

# Visual Studio **LIVE!**

EXPERT SOLUTIONS FOR ENTERPRISE DEVELOPERS

## Las Vegas

Your Code Powers the World.  
Our Training Powers You.

30<sup>th</sup> ANNIVERSARY  
VSLive!  
1993 - 2023

MARCH 19-24, 2023  
PLANET HOLLYWOOD RESORT & CASINO

IN-DEPTH  
TECHNICAL  
CONTENT  
ON:



DevOps  
and Beyond



Cloud,  
Containers and  
Microservices



AI, Data and  
Machine Learning



Developing  
New Experiences



Technical  
Excellence &  
Leadership Skills



The Core of .NET



Full Stack Web  
Development

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## A MESSAGE FROM THE CONFERENCE CO-CHAIRS

**FOR MANY PEOPLE, LAS VEGAS IS ALL ABOUT THE EXCITEMENT** of its gaming, entertainment, and dizzying array of dining options. When you come for Visual Studio Live! you are getting so much more! You have the opportunity to network with colleagues from around the world, to interact with well-known expert speakers on topics important to your job and career, and the chance to learn how to be more effective and productive, today and in the future.

We're Andrew Brust, Angela Dugan, Rockford Lhotka, and Brian Randell. As Conference Co-Chairs for Visual Studio Live! We'd like to personally invite you to join us in person at the Planet Hollywood Resort & Casino in Las Vegas from March 19 to 24, 2023. We're excited to be back in-person in Las Vegas to celebrate VSLive!'s 30th Anniversary of training developers, software architects, engineers, and designers like you, and hope you will join us.

Visual Studio Live! Las Vegas gives you a rich multi-track event with great 75-minute breakout sessions, fast focus sessions for quick hits on relevant topics, deep dives, a full day of hands-on-lab training, and two full days of deep workshops, covering a wide array of development technologies for everyone. From security to databases to team building to the latest Web, cloud, and desktop technologies, we've got you covered. Our speakers will present in-depth sessions on cloud-native development and technologies, data analytics, and development on

Windows, macOS, Linux, and mobile platforms. We have picked every hands-on-lab, workshop, deep dive, and session with one goal in mind – to share modern, relevant, and inspiring experiences, techniques, and tools with you. Our hope is that you walk away feeling empowered and enabled to be a better developer, team member, or leader, and that you return from this event energized and ready to challenge your organization to do better, and be better.

You'll find coverage on Microsoft Visual Studio 2022, VS Code, .NET 6 and 7, DevOps, service meshes, and modern data warehouse technology. If the Web is more your style, you'll find sessions on JavaScript, TypeScript, Angular, and Blazor on the client, as well as ASP.NET Core on the server. Feeling confused about .NET? We've got sessions to clear it up. Want to improve your DevOps processes, or boost your team's agility? We've got coverage of numerous topics to help you do just that. Want to be an expert on cloud transformation? We've got sessions for that too! Overall, our speakers will answer your questions with practical guidance on native client development, Web, database and more.

Our workshop content provides coverage of SQL Server and DevOps with GitHub, building distributed .NET applications, and building PaaS apps on Azure. Want to get your hands dirty? We've got great all-day hands-on-labs covering parallel programming in C#, ASP.NET Core with Entity Framework, and .NET MAUI. Hungry for even more? We've also got deep dives into Blazor and ASP.NET Core. 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 its 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! Las Vegas 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*



**Angela Dugan**  
*Solutions Director, 3Cloud Solutions*



**Rockford Lhotka**  
*VP of Strategy, Xpirit*



**Brian Randell**  
*Product Marketing Director, GitHub*



# TEN REASONS TO ATTEND VISUAL STUDIO LIVE! 2023

10

## BACK BY POPULAR DEMAND: HANDS-ON LEARNING.

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 6 full days of educational sessions on hot topics like .NET 6 & 7 and .NET MAUI, Blazor, ASP.NET Core, ML.NET, Microservices, SQL Server 2022, C#, Azure, and so much more....

8

## RESPECT THE PAST; CODE THE FUTURE.

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.

7

**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!

6

## 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.

5

**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.

4

**BE READY FOR NOW & NEXT.** Get up to speed on what's happening on the .NET developer landscape now, and learn what's coming next to get out ahead of the competition. Keep yourself and your business competitive and future-ready with training on Microsoft Visual Studio 2022, .NET 6, DevOps, MAUI, JavaScript, TypeScript, Angular, Blazor, modern data warehouse technology, and so much more....

3

**IT'S STILL VEGAS, BABY!** Code by day and enjoy all the Strip has to offer at our headquarters, Planet Hollywood Resort & Casino.

2

**THE CHOICE IS YOURS.** With so many sessions, workshops, and hands-on labs 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!

1

## 30 YEARS OF CODING INNOVATION!

For over 30 years, Visual Studio Live! (VSLive!) has been THE trusted resource for .NET developer-focused education and training! We are proud to have served tens of thousands, giving them the training and education they've needed since 1993.

**IN MOST SESSIONS THERE WAS ALWAYS SOME DISCUSSION ON HOW TO BRING YOUR CURRENT (EVEN IF OUTDATED) FRAMEWORKS, VERSIONS ETC., UP TO THE CURRENT TOPICS SUPPORTED FRAMEWORKS, VERSIONS, ETC.**

— Bradley Ottinger, Visual Studio Live!  
Las Vegas 2020 attendee



## THE FUN STUFF: VISUAL STUDIO LIVE! LAS VEGAS EVENTS & ACTIVITIES

**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.

### MIX & MINGLE @ VSLIVE!

**Monday, March 20**

Join us to mix and mingle with other conference attendees and speakers for a casual no-host mixer. Enjoy light appetizers provided by VSLive! while you get to know your fellow attendees and take in the exciting Las Vegas views. Everyone is responsible for their own beverages.

### WELCOME RECEPTION & TRIVIA TUESDAY

**Tuesday, March 21**

Enjoy drinks and snacks while you relax, unwind, and network with fellow attendees and speakers after a long day of learning.

New this year at VSLive! Las Vegas – Trivia Fun! Test your knowledge against your fellow attendees. Everyone can join in by using their mobile device. Each round winner will receive a prize along with bragging rights for the week!

### TABLE TOPIC LUNCH

**Wednesday, March 22**

Join other attendees at lunch to share ideas, talk about the issues of the day, and maybe solve a few. While you enjoy lunch, you can find and connect with other like-minded people at tables designated for certain languages, technologies, and interests.

We will also have designated speaker tables - noted with the speakers' name. Join your favorite speaker for a lunchtime discussion or to follow up on any questions from a session.

### VSLIVE!'S OUT ON THE TOWN IN OLD LAS VEGAS

**Wednesday, March 22**

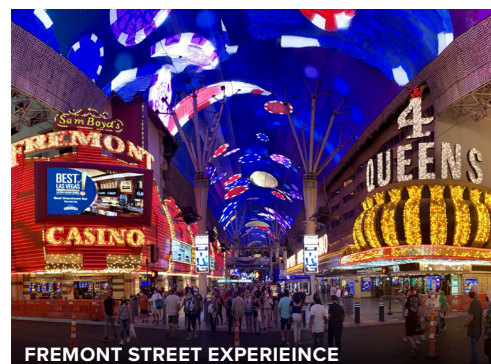
The Las Vegas strip is exciting, but have you experienced all that downtown Las Vegas has to offer? This is your chance to see the real Las Vegas (or "Glitter Gulch" as it was known for years due to all of the neon lights), from the first



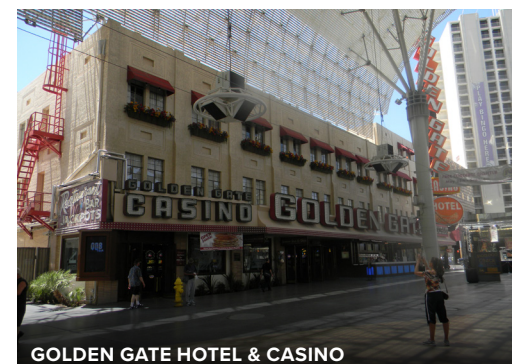
WELCOME RECEPTION



TABLE TOPIC LUNCH



FREMONT STREET EXPERIENCE



GOLDEN GATE HOTEL & CASINO

Vegas hotel (still operating as the Golden Gate Hotel and Casino) to the nightly Viva Vision show, you don't want to miss the "real" Las Vegas.

Join us on Wednesday night as complimentary buses run from our host hotel, the Planet Hollywood Resort, to the heart of old town Fremont Street. Take this opportunity to explore downtown Las Vegas's vibrant nightlife, including its restaurants, the Fremont Street Experience, SlotZilla Zip Line, a Pedestrian mall, the Neon Museum, the Viva Vision show, casinos, and so much more. Viva Las Vegas!






