

ExecuteScript Processor

– Why ExecuteScript Processor

Some functionalities can't be done natively can be done by this processor

Comparatively easy than building custom processor

Supports wide variety of programming languages to code

ExecuteScript

 **ExecuteScript**
ExecuteScript 1.15.3
org.apache.nifi - nifi-scripting-nar

In 0 (0 bytes)
Read/Write 0 bytes / 0 bytes
Out 0 (0 bytes)
Tasks/Time 0 / 00:00:00.

Configure Processor | ExecuteScript 1.15.3

⚠ Invalid

SETTINGS **SCHEDULING** **PROPERTIES** **COMMENTS**

Required field

Property	Value	
Script Engine	?	Clojure
Script File	?	No value set
Script Body	?	No value set
Module Directory	?	No value set

ExecuteScript

Configure Processor | ExecuteScript 1.15.3

! Invalid

SETTINGS

SCHEDULING

PROPERTIES

COMMENTS

Required field



Property

Script Engine

Script File

Script Body

Module Directory

Clojure

Clojure

ECMAScript

Groovy

lua

python

ruby

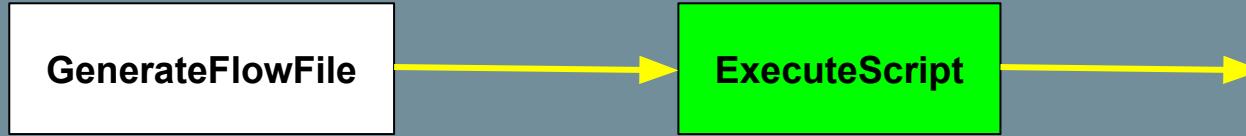
Reference parameter...

CANCEL

APPLY

Basics of writing script In ExecuteScript Processor

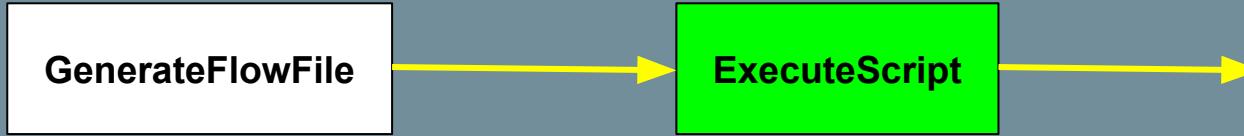
Just transferring flowfiles



```
def flowfile = session.get();
```

```
session.transfer(flowfile, REL_SUCCESS);
```

Just transferring flowfiles



```
def flowfile = session.get();
```

```
If (flowfile == null){  
    return;  
}
```

```
session.transfer(flowfile, SUCCESS);
```

Just transferring flowfiles

Configure Processor | ExecuteScript 1.15.3

Stopped

SETTINGS SCHEDULING PROPERTIES COMMENTS

Required field

Property	Value
Script Engine	Groovy
Script File	No value set
Script Body	
Module Directory	No value

EL Ø PARAM ✓

```
1 def flowfile = session.get();
2 if (flowfile == null ) {
3     return;
4 }
5
6 session.transfer(flowfile, REL_SUCCESS)
```

Set empty string

CANCEL OK

CANCEL APPLY

– ExecuteScript Processor

```
def flowfile = session.get()  
  
if (flowfile == null) {  
    return;  
}  
  
// business logic here  
  
session.transfer(flowfile, REL_SUCCESS)
```

Business logic

Configure Processor | ExecuteScript 1.15.3

Stopped

SETTINGS SCHEDULING PROPERTIES COMMENTS

Required field

Property	Value
Script Engine	Groovy
Script File	No value set
Script Body	
Module Directory	No value set

EL Ø PARAM ✓

```
1 def flowfile = session.get();
2 if (flowfile == null ) {
3     return;
4 }
5
6 // business logic here
7
8 session.transfer(flowfile, REL_SUCCESS)
```

Set empty string

CANCEL OK

CANCEL APPLY

– ExecuteScript Processor

```
def flowfile = session.get()

if (flowfile == null) {
    return;
}

// reading flowfile content
def text = "";

session.read
  ( flowFile,
    { inputStream -> text = IOUtils.toString(inputStream, StandardCharsets.UTF_8) }
      as InputStreamCallback
  )

session.transfer(flowfile, REL_SUCCESS)
```

– Concatenation

```
def text = "";  
  
session.read  
( flowFile,  
  { inputStream -> text = IOUtils.toString(inputStream, StandardCharsets.UTF_8) }  
  as InputStreamCallback  
)
```

```
def result = text.concat(" From NiFi Course")
```

```
session.transfer(flowfile, REL_SUCCESS)
```

– Writing to FlowFile

```
def text = "";  
  
session.read  
( flowFile,  
  { inputStream -> text = IOUtils.toString(inputStream, StandardCharsets.UTF_8) }  
    as InputStreamCallback  
)  
  
def result = text.concat(" From NiFi Course")  
// writing to flowfile  
  
flowfile = session.write  
( flowFile,  
  { outputStream -> outputStream.write(result.getBytes( StandardCharsets.UTF_8)) }  
    as OutputStreamCallback  
)  
  
session.transfer(flowfile, REL_SUCCESS)
```

Putting All

EL Ø PARAM ✓

```
1 import org.apache.commons.io.IOUtils
2 import java.nio.charset.StandardCharsets
3
4 def flowfile = session.get();
5 if (flowfile == null ) {
6     return;
7 }
8
9 // business logic here
10
11 def text = ""
12
13 // reading flowfile content
14 // and storing into text variable
15 session.read(flowfile, {
16     inputstream -> text = IOUtils.toString(inputstream, StandardCharsets.UTF_8)
17 } as InputStreamCallback)
18
19 // performing concatenation
20 def concatenatedString = text.concat(" From NiFi Course")
21
22 // writing concatenated string to flowfile
23 flowfile = session.write(flowfile, {outputStream ->
24     outputStream.write(concatenatedString.getBytes(StandardCharsets.UTF_8))
25 } as OutputStreamCallback)
26
27 // transfer flowfile
28 session.transfer(flowfile, REL_SUCCESS)
```

Set empty string

CANCEL

OK

Monitoring NiFi

– Monitoring NiFi

- **Inline Monitoring**
 - NiFi Canvas Summary Page
 - Reporting Task
- **External Monitoring**
 - With Grafana, Prometheus etc

NiFi - Inline Monitoring

NiFi Global Menu



0 / 0 bytes

0

0

0

0

0

0

0

0

0

0

0

0

07:33:25 UTC



Global Menu



Navigate



Operate

 NiFi Flow
Process Group

e9dbe542-017c-1000-684b-79de2a1c96f4





0 2 / 72 bytes 0 1 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0 23:57:43 IST

Navigate



Operate

Move File
Process Group

8520a736-017c-1000-ed4c-8a14ebba3dcc



■ GetFile
GetFile 1.14.0
org.apache.nifi - nifi-standard-nar

In	0 (0 bytes)	5 min
Read/Write	0 bytes / 0 bytes	5 min
Out	0 (0 bytes)	5 min
Tasks/Time	0 / 00:00:00.000	5 min

Name success
Queued 0 (0 bytes)



► UpdateAttribute
UpdateAttribute 1.14.0
org.apache.nifi - nifi-update-attribute-nar

In	0 (0 bytes)	5 min
Read/Write	0 bytes / 0 bytes	5 min
Out	0 (0 bytes)	5 min
Tasks/Time	0 / 00:00:00.000	5 min

Name success
Queued 1 (36 bytes)



■ PutFile
PutFile 1.14.0
org.apache.nifi - nifi-standard-nar

In	0 (0 bytes)	5 min
Read/Write	0 bytes / 0 bytes	5 min
Out	0 (0 bytes)	5 min
Tasks/Time	0 / 00:00:00.000	5 min

Name success
Queued 1 (36 bytes)

► Data Out

- Summary
- Counters
- Bulletin Board
- Data Provenance
- Controller Settings
- Parameter Contexts
- Flow Configuration History
- Node Status History
- Templates
- Help
- About

Global Menu Dialog

 Summary

 23 Counters

 Bulletin Board

 Data Provenance

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Parameter Contexts

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 Templates

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 About

Summary of
the canvas

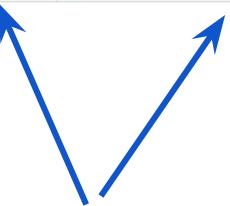
NiFi Summary

PROCESSORS INPUT PORTS OUTPUT PORTS REMOTE PROCESS GROUPS CONNECTIONS PROCESS GROUPS

Displaying 4 of 4

Filter by name ▾

Name	Type	Process Group	Run Status	In (Size) 5 min	Read Write 5 min	Out (Size) 5 min	Tasks Time 5 min	
GetFile	GetFile	Move File	Stopped	0 (0 bytes)	0 bytes 0 bytes	0 (0 bytes)	0 00:00:00.000	→ ↴
PublishKafkaRecord_1_0	PublishKafkaRecord_1_0	Kafka Push	Invalid	0 (0 bytes)	0 bytes 0 bytes	0 (0 bytes)	0 00:00:00.000	→ ↴
PutFile	PutFile	Move File	Stopped	0 (0 bytes)	0 bytes 0 bytes	0 (0 bytes)	0 00:00:00.000	→ ↴
UpdateAttribute	UpdateAttribute	Move File	Running	0 (0 bytes)	0 bytes 0 bytes	0 (0 bytes)	0 00:00:00.000	→ ↴



