
AWS
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DOP304

Sharing code at arm's length with AWS CodeArtifact

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AWS

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"We find it hard to quickly resolve issues in third-party packages because of our limited control. We didn't have time to wait for the upstream package author to fix it.

AWS CodeArtifact, as a transparent proxy to the upstream npmjs.org, enabled us to patch the package locally and upload it to our CodeArtifact repository."





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What is AWS CodeArtifact?



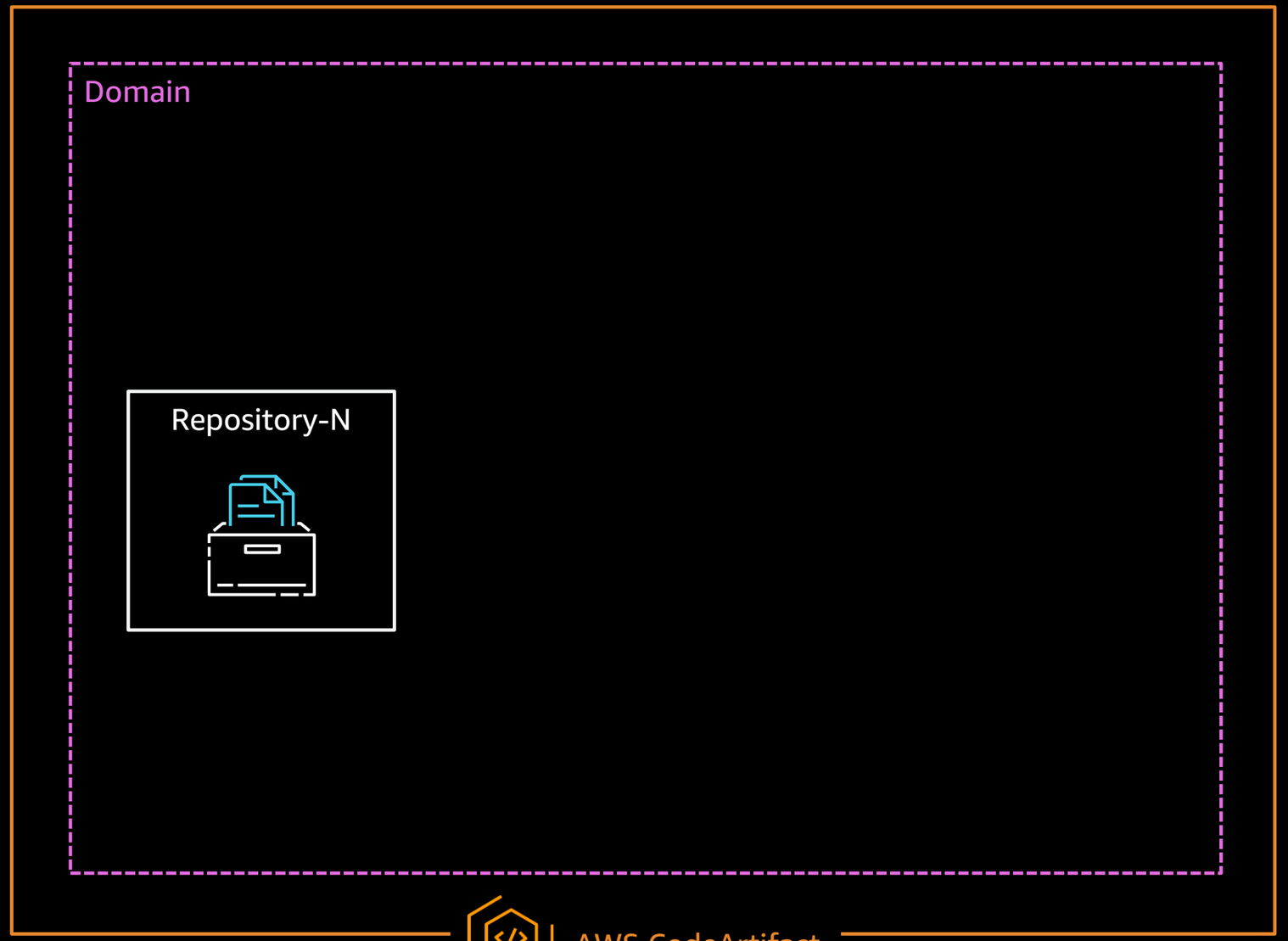
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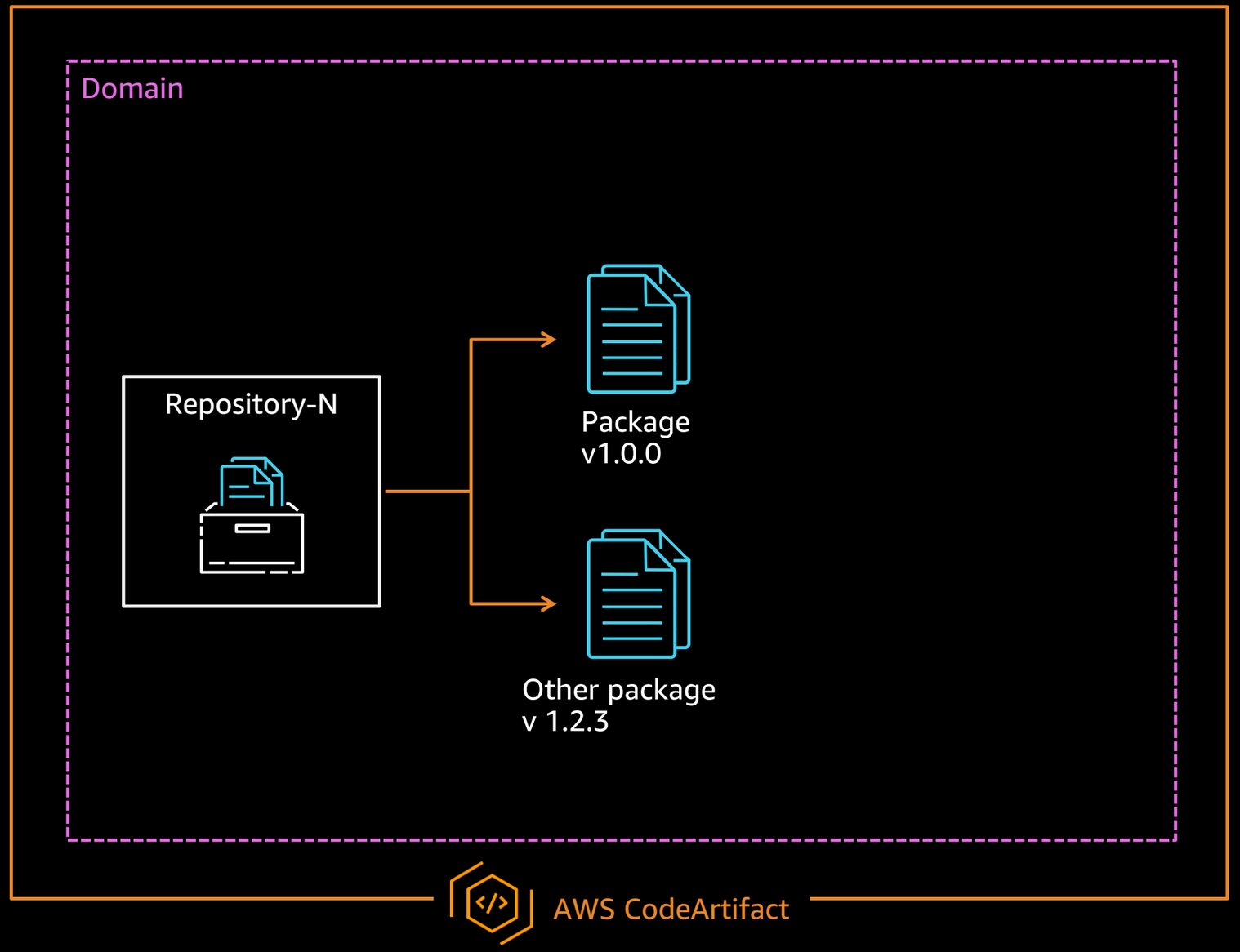
Core Concepts



