trial and errors. The

## WOMEN IN TECHNOLOGY LUNCHEON Wednesday, April 20



MICHELE L. BUSTAMANTE



KATHLEEN DOLLARD



MICHELLE CALDWELL



NAOMI MONEYPENNY



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AND  
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MORE!

Please sign up by **Tuesday** at the conference registration desk.





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The *Internet of Things* is going to double the number of devices on the Internet in the next few years, *how many of them will you build?*

Doug Seven



Sessions

session assumes knowledge of basic critical path concepts, such as network design, resource allocations and floats, and will expand on these essentials to include finding your project time/cost curve, network compression techniques, activity crashing, risk analysis, staffing distribution options and project design. You will also see a comprehensive case study and walk through its various permutations in determining the best plan that will keep the project on time all the time at the best risk and cost available.

### Build Cross-Platform Mobile Apps with Ionic, Angular, and Cordova

Brian Noyes

Cordova allows you to write cross-platform mobile apps with HTML, CSS, and JavaScript, and Angular helps you structure that code for better maintainability and reuse. Ionic brings the two together into a cohesive whole along with a suite of UI components that give you an adaptive user experience per platform. In this session, you will learn how to leverage the Ionic framework on top of Cordova and Angular to build rich mobile apps quickly and with great user experience.

### Windows 10 MVVM In Depth

Brian Noyes

Model-View-ViewModel is the most popular UI separation pattern for building loosely coupled and maintainable XAML applications. In this session, you will get a quick review of the fundamentals of the MVVM pattern and then will see how to apply it in the context of the new Universal Windows Platform of Windows 10. You'll learn how to seamlessly fit the pattern into the native constructs of data binding, components, navigation, and application lifecycle of a Windows 10 application.

### Debugging and Light Profiling

Kathleen Dollard

Erik Johnson

Debugging is a game of strategy. The rules are set by the computer, your debugger, and requirements or user expectations. You may enter the contest expecting a trivial opponent, only to find it like Hydra, with two new problems sprouting for each one you solve. It's a critical game because we fix bugs from the time we first check in code, and the cost of each bug tends to increase across the project lifecycle. This session begins with hints on assessing the difficulty of bugs and how to recognize code that will be difficult to debug, and perhaps avoid writing it. You'll see some specific traps to avoid, like floating point and date math. You'll learn about test-driven debugging and pointers to shove tests into even the most intractable legacy code. Then you'll learn about debugging strategies that help you ask better questions in order to significantly reduce the amount of time you spend debugging. Poor performance can be a bug, and you'll learn straightforward profiling techniques to help you understand performance problems. Core debugging principles covered in this talk apply across most languages and platforms; the demonstrations will use Visual Studio 2015. Leave this session ready to formulate ideas into testable strategies you can use to resolve bugs faster and with more confidence.

Check the conference website for the latest information, [DEVintersection.com](http://DEVintersection.com)  
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### Prototyping Visual Studio Apps & Assets with PowerPoint

Mark Miller

Learn how to use PowerPoint to prototype your applications and web sites, using two surprising features in PowerPoint. First, we'll use PowerPoint's built-in Storyboarding to create a prototype, and then we'll use PowerPoint's powerful vector editing features to easily create royalty-free custom assets we can use directly inside our applications and web sites. PowerPoint ships with impressive tools every developer should know; this session shows how to use this power to create better apps and sites.

### Security in ASP.NET 5 and MVC 6

Brock Allen

ASP.NET 5 and MVC 6 are bringing many changes to how ASP.NET developers write web applications. Security, as always, is an important part of any platform. In this session we will see how some aspects of security in ASP.NET 5 will look familiar to the prior versions, but other features are brand new in an attempt to improve on the approaches from the past. We will start by looking at how authentication middleware manages user authentication. We will then turn to how authorization is handled with the new and powerful policy-based architecture. Finally we will see how applications manage secrets and security keys which are vital to the secure operation of any application. This session will bring you up to speed on everything you need to know about the security features in ASP.NET 5 and MVC 6.

### Breaking Dependencies to Allow Unit Testing

Steve Smith

Unit testing software can be difficult, especially when the software wasn't designed to be testable. Dependencies on infrastructure concerns and software we don't control are one of the biggest contributors to testing difficulty. In this session, you'll learn the difference between unit tests and other kinds of tests, how to recognize and invert dependencies, and how to unit test your code's interactions with these dependencies without testing the infrastructure itself.

### Build MVVM Windows 10 UWP Apps with Prism

Brian Noyes

Prism for UWP is a framework that helps you implement the MVVM pattern on Windows 10 and UWP. It includes infrastructure for setting up the MVVM pattern, keeping your ViewModels in charge of interaction logic, data management, and navigation. It includes help implementing validation, a feature that the platform is lacking, as well as application state management. In this session, you will get a great end-to-end tour from the lead developer of the Prism for UWP framework.

### Presenting with Clarity and the Business Case for Great UI

Mark Miller

Learn how to present information effectively. In this fast-paced session, we'll cover information relevance, proximity, information in parallel, emphasis, smallest effective difference, contrast, size,

color, text, fonts, borders, and signal & noise. We'll show how existing user interfaces can be improved. If you don't have a graphic artist on your team, this session will show you how to fake it, and if you do, this session will show you how to communicate with them persuasively. We'll also present a compelling business case for great UI, useful if you're facing any kind of resistance inside your organization against improving the user experience. Regardless of whether you're building applications for the web, desktop, or mobile, you'll learn how to reduce visual noise, lower barriers to entry, enhance clarity and make your designs a pleasure to use. This session will show how you can make a big difference with small changes.

### Project Planning for Software Engineers

Michael Krasowski

Are you having difficulty planning your projects? Are you about to enter the uncharted territory of project planning and management? Are you nervous about "letting go" of your technical skills? Quickly learn common sense, experienced-based tips and pointers on how to improve your project planning skills and grow your professional soft skills. Discover how to create project plans quickly and easily so you can be more effective at your job.

### Project Control for Software Engineers

Michael Krasowski

Are you having difficulty controlling and managing your projects? Are you about to enter the new territory of project control and management? Are you nervous about "letting go" of your technical skills? Quickly learn common sense, experienced-based tips and pointers on how to improve your project control skills and grow your professional soft skills. Discover how to create project plans quickly and easily so you can be more effective at your job.

### Effective Leadership and Communication for Software Engineers

Michael Krasowski

Have you reached a point in your career when the business is expecting you to begin leading, managing and influencing others towards a common goal? Software engineers may have a great set of technical skills, but may be requiring additional essential leadership and communication skills that are necessary to meet the performance expectations of their management, company, and possibly, of themselves. More and more software engineers are asked to form, lead and deliver projects, while not writing a single line of code. This session helps software engineers to understand the practical essentials of leadership and written/verbal communications skills.

### Applying S.O.L.I.D. Principles in .NET/C#

Chris Klug

Have you heard of the SOLID principles? You have? Can you explain them all? And make your colleagues understand them, and why they are useful? Ok, in that case you should stay away from this session. If not, you should definitely go to this session, as it goes through each one of the principles, explaining what it means and why it is useful. You will also be shown C# code examples explaining how they help you, and what problems you solve by adhering to them.

### Migrating from Angular 1 to Angular 2

Ward Bell

What's your plan to migrate from Angular 1 to Angular 2? Learn how the two stacks align, when to go straight to Angular 2, when and how to use ngUpgrade, and what you can do today to prepare for a cost- and time-sensitive move to Angular 2.

### Angular 2 Data Access

Ward Bell

Angular 2 ships with a new HTTP Client and a new observable attitude based on the RxJS library. We'll investigate the benefits and hazards of observable, the promise option, binding directly to the screen with the AsyncPipe, error handling, debouncing, retry and cancellation. We'll contrast traditional mutating models (with a touch of Breeze) to the immutable store approach found in Redux. Expect plenty of samples and strong opinions.

### Building and Diagnosing N-Tier Apps with Azure SDK and Tools

Paul Yuknewicz

Azure SDK provides powerful tools to build, deploy and diagnose high-scale N-tier applications spanning IaaS, PaaS, and foundational services (storage, queues, caches). We'll dig into the Azure SDK 2.7+ tools to define and tweak your complete application topology in resource groups, using Azure Resource Manager JSON templates without having to be an infrastructure expert. We'll walk through how to configure your application for multiple environments and deploy, as well as use, the tools at your disposal to automate management operations in Azure. And finally, we'll look at several techniques and tools to diagnose common problems for scale apps in the cloud like: startup failures, correctness issues, performance degradation, and viewing/searching over massive amounts of log trace data.

### Cloud Environment and Application Lifecycle Automation Using Azure Tools and VSTS

Paul Yuknewicz

One of the biggest advantages of moving to the cloud is increasing your agility in getting great software in the hands of customers. In this session, you will learn about a breadth of options that make your life better and your cycle times faster: with ALM/DevOps for Azure workloads for a range that work with a number of Azure targets (Web Apps, App Service, Cloud Service, and Docker containers); developer platforms (Linux and Windows); languages (.NET and Java); and connected devices (Android, iOS, Windows). We will then do several deep dives into a few approaches to do continuous delivery using the Team Build service in Visual Studio Team Services (VSTS), and we'll also look into how to integrate, customize or roll your own unique processes using custom scripts or Chef. We'll also look at several options for testing, cloud load test, and richer automation options, like Azure Automation, that will increase your confidence and do some heavy lifting for you. And lastly, we'll give you a sneak-peak into exciting services Azure will be providing for DevTest Labs, so you can automate environment creation while still taking control of costs.



