

# NiFiaaCode - ReadMe

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- Nifi Registry
- Prometheus
- S3
- Redis
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## NiFi registry configuration

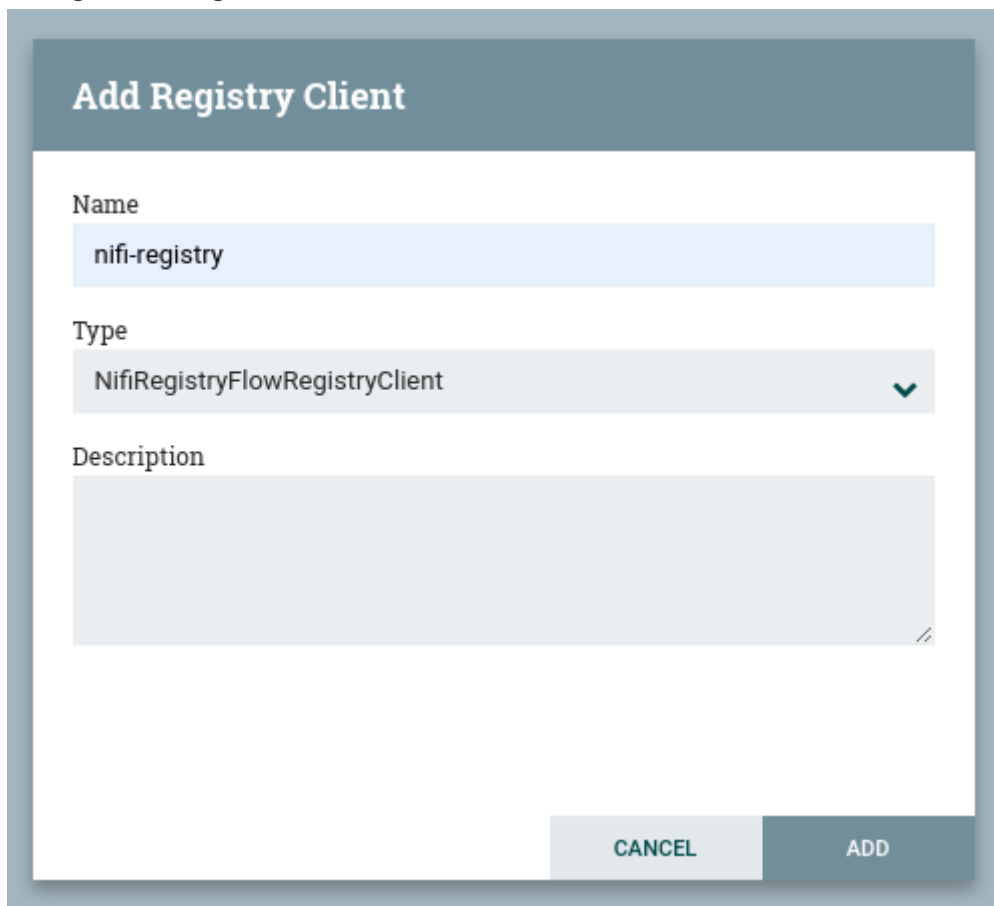
---

NiFi registry is native version control system for NiFi environment. Its configuration is only based on registry client configuration in:

**NiFi\_Setting > Controller\_Settings > Registry\_Client**

### How to configure

1. go to: **NiFi\_Setting > Controller\_Settings > Registry\_Client** and add new item
2. configure setting:



**Add Registry Client**

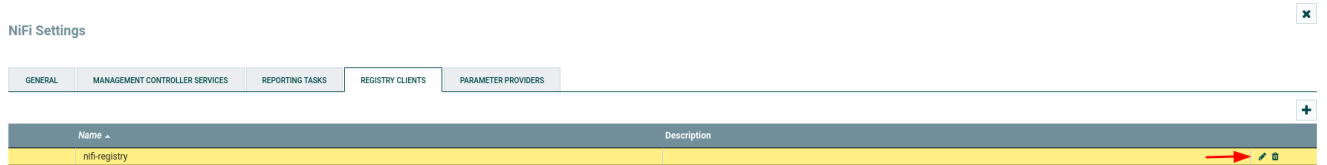
Name  
nifi-registry

Type  
NifiRegistryFlowRegistryClient ✓

Description

CANCEL ADD


### 3. edit created service





### 4. set up an URL, in our case SSL is not required

## Edit Registry Client

SETTINGS PROPERTIES

Required field 

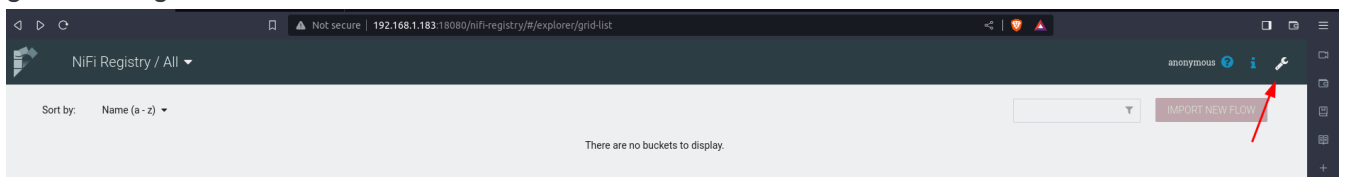
Property	Value
URL	 http://192.168.1.183:18080
SSL Context Service	 No value set

CANCEL UPDATE

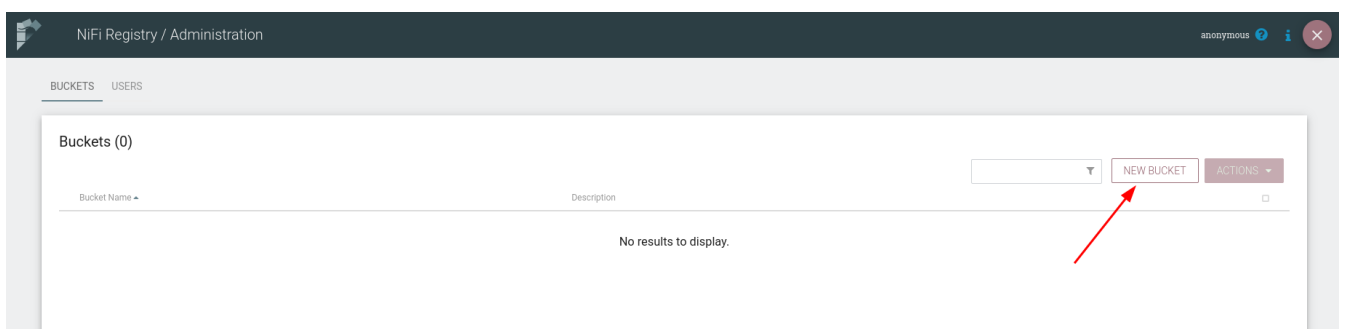
### 5. log in to NiFi Registry web site:

[http://<ip\\_address>:18080/nifi-registry/](http://<ip_address>:18080/nifi-registry/)

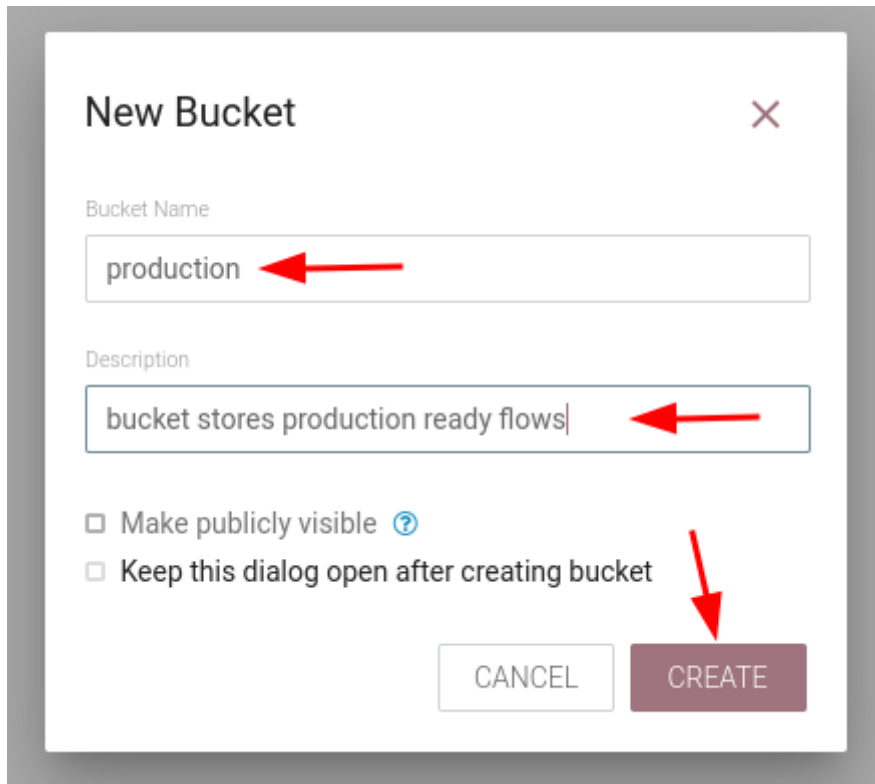
### 6. go to settings:



### 7. create new bucket:



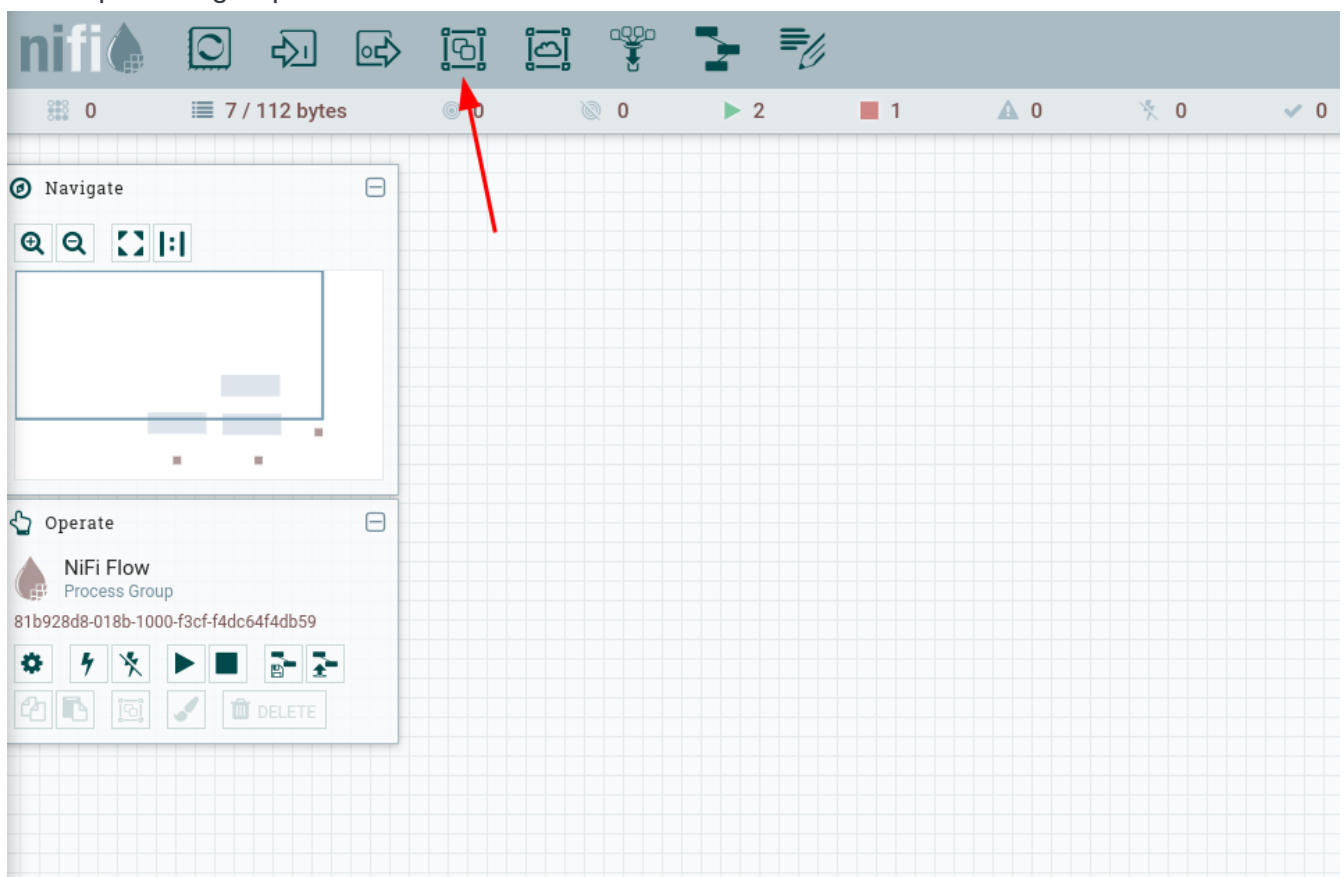
8. set up name and provide description:



The 'New Bucket' dialog box is shown with a close button (X) in the top right corner. It contains two text input fields: 'Bucket Name' with the value 'production' and 'Description' with the value 'bucket stores production ready flows'. Both fields have red arrows pointing to them. Below the fields are two checkboxes: 'Make publicly visible' (with a help icon) and 'Keep this dialog open after creating bucket'. At the bottom are two buttons: 'CANCEL' and 'CREATE', with a red arrow pointing to the 'CREATE' button.

## How to use at NiFi side

1. create process group:




2. Use registry

2a. import flow from NiFi Registry

### Add Process Group

Process Group Name

 [Import from Registry...](#) CANCEL ADD

### Import Version

Registry  
nifi-registry

Bucket  
production

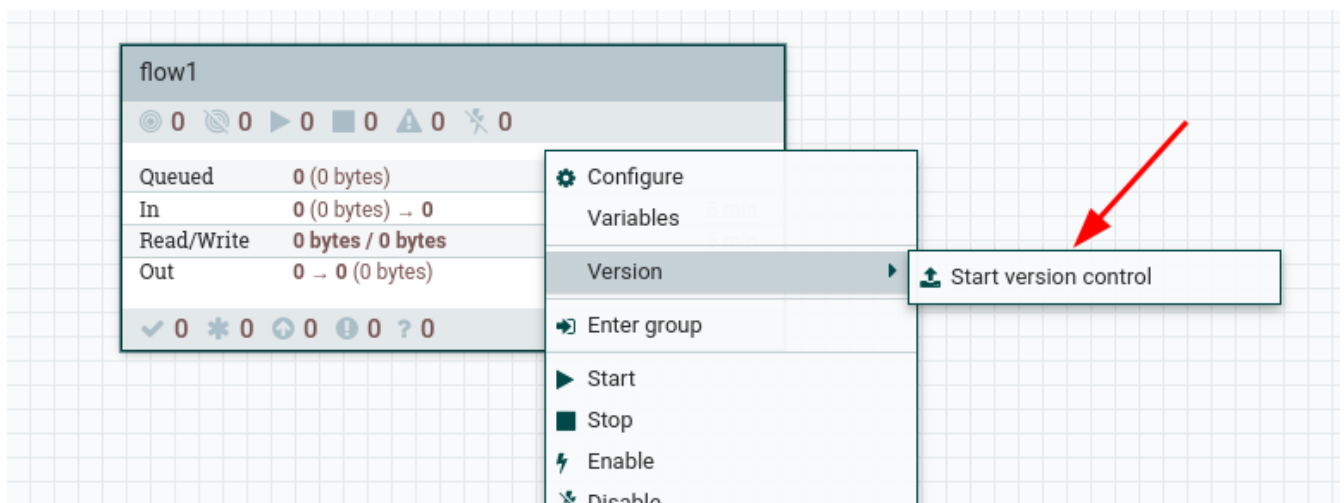
Flow Name  
flow1

Flow Description  
flow1

Version	Created	Comments
1	11/10/2023 20:23:40.992	first version

CANCEL IMPORT

2b. start versioning already created flow:



### Save Flow Version

Registry  
nifi-registry

Bucket  
production

Flow Name  
flow1

Flow Description  
flow1

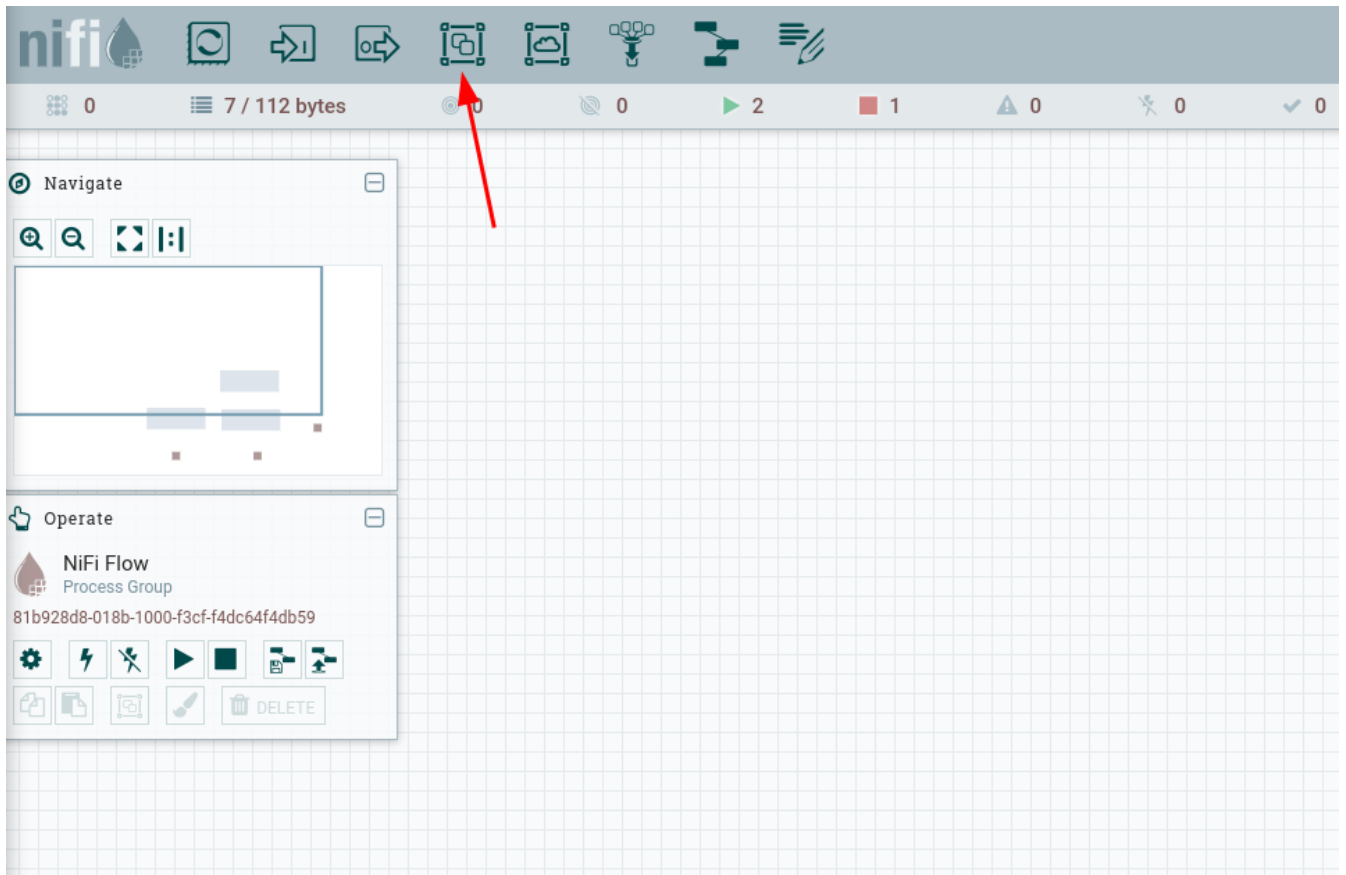
Version Comments  
first version

CANCEL SAVE

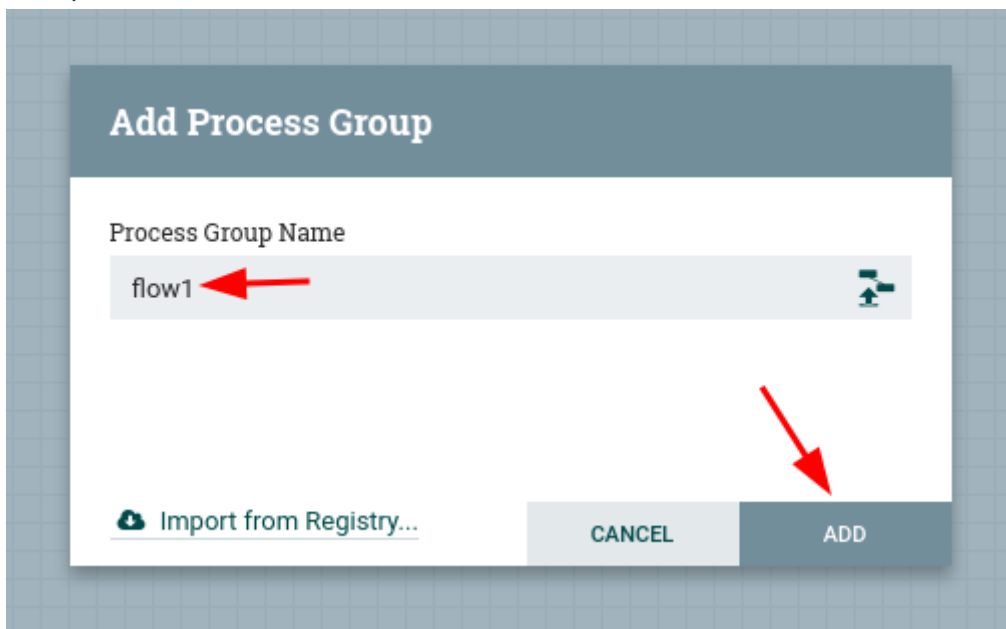
The screenshot shows the 'Save Flow Version' dialog. It contains fields for Registry (nifi-registry), Bucket (production), Flow Name (flow1), Flow Description (flow1), and Version Comments (first version). Red arrows point to each of these fields. At the bottom right, there are 'CANCEL' and 'SAVE' buttons, with a red arrow pointing to the 'SAVE' button.

## How to create a Process Group

1. create process group



2. set up a name and confirm



## Prometheus configuration from NiFi side

create reporting task service

**NiFi Settings**

GENERAL MANAGEMENT CONTROLLER SERVICES **REPORTING TASKS** REGISTRY CLIENTS PARAMETER PROVIDERS

Name	Type	Bundle	Run Status
------	------	--------	------------

**Add Reporting Task**

Source: all groups

Displaying 1 of 15

Type	Version	Tags
PrometheusReportingTask	1.20.0	prometheus, metrics, time serie...