All Processors
that exist on
canvas

Sort the column



Last updated: 00:33:43 IST

system diagnostics

NiFi Summary

[INPUT PORTS](#)[OUTPUT PORTS](#)[REMOTE PROCESS GROUPS](#)[CONNECTIONS](#)[PROCESS GROUPS](#)

Displaying 1 of 1

Filter by name ▾

Name	Run Status	Out (Size) 5 min
Data In	⚠ Invalid	0 (0 bytes)



All Input Ports

Last updated: 00:33:43 IST

system diagnostics

NiFi Summary



(1)

(2)

PROCESSORS

INPUT PORTS

OUTPUT PORTS

REMOTE PROCESS GROUPS

CONNECTIONS

PROCESS GROUPS

Displaying 1 of 1

Filter

by name



Name	Run Status	In (Size) 5 min
Data Out	⚠ Invalid	0 (0 bytes)



All Output Ports



Last updated: 00:33:43 IST

system diagnostics

NiFi Summary



PROCESSORS INPUT PORTS OUTPUT PORTS REMOTE PROCESS GROUPS CONNECTIONS PROCESS GROUPS

Displaying 0 of 0

Filter by name ▾

Name ▾	Target URI	Transmitting	Sent (Size) 5 min	Received (Size) 5 min
--------	------------	--------------	-------------------	-----------------------

Last updated: 00:33:43 IST

system diagnostics

NiFi Summary

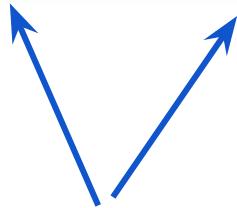


PROCESSORS
INPUT PORTS
OUTPUT PORTS
REMOTE PROCESS GROUPS
CONNECTIONS
PROCESS GROUPS

Displaying 4 of 4

Filter by source ▾

Name	Queue (Size)	Threshold %: Queue Size	In (Size) 5 min	From Source ▾	Out (Size) 5 min	To Destination	
Empty string set	0 (0 bytes)	0% 0%	0 (0 bytes)	Data In	0 (0 bytes)	PublishKafkaRecord_1_0	→ ↗
success	0 (0 bytes)	0% 0%	0 (0 bytes)	GetFile	0 (0 bytes)	UpdateAttribute	→ ↗
success	1 (36 bytes)	0% 0%	0 (0 bytes)	PutFile	0 (0 bytes)	Data Out	→ ↗
success	1 (36 bytes)	0% 0%	0 (0 bytes)	UpdateAttribute	0 (0 bytes)	PutFile	→ ↗



All connection
queues between
processors

Last updated: 00:33:43 IST

system diagnostics

NiFi Summary

Processors

Input Ports

Output Ports

Remote Process Groups

Connections

Process Groups

Displaying 3 of 3

Filter by name

Name	Version	State	Transferred (Size) 5 min	In (Size) 5 min	Read Write 5 min	Out (Size) 5 min	Sent (Size) 5 min	Received (Size) 5 min	
Kafka Push	1.0	Active	0 (0 bytes)	0 (0 bytes)	0 bytes 0 bytes	0 (0 bytes)	0 (0 bytes)	0 (0 bytes)	→ ↗
Move File	1.0	Active	0 (0 bytes)	0 (0 bytes)	0 bytes 0 bytes	0 (0 bytes)	0 (0 bytes)	0 (0 bytes)	→ ↗
NiFi Flow	1.0	Active	0 (0 bytes)	0 (0 bytes)	0 bytes 0 bytes	0 (0 bytes)	0 (0 bytes)	0 (0 bytes)	→ ↗

Root Process Group

Last updated: 00:40:04 IST

NiFi Flow » Move File

System Resource Information

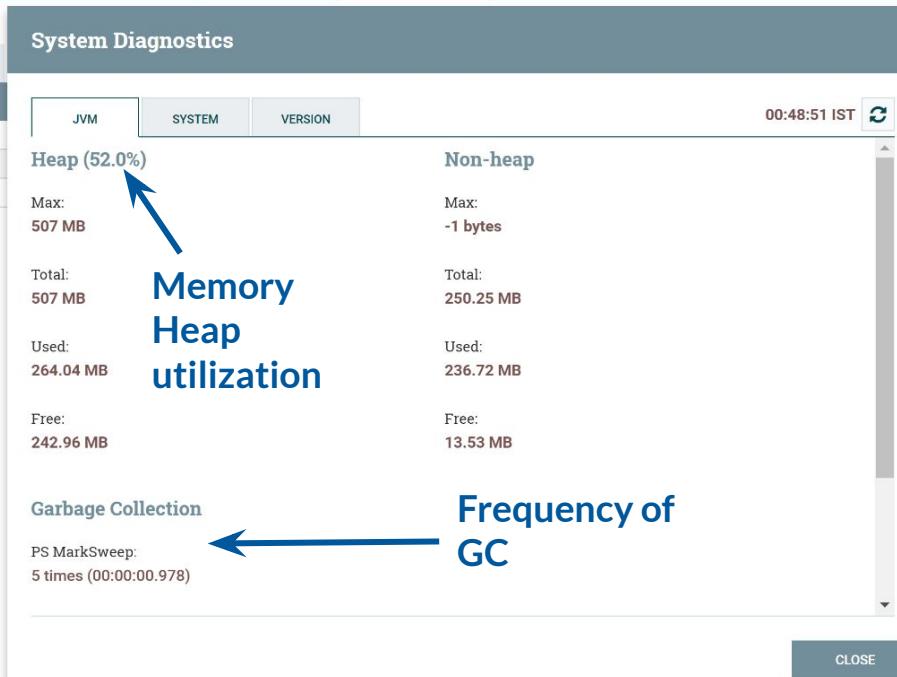
system diagnostics

NiFi Summary



Displaying 3 of 3

Name	Version	State
Kafka Push		
Move File		
NiFi Flow		



Last updated: 00:40:04 IST

system diagnostics

NiFi Summary



PROCESSORS

INPUT PORTS

OUTPUT PORTS

REMOTE PROCESS GROUPS

CONNECTIONS

PROCESS GROUPS

Displaying 3 of 3

Filter

by name

Name	Version	State
Kafka Push		
Move File		
NiFi Flow		

System Diagnostics

About CPU

JVM

SYSTEM

VERSION

00:48:51 IST



Available Cores:

12

Core Load Average:

-1.00

FlowFile Repository Storage

Usage:

10% (97.64 GB of 951.79 GB)

Content Repository Storage

Usage For Default:

10% (97.64 GB of 951.79 GB)

Repository size

CLOSE



Last updated: 00:40:04 IST

system diagnostics

NiFi Summary



Displaying 3 of 3

Filter

by name

Name	Version	State
Kafka Push		
Move File		
NiFi Flow		

System Diagnostics

JVM

SYSTEM

VERSION

00:48:51 IST



5 min

Received (Size) 5 min

(s)	0 (0 bytes)	→ ↘
(s)	0 (0 bytes)	→ ↘
(s)	0 (0 bytes)	→ ↘

NiFi

NiFi Version 1.14.0
Tag nifi-1.14.0-RC2
Build Date/Time 07/10/2021 12:25:36 IST
Branch UNKNOWN
Revision fcbf1d5

