NORTHWEST CADENCE

where technology meets teamwork

Azure & ALM Guidebook

Deliver at the speed of cloud with Northwest Cadence

Guidebook Table of Contents

Overview

Cloud, cloud, cloud. Everyone seems to be talking about it, and lots of people seem to want it, but what does it really mean? What's in it for you and your organization? What are the benefits, risks, and costs? Is this just another fad?

At Northwest Cadence, we help teams and organizations improve their software and business processes to deliver extraordinary results. We think the Microsoft Azure solution is an excellent fit for the people, processes, and tools we've always supported. We understand how the capabilities of the cloud can help solve common, persistent pain points in Application Lifecycle Management, and we've written this guidebook to share some of our ideas with you.

The cloud ecosystem provides capabilities for the entire application lifecycle and, more importantly, the humans who work in it. Role-tailored tools like Visual Studio and Office for individuals connect seamlessly to cloud-powered collaboration tools like the Visual Studio Online suite. These drive cloud workflows like lab and environment management, build-deploy-test, and on-demand (up to massive-scale!) performance and load testing capabilities. Every day (and one-off, and extraordinary) infrastructure services support the entire system, and even loop back to individuals and teams with Azure's on-demand virtual machines for any use your people can think of.

This guidebook is intended to be your travelogue as you enter the world of cloud. As you read through the ALM journey and discover all the areas affected by new Azure capabilities, we hope it'll spark some recognition—*"hey, we're not the only ones who struggle with this!"*—as well as your imagination—*"just think what we could achieve if we could overcome that!"*

Wondering how, where, when, and why to get started with Microsoft Azure? Northwest Cadence can help. Read on—let's jump into cloud together and see where it can take you!

Cloud Context

In the last decade or so, agile software delivery has moved into the mainstream for organizations large and small. Long planning horizons and big up-front design are giving way to shorter feedback cycles and flexible architectures. Short time-to-feedback works better internally, too: specialists in former functional silos can see that any technical problem is easier to solve when cross-functional teams do it together. Recovering command-and-control managers are learning to give greater autonomy to teams who have more accurate and more current information about what's needed and are in the best position to do something about it.
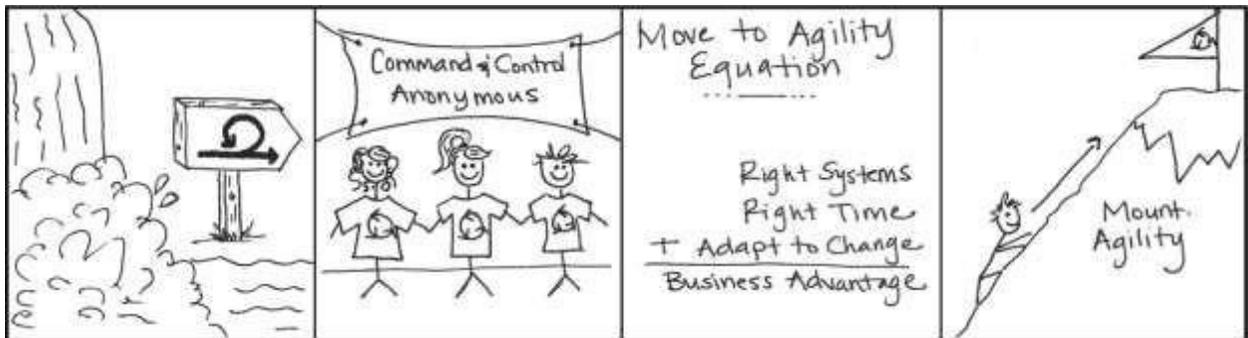
The best software delivery organizations don't even call it "agile" anymore—it's just how things are done. Just another day at the office.

More humane, more sustainable development is a pleasant side effect of these efforts, but make no mistake: the move to agility is driven by today's competitive business climate. Modern business runs on software. Whether your organization generates revenue from software directly or indirectly, your ability to create the right systems at the right time, and adapt them to your users' changing needs, is your business advantage.

So we're not all there yet, but we all understand that agility—or, call it "responsiveness"—is where we need to be.

Cloud Cadence

As the principles and practices of responsive software development have matured, what's on the next horizon? Where can we innovate to take our organizations' capabilities to the next level?

