AWS FOR FINANCIAL SERVICES

Prototyping and Cloud Engineering

FSI PACE

Financial Services Industry

OPA on AWS
Customizing your platform: Adding Software Templates

FSI PACE
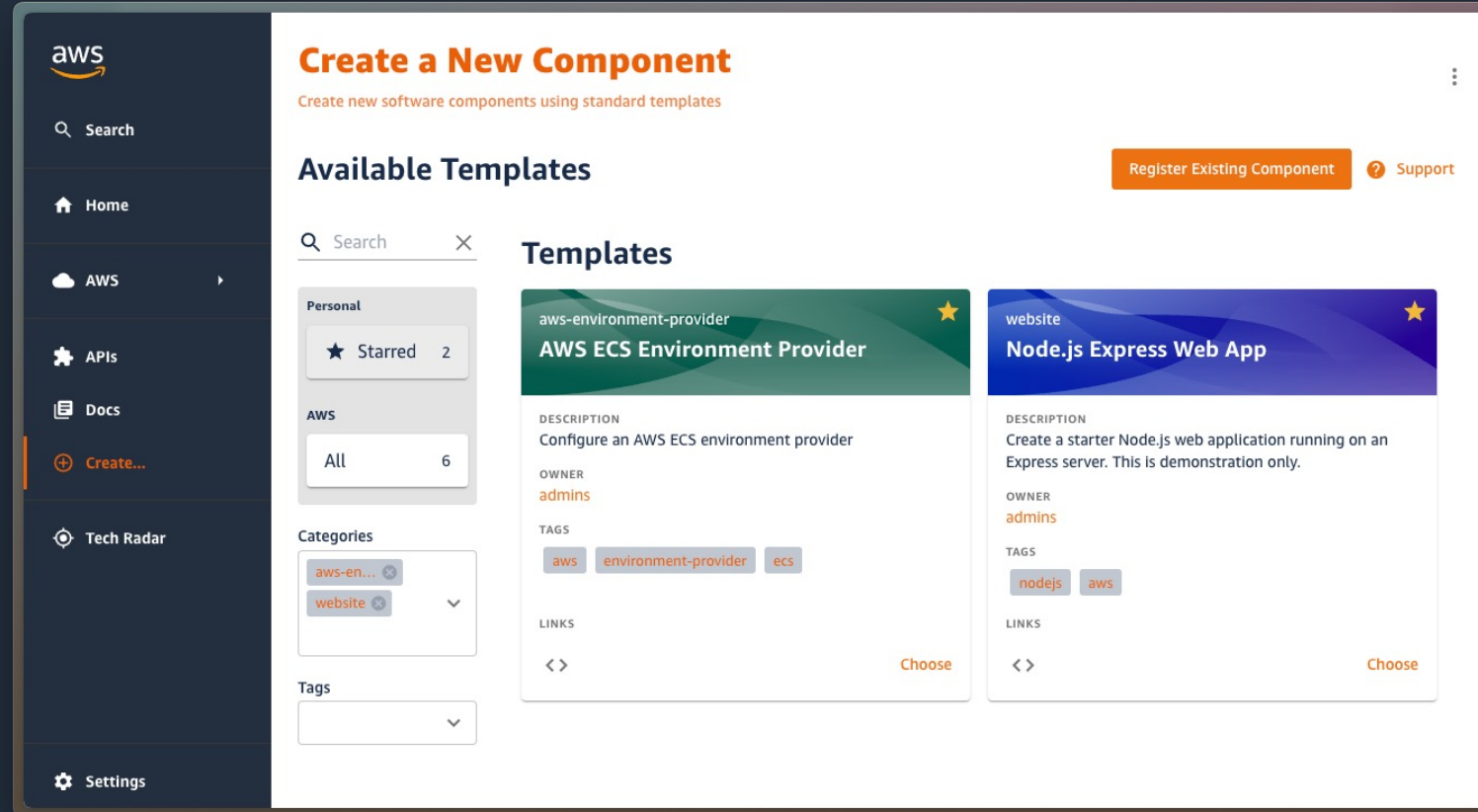
Platform Engineering Team

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OPA

Orchestrate Platform and Applications

Software Templates – creating new templates

https://backstage.io/docs/features/software-templates

Software Template – Input

Software Template – actions

Software Template – OPA custom Actions

opa:get-platform-metadata

opa:get-platform-parameters

https://{OPA_HOSTNAME}/create/actions
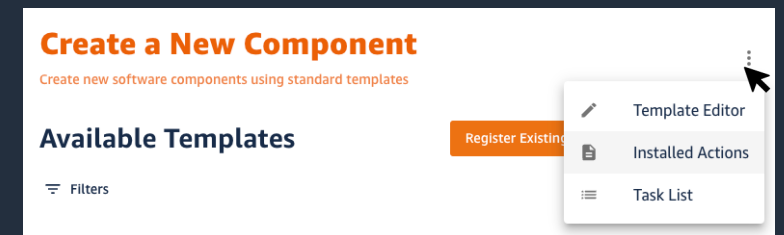
opa:get-env-providers

opa:create-secret

opa:createRepoAccessToken:gitlab

Software Template – OPA custom Actions

opa:get-platform-metadata

opa:get-platform-parameters

opa:get-env-providers

opa:create-secret

opa:createRepoAccessToken:gitlab

Retrieves information about the platform account where Backstage and OPA on AWS run

- AWS region

Software Template – OPA custom Actions

opa:get-platform-metadata

opa:get-platform-parameters

opa:get-env-providers

opa:create-secret

opa:createRepoAccessToken:gitlab

Retrieves AWS SSM Parameter Store values for the OPA on AWS platform

- `/opa` prefixed parameters such as pipeline-role and platform-role

Software Template – OPA custom Actions

opa:get-platform-metadata

opa:get-platform-parameters

opa:get-env-providers

opa:create-secret

opa:createRepoAccessToken:gitlab

Given an AWS Environment entity reference as input, it retrieves information about the Environent including an array of AWS environment providers' information

```
{
    envName: string,
    envShortName: string,
    envRef: string,
    envDeploymentManualApproval: boolean,
    envProviders: [
        envProviderName: string,
        envProviderType: string,
        envProviderPrefix: string,
        account: string,
        region: string,
        vpcId: string,
        publicSubnets: [ ],
        privateSubnets: [ ],
        assumedRoleArn: string
    ]
}
```

Software Template – OPA custom Actions

opa:get-platform-metadata

Creates a new Secrets Manager secret for a given input name.

opa:get-platform-parameters

opa:get-env-providers

opa:create-secret

opa:createRepoAccessToken:gitlab

Software Template – OPA custom Actions

opa:get-platform-metadata

Creates a GitLab repository access token and stores the value in a given Secrets Manager secret

opa:get-platform-parameters

opa:get-env-providers

opa:create-secret

opa:createRepoAccessToken:gitlab

Software Template – Environment Provider structure

Common Steps:

- opa:get-platform-metadata

- opa:get-platform-parameters

- fetch:template (base)

- fetch:template (IaC)

- publish:gitlab

- catalog:register

See the aws-ecs-environment-provider sample in the backstage-reference folder of the open source repo

Software Template – Application structure

Common Steps:

- opa:get-platform-metadata

- opa:get-env-providers

- opa:create-secret

- fetch:template (base)

- fetch:template (IaC)

- publish:gitlab

- opa:createRepoAccessToken

- catalog:register

See the example-nodejs sample in the backstage-reference folder of the open source repo

Software Template – publish and test

Store template in GitLab repo

Backstage

Test

Register template

FOR FINANCIAL SERVICES

Thank you!

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