Java

Version 1.8.0_202
Vendor Oracle Corporation

Operating System

Name Windows 10
Version 10.0
Architecture amd64

CLOSE



Last updated: 00:40:04 IST

system diagnostics

 Summary

 23 Counters

 Bulletin Board

 Data Provenance

 Controller Settings

Parameter Contexts

 Flow Configuration History

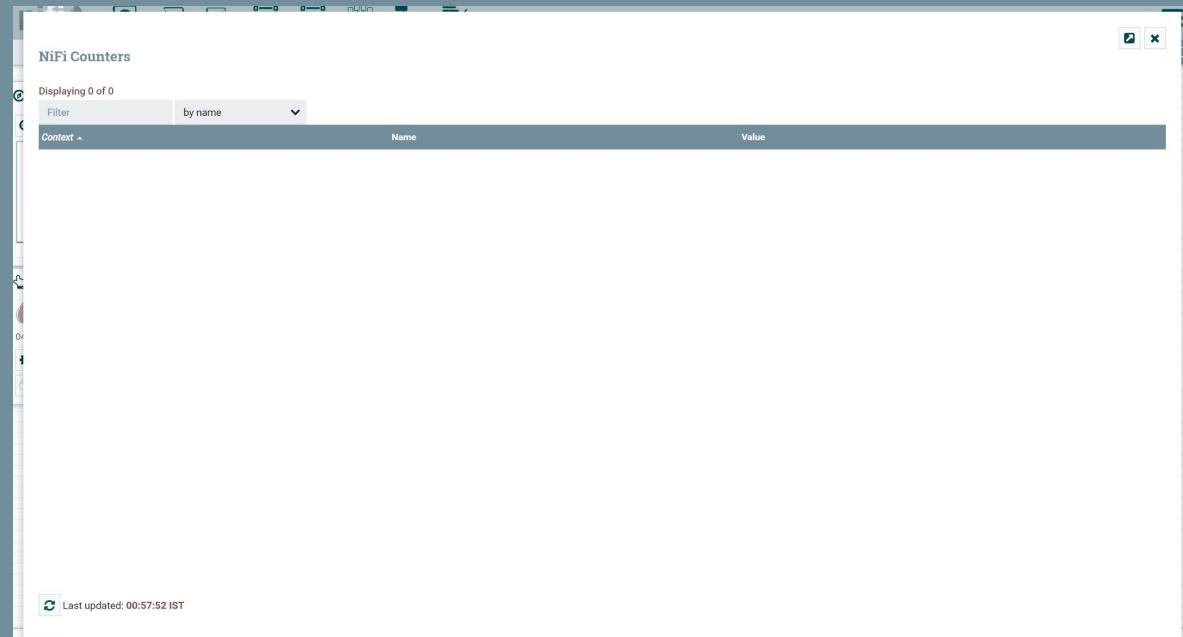
 Node Status History

 Templates

 Help

 About

Useful of keeping track of
flowfiles count when said



 Summary

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 Flow Configuration History

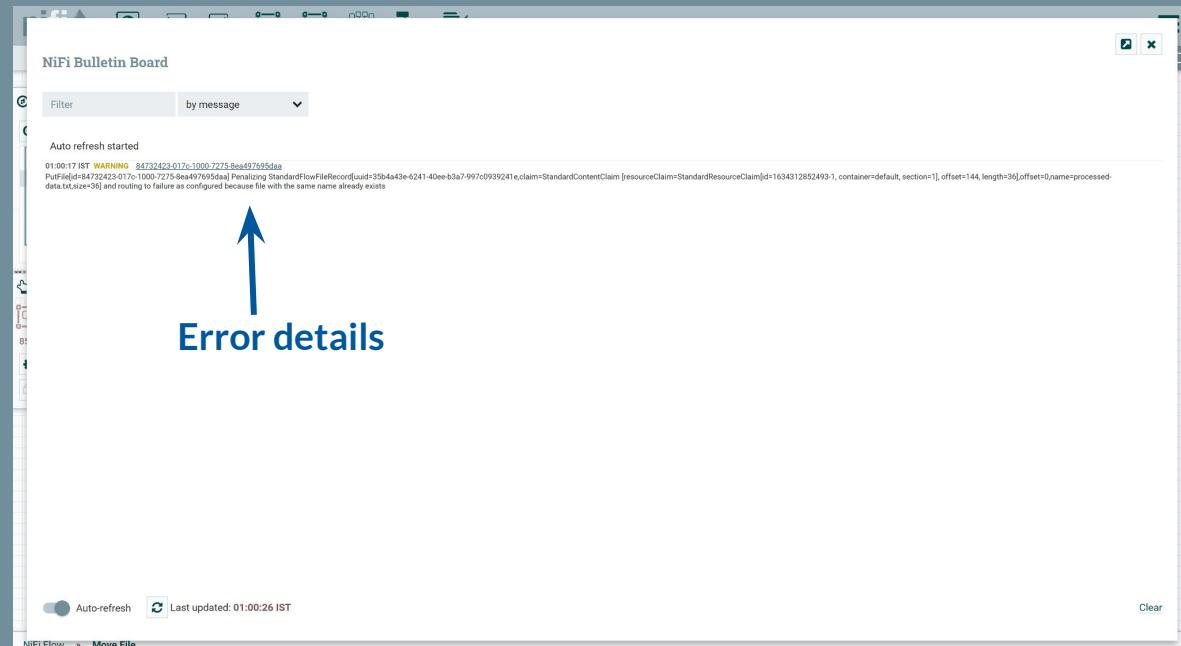
 Node Status History

 Templates

 Help

 About

All errors from processors
are show here



 Summary

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Data journey within Dataflow

NiFi Data Provenance

Displaying 148 of 148
Oldest event available: 10/04/2021 11:54:58 IST

Showing the most recent events.

Provenance Events

Date/Time	Type	FlowFile Uuid	Size	Component Name	Component Type
10/29/2021 15:43:48.846 IST	DOWNLOAD	64759d51-49ad-4a07-85ef-feb1ea1c...	487 bytes	No value set	NiFi Flow
10/29/2021 15:43:48.611 IST	DOWNLOAD	64759d51-49ad-4a07-85ef-feb1ea1c...	487 bytes	No value set	NiFi Flow
10/27/2021 18:48:58.070 IST	DOWNLOAD	64759d51-49ad-4a07-85ef-feb1ea1c...	487 bytes	No value set	NiFi Flow
10/27/2021 18:48:55.240 IST	DOWNLOAD	64759d51-49ad-4a07-85ef-feb1ea1c...	487 bytes	No value set	NiFi Flow
10/27/2021 12:05:50.224 IST	DOWNLOAD	5dcdbda85c7e-a473-b629-688a44883...	487 bytes	No value set	NiFi Flow
10/27/2021 12:03:46.651 IST	DOWNLOAD	5dcdbda85c7e-a473-b629-688a44883...	487 bytes	No value set	NiFi Flow
10/27/2021 12:03:26.261 IST	DOWNLOAD	1b933da3-d63a-4a1a-a3b1-e8b4f720...	506 bytes	No value set	NiFi Flow
10/27/2021 12:03:24.537 IST	DOWNLOAD	1b933da3-d63a-4a1a-a3b1-e8b4f720...	506 bytes	No value set	NiFi Flow
10/27/2021 11:59:13.894 IST	DOWNLOAD	88bdf6e2-5cdc-4a31-a921-0ba43345...	359 bytes	No value set	NiFi Flow
10/27/2021 11:59:12.161 IST	DOWNLOAD	88bdf6e2-5cdc-4a31-a921-0ba43345...	359 bytes	No value set	NiFi Flow
10/27/2021 11:58:22.054 IST	DOWNLOAD	6b8a2eff-c9aa-4774-8af9-90c3fe4bf7...	319 bytes	No value set	NiFi Flow
10/27/2021 11:58:20.628 IST	DOWNLOAD	6b8a2eff-c9aa-4774-8af9-90c3fe4bf7...	319 bytes	No value set	NiFi Flow
10/27/2021 11:58:12.965 IST	DOWNLOAD	7b7380c6-3b7c-4a90-ba7f-4bb15db7...	319 bytes	No value set	NiFi Flow
10/27/2021 11:55:11.101 IST	DOWNLOAD	7b7380c6-3b7c-4a90-ba7f-4bb15db7...	319 bytes	No value set	NiFi Flow
10/27/2021 11:54:42.174 IST	DOWNLOAD	7b7380c6-3b7c-4a90-ba7f-4bb15db7...	319 bytes	No value set	NiFi Flow
10/27/2021 11:54:36.845 IST	DOWNLOAD	7b7380c6-3b7c-4a90-ba7f-4bb15db7...	319 bytes	No value set	NiFi Flow
10/27/2021 11:54:34.949 IST	DOWNLOAD	7b7380c6-3b7c-4a90-ba7f-4bb15db7...	319 bytes	No value set	NiFi Flow
10/27/2021 11:50:53.965 IST	DOWNLOAD	8421a73c-71a7-4371-80cb-b20cd71...	179 bytes	No value set	NiFi Flow
10/27/2021 11:50:51.921 IST	DOWNLOAD	8421a73c-71a7-4371-80cb-b20cd71...	179 bytes	No value set	NiFi Flow
10/27/2021 01:10:11.313 IST	UNKNOWN	9ad9a075c966241ea8e9e07a00000000...	170 bytes	No value set	NiFi Flow

Last updated: 12:36:08 IST

NiFi Flow

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NiFi Settings

Global control of thread allocation to components (processors, controller services etc)

