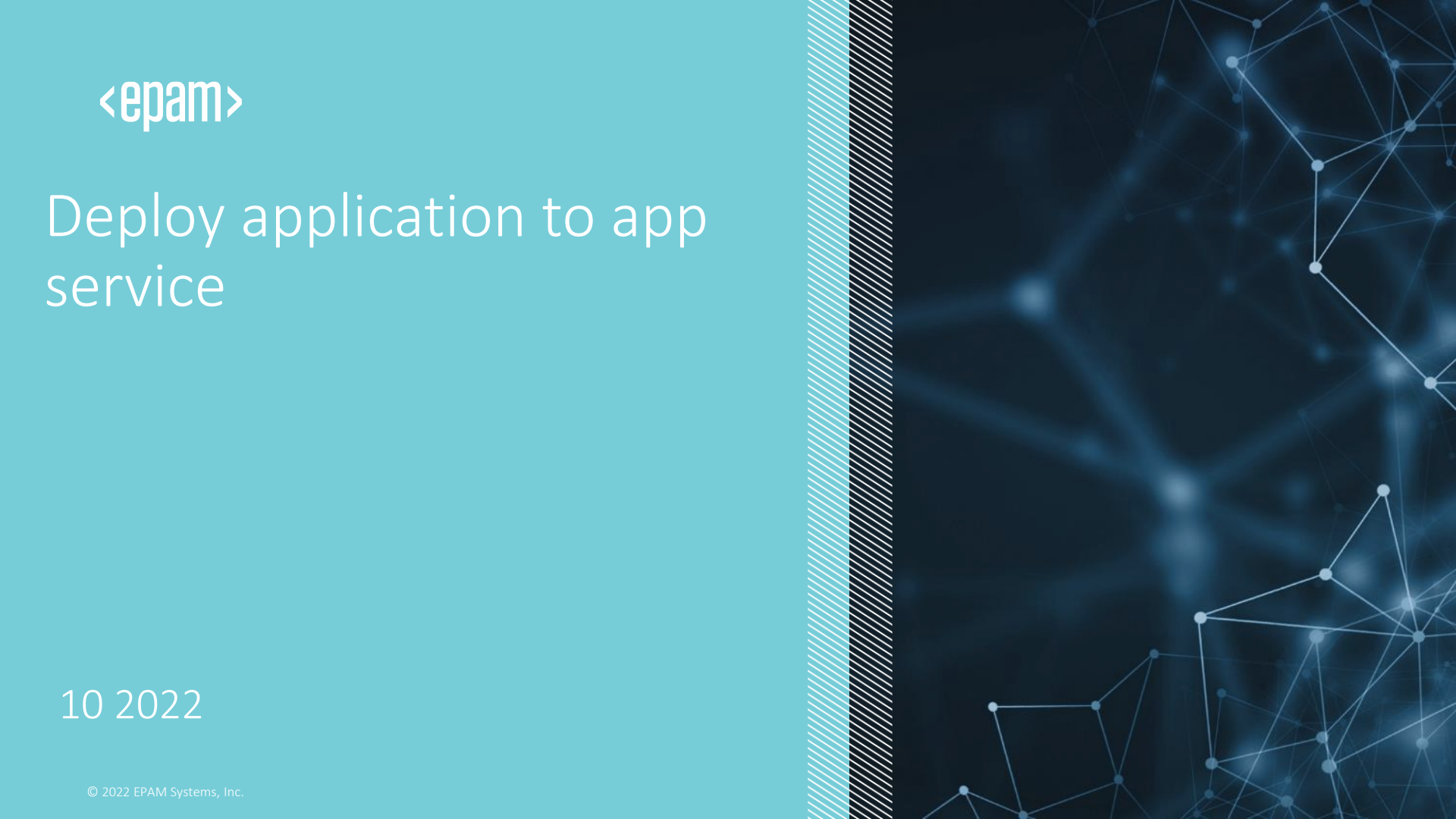
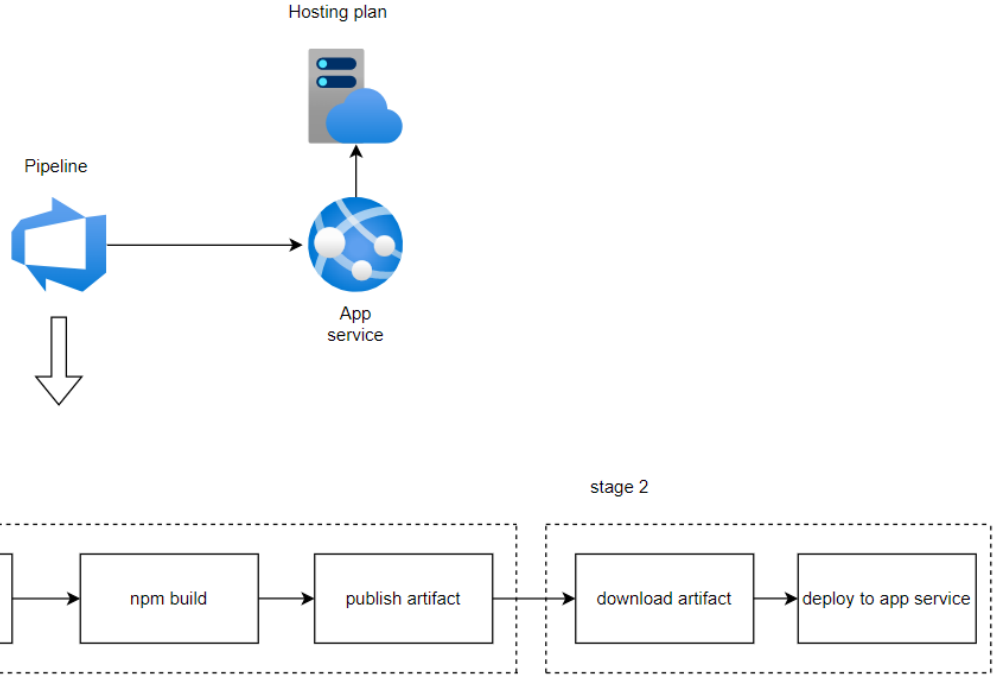