Sessions

ASP.NET

Visual Studio

<anglebrackets/>

Azure



If you want *practical development* from *real experts*, this is the place to be.

Paul D. Sheriff



Sessions

### Visual Studio 2015 Tips and Tricks

Robert Green

In this fast-paced session, you will see a variety of tips and tricks for using Visual Studio. We'll cover some of the hidden and little-known gems in the recent versions of Visual Studio and explore how to use them to be more productive while editing code and building applications.

### Build Your First Windows 10 App in 75 Minutes

Robert Green

Windows 10 makes it easier than ever to develop apps for the Universal Windows Platform with just one API set and one app package to reach all Windows 10 devices – PCs, tablets, phones, and more. In this session, we will build a simple Windows 10 app from scratch and see how to design the app so it renders properly no matter what device is used to view it. We'll then add additional functionality to the app and see how to connect to Azure, add offline data access, design tiles (including secondary tiles and lock-screen apps), badges, and toast notifications, and work with maps, cameras and video.

### Docker Containers: What Microsoft Has Packaged for You for the Next Wave of Cloud Computing

Steve Lasker

You've likely heard about Docker and wondering what the buzz is all about, and what it might mean for you. Microsoft and Docker have been working together to provide tools from development to production, including developers targeting Windows Containers with ASP.NET Core 1.0 and Mac developers targeting Linux with Node.js and GO. Come see the tools and technologies Microsoft has to offer container developers, including the Azure Container Service for the next wave of cloud computing.

### Consolidate MVC Views Using Single Page Techniques

Paul D. Sheriff

Visual Studio generates five separate pages for CRUD logic in MVC. This creates a lot of duplicate code. In this session, you will learn to combine all of these pages onto one single page. You will use MVC, C#, jQuery and MVVM to build a single page for searching, listing, adding, editing and deleting data in a database table. You will also learn how to eliminate code from your controller and make a view model that can be used across multiple UIs.

### Do More Client-Side with JSON

Paul D. Sheriff

Many web developers tend to do a lot of post backs because they are more comfortable in C# than with JavaScript and jQuery. However, with just a little JavaScript and good use of JSON, you can eliminate a lot of round trips. This session will show you how to work with JSON objects to create an add, edit, delete page where all data is kept client-side until the user is ready to submit all changes. You will build tables dynamically, fill in input fields and work with hidden fields. This session uses simple HTML, JavaScript, and jQuery to illustrate working completely on the client-side.

### Building Cross-platform Mobile Apps with Visual Studio, Cordova, AngularJS, and Ionic

Richard diZerega

Mobile developers are challenged to get their apps running across all major mobile platforms. Rather than building natively, tools like Apache Cordova, Angular, and Ionic allow developers to build one mobile application that runs everywhere. In this session, we will explore how to use these tools and Visual Studio to build powerful cross-platform mobile applications. Attendees will gain a better understanding of how to build these apps, how to leverage advanced device capabilities, and performance considerations.

### Performance and Diagnostic Tools in Visual Studio 2015

Dan Taylor

Come to this demo-driven session to learn about to use the performance and diagnostic tools in Visual Studio 2015 to fix hard bugs and build higher quality applications. You'll learn how to use the new capability of running diagnostic tools with the debugger and how to use the tools without the debugger to diagnose a broad range of issues. We will show how to use PerfTips and the Diagnostic Tools window for proactive performance tuning, powerful performance profiling features for solving tough performance issues, and historical debugging with IntelliTrace to ease the pain of solving perplexing bugs.

### Debugger Tips and Tricks with Visual Studio 2015

Dan Taylor

Come to this all-demo session to learn how to make the most of the Visual Studio debugger. We tour almost all of the debugger, throwing in tips and tricks for as we go along, and also calling out what's brand new in the latest version of the debugger in Visual Studio 2015. Whatever your experience level, we guarantee you'll learn something new!

### Where Does JavaScript Belong in the App Store?

Ryan J. Salva

Six years ago, PhoneGap (a.k.a. Apache Cordova) burst onto the scene with tremendous fanfare. It promised near-total code sharing across iOS, Android, and Windows using HTML, CSS, and JavaScript. Since then, both the technology and the market have matured. Phones are faster. Startups are experimenting with new ideas on a faster cadence. Enterprises are transitioning from Web (with a capital "W") to mobile. It's a strange new world.

In this session, we'll explore the state of hybrid app development using real-world data to understand the role web technologies play in the app store. When are businesses choosing hybrid over native? How have best practices changed with the rise of DevOps? How will hybrid apps will look in the future and who's paving the way?

Check the conference website for the latest information, [DEVintersection.com](http://DEVintersection.com)

Sessions and speakers are subject to change.

### Mobile Apps Published on a Web Cadence

Ryan J. Salva

Technologies like PhoneGap, Cordova, and React Native brought the web's enviable edit-launch-debug cycle to mobile. While this makes for an amazing dev experience, your app ultimately distributes through the App Store... which means that you can't take advantage of the same release agility often associated with web development. Or can you? Whether developing locally, distributing internally, or publishing to the world, delivering updates on a "web cadence" improves your chances of success. This talk will show how easy it can be to setup an automated build pipeline and release continuous app deployments via services like VSTS, HockeyApp and CodePush.

### ASP.NET Core 1.0 and Azure

Brady Gaster

ASP.NET Core 1.0 works great on .NET Core and is optimized for the server. Running ASP.NET Core 1.0 on Azure and making it scale is far easier than you might think. You can get an ASP.NET Core 1.0 site running on Azure in a number of ways – publish from VS, publish via source, docker, in a VM or in an Azure Web App. You can also quickly and easily add a Redis memory cache to make ASP.NET even faster. Brady will show you all this and more in this face-paced session.

### Entity Framework 7

Rowan Miller

Entity Framework (EF) is a popular data access technology for .NET applications. EF7 is a lightweight and extensible version of EF that enables new platforms and new data stores. In this new version Windows Universal App Platform, ASP.NET, and traditional desktop applications can all use the Entity Framework, as well as .NET apps running on Mac and Linux. EF7 supports relational databases as well as non-relational data stores such as Azure Table Storage and Redis.

### Building Great Mobile Apps with Cordova and Ionic

Lino Tadros

In this session, we will demonstrate several techniques for developing great apps using Cordova and Ionic together for iOS, Android and Windows Apps.

Using AngularJS 2 and KendoUI together in order to speed development with high quality will be demonstrated as well.

### Bulletproof Transient Error Handling with Polly

Carl Franklin

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 lets 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.

### Docker and ServiceFabric – A Taste of Two Platforms

Michele Leroux Bustamante

Docker is somewhat of a poster child for the microservices wave, but ServiceFabric is a very interesting PaaS alternative at the other extreme. While there are many options in the middle, including various container services platforms, this session focuses on comparing the two from a developer and DevOps perspective noting design, development, topology and deployment lifecycle differences.

### Node.js Fundamentals

Sam Artioli

An overview of the fundamentals of Node.js.

We will cover NPM, modules, simple http servers, the express framework, a simple REST service with mongo, the request module, async, caching and debugging.

**SECURITY after Dark**  
**WEDNESDAY,**  
**APRIL 20 7:00 PM**

Hosted by  
**Michele Leroux Bustamante & Brock Allen**

after Dark Sponsored by

**WIN a 1-week Caribbean cruise for two!**

**Visit our exhibit area, complete the cruise ballot and you could win a cruise!**  
*All paid attendees are eligible.*

The drawing will take place on Wednesday night at 6:15pm in the Expo Hall. You must be present to win.





Sessions

SQL



# Attendees *learn problem-solving* techniques and technologies they can *implement immediately.* *Kimberly Tripp*



Sessions

## KEYNOTE: A Day in the Life of the Data Scientist

**Buck Woody**

**Level: 200**

What does a Data Scientist do? Where do they work, and what skills do they have? Buck Woody, from the Machine Learning and Data Science team (MLADS) walks you through a typical day and explains the knowledge a Data Scientist needs, the work they do, and how they interact with other teams.

## KEYNOTE: Do You Know Data in the Microsoft Cloud?

**Bob Ward**

**Level: 200**

Maybe you have heard the “Cloud” is the future? Actually, it is here and growing fast. If you are a professional who has worked with SQL Server, you may be trying to find out more about the Cloud and how it should become part of your company’s future and your career. So come and Upgrade Your Life. In this session, I’ll give you an overview of important technologies that are part of the “Data Pillar” of Microsoft Azure Services. While this will include familiar technologies such as Azure SQL Database, SQL Server in Azure Virtual Machine, and Azure “SQL Hybrid,” I’ll also show you Azure HDInsight, Azure SQL Data Warehouse, Azure Data Lake Analytics, Azure Data Factory, Machine Learning, and Power BI. When you walk away from this session, you will know what these services offer, how you would use them, and why any developer or IT professional would consider using these in today’s world of modern and mobile applications.

