

# Automation for IBM Watson Deployments – Flip Book

<https://github.com/IBM/watson-automation>

IBM AI Research and IBM Build Lab



# Module catalog

Module search

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AI/ML

Filter by category

Cloud provider

All providers

Filter by a cloud provider

Software provider

All providers

Filter by a software provider

Module type

All types

Filter by module type

Status

Released

Filter by status

## AI/ML

Module	Name	Group	Latest version	Type	Status	Provider	Build
IBM Watson NLP	<a href="#">ibm-watson-nlp</a>	watson-embed	v1.0.0	gitops	released	ibm	<span>Verify passing</span>
IBM Watson Studio	<a href="#">ibm-watson-studio</a>	watson-studio	v1.2.0	terraform	released	ibm	<span>Verify passing</span>
CP Behavior Analytics Service	<a href="#">gitops-cp-bas</a>	gitops-cp-bas	v1.1.1	gitops	released	ibm-cp	<span>Verify passing</span>
Watson Knowledge Catalog	<a href="#">gitops-cp-wkc</a>	gitops-cp-wkc	v1.2.0	gitops	released	ibm-cp	<span>Verify passing</span>
Watson Machine Learning	<a href="#">gitops-cp-wml</a>	gitops-cp-wml	v1.2.0	gitops	released	ibm-cp	<span>Verify passing</span>
cp-watson-assistant	<a href="#">gitops-cp-watson-assistant</a>	gitops-cp-watson-assistant	v1.0.0	gitops	released	ibm-cp	<span>Verify passing</span>
cp-watson-discovery	<a href="#">gitops-cp-watson-discovery</a>	gitops-cp-watson-discovery	v1.0.0	gitops	released	ibm-cp	<span>Verify passing</span>

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Samples ▾

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Cloud provider

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Filter by a cloud provider

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All providers ▾

Filter by a software provider

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All types ▾

Filter by module type

Status

Released ▾

Filter by status

## Samples and Templates

Module	Name	Group	Latest version	Type	Status	Provider	Build
UBI	<a href="#">ubi</a>	samples	v1.0.0	gitops	released	ibm	 Verify   <span>passing</span>

EXPLORER    ...    ! bom.yaml X

OPEN EDITORS    ! bom.yaml roks-new-nlp

WATSON-BOMS

- > documentation
- > helm-nlp
- > protos
- > roks-existing-nlp
- roks-new-nlp
  - > output
    - cluster-with-watson-nlp
      - > terraform
      - \$ apply.sh
      - ! bom.yaml
      - credentials.properties
      - credentials.properties.backup
      - dependencies.dot
      - \$ destroy.sh
      - ! variables-template.yaml
      - ! variables.yaml
      - credentials-template.properties
      - credentials.properties
      - \$ launch.sh
  - ! bom.yaml

.gitignore

LICENSE

ReadMe.md

ReadNik.md

OUTLINE

TIMELINE

bom.yaml

```
apiVersion: cloudnativetoolkit.dev/v1alpha1
kind: BillOfMaterial
metadata:
  name: cluster-with-watson-nlp
spec:
  modules:
    - name: ibm-vpc
      version: v1.17.0
    - name: ibm-vpc-subnets
      version: v1.14.0
    - name: ibm-vpc-gateways
      version: v1.10.0
    - name: ibm-ocp-vpc
      version: v1.16.0
    - name: ibm-object-storage
      version: v4.1.0
    - name: argocd-bootstrap
      version: v1.12.0
    - name: gitops-repo
      alias: gitops_repo
      version: v1.20.2
    - name: terraform-gitops-ubi
      alias: terraform_gitops_ubi
      version: v0.0.8
    - name: terraform-gitops-watson-nlp
      alias: terraform_gitops_watson_nlp
      version: v0.0.42
```

Ln 27, Col 23   Spaces: 2   UTF-8   LF   YAML   ⚙   ⚡

The screenshot shows a code editor interface with a dark theme. On the left is a sidebar with various icons for file management, search, and navigation. The main area displays a YAML configuration file named `variables-template.yaml`. The file contains several sections of variables, each with a description and a value. The sections include `variables`, `# overall`, `# vpc`, `# ocp`, `# namespace`, `# gitops`, and `# nlp`. The code editor's status bar at the bottom shows the file name `variables-template.yaml`, line count `Ln 43, Col 1`, and encoding `UTF-8`.

```
variables:
  # overall
  - name: region
    description: The IBM Cloud region where the instance should be provisioned
    value: xxx
  - name: resource_group_name
    description: The name of the IBM Cloud resource group where the resources should be provisioned
    value: xxx
  - name: common_tags
    description: The list of tags that should be applied to all resources (does not work)
    value: []
# vpc
- name: ibm-vpc-subnets__count
  description: The number of subnets that should be created in the VPC
  value: 1
# ocp
- name: worker_count
  description: The number of workers that should be provisioned per subnet
  value: 2
- name: cluster_flavor
  description: The flavor of the worker nodes that will be provisioned
  value: bx2.4x16
# namespace
- name: namespace_name
  description: The name of the namespace that will be created within the cluster
  value: xxx
# gitops
- name: gitops_repo_repo
  description: The name of the gitops repository that will be created
  value: xxx
- name: gitops_repo_host
  value: github.com
- name: gitops_repo_org
  value: xxx
- name: gitops_repo_username
  value: xxx
- name: gitops_repo_project # only used for Azure
  value: xxx
# nlp
```

The screenshot shows a code editor interface with a dark theme. On the left is a sidebar with icons for Explorer, Open Editors, Watson-BOMS, and other project files. The main area displays a YAML configuration file named `variables-template.yaml`. The file contains several sections and variables, many of which are commented out or set to placeholder values like `xxx`.

```
! variables-template.yaml
 29 |   value: xxx
30 |
31 # gitops
32 - name: gitops_repo_repo
33   description: The name of the gitops repository that will be created
34   value: xxx
35 - name: gitops_repo_host
36   value: github.com
37 - name: gitops_repo_org
38   value: xxx
39 - name: gitops_repo_username
40   value: xxx
41 - name: gitops_repo_project # only used for Azure
42   value: xxx
43
44 # nlp
45 - name: terraform_gitops_watson_nlp_runtime_image
46   value: watson-nlp-runtime:0.17.0
47 - name: terraform_gitops_watson_nlp_runtime_registry
48   value: artifactory
49 - name: terraform_gitops_watson_nlp_imagePullSecrets
50   value:
51     - artifactory-key
52 - name: terraform_gitops_watson_nlp_models
53   value:
54     - registry: artifactory
55       image: watson-nlp_syntactic_izumo_lang_en_stock:0.0.4
56 - name: terraform_gitops_watson_nlp_registries
57   value:
58     - name: artifactory
59       url: wcp-ai-foundation-team-docker-virtual.artifactory.swg-devops.com
60 - name: terraform_gitops_watson_nlp_registryUserNames
61   value:
62     - registry: artifactory
63       userName: xxx
64
65 # ubi
66 - name: terraform_gitops_ubi_command
67   value: echo 'helloworld'
```

The screenshot shows the Visual Studio Code (VS Code) interface. The left sidebar contains icons for File, Find, Search, and Open Editors. The Explorer sidebar shows a file tree with the following structure:

- roks-existing-nlp
  - bom.yaml
  - roks-existing-nlp
    - documentation
    - helm-nlp
    - protos
  - output
  - bom.yaml
  - roks-new-nlp
  - .gitignore
  - LICENSE
  - ReadMe.md
  - ReadNik.md

The file `bom.yaml` is selected in the Explorer and is displayed in the main editor area. The code content is as follows:

```
apiVersion: cloudnativetoolkit.dev/v1alpha1
kind: BillOfMaterial
metadata:
  name: cluster
spec:
  modules:
    - name: ocp-login
    - name: argocd-bootstrap
      version: v1.12.0
    - name: gitops-repo
      alias: gitops_repo
      version: v1.20.2
    - name: terraform-gitops-ubi
      alias: terraform_gitops_ubi
      version: v0.0.8
    - name: terraform-gitops-watson-nlp
      alias: terraform_gitops_watson_nlp
      version: v0.0.42
```

The bottom status bar shows the file path `roks-existing-nlp > bom.yaml`, line 19, column 1, and encoding `UTF-8 LF YAML`.

