

Whats new in BRIDGE 7

BRIDGE 7 is out! Next to new applications like API-Management and new features like OData Support, the BRIDGE comes in a revised design. Find below a summary of all new features and operational and technical improvements.

To use BRIDGE 7, you need a new BRIDGE license - please contact us at info@e2ebridge.com for more information. Our [Bridge 7 Migration Guide](#) will help you with the task of updating your systems, then.

Main Features

API Management

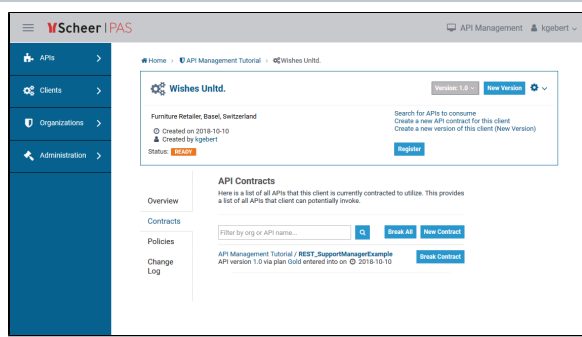
BRIDGE 7 comes with **Scheer PAS API Management**. API Management offers a maximum of control regarding administration and optimization of your APIs. You can setup different permission levels for usage and administration of APIs, services and clients, and control the publishing of contracts in real-time in a flexible way. Access to the interfaces is possible either via (immutable) contracts or via use of public APIs.

On this Page:

- [Main Features](#)
 - [API Management](#)
 - [Process Mining](#)
- [New Adapters](#)
 - [EDI](#)
 - [OData Support](#)
 - [Alias Reader](#)
 - [Persistent State Control Adapter](#)
- [Improved Adapters](#)
 - [Persistent State Adapter: Performance Improvements With External Persistent State Attributes](#)
- [xUML RUNTIME API](#)
- [Continuous Delivery with the BRIDGE](#)
- [Operational Improvements](#)
 - [Operating System Support](#)
 - [New BRIDGE Design](#)
 - [Improved Search in Log Files](#)
 - [Configurable Service Port Numbers](#)
 - [Service Version and Improved BRIDGE Deployment](#)
- [Technical Changes](#)
- [New Features for Developers](#)

Related Pages:

- [Bridge 7 Migration Guide](#)



The API Management solution has three components which can be deployed on different host to get maximum performance and stability:

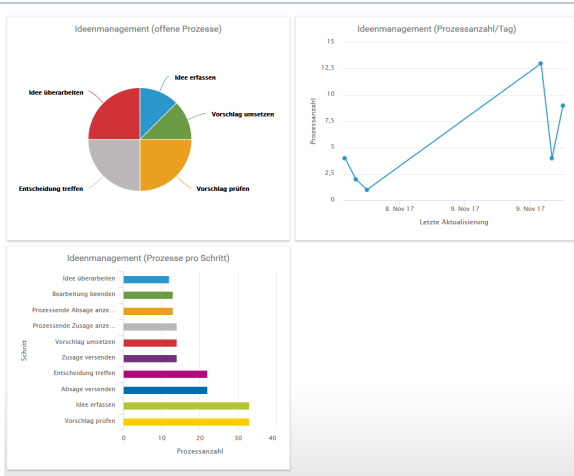
- The Gateway Server enforces all the policies at runtime. It is powered by Eclipse Vert.x to get maximum performance with low resource consumption.
- The Gateway Manager can manage one or more BRIDGE gateways.
- The Auth Server does authentication of service consumers and service developers.

API Management is based on apiman and Keycloak.

For more information, refer to the [API Management documentation](#).

Process Mining

The Process Dashboards have been completely redesigned. The new **Scheer PAS Process Mining** allows for intuitive and easy creation of new analyses and comes with significant performance improvements.



Process Mining comes with a personalized dashboard view. Manage all your analyses on one page!

- You can create templates for analyses you need frequently, and these templates can be shared among users.
- Choose between a variety of diagram types: tachometer, pie chart, line chart, area chart, area spline chart, column chart, bar chart, spline chart, radar chart.

