



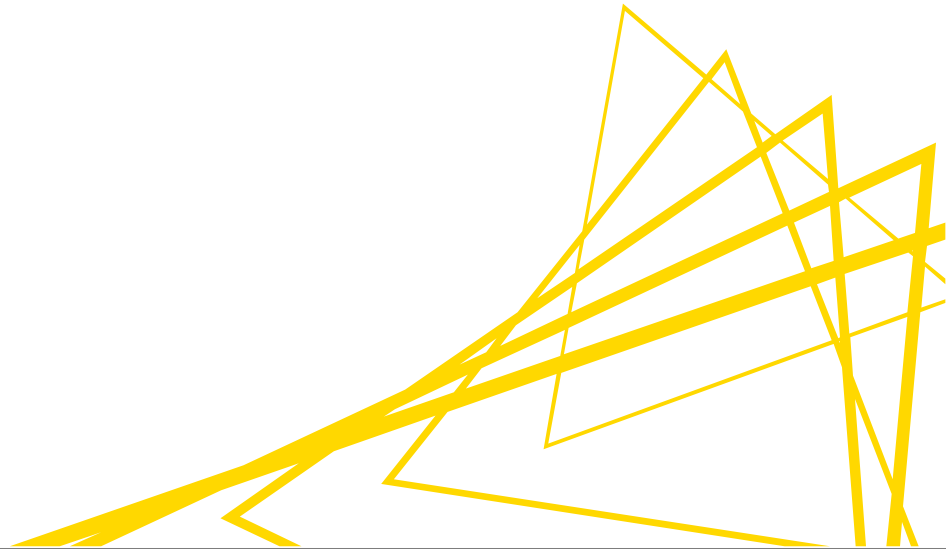
# What's new in deployment

Greg Landrum (for the KNIME team)

20 March 2019

 #KNIMESummit2019

# Demo



# Deployment?

---

Making your work or its output available to others

# Deployment?

---

Making your work or its output available to others

- Machines
- People

# Deployment?

---

Making your work or its output available to others

- Machines
- People
  - Business Users (customers, stakeholders, management, etc)
  - Casual Users
  - Data Scientists

# Making the output of your work available to others

---

- Machines
  - Updated databases
  - Triggered web services
  - Files
- People (business users, casual users, data scientists)
  - Reports (PDF, etc)
  - Files

# Making your work available to others

---

- Machines
  - Web services
- People (business users, casual users, data scientists)
  - Sharing workflows, wrapped metanodes
  - Creating web applications
  - Guided Analytics, Guided Automation

# Deploying for machines: creating web services

---

- Step 1: Copy/deploy properly prepared workflow to KNIME Server



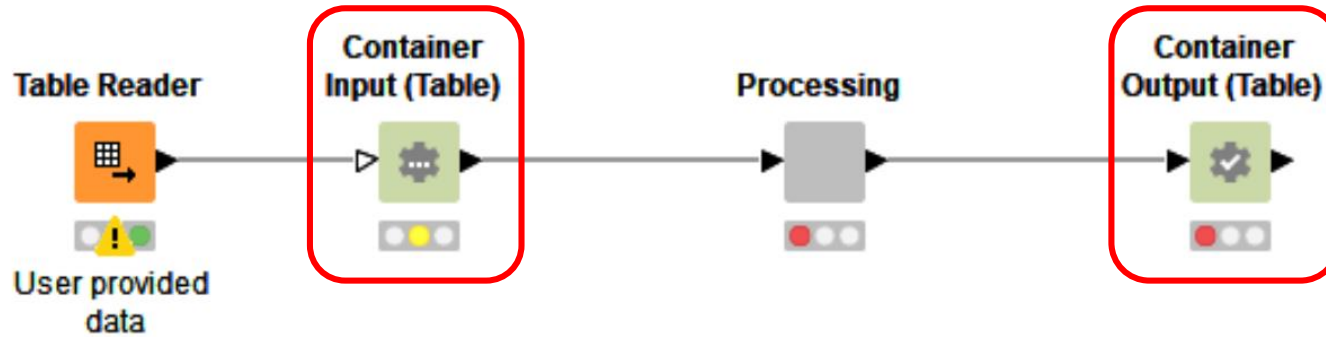
# Deploying for machines: creating web services