NiFi Settings

GENERAL REPORTING TASK CONTROLLER SERVICES REPORTING TASKS REGISTRY CLIENTS

Maximum Timer Driven Thread Count 10

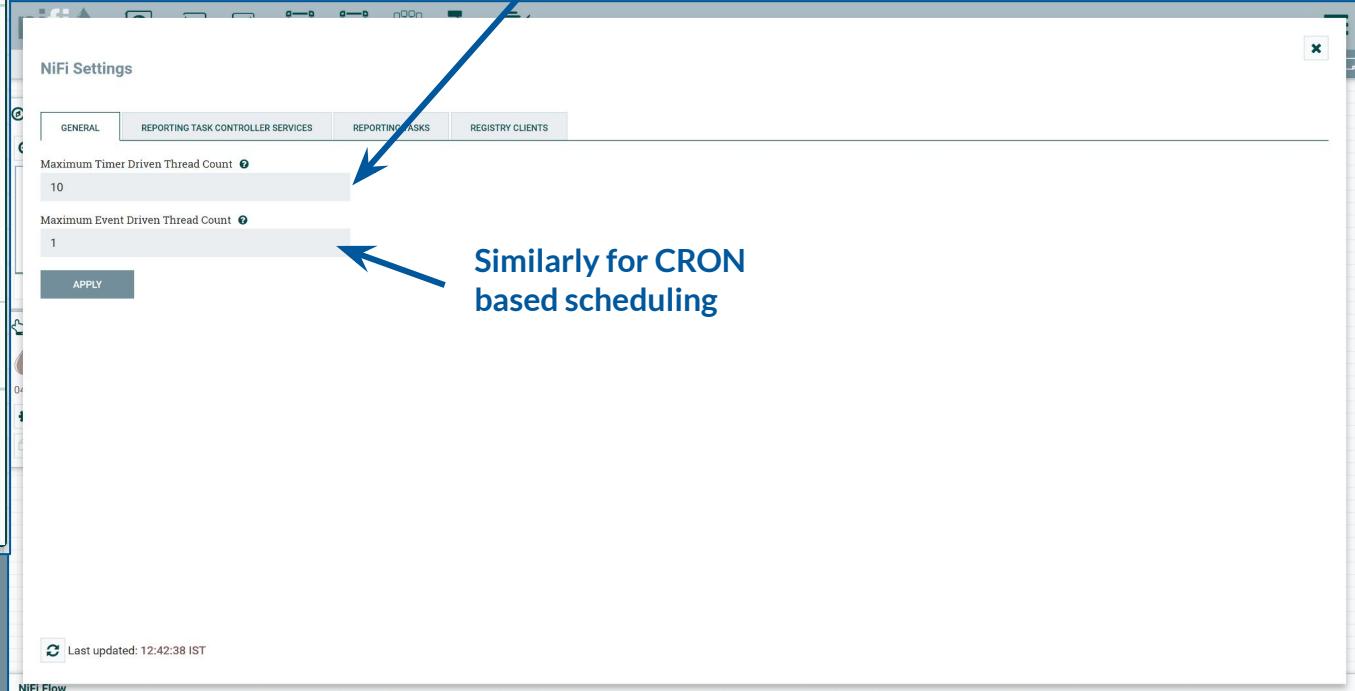
Maximum Event Driven Thread Count 1

APPLY

Last updated: 12:42:38 IST

NiFi Flow

Similarly for CRON based scheduling



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NiFi Settings

NiFi Settings

GENERAL REPORTING TASK CONTROLLER SERVICES REPORTING TASKS REGISTRY CLIENTS

Name	Type	Bundle	State	Scope
Reporting Task Controller Services	Reporting Task Controller Service	Reporting Task Controller Service	Normal	Global

Last updated: 12:42:38 IST

Listed services are available to all Reporting Tasks and services defined in the Controller Settings.

List of controller services used by Reporting Tasks

Reporting Task

Reporting Tasks

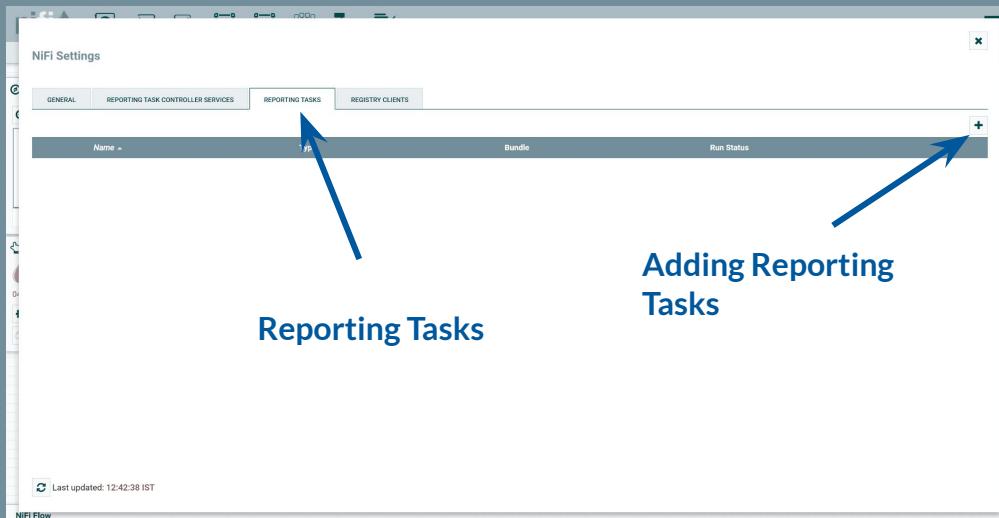
Similar to Controller Services

Runs in background specifically meant for collecting statistics of NiFi to either send or log them

List of Reporting Tasks

MonitoryMemory,
MonitorJVM,
Prometheus,
Bullentin Capture,
Ambari,
DataDog

many more



Reporting Tasks

Adding Reporting Tasks

Add Reporting Task

Source
all groups

ambari azure datadog disk
garbage collection gc heap
jvm log log analytics
memory metrics
monitor monitoring
prometheus provenance repo
reporting
restricted site
site to site stats
status storage warning

Displaying 15 of 15

Type	Version	Tags
AmbariReportingTask	1.14.0	ambari, metrics, reporting
AzureLogAnalyticsProvena...	1.14.0	provenance, log analytics, repor...
AzureLogAnalyticsReportin...	1.14.0	metrics, log analytics, reportin...
ControllerStatusReportingT...	1.14.0	stats, log
DataDogReportingTask	1.14.0	datadog, metrics, reporting
MetricsReportingTask	1.14.0	metrics, reporting
MonitorDiskUsage	1.14.0	disk, repo, warning, storage, m...
MonitorMemory	1.14.0	jvm, memory, warning, monitor...
PrometheusReportingTask	1.14.0	prometheus, metrics, time seri...
ScriptedReportingTask	1.14.0	luaj, python, jython, js, execute,...
SiteToSiteBulletinReporting...	1.14.0	site, restricted, bulletin, site to ...
SiteToSiteMetricsReporting...	1.14.0	site metrics status site to site

AmbariReportingTask 1.14.0 org.apache.nifi - nifi-ambari-nar

Publishes metrics from NiFi to Ambari Metrics Service (AMS). Due to how the Ambari Metrics Service works, this reporting task should be scheduled to run every 60 seconds. Each iteration it will send the metrics from the previous iteration, and calculate the current metrics to be sent on next iteration. Scheduling this reporting task at a frequency other than 60 seconds may produce u...

Popular Tags

Reporting Task Name

Search bar for searching Reporting Task

Highlighter in color

Adding Reporting Task

CANCEL

ADD

NiFi Settings

GENERAL REPORTING TASK CONTROLLER SERVICES

REPORTING TASKS

REGISTRY CLIENTS



Name	Type	Bundle	Run Status	
PrometheusReportingTask	PrometheusReportingTask 1.14.0	org.apache.nifi - nifi-prometheus-nar	Stopped	

Documentation

Reporting Task added
to this tab

Stopped state

Edit Reporting Task

Last updated: 12:42:38 IST

NiFi Flow

Configure Reporting Task

SETTINGS PROPERTIES COMMENTS

Name

PrometheusReportingTask

Enabled

Scheduling Strategy ?

Timer driven

Id

dfa845fe-017c-1000-c661-eb5c53123e15

Name of Reporting Task

Type

PrometheusReportingTask 1.14.0

Bundle

org.apache.nifi - nifi-prometheus-nar

Unique ID of this Reporting Task

Scheduling Strategy to run every minute

Run Schedule ?

60 sec

CANCEL

APPLY

Configure Reporting Task

SETTINGS	PROPERTIES	COMMENTS
Required field		
Property	Value	
Prometheus Metrics Endpoint Port	9092	TCP port to export the metrics
Instance ID	`\${hostname(true)}	Instance details
Metrics Reporting Strategy	All Components	
Send JVM metrics	false	
SSL Context Service	No value set	
Client Authentication	No Authentication	

CANCEL **APPLY**

NiFi Settings

GENERAL REPORTING TASK CONTROLLER SERVICES

REPORTING TASKS

REGISTRY CLIENTS



Name	Type	Bundle	Run Status	
PrometheusReportingTask	PrometheusReportingTask 1.14.0	org.apache.nifi - nifi-prometheus-nar	Running	



Reporting Task
Running

Last updated: 12:42:38 IST

NiFi Flow

http://localhost:9092/metrics

GET http://localhost:9092/metrics Instance URL Send

Params Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Body Cookies Headers (3) Test Results Status: 200 OK Time: 18 ms Size: 50.13 KB Save Response

Pretty Raw Preview Visualize Text

Response

1 # HELP nifi_active_remote_port_count The number of active remote ports associated with this component
2 # TYPE nifi_active_remote_port_count gauge
3 # HELP nifi_total_bytes_written Running total number of bytes written by the component
4 # TYPE nifi_total_bytes_written gauge
5 nifi_total_bytes_written{instance="Dev NiFi Instance",component_type="RootProcessGroup",component_name="NiFi Flow",
component_id="04737759-017c-1000-0eca-cf6e9e988919",parent_id="",} 0.0

6 # HELP nifi_percent_used_count The percentage of connection that is filled based on object count
7 # TYPE nifi_percent_used_count gauge
8 nifi_percent_used_count{instance="Dev NiFi Instance",component_type="Connection",component_name="success",
component_id="84ad3c9b-017c-1000-4985-b9c22e2741fd",parent_id="8520a736-017c-1000-ed4c-8a14ebba3dcc",
source_id="84acb326-017c-1000-1ccb-c8224d177777",
"dateAttribute",destination_id="84732423-017c-1000-7275-8ea497695daa",
destination_name="Data In",} 0.0

9 nifi_percent_used_
Component ID: 85534fd8-017c-1000-2142-4365cfef43100
Component Type: Connection
parent_id="8520a736-017c-1000-ed4c-8a14ebba3dcc",
source_id="84732423-017c-1000-7275-8ea497695daa",
source_name="PutFile",destination_id="8553338b-017c-1000-80a0-5f4bf722d43d",
destination_name="Data Out",} 0.0