**PrometheusReportingTask 1.20.0** org.apache.nifi - nifi-prometheus-nar

Reports metrics in Prometheus format by creating a /metrics HTTP(S) endpoint which can be used for external monitoring of the application. The reporting task reports a set of metrics regarding the JVM (optional) and the NiFi instance. Note that if the underlying Jetty server (i.e. the Prometheus endpoint) cannot be started (for example if two PrometheusReportingTask instances are started ...

CANCEL ADD

click pencil to edis settings

1 Status

Stopped

Configure Reporting Task | PrometheusReportingTask 1.20.0

SETTINGS | PROPERTIES | COMMENTS

Required field ✔ +

Property	Value	
Prometheus Metrics Endpoint Port	9093	
Instance ID	<IP_address>	
Metrics Reporting Strategy	All Components	
Send JVM metrics	false	
SSL Context Service	No value set	
Client Authentication	No Authentication	

CANCEL

APPLY

then turn on the service

## S3

### Uploading S3 Object

- konfiguracja procesora:



Configure Processor | PutS3Object 1.20.0

Stopped

SETTINGS

SCHEDULING

PROPERTIES

RELATIONSHIPS

COMMENTS

Required field

Property

Value

Object Key	?	/test
Bucket	?	produkcja
Content Type	?	No value set
Content Disposition	?	No value set
Cache Control	?	No value set
Access Key ID	?	Sensitive value set
Secret Access Key	?	Sensitive value set
Credentials File	?	No value set
AWS Credentials Provider Service	?	No value set
Object Tags Prefix	?	No value set
Remove Tag Prefix	?	False
Storage Class	?	Standard

