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A MESSAGE FROM THE CONFERENCE CO-CHAIRS

WITH AUTUMN IN FULL SWING and children's minds filled with dreams of candy promised on Halloween, October also brings the fun and deep learning that is Visual Studio Live! Chicago 2019! Every company is a software company and if you’re not staying current, you’re falling behind. With good food, unparalleled networking, and great technical learning, VSLive! Chicago is here to help you not just keep up-to-date, but to “get ahead” and be ready to help your team and organization be on top.

We’re Andrew Brust, Rockford Lhotka, and Brian Randell, and as Conference Co-Chairs for Visual Studio Live! Chicago, we’d like to personally invite you to join us this October, 5 minutes from Millennium Park, at the Swissôtel Chicago. As veterans of the show and longtime speakers, we may be biased, but we firmly believe that an in-person experience, where you get to have two-way conversations about the latest tools and technology, with some of the finest expert speakers in the business—and with the chance to network with your peers—continues to deliver the highest level of value. The rapid change of pace means there is more you need to know. As in years past, Microsoft announced many great updates and new compelling technologies in May for developers & technologists. Our cohort of technical speakers will be ready to help you know what’s ready, what’s not, and provide their expert advice and knowledge on how to build the best solutions for your customers.

Visual Studio Live! Chicago gives you a rich multi-track event with great 75-minute breakout sessions and a full day of deep workshops, covering a wide array of development technologies for everyone. From security to databases to the latest Web and mobile technologies, we’ve got you covered. Our speakers will present on AI, machine learning, serverless, and enterprise software solutions in-depth, with experience on Windows, macOS, Linux, and mobile platforms.

We have picked every workshop and session with the goal of transferring knowledge to you, so you can be a better developer and help your organization succeed in this ever-changing world.

You’ll find coverage on Microsoft Visual Studio 2019, the full .NET Framework, .NET Core, .NET Standard, container technologies and Big Data analytics. If the Web is more your style, you’ll find coverage of JavaScript, TypeScript, Angular and WebAssembly on the client as well as ASP.NET and ASP.NET Core on the server. Feeling confused about .NET? We’ve got sessions to clear it up. Want to improve the quality of your software? We’ve got sessions on feature flags, writing testable code, and versioning APIs. Mystified as to how you can bring DevOps to your organization? Our speakers will answer your questions with practical guidance on mobile development, Web, database and more.

Our workshop content provides coverage of Cross-Platform C# using .NET Core, Kubernetes, and WebAssembly; the latest on SQL Server for Developers; and Serverless in the Azure Cloud with Azure DevOps. Want to get your hands dirty? We’ve got two great all-day Hands-On Labs covering ASP.NET Core & EF Core as well as Azure with Xamarin. Our sessions, Hands-On Labs, and workshops drill deep into the subjects you need to master and the fundamentals that are always important.

Our industry continues the march toward the future. To keep up, you need to absorb rapidly and adapt. Go beyond Internet-based content to a live experience, where you get to ask questions in real-time and engage directly with the experts and your peers. Find a way to get to Visual Studio Live! Chicago and get the tools to help yourself grow.

We hope to see you there!

VISUAL STUDIO LIVE! CONFERENCE CO-CHAIRS

Andrew Brust  
Founder & CEO, Blue Badge Insights

Rockford Lhotka  
CTO, Magenic

Brian A. Randell  
Partner, MCW Technologies
LEARN FOR TODAY. PREPARE FOR TOMORROW.
Get relevant, immediately usable training on what’s happening on the developer landscape now, and learn what’s coming next to get out ahead of the competition.

NETWORKING IS KEY.
From the networking breakfasts, to evening activities, to just sitting next to someone new at lunch, you’ll have the unique chance to learn from and share with your peers, all week long!

UNPARALLELED SPEAKER ACCESS.
What has always separated Visual Studio Live! from other conferences (and internet-based training) is the unparalleled access to the speakers. Get your questions answered in-between sessions, during meals and at fun evening events.

IT’S ALWAYS BEEN ABOUT PERSPECTIVE.
Our speakers include both unbiased industry experts and Microsoft insiders, so you’ll hear every side of the story on the most recent software and industry updates.

WHAT’S OUR NAME? VISUAL STUDIO LIVE!
Our goal is to help make sense and assist you in harnessing the rapid pace of Microsoft’s updates. Quarterly updates to Visual Studio and Team Foundation Server (TFS) on-premises and Visual Studio Team Services (VSTS) in the cloud continue to deliver value on a regular basis. Visual Studio even provides preview updates monthly.

EXPLORE THE WINDY CITY.
Code during the day and continue the fun in the evening by exploring everything in the heart of Chicago.

THE CHOICE IS YOURS.
With so many sessions and workshops in a variety of tracks, you’re free to choose what sessions you attend and when. You aren’t bound to any one session or track! Sometimes it’s hard to choose, though, so we provide all conference proceedings and any shared code for all the sessions free to attendees!

NEW THIS YEAR! ON-DEMAND SESSION RECORDINGS.
Get on-demand access for one full year to all keynotes and sessions from Visual Studio Live! Chicago, including everything Tuesday-Thursday at the conference.

10 ENCHANCE YOUR LEARNING WITH HANDS-ON LABS.
AGAIN at VSLive! this year, there’s another full day of learning with the Sunday HANDS-ON LABS. Bring your laptop and learn by doing!

9 WE’VE NEVER SKIMPED ON CONTENT.
VSLive! is known for being a technically-focused conference, with up to 5 full days of educational sessions on hot topics like ASP.NET Core, Azure, DevOps, SQL Server, Xamarin, AI, JavaScript and more!

8 REASONS TO JOIN US IN CHICAGO

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1 NEW THIS YEAR! ON-DEMAND SESSION RECORDINGS.
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ACTIVITIES AND EVENTS

YOUR ATTENDANCE AT VISUAL STUDIO LIVE! is about learning from your peers as well as our expert speakers. Make the most of your time and add these events to your itinerary.

**DINE-A-ROUND DINNER**  
**Monday, October 7**  
Join other conference attendees and speakers for a casual, no-host dinner and make a few new friends while enjoying the fun and delicious restaurants in downtown Chicago. This is your opportunity to meet fellow attendees and start friendships that can last for the week or even longer. Attendees can break into smaller groups based on where everyone wants to dine and head off to dinner. Everyone is responsible for their own dinner and drinks.

**WELCOME RECEPTION**  
**Tuesday, October 8**  
All conference attendees are invited to celebrate the start of Visual Studio Live! Chicago at the Welcome Reception. Join us to network with fellow conference attendees and speakers, talk with the event sponsors, enjoy complimentary drinks and hors d’oeuvres, and participate in the conference raffle.

**BIRDS OF A FEATHER LUNCH**  
**Wednesday, October 9**  
Plumb the knowledge and experience of your colleagues, conference speakers and exhibitors by participating in one of the BoF Table discussions. Tables will have a designated topic to help start discussions and interact with your fellow attendees. You may even learn a new trick or two or some great tips to take back to the office.

**VSLIVE!’S TROLLEY TOUR OF THE WINDY CITY**  
**Wednesday, October 9**  
Join us as we travel through Downtown Chicago and explore all the Windy City has to offer. Over two hours, you will see the Magnificent Mile, Water Tower, John Hancock Building, River North neighborhood, historic Grant Park, Millennium Park with the famous Bean, Buckingham Fountain, The Art Institute, and several museums. You will also see Willis Tower, the Chicago Theatre, and lastly see Navy Pier as we head down Lake Shore Drive. Be prepared for stunning views of Lake Michigan! Space is limited so reserve your seat today!
## AGENDA AT-A-GLANCE

### Pre-Conference Full Day Hands-On Labs: Sunday, October 6, 2019  
Separate entry fee required

<table>
<thead>
<tr>
<th>START TIME</th>
<th>END TIME</th>
<th>Session</th>
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</thead>
<tbody>
<tr>
<td>7:30 AM</td>
<td>9:00 AM</td>
<td>Pre-Conference Hands-On Lab Registration - Coffee and Morning Pastries</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>6:00 PM</td>
<td><strong>HOL01</strong> Full Day Hands-On Lab: Develop an ASP.NET Core 2 App with EF Core 2 in a Day - Philip Japikse</td>
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<tr>
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<td></td>
<td><strong>HOL02</strong> Full Day Hands-On Lab: Azure and Xamarin: Build the Mobile Apps of Tomorrow with Serverless, AI and Cross-platform clients - Laurent Bugnion &amp; Brandon Minnick</td>
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</table>

### Pre-Conference Workshops: Monday, October 7, 2019  
Separate entry fee required

<table>
<thead>
<tr>
<th>START TIME</th>
<th>END TIME</th>
<th>Workshop</th>
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</thead>
<tbody>
<tr>
<td>7:30 AM</td>
<td>8:00 AM</td>
<td>Pre-Conference Workshop Registration - Coffee and Morning Pastries</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>5:00 PM</td>
<td><strong>M01</strong> Workshop: Go Serverless in the Azure Cloud with Azure DevOps - Brian Randell</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>5:00 PM</td>
<td><strong>M02</strong> Workshop: SQL Server for Developers: The Grand Expedition - Andrew Brust and Leonard Lobel</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>5:00 PM</td>
<td><strong>M03</strong> Workshop: Cross-Platform C# Using .NET Core, Kubernetes, and WebAssembly - Rockford Lhotka &amp; Jason Bock</td>
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<tr>
<td>5:45 PM</td>
<td>8:00 PM</td>
<td>Dine-A-Round</td>
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### Day 1: Tuesday, October 8, 2019

