

Nirmata With Jenkins Overview

Build & Deploy jobs using Jenkins and verify on Nirmata



- So here we are using Jenkins for build and deploy the code with latest build number as shown below:

Move/Copy/Promote

Pod Templates

Full Stage View

Job Config History

SonarQube

Open Blue Ocean

Rename

Maven

Groups

Roles

Schedule Build

Discontin...

gasintegrationmanager-1.0.0-SNAPSHOT-boot.jar106.31 MBview

gasintegrationmanager-1.0.0-SNAPSHOT.jar5.48 MBview

gasintegrationmanager-1.0.0-SNAPSHOT.pom8.08 KBview

Stage View

Average stage times:

| | Declarative: Checkout SCM | Clean Workspace | SCM Checkout | Code Quality Scan | Checkmarx Scan | SonarQube Scan | Quality Gate |
|-----------------------------------|---------------------------|-----------------|--------------|-------------------|----------------|----------------|--------------|
| #17 Jan 11 03:20 No Changes | 8s | 573ms | 37s | 455ms | 2min 54s | 2min 31s | 648ms |
| #16 Jan 08 06:36 1 commit | 8s | 612ms | 7s | 331ms | 3min 14s | 1min 50s | 704ms |

SonarQube Quality Gate

Here now inside the Jenkins there are three branches like suppose if we are going to build and deploy the code inside the Production Environment then we are using here master branch and if we are going to move the code inside the non-prod environments then we have to build and deploy inside the trunk branch as shown below:

enkins > EntController2 > Gas Apps > Gas Integration Manager > Delivery > Build >

NEW ITEM

Delete Folder

People

Build History

Project Relationship

Check File Fingerprint

Controlled Agents

Groups

Roles

Move/Copy/Promote

All +

| S | W | Name ↓ | Last Success | Last Failure | Last Duration | Fav |
|-----|---|--|-----------------|-----------------|---------------|-------|
| ! | ☀ | build-gasops-gim-GasIntegrationManager-master | 11 days #1 | N/A | 13 min | ▶ ☆ 📅 |
| ... | ☀ | build-gasops-gim-GasIntegrationManager-Release | N/A | N/A | N/A | ▶ ☆ 📅 |
| ! | ☁ | build-gasops-gim-GasIntegrationManager-trunk | 4 days 6 hr #17 | 7 days 3 hr #15 | 6 min 56 sec | ▶ ☆ 📅 |

Icon: S M L Icon legend 📡 Atom feed for all 📡 Atom feed for failures 📡 Atom feed for just latest builds

Now the next step is to build and deploy the job using Jenkins once the code got deployed we have to verify the latest build number inside the Nirmata so here we are find the lasttest build with snapshot number this signifiace like pod id running and it got updated once it get updated we are able to see that timestamp in the pod as shown below:

Workloads

Catalogs

Helm Charts

Environments

Running

Resources

Workloads

Pod

gasops-gim-dev-f5d96f445-bdlnq

▶

✓

PodScheduled

4 days ago

▶

✓

Ready

4 days ago

▶

✓

ContainersReady

4 days ago

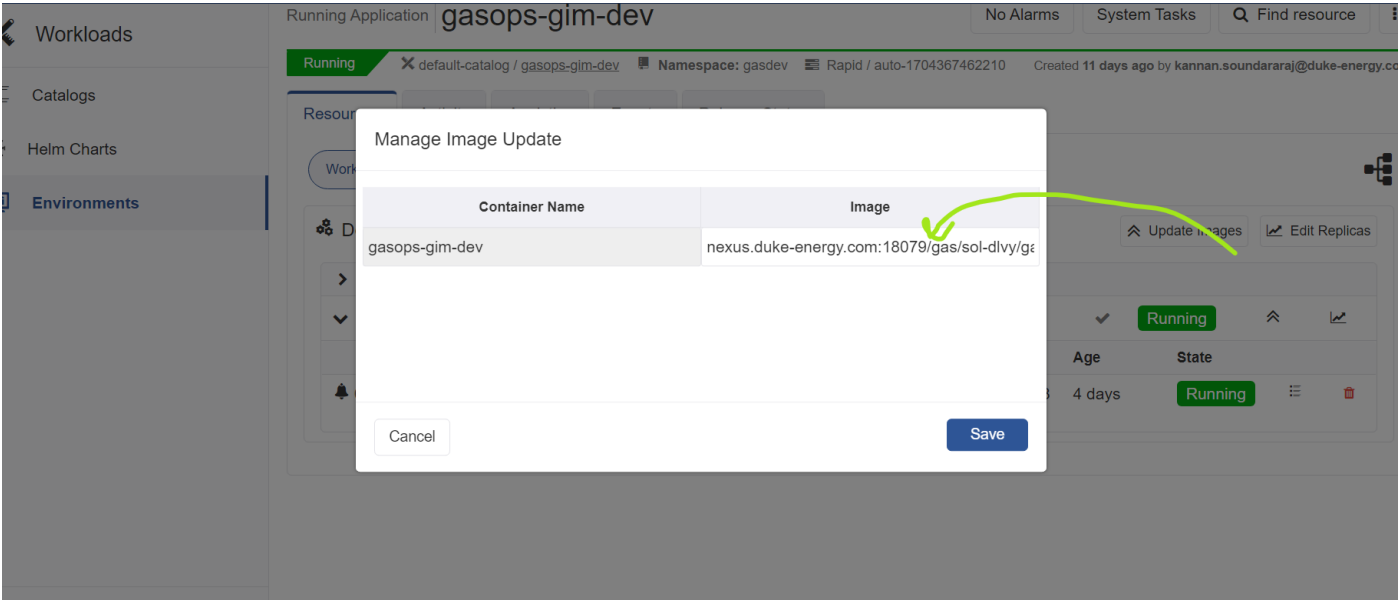
Init Containers

| Name | Image | Restarts | State |
|--|-------|----------|-------|
| <div><div></div><div>No Containers</div></div> | | | |

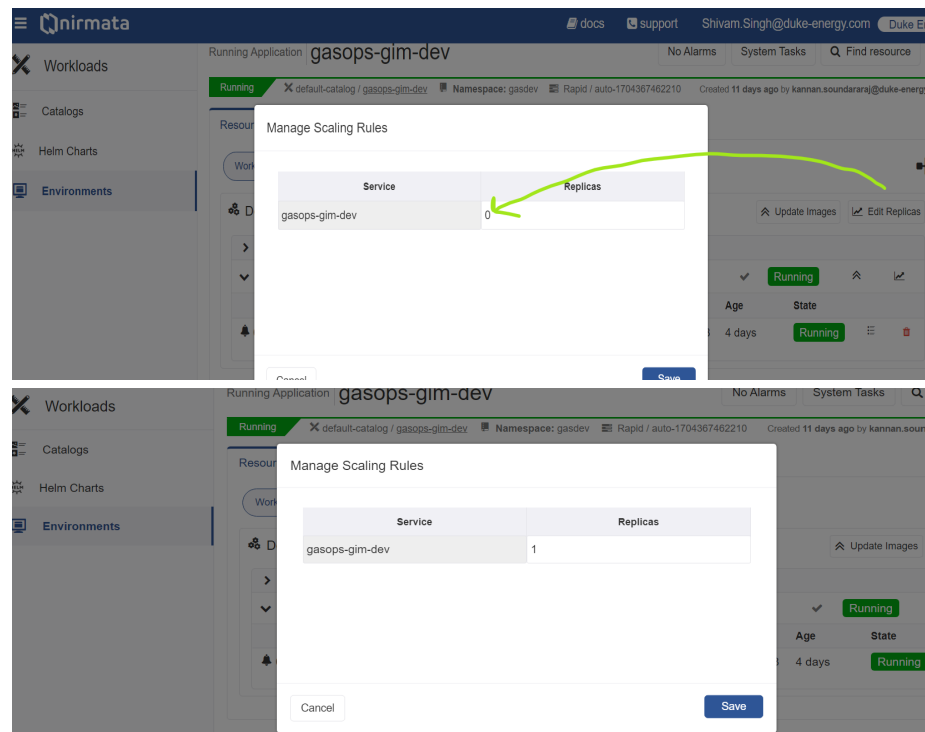
Containers

| Name | Image | Restarts | State |
|----------------|--|----------|---------|
| gasops-gim-dev | nexus.duke-energy.com:18079/gas/sol-dlvy/gasintegrationmanager:1.0.0-SNAPSHOT-17 | 0 | Running |