Enter the cloud.
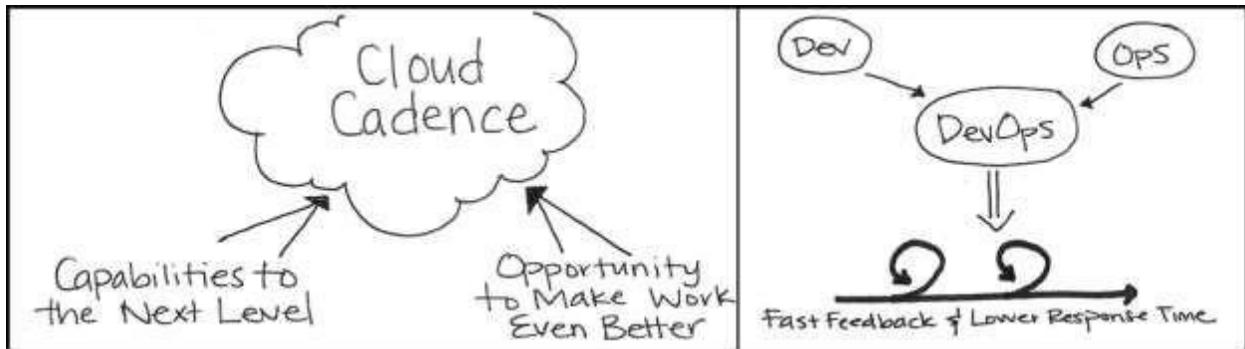
High-performing teams push the boundaries of processes and tools. They've already fine-tuned communication and collaboration, built a solid foundation for quality, and removed wasteful delay and rework from the delivery cycle. They know continuous improvement is never finished, so they're looking around for the next opportunity to make their work even better.

Enter the cloud.

There comes a point where a great process exceeds the speed of humans. And departments. And tools. A major release could be held back by the time it takes to test basic functions and regressions: DevTest tackles those with automation, so human testers can focus on the bigger picture of user acceptance. In a complex system, getting the right environment ready for the next build is slow and burdensome: continuous delivery makes the process consistent and repeatable, giving development and operations confidence in what's being promoted. Many organizations still suffer a disconnect between dev and ops: DevOps unifies these former silos around common goals, like speeding feedback and lowering response time.

Whether you're a high-performing organization already or you're trying to learn their secrets so you can become one, the marriage of great people, proven practices, and cutting-edge tools is how you'll get there.

Azure & ALM

Every part of the lifecycle is potentially touched by the capabilities of the Azure solution. In this section, we'll step through a complete overview of ALM and discuss how Azure can help each part of the process. You'll notice that neither modern ALM nor Azure necessarily adhere to old "waterfall" boundaries of timing or roles—just like great agile processes, a lot of Azure capabilities are concurrent, collaborative, and continuous.

Creating an Azure infrastructure-as-code configuration using PowerShell seems like a little thing, but capabilities like these are at the heart of the new ALM transformation. Is it a DevOps tool? *Sure*. Does it transform dev? *Yup*. Build and deploy? *You bet*. DevTest? *Mm-hmm*. You get the idea. Just one cloud practice impacts a lot of things, and that's just one of many you'll find in Azure!

As you read on in our guidebook, you'll see that these sections and roles and concepts aren't rigid boundaries. If you take away just one idea- maybe it should be how Azure brings the entire organization together- it begins to dissolve the silos that are slowing you down.

