

# MODERNIZE OPEN-SOURCE WEB APPLICATIONS WITH AZURE

Lower costs and boost performance  
for your LAMP workloads.



# THE CLOUD-ADOPTION CHALLENGE

More and more companies are headed cloudward—and it's expected that 83% of enterprise workloads will be in the cloud by the end of this year.<sup>1</sup> Yet despite the continuing trend, there can still be a lack of full understanding of the best practices for cloud adoption—especially for open-source workloads like those developed on the LAMP (Linux, Apache, MySQL, PHP) stack.

Alongside cloud adoption also comes the need to modernize open-source web applications and database platforms. A majority of enterprises—over 84%—have already started modernization efforts of some sort, but with open-source considerations and dependencies, getting it right for your business can be complicated.

And while 62% of IT executives expect their data-modernization efforts to be a success, less than half of those report having a specific, formal initiative for modernization.<sup>2</sup> This can leave gaps on the cloud-adoption pathway:

- How can you streamline the migration journey for moving open-source web applications?
- What tools are key to ensuring a successful cloud adoption?
- What are the benefits of moving to a platform as a service (PaaS) like Microsoft Azure?

Despite these challenges, cloud adoption doesn't have to be difficult—but going it alone can make it tough. With more complex migration considerations and LAMP stack needs, agility as well as minimizing risk are both essential for success.

That's what we'll talk about in this e-book: how SNP Technologies' specialized services can ensure success all along your cloud journey—for both migration and modernization.

## What is LAMP stack?

LAMP is the acronym used to describe the popular open-source web service technology stack (Linux, Apache, MySQL, and PHP).

<b>Linux</b>	<b>Operating system</b>
<b>Apache</b>	<b>Web server</b>
<b>MySQL/MariaDB</b>	<b>Database management system</b>
<b>PHP</b>	<b>Programming paradigm</b>

Nine out of 10 of today's top websites are built with MySQL, and 8 out of 10 use PHP, including popular frameworks like the WordPress and Drupal content management systems (CMS) as well as development frameworks like Zend and Laravel—making LAMP one of the most sought-after solutions in the industry.

<sup>1</sup> Louis Columbus, "83% Of Enterprise Workloads Will Be In The Cloud By 2020" Forbes, January 7, 2018.

<sup>2</sup> "Data modernization and the cloud: Which trend is driving the other?" Deloitte Insights, August 26, 2019.

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# THE SOLUTION TO SUCCESSFUL CLOUD ADOPTION

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The key to successful cloud adoption? The industry-leading power of Microsoft Azure PaaS alongside a partner that understands the unique considerations for cloud adoption when it comes to LAMP workloads—and one that can help analyze your specific open-source modernization needs to determine the best, most optimized path to cloud-journey success.

Azure PaaS is a cloud-based deployment and development environment that enables you to deliver everything from simple web apps to sophisticated enterprise applications—designed to support the complete application lifecycle of building, testing, deploying, managing, and updating. Azure PaaS App Service and Database Service have traditionally been the go-to resources for apps developed on the Microsoft tech stack, such as, Windows, IIS, SQL Server and .NET. Microsoft embraces open source, and Azure PaaS today has first-class support not only for LAMP but for any open-source workload.

The cloud has dramatically changed the role of the operations team, allowing the responsibility for infrastructure management to be shifted to the cloud provider. This in turn allows the ops team to focus on initiatives to the application value stream. By employing the services of a Microsoft Partner with a native knowledge base, you can take advantage of their expertise to ensure that you're taking full advantage of PaaS offerings and that your LAMP deployment is done correctly and efficiently.

## The power of Azure PaaS for businesses of the future

Azure PaaS is a highly secure and scalable platform for LAMP with a feature set that gives you even more of an advantage.



### Accelerate app innovation

With deeply integrated cloud services, you can rapidly build projects within a consistent portal experience.



### Protect your business

Meet the highest security regulatory standards with the industry's largest portfolio of 70 compliance offerings.



### Lower cost

With Azure PaaS, Microsoft provides and manages the hardware and software infrastructure so you don't have to—yielding cost savings, too.



### Cut coding time

Reduce the time it takes to code new apps with pre-coded application components built into the platform, such as workflow, directory services, security features, search, and more.



### Add development capabilities (without adding staff)

Give your development team new capabilities without needing to add additional team members.



### Scale quickly

Meet challenging demand with built-in auto-scale capability based on customer-defined criteria.