## KEYNOTE: SQL Sentry Tools for Productivity and Performance

**Jason Hall**

**Scott Fallen**

**Level: 200**

Whether you are hosting in your office, in a data center, or in the cloud, SQL Sentry 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 SQL Sentry software highlighting configuration and performance pitfalls, and leave with a better understanding of performance problems you may be currently missing.

## Azure SQL Database for the Production DBA

**Tim Radney**

**Level: 200**

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 Data Catalog

**Buck Woody**

**Level: 200**

With so many vectors in a data-centric process, it’s often difficult to know where to start. Normally we start with the data – but which data is accurate and authoritative, and where is it located? The process of discovering useful data is decentralized, manual, and error-prone. Using Microsoft’s new Azure Data Catalog, Buck Woody from the Data Science team at Microsoft will show you how to turn the problem around by “crowdsourcing” your definitions. You’ll see a full walkthrough of the process from end to end, from the perspective of the administrator, the data steward, and the users. After this session, you’ll start your next process the right way – by quickly and easily diagraming the data.

## Introduction to Performance Troubleshooting Using Wait Statistics

**Paul S. Randal**

**Level: 200-300**

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.

## SQL Server Tuning When You Can’t Fix the Queries

**Brent Ozar**

**Level: 200**

Your users are frustrated because the app is too slow, but you can’t change the queries. Maybe it’s a third-party app, or maybe you’re using generated code, or maybe you’re just not allowed to change it. Take heart – there’s still hope.

Brent Ozar does this every week, and he’ll share his proven methodologies to find your SQL Server’s bottleneck and then identify the cheapest/easiest fixes like database settings, SQL Server configuration switches, and hardware. You’ll learn how to capture your server’s bottlenecks with wait stats, and learn which wait stats can be fixed with indexing, hardware, and Enterprise Edition.

This session is for developers, DBAs, and consultants who have to make SQL Server go faster. You should be comfortable writing queries and creating tables, but not as confident about interpreting SQL Server’s DMVs and diagnostic data.

## Corruption Survival Techniques

**Paul S. Randal**

**Level: 200-300**

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.

## SQL Server 2016 New Feature Overview

**Tim Chapman**

**Level: 200**

SQL Server 2016 is the most feature-rich release of the database engine since 2005. In this session, Microsoft engineer Tim Chapman will uncover these fantastic new options for database engine scalability, performance, availability and security. Features to be covered include Query Store, Temporal tables, Always Encrypted, data masking, Columnstore Index enhancements, as well as new In-Memory OLTP and Always On features – just to name a few! This will be a fast-paced and demo-rich session!

## New Security Features in SQL Server 2016 and Azure SQL DB

**Aaron Bertrand**

**Level: 200**

In this session, you will learn about three new security-related features that help protect your data: Dynamic Data Masking, Row-Level Security, and Always Encrypted. With plenty of live demos, you will see how the features work, when to choose each one, and potential issues that could prove to be very important to your implementation.

## New T-SQL Capabilities in SQL Server 2016 and Azure SQL DB

**Aaron Bertrand**

**Level: 200**

Discover the ins and outs of some of the newest capabilities of our favorite data language. From JSON to COMPRESS/DECOMPRESS, from AT TIME ZONE to DATEDIFF\_BIG(), and from SESSION\_CONTEXT() to new query hints like NO\_PERFORMANCE\_SPOOL and MIN/MAX\_GRANT\_PERCENT, as well as some other surprises, you’ll walk away with a long list of reasons to consider upgrading to the latest version or finally trying out Azure SQL Database.

## Understanding SQL Server Backup and Restore

**Tim Radney**

**Level: 200**

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 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!

## Dr. DMV’s Troubleshooting Toolkit – Part 1

**Glenn Berry**

**Level: 200-300**

Dynamic Management Views and functions allow you to easily see exactly what is happening inside your SQL Server instances and databases with a high level of detail. You can discover your top wait types, most CPU-intensive stored procedures, find missing indexes, and identify unused indexes, to name just a few examples. This session presents, demonstrates and explains a complete set of diagnostic DMV queries that you can easily use to detect and diagnose configuration and performance issues in your SQL Server instances and databases.

## Dr. DMV’s Troubleshooting Toolkit – Part 2

**Glenn Berry**

**Level: 200-300**

*A continuation of Part 1!*

## Locks, Blocks, and Deadlocks, Oh My!

**Randy Knight**

**Level: 300**

Managing concurrency is one of the most challenging aspects of working with any enterprise DBMS. Too many issues that manifest as performance issues are in fact concurrency management issues. There is much confusion out there about locks, blocks, and deadlocks. In this demo-heavy session, we will clear up the confusion.

## Understanding Transaction Isolation Levels

**Randy Knight**

**Level: 300**

SQL Server offers several isolation levels beyond the default “READ COMMITTED.” But understanding when to use each one can be daunting. Whether you are a developer who needs to understand how isolation works, and why NOLOCK is not an appropriate directive in most cases, or a seasoned DBA who needs to understand the less commonly used isolation methods, this session is for you. We will look at each level, how it impacts the engine, and examine appropriate (and inappropriate) use cases for each. We’ll also take a brief look at the In-Memory OLTP feature introduced in SQL 2014 and greatly enhanced in 2016 and how that fits into the mix.

## Database Lies We Tell Ourselves

**Jeremiah Peschka**

**Level: 200**

We routinely lie to ourselves about databases – transaction isolation levels, data types, and design patterns. In this session, we’re going to look at the ugly lies we tell ourselves about databases and find the truth. We’ll be digging into isolation levels, transactions, and design patterns. By the end of this session, you’ll know how to spot common mistakes and how to fix them.

Check the conference website for the latest information, [DEVintersection.com](http://DEVintersection.com)  
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Sessions

SQL

Aaron Bertrand



Network and make valuable connections after dark.



Sessions

## Indexing: Strategies for Performance

**Kimberly L. Tripp**  
**Level: 200**

SQL Server has clustered and nonclustered b-tree indexes, clustered and nonclustered columnstore indexes, and even a few other specialized types of indexes (XML indexes / spatial indexes / new index types for In-Memory structures). 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 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?

## Indexing for Performance: Row-based Indexes

**Kimberly L. Tripp**  
**Level: 300**

Continuing our indexing theme for the day, this session will cover structures and use cases for row-based indexes. Even with column-based indexes (columnstore), there are cases when row-based indexes are still best. This session will cover when and why row-based indexes should be used as well as strategies for the right balance of indexing (not too many, not too few!).

## Indexing for Performance: Columnstore Indexes

**Kimberly L. Tripp**  
**Level: 300**

Rounding out our day on indexing, Kimberly will discuss columnstore indexes (column-based indexes) which are available in SQL Server 2012 and higher. However, the options available vary greatly between SQL Server 2012, 2014, and 2016. This session will bring together the best combinations possible based on version as well as give you migration strategies to let you access these features as soon as you can!

## Database Design for Software Architects

**Jeremiah Peschka**  
**Level: 200**

Databases need architecture, too. When building a new application, it's all too common to leave the database for last. In this session, you'll learn how to think about the database like a software architect, how to think about the long term, and how to avoid doing extra work today. You'll see how many the right choices early will give you more flexibility in the long run. Attendees will leave this session with a better idea of how to safely approach database design.

## SQL Server Encryption

**Ben Miller**  
**Level: 200**

Have you ever wanted to know how Transparent Database Encryption (TDE) works or how you set it up? What about encrypting your backups? This session will go over all the steps

and caveats that go with this technology. TDE allows you to have your database encrypted on disk and the same Encryption Hierarchy allows you to back up your database and have it encrypt the contents in the backup file. We will discuss the Encryption Hierarchy that is used for encryption in SQL Server and take you through keeping your secrets safe. Master the concepts of SQL Server Encryption when you are done with this session.

## Watch Brent Tune Queries

**Brent Ozar**  
**Level: 300**

Ever wonder how somebody else does it? Watch over the virtual shoulder of Microsoft Certified Master Brent Ozar as he walks you through the Stack Overflow public database export, shows you queries, and then tunes them to make them dramatically faster. Along the way, you'll see several free tools in action that help make the process easier. If you've seen and enjoyed this session in the past, you're not done: Brent has new queries to tune this year, and new issues to cover like CTEs, derived tables, and optimization timeouts.

## New Features with SQL Server 2016 Reporting Services

**David Pless**  
**Level: 200**

In this session, we will outline the new features of SQL Server 2016 Reporting Services that puts the power of data in the hands of everyone. In this session, we will cover the alignment of Microsoft's cloud and on-premises reporting solutions. We will cover how existing SSRS and PowerBI expertise will transfer across these deployment modalities so you can easily mix and match on-premises and cloud components, and benefit from unique hybrid scenarios. We will cover paginated reporting, interactive reporting, mobile reporting, dashboards, and analytical report and charts.

We will focus on the new capabilities of mobile reporting and web-based reporting that allows for greater consumption of your report capabilities across the board.

We will cover the new visualizations and how you can pin charts from an operational SSRS report to a Power BI dashboard. This further allows you to leverage your existing reporting investments in SQL Server Reporting Services.

Finally, we will cover dashboard best practices for rolling your own dashboard solutions.