Azure and ALM Video Animation: [Watch the Video](#)
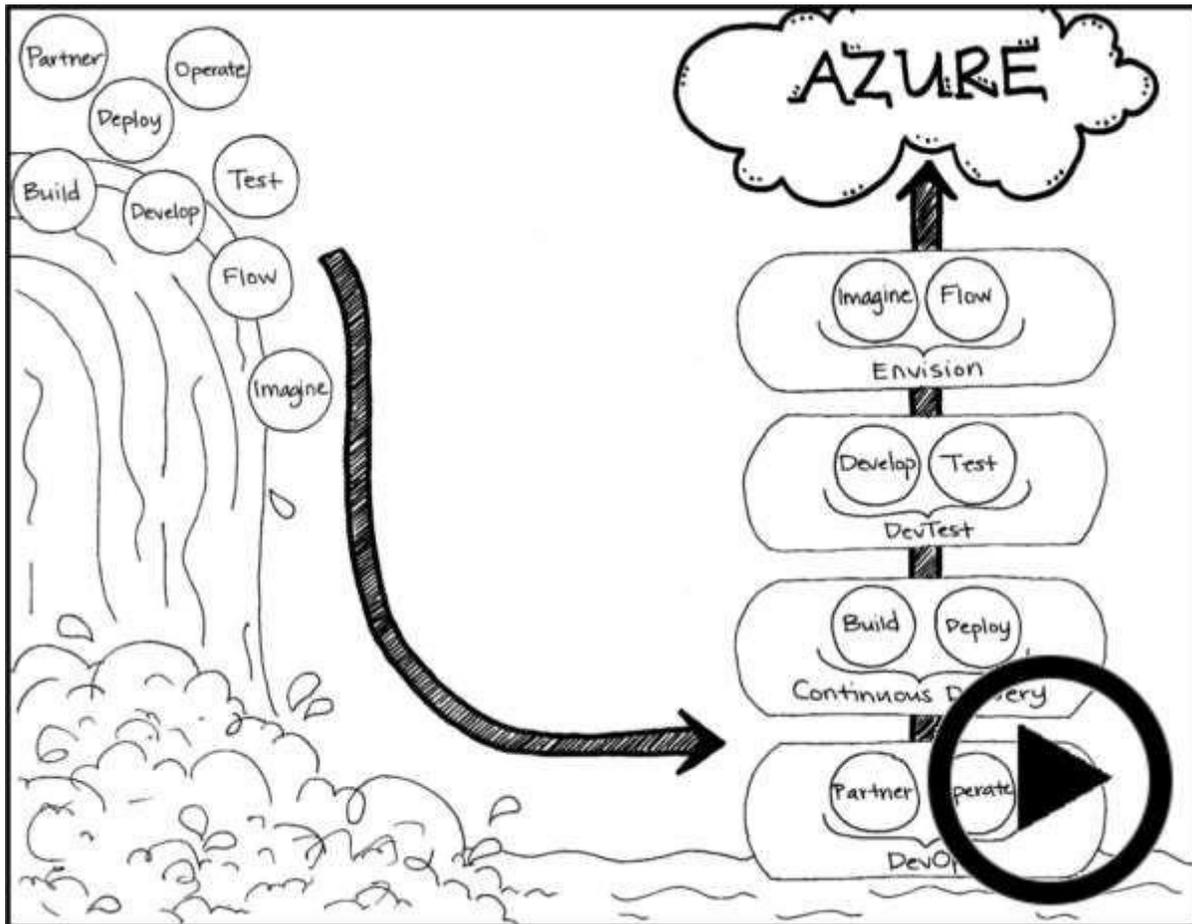
DevOps

It starts with a mindset shift. True business innovation doesn't just start with a dream and end in production: delivering, operating, measuring, and learning from deployed apps is the heart of reliable business delivery and the genesis of your next big idea. The first step on the journey to cloud cadence is embracing a DevOps point of view.

Partner

Too often for development teams, the path to production is a bumpy one, filled with late-breaking and misunderstood constraints and organizational tension. Nonfunctional requirements alone don't bridge that disconnect.

Consider practices like:

- configuration-as-code to create a true partnership and bring the operations point of view directly into teams early in the process.
- virtualization to help satisfy delivery teams' ever-changing needs without overburdening ops' infrastructure or creating unmanageable risk.

Your IT pros can quickly and easily configure exactly what your dev teams and your apps need to succeed from basics like:

- cross-platform virtualization and infrastructure autoscaling
- one-click availability sets for redundancy and uptime
- virtual networks and VPNs supporting hybrid on-prem/cloud IT solutions
- leading-edge solutions like SaaS APIs, Hadoop, and advanced BI with Azure solutions

Integrating your existing Active Directory with Azure's AD in the cloud is another great solution for ops—reducing management, overhead, and risk—with benefits for dev. In addition to managing access to your infrastructure, AD also provides a way for the dev team to decouple authentication and authorization features from the rest of the codebase. It's a win for everyone.

With so many possibilities, it's hard to know where to begin. Northwest Cadence can help you identify a strategy and focus on the most valuable starting points.

Operate

What's your organization's Mean Time to Disaster? More importantly, how can you detect and prevent the next one?

Azure's robust monitoring and diagnostic tools allow your teams to keep a close eye on what matters most: the health of production systems.

Northwest Cadence can work with you to identify your favorite metrics and suggest others you might not have considered, then configure Azure tools to collect and report for real-time response as well as long-term trend analysis.