The screenshot shows a code editor interface with a dark theme. The left sidebar contains a tree view of files and folders:

- EXPLORER
- OPEN EDITORS
- variables-template.yaml (selected)
- WATSON-BOMS
  - documentation
  - helm-nlp
  - protos
- roks-existing-nlp
  - output
    - cluster-with-watson-nlp
      - variables-template.yaml
      - variables.yaml
    - credentials-template.properties
- bom.yaml
- roks-new-nlp
- .gitignore
- LICENSE
- ReadMe.md
- ReadNik.md

The main editor area displays the content of the selected file, `variables-template.yaml`:

```
! variables-template.yaml x
roks-existing-nlp > output > cluster-with-watson-nlp > ! variables-template.yaml

1  variables:
2    # namespace
3    - name: namespace_name
4      description: The name of the namespace that will be created within the cluster
5      value: xxx
6
7    # gitops
8    - name: gitops_repo_repo
9      description: The name of the gitops repository that will be created
10     value: xxx
11    - name: gitops_repo_host
12      value: github.com
13    - name: gitops_repo_org
14      value: xxx
15    - name: gitops_repo_username
16      value: xxx
17    - name: gitops_repo_project
18      value: xxx
19
20    # nlp
21    - name: terraform_gitops_watson_nlp_runtime_image
22      value: watson-nlp-runtime:0.17.0
23    - name: terraform_gitops_watson_nlp_runtime_registry
24      value: artifactory
25    - name: terraform_gitops_watson_nlp_imagePullSecrets
26      value:
27        - artifactory-key
28    - name: terraform_gitops_watson_nlp_models
29      value:
30        - registry: artifactory
31        | image: watson-nlp_syntax_izumo_lang_en_stock:0.0.4
32    - name: terraform_gitops_watson_nlp_registries
33      value:
34        - name: artifactory
35        | url: wcp-ai-foundation-team-docker-virtual.artifactory.swg-devops.com
36    - name: terraform_gitops_watson_nlp_registryUserNames
37      value:
38        - registry: artifactory
39        | userName: xxx
40
41    # ubi
42    - name: terraform_gitops_ubi_command
43      value: echo 'helloworld'
44
```

At the bottom, there are status indicators: Ln 44, Col 1, Spaces: 2, UTF-8, LF, YAML, and a refresh icon.

```
niklasheidloff@Niklass-MBP watson-boms % cd roks-new-nlp
niklasheidloff@Niklass-MBP roks-new-nlp % iascable build -i bom.yaml -c https://modules.cloudnativetoolkit.dev/index.yaml -c file:${PWD}/../../watson-embedded-catalog/catalog.yaml
Loading catalog from url(s): https://modules.cloudnativetoolkit.dev/index.yaml,file:/Users/niklasheidloff/git-ibm/watson-boms/roks-new-nlp/../../watson-embedded-catalog/catalog.yaml
Name: cluster-with-watson-nlp
Writing output to: ./output
Unable to generate file: docs/terraform-gitops-watson-nlp.md
niklasheidloff@Niklass-MBP roks-new-nlp % cd output
niklasheidloff@Niklass-MBP output % ./launch.sh
Cleaning up old container: cli-tools-HV0Cg
parsing credentials.properties...
Initializing container cli-tools-HV0Cg from quay.io/cloudnativetoolkit/cli-tools:v1.2-v2.2.11
a1e7b1927898ab1e6f5846aebbefab6bc93a73d5543c7f7f3734d3ee20e422db
Attaching to running container...
/terraform $ cd cluster-with-watson-nlp/
/terraform/cluster-with-watson-nlp $ ./apply.sh
```

```
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm: Still creating... [3m0s elapsed]
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm: Still creating... [3m10s elapsed]
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm (local-exec): (output suppressed due to sensitive value in config)
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm (local-exec): (output suppressed due to sensitive value in config)
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm (local-exec): (output suppressed due to sensitive value in config)
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm (local-exec): (output suppressed due to sensitive value in config)
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm (local-exec): (output suppressed due to sensitive value in config)
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm (local-exec): (output suppressed due to sensitive value in config)
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.null_resource.tekton_operator_helm: Creation complete after 3m16s [id=2222076949365879402]
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.data.external.tekton_ready: Reading...
module.argocd-bootstrap.module.openshift_cicd.module.pipelines.data.external.tekton_ready: Read complete after 3s [id=-]

Warning: Attribute Deprecated

with module.argocd-bootstrap.module.bootstrap.random_string.suffix,
on .terraform/modules/argocd-bootstrap/bootstrap/main.tf line 12, in resource "random_string" "suffix":
12:   number = true

**NOTE**: This is deprecated, use `numeric` instead.

(and 6 more similar warnings elsewhere)

Apply complete! Resources: 107 added, 0 changed, 0 destroyed.
/terraform/cluster $
```



## Resource list

Create resource

Name	Group	Location	Product	Status	Tags
<input type="text"/> Filter by name or IP address...	<input type="text"/> Filter by group or org...	<input type="text"/> Filter...	<input type="text"/> Filter...	<input type="text"/> Filter...	<input type="text"/> Filter...
<b>VPC infrastructure</b> (7 / 197)					
iks-ccr95ool0tt4lfm4u4kg	niklas	London	Virtual Private Endpoint for VPC	Healthy	-
kube-ccr95ool0tt4lfm4u4kg	niklas	London	Security Group for VPC	-	-
kube-ccr95ool0tt4lfm4u4kg-ab570c6852aa41e...	niklas	London	Load Balancer for VPC	Active	-
kube-r018-fefc32ad-aff3-40fd-837f-9b87bdde...	niklas	London	Security Group for VPC	-	-
niklas-vpc	niklas	London	Virtual Private Cloud	Available	-
niklas-vpc-base	niklas	London	Security Group for VPC	-	-
niklas-vpc-default	niklas	London	Security Group for VPC	-	-
<b>Clusters</b> (1 / 44)					
niklas-cluster	niklas	London	Red Hat OpenShift on IBM Cloud	Normal	-
<b>Storage</b> (1 / 415)					
niklas-cos	niklas	Global	Cloud Object Storage	Active	-

Clusters /

# niklas-cluster

 Normal  Help[OpenShift web console](#) [Actions...](#) 

## Overview

Worker nodes

Worker pools

DevOps 

Node status

**2 of 2** Normal[Details !\[\]\(25c901288b4baacd55ea752b740a2b27\_img.jpg\)](#)

Add-on status

**1 of 1** Normal[Details !\[\]\(575950a5c9fcc622611f6b2609204f50\_img.jpg\)](#)

Master status

**Normal**[Docs !\[\]\(b71b9fb440a69b59a64624b2981aa3b4\_img.jpg\)](#)

Ingress status

**Healthy **[Docs !\[\]\(80918b2c0a8ff1e3a9e6d261db8a0d5f\_img.jpg\)](#)

## Details

Cluster ID

ccr95ool0tt4lfm4u4kg 

Version

 4.10.32\_1536

Infrastructure

VPC Gen2

VPC

r018-fefc32ad...

Zones

London 1

Created

30/09/2022, 08:55

Resource group

niklas

Image security enforcement

[Enable](#)

## Node health

**2 total nodes** Critical 0%  Warning 0%  Normal 100%  Pending 0%[Worker node details](#)

## Networking

Service endpoint URL

 Public enabled  [Copy link !\[\]\(26af1392222585df0ee88c1b2359df5e\_img.jpg\)](#) Private enabled  [Copy link !\[\]\(20e579c515d5c0b5dbc9fc6b58009012\_img.jpg\)](#)

Ingress subdomain

niklas-cluster-162e406f043e20da9b0ef0731954a894-0000.eu-gb.containers.appdom 

## Integrations

Logging

[Connect !\[\]\(9a19311d195f5207930e3112ff0eda59\_img.jpg\)](#)

Monitoring

[Connect !\[\]\(34a545ef880e50f5e3a8731bdc1ed660\_img.jpg\)](#)

Key management service

[Enable](#)

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## Deployments

Create Deployment

Name ▾

Search by name...