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<tr>
<th>START TIME</th>
<th>END TIME</th>
<th>Session</th>
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<tbody>
<tr>
<td>7:00 AM</td>
<td>8:00 AM</td>
<td>Registration - Coffee and Morning Pastries</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td><strong>T01</strong> Guiding Principles for ASP.NET Core - K. Scott Allen</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td><strong>T02</strong> Cross-Platform Development with Xamarin, C#, and CSLA .NET - Rockford Lhotka</td>
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<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td><strong>T03</strong> Signing Your Code The Easy Way - Oren Novotny</td>
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<td>8:00 AM</td>
<td>9:15 AM</td>
<td><strong>T04</strong> AI and Analytics with Apache Spark on Azure Databricks - Andrew Brust</td>
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<td>8:00 AM</td>
<td>9:15 AM</td>
<td><strong>T05</strong> To Be Announced - Laurie Barth</td>
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<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td><strong>T06</strong> Azure 101 - Laurent Bugnion</td>
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<td>8:00 AM</td>
<td>9:15 AM</td>
<td><strong>T07</strong> DevOps Practices Can Make You A Better Developer - Robert Green</td>
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<td>8:00 AM</td>
<td>9:15 AM</td>
<td><strong>T08</strong> Azure Cosmos DB Part 1 - Introduction to Cosmos DB - Leobard Lobel</td>
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<td>11:00 AM</td>
<td>12:00 PM</td>
<td><strong>KEYNOTE</strong>: .NET: To Infinity and Beyond - James Montemagno, Principal Manager, Mobile Developer Tools, Microsoft</td>
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<tr>
<td>12:00 PM</td>
<td>1:00 PM</td>
<td>Lunch</td>
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<tr>
<td>1:00 PM</td>
<td>1:30 PM</td>
<td>Dessert Break - Visit Exhibitors</td>
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<tr>
<td>1:30 PM</td>
<td>2:45 PM</td>
<td><strong>T09</strong> To Be Announced - Laurie Barth</td>
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<tr>
<td>1:30 PM</td>
<td>2:45 PM</td>
<td><strong>T10</strong> Stunning Mobile Apps with the Xamarin Visual Design System - James Montemagno</td>
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<td>1:30 PM</td>
<td>2:45 PM</td>
<td><strong>T11</strong> Get Started With Git - Robert Green</td>
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<tr>
<td>1:30 PM</td>
<td>2:45 PM</td>
<td><strong>T12</strong> Azure Cosmos DB Part II - Building Cosmos DB Applications - Leonard Lobel</td>
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<tr>
<td>3:00 PM</td>
<td>4:15 PM</td>
<td><strong>T13</strong> Advanced Azure App Services - K. Scott Allen</td>
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<td>3:00 PM</td>
<td>4:15 PM</td>
<td><strong>T14</strong> (WPF + WinForms) * .NET Core = Modern Desktop - Oren Novotny</td>
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<tr>
<td>3:00 PM</td>
<td>4:15 PM</td>
<td><strong>T15</strong> Modernize Your App to be Delivered as a SaaS Service - Nick Pinheiro</td>
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<tr>
<td>3:00 PM</td>
<td>4:15 PM</td>
<td><strong>T16</strong> Power BI: What Have You Done For Me Lately - Andrew Brust</td>
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<tr>
<td>4:15 PM</td>
<td>5:30 PM</td>
<td>Welcome Reception</td>
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Speakers and sessions subject to change
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<th>.NET Core and More</th>
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<tr>
<td><strong>START TIME END TIME</strong></td>
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<td><strong>Registration - Coffee and Morning Pastries</strong></td>
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<tr>
<td>8:00 AM 9:15 AM</td>
<td><strong>W01</strong> Designing and Building Advanced Angular Components - Anthony Monsees</td>
<td><strong>W02</strong> A Tour of Visual Studio 2019 - Jason Bock</td>
<td><strong>W03</strong> Reach Any User on Any Platform with Azure AD B2C - Nick Pinheiro</td>
<td><strong>W04</strong> Azure Pipelines - Brian Randell</td>
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<tr>
<td>9:30 AM 10:45 AM</td>
<td><strong>W05</strong> Advanced Typescript—Dive into Inheritance, Union Types, Generics, and More - Anthony Monsees</td>
<td><strong>W06</strong> What’s New in .NET Core 3 - Jason Bock</td>
<td><strong>W07</strong> 9 Azure Services Every Developer Should Know About - Eric D. Boyd</td>
<td><strong>W08</strong> Non-Useless Unit Testing Entity Framework &amp; ASP.NET MVC - Benjamin Day</td>
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<tr>
<td>11:00 AM 12:00 PM</td>
<td><strong>GENERAL SESSION: Actually, It’s Open Source That’s Eating the World - Edward Thomson, Product Manager, GitHub</strong></td>
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<td>12:00 PM 1:00 PM</td>
<td>Birds-of-a-Feather Lunch</td>
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<td>1:00 PM 1:30 PM</td>
<td>Dessert Break - Visit Exhibitors - Exhibitor Raffle @ 1:15pm (Must be present to win)</td>
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<td>1:30 PM 1:50 PM</td>
<td><strong>W09</strong> Fast Focus: Getting Started with ASP.NET Core 2.0 Razor Pages - Walt Ritscher</td>
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<td>2:00 PM 2:20 PM</td>
<td><strong>W10</strong> Fast Focus: What’s New in .NET Core 2.x - Jim Wooley</td>
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<tr>
<td>2:30 PM 3:45 PM</td>
<td><strong>W11</strong> Fast Focus: Serverless of Azure 101 - Eric D. Boyd</td>
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<tr>
<td>3:00 PM 3:30 PM</td>
<td><strong>W12</strong> Fast Focus: What is WSL and Why Do I Care? - Brian Randell</td>
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<tr>
<td>4:00 PM 5:15 PM</td>
<td><strong>W13</strong> Fast Focus: A Real-time SignalR Core Chat - Jim Wooley</td>
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<tr>
<td>4:30 PM 5:30 PM</td>
<td><strong>W14</strong> Fast Focus: Scrum in 20 Minutes - Benjamin Day</td>
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<tr>
<td>7:00 PM 9:00 PM</td>
<td>VSLive!’s Trolley Tour of the windy City</td>
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</table>

*Speakers and sessions subject to change*

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"GREAT SELECTION OF TOPICS AND SPEAKERS. NETWORK EVENTS WERE VERY NICE."

— Dave Adler, Engineering Innovation, Inc.
## AGENDA AT-A-GLANCE (continued)

<table>
<thead>
<tr>
<th>START TIME</th>
<th>END TIME</th>
<th>Day 3: Thursday, October 10, 2019</th>
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<tbody>
<tr>
<td>7:30 AM</td>
<td>8:00 AM</td>
<td>Registration - Coffee and Morning Pastries</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td>TH01 WebAssembly: the Browser is Your OS - Jeremy Likness</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td>TH02 UX Beyond the Keyboard: Designing Conversational Interfaces - John Alexander</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td>TH03 Building a Stronger Team, One Strength at a Time - Angela Dugan</td>
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<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td>TH04 # Language Enhancements, Roslyn and You - Jim Wooley</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>10:45 AM</td>
<td>TH05 What’s New in Bootstrap 4 - Paul Sheriff</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>10:45 AM</td>
<td>TH06 How to Have Better Business Intelligence Through Visualizations - Walt Ritscher</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>10:45 AM</td>
<td>TH07 How Do You Measure Up? Collect the Right Metrics for the Right Reasons - Angela Dugan</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>10:45 AM</td>
<td>TH08 Get Your BASH on with WSL - Brian Randell</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>12:15 PM</td>
<td>TH09 Create Your Own SPA Using jQuery - Paul Sheriff</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>12:15 PM</td>
<td>TH10 Microsoft Power Platform, RAD Done Right: Building Dynamic Mobile Apps with PowerApps - Walt Ritscher</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>12:15 PM</td>
<td>TH11 Writing Testable Code and Resolving Dependencies—DI Kills Two Birds with One Stone - Miguel Castro</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>12:15 PM</td>
<td>TH12 Entity Framework Performance Monitoring and Tuning - Jim Wooley</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>12:15 PM</td>
<td>Lunch</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>2:45 PM</td>
<td>TH13 Real-time Web Applications with ASP.NET Core SignalR - Roland Guijt</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>2:45 PM</td>
<td>TH14 Building UWP Apps for Multiple Devices - Tony Champion</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>2:45 PM</td>
<td>TH15 Demystifying Microservice Architecture - Miguel Castro</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>2:45 PM</td>
<td>TH16 .NET Standard: Reuse All the Code - Jonathan “J.” Tower</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>4:15 PM</td>
<td>TH17 Top 10 Browser Threats Mitigated - Roland Guijt</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>4:15 PM</td>
<td>TH18 Building Cross Device Experiences with Project Rome - Tony Champion</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>4:15 PM</td>
<td>TH19 Hacking Time: Using Micro-habits to Customize Your Environment - John Alexander</td>
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<td>3:00 PM</td>
<td>4:15 PM</td>
<td>TH20 Dotnet CLI or: How I Learned to Stop Worrying and Love the Command Line - Jonathan “J.” Tower</td>
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Speakers and sessions subject to change

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**“WIDE RANGE OF TOPICS TO SELECT FROM AND I COULD FIND SOMETHING I WAS INTERESTED IN FOR EACH SESSION.”**

— Jeff Ring, Plex Systems
KEYNOTE / GENERAL SESSION

Want a front-row seat to the future of technology? Attend the keynote and general session for Visual Studio Live! Chicago to learn what’s hot on today’s tech landscape and what exciting developments lie ahead for this year and beyond.

Tuesday, October 8, 11:00am-12:00pm

KEYNOTE: .NET: To Infinity and Beyond

James Montemagno
Principal Program Manager, Mobile Developer Tools
Microsoft

As the software development industry moves at a blazing fast pace so does .NET. .NET leads the way across a multitude of platforms including web, IoT, desktop, mobile, wearables, and so many more. In this session we will take you through the journey of a .NET developer creating apps for these platforms on Visual Studio 2019 and Visual Studio 2019 for Mac. You will see how the latest advancements in .NET with the Mono Interpreter enable new scenarios for WebAssembly, iOS and Android development, and more. If you are .NET developer, you do not want to miss this .NET packed session as .NET truly goes everywhere.

James Montemagno is a Principal Program Manager for Mobile Developer Tools at Microsoft. He has been a .NET developer since 2005, working in a wide range of industries including game development, printer software, and web services. Prior to becoming a Principal Program Manager, James was a professional mobile developer and has now been crafting apps since 2011 with Xamarin. In his spare time, he is most likely cycling around Seattle or guzzling gallons of coffee at a local coffee shop. He can be found on Twitter @JamesMontemagno, blogs code regularly on his personal blog http://www.montemagno.com, and co-hosts the weekly development podcast Merge Conflict http://mergeconflict.fm.

Wednesday, October 9, 11:00am-12:00pm

GENERAL SESSION:
Actually, It’s Open Source That’s Eating the World

Edward Thomson,
Product Manager, GitHub

When Edward Thomson joined Microsoft ten years ago, open source was still “a cancer”. But a decade later, the world has changed. Software isn’t eating the world anymore, now open source is eating the world and GitHub has become the largest developer community on the planet. Edward will explain how to pivot a company to understand and accept open source, to use and contribute open source successfully, and how to apply the open source ideologies of openness and collaboration “within your firewall” to empower your organization to achieve more.

OUR CONFERENCE CO-CHAIRS ARE HARD AT WORK SECURING OUR GENERAL SESSION DETAILS. IN THE MEANTIME, CHECK OUT ALL OF THE EXPERTS ALREADY HEADED TO CHICAGO THIS FALL.
VSLIVE.COM/CHICAGO
HANDS-ON LABS

Visual Studio Live! Chicago offers two instructor-led, pre-conference Hands-On Labs to help you take your dev skills to a new level. Get intensive, in-depth training to complete your conference experience.

Topics covered include:

• Xamarin and Azure – Build the Apps of Tomorrow
• Develop an ASP.NET Core 2 and EF Core 2 App in a Day

These labs are presented on a Bring Your Own Laptop (BYOL) basis. Attendance for each Hands-On Lab is limited, so be sure to sign up early!

HOL01 Full Day Hands-On Lab: Develop an ASP.NET Core 2 App with EF Core 2 in a Day

Intermediate

PHILIP JAPIKSE

Sunday, October 6, 9:00am – 6:00pm

Interested in ASP.NET Core 2.x and Entity Framework Core 2.x, but not sure where to start? Start here with an all-day Hands-on Lab where you will build a complete solution using the latest development technology from Microsoft. Using Visual Studio or Visual Studio Code and .NET Core 2.1 (or greater), you will build a data access library using Entity Framework Core, complete with repos and migrations. Next, you will build an ASP.NET Core web application, leveraging all of the latest that ASP.NET Core has to offer, including Tag Helpers, View Components, Dependency Injection, and more!

You will learn:

• Use EF Core to build the data access layer
• Use ASP.NET Core to build the web application
• New features in EF Core and ASP.NET Core

Attendee Requirements:

You must provide your own laptop computer (Windows or Mac) for this hands-on lab.

You will need to have and IDE installed. Any one of the following will work (all available from: https://www.visualstudio.com/downloads/):

• Visual Studio 2017 v15.9+ (any edition). When installing, make sure to select the ”ASP.NET and web development” and ”NET Core cross-platform development” workloads.

• Visual Studio 2019 (any edition) When installing, make sure to select the ”ASP.NET and web development” and ”NET Core cross-platform development” workloads.

• Visual Studio for the Max (v7.7+) When installing, make sure to select ”.NET Core + ASP.Net Core”

• Visual Studio Code (1.33.1+) After installing, make sure to add in the select the “C# for Visual Studio Code (powered by OmniSharp)” and “C# Extensions (jchannon)” extensions.

• Xamarin and Azure – Build the Apps of Tomorrow with Serverless, AI and Cross-platform Clients

Intermediate

LAURENT BUGNION

Sunday, October 6, 9:00am – 6:00pm

This hands-on workshop will take you from 0 to a fully working, cloud connected, AI powered mobile app. We’ll help you get setup with Visual Studio and the Xamarin tooling on either Windows or Mac, and connect your iPhone or your Android device ready to run an app. Once you are set-up, we’ll cover some basics of Xamarin and Xamarin Forms, then it’s heads down setting up cloud services for storage, processing and authentication, and writing a cross-platform client app - using one code base for a fully-native app that runs on both iOS and Android. We’ll also give you small lectures on relevant topics such as Serverless Functions applications for processing, Cognitive Services for Image recognition, Cosmos DB for storage.

The app we build will combine accessing device hardware using Xamarin plugins, online AI services for face and emotion detection, and other services like authentication and blob storage, all built using a serverless architecture. By the end of the workshop, you will have a production ready, AI and cloud powered mobile app.
WORKSHOPS

Choose from a range of content and topics by expert presenters with Visual Studio Live! Chicago Pre-Conference workshops.