Envision

So how do you identify, prioritize, and measure the value streams your customers don't even know they want? The skills and technology are already right there, on your teams: monitoring, logging, data, and analytics. The same toolkit you use to detect and resolve problems can maximize your opportunities.

Azure handles infrastructure constraints that used to make your critical business intelligence harder to get, with always-on globally-accessible storage for logs, and tools to make metadata consumable beyond the ops or dev teams. Need more processing power to capture logging without degrading performance? Dynamically provision the resources you need *and* run powerful tests so you know exactly how your app is using them.

Sometimes the "business side" gets left out of an agile transformation, which is exactly backwards: it's the benefits to the business that you want to *drive* agility! Northwest Cadence experts will reach out to all corners of your organization and ensure that everyone has good reason to buy into agile and cloud solutions.

Imagine

What if you could…? Whether you sell software directly, or your software plays an essential supporting role, it's all the same: *ideas* make your business. Industry-leading ideas don't come from smoke-filled rooms anymore. Engaging directly with your customers might yield you small, satisfying system improvements, but even then it can be tough to get outside the box and get truly transformative. You end up keeping up instead of taking off.

Visual Studio Online and Azure come together with Application Insights. Sure, it's a tool for operational data, but that's far from its true potential. It provides a 360° view of your system: where things might be going wrong, and the surprising places things are going *right*. Don't prioritize based on your sales team's best guess; make data-driven decisions to guide your resources wisely.

Asking decision-makers to change for the sake of change, or adopt agile for boilerplate reasons like "best practices", never works. Show, don't tell: Northwest Cadence can help you identify and generate metrics that really pop, providing all levels of your organization with truly astonishing insights to make your business more competitive.

Flow

OK, you've decided on the valuable new features you want to deliver, and now you want to blow your users' minds as quickly as possible. Whether you're thrilling them with new functionality, or surprising and delighting them with a level of responsiveness they didn't think possible, it all relies on flow. There's no place like production, and you don't want anything to get in the way.

Visual Studio Online gives teams the visibility and collaboration capabilities they need to keep value moving swiftly through your system. Whether it's in the team room or around the world, bring team members together and rally them around the common goal. Eliminate dependencies and impediments. Quickly recognize bottlenecks. Grab your teams' attention with real-time, easy-to-understand visual dashboards focused on their most important metrics.

Bringing ALM and Azure together allows you to track and manage the flow of value, even across an enterprise at scale, in new and better ways. Northwest Cadence thought leaders understand how to guide the transition from traditional forms of project management to agile visibility and transparency. It's a shift in perspective, and what you'll see are amazing results!

Continuous Delivery

Yeah, it's a buzzword, but there's buzz for a reason. Continuous delivery means getting your great ideas into your users' hands faster than ever, while reducing the demands on operations and infrastructure, and controlling costs. Azure provides a rich and growing set of tools to handle the entire CD pipeline.

Build

Interesting apps demand "interesting" builds, and those can be troublesome. Development teams rely on builds for fast feedback, and to catch small issues before they get bigger. The more you use them, the more your servers and agents accumulate installs, configs, and dependencies that make it difficult and costly to scale. Moving from monolithic legacy apps to service-oriented architecture? Growing into cross-platform or mobile? Those aren't linear—the complexity they add to your build ecosystem can be exponential.

With Visual Studio, Team Build, and Azure, you can support a wide variety of build configurations so you can unleash the creativity of your dev teams—and protect them from themselves—without breaking ops or busting your budget.

Northwest Cadence build experts have wrestled with the worst, the toughest, the broken-est, and we've learned plenty of lessons the hard way. Let us put our experience to work by smoothing the path for you.

Deploy

Are you still doing major releases at night or on the weekend because you're not confident about what might go wrong? What happens when your user base goes global and there's no such thing as off-hours anymore? Or, to put it another way, what could you achieve if your regular deployments were straightforward and predictable? You don't need to worry about rollback if it's easier to instantly deploy a fix! From rapid recovery to A/B testing to continuous micro-releases, simplifying deployment gives you a solid foundation to amp up the complexity and increase the value you can deliver.

PowerShell Desired State Configuration (DSC) makes deployment clear, consistent, and repeatable, but that isn't all. Who authors the scripts, dev or ops? The answer is "yes". The skillset can reside anywhere, but to get the details right, dev and ops must work together—maybe even pair! DSC also works for validation and troubleshooting, again helping the dev and ops teams collaborate on a solution.