Name ▾

Status ▾

Labels ▾

Pod selector ▾

 ubi-helm-ubi-helm

1 of 1 pods

app=ubi-helm

app.kubernetes.io/instance=watson-demo-ubi-he...

chart=ubi-helm-ubi-helm heritage=Helm

release=ubi-helm

app=ubi-helm, release=ubi-helm

 watson-nlp-watson-nlp

1 of 1 pods

app.kubernetes.io/component=watson-nlp

app.kubernetes.io/insta...=watson-demo-watson...

app.kubernetes.io/managed-by=Helm

app.kubernetes.io/name=watson-nlp-test

app.kubernetes.io/version=0.0.1

helm.sh/chart=test-v0.0.5

app.kubernetes.io/component=watson-nlp,

app.kubernetes.io/instance=watson-nlp,

app.kubernetes.io/name=watson-nlp-test



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Deployments &gt; Deployment details

## D watson-nlp-watson-nlp

Actions ▾

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### Deployment details

**Name**

watson-nlp-watson-nlp

**Update strategy**

RollingUpdate

**Namespace**

NS watson-demo

**Max unavailable**

1 of 1 pod

**Labels**

Edit

app.kubernetes.io/component=watson-nlp  
app.kubernetes.io/instance=watson-demo-watson-nlp app.kubernetes.io/managed-by=Helm  
app.kubernetes.io/name=watson-nlp-test app.kubernetes.io/version=0.0.1  
helm.sh/chart=test-v0.0.5

**Max surge**

3 greater than 1 pod

**Progress deadline seconds**

1800 seconds

**Min ready seconds**

Not configured

**Pod selector**

Q app.kubernetes.io/component=watson-nlp, app.kubernetes.io/instance=watson-nlp,  
app.kubernetes.io/name=watson-nlp-test

**Node selector**

No selector

**Tolerations**

0 tolerations

**Annotations**

2 annotations

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## Node selector

No selector

## Node

 10.242.0.5

## Tolerations

2 tolerations 

## Annotations

6 annotations 

## Created at

 30 Sept 2022, 09:52

## Owner

 watson-nlp-watson-nlp-85464cbfb8

## Init containers

Name	Image	State	Restarts	Started	Finished	Exit code
 model-0	wcp-ai-foundation-team-do...	Terminated	0	 30 Sept 2022, 09:52	 30 Sept 2022, 09:52	0

## Containers

Name	Image	State	Restarts	Started	Finished	Exit code
 product-abc	wcp-ai-foundation-team-do...	 Running	0	 30 Sept 2022, 09:57	-	-

## Volumes

Name	Mount path	SubPath	Type	Permissions	Utilized by
models	/app/models	No subpath	Read/Write	 product-abc	
kube-api-access-xtdn	/var/run/secrets/kubernetes.io/serviceaccount	No subpath	Read-only	 product-abc	

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 product-abc 

### Container details

#### State

 Running

#### ID

cri-o://daed84e35d9cbc837a9842b2f0899d739300clfcdafee1e23  
9b44eb65765b488

#### Restarts

0

#### Resource requests

-

#### Resource limits

-

#### Lifecycle hooks

-

#### Readiness probe

-

#### Liveness probe

-

#### Started

 30 Sept 2022, 09:57

#### Finished

-

#### Pod

 watson-nlp-watson-nlp-85464cbfb8-4hcs7

### Image details

#### Image

wcp-ai-foundation-team-docker-virtual.artifactory.swg-devops.co  
m/watson-nlp-runtime

#### Image version/tag

0.17.0\_ubi8\_py39

### Network

#### Node

 10.242.0.5

#### Pod IP

172.17.63.175

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 model-O **Container details****State**

with exit code

**ID**cri-o://16015b8e56b10f9d1ad7c88a61f243f5df108a966527228543  
b1ecc7fb236995**Restarts**

0

**Resource requests**

-

**Resource limits**

-

**Lifecycle hooks**

-

**Readiness probe**

-

**Liveness probe**

-

**Started** 30 Sept 2022, 09:52**Finished** 30 Sept 2022, 09:52**Pod** watson-nlp-watson-nlp-85464cbfb8-4hcs7**Image details****Image**wcp-ai-foundation-team-docker-virtual.artifactory.swg-devops.co  
m/watson-nlp\_syntax\_izumo\_lang\_en\_stock**Image version/tag**

0.0.4

**Command**

-

**Args**

-

**Pull policy**

Pull if needed

**Network****Node** 10.242.0.5**Pod IP**

172.17.63.175

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 **watson-nlp-watson-nlp-85464cbfb8-4hcs7**  Running

Actions ▾

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Connecting to  product-abc

Expand

```
sh-4.4$ ls -la models
total 16
drwxrwsrwx. 3 root      1000670000 4096 Sep 30 07:52 .
drwxr-xr-x. 1 app       app        4096 Sep 30 07:57 ..
drwxr-sr-x. 2 1000670000 1000670000 4096 Sep 30 07:52 syntax_izumo_lang_en_stock
sh-4.4$ 
```

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## D ubi-helm-ubi-helm

Actions ▾

Details Metrics YAML ReplicaSets Pods Environment Events

### Deployment details

**Name**

ubi-helm-ubi-helm

**Update strategy**

RollingUpdate

**Namespace**

NS watson-demo

**Max unavailable**

25% of 1 pod

**Labels**

Edit

`app=ubi-helm app.kubernetes.io/instance=watson-demo-ubi-helm chart=ubi-helm-ubi-helm  
heritage=Helm release=ubi-helm`**Max surge**

25% greater than 1 pod

**Pod selector**`Q app=ubi-helm, release=ubi-helm`**Progress deadline seconds**

600 seconds

**Node selector**

No selector

**Min ready seconds**

Not configured

**Tolerations**`O tolerations`**Annotations**`2 annotations`**Status**

Up to date

Administrator ▾

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Pods

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Jobs

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ReplicationControllers

HorizontalPodAutoscalers

Networking ▶

Storage ▶

Builds ▶

Pipelines ▶

Observe ▶

Project: watson-demo ▾

Pods &gt; Pod details

 ubi-helm-ubi-helm-7984955865-hfn9d  Running

Actions ▾

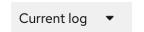
Details Metrics YAML Environment Logs Events Terminal



Log streaming...



ubi-helm



Current log



Search

 Wrap lines

Raw

Download

12 lines

```
1  'helloworld'
2  'helloworld'
3  'helloworld'
4  'helloworld'
5  'helloworld'
6  'helloworld'
7  'helloworld'
8  'helloworld'
9  'helloworld'
10 'helloworld'
11 'helloworld'
12 'helloworld'
```

Administrator

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Project: watson-demo ▾

## Services

[Create Service](#)Name ▾  

Name	Labels	Pod selector	Location
watson-nlp-watson-nlp	app.kubernetes.io/in...=watson-demo-wats...	app.kubernetes.io/component=watson-nlp, app.kubernetes.io/instance=watson-nlp, app.kubernetes.io/name=watson-nlp-test	172.21.153.42:8080 172.21.153.42:8085

Administrator ▾

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Networking ▶

Storage ▶

Builds ▶

Pipelines ▶

Observe ▶

Project: watson-demo ▾

Secrets &gt; Secret details

## S artifactory-key

[Add Secret to workload](#)

Actions ▾

[Details](#)[YAML](#)

### Secret details

**Name**

artifactory-key

**Type**

kubernetes.io/dockerconfigjson

**Namespace**

NS watson-demo

**Labels**[Edit](#)**No labels****Annotations**[0 annotations](#)**Created at**

⌚ 30 Sept 2022, 09:52

**Owner**

SS artifactory-key

**Data**[Reveal values](#)**.dockerconfigjson**

.....