So Now let us suppose for some reason this Niramata Pod is not getting updated with latest build number which is having inside the Snapshot so what we have to do we have to manually do it by update the image first we have to click on Update Images and then inside the image URL scroll till last and there we find the build number with snapshot there we can replace the latest build number from Jenkins as shown below:



So here is like sometimes image got updated with latest build number but the pod is not getting restarted so that is the reason it is not reflecting under pod so for that issue we have to click on Edit Replicas then we have to put 0 and click on save so what it will do it will delete the current pod and then again if we put 1 then it will create the new service pod as shown below:



- So here like if all these steps are not working like EditReplica & UpdatesImage then at last we have to follow another process is deleting the current application in order to update the latest build number pod so we will discuss on step by step as shown below:

The screenshot shows the Nirmata web interface. The top navigation bar includes the Nirmata logo, links for docs, support, and a user profile (Shivam.Singh@duke-energy.com). The left sidebar contains navigation options: Workloads, Catalogs, Helm Charts, and Environments. The main content area displays the 'gasops-gim-dev' application, which is in a 'Running' state. A green circle highlights the 'Delete Application' option in the application's menu. Below the application details, there is a table showing the deployment and pod status.

| Resource | Kind | Pods | State Changed | | | |
|--------------------------------|------------|----------|----------------|----------------|--------|---------|
| gasops-gim-dev | Deployment | 1/1 | 11 days ago | | | |
| Pod | Ready | Restarts | IP | Node | Age | State |
| gasops-gim-dev-f5d96f445-bdlmq | 1/1 | 0 | 148.152.171.43 | ycncdcpent1d08 | 4 days | Running |

Step 1 : So here we can view like after deleting the application this gasops-gim-dev is not visible inside the Environments under Applications as shown below:

nirmata

docs

support

Shivam.Singh@duke-energy.com

Duke Energy

Workloads

Catalogs

Helm Charts

Environments

« Return to environments list

Environment gasdev

No Alarms

System Tasks

+ Run Application

Created 5 years ago by ritu.sharma@duke-energy.com

Applications

Other Resources

Analytics

Activity

Settings

Q search

→

| Running Application | Pods | Application | Created | State |
|-------------------------|------|-------------------------|--|---------|
| gas-gir-dev | 0 | gas-gir-dev | 5 years ago (by sal.padilla@duke-energy.com) | Running |
| gasops-traceability-dev | 1 | gasops-traceability-dev | a year ago (by kannan.soundararaj@duke-energy.com) | Running |

Step 2: Now here After deleting the application we have to click on Catalogs and then choose as default-catalog option as shown below:

The screenshot shows the Nirmata web interface. The left sidebar contains navigation links: Workloads, Catalogs (highlighted with a green line), Helm Charts, and Environments. The main content area is titled 'Catalogs' and includes a search bar, a '+ Add Catalog' button, and a 'Recently Visited Applications' section. Below this, there is a 'Catalog' section with a search bar and a filter dropdown set to 'Created by: Any user'. Three catalog cards are displayed: 'damage-billing-ea1qa-catalog' (0 Applications, Owner: ritu.sharma@duke-energy.com), 'default-catalog' (135 Applications, Owner: Nirmata), and 'gasCatalog' (1 Applications, Owner: ritu.sharma@duke-energy.com). A green arrow points from the 'Catalogs' link in the sidebar to the 'default-catalog' card, which has a red vertical bar on its left side, indicating it is the selected default catalog.