DSC works seamlessly with Visual Studio Release Management to coordinate your hybrid deployments, both Azure environments and standard on-prem environments, with all the power of templating and automation.

At Northwest Cadence we understand how to pull together the right mix of tools and configurations to support your deployment needs, without over-complicating. We can help you create a pipeline that's faster *and* more sustainable.

DevTest

"Delivery" doesn't just mean deployment. Too often, fast-paced modern teams hit a wall just trying to stabilize and test in complex environments. Azure can help you create reliable and reusable automated build-deploy-test workflows and wrangle tough configurations.

Development

Coders bring the "dev" into DevOps and DevTest with configuration-as-code techniques, robust automated testing, advanced dependency management, and more.

Azure supports developers day-to-day, too. Rapidly expand your teams' repertoire into cross-platform and mobile app development and let Azure handle the infrastructure. Create, publish, and scale web applications, and take advantage of per-user storage for mobile app development. There's even a lightweight online code editor for maintenance on-the-go.

The very best coding practices form a solid foundation for the move to cloud cadence. Northwest Cadence brings real-world dev experience to help you manage branching, configuration, test automation, architecture, and more, supported by Azure tools, so your coders can get back to doing what they love—writing valuable code with a purpose.

Test

One click. That's all your coders need to quickly and safely deploy their latest changes, run a heavy-duty suite of automated tests, and grant access to QA for manual verification.

Creating a DevTest sandbox that looks just like production takes literally minutes on Azure, and it takes the responsibility (and cost) of infrastructure right off your organization's shoulders, into the cloud. Working together with your configuration-ascode strategy and automated infrastructure, you can start turning around lightning-fast feedback between developers, testers, and operations to make your code production-ready faster (and better) than ever before.

For QA, there's even more. How often are testers blocked, waiting for the latest code to be deployed to a testable environment? What about supporting multiple concurrent releases, or multiple versions in different stages of test, each with their own tricky configs? What about endless fix-redeploy-retest cycles with complex setup and teardown—or worse, when you have to figure out how to test the install process itself? Azure test agents and environments solve these common bottlenecks that get blamed on QA, eliminating the tension between quality and speed. Testers can even selfprovision a personal production-like environment any time, with its own automated deployment of any build, to test whatever they want without disrupting anyone else.

Northwest Cadence understands that quality is a team sport, bringing together those with a rigorous quality background *and* all of their colleagues across the organization, because everyone wants to deliver good stuff. With Azure capabilities bringing a first-class experience to QA and a quality mindset to everyone, users get great software without delay.

About Us

Northwest Cadence isn't some collection of individual consultants. We're thought leaders from all parts of the industry—IT pros, build masters, software craftsmen (and women), data architects, quality engineers, and agilists—who've learned to work together as a team so we can help you do it too.

Our favorite pastime is helping organizations design, build, and improve upon software delivery. What's even better? Since Microsoft Azure came into the picture, we also get to help organizations on their journey to cloud cadence. Life's good in the cloud.

A Collection of Resources

Coffee Talk events | nwcadence.com/events

DevTest: SaaS + Azure = Agility | March 05, 2015 | 9:00AM PT

How can Azure improve your agility? One way is to leverage Software-as-a-Service (SaaS). Join Northwest Cadence during this Coffee Talk as we discuss the power of Azure's SaaS offerings, and learn how to take your next step towards a leaner, more agile, development practice.

DevTest: From Zero to Testing in Minutes | March 19, 2015 | 9:00AM PT

Creating a DevTest sandbox on Azure takes literally minutes. Join Northwest Cadence during this Coffee Talk as we discuss using Azure to support a DevTest environment.

A Lap around Azure and ALM | April 16, 2015 | 9:00AM PT

From DevTest and Continuous Delivery to DevOps and Value Delivery Monitoring, Azure provides the framework and tools to support your modern software delivery cycle. Join Northwest Cadence during this Coffee Talk as we provide a high-level overview of the various Azure practices and tools available to support your Application Lifecycle Management practices.

DevOps: A Partnership Made in the Cloud | May 07, 2015 | 9:00AM PT

What can operations and development do to smooth out the release path? Join Northwest Cadence during this Coffee Talk as we discuss how to use Azure to improve the communication between operations and development

DevOps: Highlights of Hybrid Active Directory | May 21, 2015 | 9:00AM PT

How can your operations team support Azure authentication when you need to maintain an on-premise Active Directory? Join Northwest Cadence during this Coffee Talk as we discuss some of the challenges and best practices around maintaining an Active Directory infrastructure that's hybrid: on-premise and in-the-cloud.