Administrator

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Builds

Pipelines

Project: openshift-gitops ▾

## argocd-access

Details

YAML

### Secret details

**Name**

argocd-access

**Type**

Opaque

**Namespace**

NS openshift-gitops

**Labels**

Edit

app=argocd grouping=garage-cloud-native-toolkit app.kubernetes.io/part-of=argocd  
app.kubernetes.io/instance=argocd-config release=argocd-config  
app.kubernetes.io/version=1.0 app.kubernetes.io/component=tools  
app.kubernetes.io/managed-by=Helm helm.sh/chart=tool-config-0.13.0  
app.kubernetes.io/name=argocd group=catalyst-tools

**Annotations**

3 annotations

**Created at**

⌚ 30 Sept 2022, 09:45

**Owner**

No owner

**Data**

Reveal values

ARGOCD\_PASSWORD

.....





v2.3.7+ Applications

+ NEW APP ⚡ SYNC APPS ⚡ REFRESH APPS Search applications... ⚡

FILTERS

FAVORITES ONLY

SYNC STATUS

- Unknown 0
- Synced 8
- OutOfSync 0

HEALTH STATUS

- Unknown 0
- Progressing 0
- Suspended 0
- Healthy 8
- Degraded 0
- Missing 0

LABELS

PROJECTS

CLUSTERS

NAMESPACES

APPLICATIONS TILES

Log out

Items per page: 10 ▾

**0-bootstrap** ★

Project: 0-bootstrap

Labels:

Status: Healthy Synced

Repository: [https://github.ibm.com/niklas-heidloff/...](https://github.ibm.com/niklas-heidloff/)

Target Registry: main

Path: argocd/0-bootstrap/cluster/default

Destination: in-cluster

Namespace: openshift-gitops

**1-infrastructure** ★

Project: 1-infrastructure

Labels: app=argocd, app.kubernetes.io/instance=1-infrastr...

Status: Healthy Synced

Repository: [https://github.ibm.com/niklas-heidloff/...](https://github.ibm.com/niklas-heidloff/)

Target Registry: main

Path: argocd/1-infrastructure/cluster/default

Destination: in-cluster

Namespace: openshift-gitops

**2-services** ★

Project: 2-services

Labels: app=argocd, app.kubernetes.io/instance=2-services...

Status: Healthy Synced

Repository: [https://github.ibm.com/niklas-heidloff/...](https://github.ibm.com/niklas-heidloff/)

Target Registry: main

Path: argocd/2-services/cluster/default

Destination: in-cluster

Namespace: openshift-gitops

**3-applications** ★

Project: 3-applications

Labels: app=argocd, app.kubernetes.io/instance=3-applicati...

Status: Healthy Synced

Repository: [https://github.ibm.com/niklas-heidloff/...](https://github.ibm.com/niklas-heidloff/)

Target Registry: main

Path: argocd/3-applications/cluster/default

Destination: in-cluster

Namespace: openshift-gitops

**namespace-watson-demo** ★

Project: 1-infrastructure

Labels: app.kubernetes.io/instance=1-infrastr...

Status: Healthy Synced

Repository: [https://github.ibm.com/niklas-heidloff/...](https://github.ibm.com/niklas-heidloff/)

Target Registry: main

Path: payload/1-infrastructure/namespace/...

Destination: in-cluster

Namespace: default

**watson-demo-artifactory-key** ★

Project: 1-infrastructure

Labels: app.kubernetes.io/instance=1-infrastr...

Status: Healthy Synced

Repository: [https://github.ibm.com/niklas-heidloff/...](https://github.ibm.com/niklas-heidloff/)

Target Registry: main

Path: payload/1-infrastructure/namespace/...

Destination: in-cluster

Namespace: watson-demo

**watson-demo-ubi-helm** ★

Project: 3-applications

Labels: app.kubernetes.io/instance=3-applicati...

Status: Healthy Synced

Repository: [https://github.ibm.com/niklas-heidloff/...](https://github.ibm.com/niklas-heidloff/)

Target Registry: main

Path: payload/3-applications/namespace/watso...

Destination: in-cluster

Namespace: watson-demo

**watson-demo-watson-nlp** ★

Project: 2-services

Labels: app.kubernetes.io/instance=2-services...

Status: Healthy Synced

Repository: [https://github.ibm.com/niklas-heidloff/...](https://github.ibm.com/niklas-heidloff/)

Target Registry: main

Path: payload/2-services/namespace/watso...

Destination: in-cluster

Namespace: watson-demo



v2.3.7+L

[APP DETAILS](#)[APP DIFF](#)[SYNC](#)[SYNC STATUS](#)[HISTORY AND ROLLBACK](#)[DELETE](#)[REFRESH ▾](#)     [Log out](#)

## FILTERS

NAME

KINDS

SYNC STATUS

- Synced
- OutOfSync

HEALTH STATUS

- Healthy
- Progressing
- Degraded
- Suspended
- Missing
- Unknown

CURRENT SYNC STATUS

Synced

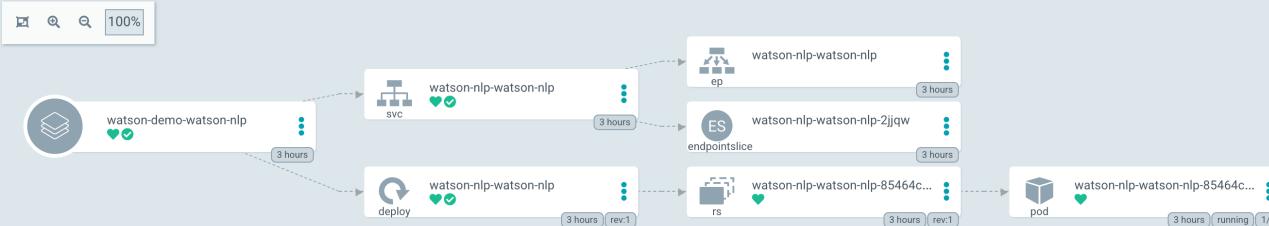
To main (8293ea8)

Author: Niklas Heidloff <niklas\_heidloff@de.ibm.com>  
Comment: Adds argocd config yaml for artifactory-key in watson-d...

LAST SYNC RESULT

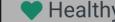
Sync OK

To 8293ea8  
Succeeded 3 hours ago (Fri Sep 30 2022 09:52:05 GMT+0200)  
Author: Niklas Heidloff <niklas\_heidloff@de.ibm.com> -  
Comment: Adds argocd config yaml for artifactory-key in watson-d...



 Applications /  v2.3.7+L

**APP DETAILS** **APP DIFF** 

**APP HEALTH**  **Healthy**

Author: Comment: Adds argo

**FILTERS**

- NAME**
- KINDS**

**SYNC STATUS**

-  **Synced**
-  **OutOfSync**

**HEALTH STATUS**

-  **Healthy**
-  **Progressing**
-  **Degraded**
-  **Suspended**
-  **Missing**
-  **Unknown**

 **watson-nlp-watson-nlp-85464cbfb8-4hcs7** 

 **SYNC**  **DELETE**

**SUMMARY** **EVENTS** **LOGS**

KIND	Pod
NAME	watson-nlp-watson-nlp-85464cbfb8-4hcs7
NAMESPACE	watson-demo
CREATED_AT	09/30/2022 09:52:05
IMAGES	wcp-ai-foundation-team-docker-virtual.artifactory.swg-devops.com/watson-nlp-runtime:0.17.0_ubi8_py39 wcp-ai-foundation-team-docker-virtual.artifactory.swg-devops.com/watson-nlp_syntax_iyuzmo_lang_en_stock:0.0.4
STATE	Running

**LIVE MANIFEST**  Hide Managed Fields 

```
1 apiVersion: v1
2 kind: Pod
3 metadata:
4   annotations:
5     cni.projectcalico.org/containerID: 158acb231aad58e13fbb1bd3f085dc03e9675a99b7adedcf1d432aea7d167fd7
6     cni.projectcalico.org/podIP: 172.17.63.175/32
7     cni.projectcalico.org/podIPs: 172.17.63.175/32
8     k8s.v1.cni.cncf.io/network-status: |-
9       [
10         {
11           "name": "k8s-pod-network",
12           "ips": [
13             "172.17.63.175"
14           ],
15           "default": true,
16           "dns": {}
17         }
18       ]
19     k8s.v1.cni.cncf.io/networks-status: |-
20       [
21         {
22           "name": "k8s-pod-network",
23           "ips": [
24             "172.17.63.175"
25           ]
26         }
27       ]
```

 Applications / [watson-demo-ubi-helm](#) APPLICATION DETAILS TREE

v2.3.7+L

[APP DETAILS](#) [APP DIFF](#) [SYNC](#) [SYNC STATUS](#) [HISTORY AND ROLLBACK](#) [DELETE](#) [REFRESH](#)

Log out

APP HEALTH Healthy

CURRENT SYNC STATUS Synced MORE To main (8293ea8)

LAST SYNC RESULT Sync OK MORE To 8293ea8

Succeeded 3 hours ago (Fri Sep 30 2022 09:52:15 GMT+0200)  
Author: Niklas Heidloff <niklas\_heidloff@de.ibm.com>  
Comment: Adds argocd config yaml for artifactory-key in watson-d...