Catalogs

Find Application Add Catalog

Recently Visited Applications

gasops-gim-dev
Catalog: default-catalog

Catalog

search → Created by: Any user

| Catalog Name | Applications | Owner |
|------------------------------|-------------------------|-----------------------------|
| damage-billing-ea1qa-catalog | 0 Applications | ritu.sharma@duke-energy.com |
| default-catalog | 135 Applications | Nirmata |
| gasCatalog | 1 Applications | ritu.sharma@duke-energy.com |

Step 3: So now here we have to search for gim and click on gasops-gim-dev as shown below:

✕ Workloads

Catalogs

Helm Charts

Environments

« Return to catalogs list

Catalog default-catalog

+ Add Application

Created 4 years ago b

ApplicationsActivitySettings

Q gim✕➔

| | Application | Workloads | Services | Created | Running |
|--|-----------------|-----------|----------|--------------------------|---------|
| | gasops-gim-dev | 1 | 1 | 4 years ago (by Nirmata) | |
| | gasops-gim-test | 1 | 1 | 4 years ago (by Nirmata) | 1 |

Step 4: And then after entering into the gasops-gim-dev page then we have to choose our latest snapshot build number from the dropdown box as shown below:

The screenshot shows the 'Edit Container gasops-gim-dev' dialog in the Nirmata interface. The 'General' tab is active, and the 'Tag' dropdown is open, displaying a list of snapshot versions. The version '1.0.0-SNAPSHOT-17' is highlighted, indicating it is the latest build number.

Container Name*

gasops-gim-dev

Image*

nexus.duke-energy.com:18079/gas/sol-divvy/gasintegrationmanager

Image Pull Policy

IfNotPresent

Ports

| Port Name | Port Type | Port |
|-----------|-----------|------|
| http | TCP | 8080 |

+ Add item

Cancel

Tag

- 1.0.0-SNAPSHOT-12
- 1.0.0-SNAPSHOT-14
- 1.0.0-SNAPSHOT-16
- 1.0.0-SNAPSHOT-17
- 1.0.0-SNAPSHOT-2
- 1.0.0-SNAPSHOT-6
- 1.0.0-SNAPSHOT-7

Step 5: No after that hit on Run Application as shown below:

Nirmata | docs | support | Shivam.Singh@duke-energy.com | Duke Energy

Catalog / Application / gasops-gim-dev / gasops-gim-dev

Catalog Deployment **gasops-gim-dev** Run Application

Created 4 years ago by Nirmata

Deployment

Replicas: 1
Revision History Limit: 5
Minimum Ready Seconds: ---
Progress Deadline: ---
Seconds: ---
Strategy: RollingUpdate
Max Surge: 1
Max Unavailable: 0

Services

| Name | Type |
|----------------|-----------|
| gasops-gim-dev | ClusterIP |

Pod Template

Service Account: ---
Hostname: ---
Restart Policy: ---
Grace Period (Seconds): 30
DNS Policy: ---
Priority Class: ---

Add Init Containers

Containers

| Name | Image | Ports |
|------|-------|-------|
|------|-------|-------|

Step 6 : Now here select this checkbox and from the Environments choose as gasdev as shown below:

The screenshot displays the Nirmata web interface. The top navigation bar includes the Nirmata logo, a menu icon, and links for 'docs', 'support', and the user 'Shivam.Singh@duke-energy.'. The left sidebar contains navigation items: 'Workloads', 'Catalogs', 'Helm Charts', and 'Environments'. The main content area is titled 'Run Application gasops-gim-dev' and shows the following configuration options:

- Run Name***: A text input field containing 'gasops-gim-dev'.
- ☒ **Create a new version for this application ?**
- Environments**: A dropdown menu with 'gasdev' selected.

A green circle highlights the 'Run Name' field, the 'Create a new version' checkbox, and the 'Environments' dropdown. Below these fields are links for 'More Options...', 'Cancel', and a blue 'Run' button.