## AGENDA-AT-A-GLANCE

DevOps and Beyond		Cloud, Containers and Microservices		AI, Data and Machine Learning		Developing New Experiences		Technical Excellence & Leadership Skills		The Core of .NET		Full Stack Web Development	
START TIME	END TIME	Visual Studio Live! Pre-Conference Hands-On Labs: Sunday, March 19, 2023											
8:00 AM	9:00 AM	Pre-Conference Hands-On Labs Registration • Coffee and Morning Pastries											
9:00 AM	6:00 PM	HOL01 Hands-on Lab: Asynchronous and Parallel Programming in C# - Jeremy Clark				HOL02 Hands-on Lab: Develop an ASP.NET Core App with EF Core in a Day - Philip Japikse				HOL03 🗺 Hands-on Lab: Building Cross-Platform Mobile & Desktop Apps with .NET MAUI - James Montemagno			
START TIME	END TIME	Visual Studio Live! Pre-Conference Workshops: Monday, March 20, 2023											
8:00 AM	9:00 AM	Pre-Conference Workshop Registration • Coffee and Morning Pastries											
9:00 AM	6:00 PM	M01 Workshop: Modern, Compliant SQL Server Database DevOps, End-to-End with GitHub - Brian Randell and Mickey Gousset			M02 Workshop: Dapr for Building Distributed .NET Applications - Marcel de Vries			M03 Workshop: Microsoft Blazor Top to Bottom - Jason Bock, Allen Conway and Rockford Lhotka			M04 🗺 Workshop: Full Stack Development From Zero to Hero - Drew Skwiers-Koballa		
7:00 PM	8:30 PM	Mix & Mingle @ VSLive!											
START TIME	END TIME	Visual Studio Live! Day 1: Tuesday, March 21, 2023											
7:00 AM	8:00 AM	Registration • Coffee and Morning Pastries											
8:00 AM	9:15 AM	T01 An Introduction to Getting Up and Running with Modern Angular - Allen Conway			T02 🗺 Event-driven Applications in Azure - Laurent Bugnion			T03 Getting Your Story Straight with Data Visualizations - Stacia Varga			T04 What's New in C# - Ian Griffiths		
9:30 AM	10:45 AM	T05 ASP.NET Core Beyond the Basics - Chris Klug			T06 🗺 .NET MAUI: Next Generation Multi-platform App Development - James Montemagno			T07 Making the Leap from Reporting to Data Analysis - Stacia Varga			T08 To Be Announced		
11:00 AM	12:00 PM	🗺 KEYNOTE: TO BE ANNOUNCED Mads Kristensen, Principal Product Manager, Microsoft											
12:00 PM	1:00 PM	Lunch											
1:00 PM	1:30 PM	Dessert Break • Visit Exhibitors											
1:30 PM	2:45 PM	T09 Modern Authentication and Authorization with OIDC, OAuth2, and Resource-based Permissions - Eric D. Boyd			T10 Be Ready: Optimizing Cold Start with .NET 6.0 in the Cloud - Ian Griffiths			T11 Desktop Apps Your Way! - Sam Basu			T12 Pure Consultancy: Mastering Your Fears Like a Jedi - Alex Thissen		
3:00 PM	4:15 PM	T13 TypeScript: Moving Beyond the Basics - Allen Conway			T14 🗺 Power Your DevOps Development with SQL Server Containers - Bob Ward			T15 🗺 Building Teams Apps & Bots with .NET & Blazor - James Montemagno			T16 Measuring Up! Collect the Right Metrics for the Right Reasons - Sara Caldwell and Angela Dugan		
4:15 PM	5:30 PM	Welcome Reception											

Sessions and speakers subject to change.



### AGENDA-AT-A-GLANCE *(continued)*

DevOps and Beyond		Cloud, Containers and Microservices		AI, Data and Machine Learning		Developing New Experiences		Technical Excellence & Leadership Skills		The Core of .NET		Full Stack Web Development	
START TIME	END TIME	Visual Studio Live! Day 2: Wednesday, March 22, 2023											
7:30 AM	8:00 AM	Registration • Coffee and Morning Pastries											
8:00 AM	9:15 AM	W01 Deep Dive: Microsoft Blazor Zero to Success - Rockford Lhotka			W02  Dive into Durable Functions - Laurent Bugnion			W03 Catching Up with C# Interfaces: What You Know Might Be Wrong - Jeremy Clark			W04 Monitor Your Applications and Infrastructure - Eric D. Boyd		
9:30 AM	10:45 AM				W05  To Be Announced - Leslie Richardson			W06 Introduction to Actor-based Development with Project Orleans - Chris Klug			W07 Shift Security Left in Your Development Process - Mickey Gousset		
11:00 AM	12:00 PM	KEYNOTE: From Startups to the Enterprise - Scale Your Business and Applications with Azure SQL Bob Ward, Principal Architect, Microsoft Azure Data, & Drew Skwiers-Koballa, Senior Program Manager, Microsoft											
12:00 PM	1:00 PM	Table Topic Lunch											
1:00 PM	1:30 PM	Dessert Break • Visit Exhibitors											
1:30 PM	1:50 PM	W08 Fast Focus: JavaScript Framework/Library Showdown - Allen Conway				W09 Fast Focus: Power BI Metrics - Managing KPIs and Scorecards for Yourself and Your Team - Andrew Brust				W10 Fast Focus: Getting .NET Interactive Notebooks - Jason Bock			
2:00 PM	2:20 PM	W11 Fast Focus: Using Blazor in MAUI - Rockford Lhotka				W12 Fast Focus: Adding Content-Negotiation to ASP.NET Core MVC - Chris Klug				W13 Fast Focus: Super Charge Your Feedback Skills in 20 Minutes - Angela Dugan			
2:30 PM	3:45 PM	W14 Creating Business Applications using Blazor - Michael Washington			W15 Modernization with Blazor Hybrid - Sam Basu			W16 Power BI: The Basics and the Latest Coolness - Andrew Brust			W17 Building Intuitive Command-line Interfaces in .NET - Alex Thissen		
4:00 PM	5:15 PM	W18 Architecting Zero Downtime Database Deployments - Steve Jones			W19 How to Fix a Failing Project - Benjamin Day			W20 An Introduction to Service Meshes on Kubernetes - Marcel de Vries			W21  Microsoft Session Under Wraps - To Be Announced - Drew Skwiers-Koballa		
After Hours Fun		VSLive!'s Out on the Town in Old Las Vegas											

Sessions and speakers subject to change.



### AGENDA-AT-A-GLANCE *(continued)*

DevOps and Beyond		Cloud, Containers and Microservices		AI, Data and Machine Learning		Developing New Experiences		Technical Excellence & Leadership Skills		The Core of .NET		Full Stack Web Development	
Visual Studio Live! Day 3: Thursday, March 23, 2023													
7:30 AM		8:00 AM		Registration • Coffee and Morning Pastries									
8:00 AM		9:15 AM		<b>TH01</b> Web Services with ASP.NET Core Deep Dive - Philip Japikse		<b>TH02</b> How to Effectively Communicate Technical Ideas to Non-Technical Audiences - Amber Vanderburg		<b>TH03</b> Testability in .NET - Jason Bock		<b>TH04</b> What's New for Developers in SQL Server 2022 - Leonard Lobel			
9:30 AM		10:45 AM				<b>TH05</b> Learned Helplessness vs. Learned Optimism - Getting Your Team Unstuck - Sara Caldwell		<b>TH06</b> Build Apps Faster with GitHub Codespaces - Brian Randell		<b>TH07</b> Introduction to Azure Cosmos DB - Leonard Lobel			
11:00 AM		12:15 PM		<b>TH08</b> To Be Announced		<b>TH09</b> Technical Debt Is Not Free - Chad Green		<b>TH10</b> Getting Started with Design Thinking: A Guide for Developers and Managers - Billy Hollis		<b>TH11</b> Analytics with the Microsoft Intelligent Data Platform - Andrew Brust			
12:15 PM		1:15 PM		Lunch									
1:15 PM		2:30 PM		<b>TH12</b> I Love YAML: Using Azure DevOps to Build and Release to Azure - Benjamin Day		<b>TH13</b> Mapping the Story – Your Team's Guide to Creating a Product Backlog - Sara Caldwell & Angela Dugan		<b>TH14</b> UX Design in a Virtual World - Billy Hollis		<b>TH15</b> Adding Graph Structures to Your SQL Database - Steve Jones			
2:45 PM		4:00 PM		<b>TH16</b> How to Effectively Move from Ideation to Implementation - Amber Vanderburg		<b>TH17</b> Secrets of Conflict Resolution - Chad Green		<b>TH18</b> Building Fabulous NuGet Packages - Jason Bock		<b>TH19</b> Creating Business Applications using Azure Maps - Michael Washington			
START TIME		END TIME		Visual Studio Live! Post-Conference Workshops: Friday, March 24, 2023									
7:30 AM		8:00 AM		Post-Conference Workshop Registration • Coffee and Morning Pastries									
8:00 AM		5:00 PM		<b>F01</b> Workshop: Developer Dive into SQL Server 2022 - Leonard Lobel				<b>F02</b> Workshop: Building Azure PaaS Apps with C# - Ian Griffiths					

Sessions and speakers subject to change.