10 nifi_percent_used_count{instance="Dev NiFi Instance",component_type="Connection",component_name="",
component_id="819b265a-017c-1000-cc92-67520fd27c3a",parent_id="8541cc27-017c-1000-72d8-872d43c72264",
"dateAttribute",destination_id="84732423-017c-1000-7275-8ea497695daa",
destination_name="Data In",} 0.0

Instance Name Component ID Component Type

Save

 Summary

 Counters

 Bulletin Board

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 About

Audit history of each user as they modify the

Who did what operation for which processor/controller service/reporting task

By who (user)

Date/Time	Name	Type	Operation	User
11/02/2021 13:45:30 IST	PrometheusReportingTask	ReportingTask	Start	anonymous
11/02/2021 13:45:27 IST	PrometheusReportingTask	ReportingTask	Configure	anonymous
11/02/2021 13:28:39 IST	PrometheusReportingTask	ReportingTask	Add	anonymous
11/02/2021 12:42:54 IST	PrometheusReportingTask	ReportingTask	Remove	anonymous
11/02/2021 12:42:36 IST	MonitorDiskUsage	ReportingTask	Remove	anonymous
11/02/2021 12:42:34 IST	PrometheusReportingTask	ReportingTask	Stop	anonymous
11/02/2021 12:42:02 IST	PrometheusReportingTask	ReportingTask	Start	anonymous
11/02/2021 12:42:00 IST	PrometheusReportingTask	ReportingTask	Configure	anonymous
11/02/2021 12:41:43 IST	PrometheusReportingTask	ReportingTask	Stop	anonymous
11/02/2021 12:40:44 IST	PrometheusReportingTask	ReportingTask	Start	anonymous
11/02/2021 12:40:43 IST	PrometheusReportingTask	ReportingTask	Configure	anonymous
11/02/2021 12:39:58 IST	PrometheusReportingTask	ReportingTask	Add	anonymous
11/02/2021 12:38:55 IST	MonitorDiskUsage	ReportingTask	Add	anonymous
11/02/2021 12:33:35 IST	DBJsonRecordSetWriter	ControllerService	Disable	anonymous
11/02/2021 12:33:30 IST	DBCSVRecordSetWriter	ControllerService	Disable	anonymous
11/02/2021 12:33:24 IST	DBCSVReader	ControllerService	Disable	anonymous
11/02/2021 12:32:54 IST	success	Connection	Disconnect	anonymous
11/02/2021 12:32:54 IST	success	Connection	Disconnect	anonymous
11/02/2021 12:32:54 IST	success	Connection	Disconnect	anonymous
11/02/2021 12:32:54 IST	success	Connection	Disconnect	anonymous
11/02/2021 12:32:54 IST	failure	Connection	Disconnect	anonymous
11/02/2021 12:32:54 IST	failure	Connection	Disconnect	anonymous

Last updated: 14:12:16 IST

 Summary

 Counters

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 About

How is node behaving

Status History

Status History

Start
10/29/2021 15:37:53.000

End
11/02/2021 14:17:54.946

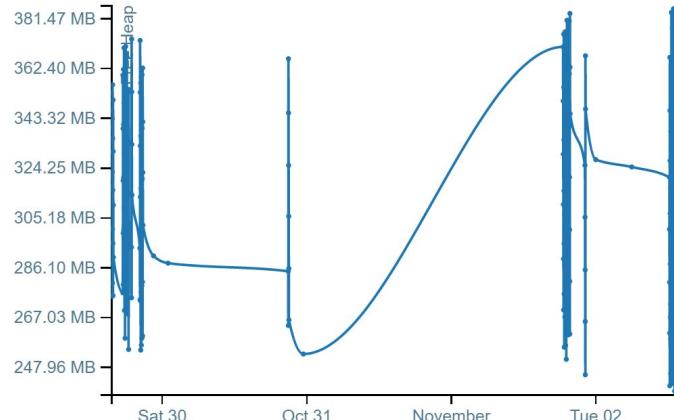
NiFi

Min / Max / Mean
237.31 MB / 386.34 MB / 313.21 MB

NiFi

Filter based on
statistic type

Free Heap



Last updated: 14:18:23 IST

CLOSE

The image shows the NiFi user interface. On the left, a sidebar lists various navigation items: Summary, Counters, Bulletin Board, Data Provenance, Controller Settings, Parameter Contexts, Flow Configuration History, Node Status History, and Templates. The 'Templates' item is selected and highlighted with a blue border. Below the sidebar, a large blue arrow points upwards from the text 'List of all templates' towards the main content area. The main content area displays the 'NiFi Templates' page, which shows one template named 'Move File Template'. A blue arrow points from the text 'Templates' towards the table header. Another blue arrow points from the text 'Download Template' towards the download icon in the top right corner of the template card.

Summary

Counters

Bulletin Board

Data Provenance

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About

List of all templates

NiFi Templates

Displaying 1 of 1

Date/Time	Name	Description	Process Group Id
11/02/2021 18:47:47 IST	Move File Template	Empty string set	8520a736-017c-1000-ed4c-8a14ebba3dcc

Templates

Download Template

- Summary
- Counters
- Bulletin Board
- Data Provenance
- Controller Settings
- Parameter Contexts
- Flow Configuration History
- Node Status History
- Templates
- Help
- About

About NiFi documentation

Apache NiFi Overview

Apache NiFi Team - dev@nifi.apache.org

Table of Contents

- What is Apache NiFi?
- The core concepts of NiFi
- NiFi Architecture
- Performance Expectations and Characteristics of NiFi
- High Level Overview of Key NiFi Features
- References

What is Apache NiFi?

Put simply, NiFi was built to automate the flow of data between systems. While the term 'dataflow' is used in a variety of contexts, we use it here to mean the automated and managed flow of information between systems. This problem space has been around ever since enterprises had more than one system, where some of the systems created data and some of the systems consumed data. The problems and solution patterns that emerged have been discussed and articulated extensively. A comprehensive and readily consumed form is found in the *Enterprise Integration Patterns* [eip].

Some of the high-level challenges of dataflow include:

- NiFi Documentation 1.14.0 Overview

General Overview

- Getting Started
- User Guide
- Expression Language Guide
- RecordPath Guide
- Admin Guide
- Toolkit Guide
- Walkthroughs

Developer

- REST API
- Developer Guide
- Apache NiFi In Depth

Processors

- AttributeRollingWindow 1.14.0
- AttributesToCSV 1.14.0
- AttributesToJson 1.14.0
- Base64EncodeContent 1.14.0
- CalculateRecordStats 1.14.0
- CaptureChangeMySQL 1.14.0
- CompareFuzzyHash 1.14.0
- CompressContent 1.14.0
- ConnectWebSocket 1.14.0

Filter
Displaying 409 of 409

 Summary

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About NiFi

About Apache NiFi



1.14.0

07/10/2021 12:25:36 IST

Tagged nifi-1.14.0-RC2
From fcbf1d5 on branch UNKNOWN

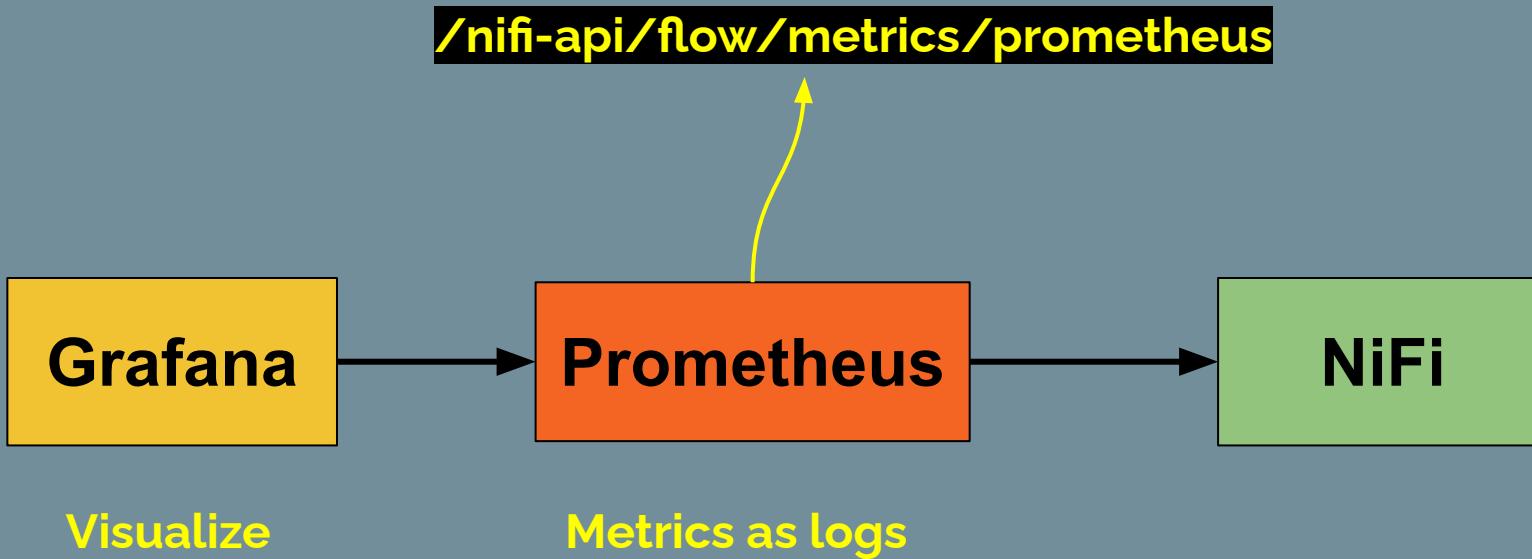
Git release branch

Apache NiFi is a framework to support highly scalable and flexible dataflows. It can be run on laptops up through clusters of enterprise class servers. Instead of dictating a particular dataflow or behavior it empowers you to design your own optimal dataflow tailored to your specific environment.