In this session, we will accomplish the following:

- Learn how to leverage the modernized SSRS web experience to embed and share BI reports
- Learn how to Publish Power BI Desktop Reports on-premises
- Learn the key aspects of the Unified Mobile BI experience
- Finally, we will cover how you can manage and monitor on-premises-to-Power BI data connections using the enterprise gateway capability.

## Incremental Load Design Patterns

**Tim Mitchell**  
**Level: 200**

When building extraction, transformation, and load (ETL) processes, one of the most common requirements is to process only new or changed data. This incremental load design

significantly improves the performance of the ETL process by dealing only with a subset of the data during each load.

Choosing the correct change detection mechanism for each incremental load process is critical. From change data capture to change tracking in SQL Server, to the slowly changing dimension wizard and other native tools in SSIS, there are many ways to detect and process incremental changes.

In this session, we will review the common decision points surrounding incrementally loading data, and will walk through methods for incremental processing in SQL Server. Among the topics of discussion:

- "Why not just do a full load?"
- A survey of the various methods of change detection in SQL Server
- Common incremental load design patterns for sources and destinations
- Performance considerations for large incremental loads

This session is ideal for those with some experience performing ETL operations in SQL Server and SSIS, but can be useful as an overview for others who want to gain a general understanding of incremental load patterns.

## Get Near Realtime ETL with Service Broker

**Allen White**  
**Level: 300**

Most of the time you'll see ETL being done with a tool such as SSIS, but what if you need near-realtime reporting? You need to get the updates in your OLTP database to the Data Warehouse quickly, but with minimal impact on your application. Asynchronous messaging with Service Broker makes this simple and painless. This session will walk through the basic transformations to build a Kimbal-style data warehouse from an OLTP database and demonstrate how to keep your data warehouse updated using Service Broker messages from your OLTP database.

## Integrating Azure into Your Data Platform

**Grant Fritchey**  
**Level: 200**

Very few companies are going to move everything into Azure, but just about every company is beginning to explore the offerings available for data management. If you're ready to begin the process of creating the hybrid environment necessary to begin using Azure, this session is for you. We'll talk about the types of data management platforms offered, from Infrastructure as a Service through virtual machines, to NOSQL solutions through DocumentDB, to Platform as a Service offerings through Azure SQL Database. You'll learn the first steps necessary to start the process of integrating your existing environment with all the new technology available in the cloud.

## Azure SQL Database Security Features and Performance Features

**David Pless**  
**Level: 200**

In this session, we will cover security features in Azure SQL Database V12. This includes Transparent Data Encryption, Dynamic Data Masking, Row Level Security, and SQL Auditing.

Additionally, we will cover firewall rules and connectivity to Azure SQL Database from SQL Server Management Studio and Visual Studio. We will cover the different migration approaches that can be used in getting an on-premises database to Azure as well as considerations that should be taken when migrating such as deprecation and the differing features of SQL Server 2016 versus Azure SQL Database.

We will also cover the performance concepts of measuring DTUs, monitoring with the Azure Dashboard, service levels, and more. We will also cover performance capabilities as well such as SQL Server Query Store and other technologies in preview.

In this session, we will accomplish the following:

- Learn how Transparent Data Encryption protects data at rest
- Learn how Dynamic Data Masking and Row Level Security can be used to increase security for existing applications
- Learn how SQL Auditing can be used to improve event awareness
- Learn how different migration strategies can help identify deprecation issues
- Cover performance concepts of DTUs and Service Levels

## Inside the SQL Server Query Store

**Bob Ward**  
**Level: 300**

In this session, you will understand how the SQL Server Query Store can be used to take you to the next level for query performance monitoring, tuning, and troubleshooting. You will see how the Query Store works, what its capabilities are, and even how to troubleshoot when problems occur with its execution. There will be plenty of demos in this session, covering both SQL Server 2016 and Azure SQL Database scenarios.

## SQL Server 2016 Plan Guides and Query Store

**David Pless**  
**Level: 200**

Query Store is a new feature in SQL Server 2016, and is also available in 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. 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. We will also cover how plan guides allow you to optimize the performance of queries when you cannot directly change the text of the actual query in SQL Server. Plan guides can be useful when a small subset of queries in a database application (example: third-party vendors) are not performing as expected.

In this session, we will accomplish the following:

- Understand how Query Store can be used to identify poorly running SQL statements and regression patterns





Sessions

SQL

Brent Ozar



Get together with presenters for lively discussions.



Sessions

- Understand how Query Store can be used in the GUI and through T-SQL.
- Understand how Plan Guides can be used to improve plan consistency without changing application T-SQL code
- Understand how to take advantage of the new Query Store DMVs to look for critical patterns

### Scaling SQL Server

Glenn Berry  
Level: 200

SQL Server implementations can quickly evolve and become more complex, forcing DBAs and developers to think about how they can scale their solution quickly and effectively. Scaling up is relatively easy (but can be expensive), while scaling out requires significant engineering time and effort. If you suggest hardware upgrades, you may be accused of simply “throwing hardware at the problem,” and if you try to scale out, you may be thwarted by a lack of development resources or third-party software restrictions. As your database server nears its load capacity, what can you do? This session gives you concrete, practical advice on how to deal with this situation. Starting with your present workload, configuration and hardware, we will explore how to find and alleviate bottlenecks, whether they are workload related, configuration related, or hardware related. Next, we will cover how you can decide whether you should scale up or scale out your data tier. Once that decision is made, you will learn how to scale up properly, with nearly zero down-time. If you decide to scale out, you will learn about practical, production-ready techniques such as vertical partitioning, horizontal partitioning, and data dependent routing. We will also cover how to use middle-tier caching and other application techniques to increase your overall scalability.

### Watch Brent Tune Indexes

Brent Ozar  
Level: 200

You're not starting from scratch – you have a database that's already in production, and you can't make too many changes to the app. You want to make it go faster with as little danger and disruption as possible. You're comfortable writing queries to get the data you need, but you're not so confident when it comes to picking the right nonclustered indexes. How many should you have? What fields should they be on?

In this session, you'll learn Brent Ozar's easy one-hour process to:

- Review the indexes you've already got
- De-duplicate your indexes to make inserts/updates/deletes go faster
- Find the right nonclustered indexes you need
- And use simple, free scripts that give you all the answers

### Change Your Habits: Tips to Tune Your T-SQL

Grant Fritchey  
Level: 200

T-SQL provides many different ways to accomplish the same task, and as you might expect, some ways are better than others. In this session, you will learn specific techniques, that when followed make you a better T-SQL developer. The session is jam-packed with practical examples and is designed for administrators and developers who want to bring their T-SQL skills to the next level. You'll write clearer and easier to read T-SQL as well as write

better performing T-SQL. So useful, you can implement these tips immediately!

### In-Memory OLTP Internals

Tim Chapman  
Level: 200

In SQL Server 2014, a new memory-optimized feature was introduced called In-Memory OLTP. This memory-based engine feature eliminates locking and latching contention as well as significantly decrease disk utilization – which can increase database performance by 5x-20x. This feature has been even further enhanced in SQL Server 2016. Join Microsoft field engineer and MCM, Tim Chapman, as he explores the internal workings of this remarkable SQL Server database engine component.

### DBA Mythbusters

Paul S. Randal  
Level: 200-300

It's amazing how many myths and misconceptions have sprung up and persisted over the years about SQL Server – after 15 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.

### Brent's Guide to Going into Consulting

Brent Ozar  
Level: 200

You've been doing technical work for several years, and you're thinking about going out on your own and starting a consulting business. What will you charge? Where will the customers come from? Should you join other people at a firm, or start your own thing?

Brent Ozar took this journey from being a database guy to building a consulting company with employees. In one hour, he'll share how he did it, how you can repeat the process, and how to avoid some of the same mistakes he made.

### Maintain SQL Server Performance Baseline with PowerShell

Allen White  
Level: 300

Maintaining a solid set of information about our servers and their performance is critical when issues arise, and often help us see a problem before it occurs. Building a baseline of performance metrics allows us to know when something is wrong and help us to track it down and fix the problem. This session will walk you through a series of PowerShell scripts you can schedule that will capture the most important data and a set of reports to show you how to use that data to keep your server running smoothly.

### SMO Internals for High Performance Automation using PowerShell

Ben Miller  
Level: 300

In today's fast-paced world, automation is becoming a necessity and not a luxury. PowerShell is a powerful tool that allows you to leverage Windows objects and, coupled with SMO, you have

the power to connect to SQL Server objects. This is all great, but not understanding how SMO works, you could find that your automations are not as fast as you would hope, when accessing SQL Server. This session will take you beneath the surface and demonstrate the secret sauce that will help you get the most out of your SQL Server automation scripts and have them perform. Understanding is the key here and we will get you there in this session. Let's take your automation to infinity and beyond.

### Scripting in SSIS

Tim Mitchell  
Level: 200

SQL Server Integration Services is full of useful and versatile tasks, components, and containers that allow the ETL developer to easily handle most data movement and transformation issues. However, it's not uncommon to run into ETL needs that require more flexibility than what is offered in the native tools of SSIS. Fortunately, Integration Services comes with a couple of tools to overcome most any ETL challenge: the Script Task and the Script Component.

