

# Controlling Containerized xUML Services Kubernetes

You have two options to deploy xUML services as a Kubernetes workload:

1. The PAS Administration offers a deployment wizard (refer to [Working With the Deployment Wizard](#) for details).
2. You can also deploy Designer services directly to the deployment target **Container** (refer to [Designer Guide > Selecting the Deployment Target](#)).

xUML services that run in Kubernetes have extended details to manage this type of service.






We recommend using container deployment as the default deployment target starting with PAS 23.1. For further information see:

- [Designer Guide > Service Deployment Details > Container Deployment](#)
- [Administration Guide > Controlling Containerized xUML Services](#)

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## Using the Workload Details

Name ↑	Type	Status
 <a href="#">form-data-transfer-example</a>	xuml-service	<span>running</span>
 <a href="#">idea-management</a>	xuml-service	<span>running</span>
 <a href="#">monitoring-ui</a>	xuml-service	<span>running</span>

You can open a details page for each workload.

To do so, click on the service name in the list.

## Related Pages:

- [Working With the Deployment Wizard](#)
- [Controlling Kubernetes Workloads](#)

## Details of idea-management

← running ▶ ■ ↺

Information

Kubernetes

Details

Documentation

Logs

History Log

Persistent State

Configuration

Click on a name in the service list to open its details page.

The details page shows you the title of the service and some quick action icons:

## Related Documentation:

Icon	Description
<span>running</span>	Shows the current state of the service.
	Starts the service.
	Stops the service.
	Restarts the service.

It also contains different collapsable sections:

- [Information](#)
- [Details](#)
- [Documentation](#)
- [Logs](#)
- [History Log \( PAS 24.0 \)](#)
- [Persistent State](#)
- [Configuration](#)

## Information

<div><div>Information</div><div><div><b>Name:</b> idea-management</div><div><b>Source:</b> Kubernetes</div><div><b>Type:</b> xuml-service</div><div><b>Created/Updated:</b> Mar 16, 2023, 2:18:10 PM</div><div><b>Version:</b> 1.0</div></div></div>	<p>The <b>Information</b> section contains the main information about the Kubernetes workload:</p> <ul style="list-style-type: none"><li>• <b>Name</b></li><li>• <b>Source</b> is <i>Kubernetes</i> for workloads</li><li>• <b>Type</b></li><li>• <b>Created/Updated</b></li><li>• <b>Version</b></li></ul>
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Kubernetes

<div><div>Kubernetes</div><div><div>API Version: platform.scheer-pas.com/v1alpha2</div><div><div>Labels: app: rc-pas-designer-service app.kubernetes.io/name: rc-pas-designer-service</div><div>platform.scheer-pas.com/platform: rc platform.scheer-pas.com/type: pas-nestjs</div><div>Annotations: license.scheer-pas.com/ha: Allowed platform.scheer-pas.com/last-applied: 2023-03-31T14:25:45Z</div></div><div>Show all</div></div></div>	<p>On top of the <b>Kubernetes</b> section, you find the information about</p> <ul style="list-style-type: none"><li>• <b>API Version:</b> Defines the versioned schema of this representation of a Kubernetes workload.</li></ul>
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	<ul style="list-style-type: none"><li>• <b>Labels:</b> Map of string keys and values that can be used to organize and categorize (scope and select) workloads.</li><li>• <b>Annotations:</b> Unstructured key value map stored with a resource that may be set by external tools to store and retrieve arbitrary metadata.</li></ul> <p>Click <b>Show all</b> to display all available labels or annotations.</p>
<div><div>Pod</div><div>Networking</div></div> <div>General</div>	<p>Below this information, you can find the two tabs <b>Pod</b> and <b>Networking</b>.</p>

## Pod

Tab **Pod** contains the sections **General** and **Container**. The information displayed in the two sections is read-only.

### Pod - General


PodNetworking

General

Name: latest

Type: deployment

Scaling: 1 Apply

Replicas: 


Additional Labels: platform.scheer-pas.com/platform: rc  
scheer-pas.com/platform: rc

Section **General** contains common information about the Pod:

<b>N a m e</b>	Version name of the Pod.								
<b>T y p e</b>	Shows the internal type of the replication controller.								
<b>S c a l i n g</b>	If available, you can adapt the number of Pod replicas (see below).								
<b>R e p l i c a s</b>	Shows the number of Pod replicas. <table><tr><th>Icon Color</th><th>Status</th></tr><tr><td>Green</td><td>Running</td></tr><tr><td>Orange</td><td>Starting</td></tr><tr><td>Red</td><td>Not running /erroneous</td></tr></table>	Icon Color	Status	Green	Running	Orange	Starting	Red	Not running /erroneous
Icon Color	Status								
Green	Running								
Orange	Starting								
Red	Not running /erroneous								
<b>A d d i t i o n a l L a b e l s</b>	Shows additional Pod labels if set.								

