

ADD0

ALL DAY DEVOPS

NOVEMBER 12, 2020

CI and CD

For documentation



\$19.6B

global IT services leader

~6,000

customers

138,000

employees worldwide

70+

countries

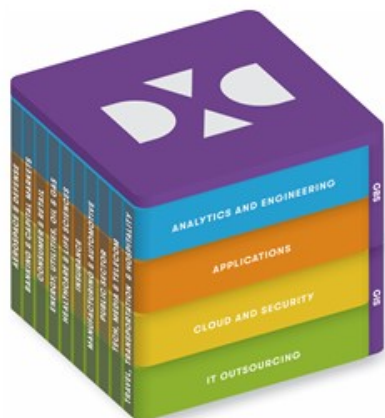
200+

partners

Executing what matters

Realize new opportunities with an empowered workforce, modern IT and data-driven operations that help you achieve better performance, competitiveness and customer experience. Rely on DXC Technology to unlock value across your enterprise.

Transform your business with the Enterprise Technology Stack



GBS: Global Business Services
GIS: Global Infrastructure Services

Analytics and Engineering

Discover data-driven insights and deploy complex software engineering at scale to accelerate your transformation.

Applications

Accelerate business agility and operational efficiencies to drive out costs, ensure business resiliency, improve customer and employee experience, and discover new revenue streams.

Cloud and Security

Modernize legacy IT by simplifying and migrating applications and workloads to secure multicloud platforms.

IT Outsourcing

Enable resilient data center and on-premises IT and new ways of working with reduced costs and risk.

Leadership recognition

- No. 3 in CRN 2020 Solution Provider 500
- Named a Leader by Everest Group in its report: Application and Digital Services in Capital Markets PEAK Matrix™ Assessment with Service Provider Landscape 2020
- Named a Leader in Next-Gen Application Development & Maintenance Services for Next-Gen Admin, Agile Development and Continuous Testing by ISG in 2019-2020
- Named a Leader by Everest Group in its report: Healthcare IT Security Services PEAK Matrix™ Assessment with Service Provider Landscape 2020

Success stories

- ▶ One automaker's autonomous driving development program collects, stores and manages a daily collection of **more than 1,500TB of raw data** from vehicle sensors — and makes the data available for the requisite AI training — in a matter of seconds rather than days or even weeks, saving testing time and cost.
- ▶ **Royal Papworth Hospital NHS Foundation Trust** implemented an electronic patient records application to improve patient care and set the foundation for transformation.
- ▶ With an IT foundation and support for operations across cloud infrastructure, applications and security, **Campbell Soup Company** is better able to focus on value-added activities.
- ▶ An intelligent digital workplace lets **Saab Group** enable employees, suppliers and partners to collaborate globally and maintain high levels of security — while saving \$4 million a year.