In this session, we will explore both the Script Task and Script Component tools within SSIS. We will discuss the reasons why one might need to include scripting as part of an ETL strategy, as well as examining some use cases where scripting is a good fit. We will follow up with several demonstrations of how to solve specific ETL challenges using the Script Task and Script Component in SSIS. Among the topics to be discussed:

- When to use scripting
- Script task vs. script component – which to use?
- Using the script task for control flow operations

- Using the script component as a data source, destination, and transformation

This session is ideal for those with some experience with SSIS. Experience with a .NET language (either C# or VB.NET) is helpful as well.

### Windows Centric Lifecycle Data Management for Cloud and Hybrid Cloud Environments – Converting Data into a Corporate Asset

Bob Smolenyak

Commvault will discuss and provide live demonstrate Best Practices for Microsoft centric Data Management in the heterogeneous cloud environment. Special attention will be paid to Microsoft Exchange, SharePoint, Active Directory, SQL, Lync and File. Commvault will cover E-Discovery/Search for compliance as well tiered storage practices with regard to DeDuplication and Azure Cloud Storage and self service data management for edge devices. **Attend the Commvault session for a chance to win a GoPro Camera!**

**SQL After Dark**

**WEDNESDAY, APRIL 20 7:00 PM**

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

*The first round is on us!*

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Sessions

Office 365

SharePoint



The *breadth of content* and the *diversity* of attendees at Intersection is *unparalleled*. Everywhere you turn, *expertise is being shared* and *solutions are being born.* Dan Holme



Sessions

### KEYNOTE: SharePoint 2016 & Office 365: Diamonds and Razorblades

Dan Holme

This spring, Microsoft is releasing SharePoint 2016 and numerous updates to Office 365 and, in these new services and products, you'll find gems and new, sharp edges. How can you maximize the value your organization realizes from its investment in these fundamental productivity platforms? How can you manage change in the increasingly fast-paced world of cloud-inspired technology? Join Dan Holme, Microsoft MVP and globally-renowned technical and thought leader, for an in-depth and candid keynote address that explores how SharePoint and Office 365 impact your team, your organization, and your career.

### SharePoint in Action: What We're Doing at NBC Olympics for Rio 2016

Dan Holme

For the last decade, Dan Holme has served as Microsoft Technologies Consultant for NBC Olympics for the broadcast of the Olympic Games from Sochi, London, Vancouver, Beijing and Torino. And in just a few weeks after Share, Dan Holme will fly to Rio for the 2016 Summer Olympics. Join Dan for an inside look at how SharePoint and Office 365 are put to use in one of the most unique IT efforts in the world, as a platform for rich collaboration and rapidly deployed solutions. Discover ways that you might leverage SharePoint in your enterprise, and how the Olympics broadcast can inform the choices you make supporting and developing for SharePoint. SharePoint is used extensively to support collaboration between thousands of employees and contractors, and to automate processes including IT help desk services like application and printer deployment. What we do with SharePoint may not be rocket science, but it's a case study in how SharePoint can serve to unify access to content, process, and service in a real-world enterprise. Come see what we do, and take away practical ideas for what SharePoint can do for your intranet and collaboration.

### Office Graph and Delve: The "Big Bang" of Findability and Discoverability

Dan Holme

Office Graph and the applications and experiences it powers—Delve, Clutter, Office 365 Videos, and NextGen Portals—revolutionize how we connect to the content and expertise we need to work successfully. Metaphors of search and information architecture expand and explode to enable an intelligent, dynamic, and powerful new paradigm for enterprise 'findability' and discoverability. This session will clarify what Delve and Office Graph are, how they work, and what they mean to your users and to your business. Delve into real-world challenges as you leverage these technologies to improve knowledge management, search, and discovery scenarios. Take away practical guidance for managing the cultural, strategic, information architecture, and governance implications of this bold new universe, where none of us have gone before.

Check the conference website for the latest information, [DEVintersection.com](http://DEVintersection.com)  
Sessions and speakers are subject to change.

### Developing for SharePoint with Angular 2

Scot Hillier

Over the last few years, Office and SharePoint developers have been living through rapid and substantial changes. The community has moved from server code to client code, from postbacks to HTML5, from mobile pages to responsive design, and from SOAP to REST. The average developer can be forgiven for feeling overwhelmed by the pace and magnitude of change. In this session, Angular 2, HTML5, Bootstrap, ADAL, and REST will be used to build Office 365 applications against SharePoint Online. Attendees will exit the session ready to get started developing for Office 365 with modern techniques.

### Developing Office Add-ins with HTML5, JavaScript, and CSS

Richard diZerega

1.2+ billion users around the world choose Office as their primary tool for productivity. This session will provide an overview of how developers can build and deploy their own experiences into Office using web add-ins. Attendees will learn how they can re-leverage their web development skills to add new capabilities to Outlook, Word, Excel, and PowerPoint.

### Building Applications with Office 365 and the Microsoft Graph

Richard diZerega

The Microsoft Graph provides a powerful API surface for developers to build applications connected to Microsoft services such as Office 365, Outlook.com, OneDrive, and OneNote. Attendees will gain a better understanding on how to leverage the Microsoft Graph, including how to get started, authenticate, navigate the different Graph endpoints, and the advantages of leveraging the Microsoft Graph over traditional APIs.

### Developing for Optimal Performance in SharePoint Online

Sean McDonough

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 should not be approached with the same mindset 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.

### Selecting and Protecting the Right SharePoint Backup Targets

Sean McDonough

SharePoint is a complex platform with many moving parts and dependencies, and most administrators know that they need some form of backup protection to safeguard their environments. When it comes to actually protecting a SharePoint environment, though, what should an administrator focus on? What's important? In this session, we'll take a look at SharePoint disaster recovery with an eye towards identifying on-premises farm protection targets. We'll examine all of the common (and many of the not-so-common) elements that need to be protected, discuss why those elements may or may not be important for any given environment, and talk about tools and technologies that are available for protection. We'll also cover some special circumstances and watch-outs that may help or hinder efforts to protect targets that are selected within a farm. By the end of the session, you will be able to prioritize backup targets in your SharePoint environment and select appropriate strategies for protection.

### Developing Office Add-Ins with Angular 2

Scot Hillier

Office Add-Ins are web applications that run in the context of an Office application like Word or Excel and can be surfaced in both the desktop and web versions of Office. Office Add-Ins are a great opportunity for developers because they add significant value to the tools business people use the most. In this session, we'll take a look at creating Office Add-Ins using the popular Angular 2 framework for JavaScript. We'll get up and running quickly and then enhance our solutions with the latest developer technologies like the Microsoft Graph, the Office 365 Unified APIs, and the Office UI Fabric. Attendees will exit the session with lots of great ideas for new Office Add-Ins.

### SharePoint's New Swiss Army Knife: The Content Search Web Part

Sean McDonough

Each release of SharePoint has delivered new tools to make SharePoint sites sparkle, but few of these tools have been as exciting as SharePoint 2013's Content Search Web Part (CSWP). Much like a Swiss Army Knife, the CSWP can be manipulated and configured in a multitude of ways. It can be used for everything from showing basic search results to displaying personalized content that is both interactive and dynamically generated. Whether you are using SharePoint on-premises or in the cloud, and whether you are "just" an end-user or a hard-core developer, the CSWP is one built-in web part you will want to understand in order to make your SharePoint sites shine. In this demo-heavy session, you will learn what you need to know to become productive with the CSWP in no time at all.

### Reimagine the Way Work Gets Done – Building a Digital Workplace with SharePoint 2016 & O365

Michelle Caldwell

Organizations with a modern workplace strategy in place are seeing vast improvements in: employee productivity (78%), increased revenue (70%) and new approaches to drive innovation (78%). Find out how to speed up business cycles and increase productivity to drive competitive advantage.

A successful digital workplace integrates social, mobile, analytics and cloud in an intelligent context that is tailored to the role and responsibilities of employees. The outcome focuses on driving the maximum increase in employee efficiency, performance and innovation. But what does it take to get there?

Join me in this interactive session to find out what it takes to make the leap into the future of collaboration

Session highlights include:

- Benefits of a digital workplace
- Growth powered by a high-performance workplace
- Intelligent context illustrations
- A high-performance workplace journey roadmap

### Planning Your Digital Workplace Transformation

Michelle Caldwell

Your success with O365 and SharePoint 2016 is not assured: A successful Digital Workplace transformation goes way beyond getting the software installed and configured successfully. Fortunately your chances have greatly improved recently with the advances made by Microsoft. By integrating new capabilities and social tools into everyday work processes we are able to reimagine how work gets done and have measureable impact to the bottom line.

In this session, we will discuss the importance of creating a Digital Workplace Transformation Strategy to ensure a successful Digital Workplace Transformation. In this highly interactive session, we'll share key aspects of a Digital Workplace Strategy and discuss how to engage business stakeholders, drive user adoption, and realize a true return on your organization's investment in SharePoint and O365.

### Enterprise JavaScript Development Patterns

Rob Windsor

Much of the JavaScript sample code you see is written like script. It's not structured or modular or layered. In other words, it doesn't follow the generally accepted best practices we use when writing server-side code. In this session, we'll take one of these script-like samples and incrementally improve it; adding structure, modularity and layering. In the end, you'll find that, while there are differences, client-side coding does not have to feel foreign to server-side developers.