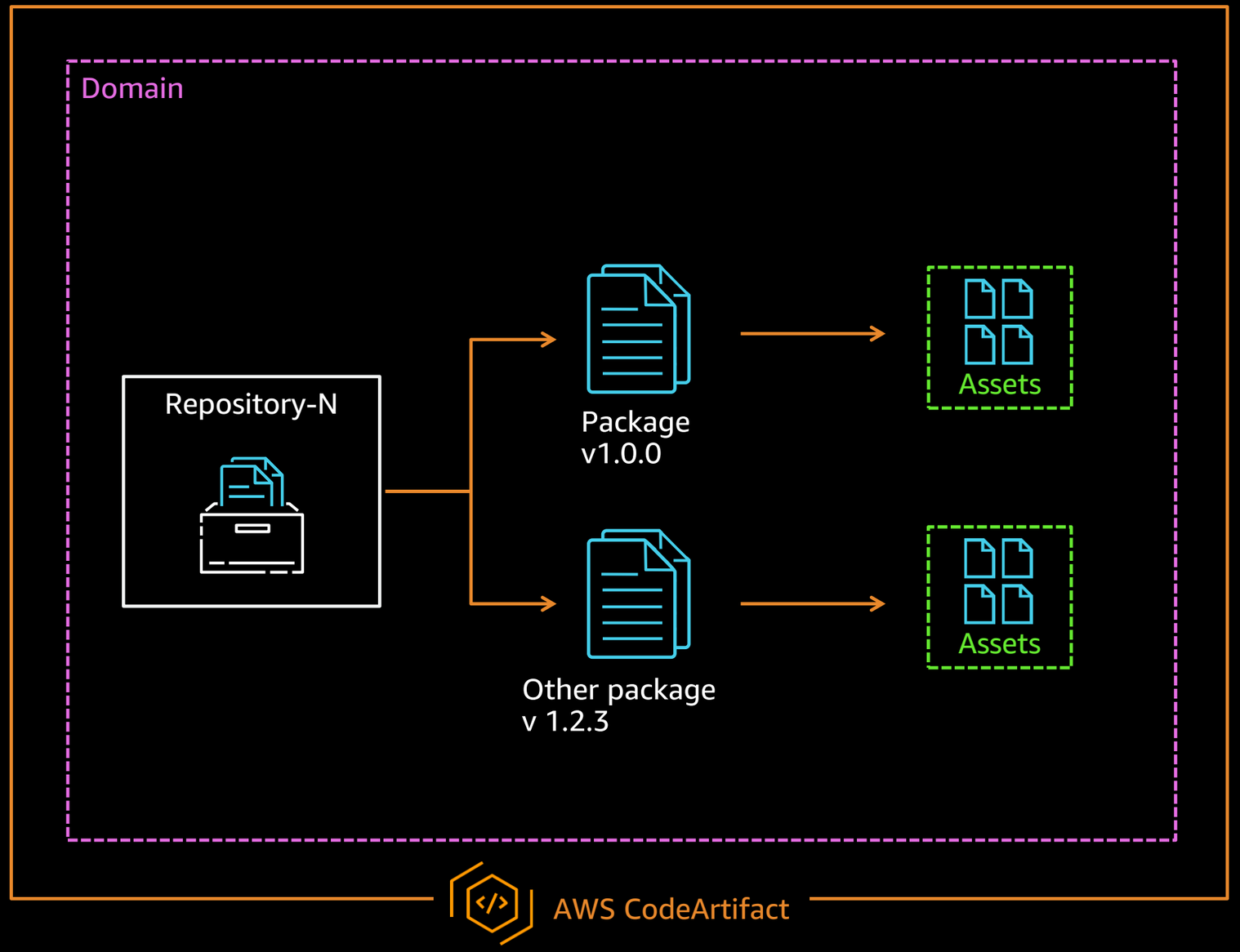
Core Concepts



Core Concepts



Core Concepts



Current support

Java

Maven Gradle

JavaScript

npm yarn

Python

pip twine

.NET

Nuget

End to end demo