Deploy application to app service

10 2022

Architecture overview



Azure resources

- Azure app service
- Azure pipeline
- Azure repos
- JS application

Azure App service overview

WHAT IS APP SERVICE?

- App service is an HTTP-based service for hosting web applications, REST APIs, and mobile back ends. You can develop in your favorite language, be it .NET, .NET Core, Java, Ruby, Node.js, PHP, or Python. Applications run and scale with ease on both Windows and Linux-based environments.
- App Service not only adds the power of Microsoft Azure to your application, such as security, load balancing, autoscaling, and automated management. You can also take advantage of its DevOps capabilities, such as continuous deployment from Azure DevOps, GitHub, Docker Hub, and other sources, package management, staging environments, custom domain, and TLS/SSL certificates.

WHY TO USE IT?

- Multiple languages and frameworks
- Managed production environment
- Containerization and Docker
- DevOps optimization
- Global scale with high availability -
- Connections to SaaS platforms and on-premises data -
- Security and compliance -
- Visual Studio and Visual Studio Code integration -
- Serverless code

Azure pipeline

- Azure Pipelines automatically builds and tests code projects to make them available to others. It works with just about any language or project type. Azure Pipelines combines continuous integration (CI) and continuous delivery (CD) to test and build your code and ship it to any target.

- Continuous Integration (CI) is the practice used by development teams of automating merging and testing code. Implementing CI helps to catch bugs early in the development cycle, which makes them less expensive to fix. Automated tests execute as part of the CI process to ensure quality. Artifacts are produced from CI systems and fed to release processes to drive frequent deployments.

- Continuous Delivery (CD) is a process by which code is built, tested, and deployed to one or more test and production environments. Deploying and testing in multiple environments increases quality. CI systems produce deployable artifacts, including infrastructure and apps. Automated release processes consume these artifacts to release new versions and fixes to existing systems. Monitoring and alerting systems run continually to drive visibility into the entire CD process.

Azure repos

- Azure Repos is a set of version control tools that you can use to manage your code. Whether your software project is large or small, using version control as soon as possible is a good idea.

- Version control systems are software that help you track changes you make in your code over time. As you edit your code, you tell the version control system to take a snapshot of your files. The version control system saves that snapshot permanently so you can recall it later if you need it. Use version control to save your work and coordinate code changes across your team.

- Even if you're just a single developer, version control helps you stay organized as you fix bugs and develop new features. Version control keeps a history of your development so that you can review and even roll back to any version of your code with ease.

Steps to implement

- App service creation in Azure
- Service connection creation in the Azure DevOps to Azure
- Pipeline creation with the following steps: install dependency, build app, deploy app to cloud
- Different settings to get pipeline working

References

- Yaml schemas - https://learn.microsoft.com/en-us/azure/devops/pipelines/yaml-schema/?view=azure-pipelines
- Get started with Azure Repos - https://learn.microsoft.com/en-us/azure/devops/repos/git/gitquickstart?view=azure-devops&tabs=visual-studio-2022
- How to add approval to stages in azure pipelines - https://learn.microsoft.com/en-us/azure/devops/pipelines/process/approvals?view=azure-devops&tabs=check-pass
- Pipeline basic concepts - https://learn.microsoft.com/en-us/azure/devops/pipelines/get-started/key-pipelines-concepts?view=azure-devops
- Branching policy setup - https://learn.microsoft.com/en-us/azure/devops/repos/git/branch-policies?view=azure-devops&tabs=browser

Questions