### Introduction to the SharePoint Client Object Model and REST API

Rob Windsor

As Microsoft was releasing SharePoint 2013, it was pretty clear that they were steering people away from using the product as a portal to using it as a gateway to external systems and services. Since the Server Object Model cannot be used remotely, developers building these external systems will need to become familiar with the Client Object Model (CSOM) and/or the REST API if they want to communicate with SharePoint. This session will introduce these two APIs, give a brief overview of their history, and then show you how to get started using them through a series of demonstrations.





Sessions

Office 365

SharePoint

Chris McNulty



Join the conversation with Microsoft and industry experts on SharePoint 2016.



Sessions

### Building Provider-Hosted Apps with ASP.NET MVC

**Rob Windsor**

Even though the majority of current ASP.NET development is done using ASP.NET MVC, development in the SharePoint world has been locked into WebForms because of restrictions of the platform. Now, with the introduction of the App model, developers finally have the option of using ASP.NET MVC in their projects. This session will introduce you to ASP.NET MVC and show you how you can use this framework when building provider-hosted apps. In this session, you'll learn about the three main components of an MVC application (models, views and controllers) as well as other important concepts like routing, scaffolding and the Razor view engine.

### SharePoint 2016 with SQL Server 2016 Integration

**Brian Alderman**

Learn how you can enrich your SharePoint Server deployment when you take advantage of specific configurations and features of SQL Server. This session will focus on SQL Server 2016 benefits for SharePoint 2016. We will cover areas of performance, security, reliability – all covered with lots of best practices and core depth knowledge for the most successful better-together deployment.

### Optimizing SQL Server for SharePoint

**Brian Alderman**

Knowing the vast majority of the content accessed via SharePoint is stored in SQL Server, and also knowing 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 discussion 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.

### Getting Started with PowerBI

**David Feldman**

Over the past year, PowerBI has been completely reinvented as a powerful new online service and a user friendly, rich design tool. Born in the cloud, PowerBI is designed for mobile first with access to live dashboards from your mobile device. Come see how to get started today and build powerful data visualizations to transform your world.

### Advanced PowerBI Hybrid Scenarios

**David Feldman**

You've mastered the basics of importing data and publishing reports and dashboards. You need real line-of-business data from your on-prem systems to really bring value to the business. Learn about connecting to on-prem data, and sharing your outputs with team members across your organization.

### Building ECM and Search Solutions with Office 365

**David Feldman**

Learn to create enterprise content management solutions that enable users to find the information they need fast. We will explore content types, the results web part and refiners to build a new search solution in this fast-paced, no-code development session.

### To the Cloud! Using IaaS as a Hosting Provider for SharePoint

**Scott Hoag**

To the cloud! This phrase seems to come up more often for organizations look to reduce their SharePoint footprint and operational expenses in their on-premises datacenters. This session will provide a brief overview of a few of the premier Infrastructure as a Service hosting providers for SharePoint, how SharePoint in the cloud stacks up against Office 365, and how to quickly get your SharePoint system built in a repeatable fashion for development environments.

You will learn:

- Core Infrastructure as a Service (IaaS) providers.
- The complexities of what is involved with implementing SharePoint in a cloud hosted environment
- Some of the nuances and workarounds for hosting SharePoint in the cloud

### Microsoft Cloud Identities in Azure and Office 365

**Scott Hoag**

Looking to reduce the number of post-it notes you see stuck around the office? Seeking to automate your user creation processes for Office 365? Or maybe you're interested in single sign-on for everything you host in the cloud? Are you questioning what a cloud identity is?

This session will take you through the basics of identity in the Microsoft Cloud and show you to how to set up and configure Office 365 with Azure Active Directory using the Azure Active Directory Synchronization Connect tools.

### SharePoint Admin Best Practices

**Lori Gowin**

Best practices can sometimes be controversial. What works in one business culture may not work in another. However, there are some best practices for SharePoint administration that are tried and true. They have been proven as effective ways to keep SharePoint (online and on premises) happy and healthy. In this session, we will discuss some of these best practices and how you can implement them in your environment.

### SharePoint Admin Worst Practices

**Lori Gowin**

Just as best practices ensure that your environment is healthy, there are some practices that will absolutely harm an environment. Drawing from real-world experiences, this session will look at some of the worst practices I've seen implemented. We will look at the practice, the impact, and ways to mitigate and recover if you have accidentally done this in your environment.

### Office 365 Administration Basics

**Lori Gowin**

This session will introduce the Office 365 offerings and capabilities. The focus will be on the SharePoint Online administrative capabilities, specifically the SharePoint Online Admin Center and Management Shell. Attendees will gain an understanding of each method of managing the SharePoint Online environment. These tools will be used to demonstrate the configuration of the services provided, especially user profiles, apps, and search.

### Office 365 Security & Compliance

**Naomi Money Penny**

IT managers and administrators need to have awareness of security options across all the technologies in Office 365, especially in hybrid environments. In this overview session we will delve into security practices available in Office 365, with particular emphasis on the collaboration platforms in the stack. We'll also look at the standards features available and best practices for demonstrating compliance such as HIPPA, FERPA and EU Model Clauses.

### Feature-itis: Managing First Release

**Naomi Money Penny**

With all the new features available and rapid iteration cycles in Office 365 and SharePoint 2016, IT has gone from managing hardware to managing user expectations while trying to keep up with the latest releases of technology. The wave of change doesn't stop, so learning how to manage your organization's internal first release program becomes critical, as well as identifying stakeholders in the business to recognize the value of internal IT in an increasingly cloud-first world.

### Productivity Metrics for Knowledge Workers

**Naomi Money Penny**

With the advent of Delve Organizational Analytics, now managers can see how much time their teams are spending in meetings or email. But what does that mean for your organization and how can you best use this data? We'll debunk some myths as well as go into details and limitations of how the service works and what the implications of this data mean for the behaviors you are trying to encourage in your digital workplace.

### SharePoint Server 2016 Under the Covers: Scaling and Limitations

**Jason Himmelstein**

**Seb Matthews**

SharePoint is alive & kicking with the latest Preview of SharePoint Server 2016. Join us as we tread into the deeper waters of the latest offering in the on-prem collaboration stack from Microsoft. We will be covering the down-level details around the major features such as MinRole, SQL Block Escalation, Fast Site Creation, Zero Downtime upgrade, the Cloud Search Service Application, the increased file upload sizes & durable links.

### SharePoint & Office 365 Hybrid: Better Together

**Todd Klindt**

It's finally here, the year of SharePoint hybrid. With SharePoint 2016, as well as SharePoint 2013 and 2010 there are many great hybrid opportunities available. The hybrid story keeps

evolving and it's tough to stay on top of it. In this session, Todd will go over what hybrid options are available with SharePoint on-prem and Office 365, and why you'd want to use them. If you're curious about SharePoint hybrid, but don't know where to start, this session is a good place.

### Upgrading to SharePoint 2016 Like a Pro

**Todd Klindt**

**Jason Himmelstein**

SharePoint 2016 isn't even RTM yet, but we're all anxious to see how easy it is to migrate our content to it from SharePoint 2013. In this session, we'll cover the out-of-the-box version to version upgrade techniques. We'll see what works and what doesn't. And if there's time at the end, we'll cover how you'll be able to achieve the unicorn of unicorns, patching SharePoint...with no downtime.

### SharePoint 2016 & Azure – Finally a Match Made

**Seb Matthews**

In this session, we will take a practical look at what is new in the combined world of SharePoint and Azure. With Microsoft's greater than ever focus on the Cloud, the latest version of on-premises SharePoint brings a lot to the table, and when coupled to Azure, the sparks really start to fly. With on-premises, Cloud and hybrid options now all on the table, the SharePoint and Azure story goes from strength to strength. Walking through the tighter integration than ever before, hybrid options with practical purpose and enterprise-grade solutions fit for any size of business makes this fast-paced session one not to miss.

### Apps for Everyone – Building No Code Business Apps

**Chris McNulty**

One of SharePoint's greatest strength is its ability to unify teams with rich content collaboration and business productivity applications. 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 for an overview of building custom solutions for enhanced collaboration, data analysis, account processing, business intelligence and mobile integration – using traditional SharePoint techniques and PowerApps.

### Better, Stronger, Faster: Engineering Your SharePoint 2016 Hybrid Solution

**Chris McNulty**

If SharePoint was Microsoft's way to get bring you to the cloud, SharePoint 2016 lets you bring the cloud into your premises system. Over 3/4th's of modern enterprises will maintain their premises based SharePoint permanently alongside Office 365. Join me for an overview of best practices to integrate Active Directory, Search, Apps, Sites and more between the cloud and your 2016 farm.

### SharePoint 2016

**Chris McNulty**

Description Coming Soon



Workshops



# Network with others and *have fun* learning about key client-side and server-side technologies. *Dan Wahlin*



Workshops

## PRE-PRE-CONFERENCE Workshops Saturday, April 16, 2016 9:00am - 4:00pm

### Introduction to SQL Server Integration Services (SSIS)

**Tim Mitchell**

**Level: 100-200**

There's a tool for every job, and when you are moving and transforming data, there are few other tools that can compare with SQL Server Integration Services (SSIS). Integration Services is the tool of choice in the Microsoft data ecosystem, providing a powerful and easy-to-learn interface for moving and manipulating data.