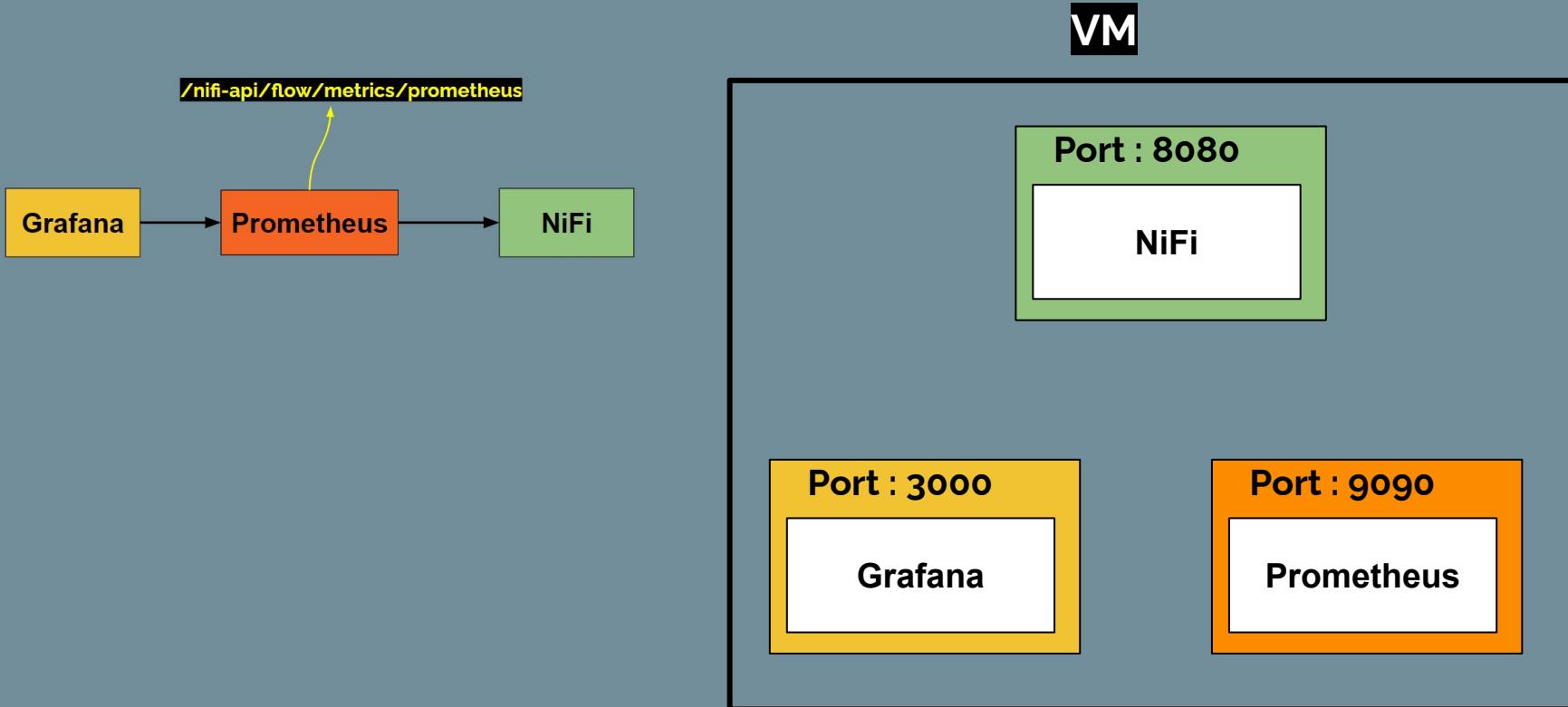
OK

NiFi - External Monitoring

NiFi - External Monitoring



NiFi - External Monitoring

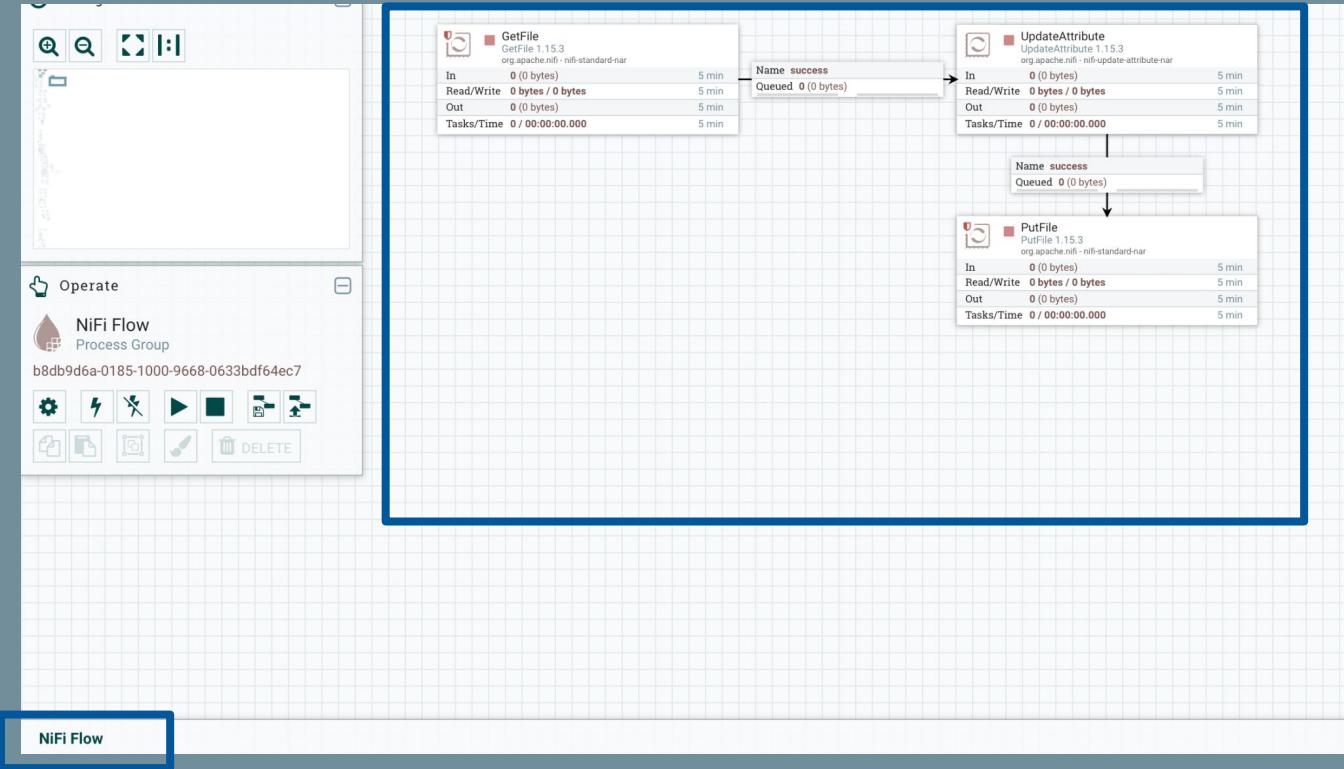


Grafana Dashboard



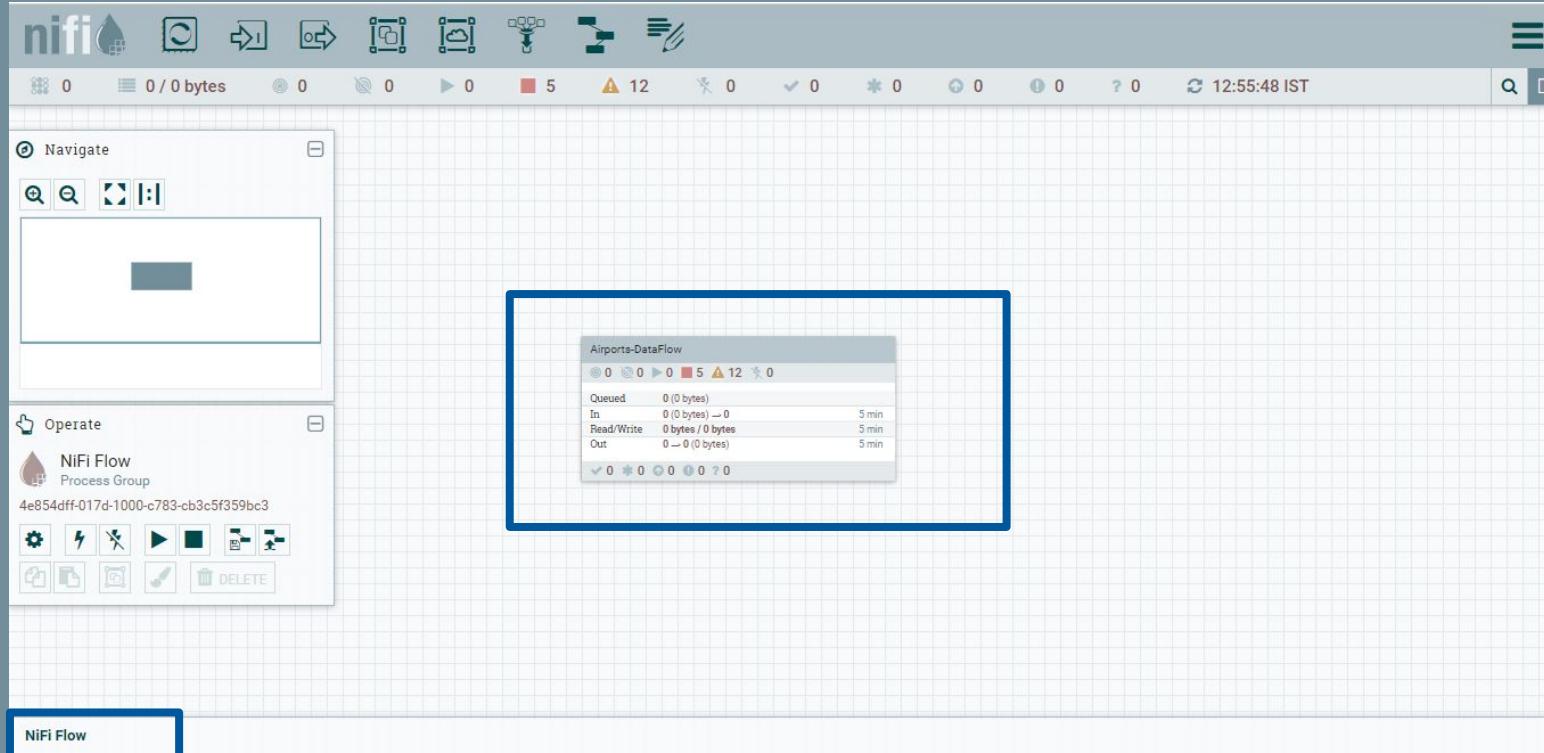
Apache NiFi Best Practices

- Never store any dataflows on root-level process group



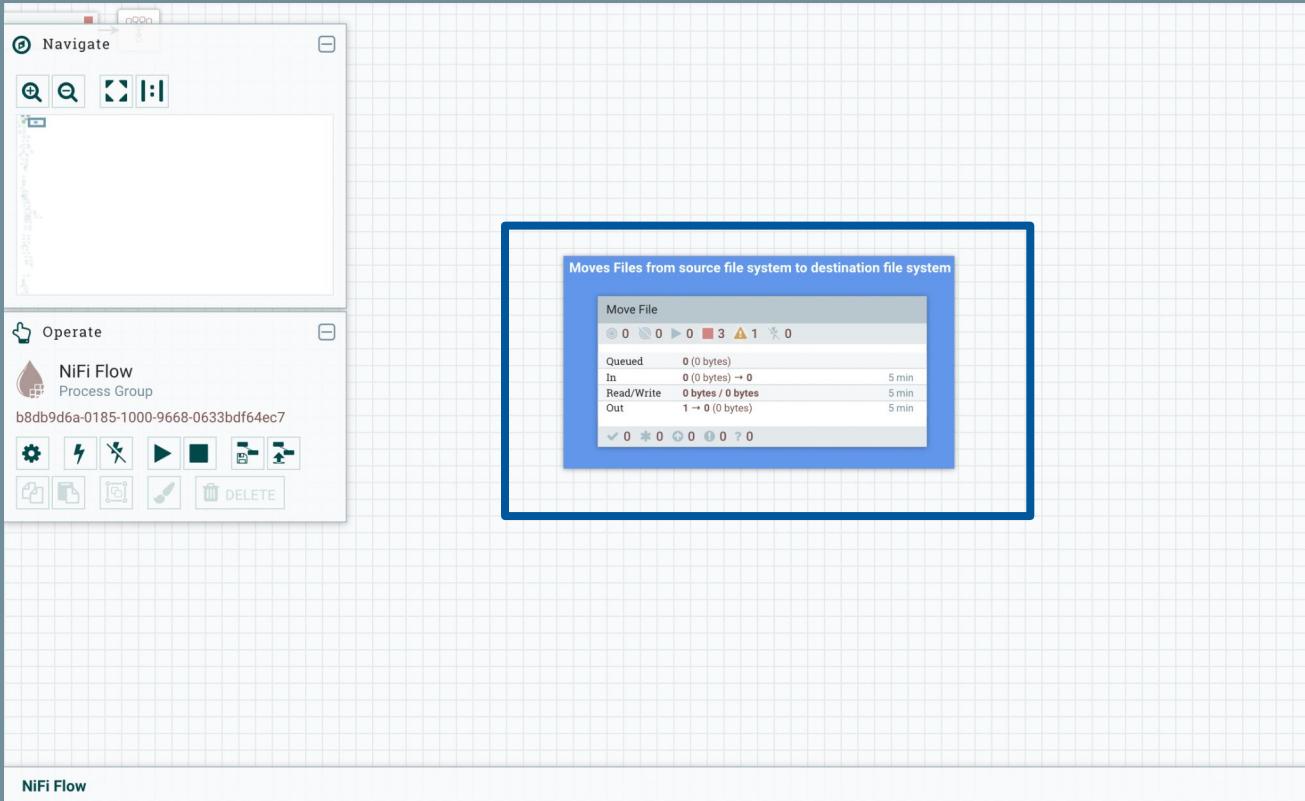
Apache NiFi Best Practices

- Never store any dataflows on root-level process group



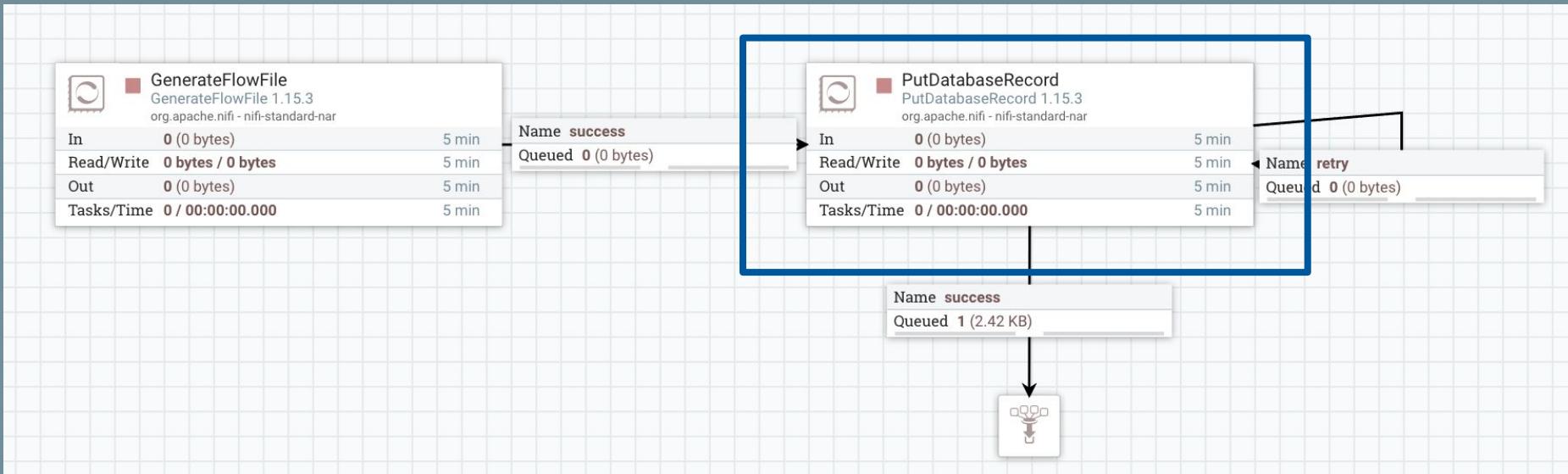
Apache NiFi Best Practices

- Always use labels to provide meaningful description



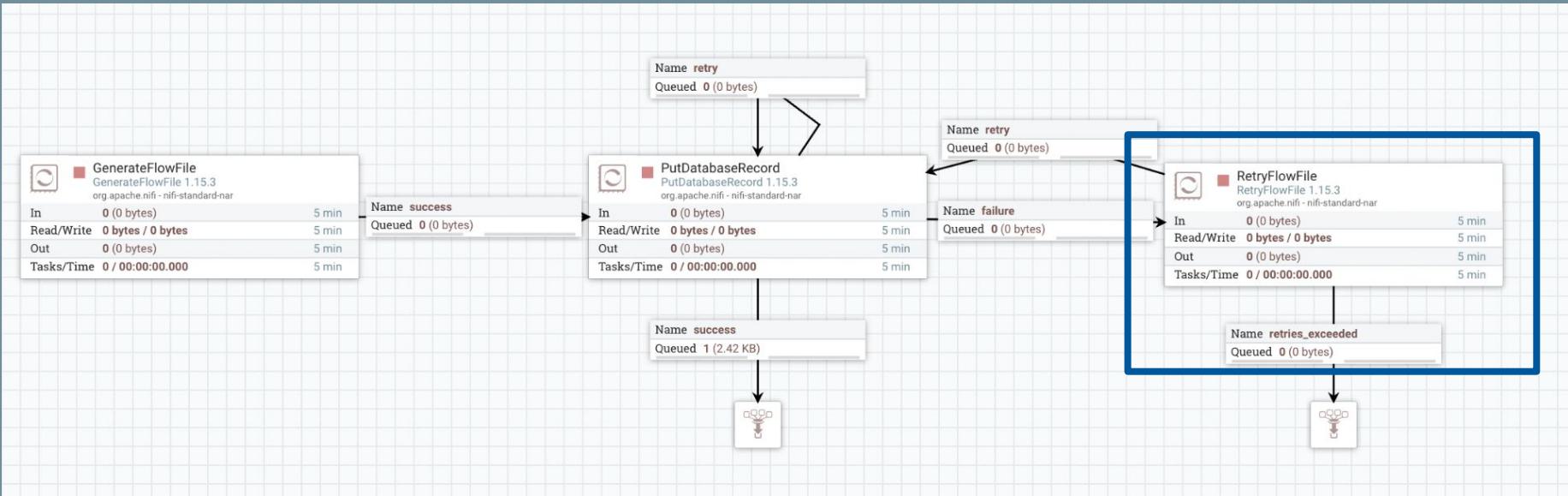
Apache NiFi Best Practices

- Always employ record processors for processing



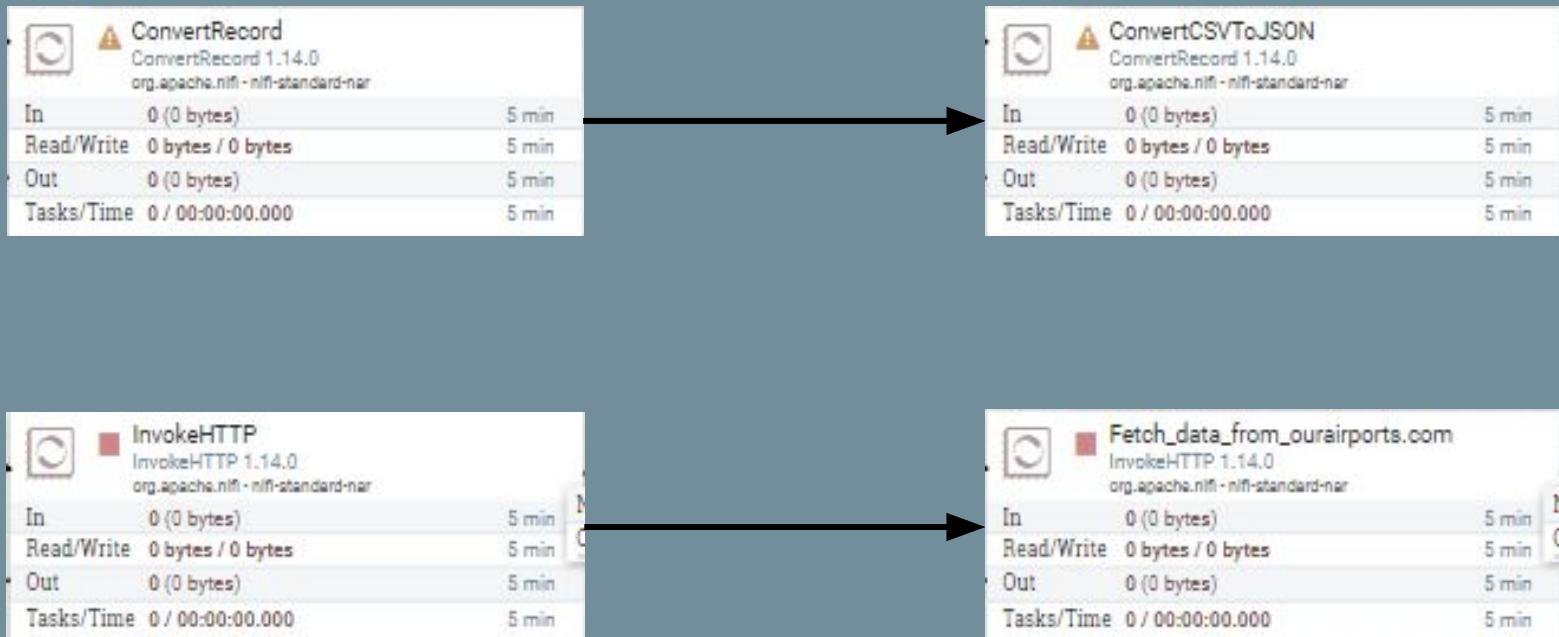
Apache NiFi Best Practices

- Identify critical dataflow points and integrate for Error handling



Apache NiFi Best Practices

- Always provide meaningful names for relationship/processors



	ConvertRecord		ConvertRecord 1.14.0	org.apache.nifi - nifi-standard-nar
In	0 (0 bytes)		5 min	
Read/Write	0 bytes / 0 bytes		5 min	
Out	0 (0 bytes)		5 min	
Tasks/Time	0 / 00:00:00.000		5 min	

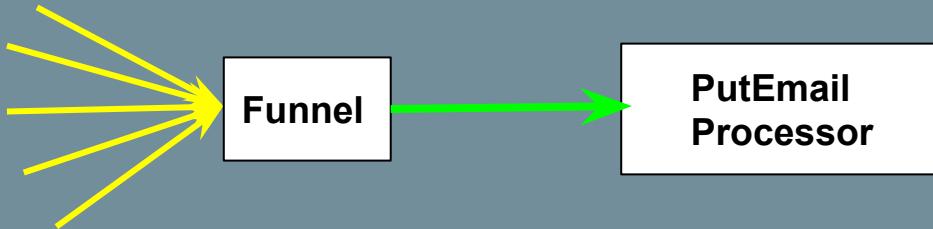
	ConvertCSVToJSON		ConvertCSVToJSON 1.14.0	org.apache.nifi - nifi-standard-nar
In	0 (0 bytes)		5 min	
Read/Write	0 bytes / 0 bytes		5 min	
Out	0 (0 bytes)		5 min	
Tasks/Time	0 / 00:00:00.000		5 min	

	InvokeHTTP		InvokeHTTP 1.14.0	org.apache.nifi - nifi-standard-nar