DevTest: SaaS + Azure = Agility | June 04, 2015 | 9:00AM PT

How can Azure improve your agility? One way is to leverage Software-as-a-Service (SaaS). Join Northwest Cadence during this Coffee Talk as we discuss the power of Azure's SaaS offerings, and learn how to take your next step towards a leaner, more agile, development practice.

DevTest: From Zero to Testing in Minutes | June 18, 2015 | 9:00AM PT

Creating a DevTest sandbox on Azure takes literally minutes. Join Northwest Cadence during this Coffee Talk as we discuss using Azure to support a DevTest environment.

Training events | nwcadence.com/events

Building Applications with Azure PaaS – Bellevue, WA | March 23-27, 2015

Azure Platform as a Service is a powerful platform for creating modern applications and suites of services. This power is unlocked when you can make intelligent use of the appropriate services available to create a highly decoupled, scalable, and fault-tolerant application. This course is about learning the big picture in Azure, understanding the patterns and practices you need to create modern cloud applications.

Blog Posts | blog.nwcadence.com

Microsoft Azure 101 | *"My goal in this article is to provide some guidance to people like me who are beginning their Azure journey. I will not be discussing the pros and cons of Azure over AWS or vice versa. I will simple be providing an introduction to Microsoft Azure for those who may need it…"*

The New Microsoft Azure | *"As our software development world becomes more tightly integrated, Microsoft appears to be removing the Windows only approach, and focusing on what teams really need to reduce costs and increase quality in their Application Lifecycle Management…"*

Quick and Easy Test Environments with Microsoft Azure | *"…In less than a day, they were able to put together a testing environment that was much more matched to their production environment and were able to adequately test the solution for both accuracy and performance. All this was done at a small fraction of the cost of acquiring and outfitting their own on-premises environment…"*

ALM Workflow in Azure and Visual Studio Online | *"ALM Workflow, from requirements to release, has a number of moving parts and challenges that teams need to develop and refine in order to achieve the level of software development and delivery maturity they desire…"*

Automate Deployment and Management in Microsoft Azure | *"Cloud platforms like Microsoft Azure are assisting in providing a flexible and robust solution for continuous delivery and DevOps. The new Windows Azure Automation feature that is available in the preview features section fits right into the continuous delivery practice…"*

Azure Website Autoscaling | *"One of the key features we rely on is the ability to autoscale our websites based on schedule and load. Luckily, it's also one of the simplest features to implement…"*

Continuous Integration – Removing the Barriers with Microsoft Azure | *"Azure offers a cohesive solution for your DevTest practices. And even better, it can be the cornerstone to that pinnacle of development - continuous integration, which is not only possible with Azure, it is easily achievable."*

Microsoft Resources

Microsoft has built a variety of resources to help familiarize customers with Windows Azure. Check out some of the Microsoft resources below for more great learning.

Microsoft Virtual Academy: Azure Jump Start | View the latest capabilities with the newest Windows Azure release. This Jump Start focuses on key technical topics

including Windows Azure Virtual Machines, Virtual Networks and PaaS implementation for IT Pros.

Azure Blogs | A variety of Azure experts have been blogging about Windows Azure lately. Read what they are saying, and get connected with the Azure community.

TechEd North America 2014 | Visit the Microsoft Azure sessions from TechEd NA 2014 for technical education, product evaluation, and community resources.

Azure Training Kit with Azure Readiness Content | The Azure Readiness Content provides a set of presentations and demos designed to help learn the latest Microsoft Azure features and services.

Azure Preview Portal | See how the Azure Preview portal radically simplifies the cloud.

Azure Websites | Discover how Azure Websites provide world-class capabilities, empowering your Enterprise cloud with functionality designed for secure mission-critical applications.

Consulting Services

Northwest Cadence provides various consulting and training services designed around Microsoft Azure and Application Lifecycle Management. Each of our clients is unique in size, style, and strategy. When it comes to consulting and training services on Azure and ALM, one size does *not* fit all. The below-listed services provide a starting point to collaborate with you on how Northwest Cadence can best serve you and your team.