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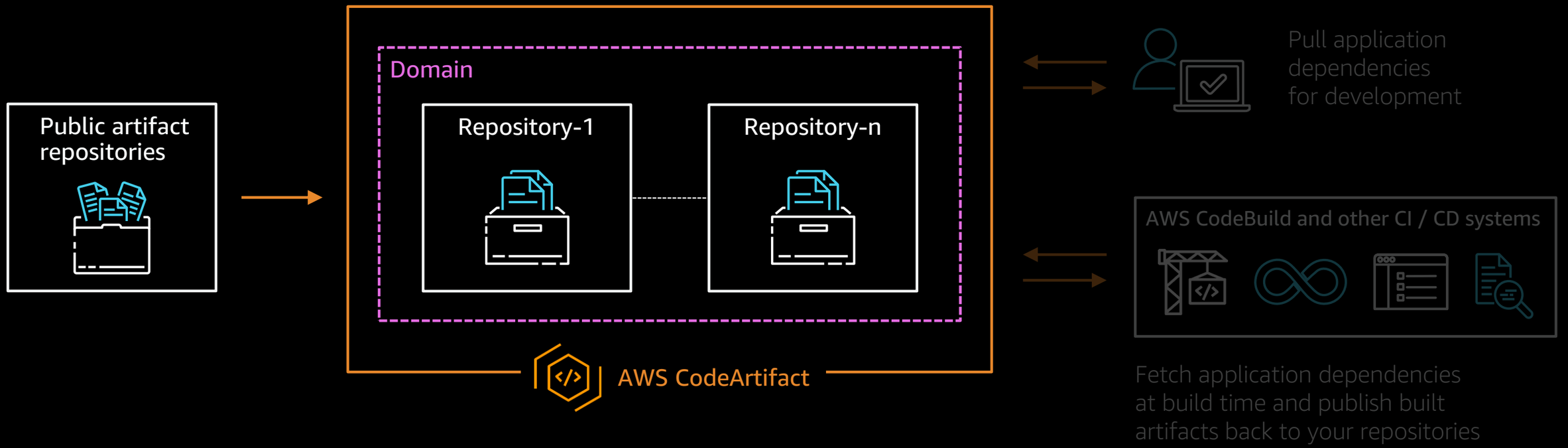
Creating, managing, and scaling your repositories



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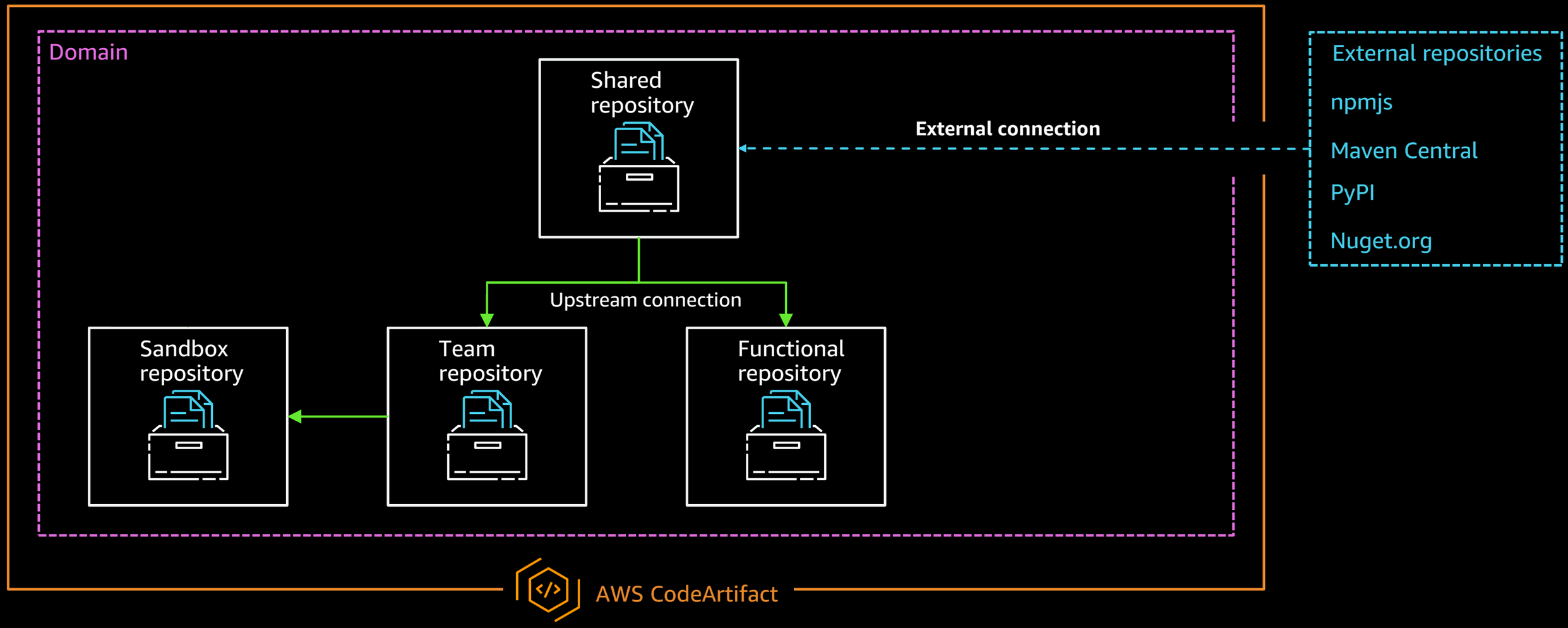
Organization