In	0 (0 bytes)		5 min	
Read/Write	0 bytes / 0 bytes		5 min	
Out	0 (0 bytes)		5 min	
Tasks/Time	0 / 00:00:00.000		5 min	

	Fetch_data_from_ourairports.com		Fetch_data_from_ourairports.com 1.14.0	org.apache.nifi - nifi-standard-nar
In	0 (0 bytes)		5 min	
Read/Write	0 bytes / 0 bytes		5 min	
Out	0 (0 bytes)		5 min	
Tasks/Time	0 / 00:00:00.000		5 min	

Apache NiFi Best Practices

- Use Funnel if there are more than 3 incoming connections to avoid cluttering the dataflow



Apache NiFi Usecases

- Building Ingestion and Delivery layers in IOT Solutions
- Ingestion tier in Data Lake Systems
- Enterprise Data Integration Platform
- Insurance
 - Claim Analytics, Risk & underwriting analysis
- Financial Services
 - Fraud Detection, Risk Management, Money Laundering
- Healthcare
 - Supply Chain Optimization, Real-time vital sign monitoring
- Manufacturing, Oil & Gas Industry, Telecommunication

Apache NiFi is not

- NiFi is **not a distributed computation engine**
 - An engine to do complex event processing
 - A computational framework to do **distributed Joins or Rolling Windows Aggregation** the way Spark/Storm/Flink does.
 - Hence its **not based on Map Reduce / Spark** or any other framework
- NiFi **doesn't have any dependency** on any big data tool like Hadoop etc. All it needs is Java

Apache NiFi is not

- It's not a long term Data Storage tool. It only holds data temporarily for re-run / data provenance purposes