Type: deployment





Scaling: 2 Apply

Replicas: 

**Scaling the Number of Replicas**

Move the position of the slider to the desired number of replicas you want to set.

Click **Apply**.

<div> <h3>Scale Pod</h3> <p>Are you really sure you want to scale the pod?</p> <p>Replicas before: 1</p> <p>Replicas after: 2</p> <div> <span>Cancel</span> <span>Scale </span> </div> </div>	<p>A pop-up window opens displaying the number of replicas before and after the change.</p> <p>Click <b>Scale</b> to confirm your choice or <b>Cancel</b> to abort.</p>
<div> <p><b>Scaling:</b>  2 <span>Apply</span></p> <p><b>Replicas:</b>  </p> </div>	<p>The new number of replicas is displayed after a refresh of the browser tab.</p>

#### Pod - Container

Container

activity-service

fluentd

Name: activity-service

activity-service



fluentd

Name: activity-service

Image: registry.gitlab.scheer-group.com/pas/platform/services/activity-service:rc

Ports and Volumes

Memory and CPU

	Resource	Limits	Requests
	Memory	1Gi	64Mi
	CPU	500m	100m

Section **Container** consists of several tabs, one tab for each container.

The content of the tabs is the same for all containers and displays the container details:

<div><div>N a m e</div></div>	<div>Name of the container.</div>
<div><div>I m a g e</div></div>	<div>Image of the container.</div>
<div><div>P o r t s a n d V o l u m e s</div></div>	<div>See below.</div>

**Memory and CPU**

Shows the container limitations. If a container exceeds its memory request and the node that it runs on becomes short of memory overall, it is likely that the Pod the container belongs to will be evicted.

Limitations cannot be changed by users. They are set during system deployment

	Limits	Requests
Memory	If the memory limit is exceeded, the container will run in state <b>OutOfMemory</b> and then be killed.	If a container exceeds its memory request and the node that it runs on becomes short of memory overall, it is likely that the Pod the container belongs to will be <b>evicted</b> .
CPU	If the CPU limit is exceeded, the container will be throttled, the process will slow down.	If the CPU memory request exceeds the nodes (server) capacity, the Pod can be stopped and started on a different node.



Visit the [official Kubernetes documentation](#) for more information:

- [Resource Management for Pods and Containers](#) for detailed information about requests and limits.
- [Scheduling, Preemption and Eviction](#) about the rules regarding the termination of pods.

## Details of Container

### Ports

Filter ×

Name	Port	Protocol
app	4112	TCP

### Volumes

Filter ×

Name	Mount Path	Read Only
config	/usr/src/app/config/local	true
logs	/usr/src/app/logs/	

Cancel

If you click the link **Ports and Volumes**, the container details open in a separate pop-up.

- **Ports:** Displays a list of all ports exposed in the internal network.
- **Volumes:** Lists all mounted volumes.

Use the filter on top of each list to search for single ports or volumes.

## Networking

Pod Networking

Filter ×

Name	Port	Protocol
app	8080	TCP

Tab **Networking** gives you an overview on the details of the service mesh.

Use the filter to search for a port name.

## Details

On top of the **Details** section, you can find the option **Delete Service** (refer to **Deleting a Service** below for further information). The boxes **General**, **Build** and **Deployment** contain read-only information.

## General

Timer

Inactive

Scheduler

Inactive

Name

Idea\_Management\_Jane

Version

23.1.0

The **General** details contain common information about the compiled .rep file:

<b>Timer</b>	Shows whether a timer is enabled or not.
<b>Scheduler</b>	Shows whether a scheduler is enabled or not.
<b>Name</b>	Name of the compiled service.
<b>Version</b>	Version of the compiled service.

## Build

Image Name

hbr.devcluster.pas-internal.com/u500

Build User

jane.marple

Build Date

Mar 16, 2023, 2:16:50 PM

Compiler Version

7.29.0-rc-c3c181c


Compile Date

Mar 16, 2023, 8:48:17 AM

The **Build** details contain information about the workload:

<b>Image Name</b>	Name of the image in the Docker registry.
<b>Build User</b>	Username of the user that triggered the build process.
<b>Build Date</b>	Build date and time of the service repository.
<b>Compiler Version</b>	Version of the compiler the service has been compiled with.
<b>Compile Date</b>	Timestamp of the compilation of the service.