The quest for great documentation





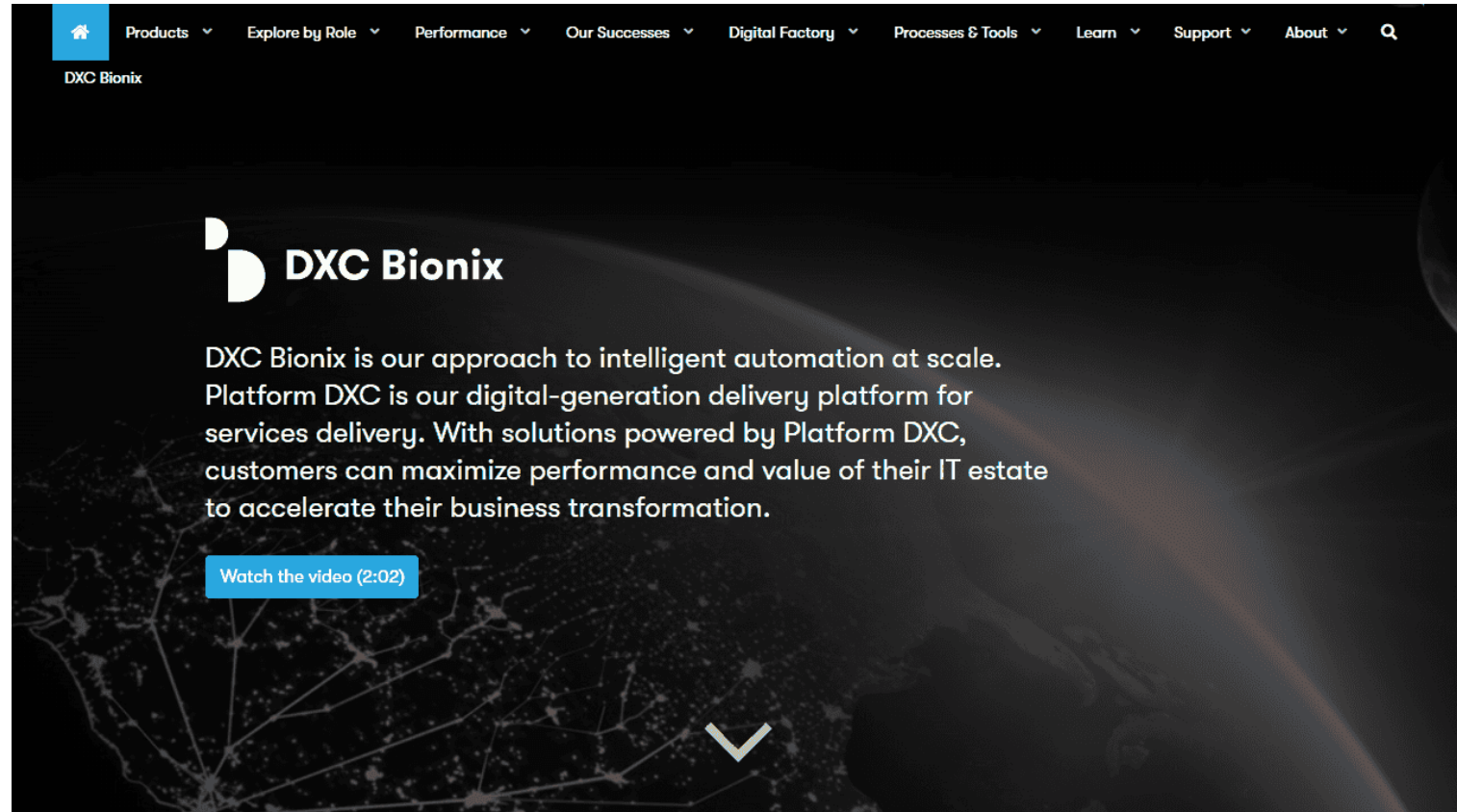
We do a lot of documentation

(as code)

- 1 service catalog: the entry point
- 174 services: technical documentation
- 630 contributors