### Efficiently manage the application lifecycle

Get the capabilities you need to support the complete web-application lifecycle, including building, testing, deploying, managing, and updating—all within the same integrated environment.

## A powerful partnership

With SNP Technologies as a partner, you are able to assess, integrate, and deploy applications to fully leverage the singular offerings of Microsoft Azure PaaS.

SNP's team of innovative engineers translates deep Azure domain knowledge and technical expertise into actionable insights so you can make informed decisions. This also allows your teams to spend energies on higher-value activities like deployment, monitoring, governance, and security auditing—and to be able to look to the future with a focus on innovation.

Our Build & Migrate LAMP Apps with Azure service helps organizations run, monitor, and optimize their apps securely in the cloud. Industry-independent, this solution caters to a wide variety of use cases, including internal line of business applications, customer-facing applications, application programming interfaces (APIs), and more.

### With SNP and Azure PaaS, you can:



#### Accelerate Azure cloud adoption for your LAMP workloads

Keep your teams focused on what they do best with SNP's intimate industry knowledge for optimizing your migration journey.



#### Simplify application development

Deployment slots move you swiftly from dev/test to production. Plus, reduce cost and accelerate time-to-market.



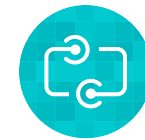
#### Improve site speeds

With SNP's skilled analysis of workloads, you can determine the best migration path for high availability, enhanced performance, and turnkey scalability.



#### Have flexibility

Apart from PHP, choose from languages like .NET Core, Java, Node.js, Ruby, and more so you can stay nimble in the face of shifting organizational priorities or market changes.



#### Bridge the gap

With our combined solution, you will be able to achieve "ideal states" of scalability, operational efficiency, governance, and more.

Overall, you need a partner that understands the distinct best practices for modernizing open-source platforms like LAMP and one who can help analyze workloads to determine the most optimized migration path forward.

As a Microsoft Gold Partner with an application modernization practice and specialized Azure PaaS knowledge base, SNP is able to guide you through the process easily and securely—and is uniquely qualified to onboard customers with exacting LAMP workload requirements.



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# PUTTING IT ALL TOGETHER

**SUCCESSFUL AZURE CLOUD  
SOLUTIONS REQUIRE NATIVE  
KNOWLEDGE**

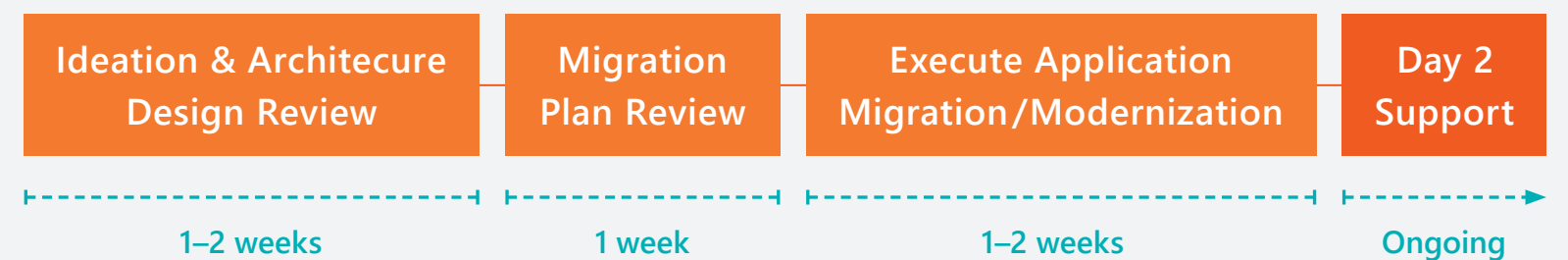


As you begin (or continue) on your cloud journey, a clear pathway is key. SNP has developed an innovative approach to cloud migration on Azure PaaS that does just that.

SNP's Azure adoption methodology provides a comprehensive approach for the entirety of your cloud migration—from pre-migration to post-migration and optimization. Learn how to streamline your adoption journey for open-source web applications developed on the LAMP stack, and benefit from SNP's content management system (CMS) domain experience to deploy and optimize popular platforms such as WordPress, Drupal, and Joomla.

SNP also fully supports a range of LAMP scenarios from traditional N-tier to modern, cloud-native microservice architectures. You can deploy code updates and have monitoring and alerting tools in place to safely conduct and ensure continuous delivery.

