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Workshop
RNP

*Onde o futuro
se encontra.*

Uso de Dados de Rede para Pesquisa - DataX

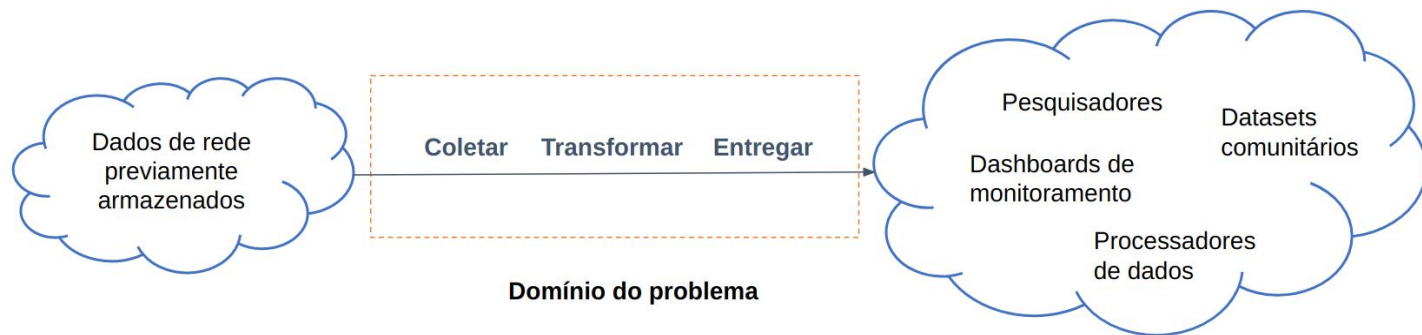
Daniel Neto

RNP/Analista de Sistemas

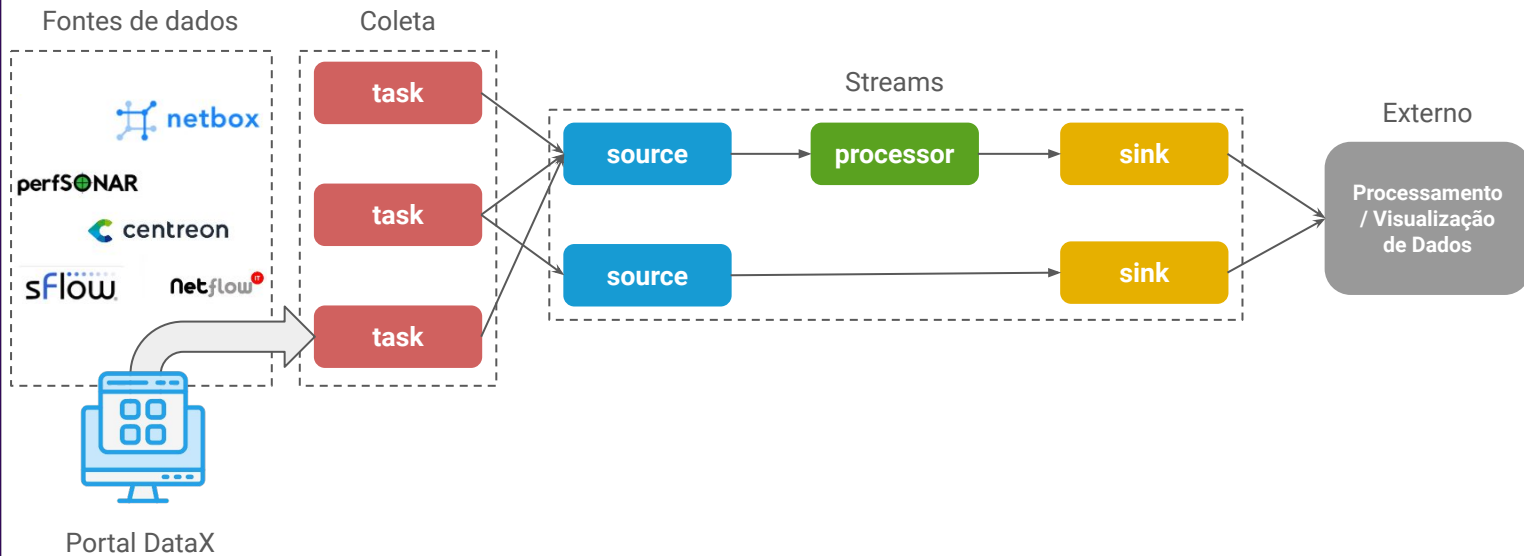
Introdução

O que estamos construindo:

- Sistema para o compartilhamento de dados de rede entre áreas da RNP e com a comunidade
- Sistema baseado em uma arquitetura simples, mas flexível o suficiente para permitir a integração com diversas fontes de dados assim como a aplicação de políticas e representação de processos



Arquitetura



Portal Web - Fontes de Dados

The screenshot displays the 'Portal DataX' web application interface. On the left is a dark sidebar with a user profile 'Admin' and a menu containing 'Dashboard', 'MoniPE', 'Conexões clientes', 'Fluxos', and 'Requests'. The main content area is titled 'Dashboard' and features three prominent colored cards: a teal card for 'MoniPE', a green card for 'Conexões clientes', and a yellow card for 'Fluxos'. Each card includes a 'Selecionar' button with a dropdown arrow and a corresponding icon. The top navigation bar includes 'Home' and 'Contact' links, and a 'Logout' button is located in the top right corner. The footer contains the copyright notice 'Copyright © 2014-2021 AdminLTE.io. All rights reserved.' and the version number 'Version 3.2.0'.

Portal DataX

Home Contact

Logout

Admin

Dashboard

MoniPE

Conexões clientes

Fluxos

Requests

MoniPE Selecionar

Conexões clientes Selecionar

Fluxos Selecionar

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Version 3.2.0



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Portal Web - Dados MonIPÊ



Portal DataX

Admin

Dashboard

MonIPÊ

Conexões clientes

Fluxos

Requests

Home Contact Logout

Dados

Tipo de Teste	Dados do teste	Origem	Destino
Banda (BBR)	<input type="checkbox"/> failures <input checked="" type="checkbox"/> packet-retransmits <input type="checkbox"/> packet-retransmits-subintervals <input checked="" type="checkbox"/> throughput <input type="checkbox"/> throughput (averages 86400) <input type="checkbox"/> throughput-subintervals	PoP-RJ	Todos

Intervalo de Tempo

Único Periódico

14/05/2024 19:00 - 15/05/2024 19:00

Destino

HTTP InfluxDB

URL
http://endpoint.datax

Gerar

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Portal Web - Dados Clientes dos PoPs



Portal DataX

Admin

Dashboard

MonIPÉ

Conexões clientes

Fluxos

Requests

Home Contact Logout

Dados

PoP	Cliente	Dados do teste
PoP-AL	IFAL - Batalha	<input type="checkbox"/> packet loss (%) <input checked="" type="checkbox"/> rtt average (ms) <input type="checkbox"/> rtt max (ms) <input type="checkbox"/> rtt minimum (ms) <input checked="" type="checkbox"/> traffic in (bps) <input type="checkbox"/> traffic out (bps)

Intervalo de Tempo

Único Periódico

🕒 14/05/2024 18:00 - 15/05/2024 18:00

Destino

	URL	Organization	Bucket	API Token
<input type="radio"/> HTTP				
<input checked="" type="radio"/> InfluxDB	http://influxdb:8086	influxdata	poc-centreon-v2	0lbu55ASpiBI2A3AZ7YJMoPHPkJ2g7Z3

Gerar

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Portal Web - Dados Fluxos

The screenshot displays the 'Portal DataX' web application interface. The main content area is titled 'Dados Fluxos' and features several filterable sections:

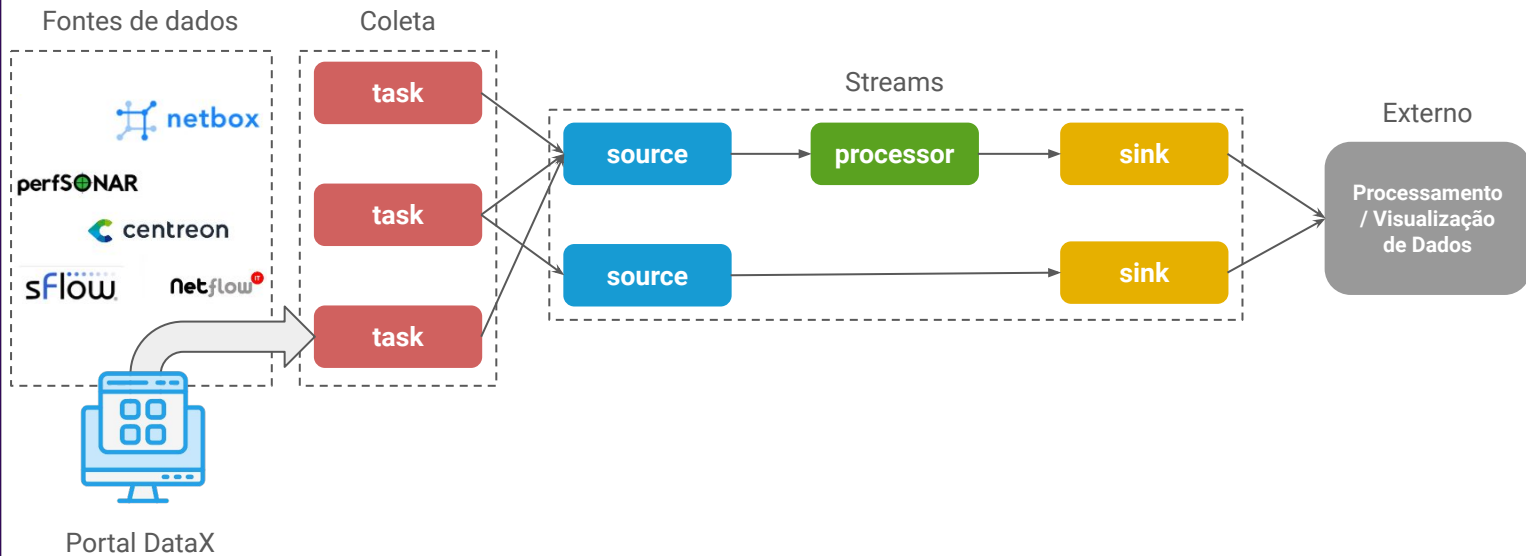
- Fluxos:** A table with columns 'Porta' (value: 443) and 'Protocolo' (value: TCP).
- Intervalo de Tempo:** A section with a radio button for 'Único' and a date range selector set to '14/05/2024 19:00 - 15/05/2024 00:00'.
- Destino:** A section with radio buttons for 'HTTP' (selected) and 'InfluxDB', and a text input field for 'URL' containing 'http://data.com'.

A green 'Gerar' button is located below the filters. The interface includes a dark sidebar with navigation options: 'Dashboard', 'MonIPÉ', 'Conexões clientes', 'Fluxos', and 'Requests'. The top navigation bar contains 'Home', 'Contact', and a 'Logout' button. The footer contains the copyright notice 'Copyright © 2014-2021 AdminLTE.io. All rights reserved.' and the version number 'Version 3.2.0'.