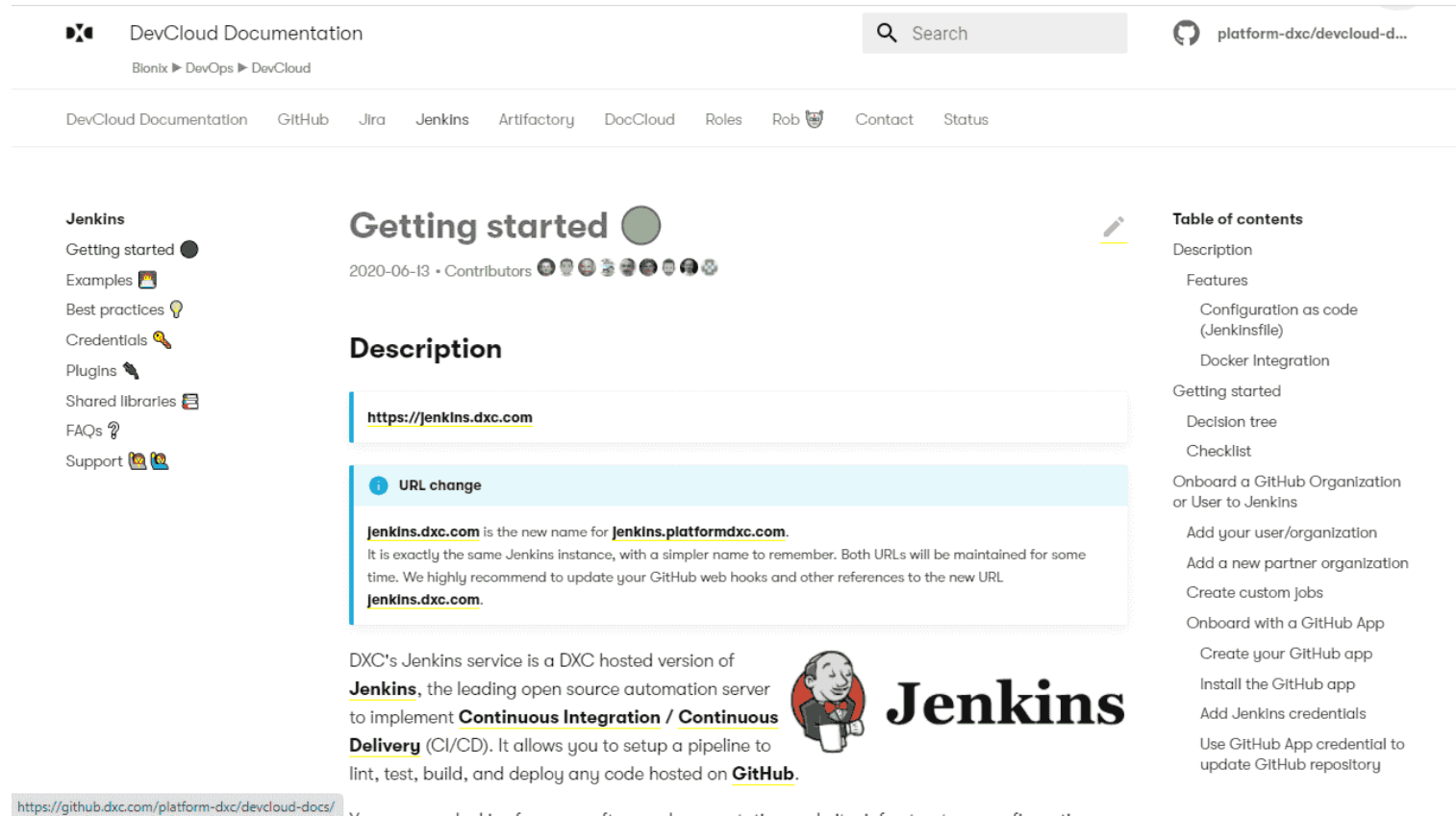
Service catalog

With Hugo



Service documentation

With MkDocs +
material theme



The screenshot shows the DevCloud Documentation website for Jenkins. The page has a yellow header with the ADDO logo and the text "TRACK: CI/CD CONTINUOUS EVERYTHING". Below the header is a navigation bar with a search box and a user profile. The main content area is divided into three columns. The left column contains a sidebar menu for Jenkins with items like "Getting started", "Examples", "Best practices", "Credentials", "Plugins", "Shared libraries", "FAQs", and "Support". The middle column features the "Getting started" article, which includes a "Description" section with a URL change notice and a paragraph explaining that the new URL is jenkins.dxc.com and that it is the same as the old jenkins.platformdxc.com. The right column contains a "Table of contents" with links to various sections like "Description", "Features", "Getting started", "Decision tree", "Checklist", and "Onboard a GitHub Organization or User to Jenkins". The Jenkins logo is also visible in the bottom right of the main content area.

Jenkins

Getting started

Examples

Best practices

Credentials

Plugins

Shared libraries

FAQs

Support

Table of content from .md files in folder

Examples

2020-09-15 • Contributors

Contributors

Look for examples

Use [DXC GitHub](#) to find examples of `Jenkinsfile`. Some search queries:

- linting / checking syntax: `filename=jenkinsfile lint`
- compile using maven: `filename=jenkinsfile mvn compile`
- use a `Dockerfile`: `filename=jenkinsfile Dockerfile`
- push packages or binaries to Artifactory: `filename=jenkinsfile artifactory push`
- AWS deploy: `filename=jenkinsfile deploy withAwsCredentials`
- sending pipeline status to an MS Teams Channel: `filename=jenkinsfile office365ConnectorSend`

Agent from docker container

This example uses the public Docker Hub registry to download an Alpine Linux image (extremely small) with Node.js Version v12 pre-installed.

```
pipeline {
  agent {
    docker { image 'node:12-alpine' }
  }
  stages {
    stage('Test') {
      steps {
        sh 'node --version'
      }
    }
  }
}
```

Table of contents

- Look for examples
- Agent from docker container
- Agent from docker container on Windows system
- Agent from Dockerfile
- Build and test your own Docker Images from a Dockerfile
- Using DXC Artifactory as a Docker Registry
- Artifactory Integration
- Connect to the Artifactory server
- Download files
- Upload files and publish the build
- Upload a docker image and publish the build
- Remotely trigger Jenkins job
- Notifications
 - Microsoft Teams Notifications
 - E-mail