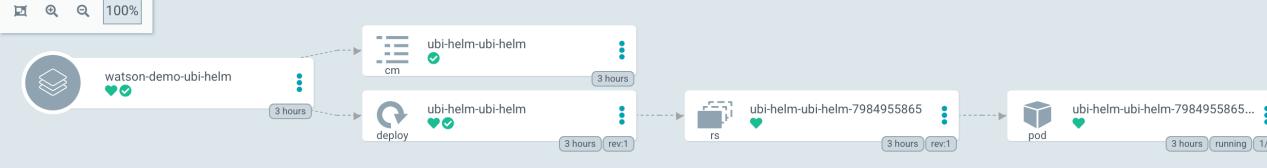
[FILTERS](#)

NAME

KINDS

SYNC STATUS Synced OutOfSync

HEALTH STATUS Healthy Progressing Degraded Suspended Missing Unknown



```
graph LR; A[watson-demo-ubi-helm] --> B[ubi-helm-ubi-helm]; B --> C[ubi-helm-ubi-helm]; C --> D[ubi-helm-ubi-helm-7984955865]; D --> E[ubi-helm-ubi-helm-7984955865];
```

The diagram illustrates the deployment structure of the 'watson-demo-ubi-helm' application. It starts with a 'watson-demo-ubi-helm' service, which is connected to a 'ubi-helm-ubi-helm' component manager (cm). This component manager is associated with a 'deploy' step, which has been completed 3 hours ago. The deployment leads to a replicated set ('rs') of 'ubi-helm-ubi-helm-7984955865' instances, each running 1 pod.

 Applications / [namespace-watson-demo](#) APPLICATION DETAILS TREE

v2.3.7+L

**APP DETAILS** **APP DIFF** **SYNC** **SYNC STATUS** **HISTORY AND ROLLBACK** **DELETE** **REFRESH**

**APP HEALTH**  **Healthy**

**CURRENT SYNC STATUS**  **Synced** **MORE** To main (8293ea8)

Author: Niklas Heidloff <niklas\_heidloff@de.ibm.com>  
Comment: Adds argocd config yaml for artifactory-key in watson-d...

**LAST SYNC RESULT**  **Sync OK** **MORE** To 8293ea8

Succeeded 3 hours ago (Fri Sep 30 2022 09:52:08 GMT+0200)  
Author: Niklas Heidloff <niklas\_heidloff@de.ibm.com> -  
Comment: Adds argocd config yaml for artifactory-key in watson-d...

**FILTERS**

**NAME**

**KINDS**

**SYNC STATUS**

 Synced

 OutOfSync

**HEALTH STATUS**

 Healthy

 Progressing

 Degraded

 Suspended

 Missing

 Unknown

   100%

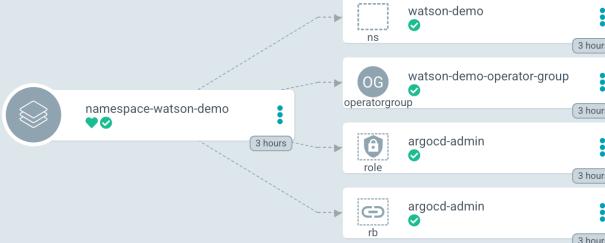
 **namespace-watson-demo**  

 **watson-demo**   3 hours

 **watson-demo-operator-group**   3 hours

 **argocd-admin**   3 hours

 **argocd-admin**   3 hours



 Applications / [watson-demo-artifactory-key](#) APPLICATION DETAILS TREE

v2.3.7+L

[APP DETAILS](#) [APP DIFF](#) [SYNC](#) [SYNC STATUS](#) [HISTORY AND ROLLBACK](#) [DELETE](#) [REFRESH](#)

Log out

APP HEALTH **Healthy**

CURRENT SYNC STATUS **Synced** MORE To main (8293ea8)

Author: Niklas Heidloff <niklas\_heidloff@de.ibm.com>  
Comment: Adds argocd config yaml for artifactory-key in watson-d...

LAST SYNC RESULT **Sync OK** MORE To 8293ea8

Succeeded 3 hours ago (Fri Sep 30 2022 09:52:15 GMT+0200)  
Author: Niklas Heidloff <niklas\_heidloff@de.ibm.com> -  
Comment: Adds argocd config yaml for artifactory-key in watson-d...

FILTERS

NAME

KINDS

SYNC STATUS

Synced

OutOfSync

HEALTH STATUS

Healthy

Progressing

Degraded

Suspended

Missing

Unknown



 v2.3.7+L

Settings / Projects / 2-services

PROJECTS

+ ADD ROLE + ADD SYNC WINDOW × DELETE Log out

SUMMARY ROLES WINDOWS EVENTS

GENERAL EDIT

NAME 2-services

DESCRIPTION

LABELS app=argocd app.kubernetes.io/instance=0-bootstrap app.kubernetes.io/managed-by=Helm  
app.kubernetes.io/name=services app.kubernetes.io/part-of=gitops-bootstrap app.kubernetes.io/version=1.16.0  
helm.sh/chart=services-0.24.0

SOURCE REPOSITORIES EDIT

<https://github.ibm.com/niklas-heidloff/watson-demo.git>

SCOPED REPOSITORIES EDIT

Project has no source repositories

DESTINATIONS EDIT

Server	Name	Namespace
<a href="https://kubernetes.default.svc">https://kubernetes.default.svc</a>	*	

The screenshot shows the Octopus Deploy interface for a project named "2-services". The left sidebar contains navigation icons for Settings, Projects, Pipelines, Artifacts, and Monitoring. The main content area is divided into four tabs: SUMMARY (selected), ROLES, WINDOWS, and EVENTS. The SUMMARY tab displays the project's general information, including its name ("2-services"), a detailed description of its labels (specifying it as an argocd instance, bootstrap, managed by Helm, and part of gitops-bootstrap), and its helm chart version. Below this are three expandable sections: SOURCE REPOSITORIES, SCOPED REPOSITORIES, and DESTINATIONS. The SOURCE REPOSITORIES section lists a single repository URL. The SCOPED REPOSITORIES section indicates that the project has no source repositories. The DESTINATIONS section lists a single destination entry with a server URL and a namespace value of "\*". Each section includes an "EDIT" button.

[niklas-heidloff / watson-demo](#) Private[Unwatch](#) 1[Star](#) 0[Fork](#) 0[Code](#)[Issues](#)[Pull requests](#)[Zenhub](#)[Projects](#)[Wiki](#)[Security](#)[Insights](#)[Settings](#)[main](#) ▾

9 branches

0 tags

[Go to file](#)[Add file](#) ▾[Code](#) ▾

 niklas-heidloff and Cloud-Native Toolkit Adds argocd config yaml for artifactory-...	... 8293ea8 4 hours ago	11 commits
 argocd	Adds argocd config yaml for artifactory-key in watson-demo for defa...	4 hours ago
 docs	Populates initial gitops structure	4 hours ago
 payload	Adds payload yaml for artifactory-key (#5)	4 hours ago
 .owner_module	Saves owner_module id	4 hours ago
 README.md	Populates initial gitops structure	4 hours ago
 config.yaml	Populates initial gitops structure	4 hours ago
 kubeseal_cert.pem	Populates initial gitops structure	4 hours ago

README.md



## GitOps repository

Repository that contains the yaml resources defining the desired state of the configuration for a cluster. The resources are organized to support deployments to multiple clusters.

### App of Apps

There are two major types of resources in the repository:

1. ArgoCD configuration
2. Application "payloads"

### ArgoCD configuration

In ArgoCD, collections of kubernetes resources that are deployed together are called "applications". Applications in ArgoCD are configured using a custom resource definition (CRD) in the cluster which means ArgoCD applications

### About

No description, website, or topics provided.