## KEYNOTE SESSIONS

**WANT A FRONT-ROW SEAT TO THE FUTURE OF TECHNOLOGY?** Attend the two keynote sessions for Visual Studio Live! Las Vegas to learn what's hot on today's tech landscape and what exciting developments lie ahead for this year and beyond.

### TUESDAY KEYNOTE

#### To Be Announced

Tuesday, March 21, 11:00am – 12:00pm



**Mads Kristensen**

*Principal Product Manager, Microsoft*

Details to be announced.

### WEDNESDAY KEYNOTE

#### From Startups to the Enterprise - Scale Your Business and Applications with Azure SQL

Wednesday, March 22, 11:00am – 12:00pm



**Bob Ward**

*Principal Architect, Microsoft Azure Data, Microsoft*



**Drew Skwiers-Koballa**

*Senior Program Manager, Microsoft*

Any startup is looking to scale its business to the next enterprise. They need their developers to access cloud services that are easy to deploy, integrate with DevOps, and scale quickly with unlimited resources as the business grows. Azure SQL has the tools for developers and industry-proven cloud services for data with built-in capabilities for graph, JSON, REST API, analytics, Ledger, and traditional OLTP. Build applications and let Azure SQL adapt to your workload with built-in intelligence for maximum performance. In this session, we will show you all the innovations for Azure SQL that provide developers with the tools, price/performance, security, and fault tolerance needed for any data application from small to virtually unlimited size.

#### **You will learn:**

- How to scale your business as it grows
- What developer tools to access data seamlessly and integrated with DevOps
- Trust a proven data platform that works with the smallest to largest application and business

## FULL-DAY HANDS-ON LABS *(Separate entry fee required)*

Visual Studio Live! Las Vegas offers three 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. Hands-on Labs on Sunday, March 19 are included in the 6-Day Conference Package, purchased as a single day pass, or added to a 3-Day, 4-Day or 5-Day Package.

### Topics covered include:

- Hands-on Lab: Asynchronous and Parallel Programming in C#
- Hands-on Lab: Develop an ASP.NET Core App with EF Core in a Day
- Hands-on Lab: Building Cross-Platform Mobile & Desktop Apps with .NET MAUI

### Attendee Requirements:

- You must provide your own laptop computer (Windows or Mac) for these hands-on labs.
- All other laptop requirements will be provided to attendees 2 weeks prior to the conference

Attendance for each Hands-On Lab is limited, so be sure to sign up early!

### HOL01

#### Hands-on Lab: Asynchronous and Parallel Programming in C#

*Intermediate*

**JEREMY CLARK**

**Sunday, March 19, 9:00am-6:00pm**

Asynchronous programming is a critical skill to take full advantage of today's multi-core systems. But async programming brings its own set of issues. In this HOL workshop, we'll work through some of those issues and get comfortable using parts of the .NET Task Parallel Library (TPL).

We'll start by calling asynchronous methods using the Task Asynchronous Pattern (TAP), including how to handle exceptions and cancellation. With this in hand, we'll look at creating our own asynchronous methods and methods that use asynchronous libraries. Along the way, we'll see how to avoid deadlocks, how to isolate our code for easier async, and why it's important to stay away from "async void".

In addition, we'll look at some patterns for running code in parallel, including using Parallel.ForEachAsync, channels, and other techniques. We'll see pros and cons so that we can use the right pattern for a particular problem.

Throughout the day, we'll go hands-on with lab exercises to put these skills into practice.

#### Objectives

- Use asynchronous methods with Task and await
- Create asynchronous methods and libraries
- How to avoid deadlocks and other pitfalls
- Understand different parallel programming techniques

#### Prerequisites

Basic understanding of C# and object-oriented programming (classes, inheritance, methods, and properties). No prior experience with asynchronous programming is necessary; we'll take care of that as we go.

### HOL02

#### Hands-on Lab: Develop an ASP.NET Core App with EF Core in a Day

*Intermediate*

**PHILIP JAPIKSE**

**Sunday, March 19, 9:00am-6:00pm**

Interested in ASP.NET Core and Entity Framework Core, 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. 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:

- ASP.NET Core Web Applications (MVC)
- EF Core
- Build an application in a day!

### HOL03

#### Hands-on Lab: Building Cross-Platform Mobile & Desktop Apps with .NET MAUI

*Intermediate*

**JAMES MONTEMAGNO**

**Sunday, March 19, 9:00am-6:00pm**

Let's learn how to build our very first cross-platform mobile and desktop app for iOS, Android, MacOS, and Windows with .NET MAUI! We will build out a new project, add data, navigation, and call web services.

#### You will learn:

- What is .NET MAUI and how can you use it to build apps
- Build your first .NET MAUI app and call backend services
- Add navigation, platform features, and more!



## FULL-DAY WORKSHOPS

Choose from a range of content and topics by expert presenters with Visual Studio Live! Las Vegas Pre- and Post-Conference workshops. Workshops on Monday, March 20 and Friday, March 24 are included in the 6-Day and 5-Day Conference Package, purchased as a single day pass, or added to a 3-Day to customize your conference experience. The 4-Day package includes your choice of either a Monday or a Friday workshop.

### Topics covered include:

- Modern, Compliant SQL Server Database DevOps, End-to-End with GitHub
- Dapr for Building Distributed .NET Applications
- Building Azure PaaS Apps with C#
- SQL Server Developer Dive
- Microsoft Blazor Top to Bottom

### M01

#### Workshop: Modern, Compliant SQL Server Database DevOps, End-to-End with GitHub

*level tktktktktk*

**BRIAN RANDELL AND MICKEY GOUSSET**

**Monday, March 20, 9:00am - 6:00pm**

Details to be announced.

### M02

#### Workshop: Dapr for Building Distributed .NET Applications

*Intermediate*

**MARCEL DE VRIES**

**Monday, March 20, 9:00am - 6:00pm**

Modern distributed applications require much more than just application logic. Features such as state management for services, communication using publish/subscribe messaging and event-driven binding to cloud resources might be needed. Dapr introduces a runtime to offer such building blocks, and is less invasive in your application, allowing you to pick and choose what you need. In this workshop, we will look at the approach that the Dapr runtime takes with a sidecar architecture, separating application logic from the Dapr runtime components. You learn to develop distributed applications in .NET using Dapr's features and, how to bind to messaging infrastructure and cloud resources.

#### You will learn:

- Understanding Dapr and side-car architecture
- Dapr components and actor programming model
- Programming container-based applications in .NET using Dapr

### M03

#### Workshop: Microsoft Blazor Top to Bottom

*Introductory / Intermediate*

**JASON BOCK, ALLEN CONWAY AND ROCKFORD LHOTKA**

**Monday, March 20, 9:00am - 6:00pm**

Blazor (Browser + Razor) has redefined the current landscape for web developers, allowing C# and .NET back into the modern web development picture. Leveraging WebAssembly to allow running .NET code in the browser, we can use the same C# language on the client and the server to build our modern web applications. At the core of Blazor is the ability to compose our web application using reusable components just like the modern browser frameworks.

Join experts in Blazor, WebAssembly, and enterprise development as they discuss why and when to use Blazor. They will give you everything you need to know to build Blazor apps, use the Razor component model, data and event binding, styling the UI, and building maintainable code. You will learn about Blazor server, WebAssembly, and MAUI hybrid apps, and how to implement authentication and authorization. WebAssembly and Blazor are incredibly powerful technologies and may be the future of web development. Come to this workshop to form your own view on this exciting platform.