Table of Content from titles



DXC, Microsoft, GitHub, GitLab, AWS all use "Documentation as code"

Because:

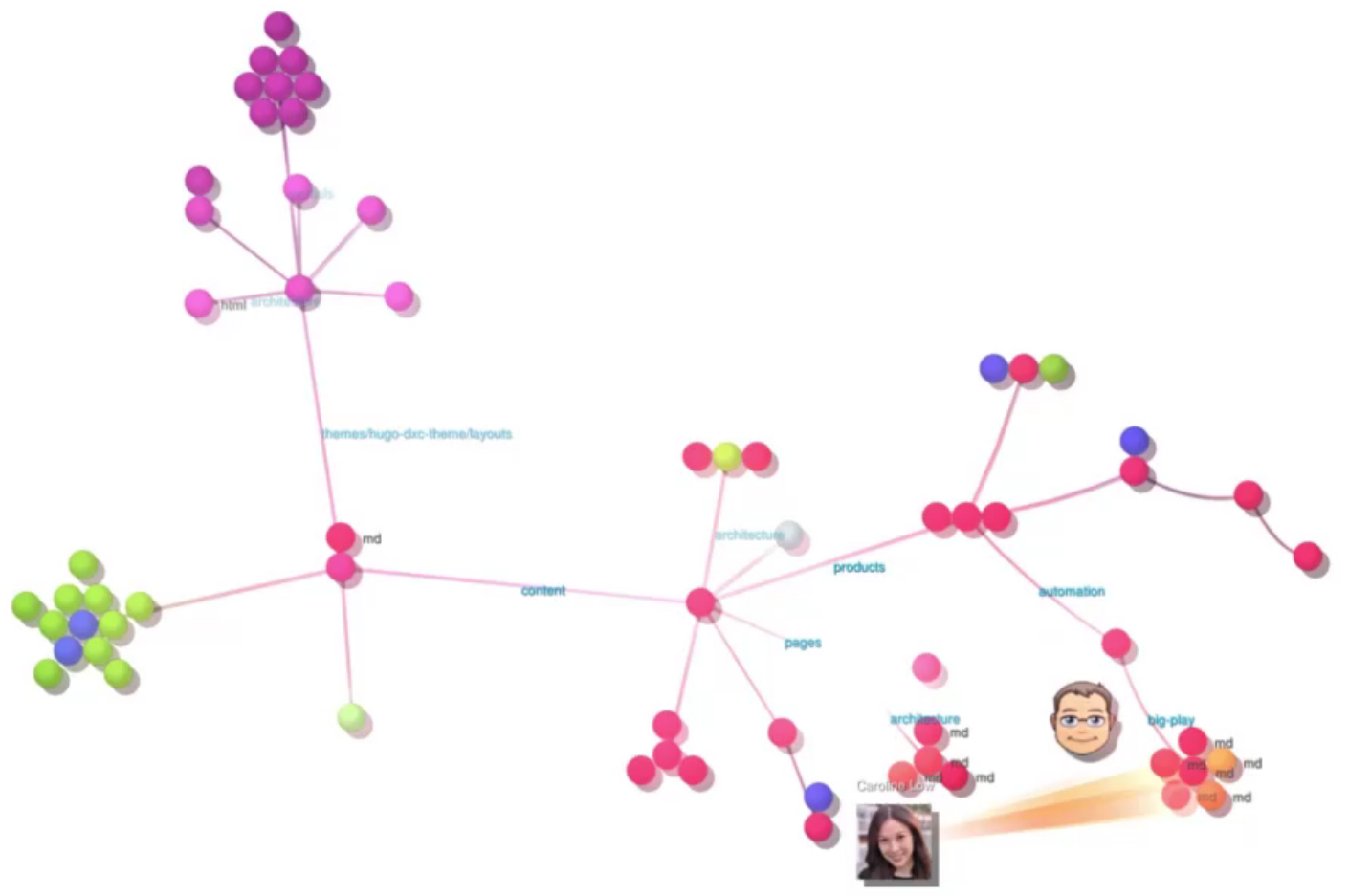
- It's fast, secure and cheap (static sites)
- It's easier to contribute to / keep up-to-date
- It's battle tested
- It's engineered
- We can monitor it (think analytics)