[Readme](#)

### Releases

No releases published  
[Create a new release](#)

### Languages

 Mustache 100.0%

The screenshot shows a code editor interface with a dark theme. On the left is a sidebar with icons for Explorer, Open Editors, Watson Demo, and other project components. The main area displays a file named `! namespace-watson-demo.yaml` under the `argocd/1-infrastructure` directory. The code is an Argo Project manifest:

```
argocd > 1-infrastructure > cluster > default > base > ! namespace-watson-demo.yaml
1 apiVersion: argoproj.io/v1alpha1
2 kind: Application
3 metadata:
4   name: namespace-watson-demo
5   finalizers:
6     - resources-finalizer.argocd.argoproj.io
7 spec:
8   destination:
9     namespace: default
10    server: https://kubernetes.default.svc
11  project: 1-infrastructure
12  source:
13    path: payload/1-infrastructure/namespace/watson-demo/namespace
14    repoURL: https://github.ibm.com/niklas-heidloff/watson-demo.git
15    targetRevision: main
16  syncPolicy:
17    automated:
18      prune: true
19      selfHeal: true
20  ignoreDifferences: []
21
```

The bottom status bar shows the file is 21 lines long, in Col 1, with 2 spaces, in UTF-8 encoding, and is a YAML file. It also includes navigation icons and a search icon.

The screenshot shows a code editor interface with a sidebar and a main editor area.

**Left Sidebar:**

- EXPLORER**: Shows the directory structure of the repository:
  - argocd
  - Watson-DEMO
    - base
      - namespace-watson-demo.yaml
      - watson-demo-artifactory-key.yaml
      - kustomization.yaml
      - .gitkeep
    - cluster/default
      - base
        - watson-demo-watson-nlp.yaml
        - kustomization.yaml
        - .gitkeep
      - 3-applications
        - cluster/default
          - base
            - watson-demo-ubi-helm.yaml
            - kustomization.yaml
            - .gitkeep
    - docs
    - payload
    - .owner\_module
    - config.yaml
    - kubeseal\_cert.pem
    - README.md
  - OUTLINE**
  - TIMELINE**

**Main Editor Area:**

**File:** watson-demo-artifactory-key.yaml

**Content:**

```
argocd > 1-infrastructure > cluster > default > base > ! watson-demo-artifactory-key.yaml
1  apiVersion: argoproj.io/v1alpha1
2  kind: Application
3  metadata:
4    name: watson-demo-artifactory-key
5    finalizers:
6      - resources-finalizer.argocd.argoproj.io
7  spec:
8    destination:
9      namespace: watson-demo
10     server: https://kubernetes.default.svc
11   project: 1-infrastructure
12   source:
13     path: payload/1-infrastructure/namespace/watson-demo/artifactory-key
14     repoURL: https://github.ibm.com/niklas-heidloff/watson-demo.git
15     targetRevision: main
16   syncPolicy:
17     automated:
18       prune: true
19       selfHeal: true
20   ignoreDifferences: []
21
```

**Bottom Status Bar:**

Ln 21, Col 1 Spaces: 2 UTF-8 LF YAML ⚙️ 🔍

The screenshot shows a code editor interface with a dark theme. On the left, there's a sidebar with various icons for file operations like copy, search, and refresh. Below the sidebar, the file tree is displayed under the 'EXPLORER' tab. The tree shows a directory structure for 'argocd' containing '0-bootstrap', '1-infrastructure', 'cluster/default', 'base', and '2-services'. Under 'base', there are files like 'namespace-watson-demo.yaml', 'watson-demo-artifactory-key.yaml', 'kustomization.yaml', and '.gitkeep'. Under '2-services', there are 'cluster/default' and 'base' sub-directories, each containing 'watson-demo-watson-nlp.yaml' and 'kustomization.yaml', along with '.gitkeep' files. Other files visible include '.owner\_module', 'config.yaml', 'kubeseal\_cert.pem', and 'README.md'. The bottom of the sidebar also has sections for 'OUTLINE' and 'TIMELINE'. The main workspace on the right is titled 'watson-demo-ubi-helm.yaml' and contains the following YAML code:

```
argocd > 3-applications > cluster > default > base > ! watson-demo-ubi-helm.yaml
  1 apiVersion: argoproj.io/v1alpha1
  2 kind: Application
  3 metadata:
  4   name: watson-demo-ubi-helm
  5   finalizers:
  6     - resources-finalizer.argocd.argoproj.io
  7 spec:
  8   destination:
  9     namespace: watson-demo
 10    server: https://kubernetes.default.svc
 11  project: 3-applications
 12  source:
 13    path: payload/3-applications/namespace/watson-demo/ubi-helm
 14    repoURL: https://github.ibm.com/niklas-heidloff/watson-demo.git
 15    targetRevision: main
 16    helm:
 17      | releaseName: ubi-helm
 18 syncPolicy:
 19   automated:
 20     prune: true
 21     selfHeal: true
 22 ignoreDifferences: []
```

At the bottom of the editor, there are status indicators: 'main' (with a gear icon), '0 △ 0' (with a search icon), and 'Ln 23, Col 1 Spaces: 2 UTF-8 LF YAML'.

The image shows a code editor interface with a sidebar and a main editor area.

**Left Sidebar:**

- EXPLORER
- OPEN EDITORS
- WATSON-DEMO
- argocd
- 0-bootstrap
- 1-infrastructure
- cluster/default
- base
  - ! namespace-watson-demo.yaml
  - ! watson-demo-artifactory-key.yaml
  - ! kustomization.yaml
  - !.gitkeep
- 2-services
- cluster/default
- base
  - ! watson-demo-watson-nlp.yaml
  - ! kustomization.yaml
  - !.gitkeep
- 3-applications
- cluster/default
- base
  - ! watson-demo-ubi-helm.yaml
  - ! kustomization.yaml
  - !.gitkeep
- docs
- payload
- .owner\_module
- ! config.yaml
- ! kubeseal\_cert.pem
- README.md