https://docs.aws.amazon.com/codeartifact/latest/ug/repos.html

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Organizing for scale: Upstream connections



https://docs.aws.amazon.com/codeartifact/latest/ug/repos-upstream.html

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Provisioning via AWS CloudFormation

```
Resources:
  # Create Domain
    ExampleDomain:
      Type: AWS::CodeArtifact::Domain
      Properties:
        DomainName : “example-domain”

  # Create External Repository
    MySharedRepository:
      Type: AWS::CodeArtifact::Repository
      Properties:
        DomainName: !GetAtt ExampleDomain.DomainName
        RepositoryName: “my-external-repository”
        ExternalConnections:
          - public:npmjs

  # Create Repository
    MyTeamRepository:
      Type: AWS::CodeArtifact::Repository
      Properties:
        DomainName: !GetAtt ExampleDomain.DomainName
        RepositoryName: “my-team-repository”
        Upstreams:
          - !GetAtt MySharedRepository.RepositoryName
```

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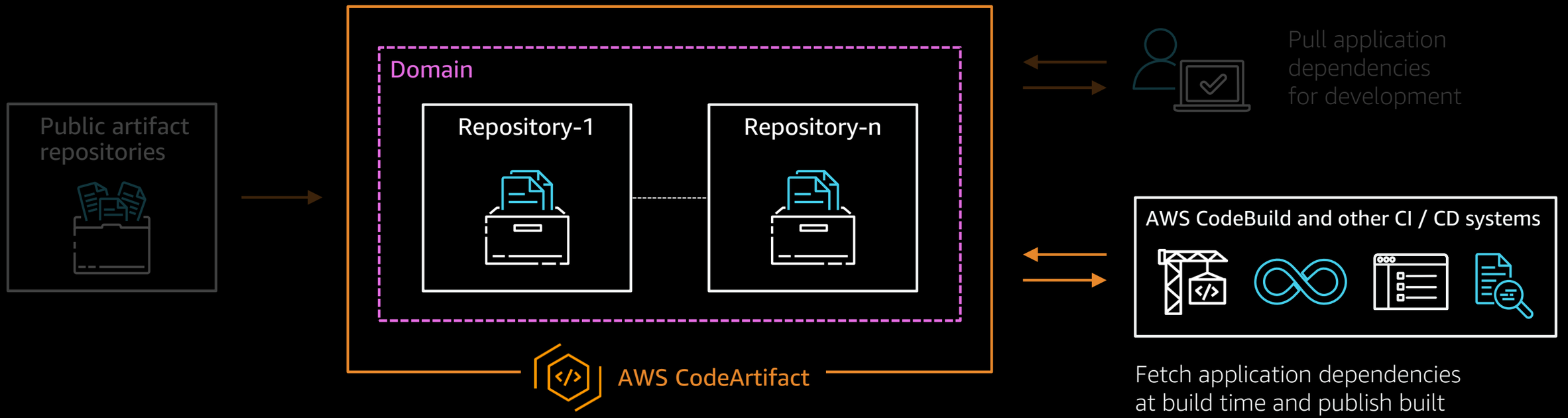
Package publishing: Build and distribute your packages effectively



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Build and publish



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Build and publish

```
# Step 1. Log in to CodeArtifact
aws codeartifact login --tool npm \
--domain "my-org" --domain-owner "account-id" \ --
repository "my-team-repo"

# Step 2. Run build command
npm run build

# Step 3. Set $VERSION from your build system
npm version $VERSION

# Step 4. Publish to CodeArtifact
npm publish
```