Topics covered include:
- Cross platform C# with .NET Core, Kubernetes, and WebAssembly
- Azure DevOps
- SQL Server for Developers: The Grand Expedition

M01 Go Serverless in the Azure Cloud with Azure DevOps

Introductory / Intermediate

BRIAN RANDELL
Monday, October 7, 8:00am – 5:00pm

It’s 2019. How’s your DevOps transformation? What about getting rid of all your servers and VMs and moving to serverless computing? Well if you’re not there yet, come to this workshop where you’ll learn about the why and how of serverless computing and DevOps in the Microsoft cloud.

Starting from nothing to something, Brian will show you how to “File | New” your serverless systems by showing you how to create an Azure Functions environment that is correctly built, tested, deployed, managed, and monitored using the Azure Platform and Azure DevOps Services.

First you’ll learn how to create your inner workflow as a single developer and get an Azure Functions “app” working with queues, storage, and data persistence. This will cover the latest version of Visual Studio 2019 and Visual Studio Code.

Next, you’ll see how using Azure Boards and Azure Repos makes your life better as you move to a team development experience using Azure DevOps. We’ll look at tracking work and getting metrics using Scrum and Kanban.

You’ll then see how to enable CI/CD pipelines using Azure Pipelines as well as how to share code using Azure Artifacts.

Finally, we’ll move to operations side and integrate Azure Monitor’s Logs, Metrics, Insights and various alerting tools. By the end of the day you’ll know how to go back to your organization and start both your serverless computing and DevOps transformations.

Products features covered include:
- Azure App Service
- Azure Functions
- Azure Storage
- Azure Service Bus
- Azure Cosmos DB
- Azure Monitor
- Azure DevOps

You will learn:
- What Serverless is in concept and in practice using Azure Functions
- What DevOps is and how you can apply it in your organization
- How to piece together a rich set of Azure services to build a modern, Serverless solution

M02 Workshop: SQL Server for Developers: The Grand Expedition

Intermediate

ANDREW BRUST & LEONARD LOBEL
Monday, October 7, 8:00am – 5:00pm

This all-day workshop on SQL Server will provide coverage of a wide range of the platform’s capabilities and optimal usage of them, from core features like security and T-SQL language improvements; to new innovations like running SQL Server in containers and utilizing temporal tables; to the latest in operational analytics, machine learning (ML) and Big Data. You’ll learn about critical features that have been in the product for some time, as well as many of the latest features, delivered in SQL Server 2019. That’s the tldr. For details, read on!

We’ll kick things off with the most important features added to the relational engine, including broad multi-platform support across Windows, Linux, and Docker. Then you’ll explore all the latest T-SQL enhancements, including more convenient DDL statements, new string split, join, and aggregate functions, partition truncation, and other language improvements.

“SO MUCH GREAT INFORMATION THAT IS RELEVANT TO NOW!”

— Lyn Sawyer, Lake Michigan Credit Union
But data platforms aren’t just about operational databases anymore, and neither is SQL Server. So we’ll next move on to its analytics capabilities, starting with columnstore indexes: what they are; how to create them; how they benefit massive data warehouse-style queries; and tips for monitoring how they’re used in query plans.

From there we’ll look at PolyBase, including its connectivity to data lakes on Hadoop clusters and cloud storage as well as new connectivity to databases like Oracle, Teradata, MongoDB and even additional SQL Server instances. Next, we’ll look at SQL Server’s Big Data clusters and their incorporation of technologies like Apache Spark, the Hadoop Distributed File System (HDFS) and data stored in the Apache Parquet columnar format.

We’ll start to wind down our analytics tour with a look at SQL Server’s machine learning capabilities, including in-database features made possible by native hosting of the Python and R programming languages. And as the last stop on our analytics tour, we’ll take in how to use Azure Data Studio to query SQL Server and the platforms it integrates with, as well as leverage SQL Server’s data science features.

Our workshop continues with the latest security features, including dynamic data masking (DDM), row level security (RLS), and Always Encrypted. You’ll also get a look at the new “secure enclaves” feature in SQL Server 2019 that enables rich query and range operations on always encrypted data. We’ll conclude by exploring temporal tables (versioned tables that enable instant point-in-time queries over your data) and Stretch DB for online archival of historical data.

Attend this workshop, designed especially for developers, and get up-to-speed on both the latest relevant SQL Server features and the product’s classic critical capabilities!

You will learn:
• How to accelerate your database development process by running cross-platform SQL Server inside containers with Docker
• The latest T-SQL language enhancements, plus DDM, RLS, Always Encrypted, temporal tables, and Stretch DB
• How to use SQL Server for data warehouse, big data and machine learning workloads
• The basics of new SQL Server-integrated open source technologies, including Spark, HDFS, Python, R and Parquet

In this workshop Rocky and Jason will show you how to build C# and .NET code that runs on Windows, Linux, Docker/Kubernetes, macOS, iOS, Android and in the browser. You’ll learn how to leverage .NET Core, .NET Standard (netstandard), Visual Studio, Visual Studio Code, Docker, and many other tools and technologies to build apps and services for each platform. Perhaps more important, you’ll learn how to share common code across all these platforms, and techniques for when you need to also leverage platform-specific code.

You will learn:
• How to build C# and .NET code that runs cross-platform on client and server
• How to leverage .NET Standard and .NET Core
• How to share common code across platforms

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• How to build C# and .NET code that runs cross-platform on client and server
• How to leverage .NET Standard and .NET Core
• How to share common code across platforms
SESSION DESCRIPTIONS BY TRACK

**DEVOPS IN THE SPOTLIGHT**

DevOps has been called the second decade of Agile. While it’s easy to get obsessed over tools, it’s really about organizational transformation. It starts with people, better process, and then yes, good products can make all the difference. DevOps is all about continuous value delivery. You have a role to play when it comes to DevOps, and in this track, you’ll learn the about the tools, techniques, and concepts that you can immediately apply to your daily work.

You’ll find coverage of:
- Azure DevOps
- Git
- DevOps practices for developers
- Azure Pipelines
- Unit testing Entity Framework and ASP.NET MVC code
- Scrum in 20 minutes
- SAFe in the enterprise
- Scrum under a waterfall

**T07 DevOps Practices Can Make You a Better Developer**

*Intermediate*

**ROBERT GREEN**

**Tuesday, October 8, 9:30 – 10:45am**

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

You will learn:
- Explore the value of implementing DevOps practices
- How to create CI/CD pipelines
- Understand how to implement basic DevOps practices in your development routine

**W04 Azure Pipelines**

*Intermediate*

**BRIAN RANDELL**

**Wednesday, October 9, 8:00 – 9:15am**

Azure Pipelines is a component of Azure DevOps that allows you to continuously build, test, and deploy to any platform and cloud, for apps written in any language. In this session Brian will take a deep dive into Azure Pipelines and how you can build and deploy apps to Azure, AWS, and Google Cloud as well as local IIS and Kubernetes deployments. Will look at app tiers and data tiers and talk about how to manage configuration data. Finally, we’ll look at Infrastructure as Code options.

You will learn:
- What is Azure Pipelines
- How to create a cloud pipeline
- How to create an on-premises pipeline

**T11 Get Started with Git**

*Intermediate*

**ROBERT GREEN**

**Tuesday, October 8, 3:00 – 4:15pm**

Git is a free, open source distributed version control system. It has become wildly popular as a way to not only manage source code, but also as a way of sharing code with others. In this session, you will learn the basics of using Git. You will get familiar with repos, committing changes, branching and merging. You’ll see how to work with both new and existing projects, how to store your code in both GitHub and Azure DevOps (formerly VSTS) and how to work with Git in Visual Studio.

You will learn:
- What Git is and how to get started using it
- Get familiar with the basics of Git, including repos, committing changes, branching and merging
- How to use Git with GitHub, Azure DevOps and Visual Studio

**W08 Non-Useless Unit Testing Entity Framework & ASP.NET MVC**

*Intermediate*

**BENJAMIN DAY**

**Wednesday, October 9, 9:30 – 10:45am**

We all know that we should be writing unit tests for our applications. But what do you do about that database code? Data access code is FAMOUS for wrecking our dreams for a clean, unit testable application. Add ASP.NET MVC and application security into the mix and those unit testing dreams just drift further and further away.

You will learn:
- What is Entity Framework
- How to write unit tests
- How to test model code
It doesn’t have to be that way. Heck! It’s not even that hard to do! It just takes a little bit of planning and some basic design patterns. In this session, we’ll go through how to design and build your ASP.NET MVC & Entity Framework applications so that you’ve got a clean, maintainable, and unit testable design.

You will learn:
- How to design a testable ASP.NET app using Entity Framework
- Unit test security related code in ASP MVC Controllers
- Gotchas for testing Entity Framework code

**W14 Fast Focus: Scrum in 20 Minutes**  
*Intermediate*

**BENJAMIN DAY**  
Wednesday, October 9, 2:00 – 2:20pm

We’ll start off with the fastest Scrum overview of all time and why you should care. From there, we’ll pivot to talk about why Scrum is still relevant in the days of DevOps and continuous deploy and continuous releases. Plus, stick around afterward to chat about your Scrum questions!

**W18 Getting to SAFe in the Enterprise**  
*Introductory*

**JIM SZUBRYT**  
Wednesday, October 9, 2:30 – 3:45pm

Having Agile teams are great, but how can you get to using Scaled Agile Framework (SAFe) in the enterprise successfully? Identifying the constructs and practices of getting to SAFe is a challenge and there are successful ways to navigate the waters.

You will learn:
- What Safe is
- Determine how SAFe is implemented
- Implement SAFe in your environment

**W22 Scrum under a Waterfall**  
*Intermediate*

**BENJAMIN DAY**  
Wednesday, October 9, 4:00 – 5:15pm

It would be so easy if everyone at our companies just used Scrum—or at least Agile. No one would lean on the team for dates and deadlines, and everyone would know that change is a good thing. It’d be one great big happy project management family. But let’s face it—an all-Agile organization isn’t always possible. Maybe you have a Project Management Office (PMO). Maybe you work for a government contractor. Maybe you have regulatory requirements. Maybe you’re the first Scrum/Agile project at your company. Maybe your company simply “likes” it this way. Whatever the reason, Agile teams frequently report into Waterfall organizations.

Your team thinks “backlog” and your bosses think “project plan.” How do you make it work? How do you ensure communication and foster trust between the two groups? How do you bridge the project management impedance mismatch? You need to find a way get everybody to ‘play nice’ so they can do their jobs.

In this session, we’ll drill into the details of the project management impedance mismatch and talk about strategies to improve communication and delivery when you need to make Agile work inside a Waterfall-centric organization.

You will learn:
- Similarities and differences between Waterfall and Scrum/Agile?
- How to bridge the divide between the two project management styles and cultures?
- What anti-patterns should you look out for? What tools can help you?

**CLOUD, CONTAINERS, AND MICROSERVICES**

Cloud computing is no longer new. For most organizations, it’s not a matter of “if”, it’s more about how much.

Container technologies such as Docker and Kubernetes (aka k8s) are having a large impact on cloud computing, as well as on software architecture. This is perhaps most clear when thinking about service-oriented, or microservice, software architectures and how they can be used to leverage cloud- and container-based environments. It is hard to imagine any enterprise development scenario where one or more of these trends would not be high on the list of critical skills.

This track includes coverage of the following:
- Azure 101
- Deliver your apps as a SaaS service
- Azure AD B2C
- Azure services every developer should know
- Serverless in Azure
- Azure DevOps and containers

**T06 Azure 101**  
*Intermediate*

**LAURENT BUGNION**  
Tuesday, October 8, 9:30 – 10:45am

“There is no cloud, it’s just someone else’s computer...” That is true. But when this someone else is Microsoft, and takes care of all the maintenance of these huge server farms, you can redirect these resources used to take care of your own infrastructure to other important tasks, such as adding
features for your users. However at first sight, Microsoft Azure and its huge offering can seem daunting for a new user. In this presentation, Laurent Bugnion, who until recently didn’t know much about the cloud, will show you how he got started and how you too can take advantage of the services that the Microsoft Cloud has to offer. Together we will discover the Azure Portal as well as quite a few tools that make your life as a cloud developer easier.