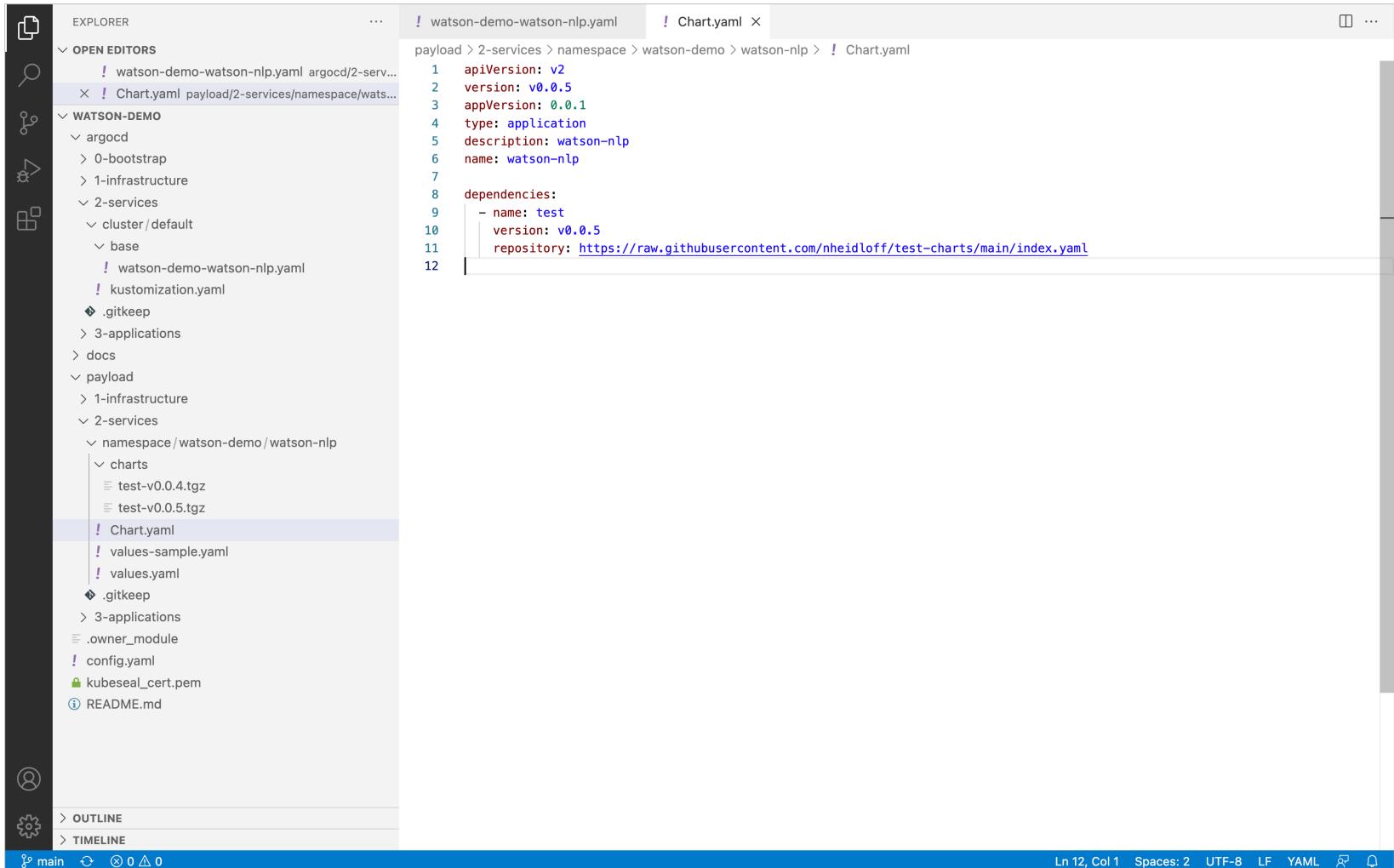
**Right Editor Area:**

! watson-demo-watson-nlp.yaml

```
argocd > 2-services > cluster > default > base > ! watson-demo-watson-nlp.yaml
```

```
1 apiVersion: argoproj.io/v1alpha1
2 kind: Application
3 metadata:
4   name: watson-demo-watson-nlp
5   finalizers:
6     - resources-finalizer.argocd.argoproj.io
7 spec:
8   destination:
9     namespace: watson-demo
10    server: https://kubernetes.default.svc
11  project: 2-services
12  source:
13    path: payload/2-services/namespace/watson-demo/watson-nlp
14    repoURL: https://github.ibm.com/niklas-heidloff/watson-demo.git
15    targetRevision: main
16    helm:
17      | releaseName: watson-nlp
18  syncPolicy:
19    automated:
20      | prune: true
21      | selfHeal: true
22  ignoreDifferences: []
```

Ln 1, Col 1 Spaces: 2 UTF-8 LF YAML ⚙️ 🔍



The screenshot shows a code editor interface with a dark theme. On the left is the Explorer sidebar, which lists project files and folders. The main area displays a YAML configuration file for a Watson NLP service.

**EXPLORER**

- OPEN EDITORS
- Watson-Demo
- argocd
- payload
- namespace/watson-demo/watson-nlp
- charts
- values.yaml
- values-sample.yaml
- Chart.yaml
- test-v0.0.4.tgz
- test-v0.0.5.tgz
- .gitkeep
- 3-applications
- docs
- payload
- 1-infrastructure
- 2-services
- cluster/default
- base
- watson-demo-watson-nlp.yaml
- kustomization.yaml
- .gitkeep
- 3-applications
- docs
- payload
- 1-infrastructure
- 2-services
- namespace/watson-demo/watson-nlp
- charts
- values.yaml
- values-sample.yaml
- Chart.yaml
- test-v0.0.4.tgz
- test-v0.0.5.tgz
- .gitkeep
- 3-applications
- .owner\_module
- config.yaml
- kubeseal\_cert.pem
- README.md

**! watson-demo-watson-nlp.yaml** **! Chart.yaml** **! values.yaml**

```
payload > 2-services > namespace > watson-demo > watson-nlp > ! values.yaml
1  'test':
2    "componentName": "watson-nlp"
3    "imagePullSecrets":
4      - "artifactory-key"
5    "models":
6      - "image": "watson-nlp_syntax_izumo_lang_en_stock:0.0.4"
7        "registry": "artifactory"
8    "registries":
9      - "name": "artifactory"
10         "url": "wcp-ai-foundation-team-docker-virtual.artifactory.swg-devops.com"
11    "runtime":
12      "image": "watson-nlp-runtime:0.17.0_ubi8_py39"
13      "registry": "artifactory"
14    "serviceType": "ClusterIP"
15
16
```

Ln 1, Col 1 Spaces: 2 UTF-8 LF YAML ⚙ ⚙

The image shows a code editor interface with a dark theme. On the left is a sidebar with various icons: a clipboard, magnifying glass, gear, user profile, and a gear with a checkmark. Below these are sections for 'OUTLINE' and 'TIMELINE'.

The main area has a top navigation bar with tabs: 'watson-demo-ubi-helm.yaml' (active), 'Chart.yaml', and others. The status bar at the bottom shows 'Ln 5, Col 1' and other settings.

The file tree on the left shows a directory structure:

- OPEN EDITORS
- Watson-DEMO
  - argocd
    - 0-bootstrap
    - 1-infrastructure
    - 2-services
  - 3-applications
    - cluster/default
      - base
        - watson-demo-ubi-helm.yaml
        - kustomization.yaml
    - .gitkeep
  - docs
  - payload
    - 1-infrastructure
    - 2-services
    - 3-applications
  - namespace/watson-demo/ubi-helm
    - charts/ubi-helm
      - templates
        - \_helpers.tpl
        - configmap.yaml
        - deployment.yaml
      - .helmignore
      - Chart.yaml
      - ubi-helm-v0.0.1.tgz
      - values.yaml
      - Chart.yaml
      - values.yaml
    - .gitkeep
    - .owner\_module
    - config.yaml
    - kubeseal\_cert.pem

The screenshot shows a code editor interface with a dark theme. On the left is a sidebar with icons for Explorer, Search, Repository, and Settings. The Explorer section displays a file tree:

- Watson-DEMO
  - argocd
    - 0-bootstrap
    - 1-infrastructure
    - 2-services
  - 3-applications
    - cluster/default
      - base
        - watson-demo-ubi-helm.yaml
        - kustomization.yaml
    - .gitkeep
    - docs
    - payload
      - 1-infrastructure
      - 2-services
    - 3-applications
      - namespace/watson-demo/ubi-helm
        - charts/ubi-helm
          - templates
            - \_helpers.tpl
            - configmap.yaml
            - deployment.yaml
          - .helmignore
          - Chart.yaml
          - ubi-helm-v0.0.1.tgz
        - values.yaml
        - Chart.yaml
        - values.yaml
        - .gitkeep
        - .owner\_module
        - config.yaml
- OUTLINE
- TIMELINE

The main area shows an open file: `values.yaml`. The code content is as follows:

```
1 # Default values for chart.
2 # This is a YAML-formatted file.
3 # Declare variables to be passed into your templates.
4 replicaCount: 2
5 image:
6   repository: "registry.access.redhat.com/ubi8/ubi"
7   tag: latest
8   command: "echo helloworld!"
```

At the bottom, the status bar shows: Ln 1, Col 1 Spaces: 2 UTF-8 LF YAML ⚙️ 🔍

The screenshot shows the Visual Studio Code (VS Code) interface. On the left, the Explorer sidebar displays a file tree with the following structure:

- OPEN EDITORS:
  - Chart.yaml
- TEST:
  - templates
    - \_helpers.tpl
    - deployment.yaml
    - service.yaml
  - .gitignore
  - Chart.yaml
- LICENSE
- ReadMe.md
- values.yaml

The Chart.yaml file is selected in both the Explorer and the main editor area. The editor tab bar at the bottom indicates the file is a YAML document with 6 lines, 18 columns, and is saved in UTF-8 encoding.

The main editor area contains the following YAML configuration:

```
apiVersion: v2
name: test
description: Deploy a minimal product-abc deployment on k8s
type: application
version: v0.0.5
appVersion: 0.0.1
```

At the bottom right of the editor, there are status icons for file changes (green checkmark), save (blue circle), and other document status.