In this full-day workshop, we'll cover the essentials of SSIS. Among the topics we'll cover:

- An overview of SSIS and how it fits into the picture
- Navigating and using SQL Server Data Tools (SSDT)
- Essentials of orchestration: the Control Flow
- Moving data in the Data Flow
- Configuration with SSIS variables and parameters
- Putting the "T" in "ETL": using transformations in the data flow
- Essentials of logging
- The SSIS catalog

This workshop is intended for those with some experience with database concepts (relational theory, querying data, etc.). No prior experience with SSIS is required.

### Identity and Access Control and Modern Web Applications

**Two-Day Workshop continues Sunday (HANDS-ON, BRING YOUR LAPTOP)**

**Brock Allen**

**Level: 200**

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 completely revamped their web stack with ASP.NET 5 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 two-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.

### A Day with Sitefinity

**(HANDS-ON, BRING YOUR LAPTOP)**

**Lino Tadros**

In this workshop, we will demonstrate the complete aspect of working with Sitefinity while building a full site

- A tour of Sitefinity 8.2 from a business Analyst point of view
- Solid session for Administrators to setup Sitefinity correctly and tweak IIS and set permissions in a productive way

- A solid session for Designers to create custom template using Thunder and plenty of tips and tricks to productively be a successful FrontEnd Designer for Sitefinity
- A Solid session for Developers to create custom widgets and use the Sitefinity APIs to customize whatever your project will need.

Bring your laptop and let's build this together! Tons of fun guaranteed

## PRE-PRE-CONFERENCE Workshops Sunday, April 17, 2016 9:00am - 4:00pm

### SQL Server 2014 and 2016 New Features and Capabilities

**David Pless**

**Tim Chapman**

**Level: 300**

Join Microsoft Field Engineers and MCMs Tim Chapman and David Pless as they discuss the exciting new SQL Server capabilities in SQL Server 2014 and SQL Server 2016. 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. It integrates into the SQL Server Engine improving database performance by 5x-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.

We will also explore the new database engine features included in SQL Server 2016 such as Query Store, Temporal tables, Always Encrypted, data masking, row level security, Stretch Database and improvements to Always-On Availability Groups.

This will be a very demo driven and active delivery. Come prepared to be immersed into these new features and how you can take advantage of them to improve performance, security, and reliability of your SQL Server infrastructure.

### Developer's Guide to SQL Server Performance

**Brent Ozar**

**Jeremiah Peschka**

**Level: 200-300**

You're a developer stuck with a database server that's not going fast enough. You've got a hunch that the biggest bottleneck is inside the database server somewhere, but where? In this one-day workshop, you'll learn how to use powerful scripts to identify which queries are killing your server, what parts of the database server are holding you back, how to tackle indexing improvements, and how to identify query anti-patterns.

In one day of training with Brent Ozar and Jeremiah Peschka, you'll learn:

- How wait stats tell you where to focus your tuning
- How the plan cache shows you which queries are the worst
- How to make fast improvements by picking the right indexes
- How to identify and fix the most common query anti-patterns

### NativeScript: Cross-Platform Native Mobile Apps with Angular

**Todd Anglin**

**Burke Holland**

**Level: 200**

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 2
- 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!

### Making the Jump to ES6 and TypeScript (HANDS-ON, BRING YOUR LAPTOP)

**Dan Wahlin**

**John Papa**

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

Interested in learning about the future of JavaScript and Web development? If you haven't started looking at the future of JavaScript and where it's going with ES6, then this is your opportunity. This workshop will introduce language features found in ES6 and TypeScript and show what both languages have to offer. Learn how to convert ES6 and TypeScript to ES5 using tools like Gulp and tsc so that it can run in any browser. Learn about modules, classes, maps/sets, destructors, types, interfaces, generics and many more language features.

Topics covered:

- ES6 Core Features
- The Benefits of TypeScript
- Getting Started with TypeScript
- Debugging TypeScript
- Built-in Types
- Creating Enums and Const Enums
- Working with Functions
- Optional, Default and Rest Parameters
- Arrow Functions and "this"
- Working with Classes
- Using the public and private Modifiers
- Using Namespaces

- Working with Interfaces and Type Definition Files
- Defining and Using Generics
- Working with ES6 Modules in TypeScript

*If you'll be taking the Angular 2 workshop on Monday it's highly recommended that you take this workshop as well.*

### Getting Hot & Cold with Big Data on Azure

**Zoiner Tejada**

**Level: 300**

Are you working on IoT or web scale clickstream processing solutions? Got megabytes, tens of megabytes or even hundreds of megabytes of small data coming at you? Per second? If you answered yes to any of these, awesome, this workshop is for you. We will cover the Lambda Architecture for Big Data, and walk through an Azure reference architecture that answers the questions of: How best should you ingest all that data? What can you do with the data now in near real-time now that you have it (the hot path), and how you should go about keeping it for future analysis (the cold path)? While you are on your way to building the next Twitter, or solving the world's energy crisis with a massively successful IoT platform, understanding how and when to leverage Data Lake, IoT Hub, Event Hubs, Blob Storage, Stream Analytics, HD Insight (Spark and Storm), Azure Machine Learning and how to position those pipelines next to your operational SQL Server in a VM is a mission critical decision. Choose poorly and your solution will cost too much, be a burden on your developers, or will ultimately collapse underneath the volume of data. Choose wisely, and you are well on your way to stream processing nirvana. Choose wisely and attend this workshop.

### Identity and Access Control and Modern Web Applications

**Two-Day Workshop starts Saturday**

**(HANDS-ON, BRING YOUR LAPTOP)**

**Brock Allen**

**Level: 200**

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 completely revamped their web stack with ASP.NET 5 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 two 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.

**You will need to be signed up for Day 1 of this workshop to take Day 2.**

Check the conference website for the latest information, [DEVintersection.com](http://DEVintersection.com)  
Sessions and speakers are subject to change.





Workshops



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John Papa



Workshops

## PRE-CONFERENCE Workshops Monday, April 18, 2016 9:00am - 4:00pm

### Introduction to ASP.NET Core 1.0

**Damian Edwards**  
**Scott Hunter**  
**Brady Gaster**

You'll learn about ASP.NET Core 1.0 directly from the team that built it in this high-powered workshop. ASP.NET Core 1.0 is a lean and composable framework for building web and cloud applications. ASP.NET Core 1.0 is fully open source and available on GitHub. What does that ASP.NET Core 1.0 mean for compatibility? What powerful new cloud scenarios does ASP.NET Core 1.0 enable? We'll cover ASP.NET Core 1.0 both inside and outside the IDE, on Windows, Mac, and Linux.

### Zen of Architecture

**Juval Lowy**

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, common pitfalls of design in an Agile environment, and how to design the development process for maximum productivity.

### I Will Make You a Better C# Programmer

**Kathleen Dollard**

You're an intermediate or advanced C# developer and you're excited about attending a conference filled with cutting edge talks from amazing speakers. But you also know you could be better at the basic skills you use every day. You're good. You certainly don't want to see an inheritance hierarchy of animals or hear someone explain what a virtual method is. But you also know the vastness of the .NET framework and how subtle C# can occasionally be. You may not know that your application chooses between several variations of the garbage collector, how the large object heap compacts or how to track exceptions in production without a third-party tool and without a single line of code. In this workshop, you'll explore details of types solving puzzles. You'll gain a deeper understanding of nuances of memory management by profiling common "best practices." You'll get a deeper sense of async. You'll confirm your understanding of overloads (or be surprised). You'll dive into delegates and lambdas to leverage

functional approaches to C#. You'll go deeper into GC and explore what .NET logs for you. This workshop will make you a better coder. You'll know more about the .NET framework and be better at building great programs in this amazing environment.

### Performance Troubleshooting Using Waits and Latches

**Paul S. Randal**  
**Level: 300-400**

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.

### Analyzing and Improving I/O Subsystem Performance

**Glenn Berry**  
**Level: 200-400**

SQL Server is often I/O bound, but proving it to your storage or SAN administrator can be challenging! You will learn about the different types of storage that are available for SQL Server, and how to decide what type of storage to use for different SQL Server workload and file types. You will also learn useful tips and techniques for configuring your storage for the best performance and reliability for your workload. There will be extensive coverage on how to use disk benchmark tools like CrystalDiskMark 5.0 and Microsoft DiskSpd, so you can confidently understand the performance that your I/O subsystem can deliver. We'll also cover methods to effectively measure and monitor your storage performance from an OS and SQL Server perspective so that you will have valuable information and evidence available the next time you have to discuss I/O performance with your storage administrator. You will also learn a number of valuable OS and SQL Server configuration settings that will help you get the best I/O performance possible from your storage subsystem.

### PowerShell for the DBA from 0-60 in a Day

**Ben Miller**  
**Level: 100-200**

Think of how many servers or instances you maintain. Putting tools in your toolbox becomes a critical part of your life as a DBA. How many clicks can be reused? We will be taking you from 0-60 and everywhere in between with how PowerShell fits into a DBA's day in the life. We will go from getting PowerShell connected to SQL Server to walking away with a toolbox starter kit that will help you get automated and allow you to focus on harder problems than modifying database options or getting information from SQL Server and storing it away for later analysis. The toolbox alone will make it well worth your attendance.