Our challenges

- Common look & feel
- Common voice
- DRY: Don't Repeat Yourself
- Diagrams: what changes?
- Broken links
- Publishing

md	34
html	15
svg	12
png	5
css	1
yaml	1
yml	1



CI and CD for documentation

CI

- Spell checking
- Check for approved acronyms / custom dictionary
- One voice
- Periodically check for 404 links

CD

- Automate publishing



Rename workflow steps

vale



2a125e8

✓ build-web-site
on: push

● Markdown Lint

● Links

● Spelling

● Style and Voice

ADD0

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In practice



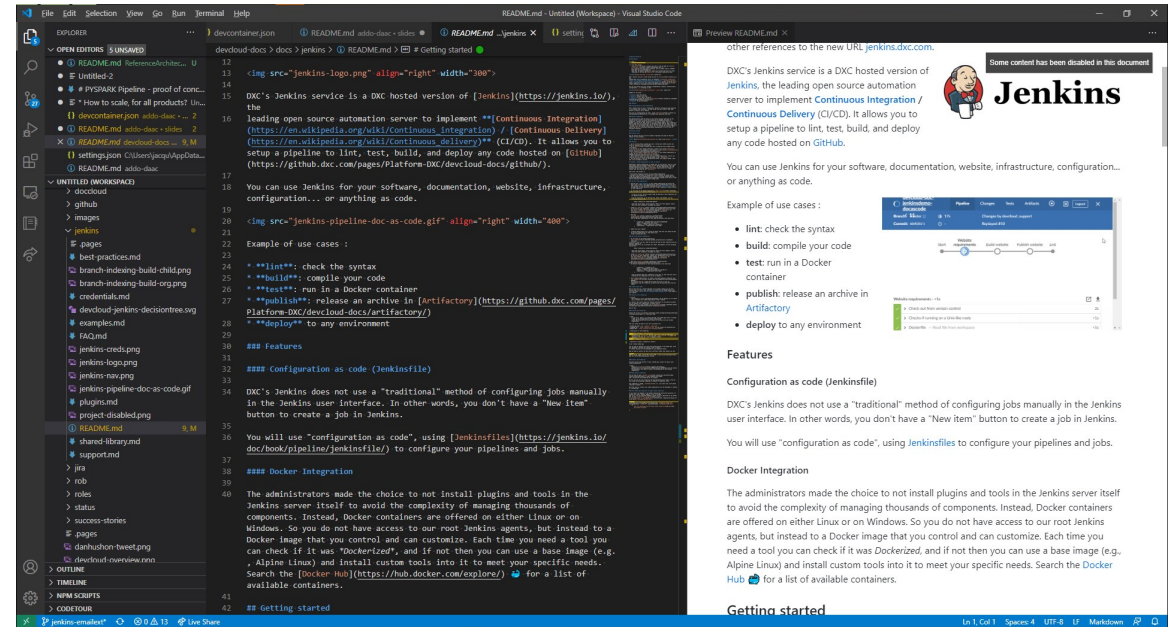


Authoring

Leverage **Markdown**

Use your favorite code editor:

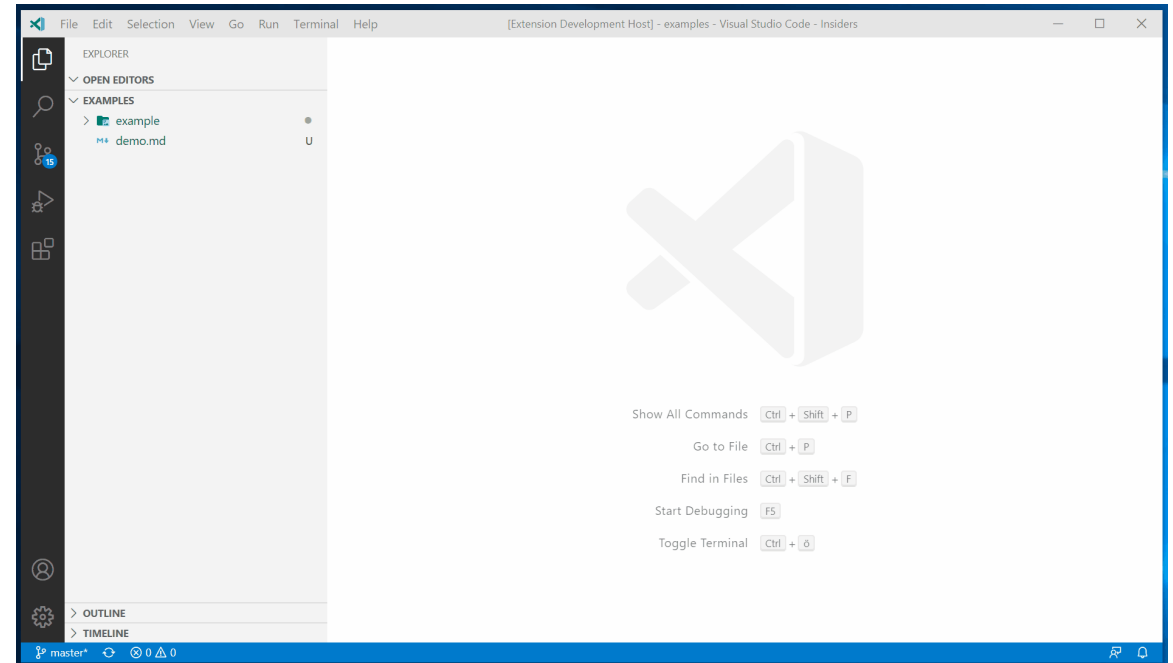
- IntelliJ
- Eclipse
- VSCode 



Authoring (1)

Add editor extensions

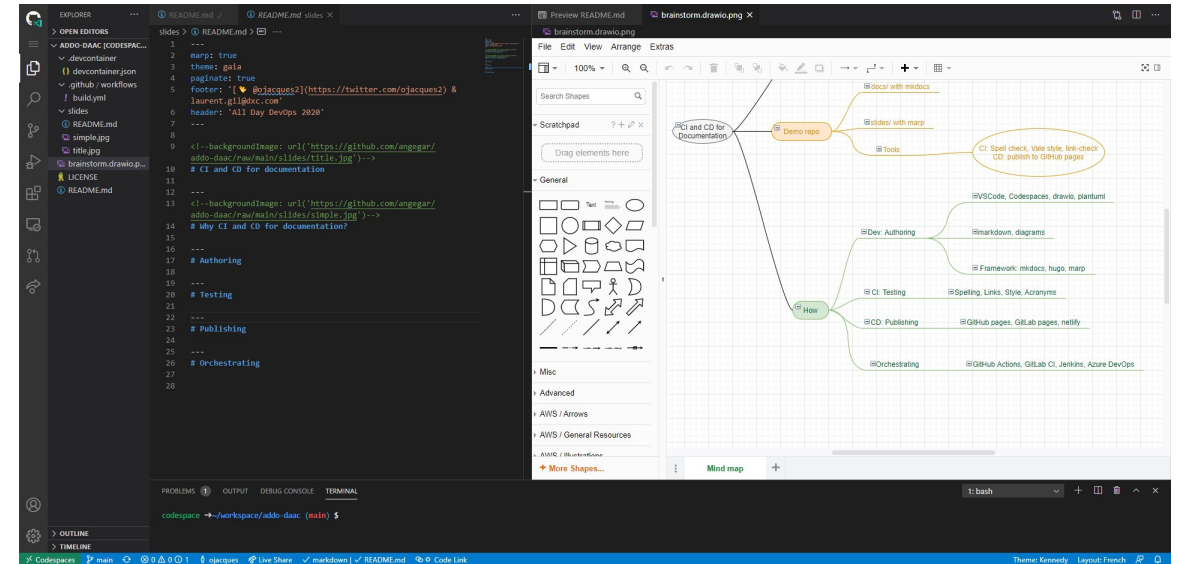
- [markdownlint](#) (for syntax)
- [Draw.io](#) (for drawings)
- [PlantUML](#) (for diagrams as code)
- [Marp](#) (for slides)



Authoring (2)

GitHub Codespaces or GitPod

- Edit directly from the browser
- Make it easy for tech writers:
 - no `git clone/branch/push`
 - `git reset origin/main --hard`
- Shared extensions across development environments





Authoring (3)

Pick a tool

- [Jekyll](#) 🤖
- [Hugo](#): powerful, blazing fast ➡
- [Marp](#): slides as code in markdown
- [MkDocs](#) + [material theme](#) ➡





Orchestrating

- GitHub Actions
- GitLab CI
- Jenkins (Jenkinsfile) ➔
- AWS code pipeline
- Azure DevOps

CI: Linter

CLI linter

- [github super-linter](#)
- [markdownlint](#)