**THE BEST PART OF THE CONFERENCE WAS MEETING SPEAKERS/INDUSTRY LEADERS. CONFERENCE SIZE REALLY HELPED; IT WASN'T OVERWHELMING AND SPEAKER ACCESS WAS EASY.**

— Visual Studio Live! Las Vegas 2020 attendee

## FULL-DAY WORKSHOPS *(continued)*

### M04

#### **Workshop: Full Stack Development From Zero to Hero**

*Introductory to Intermediate*

**DREW SKWIERS-KOBALLA**

**Monday, March 20, 9:00am - 6:00pm**

Let's build a fullstack/jamstack solution together, in one day. Starting from scratch, we'll see how using Azure Static Web Apps, Vue.js, Azure Functions and Azure SQL Database you can build a modern, ultra-scalable, secure solution, in just a day. We'll cover the basic of a Jamstack solution, and we'll go through all these steps to have it built and tested locally and deployed in Azure, using GitHub to setup a CI/CD pipeline that will take care of everything. We'll go through changing requirements, authentication and authorization, scalability and alternative architectures so that, and the end of the day, you will have a solid and practical foundation for building a modern, cloud based, hyper scalable, solution.

##### **We will cover the following topics:**

- Jamstack Architecture
- Static Web Apps, Vue.js and Azure Functions
- The Database: Azure SQL DB (Why? Stored Procs or not? JSON? Dapper or EF Core?)
- Authentication
- Connection Resiliency
- Deployment and CI/CD
- Caching
- Alternative Implementations

**I LIKE HAVING MORE PEOPLE IN THE INDUSTRY GIVING PRAGMATIC ADVICE AND NOT TRYING TO SELL THEIR PRODUCT.**

– Mike Shipley, *Visual Studio Live!*  
Las Vegas 2020 attendee

### F01

#### **Workshop: Developer Dive into SQL Server 2022**

*Intermediate*

**LEONARD LOBEL**

**Friday, March 24, 8:00am-5:00pm**

This full-day workshop will get you up to speed on powerful new features in SQL Server 2022. Lenni will pull no punches as he rips through the most important SQL Server features for developers in this intensive demo-packed tour.

We'll kick things off with the broad multi-platform support across Windows, Linux, and Docker. Learn how SQL Server's ability to run inside Linux containers on both Windows and Mac will revolutionize the way you work with the database engine. Then you'll explore the Intelligent Query Processing (IQP) features, which deliver groundbreaking performance improvements to the query engine. We'll then move on to the latest development platform improvements, including T-SQL enhancements added in SQL Server 2022, machine learning services with R and Python, integrated JSON support, and temporal tables.

Next we'll explore security features, starting with ledger tables. New in SQL Server 2022, ledger utilizes blockchain technology that hashes every transaction, and guarantees tamper evidence in your database. Next, we'll examine dynamic data masking and row-level security. We'll then dig into Always Encrypted and demonstrate support for secure enclaves to enable rich querying over encrypted data. We'll wrap up with the latest PolyBase enhancements to query external data in Azure Blob Storage, Mongo DB, Oracle, and other remote data sources.

You'll learn a ton of new SQL Server features in this information-packed day!

##### **You will learn:**

- How to boost developer productivity by running SQL Server inside Linux containers with docker
- Intelligent Query Processing features, T-SQL enhancements, and modern development platform for machine learning with R and Python
- Discover the newest security features including ledger tables, Always Encrypted with secure enclaves, and the latest data virtualization capabilities with PolyBase

### F02

#### **Workshop: Building Azure PaaS Apps with C#**

*Intermediate*

**IAN GRIFFITHS**

**Friday, March 24, 8:00am – 5:00pm**

Making the leap from samples and educational demos to building real systems in Azure is difficult. Simple examples tend to punt on tricky issues such as secret management, authentication, and handling configuration in multiple environments. Demos don't usually show what to do when things don't work right (at least, not on purpose), even though a lot of development work involves diagnosing problems.

This workshop will show how to build web applications and APIs on Azure App Service (Azure Web Apps, and Azure Functions) and also Azure Container Apps. It will present techniques for managing critical secrets in a 'zero-trust' way, so that developers don't need direct access to storage account keys or connection strings. It will show strategies for managing configuration across multiple dev, test, and prod environments. It will illustrate how to use Azure AD both to secure access to your application, but also to provide higher-security service-to-service communication than more commonplace approaches. You will see how to architect systems to take full advantage of Azure's network-level security.

You will also learn techniques for diagnosing problems in the cloud, and for investigating performance issues. You will see how to use an extend Azure's built-in monitoring features to keep track of your system's vital signs. You will also see how to build detailed observability into your systems using Application Insights.

##### **You will learn:**

- Techniques for diagnosing problems in complex cloud systems
- How to manage secrets and configuration effectively across multiple environments
- How to provide deep observability and monitoring on Azure



## SESSION DESCRIPTIONS BY TRACK

### **DEVOPS AND BEYOND**

As the world continues to move forward, it's become crystal clear that providing remote access and automation that is secure, easy to access, and readily available are critical to modern teams being successful. We've learned much about what it means to be agile and to "do DevOps", and organizations that have thrived in times of uncertainty know that DevOps is the way that modern teams deliver value to their customers with both speed and high quality.

As part of an organizational transformation, DevOps starts with a focus on people and better process and then, yes, great products are adopted to increase productivity and reduce friction. DevOps is all about the enablement and acceleration of continuous value delivery. After participating in sessions in this track, you'll walk away confident in your knowledge about the why, how, and what of modern DevOps. Our DevOps experts will leverage their knowledge and experiences to expose you to the latest tools, strategies, and leading practices.

#### You'll find coverage of:

- Workshop: Modern, Compliant SQL Server Database DevOps, End-to-End with GitHub
- Monitor your applications and infrastructure
- Shift Security Left in Your Development Process - Mickey Gousset
- Architecting Zero Downtime Database Deployments
- YAML and Azure DevOps Pipelines
- How to Effectively Move from Ideation to Implementation - Amber Vanderburg

### W04

#### Monitor Your Applications and Infrastructure

*Introductory / Intermediate*

ERIC D. BOYD

Wednesday, March 22, 8:00 – 9:15am

##### You will learn:

- An overview of Azure Monitor
- How to Integrate Azure Monitor and Application Insights into your applications
- How to query, gain insights, and send alerts with Azure Monitor

### W07

#### Shift Security Left in Your Development Process

*Intermediate*

MICKEY GOUSSET

Wednesday, March 22, 9:30 – 10:45am

##### You will learn:

- What security issues to look for when developing/ deploying software
- What changes you should consider in your development process
- How tools can help you become more secure

### W18

#### Architecting Zero Downtime Database Deployments

*Intermediate*

STEVE JONES

Wednesday, March 22, 4:00 – 5:15pm

##### You will learn:

- The challenges of zero downtime database deployments
- About deployment patterns the minimize impact of database changes
- The application development patterns that support zero downtime deployments

### TH12

#### I Love YAML: Using Azure DevOps to Build and Release to Azure

*Intermediate / Advanced*

BENJAMIN DAY

Thursday, March 23, 1:15 – 2:30pm

##### You will learn:

- What is YAML and YAML-based pipelines? How is it the same/different from JSON-based pipelines?
- How do you handle multiple environments?
- How do you use approvals to control deployments to environments?

### TH16

#### How to Effectively Move from Ideation to Implementation

*Introductory*

AMBER VANDERBURG

Thursday, March 23, 2:45 – 4:00pm

##### You will learn:

- Tools to craft powerful, memorable, relatable storytelling to convey complex ideas
- How to present data and statistics in a way that conveys ideas clearly
- Insight into the power of jargon and when communication short cuts can be a benefit and a detriment in collaboration

**I LIKED THE VARIETY OF COURSES AS WELL AS INSIGHT INTO THE FUTURE OF DEVELOPMENT TECH.**

– Visual Studio Live! Las Vegas 2020 attendee

## SESSION DESCRIPTIONS BY TRACK *(continued)*



### 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 with a focus on the big three: AWS, Azure, and GCP. 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:

- Workshop: Dapr for Building Distributed .NET Applications
- Event-driven applications in Azure
- Be Ready: Optimizing Cold Start with .NET 6.0 in the Cloud
- Power your DevOps development with SQL Server Containers
- Deep Dive into Durable Functions
- An Introduction to Service Meshes on Kubernetes
- Creating Business Applications Using Azure Maps
- Workshop: Building Azure PaaS Apps with C#

### T02

#### Event-driven Applications in Azure

*Intermediate*

LAURENT BUGNION

Tuesday, March 21, 8:00 – 9:15am

##### You will learn:

- How to use SignalR to create event-driven web applications with Web sockets
- How to deploy and configure a Static Web App on Azure
- How these technologies are used at Microsoft in a production setting