You will learn:
• Take a guided tour in the features and tools of Azure
• How Azure can immediately be helpful to you as a developer
• Understand the basics of pricing and make sure that you don’t waste money

T15 Modernize Your App to be Delivered as a SaaS Service
Intermediate
NICK PINHEIRO
Tuesday, October 8, 3:00 – 4:15pm
Interested in providing your existing or upcoming app to be delivered as a service but don’t know where to begin? In this session we will discuss the steps you will need to take to convert your app into a SaaS-based service. In addition, we’ll cover recommended practices around SaaS platform architecture, onboarding new tenants, automated deployments, operational architecture, security and everything else you need to know to begin building SaaS solutions on the Azure PaaS platform. Technologies include: Azure App Service, Azure Web Apps, Azure API Apps, ASP.NET, Azure REST API, Azure Resource Manager (ARM), Azure Role Based Access Control (RBAC), CI/CD with Azure DevOps, Azure SQL and Azure Storage.

You will learn:
• Migrate your app into a SaaS-ready deployment package
• Best practices for SaaS architecture
• Generate a SaaS provisioning engine using a pre-built Microsoft deployment

W03 Reach Any User on Any Platform with Azure AD B2C
Introductory / Intermediate
NICK PINHEIRO
Wednesday, October 9, 8:00 – 9:15am
Customer interactions are the lifeline of any company. Every customer experience needs to be a positive one. Signing up and logging into your app is one of the most crucial consumer interactions a business can have. In this session, you will learn how to allow users to login to your web or mobile apps with their social and consumer identities or email address with Azure AD B2C. Technologies include: Azure AD B2C, Azure App Service, API Apps, Xamarin and more.

You will learn:
• Enable and configure Azure AD’s Business to Consumer (B2C) identity offering
• Use the Microsoft Graph API to access the user data in Azure AD B2C
• Integrate your existing app identity with Azure AD B2C

W07 9 Azure Services Every Developer Should Know About
Introductory / Intermediate
ERIC D. BOYD
Wednesday, October 9, 9:30 – 10:45am
Every developer should be familiar with these nine services and capabilities of Azure:
• Azure App Service
• Azure Functions
• Azure Blob Storage
• Azure SQL Database
• Azure Cosmos DB
• Azure Cognitive Services
• Azure Monitor with Application Insights
• Azure DevOps
• Azure CLI’s and Dev Tools

Join this session to get a lap around these Azure services and capabilities so that you will be equipped with them in your developer toolbelt.

You will learn:
• Overview of essential Azure compute services
• Overview of essential Azure data services
• Additional Azure services and capabilities you should know

W11 Fast Focus: Serverless of Azure 101
Introductory / Intermediate
ERIC D. BOYD
Wednesday, October 9, 1:30 – 1:50pm
Learn what serverless compute is all about and how you get started with serverless in Azure. Get an overview of developing and running serverless code in Azure. Explore how to integrate with other services, and trigger your code from events within and outside of Azure. And leave this session understanding the billing model, so you’re prepared when estimating the cost of your apps.

You will learn:
• Overview of serverless computing
• Getting started with serverless in Azure
• How to trigger your serverless code

W17 Keep Secrets with Azure Key Vault
Introductory / Intermediate
ERIC D. BOYD
Wednesday, October 9, 2:30 – 3:45pm
As developers, we are constantly working with secrets and cryptographic keys, and often these secrets are handled with the appropriate caution and care. We have SSL/TLS certificates and their private keys laying around on file systems, connection strings and passwords in config files, and secrets in code. And this is not good. Azure Key Vault is a cloud-based key management solution that can help and in this session we will walk through the capabilities of Azure Key Vault and explore
how you protect and generate your secrets. You will learn how to get secrets out of your configuration files, applications and version control systems, rotate your keys automatically, and more.

You will learn:
• Overview of secret and key management
• Getting started with Azure Key Vault
• How to manage your application secrets and keys with Azure Key Vault

W21 Achieving DevSecOps with Azure DevOps and Containers

Introductory

JIM SZUBRYT

Wednesday, October 9, 4:00 – 5:15pm

Containers give you application portability across Cloud providers and on-premise usage. Microsoft VSTS gives you source code management, build automation and release automation. Add a container security tool and SonarQube in and you have complete DevSecOps for secure, deployable code with every check-in. See how this is achievable in an organization of any size.

You will learn:
• Defining DevSecOps
• Determining where containers live in the DevOps pipeline
• Deploying containers via Azure DevOps

AI, DATA, AND MACHINE LEARNING

Data has once again become one of the hottest topics in our industry. Advances in relational tools like SQL Server are exciting, but then there’s all the cool stuff happening around NoSQL too! And a major driver for all this excitement around data is how it enables AI scenarios and how businesses are rapidly relying on machine learning. There’s no room for anyone to be complacent when it comes to data, and we’re here to keep you up-to-date.

This track includes coverage of the following:
• SQL Server for developers
• SQL Server 2019 big data clusters
• Power BI
• Azure Cosmos DB in depth
• Azure Data Explorer
• Azure Machine Learning

T04 AI and Analytics with Apache Spark on Azure Databricks

Intermediate

ANDREW BRUST

Tuesday, October 8, 8:00 – 9:15am

Open source technology Apache Spark as the analytics and machine learning platform of choice for many companies. While Spark has manifested in numerous parts of the Microsoft stack, including SQL Server 2019, Microsoft’s go-to Spark service is Azure Databricks. The service, from Microsoft and Databricks (the company founded by Spark’s creators), is a versatile one, geared towards analytics, data engineering and data science.

Azure Databricks lets developers work in notebooks, offline, interactively with running clusters, or schedule them as production jobs that provision Spark clusters on-demand.

This session will cover the concepts, service mechanics, and code necessary for you to do analytics and machine learning on Azure Databricks, and integrate it with other Microsoft cloud services and on-premises technologies.

You will learn:
• About the fundamentals of Apache Spark, Spark SQL and Spark MLib
• How to use Databricks notebooks
• How to manage clusters and jobs
• How to integrate Azure Databricks with blob storage and Azure Data Lake Store (ADLS)
• How to write Python code for both analytics and machine learning

T16 Power BI: What Have You Done For Me Late!

Intermediate

ANDREW BRUST

Tuesday, October 8, 1:30 – 2:45pm

Power BI has been a runaway success in adoption and mindshare, rocketing Microsoft past many of its business intelligence competitors. You may already know Power BI creates great looking visualizations, or that it runs on Windows, iOS, Android, and in the cloud. But do you know how to use it? And if you do, is your knowledge current with all the new features of this product that’s updated on a monthly basis?

Come to this session for a combination quick intro to Power BI (including its technology underpinnings, the costs around it and, of course, how to use it) and primer on several newer features, including data flows, AI features, composite models and Python integration. We’ll even cover features released after this abstract is published.

“SPEAKERS ALL SEEM TO BE VERY EXPERIENCED AND WERE MASTERS OF THE MATERIAL THEY PRESENTED.”

— Mike Schmidt, Strata Decision Technology
SESSION DESCRIPTIONS BY TRACK (continued)

You will learn:
• Power BI Basics: Reports and dashboards on desktop, cloud and mobile
• New and recent features like data flows and AI integration
• Using Power BI for Big Data analytics with aggregation tables and composite models
• Scripts and visualizations with Python and R

T08 Azure Cosmos DB Part I—Introduction to Cosmos DB
Introductory
LEONARD LOBEL
Wednesday, October 9, 8:00 – 9:15am
This session presents an overview of Azure Cosmos DB, a globally distributed, massively scalable, low (single-digit millisecond) latency, fully managed NoSQL database service that is designed specifically for modern web and mobile applications. Like other NoSQL platforms, Cosmos DB supports a schema-free data model, built-in partitioning for sustained heavy-write ingestion, and replication for high availability. But only Cosmos DB offers turnkey global distribution, automatic indexing, and SLAs for guarantees on 99.99% availability, throughput, latency, and consistency.
We begin by explaining NoSQL databases in general, and how they compare with traditional relational database platforms. Then we tour the many features of Cosmos DB, including its multi-model capabilities which allow you to store and query schema-free JSON documents (using either SQL or MongoDB APIs), graphs (Gremlin API), and key/value entities (table API). You’ll learn about global distribution, scale-out partitioning, tunable consistency, custom indexing, and more. We’ll also discuss client development using the many available SDKs. Attend this session, and get up to speed on Cosmos DB today!

T12 Azure Cosmos DB Part II - Building Cosmos DB Applications
Introductory / Intermediate
LEONARD LOBEL
Wednesday, October 9, 9:30 – 10:45am
In this intensive demo-packed session, you’ll learn how to write applications for Cosmos DB, and see how to work with the various Cosmos DB APIs. These APIs support a variety of data models, including the SQL API (for JSON documents), Table API (for key-value entities), Gremlin API (for graphs) and Cassandra (for columns). Regardless what you choose as a data model of choice, you’ll learn how to provision throughput, and how to partition and globally distribute your data to deliver massive scale. You’ll see how to migrate data from SQL Server to Cosmos DB, and how to write queries using Cosmos DB SQL. Then we’ll write data access code that creates and queries databases, collections, and documents, manages custom indexing policies, and defines users and permissions for resource-level access. We’ll also create, deploy, and execute server-side stored procedures, triggers, and user-defined functions, using the Cosmos DB server-side programming model. Attend this session, and prepare to build Cosmos DB applications today!

W10 Fast Focus: What’s New in EF Core 2.x
Intermediate
JIM WOOLEY
Wednesday, October 9, 1:30 – 1:50pm
Entity Framework Core, Microsoft’s Object Relational Mapping data access tool, was re-written from the ground up with .NET Core. By taking a fresh look, a number of features were changed and re-thought. This redesign caused it to continue playing catch-up to features added in 10 years of development leading up to EF6, while also exploring new programming options that have popularized since the original design came out, including non-relational data stores. In this fast focus session, we’ll explore the additions to EF Core 2 and beyond and how they can impact your application decisions. This whirlwind tour will include such topics as Table Splitting, Owned Types, Query Filters, DbContext pooling, GroupBy, String Interpolation, Lazy loading, Value Converters, Data Seeding, Query types, Optimized correlated subqueries, Spatial support, and Query Tags.
You will learn:
• Explore the new features of EF Core 2.0
• New enhancements in EF Core 2.1
• Discover the EF Core 2.2 additions
SESSION DESCRIPTIONS BY TRACK (continued)

W16  Azure Data Explorer—An in-depth Look at the New Microsoft PaaS Offering
Intermediate
RAJ KRISHNAN
Wednesday, October 9, 2:30 – 3:45pm
Azure Data Explorer, the in-memory / real time query engine, behind many of Microsoft internal service offerings like incident management system, Application Insights, Time Series Insight - is now available as a PaaS solution to everyone. Whether it is telemetry, IoT data or Operational Analytics, ADX can accept data from many sources and a powerful query engine delivers results in sub seconds with built in visualization or with connection to tools like Data Bricks, Power BI. In this session you will learn how to set-up ADX, ingest data and write queries (KQL) to get immediate results.

You will learn:
• About the new Azure Data Explorer PaaS offering for data storage and analytics
• Understand when and how to use ADX
• All the tools available to work with ADX

T14 (WPF + WinForms) * .NET Core = Modern Desktop
Introductory
OREN NOVOTNY
Tuesday, October 8, 3:00 – 4:15pm
Learn how .NET Core 3 brings WPF and Windows Forms into the future with a modern runtime. See what’s new for WPF and Windows Forms, learn how to easily retarget your .NET Framework application over to .NET Core, and how to get these modern desktop apps to your users.

You will learn:
• How to modernize WPF & WinForms apps to run on .NET Core 3
• Ways to distribute Modern Desktop apps
• What .NET Core 3 means for desktop development

W20  Building End-to-End ML Solution Using Azure Machine Learning Service
Intermediate
RAJ KRISHNAN
Wednesday, October 9, 4:00 – 5:15pm
In this session we will walk through an end to end Machine Learning scenario from data preparation, building a model using Azure Notebook, training / testing the model, tuning the model AutoML, registering the model in the workspace and finally deploying the model on IoT edge for consumption.

You will learn:
• How to work with Azure Machine Learning Service
• Get a deeper understanding of the tools available for building ML solutions
• How ML solutions can be deployed on IoT edge

DEVELOPING NEW EXPERIENCES

The expectations around “user experience” are being upended right before our eyes. In today’s world you need to understand not only graphical interactions with keyboard, mouse, touch, and stylus, but also gesture, 3D, mixed-reality, and more. Fortunately, we’ve got you covered with content from phones to PCs to augmented and mixed reality.