## Deployment

Service Name

**idea-management**

Deployment User

**jane.marple**

Deployment Date

**Mar 16, 2023, 2:18:10 PM**

Container Start Date

**Mar 28, 2023, 9:37:30 AM**

The **Deployment** details contain information about the deployment:

<b>Service Name</b>	Name of the xUML service.
<b>Deployment User</b>	Username of the user that triggered the deployment process.
<b>Deployment Date</b>	Creation date and time of the container.
<b>Container Start Date</b>	Date and time of the last (re-)start of the container.

Endpoints
















Libraries

Filter









Below the three sections that contain read-only information, you can find the two tabs **Endpoints** and **Libraries** (see below for details).


## Endpoints

In tab **Endpoints** you can find the necessary information regarding the API endpoints of this service:

Endpoints						
Filter						
Name	Type	URL	Test	Interface / Descriptor	API	
xUMLControllerService	control	https://pas.devcluster.pas.schaeff-systems.com/uml/control/rest/service/xUMLControllerService/api				
ModelTesttest	rest	https://pas.devcluster.pas.schaeff-systems.com/uml/rest/rest/service/BPMN_RESTService/rest/process/ModelTest				
Rest	rest	https://pas.devcluster.pas.schaeff-systems.com/uml/rest/rest/service/BPMN_RESTService/rest				
StartupShutdown4TestService	shadow	https://pas.devcluster.pas.schaeff-systems.com/uml/shadow/rest/service/StartupShutdownService4TestService/startupShutdown4TestService				
ModelTestRest	shadow	https://pas.devcluster.pas.schaeff-systems.com/uml/shadow/rest/service/BPMN_RESTService/rest/process/ModelTest				

Column	Description	Possible Values
<b>Name</b>	Name of the registered endpoint.	Any string.
<b>Type</b>	Type of the registered endpoint.	<ul style="list-style-type: none"> <li>control</li> <li>rest</li> <li>shadow</li> <li>soap</li> <li>ui</li> </ul>

URL	<ul style="list-style-type: none"> <li>Click the URL to copy the secured endpoint  to the clipboard.</li> <li>Click  to display the URL of the internal endpoint . Click the URL to copy it to the clipboard.</li> </ul>	Any URL.
Test	<p>Click <b>Open</b>  to switch to the interface that allows you to test the application/API. The test interface is available on running services only.</p> <div>  The PAS platform features an <a href="#">xUML Runtime API</a> for each service. You can use the interface to obtain information on the states of the service's state machines in general, and to trigger state transitions. Refer to <a href="#">xUML Runtime API Reference</a> for a comprehensive list of all available requests. </div>	-
Interface /Descriptor or	<p>Click <b>Download</b>  to download the description (OpenAPI/WSDL) of the service interface.</p> <p>Click <b>Copy to clipboard</b>  to copy the private descriptor URL.</p>	-
API	Click <b>Import</b>  to import the API to <b>Scheer PAS API Management</b> . A wizard will support you in creating the API in API Management. Refer to <a href="#">Creating an API</a> in the <a href="#">API Management Guide</a> for details.	-



Filter  
 idea

Name	Type	URL
IdeaProcessRest	rest	https://pas-/BPM
StartupShutdown4Idea_Management_Jane	shadow	https://pas-/Start/Start
IdeaProcessRest	shadow	https://pas-/BPM

Use the filter field to search for a specific endpoint.


The content of the filter field is applied to the columns **Name** and **Type**.

Filter  
 idea


Type (1)

Reset Filter

☐ control  
☒ rest  
☐ shadow  
☐ ui  
 Reset Selection

Click **Extended filter**  to display the extended filter options:

- Type**
- Reset Filter**

If a filter is applied, the extended filter changes to .

Filter

idea

Type (2)

Reset Filter

control

rest

shadow

ui

Reset Selection

StartupShutdown4Idea\_Man

IdeaProcessRest

In the main filter window, you can reset all selected filters.

Click **Reset Filter**.

In the filter option window, you can also reset the selection.

## Libraries

In tab **Libraries** you can find a list of all libraries that are used in this service:

Libraries			
Name	Version	Compiler Version	Compile Date
PAS_Platform	1.5.1	7.27.0-rc-7ed88cd	Mar 22, 2023, 3:01:08 PM
SendMail	1.0.0	7.28.1	Mar 6, 2023, 11:46:53 AM
librarySQLQuery	2.0	7.2.0	Nov 20, 2018, 9:56:20 AM

Column	Description
<b>Name</b>	Name of the library.
<b>Version</b>	Version of the library.
<b>Compiler Version</b>	Version of the compiler the library has been compiled with.
<b>Compile Date</b>	Timestamp of the compilation of the library.