Strategic Discovery and Planning Workshop | one day*

Every technology engagement must deliver business value. Modern technology trends like agile, DevOps, and cloud require a long-term, strategic, and inclusive approach at all levels of your organization. In this facilitated one day workshop, our experts will work with you to ensure your critical technical investments are well-aligned with appropriate strategic goals.

Sometimes it's difficult to know which steps to take first. That's why we created this all inclusive service offering - to give you some place to start. In this one day Strategic

Discovery and Planning Workshop, we will explore your business context, elicit pain points and timely opportunities, and identify your highest priorities. We will bring our years of experience to help you understand business benefits, your own readiness, and organizational prerequisites.

When we're finished with our day together, you will have an action plan that you can use to engage with us and/or implement on your own.

Cloud Cadence Strategy Session & Proof-of-Concept | five days*

During this time onsite, a Northwest Cadence cloud cadence strategy expert will focus on how to best apply Azure in your existing ALM Practices. Northwest Cadence will gain an understanding through facilitated whiteboard sessions and interviews with key leaders from your organization. Topics that will be covered include DevTest, Continuous Deliver, DevOps, and IaaS/PaaS. Northwest Cadence will provide expert advice and coaching, appropriate documentation, and question & answer sessions. The goal is to develop an Azure and ALM business and technical strategy.

At the end of this Strategy Session, you will have a defined strategy for applying Azure in your existing ALM practices. Upon completing the Learning and Strategy Session, Northwest Cadence will assist in building an Azure Proof-of-Concept based on the defined objectives and strategy.

DevTest Proof of Concept | five days*

In this five day engagement, Northwest Cadence will help you design your Development and Test (DevTest) workloads and build out a proof-of-concept leveraging Azure. During this Proof-of-Concept Northwest Cadence will work alongside your team to:

- Setup an Azure subscription
- Build out a Proof-of-Concept DevTest environment that includes an on-premise and Azure machine
- Automate the creation of new test environments in Azure so they can be deployed and redeployed on demand
- Provide coaching on how to automate an application deployment
- Automate a demonstration application deployment to create an end-to-end DevTest experience

DevTest Quick Start | ten days*

In this ten day engagement, Northwest Cadence will help you integrate your Development and Test (DevTest) workloads and move them to Azure. During this Quick Start, Northwest Cadence will work alongside your team to:

- Setup an Azure subscription
- Connect your on premises network to Azure so that test machines can sit on the same domain
- Automate the creation of new test environments in Azure so they can be deployed and redeployed on demand
- Automate application deployment to create and end-to-end DevTest experience

At the end of this DevTest Quick Start, you will have a fully automated DevTest environment in Azure that can be repeatedly and reliable provisioned. You will also have a fully automated application deployment.

Cloud Cadence Strategy Session (Azure & ALM Mapping) | three days

During this time onsite, a Northwest Cadence cloud cadence strategy expert will focus on how to best apply Azure in your existing ALM practices. Northwest Cadence will gain an understanding through facilitated whiteboard sessions and interviews with key leaders from your organization. Topics that will be covered include DevTest, Continuous Delivery, DevOps, and IaaS/PaaS.

During this time onsite, Northwest Cadence will provide expert advice and knowledge transfer, appropriate documentation, and question & answer sessions. The goal is to create an Azure and ALM business and technical strategy.

At the end of this Strategy Session, you will have a defined strategy for applying Azure in your existing ALM practices.

Azure Staff leadership | ten days

In this ten day engagement, Northwest Cadence will work with your team in a highly hands-on environment to provide coaching and knowledge transfer around Azure infrastructure, planning, architecting solutions and development. Northwest Cadence will prepare your team on the following topics:

- IaaS, PaaS and SaaS in Azure
- Developing a DevTest environment in Azure

- How to architect a PaaS solution that takes advantage of Azure best practices
- How to plan for a migration of an on-site application into Azure
- How to think about Continuous Delivery

At the end of this engagement, your team will have been trained to design Azure solutions, developed the skills to migrate an existing solution and identify which Azure technologies should be used to support new application development in Azure.

Continuous Delivery Quick Start | ten days

Automating the creation of your test environments is important, as it allows you to validate both your deployment process and your application. The environment and its configuration, however, can still be untested. During this engagement, Northwest Cadence will work with your team to support the entire delivery pipeline, resulting in automation that verifies the environment, configuration, deployment process, and application during each and every automated deployment. Changes to all aspects of your software pipeline are version controlled; changes to machine configurations can be made by simply editing text files and redeploying your environment. We will utilize the appropriate technologies during this engagement, potentially including Release Management (RM), Chef, Dynamic State Configuration (DSC), Octopus Deploy, and PowerShell scripting, as well as any other needed tools.