### T10

#### Be Ready: Optimizing Cold Start with .NET 6.0 in the Cloud

*Intermediate*

IAN GRIFFITHS

Tuesday, March 21, 1:30 – 2:45pm

##### You will learn:

- The factors affecting cold start times in the cloud
- The tools and technique .NET offers for improving cold start
- How to repeatedly, reliably measure and analyze cold start performance

### T14

#### Power Your DevOps Development with SQL Server Containers

*Intermediate*

BOB WARD

Tuesday, March 21, 3:00 – 4:15pm

##### You will learn:

- How SQL Server containers work
- Why SQL Server containers can make you a more efficient developer
- See a local cloud database development experience to power DevOps

### W02

#### Dive into Durable Functions

*Advanced*

LAURENT BUGNION

Wednesday, March 22, 8:00 – 9:15am

##### You will learn:

- Why Durable Functions can help solve issues that normal Azure Functions cannot
- Learn from experience what can happen when you use Durable Functions, and how to solve issues
- Understand when Durable Functions are used in production scenarios

### W20

#### An Introduction to Service Meshes on Kubernetes

*Introductory*

MARCEL DE VRIES

Wednesday, March 22, 4:00 – 5:15pm

##### You will learn:

- What services a service mesh can provide
- How to setup a service mesh on AKS
- Applying deployment strategies

### TH19

#### Creating Business Applications using Azure Maps

*Introductory*

MICHAEL WASHINGTON

Thursday, March 23, 2:45 – 4:00pm

##### You will learn:

- Display interactive maps using Microsoft Blazor technology
- Implement proper production level security
- Create a store locator service



## SESSION DESCRIPTIONS BY TRACK *(continued)*



### AI, DATA, AND MACHINE LEARNING

Data has once again become one of the hottest topics in our industry and ecosystem. SQL Server 2019 is a juggernaut, with SQL Server 2022's release eminent, Azure SQL Database continually improves, Cosmos DB is coming on strong and Entity Framework is ever-more relevant in the modern .NET world. 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:**

- Getting Your Story Straight with Data Visualizations
- Making the Leap from Reporting to Data Analysis
- From startups to the enterprise: Scale your business and applications with Azure SQL
- Fast Focus: Power BI Metrics: Managing KPIs and Scorecards for Yourself and Your Team
- Power BI: The Basics and the Latest Coolness
- What's New for Developers in SQL Server 2022
- Introduction to Azure Cosmos DB
- Analytics with the Microsoft Intelligent Data Platform
- Adding Graph Structures to Your SQL Database
- Workshop: Developer Dive into SQL Server

#### T03

### Getting Your Story Straight with Data Visualizations

*Introductory*

STACIA VARGA

Tuesday, March 21, 8:00-9:15am

**You will learn:**

- How telling a story is different from creating a report
- Explore the vocabulary and grammar of data visualization
- Evaluate the goal of your data story and choose appropriate visualizations

#### T07

### Making the Leap from Reporting to Data Analysis

*Introductory / Intermediate*

STACIA VARGA

Tuesday, March 21, 9:30-10:45am

**You will learn:**

- Review the basic process of data analysis
- how to reveal and explore relationships in your data
- How to apply simple statistics to your data for deeper insights

#### W09

### Fast Focus: Power BI Metrics - Managing KPIs and Scorecards for Yourself and Your Team

*Intermediate*

ANDREW BRUST

Wednesday, March 22, 1:30-1:50pm

**You will learn:**

- What KPIs and OKRs are, and when they're useful
- The basics of Power BI scorecarding and different types of scorecards
- How to build and deploy Power BI scorecards, and analyze their output

#### W16

### Power BI: The Basics and the Latest Coolness

*Intermediate*

ANDREW BRUST

Wednesday, March 22, 2:30-3:45pm

**You will learn:**

- The basics of Power BI visuals and reports
- How to build a full semantic model
- How to leverage cool AI features in Power BI
- Using a self-service BI approach with big data volumes of enterprise data
- Elementary and expert data prep with Power Query

#### W21

### Microsoft Session Under Wraps - To Be Announced

DREW SKWIERS-KOBALLA

Tuesday, March 21, 4:00-5:15pm

#### TH04

### What's New for Developers in SQL Server 2022

*Intermediate*

LEONARD LOBEL

Thursday, March 23, 8:00-9:15am

**You will learn:**

- How to secure your data using ledger tables
- How to apply granular permissions to dynamic data masking
- How to leverage new T-SQL enhancements

#### TH07

### Introduction to Azure Cosmos DB

*Introductory*

LEONARD LOBEL

Thursday, March 23, 9:30-10:45am

**You will learn:**

- Get familiar with NoSQL databases, and Microsoft Azure Cosmos DB
- Understand the differences between NoSQL and relational database platforms, and when to choose one or the other for your next application
- About the unique NoSQL features of Cosmos DB, including global distribution, server-side horizontal partitioning, multi-model support, rich query over schema-free data, client development, server-side programming, tunable consistency, and automatic indexing

## SESSION DESCRIPTIONS BY TRACK *(continued)*

### TH11

#### Analytics with the Microsoft Intelligent Data Platform

ANDREW BRUST

Thursday, March 23, 11:00am-12:15pm

Details to be announced.

### TH15

#### Adding Graph Structures to Your SQL Database

Introductory

STEVE JONES

Thursday, March 23, 1:15-2:30pm

##### You will learn:

- How graph databases work
- About modeling data structures with a graph database
- The basics of querying graph structures to solve problems

**THE TOPICS WERE UP-TO-DATE AND RELEVANT AND THE SPEAKERS WERE VERY KNOWLEDGEABLE. THIS EVENT MAKES ME WANT TO COME BACK NEXT YEAR.**

– Kevin Smith, Visual Studio Live!  
Las Vegas 2020 attendee



### 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 for rich multi-platform apps covering Windows, macOS, and mobile and even bots for good measure.

##### This track includes coverage of the following:

- Hands-on Lab: Building Cross-Platform Mobile & Desktop Apps with .NET MAUI
- .NET MAUI: Next generation multi-platform app development
- Desktop Apps Your Way!
- Building Teams Apps & Bots with .NET & Blazor
- Fast Focus: Using Blazor in MAUI
- Design Thinking for Software Development Teams
- UX Design in a virtual world

### T06

#### .NET MAUI: Next Generation Multi-Platform App Development

Introductory

JAMES MONTEMAGNO

Tuesday, March 21, 9:30-10:45am

##### You will learn:

- What is .NET MAUI and how can you use it to build apps
- How do I get started and what is the project structured
- Accessing platform features and integrations

### T11

#### Desktop Apps Your Way!

Introductory / Intermediate

SAM BASU

Tuesday, March 21, 1:30-2:45pm

##### You will learn:

- Various ways of building for desktop
- Explore modernization options for desktop apps
- How to share code across platforms

### T15

#### Building Teams Apps & Bots with .NET & Blazor

Intermediate

JAMES MONTEMAGNO

Tuesday, March 21, 3:00-4:15pm

##### You will learn:

- What are Teams apps and bots
- How to write apps and bots in C# and Blazor
- Share code across all .NET apps and Teams apps/bots

### W11

#### Fast Focus: Using Blazor in MAUI

Introductory

ROCKFORD LHOTKA

Wednesday, March 22, 2:00-2:20pm

##### You will learn:

- How to create a MAUI Blazor project
- How Blazor operates within MAUI
- How Blazor can leverage MAUI to access native capabilities



## SESSION DESCRIPTIONS BY TRACK *(continued)*

### W15

#### Modernization with Blazor Hybrid

*Introductory / Intermediate*

**SAM BASU**

Wednesday, March 22, 2:30-3:45pm

.NET MAUI & Blazor are pillars of innovation in the modern .NET ecosystem. .NET MAUI is the next generation of cross-platform .NET development stack. A truly single code base powers native apps for mobile/desktop, with tighter inner loop & smarter app architecture. Blazor isn't just for modern server/client web apps, but now powers native apps with .NET MAUI. With .NET 7, .NET MAUI & Blazor share a runtime, promote code reuse across platforms & enable modernization strategies. Blazor Hybrid enables bringing the best of the web to mobile/desktop apps, aided by with the island mindset with .NET MAUI – let's mix & match technology stacks & move apps forward.

### TH10

#### Getting Started with Design Thinking: A Guide for Developers and Managers

*Introductory*

**BILLY HOLLIS**

Thursday, March 23, 11:00am-12:15pm

Many developers think “design” is synonymous with “visual design”. But there are many different ways that design and design thinking can help teams produce more valuable applications, and visual design is only one of them. In this session, we'll cover the various levels of design effort.