Endpoints

Libraries

Filter

mail

Name

Version

SendMail

1.0.0

Use the filter field to search for a specific library.

The content of the filter field is applied to the column **Name** only.

## Deleting a Service



## Delete Service

If you want to delete a containerized xUML service, click **Delete Service** on top of the **Details** section.

### Confirm Deletion



Please be aware that by deleting this service...

- the service container (deployment) gets removed from the current system
- registered routes are purged
- persisted data that may have been stored in this service will be removed

Please type the following: example-service

Service name \*

Delete

Cancel

Please note, that the deletion of a service has several consequences:

- The service container (deployment) will be removed from the current system.
- The registered routes are purged.
- Persisted data stored in this service will be removed.



## Documentation

Select Document

Ticketssystem\_\_1889809404.txt

Logging\_Lib\_1442153486.html



Polymorphic\_Lib\_355219323.html

erpOrderInterface\_557722615.html

Documentation\_Lib\_\_70801303.html

Use the list **Select Document** to choose the documentation you want to see.

The list contains:

- The documentation of the xUML service itself (if it is a service that has been created in the [Designer](#), you will see the content of field **Description** from the [services detail page](#)).

## Documentation

Select Document

Logging\_Lib\_1442153486.html

### Logging Library

Simple library for service logging, implementing a log operations and operations for every log level.

For more information on xUML service logging, refer to our [online documentation](#):

- [IoU Function](#)
- [Logging of xUML Services](#)

### Change Log

Date	Author	Version	Implementation	Note
25.11.2020	David Stringer	1.0.0	Simple bridge log operations	
07.01.2021	Meredith Mitchell	1.0.1	Documentation added	
08.01.2021	Meredith Mitchell	2.0.0	Provided logging operations for different log levels	
			Added operation for logging of error details	

- The documentation of the libraries that are used in the service.

## Logs

Logs

Filter

Channel

error

access

Open Log Analyzer to inspect logs

In section **Logs** you can change the log level. Go to page [Changing the Log Level of a Workload](#) for detailed information.

The link in section **Logs** gives you direct access to the Log Analyzer, where you can inspect the logs. Refer to [Showing Logs of a Containerized xUML Service](#) and [Using Kibana](#) for further information.

History Log

History Log

Filter

Date	User	Action
28/02/2024 13:42	jane.marple	Restart instance
13:41	jerry.cotton	AO_SRV_BPMN_RETSERVICE_MAXREQUESTHEADERSIZE changed from 8 to 10
13:40	jane.marple	The following settings have been changed: <ul style="list-style-type: none"><li>G_SIMPLE_FORM_EXAMPLE_AUTORETRY changed from false to true</li><li>AO_SETTINGS_DEFAULTCONNECTIONPOOLSIZE changed from 10 to 11</li></ul>
13:39	jerry.cotton	Stop instance
13:33	jane.marple	Start instance
13:33	jane.marple	Service created (1.0)

Items 10 1 - 6 / 6

In the **History Log** section ( **PAS 24.0** ) you can inspect the service history. Refer to [Showing Logs of a Containerized xUML Service](#) for detailed information.

Persistent State

Persistent State

Class

States

Stalled

Primary Key Search

urn:ideaProcess.IdeaProcess

0

0

In section **Persistent State** you can manage persistent state objects. Refer to [Persistent States of Containerized xUML Services](#) for detailed information.

Configuration

Configuration

Filter

Expert Mode

Invalid 3 Edited 0 / 91

Section	Key	Current Value	Default Value
Settings / Deployment Macros	:AuthenticatorEnabled:	<div>String *</div> <div>True</div> <div><div></div><div></div><div></div></div>	True
Settings / Deployment Macros	IdeaProcess:holdTime:	<div>String *</div> <div>PT60S</div> <div><div></div><div></div><div></div></div>	PT60S
Settings / Deployment Macros	IdeaProcess:autoRetryTime:	<div>String *</div> <div>PT60S</div> <div><div></div><div></div><div></div></div>	PT60S
SAP global	DefaultConnectionPoolSize:	<div>String *</div> <div>10</div> <div><div></div><div></div><div></div></div>	10
SOAP HTTP Service Request	<div>Invalid</div> BPMN_RESTService: Rest: URI	<div>String</div> <div>/rest</div> <div><div></div><div></div><div></div></div>	/rest

Save

Items 5

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In the **Configuration** section you can change the settings of an xUML service. Refer to [Adapting the Configuration of Containerized xUML Services](#) for detailed information.