The screenshot shows a code editor interface with a dark theme. On the left is a sidebar with icons for Explorer, Open Editors, Test, and other development tools. The main area has two tabs: 'Chart.yaml' and 'values.yaml'. The 'values.yaml' tab is active, displaying the following YAML configuration:

```
! values.yaml
1 componentName: product-abc
2 serviceType: ClusterIP
3
4 imagePullSecrets:
5   - productreg-key
6   - myreg-key
7
8 registries:
9   - name: product
10  | url: productreg.com
11  - name: my-reg
12  | url: myreg/namespace
13
14 runtime:
15  | registry: product
16  | image: product-abc-runtime:tag
17
18 models:
19  - registry: product
20  | image: model1image:tag
21  - registry: product
22  | image: model2image:tag
23  - registry: my-reg
24  | image: mynamespace/mymodel:latest
```

The status bar at the bottom shows the file path 'main', line count 'Ln 24, Col 38', character count 'Spaces: 2', encoding 'UTF-8', line feed 'LF', and file type 'YAML'. There are also icons for search, refresh, and other editor functions.

The screenshot shows the Visual Studio Code interface with the following details:

- Explorer View:** Shows the project structure with files like Chart.yaml, values.yaml, deployment.yaml, \_helpers.tpl, service.yaml, .gitignore, Chart.yaml, LICENSE, ReadMe.md, and values.yaml.
- Editor Tab:** The active tab is "deployment.yaml" located in the "templates" directory. The content of the file is as follows:

```
1  {{- $compName := .Values.componentName -}}
2  ---
3  apiVersion: apps/v1
4  kind: Deployment
5  metadata:
6    name: {{ .Release.Name }}-{{ $compName }}
7    labels:
8      | {{- include "test.labels" (list . $compName) | nindent 4 -}}
9  spec:
10   #replicas: 1 is the default, let's not use it and scale manually, so that kubectl apply does not overwrite this
11   selector:
12     matchLabels:
13       | {{- include "test.selectorLabels" (list . $compName) | nindent 6 -}}
14     progressDeadlineSeconds: 1800
15   strategy:
16     type: RollingUpdate
17     rollingUpdate:
18       maxSurge: 3
19       maxUnavailable: 1
20   template:
21     metadata:
22       | {{- with .Values.podAnnotations -}}
23         annotations:
24           | {{- toYaml . | nindent 8 -}}
25       | {{- end -}}
26     labels:
27       | {{- include "test.selectorLabels" (list . $compName) | nindent 8 -}}
28   spec:
29     volumes:
30       - name: models
31         | emptyDir: {}
32     imagePullSecrets:
33       | {{- range .Values.imagePullSecrets -}}
34         | - name: {{ . }}
35       | {{- end -}}
36     | {{- if .Values.models -}}
37     initContainers:
38       | {{- range $index, $model := .Values.models -}}
39         | {{- $registryName := $model.registry -}}
40         | {{- $image := $model.image -}}
41         - name: model-{{ $index -}}
42           | image: {{- include "test.registries" (list $ registryName $image) | trim | indent 1 -}}
43           | volumeMounts:
44             | - name: models
```

**Bottom Status Bar:** Shows "Ln 71, Col 35 (272 selected)" and "Spaces: 2 UTF-8 LF YAML".

The screenshot shows a code editor interface with a dark theme. On the left is a sidebar with icons for Explorer, Open Editors, Test, and other tools. The main area has tabs for Chart.yaml, values.yaml, deployment.yaml, and service.yaml. The service.yaml tab is active, showing a YAML configuration for a Kubernetes Service.

```
! Chart.yaml      ! values.yaml      ! deployment.yaml      ! service.yaml ×
templates > ! service.yaml
1   {{- $compName := .Values.componentName -}}
2   ---
3   apiVersion: v1
4   kind: Service
5   metadata:
6     name: {{ .Release.Name }}-{{ $compName }}
7   spec:
8     type: {{ .Values.serviceType }}
9     selector: {{- include "test.selectorLabels" (list . $compName) | nindent 4 }}
10    ports:
11      - port: 8080
12        protocol: TCP
13        targetPort: 8080
14        name: rest
15      - port: 8085
16        protocol: TCP
17        targetPort: 8085
18        name: grpc
```

The status bar at the bottom shows the file is main, has 0 changes, and is in YAML format. It also indicates the current line is 18, column 15, with 2 spaces, and the encoding is UTF-8.

```
git-ibm — oc port-forward svc/watson-nlp-watson-nlp -n watson-demo 8085 — 70x38
niklasheidloff@Niklass-MBP git-ibm % YOUR_NAMESPACE=watson-demo
niklasheidloff@Niklass-MBP git-ibm % WATSON_SERVICE=$(oc get services
-n $YOUR_NAMESPACE | grep "watson" | awk '{print $1;}')
niklasheidloff@Niklass-MBP git-ibm % oc port-forward svc/$WATSON_SERVI
CE -n $YOUR_NAMESPACE 8085
Forwarding from 127.0.0.1:8085 -> 8085
Forwarding from [::1]:8085 -> 8085
Handling connection for 8085
```

```
protos — zsh — 83x38
clear
cd protos
grpcurl -plaintext -proto common-service.proto
-d '{
  "raw_document": {
    "text": "It is so easy to embed Watson NLP in applications. Very cool!"
  },
  "parsers": "token"
}' -H 'mm-model-id: syntax_izumo_lang_en_stock' localhost:8085 watson_runtime.NlpSe
rvice.SyntaxPredict
{
  "text": "It is so easy to embed Watson NLP in applications. Very cool!",
  "producerId": {
    "name": "Izumo Text Processing",
    "version": "0.0.1"
  },
  "tokens": [
    {
      "span": {
        "end": 2,
        "text": "It"
      }
    },
    {
      "span": {
        "begin": 3,
        "end": 5,
        "text": "is"
      }
    },
    {
      "span": {
        "begin": 6,
        "end": 8,
        "text": "so"
      }
    },
    {
      "span": {
        "begin": 9,
        "end": 11,
        "text": " "
      }
    }
  ]
}
```

```
git-ibm — oc port-forward svc/watson-nlp-watson-nlp -n watson-demo 8080 — 70x38
niklasheidloff@Niklass-MBP git-ibm % YOUR_NAMESPACE=watson-demo
niklasheidloff@Niklass-MBP git-ibm % WATSON_SERVICE=$(oc get services -n $YOUR_NAMESPACE | grep "watson" | awk '{print $1}')
niklasheidloff@Niklass-MBP git-ibm % oc port-forward svc/$WATSON_SERVICE -n $YOUR_NAMESPACE 8080
Forwarding from 127.0.0.1:8080 -> 8080
Forwarding from [::1]:8080 -> 8080
Handling connection for 8080
```

```
protos — zsh — 83x38
niklasheidloff@Niklass-MBP protos % curl -X POST "http://localhost:8080/v1/watson_runtimes/NlpService/SyntaxPredict" \
-H "accept: application/json" \
-H "grpc-metadata-mm-model-id: syntax_izumo_lang_en_stock" \
-H "content-type: application/json" \
-d " { \"rawDocument\": { \"text\": \"It is so easy to embed Watson NLP in applications. Very cool!\" } }"
{"text":"It is so easy to embed Watson NLP in applications. Very cool!", "producerId": {"name": "Izumo Text Processing", "version": "0.0.1"}, "tokens": [{"span": {"begin": 0, "end": 2, "text": "It"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 3, "end": 5, "text": "is"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 6, "end": 8, "text": "so"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 9, "end": 13, "text": "easy"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 14, "end": 16, "text": "to"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 17, "end": 22, "text": "embed"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 23, "end": 29, "text": "Watson"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 30, "end": 33, "text": "NLP"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 34, "end": 36, "text": "in"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 37, "end": 49, "text": "applications"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 49, "end": 50, "text": "."}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 51, "end": 55, "text": "Very"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 56, "end": 60, "text": "cool"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"span": {"begin": 60, "end": 61, "text": "!"}, "lemma": "", "partOfSpeech": "POS_UNSET", "dependency": null, "features": []}, {"sentences": [{"span": {"begin": 0, "end": 50, "text": "It is so easy to embed Watson NLP in applications. Very cool!"}}], "paragraphs": [{"span": {"begin": 0, "end": 61, "text": "It is so easy to embed Watson NLP in applications. Very cool!"}}]}"
niklasheidloff@Niklass-MBP protos %
```