This track includes coverage of the following:
• WPF and Windows Forms in .NET Core 3
• Designing conversational interfaces
• Cross-platform development with C# and CSLA
• Using visualizations in your apps for business intelligence
• Microsoft Power Platform
• Build UWP apps for multiple devices
• Build cross platform experiences with Project Rome

T02 Cross-Platform Development with Xamarin, C#, and CSLA .NET
Intermediate
ROCKFORD LHOTKA
Tuesday, October 8, 8:00 – 9:15am
You may write your smart client app in UWP, Xamarin, WPF, or even Windows Forms. In any case, your app probably calls back-end services and needs to interact with app servers. Some or all of your business logic may run on the client, the app server, or both. That’s ideal for the balance between user interactivity, performance, scalability, and security. The widely-used open source CSLA .NET framework helps you create a reusable, scalable, and cross-platform portable business layer that lets your application run on multiple types of client devices while sharing business logic between the clients and your app server. This session is an end-to-end walkthrough of how this works and how you can benefit.

You will learn:
• Why separation of concerns is critical to building maintainable apps
• How to use the open source CSLA .NET framework to create reusable business logic
• How to share common code across platforms

T04 Building Cross-Platform Solutions Using Xamarin and C# [Intro]
Intermediate
OREN NOVOTNY
Tuesday, October 8, 9:30 – 10:45am
Learn how to build cross-platform solutions using Xamarin and C#. You will explore how to use .NET Core 3, the UWP, and the Xamarin.Forms framework to build cross-platform mobile and web apps.

You will learn:
• How to use C# to build cross-platform apps
• How to use Xamarin.Forms to create apps that run on iOS, Android, and Windows
• How to use .NET Core 3 to create server-side components for cross-platform apps

T05 Cross-Platform Development with Xamarin Forms & C# [Intermediate]
OREN NOVOTNY
Wednesday, October 9, 8:00 – 9:15am
Learn how to build cross-platform mobile apps using Xamarin.Forms and C#. You will explore how to use .NET Core 3, the UWP, and the Xamarin.Forms framework to build cross-platform mobile apps that run on iOS, Android, and Windows.

You will learn:
• How to use Xamarin.Forms to create cross-platform mobile apps
• How to use .NET Core 3 to create server-side components for cross-platform apps
• How to use C# to build cross-platform apps
TH02 UX Beyond the Keyboard: Designing Conversational Interfaces
Introductory
JOHN ALEXANDER
Thursday, October 10, 8:00 – 9:15am
With the ever-changing landscape of devices, web and native applications on mobile, wearables and assistants like Alexa, Cortana, and Home that rely on conversational UI, developers are increasingly expected to understand how to create user experiences that need more than keyboard and mouse interaction. UX expectations are becoming more prevalent and sophisticated. As a developer, what are you to do? Never fear, this interactive and entertaining session will focus on design concepts and terminology to help you tackle this new and exciting frontier. You’ll focus on tips to create a natural experience when working with voice and other conversational apps, such as Bots. You’ll also explore accessibility and its impact within these experiences. Whether working on your own or with a designer, you’ll be able to design apps that can interact more seamlessly with your users environment.
You will learn:
• Understand conversational app design concepts and terminology
• Tips to create a natural experience when working with voice and other conversational apps
• Accessibility practices and their impact within conversational experiences

TH06 How to Have Better Business Intelligence through Visualizations
Introductory / Intermediate
WALT RITSCHER
Thursday, October 10, 9:30 – 10:45am
No one questions that data is vital to application development, our teams spend untold hours obsessing about data structures. We build useful data layers and strive to eliminate processing roadblocks so that our data services are fast and fluid.
Do you spend that much effort on the visual portrayal of the data? If not, why not?
At some point in the data analytics cycle you need to show results to the stakeholder. That’s when choosing the correct visual representation of the data becomes vital. Do it wrong and the data is merely wrapped in pretty graphics; do it right and the user perceives their information in clear and meaningful patterns.
This fast paced and entertaining session starts by looking at how your brain and optical system perceive data. This session explores the overall visualization concepts that make data easier to grasp. Do you know the best way to show data to your users, so that the information is clear and understandable? Come to this session to learn how to make your data shine.
You will learn:
• Concepts of clean information design
• Why time based animation is a powerful data enhancer
• Understand the power and pitfalls of the human visual system

TH10 Microsoft Power Platform, RAD Done Right: Building Dynamic Mobile Apps with PowerApps
Introductory / Intermediate
WALT RITSCHER
Thursday, October 10, 11:00am – 12:15pm
PowerApps provides a simple and powerful way to create business forms and apps. You can quickly create a no-code, mobile friendly UI that taps into company data. PowerApps supports a broad set of data sources; including Azure, SharePoint and Office files. Also available is the Common Data service layer; an easy way to merge disparate data sources. Once published, the app is instantly available to your company users on web, iOS and Android. This session shows you how to get started with PowerApps. You’ll see how to use the built templates to make CRUD forms-over-data apps. Next, see how to customize the app with formulas, custom navigation, Galleries and custom data cards.
You will learn:
• Quickly build forms-over data apps with the PowerApps templates
• Explore and customize Galleries and Data Cards
• Publish the app to the Power Platform

TH14 Building UWP Apps for Multiple Devices
Intermediate / Advanced
TONY CHAMPION
Thursday, October 20, 1:30 – 2:45pm
With Windows 10 and UWP, developers can now build a single application that will target multiple devices. Your UWP apps can now run on devices ranging from desktop and Xbox to HoloLens and IoT devices. This ability to target such a wide range of devices requires some new strategies and planning to enable UWP apps to not only
look and function correctly on each device, but to light up device specific features without needing special builds. This session will take a look at how to successfully build UWP apps that target multiple devices and get you ready to start deploying UWP apps across devices.

You will learn:
• Discover how to structure UWP apps to build for multiple devices
• Coding and XAML techniques for supporting multiple versions and device types
• Build UWP apps that support newer features while running on older builds

DELIVERY AND DEPLOYMENT
Every developer knows that there’s more to software development than just code and tooling. The practices and techniques we use to understand and analyze the problem space, to manage interpersonal communication and conflict, and other patterns and practices, are key to success. Modern software teams understand that people are the difference and building better teams means building better solutions.

Topics in this track include:
• Signing your code the easy way
• Windows Subsystem for Linux
• Building Better Teams
• Collecting the Right Metrics
• Dependency injection and writing testable code
• Microservice architecture
• Using micro-habits to customize your environment

TH18 Building Cross Device Experiences with Project Rome
Intermediate / Advanced
TONY CHAMPION
Thursday, October 10, 3:00 – 4:15pm
Today's users want more from their apps. They want a single experience that follows them no matter what device they are on. As a developer, providing this experience can be quite daunting. Microsoft’s Project Rome enables developers to extend their apps’ experiences across devices and platforms. In this session we will explore how Project Rome’s remote system APIs can help you drive user engagement with your apps.

You will learn:
• Get an introduction Project Rome
• Build apps on different platforms that can communicate with each other through Project Rome
• Discover how to build multi-user experiences with Project Rome

W12 Fast Focus: What is WSL and Why Do I Care?
Introductory / Intermediate
BRIAN RANDELL
Wednesday, October 9, 2:00 – 2:20pm
WSL or the Windows Subsystem for Linux brings a real bash shell to Windows 10 and Windows Server. In this quick tour, Brian will take you from nothing to something and show you some wonderful things you can do to live a heterogeneous developer lifestyle at the command-line.

You will learn:
• Why WSL
• How to install WSL
• Ways to use WSL

TH03 Building a Stronger Team, One Strength at a Time
Introductory
ANGELA DUGAN
Thursday, October 10, 8:00 – 9:15am
Building the “perfect team” seems like an impossible task these days. Can a truly “cross-functional” team even be built? How do you get introverts and extroverts (yes, they DO exist in IT) to play nice? Seems like these days you practically need a degree in psychology to get this right. But you don’t.

Over the course of my career, I’ve worked with my clients and my company to develop high functioning teams. I’ve found that regardless of focus (software development, marketing, sales), there are patterns to what makes teams successful, and what can hold them back from greatness.
• Are you leveraging people’s individual strengths and balancing the team as a whole or just putting whomever is available on a team and hoping for the best?

• Are you trying “one size fits all” solutions?

• Are you creating a safe and supportive environment to foster experimentation and learning, or are you doing the same old stuff you’ve always done, wondering why you don’t see better results?

• Are you leveraging the needs and strengths of your individual team members, identifying strength gaps, and action items for creating a happy and well-balanced team that can get it done!

You will learn:
• Are you leveraging people’s individual strengths and balancing the team as a whole or just putting whomever is available on a team and hoping for the best?

• Are you spending time understanding what the individual members of the team need to be successful or are you trying “one size fits all” solutions?

• Are you leveraging the needs and strengths of your individual team members, identifying strength gaps, and action items for creating a happy and well-balanced team that can get it done!

TH11 Writing Testable Code and Resolving Dependencies—DI Kills Two Birds with One Stone

Intermediate

MIGUEL CASTRO

Thursday, October 10, 11:00 – 12:15pm

Dependency Injection is one of those terms that advanced programmers throw out with an expectation and assumption of full understanding on the part of the receiver. However, I constantly get asked by attendees, students, and clients to please recommend a good DI product and show them how to use it; and when I proceed to start talking about the subject, it becomes immediately apparent that many don’t even know what they’re asking about. It’s easy to get infatuated by a cool buzz phrase, especially when you hear so many others using it. But to truly understand something you need to start by understanding the problem spaces that it is trying to solve. To write testable software, you need to understand and embrace abstractions and injecting them. But then you introduce the problem of having to resolve dependency chains. This is where using a DI container helps you solve both these issues. Come and I’ll show you how to make your code testable and maintainable with the help of a DI container. If this is something your organization has not fully embraced yet, come and prepare for a tremendous wow factor.

TH15 Demystifying Microservice Architecture

Intermediate

MIGUEL CASTRO

Thursday, October 10, 1:30 – 2:45pm

Here we go again, another cool buzz phrase. And like many other buzz phrases, it’s often misunderstood. In fact, many developers or even full organizations don’t really have a clear understanding of what Microservices are. The reason is twofold. First, may are too hung up on the technology to use. It’s gotta be REST, they have to be small (it’s micro remember), you gotta use Docker, etc. I’m being sarcastic in case you didn’t notice. The second reason is that devs are not thinking of their systems in a more holistic fashion when trying to fit what they think are microservices into the mix. And no, this way of thinking about a system does not imply a tightly coupled system, don’t worry. This session will not be about code, but more about architecture and design. I’ll tell you what microservices are and what a microservice architecture is and we’ll discuss the characteristics at the service level and with everything that surrounds them in the architecture. We’ll talk about the concept of “design for failure” while covering topics like hosting, discoverability, failover, and the often-confusing API Gateway. These are some of the things you will need to understand before you embark on the adventure that is a microservice architecture and if it’s even something that will work for you.

You will learn:
• Demonstrating problem code
• Embracing abstractions for across-the-board testability
• Using a full-featured DI container

TH07 How Do You Measure Up? Collect the Right Metrics for the Right Reasons

Introductory / Intermediate

ANGELA DUGAN

Thursday, October 10, 9:30 – 10:45am

How many times have you been asked to deliver metrics being collected are the ones that are easy, but not necessarily the ones that matter. In the spirit of Kaizen, this session will take a look at the measures we can and should collect from agile teams, why these metrics are relevant and interesting, and how we can use them to help our teams continuously improve.

You will learn:
• Why is it so difficult to identify meaningful metrics in the software world?
• What are the best types of quality focused metrics to focus on in an agile organization?
• Examples of good, bad, and ugly metrics, as well as how to analyze and interpret them.
TH19  Hacking Time: Using Micro-habits to Customize Your Environment
Intermediate
JOHN ALEXANDER
Thursday, October 10, 3:00 – 4:15pm

How can Paul Simon help you save resources? Can putting your running shoes in the way help you exercise? Can a vegetable assist you with being more accurate? If this makes you curious, join us for an exploration into micro-habits and habit stacking - two small but powerful tools that can assist you with changing your life for the better. John has used (and uses) these techniques to assist him in many areas of life, and wants to share these hacks with you. In this interactive and entertaining session, you’ll see several examples and practical tips for getting started quickly.