---

- Step 1: Copy/deploy properly prepared workflow to KNIME Server
- That's it

# What's new?

---



Container Input/Output (Table)  
Container Input/Output (JSON)

# Specifying the input table spec

Dialog - 0:250 - Container Input (Table)

File

Container Input (Table) | Flow Variables | Job Manager Selection | Memory Policy

Parameter Name:

Description:


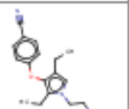
☒ Template table

The input table is different from the configured template table, you might want to update the template

☒ Use entire input table

☐ Use only first rows

☐ Omit table spec in API definition

Row ID	S compound...	SMI smiles
Row0	ChEMBL_36_A_1	
Row1	ChEMBL_36_A_2	

# How do I call the service?



▼ datascience1 (greg.landrum@https://datascience1.knime.com/knime/rest)

> Demos

> Events

▼ Users

> daria.goldmann

▼ greg.landrum

> Demo workflows

> Jupyter KNIME Jupyter

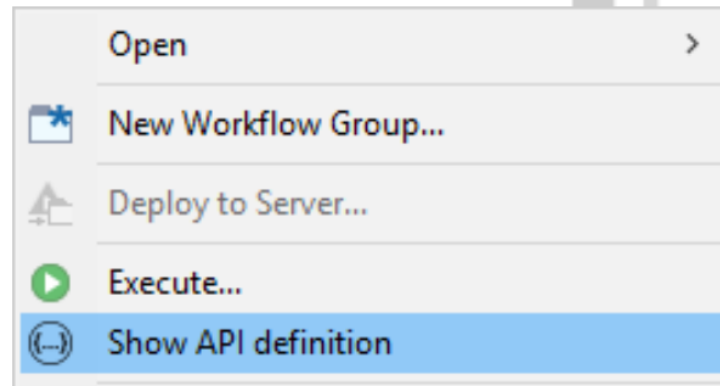
▼ KNIME Stories

> Reproducibility and Validatability

▼ Web service validation

▲ 01\_Prediction\_Workflow

> New Web Services



# Input spec in Swagger UI

Request body application/json ▾

Inline input parameters for the job

**Example Value** | Schema

```
{
  "molecule_input-250": {
    "table-spec": [
      {
        "compound_id": "string"
      },
      {
        "smiles": "Smiles"
      }
    ],
    "table-data": [
      [
        "ChEMBL_36_A_1",
        "CN(C)c1ccc(C2CC3(C)C(CCC3(O)C#Cc3ccc(C(C)(C)C)cc3)C3OCC4=CC(=O)CCC4=C23)cc1"
      ],
      [
        "ChEMBL_36_A_2",
        "CCc1cn(CCN)c(CC)c10c1ccc(C#N)cc1"
      ]
    ]
  }
}
```

# Managed Scoring Service

---

- Globally deploy KNIME “models” as web services without having to worry about servers / infrastructure / etc.
- Automatically scales to handle load
- A KNIME-managed service
- Work in progress; talk to Jim, Jason, or Jon for more details

{ REST }



kubernetes



docker



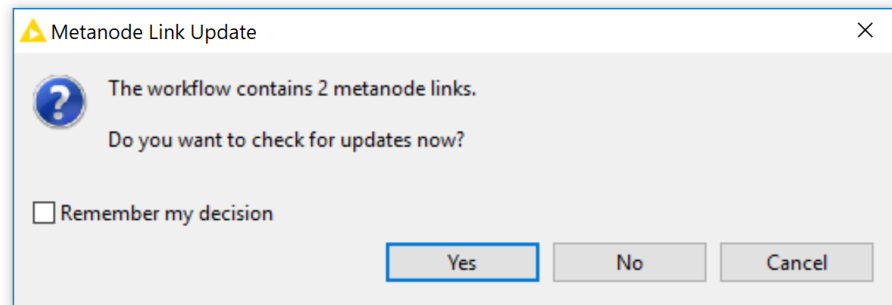
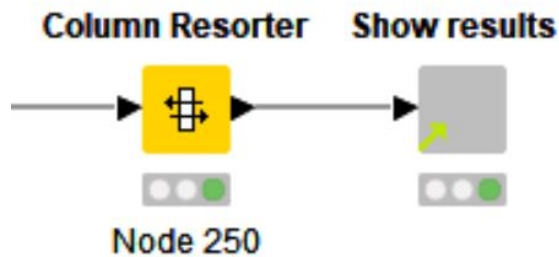
# Deploying for people