https://docs.aws.amazon.com/codeartifact/latest/ug/npm-auth.html

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Promote a package version

```
# Copy package version between repositories
aws codeartifact copy-package-versions \
--domain "my-org" --domain-owner "account-id" \
--source-repository "my-team-repo" \
--destination-repository "shared-repo" \
--package "my-team-package" \
--format "npm" \
--versions '["6.0.2"]'
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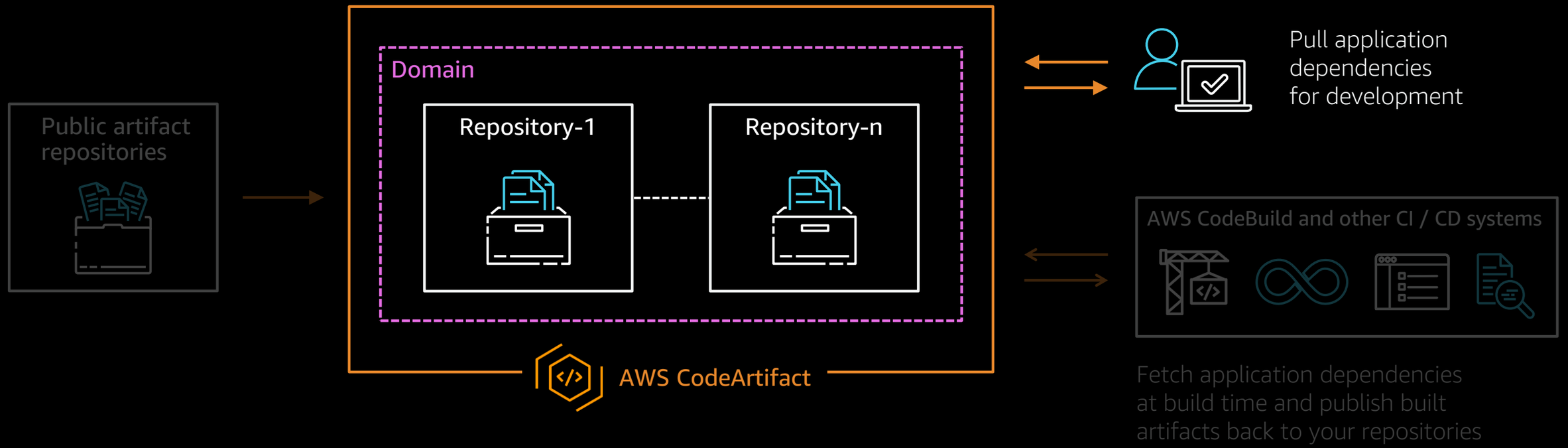
Consuming packages: Using packages across your teams