Join me in the quest to become a PowerShell DBA.

### Building Applications for Office 365 and SharePoint with Angular 2 and ASP.NET 5

**Scot Hillier**  
**Level: 300**

Over the last couple of years, developers have been hard at work mastering the creation of enterprise applications with JavaScript and RESTful services. Many of these solutions utilized the Google Angular 1.x framework and the Microsoft ASP.NET MVC/ Web API, which were created by separate organizations, but worked very well together. Recognizing the synergy, Google and Microsoft worked closely together on the development of Angular 2, which utilizes Microsoft typescript and can be created within Visual Studio 2015. This collaboration has resulted in a powerful set of tools and technologies that can be leveraged by the Office and SharePoint developer. In this workshop, Angular 2 and ASP.NET 5 will be brought together to build applications for Office 365 and SharePoint. Along the way, the workshop will present the essentials of security using OAuth tokens and Azure Active Directory. Attendees will exit the workshop ready to build Office 365 and SharePoint applications with Angular 2 and ASP.NET 5.

### ThingLabs.io IoT Hands-on Workshop (HANDS-ON, BRING YOUR LAPTOP)

**Doug Seven**

**You must bring your own Windows 10 laptop with Visual Studio 2015 Community (or higher edition) installed.**

The Internet of Things (IoT) is the latest in an ever-growing realm of technology that modern developers have to know about. To get into the IoT, you have to learn about small form-factor and low-energy devices that interact with the physical world, and you have to know the Cloud services that will interface with these devices, for both data ingestion and command and control. In this full-day workshop you will learn both sides of the IoT. You will begin by diving into the world of Things by building applications that run on the Raspberry Pi 2, running Windows 10 IoT Core – a small form-factor variant of the popular Windows 10 family. Once you have mastered the world of Windows 10 IoT Core, you will learn how to connect the Thing you built to Azure IoT Hubs – a new Azure service designed to support millions of devices sending millions of messages. You will build an data ingestion pipeline, including visualizations of your IoT data that enable you to gain insight into your solution, and a command capability that enables you to control your device remotely. By the end of the workshop, you will have built a complete Windows and Azure IoT solution – and you may keep the hardware kit to continue your adventure in IoT.

### Building Single Page Applications with Angular 2

**Dan Wahlin**

**John Papa**

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

Interested in learning how to build Single Page Applications with Angular 2? By using SPA frameworks you can provide a robust "desktop-like" experience for users while leveraging a web deployment model. Whether you've been building Angular 1

applications or you're brand new to Angular, this workshop will provide a ground-up approach to learning Angular 2 concepts.

The workshop explores the core pieces that help you build end-to-end SPA solutions including the role of ES6/TypeScript, project setup, code structure, using data binding and MV\*, abstracted remote data calls through services, routing and more. You'll see several demos (and be provided with the code) throughout the workshop that will help you learn and understand the Angular 2 framework.

Topics that this workshop covers include:

- SPA fundamentals
- Importance of Separation of Concerns (SoC)
- ES6/TypeScript fundamentals
- Bootstrapping your application
- The Role of Components
- Using Annotations in Components
- Dependency injection
- Binding data to views
- Working with forms
- Managing remote data calls using services
- Routing and page navigation
- More...

*It's recommended that you take the 1-day ES6/TypeScript workshop along with the Angular 2 workshop to get the most out of the overall experience.*

## POST-CONFERENCE Workshops Friday, April 22, 2016 9:00am - 4:00pm

### Microservices on Azure

**Michele Leroux Bustamante**

Microservice architecture decomposes monolithic applications into discrete, atomic, full-stack service silos. It's patterns and principles build on techniques used in Service-Oriented Architecture by including recent advances in containerization and DevOps culture. The Microsoft Azure platform supports several options for developing microservice solutions including Docker, Windows Containers, Azure Container Service and Service Fabric. In this workshop, Michele will show you how these approaches compare in terms of development, deployment, architecture and topology of the solution and the scalability story. You'll learn modern patterns and practices for designing and implementing micro service solutions – illustrated with visual topologies and demos covering the tools and techniques for each microservice technology.

### Queries Gone Wrong: Statistics, Cardinality, Solutions

**Kimberly L. Tripp**  
**Level: 200-400**

Have you ever wondered why SQL Server did what it did to process your query? Have you wondered if it could have done better? Query estimates/statistics are often the key to understanding; this session will explain the what, why, and how about stats!

Most of the time SQL Server returns data quickly but sometimes performance is slow. Ultimately, what SQL Server did to access your data just doesn't make sense. Transact-SQL is a declarative language that details what data you need but without information



Workshops



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about how SQL Server should get it. Join order, predicate analysis – how does SQL Server decide the order or when to evaluate a predicate? There are numerous reasons why query performance can suffer and in this full-day workshop, Kimberly will cover a number of critical areas and for each – show you the behavior, the execution plan, the troubleshooting technique, and most importantly, the possible solutions.

This full-day workshop is about solving your query performance problems. Each problem has a different way of handling it and you'll walk away with a plethora of strategies to troubleshoot and tackle even the most gnarly of query problems. Stop with the "sledgehammer" approaches (updating statistics, rebuilding indexes, recompiling, clearing cache, restarting SQL Server) and really solve the problem. In this full-day workshop, you'll learn much more finessed ways to solve query plan quality problems.

Topics covered include understanding / maintaining statistics, handing VLTs / skewed data, distribution problems, troubleshooting common and advanced scenarios, and how to best utilize the cardinality estimation models (and trace flags) available in SQL Server versions 2008-2014.

### Leveraging SQL Server in the Cloud

**Brent Ozar**  
**Jeremiah Peschka**  
**Level: 200-300**

You're a developer or operations specialist and you're moving into the cloud. You know how to deal with SQL Server on-premises, but you're not sure where to go with the cloud. In this one-day workshop, you'll learn how to pick the right cloud, deploy SQL Server in the cloud, pick the right features, design for success (and failure), and scale SQL Server in the cloud.

In one day of training with Brent Ozar and Jeremiah Peschka you'll learn about:

- Choosing a cloud provider
- SQL Server deployment models
- SQL Server features that do and don't work
- Cloud-based alternatives to SQL Server features
- Scaling techniques
- Architecting for availability
- Designing for failure

### Building Better SSIS Packages

**Tim Mitchell**  
**Level: 200-300**

Building packages in SQL Server Integration Services is easy. Building good packages takes a bit more effort.

SQL Server Integration Services is deceptively easy to use. With a few hours of instruction or self-study, most data professionals can throw together an SSIS package. However, creating a process that simply runs successfully isn't the endgame; enterprise-class ETL demands a higher standard. Specifically, well-designed packages will be:

- Reliable
- Resilient
- Reusable
- Maintainable
- Well performing

There's nothing magical about building rock-solid SSIS packages, but it does take some discipline, experience, and a library of best practices. That is exactly the aim of this workshop: to demonstrate

a set of proven practices that help frame the development of enterprise-ready SSIS packages.

In this full-day workshop, we will walk through each of these five facets of well-built packages, discussing and then demonstrating ways of applying these practices to design better SSIS packages. Among the topics for the day:

- Checking for problems even when the package executes successfully
- Building effective tests for your packages
- Error handling and prevention
- Being kind to your fellow developers by building clear and easy-to-maintain packages
- Leave a trail of evidence: package logging done properly
- Avoiding performance bottlenecks: tips for making packages run faster
- Using the right tool for the job by integrating non-SSIS tools when appropriate
- This course is designed for the beginner- to intermediate-level SSIS developer.

### Building Hybrid Mobile Apps with Aurelia & Aurelia Interface

**Rob Eisenberg**

Aurelia is an amazingly simple, yet powerful open source framework for building browser, desktop and mobile applications. In this workshop we'll cover how to use Aurelia, including topics such as:

- MVVM
- Databinding
- Templating
- Custom HTML Elements
- Custom HTML Attributes
- Dependency Injection
- Routing

But, we won't stop there. Everyone who attends this workshop will receive a free, one year subscription to Aurelia Interface. What is that? It's a set of UI components, built on Aurelia, designed to help you build mobile apps that look and feel native on their respective platforms. Using Aurelia interface, we'll assemble a Hybrid Mobile app that looks and feels native on both iOS and Android devices... with a single codebase and a unified component library.

### Use Innovation Games and Gamestorming Techniques to Jump Start Your Next Project!

**Michelle Caldwell**

Analysis is broken! Did you ever wish there was a more effective and interactive way to gather requirements? In this session we will role play some of these tactics that provide quick and effective insights into business needs. Throw out your trusty questionnaires and get ready to play some serious games. If you want to have fun while you define requirements you won't want to miss this session.

By attending this workshop, you will get a chance to:

- Get hands on experience in gamestorming and innovation game techniques
- Understand how to facilitate these innovative strategies on your project
- Apply field-tested strategies in your organization



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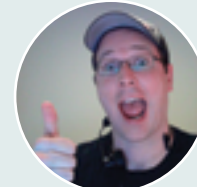
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