CANCEL

APPLY

Configure Processor | PutS3Object 1.20.0

Stopped

SETTINGS

SCHEDULING

PROPERTIES

RELATIONSHIPS

COMMENTS

Required field

Property

Value

Write Permission User List	?	\${s3.permissions.write.users}
Read ACL User List	?	\${s3.permissions.readacl.users}
Write ACL User List	?	\${s3.permissions.writeacl.users}
Owner	?	\${s3.owner}
Canned ACL	?	\${s3.permissions.cannedacl}
SSL Context Service	?	No value set
Endpoint Override URL	?	http://<S3_ip_address>:9000
Signer Override	?	Default Signature
Multipart Threshold	?	5 GB
Multipart Part Size	?	5 GB
Multipart Upload AgeOff Interval	?	60 min
Multipart Upload Max Age Threshold	?	7 days

CANCEL

APPLY

## Download S3 Objects

- configuration listing processor:

## Configure Processor | ListS3 1.20.0

Stopped

SETTINGS

SCHEDULING

PROPERTIES

RELATIONSHIPS

COMMENTS

Required field



Property		Value	
Listing Strategy	?	Tracking Timestamps	
Bucket	?	produkcja	
Region	?	US West (Oregon)	
Access Key ID	?	Sensitive value set	
Secret Access Key	?	Sensitive value set	
Record Writer	?	No value set	
Minimum Object Age	?	0 sec	
Maximum Object Age	?	No value set	
Listing Batch Size	?	100	
Write Object Tags	?	False	
Write User Metadata	?	False	
Credentials File	?	No value set	

CANCEL

APPLY

## Configure Processor | ListS3 1.20.0

Stopped

SETTINGS

SCHEDULING

PROPERTIES

RELATIONSHIPS

COMMENTS

Required field



Property		Value	
Write User Metadata	?	False	
Credentials File	?	No value set	
AWS Credentials Provider Service	?	No value set	
Communications Timeout	?	30 secs	
SSL Context Service	?	No value set	
Endpoint Override URL	?	http://<S3_ip_address>:9000	
Signer Override	?	Default Signature	
Proxy Configuration Service	?	No value set	
Proxy Host	?	No value set	
Proxy Host Port	?	No value set	
Proxy Username	?	No value set	
Proxy Password	?	No value set	

CANCEL

APPLY

- configuration of fetching processor:

Stopped

SETTINGS

SCHEDULING

PROPERTIES

RELATIONSHIPS

COMMENTS

Required field



Property		Value	
Bucket	?	produkcja	
Object Key	?	\${filename}	
Region	?	US West (Oregon)	
Access Key ID	?	Sensitive value set	
Secret Access Key	?	Sensitive value set	
Credentials File	?	No value set	
AWS Credentials Provider Service	?	No value set	
Communications Timeout	?	30 secs	
Version	?	No value set	
SSL Context Service	?	No value set	
Endpoint Override URL	?	http://<S3_ip_address>:9000	
Signer Override	?	Default Signature	

CANCEL

APPLY

## Redis

### Service configuration

#### Redis connection pool

## Configure Controller Service | RedisConnectionPoolService 1.20.0

SETTINGS

PROPERTIES

COMMENTS

Required field



Property		Value	
Redis Mode	?	Standalone	
Connection String	?	<redis_ip_address>:6379	
Database Index	?	1	
Communication Timeout	?	10 seconds	
Cluster Max Redirects	?	5	
Sentinel Master	?	No value set	
Password	?	Sensitive value set	
SSL Context Service	?	No value set	
Pool - Max Total	?	8	
Pool - Max Idle	?	8	
Pool - Min Idle	?	0	
Pool - Block When Exhausted	?	true	
Pool - Max Wait Time	?	10 seconds	
Pool - Min Evictable Idle Time	?	60 seconds	

CANCEL

APPLY

## Redis Distributed Map Cache

## Configure Controller Service | RedisDistributedMapCacheClientService 1.20.0

SETTINGS

PROPERTIES

COMMENTS

Required field



Property		Value	
Redis Connection Pool	?	Redis_DB1: production	→
TTL	?	0 secs	

CANCEL

APPLY

## Processors configuration:

### Put Distributed Map Cache:

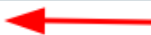
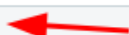
tasks/time 0 / 00:00:00.000 5 min