At the end of this Continuous Delivery Quick Start, your environments, configurations, and deployment processes will be version controlled and automated. You'll have reached "configuration-as-code" and will be able to deliver features as fast as your developers can code them and your customers are able to accept them.

Application Insights (AI) Implementation | five days

Find application opportunities before your customers do! During this time onsite, Northwest Cadence will set up Application Insights and work with your team to develop practices to best monitor and understand your application usage.

At the end of this AI Implementation, your organization will be positioned to proactively monitor both .NET and Java applications in production environments, as well as monitor the production environment itself.

Platform as a Service (PaaS) Evaluation | three days

When is it prudent, strategic, or opportunistic to move to the cloud? What should you move to the cloud? During this time on site, Northwest Cadence will help develop a strategic plan around what you could move to the cloud. Northwest Cadence will provide expert advice and knowledge transfer, appropriate documentation, and question & answer sessions. The goal is to create a strategy for moving on-premises applications to the cloud. At the end of this PaaS evaluation, your team will have defined which applications are appropriate to move to the cloud, and why.

Platform as a Service (PaaS) Application Forklift | varies by application

Whether your application is PaaS ready or you need to perform some re-architecting, Northwest Cadence can work with your team to move your application into Azure! During this time on site, Northwest Cadence will provide expert advice and knowledge transfer, work with your team to prepare them move the application and then assist the team with the migration of their web application into PaaS.

The goal of this application forklift is to work with your team to move your application into Azure and to provide azure leadership training so that your team can take the skills they've learned and apply it to other applications.

At the end of this PaaS Application Forklift, your team will have moved your application into the cloud and to experience the best practices for moving applications into Azure.

Qualified customers may be eligible for Microsoft funding to cover a portion of this engagement. Please contact clientservices@nwcadence.com for more information.

Training & Workshops

Training: Building Applications with Azure Platform as a Service | five days

Azure Platform as a Service is a powerful platform for creating modern applications and suites of services. This power is unlocked when you can make intelligent use of the appropriate services available to create a highly decoupled, scalable, and fault-tolerant application. This course is about learning the big picture in Azure, understanding the patterns and practices you need to create modern cloud applications.

Topics to be covered include:

- The different pieces of Azure PaaS and how they fit together to create a coherent, de-coupled, and scalable application or set of services
- Using the Azure UI and Powershell to create the major PaaS pieces in Azure.
- Using code to interact with the major PaaS components
- The common Azure architecture and design patterns, the pros and cons of them, and how to implement them
- Building out a complete Build-Deploy-Test-Release pipeline in Azure
- Review of the basics of
    - o Azure subscription management
    - o Azure Active Directory
    - o Virtual Networks, and creating VPN tunnels
    - o Azure IaaS, and why it should usually be a last resort

Workshop: Azure End-to-End | one day

Learn about the Azure solution and how it intersects with the way you do business. Discover ways to move your solutions, platforms, and infrastructures to the cloud.

In this workshop, you will be taken through an exhaustive review of all of Azure's core features including virtual environments, web and mobile app support, DevTest, big data, media ingestion and streaming, storage backup and recovery, and identity management and federation.

Workshop: Configuring IaaS with Microsoft Azure | one day

Discover what it takes to set up your infrastructure within Microsoft Azure.

In this workshop, you will learn the fundamentals of Azure including setting up virtual machines and networks, storage, networking concepts, backup in the cloud, VPNs in Azure AD, SQL 2012 clustering, and SharePoint 2013 farms.

Workshop: Simplify your Teams Authentication Experience | one day

Learn how to simplify your employees' authentication experience across the web through the design and configuration of Azure Active Directory. Whether you need strict cloud-based Active Directory infrastructure, or you need an authentication infrastructure

to support both cloud and on-premises AD, we work with your team to design and deploy an Azure Active Directory infrastructure that supports your complex needs.

In this workshop, you will learn how to configure AD Sync and AD Federation Services to support web-wide single-sign-on authentication.

Please visit us regularly at www.AzureCloudCadence.com for the most up-to-date content, resources, videos, and services.