Editor linter

- [VS Code markdownlint extension](#)

```

-----
Linting [MARKDOWN] files...
-----
-----
File:[/github/workspace/README.md]
- File:[README.md] was linted with [markdownlint] successfully
-----
File:[/github/workspace/slides/README.md]
- File:[README.md] was linted with [markdownlint] successfully
-----
Generated reports:
-----
Reports generated in folder /github/workspace/super-linter.report
Report output folder (/github/workspace/super-linter.report) does NOT exist.
-----
The script has completed
-----
All file(s) linted successfully with no errors detected

```


CI: Spell Checker

CLI spell checker

- [spellcheck-github-actions](#)
- [spellchecker-cli](#)

Editor spell checker

- VS Code [code-spell-checker](#) extension

```

4 Using pyspelling on repository files outlined in >.spellcheck.yml<
5 -----
6 Misspelled words:
7 <htmlcontent> slides/README.md: html>body>p
8 -----
9 dxc
10 marp
11 -----
12
13 Misspelled words:
14 <htmlcontent> slides/README.md: html>body>p
15 -----
16 mkdocs
17 -----
18
19 !!!Spelling check failed!!!
20 Files in repository contain spelling errors
  
```



CI: Link checker

404 links

[markdown-link-check](#)

```
FILE: README.md
[✓] https://twitter.com/ojacques2
[✓] mailto:laurent.gil@dxc.com
[✗] https://github.com/documentation-as-code/service-catalog-hugo.gif
[✓] https://gohugo.io/
[✗] https://github.com/documentation-as-code/service-documentation-mkdocs.gif
[✓] https://www.mkdocs.org/
[✓] https://squidfunk.github.io/mkdocs-material/
[✓] https://github.com/documentation-as-code/ci-cd-for-documentation/raw/main/slides/doc-site.jpg
[✓] https://github.com/documentation-as-code/ci-cd-for-documentation/raw/main/slides/vscode.jpg
[✓] https://github.com/hediet/vscode-drawio/raw/master/docs/drawio-png.gif
[✓] https://marketplace.visualstudio.com/items?itemName=DavidAnson.vscode-markdownlint
[✓] https://marketplace.visualstudio.com/items?itemName=hediet.vscode-drawio
[✓] https://github.com/qjebbs/vscode-plantuml
[✓] https://marketplace.visualstudio.com/items?itemName=marp-team.marp-vscode
[✓] https://github.com/documentation-as-code/ci-cd-for-documentation/raw/main/slides/codespaces.jpg
[✓] https://jekyllrb.com/
[✓] https://marp.app/
```



CI: Testing (4)

Style / voice

Vale

```
slides/README.md
61:17 suggestion Try to avoid using 'is'. write-good.E-Prime
100:6 suggestion Try to avoid using 'is'. write-good.E-Prime
100:10 warning 'mostly' is a weasel word! write-good.Weasel
134:46 warning 'mostly' is a weasel word! write-good.Weasel
184:17 warning In general, don't use an Microsoft.Ellipses
ellipsis.

X0 errors, 3 warnings and 2 suggestions in 1 file.
```

Publishing (CD)

GIT Hosting

GitHub, GitLab, Bitbucket

Web hosting

- [GitHub pages](#) ➔
- [GitLab pages](#)
- [Netlify](#)
- An AWS S3 bucket ➔

```
#https://github.com/marketplace/actions/deploy-to-github-pages
- name: Deploy to GitHub Pages
  uses: JamesIves/github-pages-deploy-action@3.6.2
  with: # Set the secret as an input
    GITHUB_TOKEN: ${{ secrets.DEPLOYMENT_ACCESS_KEY }}
    BRANCH: gh_pages
    FOLDER: site
```

Quick starts

Making it easy with:

- [GitHub templates](#)
- [GitLab project templates](#)

Create a new repository

A repository contains all project files, including the revision history.

Repository template

Start your repository with a template repository's contents.

No template ▾

✓ No template

devcloud/devops-chart-template

Platform-DXC/afapi-plugin-template

Platform-DXC/devops-jenkins-bootstrap

Platform-DXC/docs-mkdocs-template

Platform-DXC/github-template

Platform-DXC/microcva-template

Platform-DXC/monitoring-templates-base

Platform-DXC/monitoring-templates-MIM

Skip this step if you're importing an existing repository.

Initialize this repository with a README

This will let you immediately clone the repository to your computer.

Add .gitignore: None ▾

Create repository



Thank you 🙏