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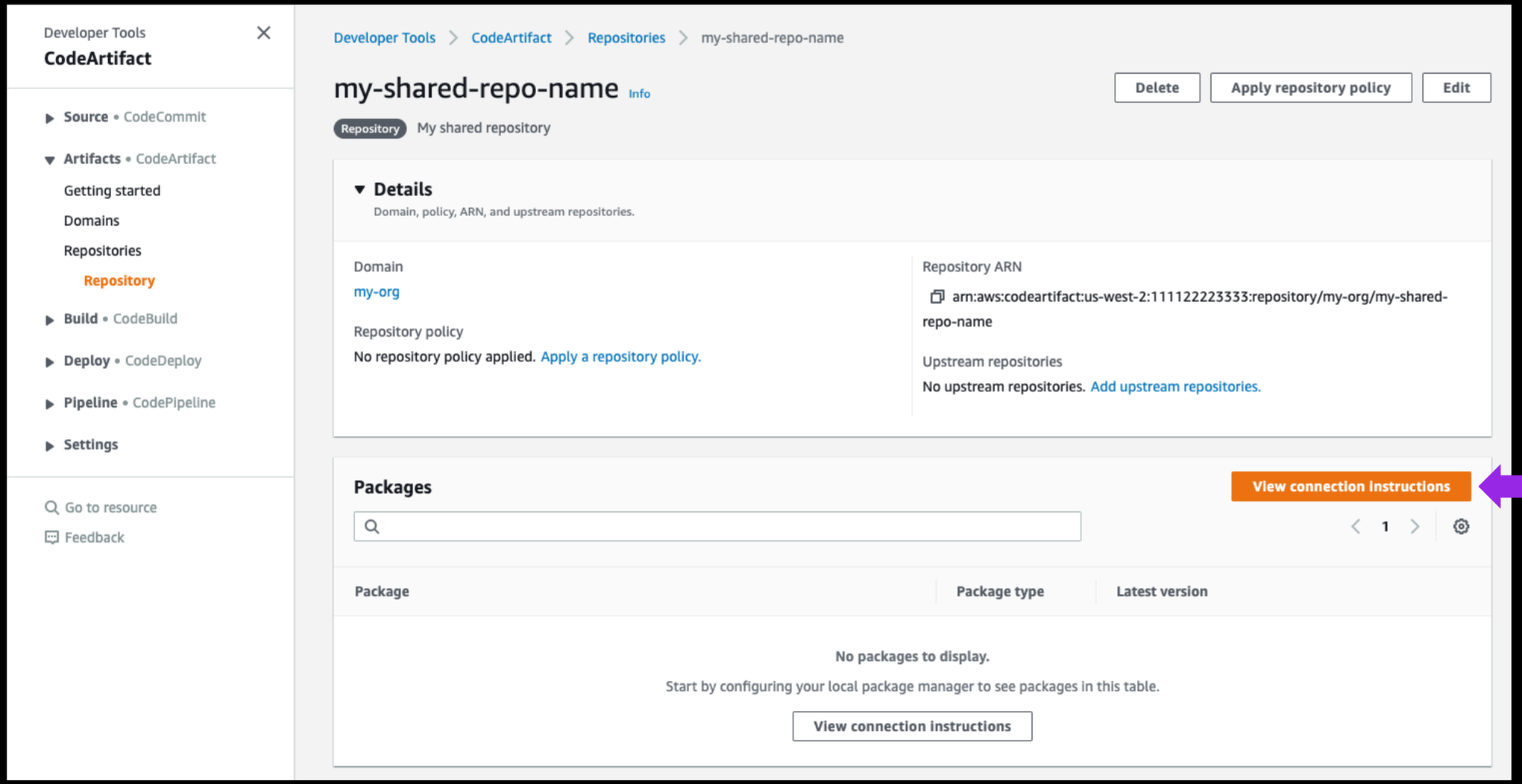
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Consuming



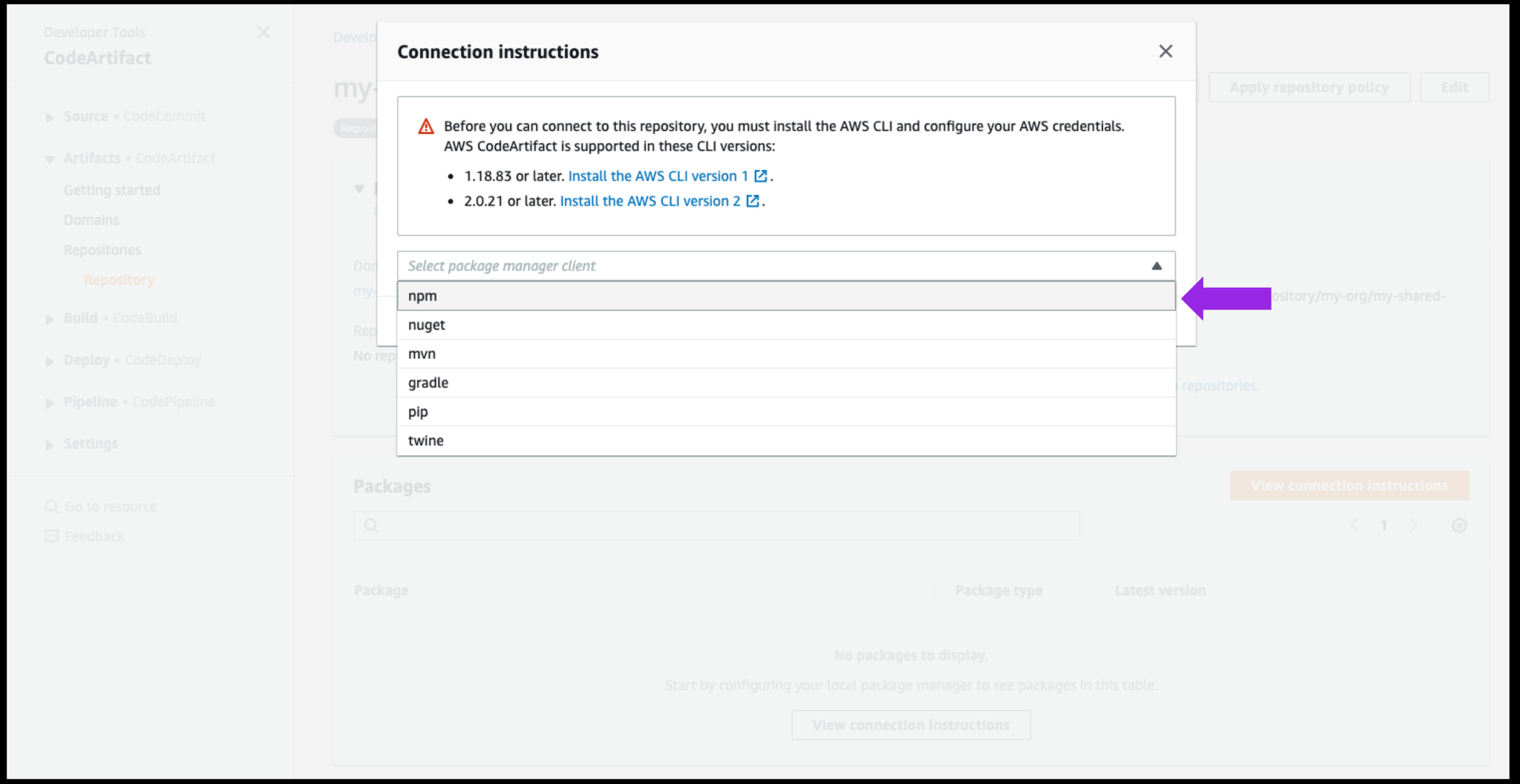
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Connecting



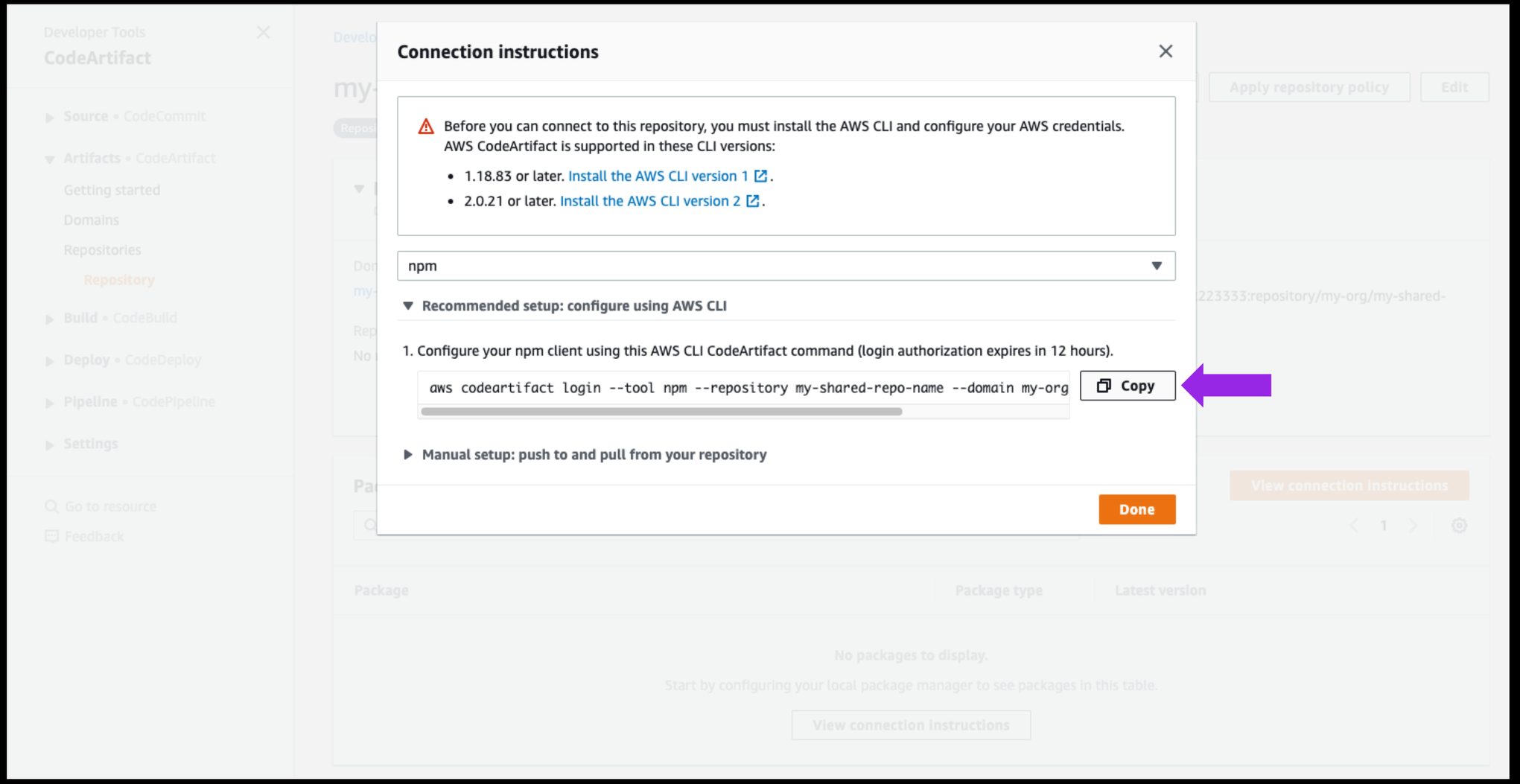
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Connecting



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Connecting



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Pulling your artifacts natively

JavaScript

npm install package-name

Python

pip install package-name