You will learn:
• Understand what micro-habits are
• Be able to internalize micro habits and habit stacking for improving life and development strategies
• Several examples to help be productive quickly

.W02  A Tour of Visual Studio 2019
Intermediate
JASON BOCK
Tuesday, October 8, 9:30 – 10:45am

Visual Studio is used by many .NET developers to create their applications, but just how well is the tool known? The capabilities and features within Visual Studio are vast, so much so that users may not be aware of everything that Visual Studio has to offer. In this session, you’ll get a fast-paced tour of the Visual Studio landscape, like configuration, debugging, code analysis, unit testing, performance, metrics and so much more. You’ll also see new features that are in Visual Studio 2019. At the end of this session, you’ll have a solid understanding of Visual Studio to quickly develop reliable, maintainable solutions.

You will learn:
• Understand the vast Visual Studio ecosystem
• Gain insights into analysis tools Visual Studio to improve applications
• How to extend Visual Studio with extensions and templates

.W06  What’s New in .NET Core 3
Intermediate
JASON BOCK
Tuesday, October 8, 9:30 – 10:45am

.NET Core is the runtime for writing modern applications. Its speed, efficiency, and cross-platform capabilities provide .NET developers with flexibility and power. In 2019, Microsoft released .NET Core 3.0, and in this session, we’ll cover what’s been added. We’ll review new features and APIs that you can use wherever .NET Core goes.

You will learn:
• What .NET Core provides
• Understand new features in .NET Core
• Gain insight in staying on top of new runtime versions

.W13  Fast Focus: A Real-time SignalR Core Chat
Introductory
JIM WOOLEY
Tuesday, October 8, 2:00 – 2:20pm

SignalR is Microsoft’s abstraction over push based communication channels like WebSockets. We’ll show you how easy it is to add server push notifications to web clients using SignalR.

You will learn:
• What SignalR is
• Discover how to add SignalR to an existing web application to receive updates without polling
• Consider some use-cases that aren’t chat apps
TH04 C# Language Enhancements, Roslyn and You
Intermediate / Advanced
JIM WOOLEY
Thursday, October 10, 8:00 – 9:15am
The C# and VB compilers have been re-written from the ground up. Visual Studio now includes this new compiler and features new extensibility and language capabilities. In this session, we will focus on how these changes will impact you as a C# developer in your day-to-day development. We’ll start with exploring the new language features. We’ll then look at how to take advantage of code diagnostics and fixes that are publicly available. We’ll end by exploring some of the extensibility points that you can take advantage of if you want to build your own diagnostics and code fixes.

You will learn:
• Language features from C# 7 and 8 that you can use to improve your code
• How to build and use Roslyn based analyzers to detect code smells and other issues
• How to leverage Roslyn based scripting APIs in your applications

TH08 Get Your BASH on with WSL
Introductory / Intermediate
BRIAN RANDELL
Thursday, October 10, 9:30 – 10:45am
WSL or the Windows Subsystem for Linux brings a real bash shell to Windows 10 and Windows Server. In this session Brian will take you from nothing to something and show you all the wonderful things you can do to live a heterogeneous developer lifestyle accessing Azure, Docker, and Linux servers all from the warm, comfort of Windows 10. Come see how the command-line has changed and how you too can unleash the power as part of your modern, development workflow.

You will learn:
• How to install and configure WSL
• Ways to leverage command-line tools in your day-to-day development
• Use WSL with Visual Studio Code to target Linux environments

TH12 Entity Framework Performance Monitoring and Tuning
Intermediate / Advanced
JIM WOOLEY
Thursday, October 10, 11:00am – 12:15pm
Object Relational Mapping technologies, including the Entity Framework can drastically simplify the programming model against databases, but when done carelessly, performance can suffer. In this session, we’ll explore some real-life strategies that have solved performance issues in production applications that I have encountered at a variety of customers. We’ll discuss the pros and cons of working without stored procs and cover strategies for monitoring and tuning your entity queries.

You will learn:
• How to profile your database interactions through Entity Framework
• Typical performance issues based on real-life examples and how to fix them
• How EF 6 and EF Core generate different queries and how you need to modify your data access strategy as a result

TH16 .NET Standard: Reuse All the Code
Intermediate
JONATHAN “J.” TOWER
Thursday, October 10, 1:30 – 2:45pm
If you’ve ever publish a .NET code library for reuse on different types of .NET projects, you’re probably already familiar with some of the strategies for doing this on different flavors of the .NET Framework: multiple compiles, portable class libraries (PCLs), etc. Did you know that Microsoft has come up with a new standard that helps you share your libraries easily by targeting a new, virtual .NET Framework called .NET Standard?

In this session, I’ll show you how to write code that compiles once and can be shared across disparate environments--Mono for iOS and Android, Windows, Mac and Linux via .NET Core, and Universal Windows Platform (UWP). It can even be reused on versions of .NET that haven’t been invented yet.

If you want to publish a reusable component, or just need to share code in multiple project, come learn the new and better way to do it with .NET Standard.

You will learn:
• What .NET Standard is, and how it’s better than PCLs
• How to read Nuget packages supported frameworks
• How targeting .NET Standard in their code libraries will allow for easy future reuse of that code across platforms
SESSION DESCRIPTIONS BY TRACK (continued)

**TH20 Dotnet CLI or: How I Learned to Stop Worrying and Love the Command Line**  
**JONATHAN “J.” TOWER**  
Thursday, October 10, 1:30 – 2:45pm

If you’ve been using Visual Studio for years like I have, you’ve probably also grown accustomed to the “walled garden” experience that it provides. With .NET Core’s successful moves toward being cross-platform support for Linux, Mac, and Windows, the command-line interface (CLI) for .NET Core has become an even more important piece of the puzzle than ever before.

In this session, we’ll work through all the basic workflows for a .NET developer—but all without the help Visual Studio. By the end, you will be able to create, build, publish, test, run, and package projects, as well several other common tasks like database migrations, or using third-party CLI tools.

You will learn:
- To do common build, run, and publish tasks with the dotnet CLI
- How to use the dotnet CLI to create new projects, restore packages, and package their code libraries into nuget packages
- How to use third-party tools from the dotnet CLI

**FULL STACK WEB DEVELOPMENT**

Web development has become the dominant approach for building enterprise software. To provide your best on every project, you need to understand the server and browser client worlds.

On the server there’s ASP.NET Core with MVC, the new Razor Pages, and support for building services. The browser client is evolving rapidly, with constant changes and updates to JavaScript, TypeScript, Angular, React, and other related frameworks. But more than this, there’s now WebAssembly and the ability to run other languages natively in the browser, including C/C++, C#, and many more. Your need to keep up-to-date with all these technologies has never been greater, and we’re here to give you the knowledge you need!

Topics in this track include:
- ASP.NET Core intro and deep dive
- Getting started with Razor Pages
- Angular 101
- Managing async data in Angular
- Designing advanced Angular components
- Advanced Azure App Services
- Advanced TypeScript
- JavaScript for C# developers
- WebAssembly
- Bootstrap 4
- Create your own SPA with jQuery
- Real-time web apps with SignalR
- How to mitigate the top 10 browser threats

**T01 Guiding Principles for ASP.NET Core**  
**Intermediate**  
**K. SCOTT ALLEN**  
Tuesday, October 8, 8:00 – 9:15am

Improve the architecture, design, and code inside your ASP.NET Core applications with an opinionated approach to ASP.NET Core. In this talk, we’ll look at strategies for organizing projects, solutions, files and folders. We’ll also look at data access alternatives, see tips for writing unit and integration tests, and think differently about the MVC design pattern.

You will learn:
- How to remove the typical complexities from ASP.NET
- Razor pages are better than what you think
- Testing is about adding value for each line of code

**T05 Angular 101**  
**Introductory**  
**TRACY LEE**  
Tuesday, October 8, 9:30 – 10:45am

This beginner-level session introduces the .NET developer to Angular, the very popular JavaScript framework for building client-side applications.

We cover key building blocks such as modules, components, and templates. Come and get a quick start to building successful Web applications with Angular!

You will learn:
- Angular terms and concepts
- The basics of building an Angular application using the Angular CLI
- Angular’s data binding features and syntax
**T09 Reactive Programming Using RxJS—RxJS Operators—Real World Use Cases, Anti Patterns & Debugging**

*Introductory*

TRACY LEE

Tuesday, October 8, 1:30 – 2:45pm

RxJS is a better, declarative functional style of programming that will help you prepare for upcoming JavaScript standards. Learn how to think reactively in this talk while programming using RxJS, the push based primitive in JavaScript closest to the TC39 Observable spec. Walk through a basic understanding of the library, then learn the implementation of RxJS in your code while working with APIs and an HTTP server.

Hear what’s new with the library in upcoming releases for RxJS 6 and 7.

Do you feel like you spend too much time wondering which operator to use in RxJS? What’s the difference between this operator and that operator?

Are you using RxJS operators correctly in Angular, or are you introducing anti-patterns into your code?

And when there is a memory leak in your application, do you know how to properly debug your RxJS operator chain?

In this talk we’ll talk about what RxJS is doing in your Angular applications by going through simple explanations of operators, real world use cases, and comparing similar operators in RxJS. We will also go through some practical tips on how to properly debug RxJS.

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**T13 Advanced Azure App Services**

*Intermediate*

K. SCOTT ALLEN

Tuesday, October 8, 3:00 – 4:15pm

You’ll find many introductions showing you how to use Azure App Services, so this talk will give you the inside scoop on the real world tips, tricks, and troubles you’ll see when moving enterprise projects into App Services. We will discuss best practices for security and deployment, as well as prescriptions to follow to achieve the best performance, scalability, and resiliency.

**You will learn:**
- Recommended settings for secure app services
- Monitoring and logging options with app services
- Achieving scale and high availability with traffic manager and app services

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**W01 Designing and Building Advanced Angular Components**

*Advanced*

ANTHONY MONSEES

Wednesday, October 9, 8:00 – 9:15am

Learn the ins and outs of designing your own reusable Angular components. Learn about component inheritance, child views & templates, dynamic component creation and using your component with ngModel and reactive forms!

**You will learn:**
- Understand Component Life cycle and inheritance
- How to make your components extensible with child views, templates and dynamic component creation
- How to use your control with template and reactive forms
**W09 Fast Focus: Getting Started with ASP.NET Core 2.0 Razor Pages**  
*Introductory / Intermediate*  
**WALT RITSCHER**  
**Wednesday, October 9, 1:30 – 1:50pm**  
Razor Pages are a new feature of ASP.NET Core 2.0 that brings a simple page based development model to .NET Core. While they are similar to Razor Views in MVC, they have interesting differences. Essentially, they are the preferred way to generate server-side HTML content in the Microsoft MVC world.

This session explores how the Pages framework operates and how it fits into the standard ASP.NET Core MVC infrastructure. We’ll look at scenarios where Razor pages are a good choice and discuss when it is best stick with MVC. You’ll see how all your favorite concepts (like Model Binding, Validation, Filters, Routing and Action Results) work in this new system. And you’ll see how Razor pages simplify many common tasks when building basic web pages.

**You will learn:**  
- Understand how Razor Pages fit into the ASP.NET MVC Core framework  
- How to build a data and model driven site with Razor Pages  
- How handlers work in Razor code

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**W15 Diving Deep into ASP.NET Core 2.x**  
*Intermediate / Advanced*  
**PHILIP JAPIKSE**  
**Wednesday, October 9, 2:30 – 3:45pm**  
ASP.NET Core has changed development of web applications and Restful services in revolutionary ways. In this session I show you what you need to know to move to ASP.NET Core.

**You will learn:**  
- Changes from ASP.NET MVC and WebAPI  
- Dependency Injection, Configuration, Environmental awareness  
- View Components, Tag helpers, and more

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**W19 JavaScript for the C# (and Java) Developer**  
*Introductory / Intermediate*  
**PHILIP JAPIKSE**  
**Wednesday, October 9, 4:00 – 5:15pm**  
Yes, it has curly braces. Yes, it has semi colons. And you can write C# like code in JavaScript. But should you? JavaScript programming has many paradigms that make it very different than writing typical managed code. In this session I show you, the C# programmer, what you need to know to avoid the pit of despair.