---

- For KNIME Analytics Platform users (casual users, data scientists)
- For everyone else (business users)

# Sharing workflows/wrapped metanodes with the KNIME Server

- Share workflows
- Share wrapped metanodes encapsulating useful/tricky functionality by
  - Can be automatically updated when opening the workflow



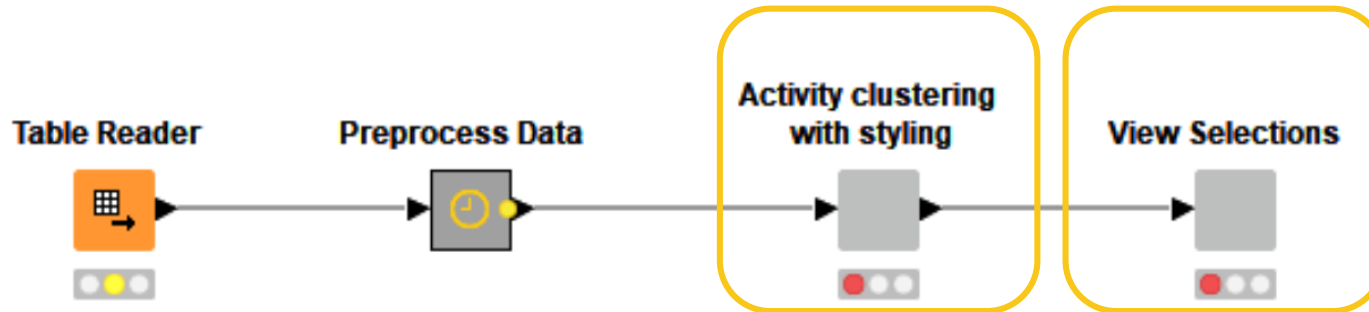


# Creating web applications with the KNIME Server

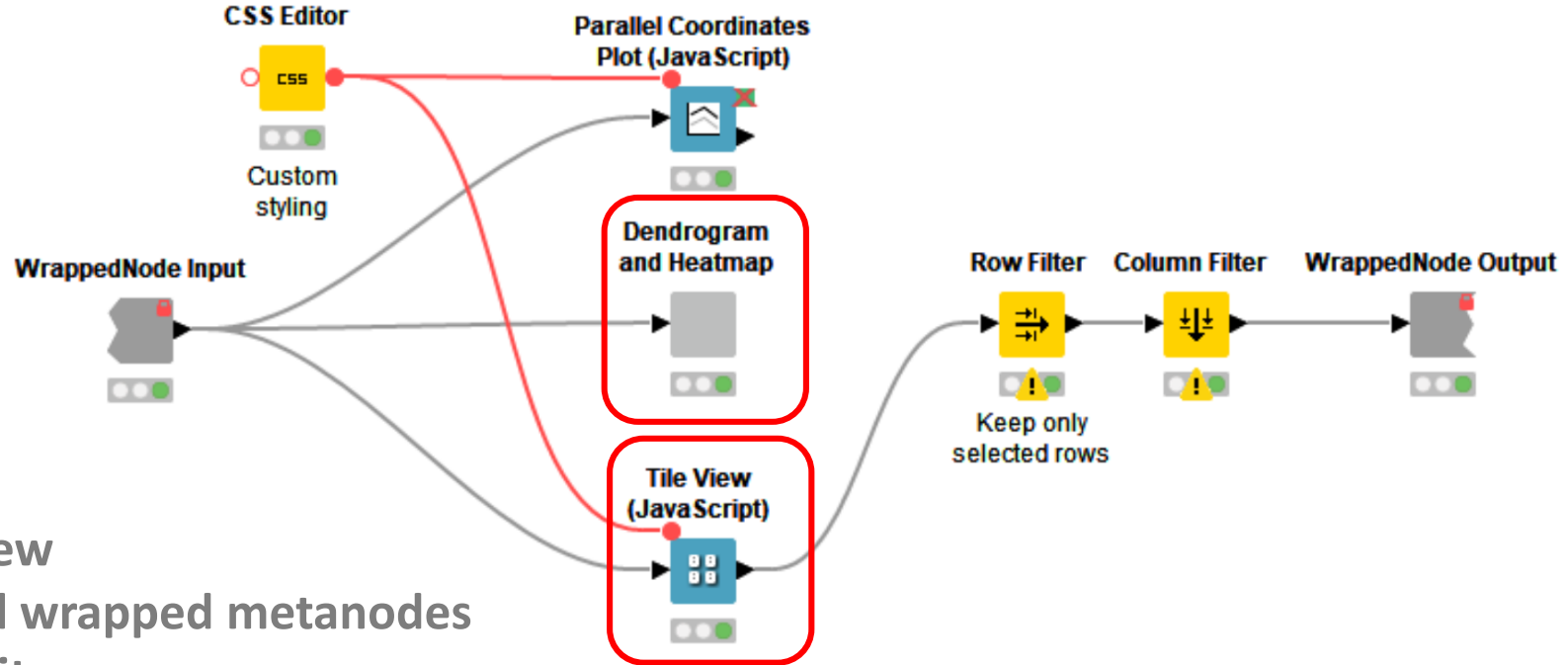
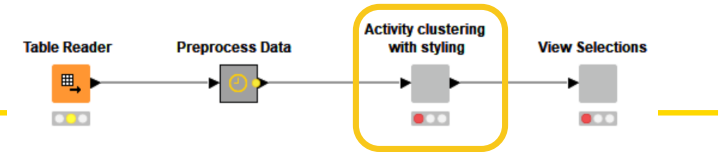
---