### TH14

#### UX Design in a Virtual World

*Introductory*

**BILLY HOLLIS**

Thursday, March 23, 1:15-2:30pm

**You will learn:**

- See an overview of a typical, lightweight design process
- Find out how UX design techniques change when teams operate virtually
- Learn a hybrid design process that combines the best of in-person and virtual/remote work



### TECHNICAL EXCELLENCE AND LEADERSHIP SKILLS

Every software team member knows that there's more to delivering truly great products than writing solid code and having the best of breed tooling. Modern software teams that experience the greatest successes understand that strong leadership of highly motivated and skilled people are the difference, and that building better teams means building better solutions. The practices and techniques that team members use to understand and analyze the problem space, to manage interpersonal communication and conflict, and to deliver solutions that delight the end users are key to their success.

People are not born leaders; leaders are cultivated from anyone who is motivated to make a difference! Whether you're a leader by title or by necessity, the skills and practices shared in this track will enable you to have more effective interactions with stakeholders, team members, direct reports, even your manager. Whether you're an experienced leader or an aspiring leader, we have something for you in the Technical Excellence and Leadership Skills track.

**Topics in this track include:**

- Pure Consultancy: Mastering your fears like a Jedi
- Measuring up! Collect the Right Metrics for the Right Reasons
- Fast Focus: Super charge your Feedback Skills in 20 minutes
- How to Fix a Failing Project
- How to Effectively Communicate Technical Ideas to Non-Technical Audiences
- Learned Helplessness vs Learned Optimism - Getting Your Team Unstuck
- Technical Debt Is Not Free
- Mapping the Story – Your team's guide to creating a Product Backlog
- Secrets of Conflict Resolution

### T12

#### Pure Consultancy: Mastering Your Fears Like a Jedi

*Intermediate*

**ALEX THISSEN**

Tuesday, March 21, 1:30-2:45pm

**You will learn:**

- Understanding common fears during customer and colleague interaction
- Interact with other consultants, architects and developers
- Overcoming fears and changing your mindset

### T16

#### Measuring Up! Collect the Right Metrics for the Right Reasons

*Introductory / Intermediate*

**SARA CALDWELL AND ANGELA DUGAN**

Tuesday, March 21, 3:00-4:15pm

**You will learn:**

- Why it is so difficult to identify meaningful metrics in the software world
- The importance of developing a healthy “metrics mindset”
- The best types of quality-focused team metrics to focus on in an agile organization

### W13

#### Fast Focus: Super Charge Your Feedback Skills in 20 Minutes

*Introductory / Intermediate*

**ANGELA DUGAN**

Wednesday, March 22, 2:00-2:20pm

In this fast-paced 20-minute session focused on supercharging your feedback skills, Angela will help you get a good foothold on where to start. We'll warm up with an overview of what feedback is, attributes of high-quality feedback, and some “tips and tricks” to getting comfortable with giving and receiving candid feedback that has worked really well for me both as a manager and a team member.

## SESSION DESCRIPTIONS BY TRACK *(continued)*

### W19

#### How to Fix a Failing Project

*Intermediate / Advanced*

**BENJAMIN DAY**

Wednesday, March 22, 4:00-5:15pm

**You will learn:**

- How unclear priorities and too much Work in Progress (WIP) can get in your way
- How to use simple metrics to measure what's going on: Flow Metrics, Cycle Time, and Lead Time
- Communication techniques for working with grumpy stakeholders and bosses

### TH02

#### How to Effectively Communicate Technical Ideas to Non-Technical Audiences

*Introductory*

**AMBER VANDERBURG**

Thursday, March 23, 8:00-9:15am

**You will learn:**

- Tools to craft powerful, memorable, relatable storytelling to convey complex ideas
- How to present data and statistics in a way that conveys ideas clearly
- Insight into the power of jargon and when communication short cuts can be a benefit and a detriment in collaboration

### TH05

#### Learned Helplessness vs. Learned Optimism - Getting Your Team Unstuck

*Introductory*

**SARA CALDWELL**

Thursday, March 23, 9:30-10:45am

**You will learn:**

- How to recognize when your team is struggling with "learned helplessness"
- How to list three ways to manage learned helplessness on your team
- Feel more comfortable how to talk about learned helplessness

### TH09

#### Technical Debt Is Not Free

*Introductory*

**CHAD GREEN**

Thursday, March 23, 11:00am-12:15pm

**You will learn:**

- What technical debt is and how to measure it
- How to track technical debt in a way meaningful for developers and the business
- Ways to combat technical debt

### TH13

#### Mapping the Story – Your Team's Guide to Creating a Product Backlog

*Introductory*

**SARA CALDWELL AND ANGELA DUGAN**

Thursday, March 23, 1:15-2:30pm

**You will learn:**

- Shared understanding of the business outcome the team is driving towards,
- Shared understanding of how the team is going to work to accomplish the outcome(s),
- How to create an actionable release plan

### TH17

#### Secrets of Conflict Resolution

*Introductory*

**CHAD GREEN**

Thursday, March 23, 2:45-4:00pm

**You will learn:**

- The five conflict resolution methods and why you would use one over another
- About the Karpman Dram Triangle is and how we can use it to understand the motivations of those involved within a conflict
- The 10 useful tips for handling conflict that you can employ right away

## THE CORE OF .NET

The heart of the Microsoft development experience has been the .NET Framework. But it's changed a lot in the era of .NET Core. And now we have a single, unified version, .NET 6. You need to understand these major changes in the platform, not to mention the cool features being added to C#. These are the foundation-level topics you need to know for success in the Microsoft development world.

**Topics in this track include:**

- Hands-on Lab: Asynchronous and Parallel Programming in C#
- What's new in C#
- Catching Up with C# Interfaces: What You Know Might Be Wrong
- Introduction to Actor-based Development with Project Orleans
- Getting .NET Interactive Notebooks
- Building intuitive command-line interfaces in .NET
- Testability in .NET
- Build Apps Faster with GitHub Codespaces
- Building Visual Studio extensions have never been easier
- Building Fabulous NuGet Packages

### T04

#### What's New in C#

*Intermediate*

**IAN GRIFFITHS**

Tuesday, March 21, 8:00-9:15am

**You will learn:**

- About the features added to the latest versions of C#
- About the features added to the latest versions of .NET
- What is planned for C# 12 and .NET 8.0

## SESSION DESCRIPTIONS BY TRACK *(continued)*

### W03

#### Catching Up with C# Interfaces: What You Know Might Be Wrong

*Intermediate*

**JEREMY CLARK**

Wednesday, March 22, 8:00-9:15am

**You will learn:**

- Pros and cons of default implementation in interfaces
- Why you may want a “private” interface member
- Why you need to be more explicit when using interfaces

### W06

#### Introduction to Actor-based Development with Project Orleans

*Introductory / Intermediate*

**CHRIS KLUG**

Wednesday, March 22, 9:30-10:45am

**You will learn:**

- To understand what the Actor model is
- To understand how Project Orleans gives us access to an Actor model
- To see how we can use the Actor model to build advanced solutions

### W10

#### Fast Focus: Getting .NET Interactive Notebooks

*Introductory*

**JASON BOCK**

Wednesday, March 22, 1:30-1:50pm

**You will learn:**

- See what .NET Interactive Notebooks are
- Understand how .NET works in notebooks
- Gain insight into .NET integration in Jupyter

### W17

#### Building Intuitive Command-line Interfaces in .NET

*Intermediate*

**ALEX THISSEN**

Wednesday, March 22, 2:30-3:45pm

**You will learn:**

- How to use System.CommandLine to create CLI interfaces for .NET applications
- About making discoverable and intuitive CLI using designs and patterns
- How to leverage CLIs in DevOps scenarios using pipelines for CI/CD

### TH03

#### Testability in .NET

*Introductory / Intermediate*

**JASON BOCK**

Thursday, March 23, 8:00-9:15am

**You will learn:**

- What is available for developers to help them write clear unit tests
- A deep understanding of testing and mocking frameworks
- Obtain guidance on unit testing strategies

### TH06

#### Build Apps Faster with GitHub Codespaces

*Intermediate*

**BRIAN RANDELL**

Thursday, March 23, 9:30-10:45am

**You will learn:**

- What are GitHub Codespaces
- How do you get started with Codespaces
- How to work with Codespaces at the team level

### TH18

#### Building Fabulous NuGet Packages

*Intermediate*

**JASON BOCK**

Thursday, March 23, 2:45-4:00pm

**You will learn:**

- What NuGet is
- Insight into different NuGet features
- How NuGet packages are created and consumed





## SESSION DESCRIPTIONS BY TRACK *(continued)*



### 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 using .NET 6 with MVC, Razor Pages, and support for building services. The browser client is evolving rapidly, with constant changes and updates to JavaScript, TypeScript, Angular, and other related frameworks. But more than this, there's now Blazor Server and Blazor Client (aka WebAssembly) and the ability to run other languages natively in the browser. 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:

- Hands-on Lab: Develop an ASP.NET Core App with EF Core in a Day
- Workshop: Microsoft Blazor Top to Bottom
- Getting Up and Running with Modern Angular
- ASP.NET Core Beyond the Basics
- Modern Authentication and Authorization with OIDC, OAuth2, and Resource-based Permissions
- TypeScript: Moving Beyond the Basics
- Deep Dive: Microsoft Blazor Zero to Success
- Fast Focus: JavaScript Framework/Library Showdown
- Fast Focus: Adding Content-Negotiation to ASP.NET Core MVC
- Creating Business Applications using Blazor
- Web Services with ASP.NET Core Deep Dive

### T01

#### Getting Up and Running with Modern Angular

*Introductory*

ALLEN CONWAY

Tuesday, March 21, 8:00-9:15am

##### You will learn:

- The fundamentals of the Angular framework and why you would use it for modern web development, as well as how it fits in front of your existing back-end implementation
- How to create and run an Angular application using the CLI (Command Line Interface)
- The fundamentals of Angular applications by building components, views, and services

### T05

#### ASP.NET Core Beyond the Basics

*Intermediate / Advanced*

CHRIS KLUG

Tuesday, March 21, 9:30-10:45am

##### You will learn:

- To understand that there is more to ASP.NET Core than meets the eye
- To see some ways that we can extend our ASP.NET Core applications to solve some interesting problems
- To have some fun, seeing some stuff you have never seen before

### T09

#### Modern Authentication and Authorization with OIDC, OAuth2, and Resource-based Permissions

*Introductory / Intermediate*

ERIC D. BOYD

Tuesday, March 21, 1:30-2:45pm

##### You will learn:

- Overview of modern identity with OIDC and OAuth2
- Getting started with Azure Active Directory and other identity providers
- How to secure your applications and services with OIDC and OAuth

### T13

#### TypeScript: Moving Beyond the Basics

*Intermediate / Advanced*

ALLEN CONWAY

Tuesday, March 21, 3:00-4:15pm

##### You will learn:

- About advanced TypeScript language features available beyond the basics
- How to leverage the building blocks of TypeScript and build upon them with advanced features to make web client development more powerful
- About additional TypeScript language features like advanced types, decorators, mixins, symbols, generics, iterators, and declaration merging

### W01

#### Deep Dive: Microsoft Blazor Zero to Success

*Intermediate*

ROCKFORD LHOTKA

Wednesday, March 22, 8:00-10:45am

##### You will learn:

- How Blazor, WebAssembly, and .NET combine to enable this app platform
- How to build server-side Blazor and Blazor WebAssembly apps
- How to use Blazor UI framework features such as UI components, data binding, routing, and authorization

### W08

#### Fast Focus: JavaScript Framework/Library Showdown

*Introductory*

ALLEN CONWAY

Wednesday, March 22, 1:30-1:50pm

##### You will learn:

- About the main frameworks and libraries for modern web client development
- About the main differences between Angular, React, and Vue
- About what backing factors will help guide the way to making a good decision about the framework and library chosen

## SESSION DESCRIPTIONS BY TRACK *(continued)*

### W12

#### Fast Focus: Adding Content-Negotiation to ASP.NET Core MVC

*Intermediate*

CHRIS KLUG

Wednesday, March 22, 2:00-2:20pm

##### You will learn:

- That content-negotiation is a great way to extend our APIs
- What is needed to support content-negotiation in ASP.NET Core
- That ASP.NET Core is more than just the built-in features

### W14

#### Creating Business Applications using Blazor

*Introductory*

MICHAEL WASHINGTON

Wednesday, March 22, 2:30-3:45pm

##### You will learn:

- Core Blazor concepts including Binding, Routing and JavaScript Interop
- How to create end-to-end Blazor business applications using Server Side Blazor and Blazor WebAssembly

### TH01

#### Web Services with ASP.NET Core Deep Dive

*Intermediate*

PHILIP JAPIKSE

Thursday, March 23, 8:00-10:45am

##### You will learn:

- Foundations of ASP.NET Core
- Building RESTful services with ASP.NET Core
- Documenting services with swagger





## CONFERENCE CHAIRS & SPEAKERS

### CONFERENCE CHAIRS



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



**Angela Dugan**  
Solutions Director,  
3Cloud Solutions  
  
Visual Studio Live!  
Conference Co-Chair



**Rockford Lhotka**  
VP of Strategy,  
Xpirit  
  
Visual Studio Live!  
Conference Co-Chair



**Brian Randell**  
Product Marketing Director,  
GitHub  
  
Visual Studio Live!  
Conference Co-Chair

### SPEAKERS



**Sam Basu**  
Developer Advocate,  
Progress Software



**Jeremy Clark**  
Developer Educator,  
JeremyBytes.com



**Chad Green**  
Director of IT  
Architecture,  
Glennis Solutions



**Mads Kristensen**  
Principal Product  
Manager, Microsoft



**Drew Skwiers-Koballa**  
Senior Program  
Manager, Microsoft



**Jason Bock**  
Developer Advocate,  
Rocket Mortgage



**Allen Conway**  
Web Client Practice  
Lead,  
Cognizant Softvision



**Ian Griffiths**  
Technical Fellow, endjin



**Rockford Lhotka**  
VP of Strategy, Xpirit



**Alex Thissen**  
Architect, Lead  
Developer, and Mentor



**Eric D. Boyd**  
Founder and CEO,  
responsiveX



**Benjamin Day**  
Author, Trainer,  
Developer



**Billy Hollis**  
Developer. Designer.  
Speaker. Author.



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



**Amber Vanderburg**  
Founder,  
Pathwayz Group



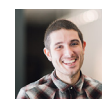
**Andrew Brust**  
CEO and Founder, Blue  
Badge Insights



**Marcel de Vries**  
CO-Founder & CTO,  
Xpirit



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



**James Montemagno**  
Principal Lead Program  
Manager for .NET  
Community, Microsoft



**Stacia Varga**  
Consultant, Educator,  
and Author



**Laurent Bugnion**  
Cloud Developer Advo-  
cate, Microsoft



**Angela Dugan**  
Solutions Director,  
3Cloud Solutions



**Steve Jones**  
Editor,  
SQLServerCentral



**Brian Randell**  
Product Marketing  
Director, GitHub



**Bob Ward**  
Principal Architect,  
Microsoft Azure Data,  
Microsoft



**Sara Caldwell**  
Principle Agile Coach at  
3Cloud Solutions



**Mickey Gousset**  
DevOps Architect,  
GitHub



**Chris Klug**  
Developer,  
Active Solution



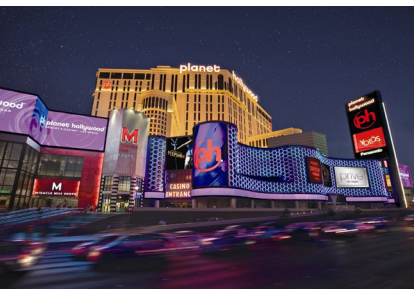
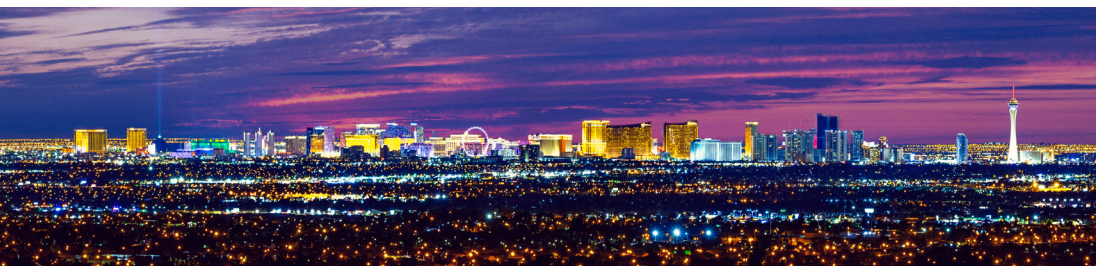
**Leslie Richardson**  
Program Manager,  
Visual Studio  
Extensibility, Microsoft



**Michael Washington**  
Founder,  
BlazorHelpWebsite.com  
& AIHelpWebsite.com



## VENUE & TRAVEL



### LOCATION

Take advantage of the \$171.00\* room rate by February 24th

### PLANET HOLLYWOOD RESORT & CASINO

3667 S Las Vegas Boulevard  
Las Vegas, NV 89109

Special attendee rate: \$171.00\*

Book by: February 24, 2023

[Book your room online](#) for the Visual Studio Live! Room Block. The offer is subject to room availability, so make sure to book early.