**You will learn:**  
- Differences in behavior between JavaScript and C#  
- Core JavaScript features you should know  
- Common pitfalls for C# developers

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**TH01 WebAssembly: the Browser is your OS**  
*Intermediate*  
**JEREMY LIKNESS**  
**Thursday, October 10, 8:00 – 9:15am**  
WebAssembly, or Wasm for short, is a stack-based virtual machine that runs on existing browser engines. It is a cross-platform binary portable target for language compilers. Blazor is a C# implementation that targets Wasm and leverages .NET to build high performance Single Page Applications (SPA) without relying on JavaScript and/or other front-end frameworks. Learn what Wasm is and does and see it in action with Blazor examples.

**You will learn:**  
- What is WebAssembly?  
- What is Blazor?  
- How to build SPA apps with Blazor
TH05  What’s New in Bootstrap 4
Intermediate
PAUL SHERIFF
Thursday, October 10, 9:30 – 10:45am
Bootstrap 4 has been recreated from the ground-up using CSS 3 features such as Flexbox. As such, it only supports the latest, stable releases of all major browsers. On Windows, this means only IE 10, 11 and Edge. Many of the old, familiar CSS classes are still available, but have been modified slightly in some cases. And, there are cases where things should be done a little differently. This course provides you with an overview of how to lay out your web pages using Bootstrap 4, while pointing out the differences from Bootstrap 3.
You will learn:
• Introduction to Bootstrap 4
• What’s different from Bootstrap 3
• New features in Bootstrap 4

TH09  Create Your Own SPA Using jQuery
Intermediate / Advanced
PAUL SHERIFF
Thursday, October 10, 11:00am – 12:15pm
There are many frameworks such as Angular and React that help you develop client-side applications in a very structured manner. They help you create Single Page Applications (SPA) where each page, and the logic for each page are created separately. The purpose of this seminar is not to replace these frameworks, but to show you how to use these same techniques using JavaScript and jQuery. You may have a huge investment in JavaScript and jQuery and can’t, or maybe don’t want to, convert to these new frameworks. However, you do want to create a SPA and have a nice structured approach to development using JavaScript and jQuery. In this session I present a method to create a SPA using HTML, Bootstrap and jQuery and how to structure your application files.
You will learn:
• How to load partial HTML pages
• Add custom CSS and JavaScript to partial pages
• Create a CRUD page

TH13  Real-time Web Applications with ASP.NET Core SignalR
Intermediate
ROLAND GUIJT
Thursday, October 10, 1:30 – 2:45pm
SignalR for ASP.NET Core is finally here. But it’s quite a lot different than the “old” SignalR.
After a short introduction of what SignalR is I’ll show you how to build real-time functionality into every ASP.NET Core application by diving into the code of a demo application showing you the server- and client-side and you’ll see how it’s different from the SignalR you might be used to.
When your app’s ready there are a couple of things you should know when you want to scale out a SignalR app. You could do the plumbing yourself or using the new Azure SignalR service. After this session you’re ready to write and deploy your ASP.NET Core SignalR application.
You will learn:
• The workings of a real-time web application
• Create an ASP.NET Core real-time web application
• Creating a SignalR JavaScript client

TH17  Top 10 Browser Threats Mitigated
Intermediate
ROLAND GUIJT
Thursday, October 10, 3:00 – 4:15pm
Cross site scripting attacks, cross site request forgery and redirection attacks are just a few of the many threats that applications in a browser face. These threads are easily mitigated using features that come with every browser nowadays. The problem is you need to know that they’re there and how to turn them on. In this session we’ll take a look at the top 10 most common vulnerabilities in the browser and I’ll give you a fitting solution for each problem right away!
You will learn:
• Understand the most common browser attacks
• Understand how they are easily mitigated
• Know how to implement the mitigations in an ASP.NET Core app

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— Mike Hewitt, Grande Cheese Company
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Visual Studio Live! Conference Co-Chair  
Andrew Brust is the founder and CEO of Blue Badge Insights. He advises data and analytics ISVs on winning in the market, solution providers on their service offerings, and customers on their analytics strategy. He writes about Big Data for ZDNet and co-chairs the Visual Studio Live! series of developer conferences. Andrew is an entrepreneur, a consulting veteran, a former analyst and research director, and a current Microsoft Regional Director and MVP. @andrewbrust

Michael Desmond  
Editor in Chief, MSDN Magazine  
Michael Desmond is editor in chief of MSDN Magazine, Microsoft’s flagship publication for software developers working with Microsoft tools and technologies. A 20-year veteran of IT and technology publishing, Desmond was an editor at PC World magazine for six years before launching an editorial consultancy that worked for leading technology firms like IBM, Intel, and Sun Microsystems.

Rockford Lhotka  
CTO, Magenic  
Visual Studio Live! Conference Co-Chair  
Rockford Lhotka is the CTO of Magenic, and the creator of the widely used CSLA .NET development framework. He is the author of numerous books on software development and regularly speaks at major conferences around the world. Rockford is a Microsoft Regional Director and MVP. His company Magenic (magenic.com) specializes in planning, designing, building, and maintaining an enterprise’s most mission critical systems. For more information, go to lhotka.net. @RockyLhotka

David Ramel  
Editor in Chief, Visual Studio Magazine and ADTmag.com  
David Ramel is editor in chief of Visual Studio Magazine and Application Development Trends Magazine. He is an editor, writer and Web multimedia producer with 20 years of experience in mainstream journalism and within the information technology trade industry.

Brian Randell  
Partner, MCW Technologies  
Visual Studio Live! Conference Co-Chair  
Brian A. Randell is a partner with MCW Technologies, LLC. For more than 20 years, he has been building software solutions. He educates teams on Microsoft technologies via writing and training—both in-person and on demand. He’s also a consultant for worldwide companies of all sizes including Fortune 100 companies like Microsoft. Brian is a passionate software craftsman who still enjoys coding as he helps teams to improve their processes from idea to shipping to production management and monitoring. He’s currently a Visual Studio MVP and co-author of “Professional Application Lifecycle Management with Visual Studio 2013” from Wrox Publishing. When he’s not working, Brian enjoys spending time with his wife and two children. @brianrandell
CONFERENCE SPEAKERS

John Alexander  
Sr. Content Developer / Docs Lead, ML.NET Microsoft  

John is on the Microsoft Advanced Analytics doc team and is the lead for ML.NET. He sat in Kirk’s Chair on the bridge, recorded cartoon pilots as part of a voice ensemble cast, is the co-founder of the “Geek” t-shirt (found at most Microsoft conferences), and was Facebook friends with Patrick Swayze. John has a passion for designing and building accessible experiences using machine learning coupled with vision, voice, touch, and virtual/mixed reality. In a previous life, He was the co-founder of a digital agency and consultancy, and also had the honor of being a Microsoft Regional Director for 19 years. In the previous, previous life before that, John co-founded the largest technical blogging community in the world, Geekswithblogs.net, before selling it several years ago. He also built music chart applications for Billboard Magazine used by “American Top 40”, and architected a highly scalable Mutual Funds Trading SOA-based platform used non-stop the last 15 years to process billions of dollars in transactions. A trainer since 1996, with 26 Microsoft product certifications, he’s coached several teams of developers, leading one directly responsible for earning their organization a spot on CIO Magazine’s “Agile 100” list. He’s co-authored three best-selling technical books and Microsoft Official Curriculum. John has also co-hosted two technical focused podcasts, and is gearing up on a third. He speaks regularly at conferences and is the co-founder of Kansas City, NET Meetup and KC Windows Mixed Reality meetup (now part of KCVR). Based in Kansas City, Missouri USA, John loves to paint, draw, game, do voiceovers, and spend time with his spouse and three children on all sorts of adventures.

Laurie Barth  
Consultant, Ten Mile Square  

Laurie is a software developer, conference speaker, egghed instructor and frequent blogger. She’s a member of the TC39 Educators committee and contributor to various publications, including CSS Tricks. During normal business hours, she is a consultant at Ten Mile Square. Depending on the day she can be found using any number of technologies from different languages to frameworks and other support tools. When she isn’t writing code you can find her playing board games and eating cupcakes with her puppy, Avett.

K. Scott Allen  
OdeToCode  

K. Scott Allen is the founder of OdeToCode. Scott has over 20 years of commercial software development experience across a wide range of technologies. He has delivered software products for embedded devices, Windows desktop, web, and mobile platforms. As a popular trainer and speaker, Scott is known for delivering quality content on Pluralsight.com as well as using his unique teaching abilities in classrooms around the world.

Jason Bock  
Practice Lead, Magenic  

Jason Bock is a practice lead for Magenic (http://www.magenic.com) and a Microsoft MVP (C#). He has more than 20 years of experience working on a number of business applications using a diverse set of frameworks and languages such as C#, .NET, and JavaScript. He is the author of “.NET Development Using the Compiler API,” “Metaprogramming in .NET,” and “Applied .NET Attributes.” He has written numerous articles on software development issues and presented at a number of conferences and user groups.

Andrew Brust  
CEO and Founder, Blue Badge Insights  
Visual Studio Live! Conference Co-Chair  

Andrew Brust is the founder and CEO of Blue Badge Insights. He advises data and analytics ISVs on winning in the market, solution providers on their service offerings, and customers on their analytics strategy. He writes about Big Data for ZDNet and co-chairs the Visual Studio Live! series of developer conferences. Andrew is an entrepreneur, a consulting veteran, a former analyst and research director, and a current Microsoft Regional Director and MVP. @andrewbrust

Eric D. Boyd  
Founder & CEO, responsiveX  

Eric D. Boyd is the founder and CEO of responsiveX, a Microsoft Azure MVP, a Microsoft Regional Director, a regular conference speaker, and the co-author of ”Step-by-Step Azure SQL Database” from Microsoft Press. He is so passionate about cloud, mobile, and modern applications that he founded responsiveX (www.responsesX.com), a technology company that helps customers deliver great web, mobile, and enterprise apps using the cloud and Azure. Eric launched his technology career almost two decades ago with a web development startup and has served in multiple roles since including developer, consultant, technology executive, and business owner. You can find Eric blogging at http://www.EricDBoyd.com and on Twitter at http://twitter.com/EricDBoyd.
Laurent Bugnion  
**Senior Global Azure Advocate, Microsoft**

Laurent Bugnion currently works as senior global Azure advocate for Microsoft. He spent almost 10 years with IdentityMine and Valorem, two leading firms in using and deploying Microsoft technologies. He is one of the foremost experts for XAML and C# based development. He codes in Windows, WPF, Xamarin (iOS and Android), Unity, ASP.NET. In his free time, he writes for technical publications such as MSDN Magazine and his blog at blog.galasoft.ch. He is a frequent speaker at conferences such as Microsoft MIX, TechEd, Visual Studio Live!, TechDays and many other international events. Prior to joining Microsoft, he was a Microsoft Most Valuable Professional for Windows development from 2007 to 2017, a Microsoft Regional Director from 2013, and a Xamarin Most Valuable Professional from 2015. He is also the author of the well-known open source framework MVVM Light for Windows, WPF, Xamarin, and of the popular Pluralsight reference course about MVVM Light. @LBugnion

Miguel Castro  
**President, MRD, Melvicorp LLC**

Miguel Castro is an architect, developer, and trainer with more than 30 years of experience in the software industry. He’s a Microsoft MVP for 12 years running, a Microsoft Regional Director, and a member of several of the Microsoft Insider groups. With a Microsoft background that goes all the way back to VB 1.0 (and QuickBasic in fact), Miguel speaks regularly at numerous user groups, code camps, and conferences in the U.S. and abroad. He has also been featured on several technology talk shows and is a Pluralsight author. He specializes in architecture and development consulting and training with emphasis on Microsoft technologies.