### Configure Processor | PutDistributedMapCache 1.20.0

Stopped

SETTINGS SCHEDULING PROPERTIES RELATIONSHIPS COMMENTS

Required field ✔ +

Property	Value
Cache Entry Identifier	<span>?</span> id 
Distributed Cache Service	<span>?</span> Redis_DB1: production  <span>→</span>
Cache update strategy	<span>?</span> Replace if present
Max cache entry size	<span>?</span> 1 MB

CANCEL APPLY 

### Fetch Distributed Map Cache:

Configure Processor | FetchDistributedMapCache 1.20.0

Stopped

SETTINGS

SCHEDULING

PROPERTIES

RELATIONSHIPS

COMMENTS

Required field

Property

Value

Cache Entry Identifier	<div>?</div> id	
Distributed Cache Service	<div>?</div> Redis_DB1: production	<div>→</div>
Put Cache Value In Attribute	<div>?</div> FromRedis	
Max Length To Put In Attribute	<div>?</div> 256	
Character Set	<div>?</div> UTF-8	

CANCEL

APPLY

## Kafka

### Consume Kafka processor configuration (ConsumeKafka\_2\_6)

Configure Processor | ConsumeKafka\_2\_6 1.20.0

Invalid

SETTINGS

SCHEDULING

PROPERTIES

RELATIONSHIPS

COMMENTS

Required field

Property	Value	
Kafka Brokers	<IP_address>:9092	
Topic Name(s)	topicName	
Topic Name Format	names	
Group ID	nifi-consumer	
Commit Offsets	true	
Max Uncommitted Time	1 secs	
Honor Transactions	true	
Message Demarcator	No value set	
Separate By Key	false	
Security Protocol	PLAINTEXT	
SASL Mechanism	GSSAPI	
Kerberos Credentials Service	No value set	

CANCEL

APPLY

- if you want to load all event on the topic change Offset Reset -> earliest

## Publish Kafka processor configuration (PublishKafka\_2\_6)

Invalid

SETTINGS

SCHEDULING

PROPERTIES

RELATIONSHIPS

COMMENTS

Required field



Property	Value
Kafka Brokers	<IP_address>:9092
Topic Name	nifi
Use Transactions	true
Transactional Id Prefix	No value set
Message Demarcator	No value set
Failure Strategy	Route to Failure
Delivery Guarantee	Guarantee Replicated Delivery
Attributes to Send as Headers (Regex)	No value set
Message Header Encoding	UTF-8
Security Protocol	PLAINTEXT
SASL Mechanism	GSSAPI
Kerberos Credentials Service	No value set

CANCEL

APPLY

## Offset Explorer / Kafka Tool

Properties \ Security \ Advanced \ JAAS Config \ ACL \

General

Cluster name

kafka

Kafka Cluster Version

0.11

Zookeeper Host

IP\_address

Zookeeper Port

2181

chroot path

/

Properties \ Security \ Advanced \ JAAS Config \ ACL \

Broker Security

Type

Plaintext

Properties \ Security \ Advanced \ JAAS Config \ ACL \

Advanced

Bootstrap servers

IP\_address:9092

SASL Mechanism

Offset Topic

☒ Use background thread to read from \_\_consumer\_offsets topic  
 If disabled, viewing the consumer offsets will be considerably slower

Schema Registry

Endpoint

Basic Auth Credentials

Truststore Location

Truststore Password

Keystore Location

Keystore Password

Keystore Private Key Password

## S3 Tool



## Instalation process

```
###--go to GitHub and download the newest version the S3_Tool:  
https://github.com/michal-kocur
```

```
###-- install python modules:  
pip install django  
pip install django-admin  
pip install boto3  
pip install crispy_f  
pip install crispy-bootstrap5
```

**Provide credentials (access key, secret key, url) to S3 instance and put them into settings.conf files. There are two such files, it's important to change both of them:**

```
###-- change configuration in below files:  
./settings.conf  
./CLI/settings.conf
```

### What to change / add:

```
[NameOfNamespace]  
access_key = [access_key]  
secret_key = [secret_key]  
url = [url]
```

### How to log in to the GUI version of S3\_Tool:

```
###-- run django server  
# go to S3_Tool/S3_Tool/  
# run the commands:  
python3 manage.py runserver
```

```
###-- go to the browser  
http://localhost:8000/
```

Buckets list

Users

Logs

Cluster info

About author: [gitHub.com](#)

# Global Namespace

ADD

EMPTY