Planet Hollywood rooms booked within the Visual Studio Live! room block include:

- Unlimited local phone calls
- Two (2) passes per day to the Fitness Center
- In-room internet access for up to two devices

*\*The \$171.00 room rate is based on single or double occupancy and includes a \$32.00 resort fee. The room rate does not include applicable state, local and occupancy taxes.*

### VISITING LAS VEGAS

Take advantage of all the city of Las Vegas has to offer. Visit the [Las Vegas Weekly](#) site for information on places to visit and things to do in Las Vegas.

### TRAVEL

**TAXI SERVICE** one way fare from McCarran Airport to Planet Hollywood Resort & Casino is ~ \$20-25.

**AVIS RENT-A-CAR** is offering a discount on car rental for Visual Studio Live! Las Vegas attendees. To receive the discounted rates, call Avis at 800.331.1600 and use the Avis Worldwide Discount (AWD) number **D005872**, or [click here](#) to make your reservation online.

**Shuttle Service** to and from McCarran International Airport, non-stop round trip fare starts at \$32.00.

### WEATHER AND DRESS

Dress for Visual Studio Live! Las Vegas is casual. Las Vegas enjoys moderate weather in March, with daytime temperatures that typically average 65 degrees Fahrenheit and evenings that average in the 50s. Temperatures inside the meeting rooms can vary greatly, so please plan your attire accordingly.

### PARKING AT PLANET HOLLYWOOD RESORT & CASINO

For your convenience, Planet Hollywood Resort & Casino offers [valet and self-parking](#) in their Main Parking Garage.

#### Self-parking at Planet Hollywood's:

- 0 to 60 minutes: Free
- 1 to 4 Hours: \$12
- 4 to 24 Hours: \$15
- Over 24 Hours: \$15 per day

Self-parking is free for anyone who has a Total Rewards card at the Platinum, Diamond, or Seven Stars level.

#### Valet parking at Planet Hollywood's:

- Up to 2 Hours: \$24 weekdays / \$26 weekends
- 2 to 4 Hours: \$28 weekdays / \$30 weekends
- 4 to 24 Hours: \$32 weekdays / \$36 weekends
- Special Event Pricing: \$36 weekdays / \$36 weekends

As with self-parking, valet parking is free for anyone at the Platinum, Diamond, or Seven Stars status on their Total Rewards players card.

*\*parking charges are subject to change without notice.*

## CONFERENCE AND HOTEL PRICING PACKAGES

**VISUAL STUDIO LIVE! OFFERS SEVERAL CONFERENCE AND HOTEL PACKAGES** to best suit your needs and budget. Register now to save your seat and remember to book your hotel early too before it sells out!

CONFERENCE PACKAGES				
Every Conference Package grants you access to every Keynote, Session, Breakfast, Lunch, and Welcome Reception	YEAR-END SAVINGS UNTIL DEC 16	SUPER EARLY BIRD UNTIL JAN 27	EARLY BIRD UNTIL FEB 24	STANDARD UNTIL MAR 19
<b>6-DAY CONFERENCE PACKAGE</b> + Full Day Hands-On Lab and Two Workshops (Sunday - Friday)	\$3,100	\$3,200	\$3,300	\$3,600
<b>5-DAY CONFERENCE PACKAGE</b> + Two Workshops (Monday - Friday)	\$2,600	\$2,700	\$2,800	\$3,100
<b>4-DAY CONFERENCE PACKAGE</b> + One Workshop (Monday OR Friday)	\$2,100	\$2,200	\$2,300	\$2,600
<b>3 DAY CONFERENCE PACKAGE</b> (Tuesday-Thursday)	\$1,700	\$1,700	\$1,800	\$2,100
<b>FULL DAY HANDS-ON LAB</b> (Sunday)	\$650 expired	\$650	\$700	\$750

### ADD THE HOTEL PACKAGE

At Planet Hollywood Resort & Casino

#### 6 DAY HOTEL PACKAGE\*

**\$1,200**

Check In: Sat, Mar 18 | Check Out: Fri, Mar 24

#### 5 DAY HOTEL PACKAGE\*

**\$1,000**

Check In: Sun, Mar 19 | Check Out: Fri, Mar 24

#### 4 DAY HOTEL PACKAGE\*

**\$800**

Check In: Sun, Mar 19 OR Check In: Mon, Mar 20  
Check Out: Thur, Mar 23 Check Out: Fri, Mar 24

#### 3 DAY HOTEL PACKAGE\*

**\$600**

Check In: Mon, Mar 20 | Check Out: Thur, Mar 23

\*The Hotel Package includes the resort fee and applicable state, local and occupancy taxes (the base rate for the hotel room is \$139.00 per night + a \$32.00 resort fee).

## DISCOUNTS & SPECIAL SAVINGS

### TEAM DISCOUNTS: BRING THE TEAM AND SAVE BIG!

Visual Studio Live! Las Vegas offers savings to teams of 3 or more from the same company and registering for the same package. Looking to bring 10 or more? Contact our Conference Registrar at [sross@converge360.com](mailto:sross@converge360.com) or at 949.296.9840.

<b>TEAM PACKAGES</b> <i>Pricing listed is per attendee</i>				
Every Conference Package grants you access to every Keynote, Session, Breakfast, Lunch, and Welcome Reception	YEAR-END SAVINGS UNTIL DEC 16	SUPER EARLY BIRD UNTIL JAN 27	EARLY BIRD UNTIL FEB 24	STANDARD UNTIL MAR 19
<b>6-DAY CONFERENCE PACKAGE</b> + Full Day Hands-On Lab and Two Workshops (Sunday - Friday)	\$2,800	\$2,900	\$3,000	\$3,300
<b>5-DAY CONFERENCE PACKAGE</b> + Two Workshops (Monday - Friday)	\$2,300	\$2,400	\$2,500	\$2,800
<b>4-DAY CONFERENCE PACKAGE</b> + One Workshop (Monday OR Friday)	\$1,800 expired	\$1,900	\$2,000	\$2,300

### MORE DISCOUNTS

#### ALUMNI

Welcome back! If you have attended any Visual Studio Live!, TechMentor or Live! 360 event, you qualify for our special alumni discount. You should receive alumni special promotions, but if not, please contact our Conference Registrar at [sross@converge360.com](mailto:sross@converge360.com) or 949.296.9840.

#### EDUCATION

We offer full-time college students and faculty from accredited universities a discount. To receive this discount, please contact our Conference Registrar at [sross@converge360.com](mailto:sross@converge360.com) or 949.296.9840. Subject to Visual Studio Live! verification.

#### NEW DEVELOPER

If you are a new Developer (or new to the Microsoft Platform) with less than three years of experience, you are eligible for \$600 off of our full price conference registration to help accelerate your career. Use Promo Code NDD. Subject to Visual Studio Live! verification.

#### GOVERNMENT/ NON-PROFIT

Employees of a national, federal, state, provincial, or local government entity are eligible to take advantage of our discount. To receive this discount, please contact our Conference Registrar at [sross@converge360.com](mailto:sross@converge360.com) or 949.296.9840. Subject to Visual Studio Live! verification.



## UPCOMING 2023 CONFERENCES



**Visual Studio Live!  
Nashville**  
**May 15-19, 2023**

Renaissance Nashville,  
Nashville, TN

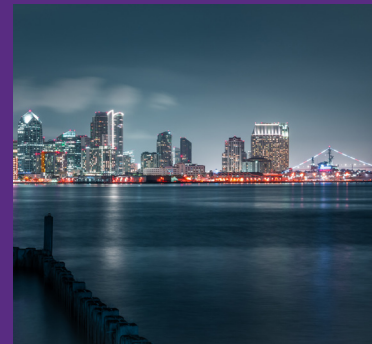
[vslive.com/nashville](https://vslive.com/nashville)



**Visual Studio Live!  
Microsoft HQ**  
**July 17-21, 2023**

Microsoft Conference  
Center, Redmond, WA/ Hyatt  
Regency Bellevue

[vslive.com/microsofthq](https://vslive.com/microsofthq)



**Visual Studio Live!  
San Diego**  
**August 7-11, 2023**

Sheraton San Diego Hotel  
& Marina

[vslive.com/sandiego](https://vslive.com/sandiego)



**Visual Studio Live! /  
Live! 360 Orlando**  
**November 12-17, 2023**

Loews Royal Pacific Resort at  
Universal Orlando,  
Orlando, FL

**FOR MORE INFO ON LIVE! 360**  
[live360events.com](https://live360events.com)