- It's not a document indexer. Its indexing capabilities are only to help in troubleshooting / debugging

You learnt

- How to build dataflows in NiFi and interact with external systems
- Such as splitting, transforming, aggregating, routing, web services (exposing, invoking), records and many more
- How NiFi is architected (standalone, clustered)
- How to replay data provenance for data recovery
- You learnt NiFi Expression Language and Record Path Language
- How to monitor NiFi with Reporting Tasks, External Monitoring etc.

You learnt

- Record based Processing
- Custom Development in NiFi
- ExecuteScript Processor
- Integrating with Kafka
- Integrating with AWS Services like (S3, SNS, SQS, Lambda)
- Integrating with NoSQL databases like Mongodb, DynamoDB
- Integrating with Elasticsearch

You learnt

- Versioning Dataflows with NiFi Registry
- Best practices, troubleshooting, logging
- You learnt 39+ Processors, 7+ Controller Services etc
- Critical Thinking to design DataFlows etc
- I gave adhocs (10+ personalized) that were requested by you

References

<https://nifi.apache.org/>

<https://github.com/apache/nifi>

<https://github.com/naddym/nifi-course-abm>

**THANK
YOU**

The word "THANK" is positioned above the word "YOU". A horizontal brown vine with green leaves and two red roses, one on each end, spans across the text.

Q & A