Step 7 : Now finally we are able to see this service got created as shown below:

The screenshot shows the Kubernetes dashboard interface. On the left, there is a sidebar with navigation links: Workloads, Catalogs, Helm Charts, and Environments. The main panel displays the 'gasops-gim-dev' application, which is in a 'Running' state. The application is located in the 'gasdev' namespace. The 'Running' status is indicated by a green bar at the top of the application details. Below this, there are tabs for Resources, Activity, Analytics, Events, and Release Status. The 'Resources' tab is selected, showing a table of Deployments, StatefulSets, and DaemonSets. The table has columns for Resource, Kind, Pods, and State Changed. A single deployment, 'gasops-gim-dev', is listed with 1/1 pods. A green circle highlights the pod details, showing the pod name 'gasops-gim-dev-549bfb6b5-4k80k', its IP address '148.152.171.72', the node 'ycn0dcpcnt1d08', and its state 'Running'.

| Resource | Kind | Pods | State Changed |
|----------------|------------|------|---------------|
| gasops-gim-dev | Deployment | 1/1 | 2 minutes ago |

| Pod | Ready | Restarts | IP | Node | Age | State |
|--------------------------------|-------|----------|----------------|----------------|-----------|---------|
| gasops-gim-dev-549bfb6b5-4k80k | 1/1 | 0 | 148.152.171.72 | ycn0dcpcnt1d08 | 2 minutes | Running |

Step 8 : Now finally from here we can check the logs as well that application got started or not as shown below:



The screenshot displays a logging application window with a toolbar at the top containing buttons for 'Start Logging', 'Stop Logging', 'Download Logs', 'Clear Logs', and 'Change settings...'. It also shows filters for 'Since: Last 10 minutes', 'Tail: 200', 'Follow: false', and a 'Click "Start" button to stream container logs' option. The main area contains a large block of log text, including SQL queries, Hibernate messages, and application logs from 'com.dukeenergy.gim.scheduler.arm.ARMCreateWoScheduler' and 'com.dukeenergy.gim.scheduler.smt.SMTScheduler'. The logs indicate successful processing of records and the completion of various tasks.

```
as Step55_37_0, this.Step2_Status as Step56_37_0, this.Step3_Status as Step57_37_0, this.Step4_Status as Step58_37_0, this.Step5_Status as Step59_37_0, this.Step6_Status as Step60_37_0, this.Step7_Status as Step61_37_0, this.Step8_Status as Step62_37_0, this.Street_Nm as Street_63_37_0, this.Target_Start_Dt as Target_64_37_0, this.Task_Dependency_Cd as Task_De65_37_0, this.Unit_Num as Unit_Nu66_37_0, this.Url_Nm as Url_Nm67_37_0, this.Work_Order_Desc as Work_Or68_37_0, this.Work_Order_Long_Description as Work_Or69_37_0, this.Work_Order_Num as Work_Or70_37_0, this.Work_Order_Status as Work_Or71_37_0, this.Zip_Code as Zip_Cod72_37_0 from SMT_Integration this_ where this_.RequestStatus=?
Hibernate: select this_.ARM_Integration_Id as ARM_Intel1_11_0, this_.Create_Ts as Create_T2_11_0, this_.Create_User_Id as Create_U3_11_0, this_.Last_Modified_User_Id as Last_Mod4_11_0, this_.Update_Ts as Update_T5_11_0, this_.Target_Finish_Dt as Target_F6_11_0, this_.ADD_CU_Step_Status as ADD_CU_S7_11_0, this_.ARM_Wr_NUM as ARM_Wr_N8_11_0, this_.Change_By_Nm as Change_B9_11_0, this_.City_Nm as City_Nm10_11_0, this_.County_Nm as County_11_11_0, this_.CUE_Estimate_Num as CUE_Est12_11_0, this_.GET_WO_Step_Status as GET_WO_13_11_0, this_.Job_Plan_Nm as Job_Pla14_11_0, this_.Latitude as Latitud15_11_0, this_.Line_Of_Business_Cd as Line_Of16_11_0, this_.Local_District_Code as Local_D17_11_0, this_.Longitude as Longitu18_11_0, this_.Opportunity_Id as Opportu19_11_0, this_.Owner_Group as Owner_G20_11_0, this_.Process_Cd as Process21_11_0, this_.Reported_By as Reporte22_11_0, this_.Reported_By_Application_Name as Reporte23_11_0, this_.RequestStatus as Request24_11_0, this_.ResponseStatus as Respons25_11_0, this_.Service_Area_Cd as Service26_11_0, this_.Service_Sub_Area as Service27_11_0, this_.Site_Nm as Site_Nm28_11_0, this_.Site_Precaution_Comments as Site_Pr29_11_0, this_.State_Province_Nm as State_P30_11_0, this_.Status_Memo as Status_31_11_0, this_.Street_Nm as Street_32_11_0, this_.Target_Start_Dt as Target_33_11_0, this_.TaskworkOrderNum as Taskwor34_11_0, this_.Unit_Num as Unit_Nu35_11_0, this_.Update_WO_Step_Status as Update_36_11_0, this_.WO_Create_Step_Status as WO_Crea37_11_0, this_.Work_Order_Desc as Work_Or38_11_0, this_.Work_Order_Long_Description as Work_Or39_11_0, this_.Work_Order_Num as Work_Or40_11_0, this_.Work_Order_Status as Work_Or41_11_0, this_.Work_SubType_Cd as Work_Su42_11_0, this_.Work_Type_Cd as Work_Ty43_11_0, this_.Zip_Code as Zip_Cod44_11_0 from ARM_Integration this_ where this_.Work_Order_Num is not null and (this_.Work_Order_Status<>? or this_.Work_Order_Status is null)
Hibernate: update ARM_Scheduler_Control set Create_User_Id=?, Last_Modified_User_Id=?, Update_Ts=?, Data_Curr_Start_Date=?, Data_LastRun_Records_Processed=?, Data_Run_Status=?, Max_Records_Per_Run=?, Scheduler_Desc=?, Scheduler_Name=?, Scheduler_Type_Cd=?, Total_Records_Processed=? where ARM_Scheduler_Control_Id=?
[DEBUG] 2024-01-15 11:34:00,623 com.dukeenergy.gim.scheduler.arm.ARMCreateWoScheduler - ScheduleProcessCreateWOARMRequests ProcessedRecordCtr Count::: 0
[DEBUG] 2024-01-15 11:34:00,624 com.dukeenergy.gim.scheduler.arm.ARMCreateWoScheduler - finished scheduleProcessCreateWOARMRequests()
Hibernate: update SMT_Scheduler_Control set Create_User_Id=?, Last_Modified_User_Id=?, Update_Ts=?, Data_Curr_Start_Date=?, Data_LastRun_Records_Processed=?, Data_Run_Status=?, Max_Records_Per_Run=?, Scheduler_Desc=?, Scheduler_Name=?, Scheduler_Type_Cd=?, Total_Records_Processed=? where SMT_Scheduler_Control_Id=?
[DEBUG] 2024-01-15 11:34:00,633 com.dukeenergy.gim.scheduler.smt.SMTScheduler - finished scheduleProcessSMTRequests()
Hibernate: update ARM_Scheduler_Control set Create_User_Id=?, Last_Modified_User_Id=?, Update_Ts=?, Data_Curr_Start_Date=?, Data_LastRun_Records_Processed=?, Data_Run_Status=?, Max_Records_Per_Run=?, Scheduler_Desc=?, Scheduler_Name=?, Scheduler_Type_Cd=?, Total_Records_Processed=? where ARM_Scheduler_Control_Id=?
[DEBUG] 2024-01-15 11:34:00,728 com.dukeenergy.gim.scheduler.arm.ARMGetWoStatusScheduler - scheduleProcessGetWoStatus processedRecordCtr Count::: 0
[DEBUG] 2024-01-15 11:34:00,730 com.dukeenergy.gim.scheduler.arm.ARMGetWoStatusScheduler - finished scheduleProcessGetWoStatus()
```