Tony Champion  
**President, Champion DS**

Tony Champion is a software architect with over 20 years of experience developing with Microsoft technologies. As the president of Champion DS and its lead software architect, he remains active in the latest trends and technologies, creating custom solutions on Microsoft platforms. His list of clients span across multiple industries and includes companies such as Schlumberger, Microsoft, Boeing, MLB, and Chevron/Philips. Tony is an active participant in the community as an eight-year Microsoft MVP, international speaker, published author, and blogger. @tonychampion

Benjamin Day  
**Consultant / Trainer**

Benjamin Day is a consultant and trainer specializing in software practices using Scrum with Microsoft’s DevOps tools. Ben’s main areas of emphasis include Team Foundation Server, Scrum, software testing, and software architecture. He is a Microsoft Visual Studio ALM MVP, a certified Scrum trainer via Scrum.org, and a speaker at conferences such as TechEd and Visual Studio Live! When not developing software, Ben’s been known to go running and sea kayaking in order to balance out his love of cheese, cured meats, and champagne. He can be contacted via http://www.benday.com. @benday

Angela Dugan  
**Director, Polaris Solutions**

Angela has been in the software industry since 1999, is an active tech community contributor, and has been an organizer for a number of local meetups and conferences including IAMCP Women in Tech, Chicago Code Camp, and ThatConference. She is a Microsoft ALM MVP, a Certified Scrum master, and a SAFe Program Consultant.

Robert Green  
**Program Manager, Evangelism, Microsoft**

Robert Green is a Program Manager Evangelism in the Developer Experience and Evangelism (DX) group at Microsoft. He focuses on Visual Studio and mobile development. Robert is the host of the Visual Studio Toolbox show on Channel 9. @rogreen_ms

Roland Guijt  
**Microsoft MVP, Trainer**

Roland is a Microsoft MVP enjoying a constant curiosity around new techniques in software development. His focus is on all things .NET and browser technologies. As a long-time trainer, he led many courses on these topics and spoke about them at international conferences. He also travels around the globe to offer his self-developed workshops and is a popular Pluralsight author. The word that comes to mind when he thinks about software development is passion!

Philip Japikse  
**Developer, Coach, Author, Teacher**

An international speaker, Microsoft MVP, ASPInsider, MCSD, CSM, and CSP, and a passionate member of the developer community, Phil Japikse has been working with .NET since the first betas. He has been developing software for more than 30 years and has been heavily involved in the agile community since 2005. Phil is co-author of the best-selling “C# and the .NET 4.6 Framework” (http://bit.ly/pro_csharp), the lead director for the Cincinnati .NET User’s Group (http://www.cinnug.org) and Cincinnati Software Architect Group, co-hosts the Hayway.

Angela is an avid board gamer, an accidental CrossFit junkie, an aspiring crafty diva, and an avid gardener. She is constantly working on her 100+ year old house in Oak Park with her husband David, where they raise two ornery chickens Betsy and Gertrude and a rambunctious GSP named Sadie.
Raj Krishnan  
**Cloud Solution Architect, Microsoft**

Raj Krishnan has worked in the high technology area for over 25 years. Currently he is a Cloud Solution Architect at Microsoft designing, developing and implementing applications and analytics solutions for customers. He is also an adjunct professor at IIT and DePaul where he teaches Application Development and Data Analytics.

Rockford Lhotka  
**CTO, Magenic**

Rockford Lhotka is the CTO of Magenic, and is the creator of the widely used CSLA .NET development framework. He is the author of numerous books on software development, and regularly speaks at major conferences around the world. Rockford is a Microsoft Regional Director and MVP. Magenic (magenic.com) is a company that specializes in implementing applications and analytics solutions for customers. He is also an adjunct professor at IIT and DePaul where he teaches Application Development and Data Analytics.

Jeremy Likness  
**Cloud Developer Advocate, Azure, Microsoft**

Jeremy is a Cloud Developer Advocate for Azure at Microsoft. Jeremy wrote his first program in 1982, was recognized in the “who’s who in Quake” list for programming the first implementation of “Midnight Capture the Flag” in Quake C and has been developing enterprise applications for 20 years. For the past 20 years he has specialized in web-based delivery of line of business applications. Jeremy is the author of four technology books, an former eight-year Microsoft MVP for Developer Technologies, and speaks and writes regularly on web-based topics such as Angular and the cloud. Jeremy follows a 100% plant-based diet and spends most of his free time running, hiking and camping with his family, and playing 9-ball and one pocket.

Leonard Lobel  
**CTO, Sleek Technologies, Inc.**

Leonard Lobel is the chief technology officer and co-founder of Sleek Technologies, a New York-based development shop with an early adopter philosophy toward new technologies. He is also a principal consultant at Tallan, a Microsoft National Systems Integrator and Gold Competency Partner. He is also a Microsoft MVP, Data Platform. Programming since 1979, Lenni specializes in Microsoft-based solutions, with experience that spans a variety of business domains, including publishing, financial, wholesale/retail, health care, and e-commerce. Lenni has served as chief architect and lead developer for various organizations, ranging from small shops to high-profile clients. He is also a consultant, trainer, and frequent speaker at local usergroup meetings, VSLive!, Live! 360, SQL PASS, and other industry conferences. Lenni has also authored several MS Press books and Pluralsight courses on SQL Server programming. @lennilobel

Brandon Minnick  
**Mobile App Developer, Developer Advocate Team, Microsoft**

Brandon loves everything mobile and he shares his passion with anyone willing to listen! As a mobile app developer working on the Developer Advocate team at Microsoft, Brandon has created countless apps for iOS, Android and UWP. He works with developers in the community to ensure they have the right tools to hit the ground running, and running in the right direction, when creating their apps! He currently has apps in the iOS App Store and Android Google Play Store and Windows Store. Search any store for “Brandon Minnick” to discover them. It’s free—download it today! He is also active in the C# developer community!

Anthony Monsees  
**Owner/Architect, Devware, Inc.**

Anthony Monsees is a Full Stack Software Architect, Developer and business owner with over 20 years of experience across many industries. He loves to solve complex business challenges with elegant technology solutions and building frameworks to solve all the world’s problems.

James Montemagno  
**Principal Program Manager, Mobile Developer Tools, Microsoft**

James Montemagno is a Principal Program Manager for Mobile Developer Tools at Microsoft. He has been a .NET developer since 2005, working in a wide range of industries including game development, printer software, and web services. Prior to becoming a Principal Program Manager, James was a professional mobile developer and has now been crafting apps since 2011 with Xamarin. In his spare time, he is most likely cycling around Seattle or guzzling gallons of coffee at a local coffee shop. He can be found on Twitter @JamesMontemagno, blogs code regularly on his personal blog http://www.montemagno.com, and co-hosts the weekly development podcast Merge Conflict http://mergeconflict.fm
Technologies in 2016, Xamarin MVP in 2016, and member of the .NET Foundation Advisory Council in 2017, he has been writing code on the Microsoft platform since the days a 2400 baud modem was considered cutting-edge. His prior experience ranges from building identity solutions for global organizations, developing real-time trading systems dealing with massive amounts of data to the complex data models of equity derivatives and the regulatory needs of Medicaid claims processing. He believes that technology is meaningless in a vacuum and strives to show how the bleeding-edge delivers superior value to the clients’ bottom line.

Nick Pinheiro
Cloud & Software Architect, Microsoft

Nick Pinheiro is an experienced and award-winning software engineer, technologist, cloud evangelist, marketer, speaker and author. He is Cloud & Software Architect to the Americas at Microsoft where he develops cloud-based, web and mobile solutions for the world’s largest organizations. Known as the authority on integrating Facebook & Microsoft Technologies, Nick is also a Strategic Partner to Facebook, Inc. Furthermore, Nick is the Founder of ‘Modern Appz’, a technology startup focusing on providing Social Apps as a Service to the global marketplace. Nick holds a Master’s Degree in Computer focusing on providing Social Apps as a Service to the global marketplace. Nick holds a Master’s Degree in Computer

Brian Randell
Partner, MCW Technologies

Brian Randell is a partner with MCW Technologies, LLC. For more than 20 years, he has been building software solutions. He educates teams on Microsoft technologies via writing and training—both in-person and on demand. He’s also a consultant for worldwide companies of all sizes including Fortune 100 companies like Microsoft. Brian is a passionate software craftsman who still enjoys coding as he helps teams to improve their processes from idea to shipping to production management and monitoring. He’s currently a Visual Studio MVP and co-author of “Professional Application Lifecycle Management with Visual Studio 2013” from Wrox Publishing. When he’s not working, Brian enjoys spending time with his wife and two children. @brianrandell

Walt Ritscher
Senior Staff Instructor, LinkedIn Learning / Lynda

Walt’s enthusiasm for crafting software interfaces blossomed early. Just a few days after discovering how to move pixels around a computer screen he was devouring books on the topic of computer graphics and UI design. Before long he was sharing his discoveries with other technology buffs, a lifelong pursuit that has led to teaching engagements at universities, private training companies and the international conference circuit. As a consultant, he has worked with a wide spectrum of clients, including Microsoft, HP, and Intel. He is now a staff author at Lynda.com, part of the LinkedIn family, where his content team produces technical training courses for software developers. @waltritscher500 companies. Paul is a top-notch instructor, a pluralsight author, has published 200+ articles, and authored over 14 books on topics ranging from C#, SQL Server, and many .NET technologies. Paul speaks at many different conferences and user groups around the world.

Paul Sheriff
Author / Instructor

Paul has over thirty years of experience architecting information systems and his expertise is in much demand from Fortune 500 companies. Paul is a top-notch instructor, a pluralsight author, has published 200+ articles, and authored over 14 books on topics ranging from C#, SQL Server, and many .NET technologies. Paul speaks at many different conferences and user groups around the world.

Jim Szubryt
Tech Arch Senior Manager, Accenture

Jim Szubryt is a Tech Arch Senior Manager in Accenture’s Enterprise Architecture organization. His responsibilities include setting the direction for the use of dev tools, source code management, release management and automated testing tools that support DevOps in Accenture’s internal IT.

Jonathan “J.” Tower
Partner & Principal Consultant, Trailhead Technology Partners

Jonathan “J.” Tower is a Microsoft MVP, Telerik Developer Expert, and business owner with over eighteen years of software industry experience. He loves solving problems and the creative aspects of software development, as well as sharing what he’s learned and helping building the technology community. His current technology interests include .NET Core, Mobile, and JavaScript development. J. lives in Grand Rapids, Michigan with his wife and children, where he uses his passion for the tech community to help run a user group and several annual conferences.

Jim Wooley
Solution Architect, Slalom Consulting

Jim Wooley is a Solution Architect for Slalom Consulting. In his free time, Jim is a frequent speaker, MVP, and author of “LINQ in Action”. He is always striving to stay at the forefront of technology and enjoys the thrill of a new challenge. He has been active evangelizing LINQ since its announcement in 2005. In addition, he attempts to pass on the insights he has gained by being active in the community, including organizing and speaking at code camps and regional events, including MIX, Visual Studio Live!, CodeMash, KDCDC, That Conference, DevWeek, and CodeStock. @Jimwooley
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- 6-24 hrs: $57

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Every Conference Package grants you access to every:

- Keynote
- Session
- Welcome Reception
- Breakfast/Lunch

### Conference and Hotel Pricing Packages

<table>
<thead>
<tr>
<th>Packages</th>
<th>Super Early Bird Until Aug 2</th>
<th>Early Bird Until Sep 13</th>
<th>Standard Until Oct 6</th>
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<tr>
<td>Ultimate VSLive! Package</td>
<td>$2,815</td>
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<tr>
<td>Includes 5 Day Conference + On-Demand Recordings + Polo Shirt &amp; Cap SUNDAY - THURSDAY</td>
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<td>5 Day Conference Package</td>
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<td>+ Full Day Hands-On Lab and Workshop SUNDAY - THURSDAY</td>
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<td>4 Day Conference Package</td>
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<td>+ Workshop MONDAY - THURSDAY</td>
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<td>3 Day Conference Package</td>
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<td>Full Day Hands-On Lab</td>
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<td>SUNDAY ONLY</td>
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### Add the Hotel Package

| 5 Day Hotel Package                  | $1,225                       |
| Check In: Saturday, October 5        | Check Out: Thursday, October 10 |

| 4 Day Hotel Package                  | $1,000                       |
| Check In: Sunday, October 6          | Check Out: Thursday, October 10 |

| 3 Day Hotel Package                  | $750                         |
| Check In: Monday, October 7          | Check Out: Thursday, October 10 |
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<th>Team Packages</th>
<th>Super Early Bird</th>
<th>Early Bird</th>
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<td><strong>4 Day Conference Package</strong></td>
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<td>+ Workshops</td>
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