## Using the WebPortal

- Copy workflows to server
- Wrapped metanodes become web pages

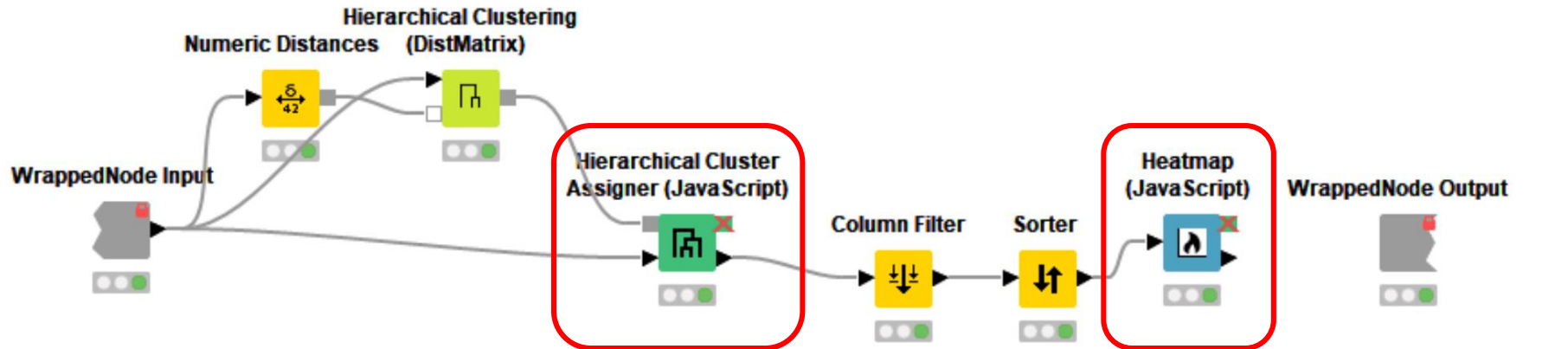


# What's new?



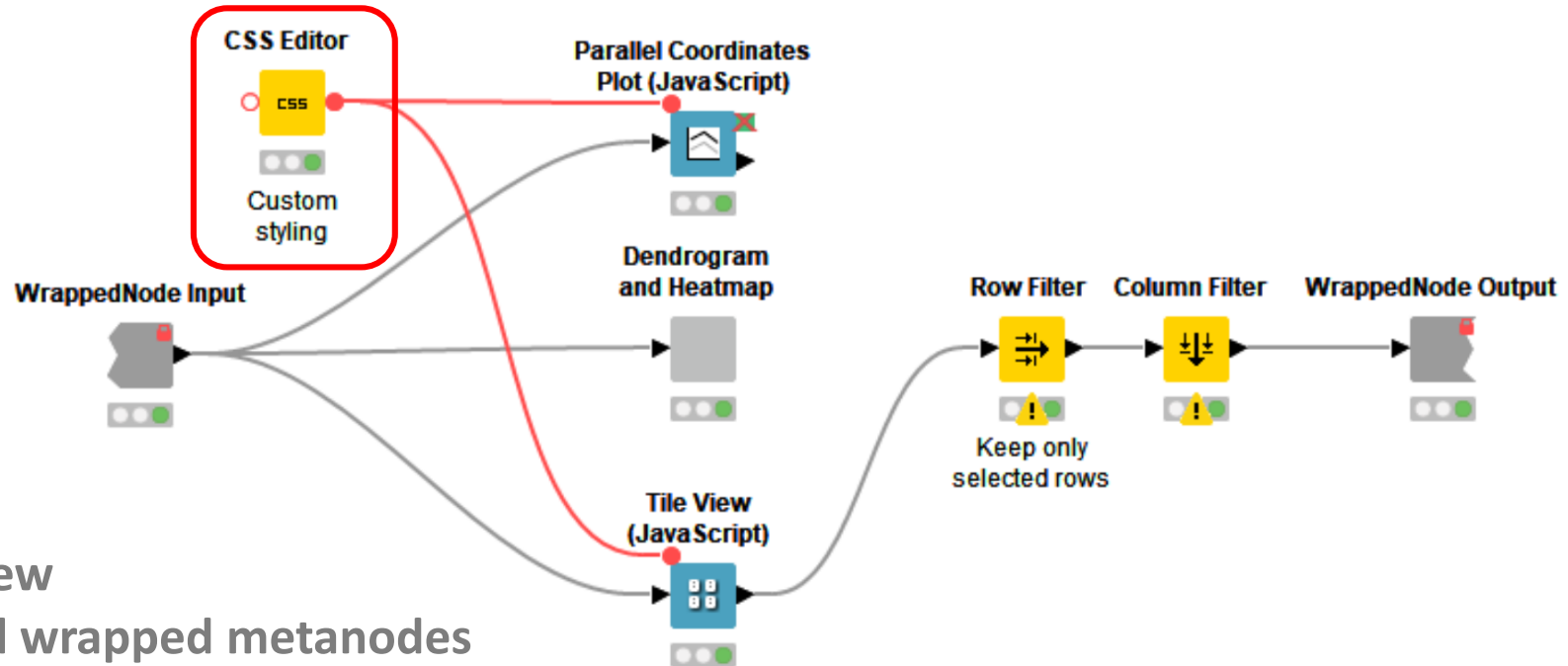
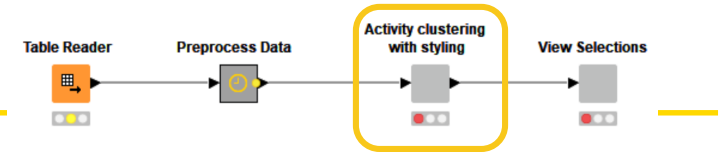
Tile View  
Nested wrapped metanodes  
CSS Editor  
Visual layout editor

# What's new?



## Hierarchical Cluster Assigner Heatmap

# What's new?



Tile View  
Nested wrapped metanodes  
CSS Editor  
Visual layout editor

# Deployment?

---

Making your work or its output available to others with the KNIME Server

- Machines
- People
  - Business users
  - Casual users
  - Data scientists

**Arrive**



**Engage**



**Learn**



**Enjoy**



The KNIME® trademark and logo and OPEN FOR INNOVATION® trademark are used by KNIME AG under license from KNIME GmbH, and are registered in the United States. KNIME® is also registered in Germany.