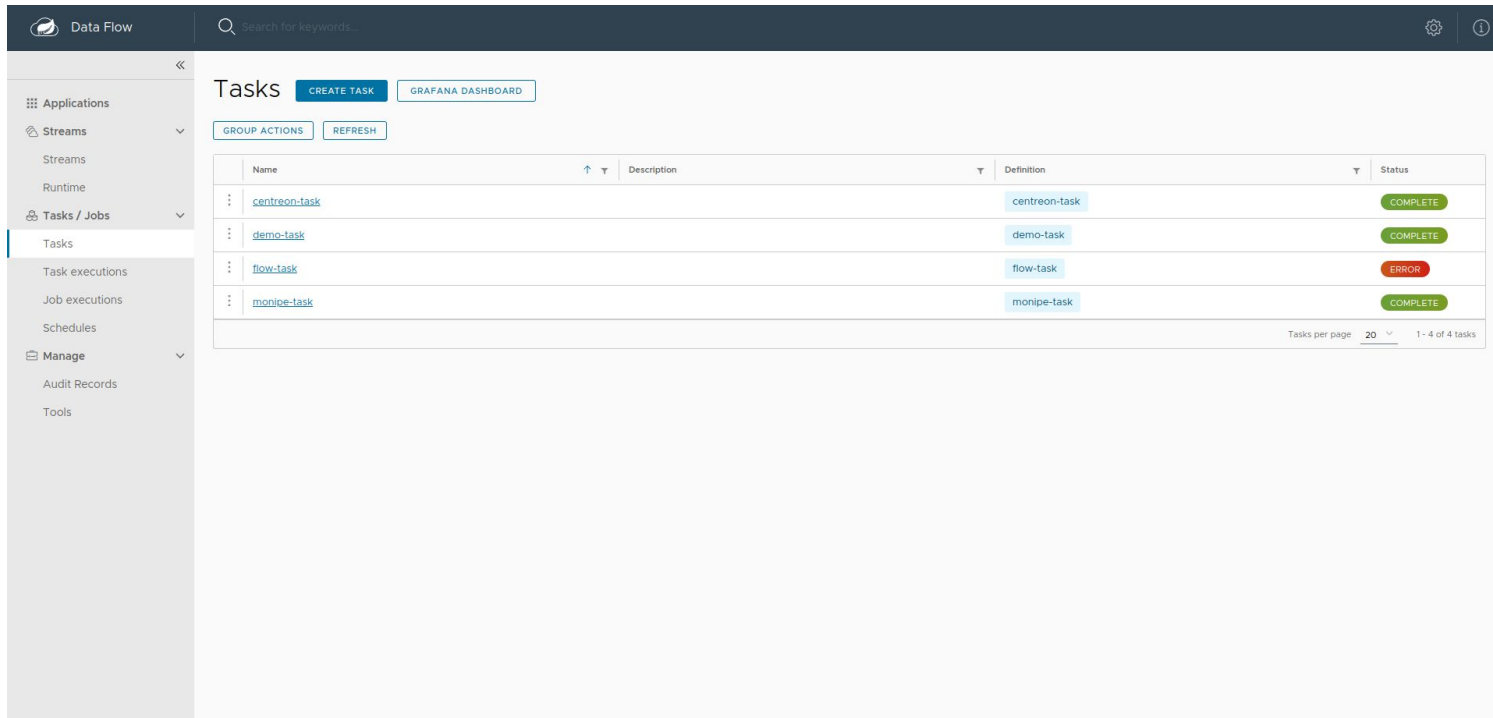


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Arquitetura



Dashboard Data Flow - Tasks



The screenshot shows the 'Data Flow' dashboard interface. On the left is a navigation sidebar with categories: Applications, Streams, Tasks / Jobs, Task executions, Job executions, Schedules, Manage, Audit Records, and Tools. The 'Tasks / Jobs' section is expanded to show 'Tasks'. The main content area is titled 'Tasks' and includes buttons for 'CREATE TASK' and 'GRAFANA DASHBOARD'. Below these are 'GROUP ACTIONS' and 'REFRESH' buttons. A table lists four tasks with columns for Name, Description, Definition, and Status.

Name	Description	Definition	Status
centreon-task		centreon-task	COMPLETE
demo-task		demo-task	COMPLETE
flow-task		flow-task	ERROR
monipe-task		monipe-task	COMPLETE

Tasks per page: 20 | 1 - 4 of 4 tasks



Dashboard Data Flow - Streams

The screenshot displays the Data Flow dashboard interface. The top navigation bar includes the 'Data Flow' logo, a search bar, and settings. The left sidebar contains a navigation menu with categories: Applications, Streams, Runtime, Tasks / Jobs, Manage, Audit Records, and Tools. The main content area is titled 'Streams' and features buttons for 'CREATE STREAM(S)' and 'GRAFANA DASHBOARD'. Below this, there are 'GROUP ACTIONS' and 'REFRESH' buttons. A table lists several streams, each with a 'Name', 'Description', 'Definition', and 'Status' (all marked as 'DEPLOYED'). The 'flow-stream' entry is selected, and its definition is visualized as a flow diagram with four components: 'http | HTTP', 'map-dataflow-proces... | MAP-DATAFLOW-PRO...', 'mask-dataflow-proces... | MASK-DATAFLOW-PR...', and 'datax-http-sink | DATA-X-HTTP-SINK'.

Name	Description	Definition	Status
centreon-influxdb-stream		http centreon-processor influxdb-sink	DEPLOYED
centreon-influxdb-stream-DEV		http centreon-processor influxdb-sink	DEPLOYED
centreon-stream		http centreon-processor datax-http-sink	DEPLOYED
centreon-stream-DEV		http centreon-processor datax-http-sink	DEPLOYED
demo-stream		http mask-demodata-processor datax-http-sink	DEPLOYED
demo-stream-DEV		http mask-demodata-processor datax-http-sink	DEPLOYED
flow-stream		http map-dataflow-processor mask-dataflow-processor datax-...	DEPLOYED
flow-stream-DEV		http map-dataflow-processor mask-dataflow-processor datax-...	DEPLOYED
http-demo-stream-DEV		demo-http-source mask-demodata-processor datax-http-sink	DEPLOYED

```
graph LR; A[http | HTTP] --> B[map-dataflow-proces... | MAP-DATAFLOW-PRO...]; B --> C[mask-dataflow-proces... | MASK-DATAFLOW-PR...]; C --> D[datax-http-sink | DATA-X-HTTP-SINK];
```



Panorama do Catálogo de Redes

Interface

Portal: Catálogo de Dados de Rede

Modelagem

Estrutura, Semântica, Governança, Papéis e Processos

Tecnologias Habilitadoras

DataX

Pesquisas associadas

RNP como fonte de dados de rede para pesquisa

Parceiros

- DAERO
- GTI
- GSC
- CT-MON
- CT-CDIA
- CT-MON
- ...

Alinhamento Estratégico RNP



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OBRIGADO!

daniel.neto@rnp.br

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E INOVAÇÃO

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BRASIL
UNIÃO E RECONSTRUÇÃO