## SNP's Solution Architecture



## Accelerating your cloud adoption

SNP's Azure Enablement program follows three distinct, tailored tracks to help expedite your cloud adoption:

### 1) APPLICATION ASSESSMENT

In the initial assessment phase, we'll evaluate your app environment and recommend the best-fit Azure cloud solution for your needs.

### 2) AZURE FRAMEWORK

Next, we'll determine how you can fully leverage the power of Azure—the most secure and scalable platform for LAMP—and establish a custom blueprint relative to governance, security, identity, and networking.

### 3) DEVOPS MATURITY MODEL

Finally, our DevOps Maturity Model will assess your current practices to recommend new best practices for deployment of the applications on Azure, including built-in DevOps that facilitate continuous deployment of application changes.

Post migration, SNP provides support and training to your teams that will equip them to efficiently and successfully manage the new infrastructure. You're able to capitalize on SNP's deep knowledge base to educate internal teams to manage your Azure cloud resources with ease.

## The benefits of SNP's custom-fit cloud solution

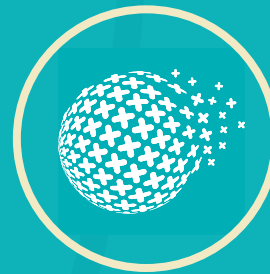
Gain a more comprehensive pathway to cloud adoption and learn the bespoke best practices for your journey with SNP Technologies' customized process:

<b>FEATURE</b>	<b>Custom analysis</b>
<b>BENEFIT</b>	Look at current workloads to determine best migration path for high availability, enhanced performance, scalability, and security.
<b>FEATURE</b>	<b>Migration roadmap</b>
<b>BENEFIT</b>	Ensure full visibility, customized for your business needs.
<b>FEATURE</b>	<b>Collaborative implementation</b>
<b>BENEFIT</b>	SNP engineers work collaboratively with your AppDev and Ops engineers to equip your teams to successfully and confidently adopt Azure, on your terms.
<b>FEATURE</b>	<b>24/7 managed support</b>
<b>BENEFIT</b>	Modern monitoring of both the infrastructure and applications performance creates transparency through your system's entire inventory by detecting and addressing issues before they create problems.

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## CASE STUDY

# HIGH AVAILABILITY SUCCESS WITH SNP FOR MICROSOFT AZURE



## Situation

A regional health district in the State of Connecticut relies on its website as a primary resource for constituent communication. With the rise of the opioid epidemic and other urgent matters impacting the wellbeing of the community, the health district required a website platform that would allow for content updates at a moment's notice and a hosting platform that ensured high uptime.

## Challenge

In order to allow just-in-time content updates, the health district built its website with the Drupal CMS—an open-source content management system on the LAMP stack. The district also originally selected a hosting platform that was optimized for Drupal.

While the original hosting option did offer some performance benefits, optimization was offset by all-too-frequent maintenance and network outages. And at the time the site launched in 2014, website hosting options providing a 99.9% or better uptime guarantee (SLA) were cost-prohibitive for the health district.

## Solution

In 2018, SNP helped the health district migrate its website to Microsoft Azure PaaS to benefit from the offering's affordable, high-availability guarantees.

For its Drupal website, SNP recommended the adoption of Azure App Service, with a 99.95% uptime SLA, and for the database SNP recommended Azure Database for MySQL, with a 99.99% uptime SLA.



## Results

### High availability

With redundancy built into Azure PaaS resource, website reliability has been a nonissue. Thus, the service interruptions and frequent communications from the former hosting service regarding outages and maintenance alerts have been eliminated.