Java

mvn install

.NET

dotnet add package package-name

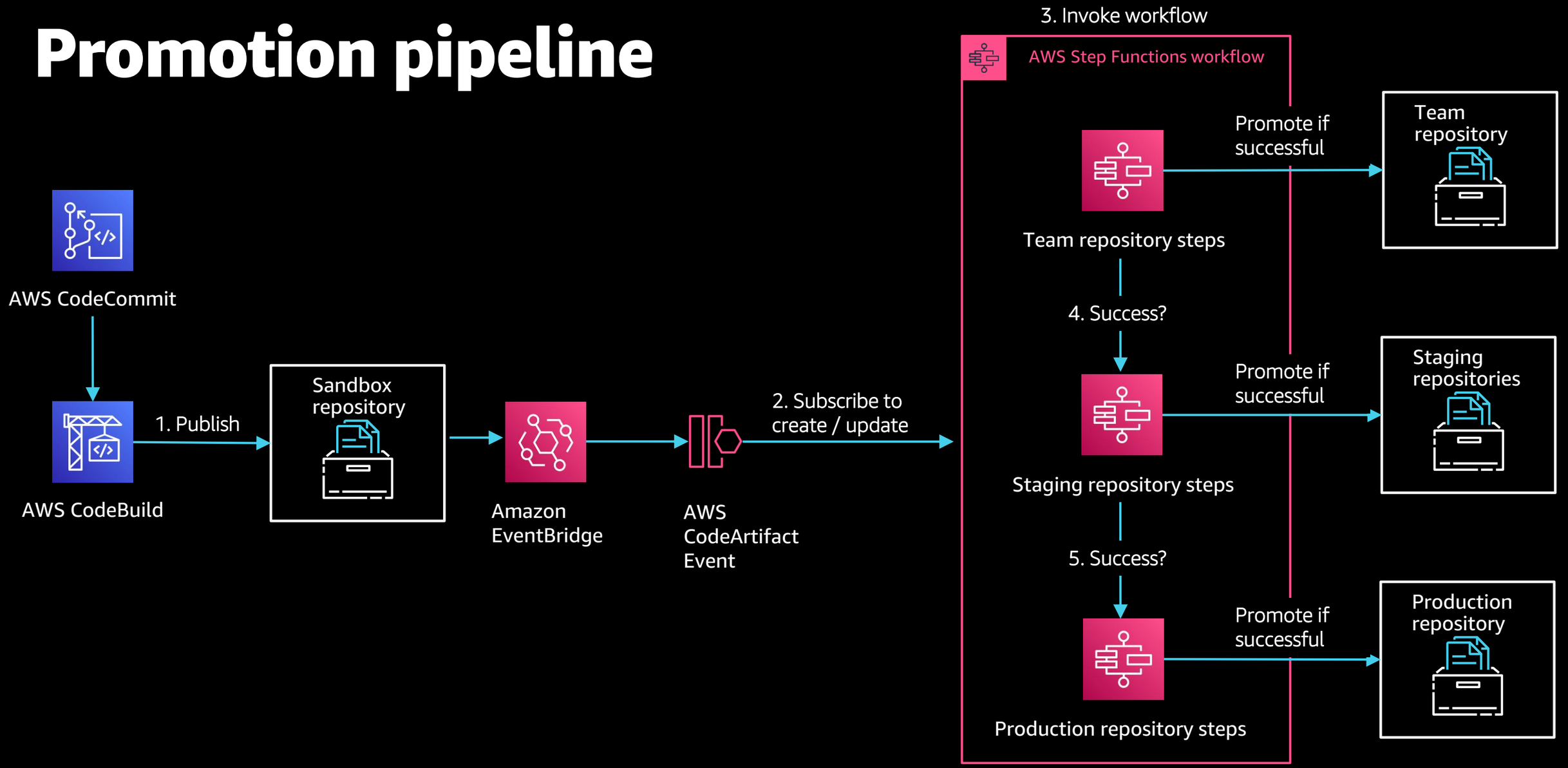
Extensibility: Enhancing functionality to fit your use cases: Advanced use cases



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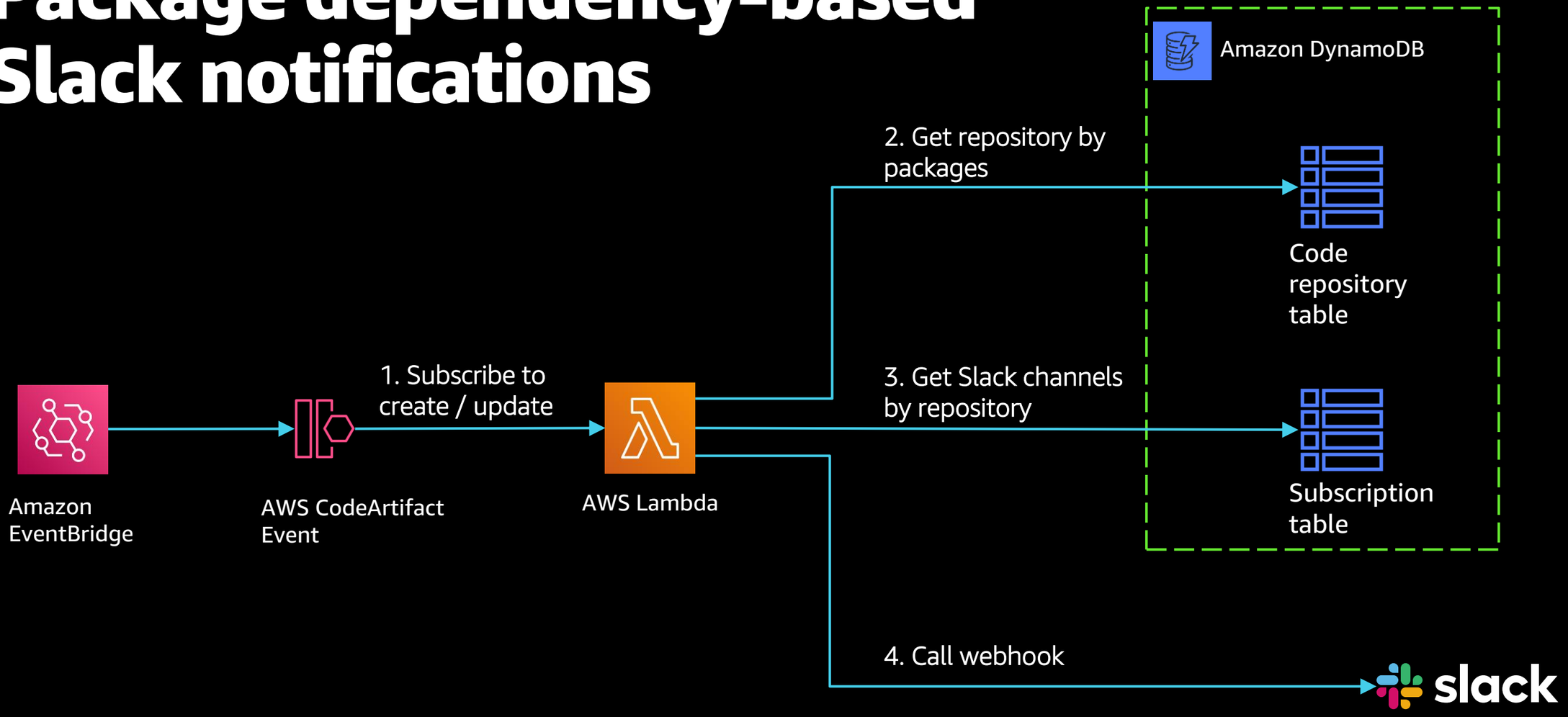
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Promotion pipeline



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Package dependency-based Slack notifications



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Closing thoughts



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Summary

Self-managed	AWS CodeArtifact
Requires setup, operating, and self-managed scaling	Manage only the domains, repositories, and security
Limited durability and security	Inherited durability and security
Upfront fees	Pay as you go by request and storage
Limited extensibility	Extensible with Amazon CloudWatch Events

Summary and next steps?

- Native tool integration
- AWS CloudFormation support
- Amazon CloudWatch Events
- Get started today – Workshop

https://github.com/aws-samples/aws-codeartifact-samples



Thank you!



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