### Intelligent performance

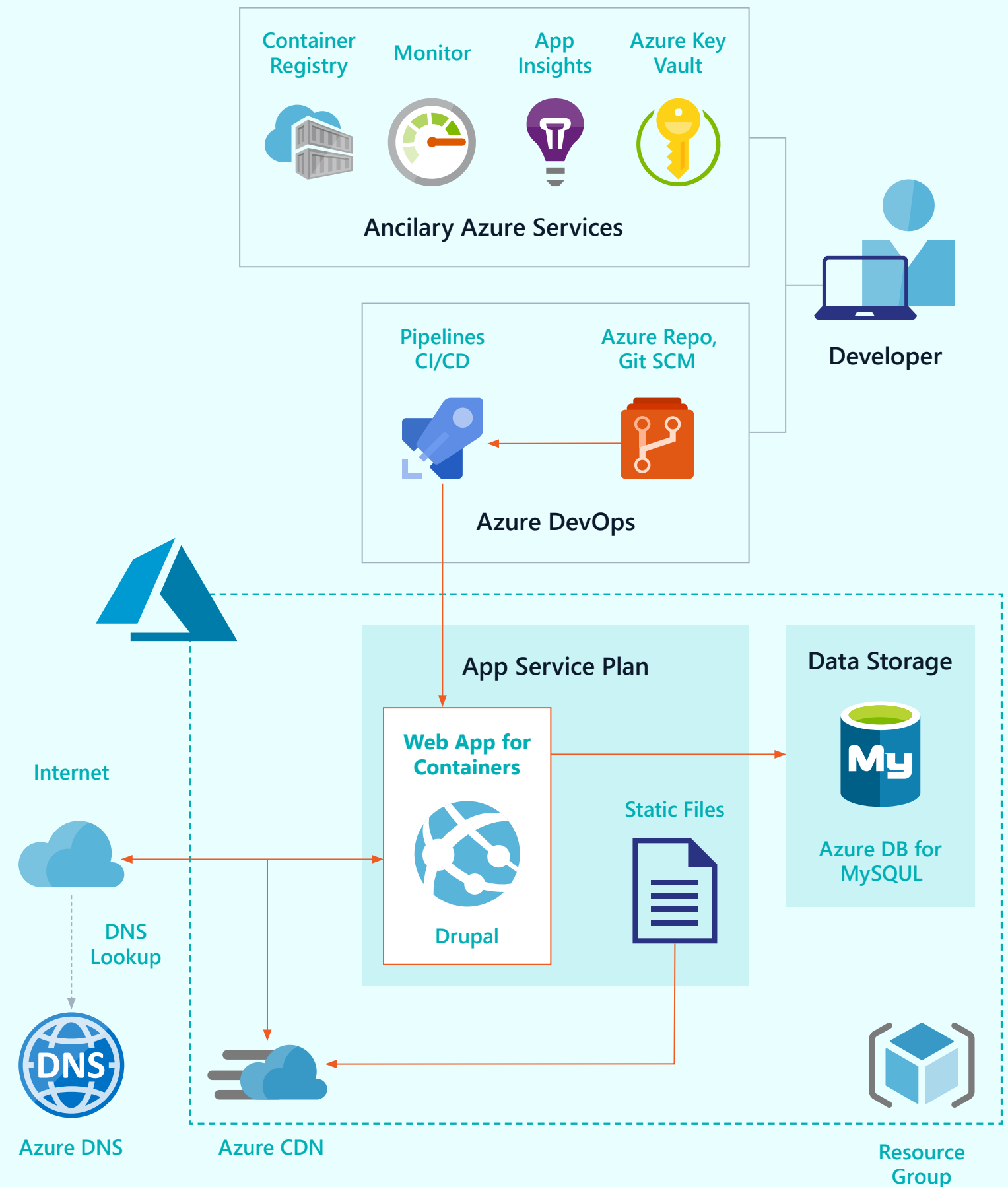
Azure Monitor has provided deeper insights into system performance than were previously available, informing decisions to tune performance and realize cost savings.

### Enhanced DevOps

The Azure Web App for Containers option for App Service allowed SNP to package the Drupal PHP web application along with Linux and Apache in a single Docker container.

Unlike the former hosting service, this gave SNP full configuration control over the Linux, Apache, and PHP (the LAP in LAMP). With Azure DevOps Service, SNP was able to easily build out a continuous integration and continuous delivery (CI/CD) pipeline that's fully integrated with stage and production instances of the application in Azure.

## Drupal on Azure PaaS



# YOUR PATHWAY TO CLOUD ADOPTION AND PaaS SUCCESS STARTS HERE.

As one of the few system integrators with expertise in complex migrations and LAMP stack needs, SNP helps you quickly deploy and show success. Engage with SNP cloud experts and our Build & Migrate LAMP Apps with Azure program. Receive a customized cloud-adoption roadmap for your LAMP workloads—from project requirements and scope to project timeline and budget.

See how you can migrate in the shortest time with our two-week Azure cloud pilot with side-by-side implementation support to ensure a successful, repeatable implementation. Mitigate project risk with turnkey implementation from our certified engineers—and ensure a seamless migration transition. Plus, reduce cost and accelerate time-to-market and learn how to leverage the best that Microsoft Azure PaaS has to offer.

**With SNP Technologies, you gain access and insight to one of the industry's deepest knowledge bases, allowing you to take charge of your Azure adoption—and to create a cloud-based future poised for continued success.**

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