Create New Analysis

Choose Chart Type or Template Choose Process Allocating the Axes **4** Setting Filters (optional)

☐ Applying no filter

☒ Applying the following filter:

Consider all of the following rules

End Event	is defined		Y	Y	Y
Process Duration	>	Value	Y	Y	Y

<

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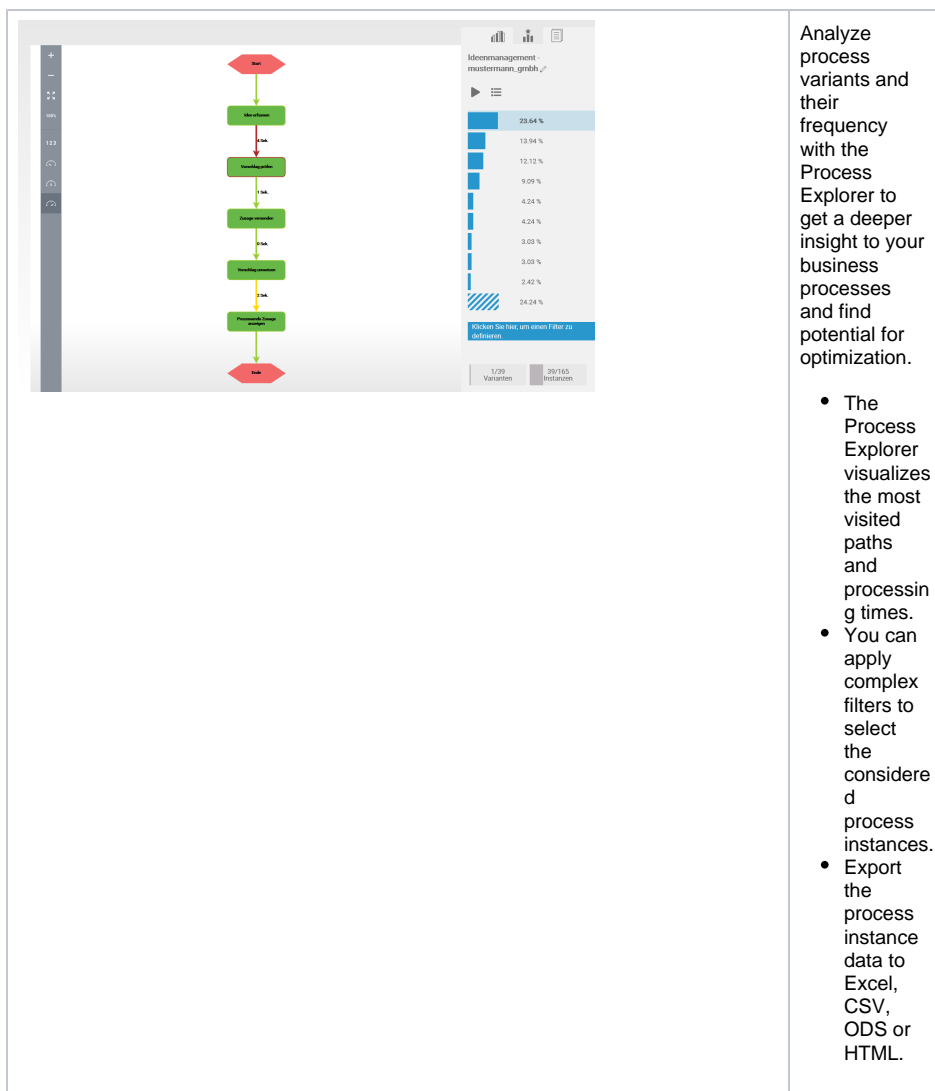
CANCEL BACK NEXT CREATE ANALYSIS

is not defined

is defined

Create your diagrams to your needs.

- You can customize the look of your charts by changing the colors, sorting the displayed data and defining if data labels should be displayed.
- Define a secondary axis to your chart to compare two key performance indicators.
- Filter your process data by complex filters that can be combined (and/or). It is even allowed to apply a filter multiple times to the same key performance indicator to compare data of e. g. different time ranges.



- The Process Explorer visualizes the most visited paths and processing times.
- You can apply complex filters to select the considered process instances.
- Export the process instance data to Excel, CSV, ODS or HTML.

For more information, please refer to [the official Process Mining documentation](#) (German only).

New Adapters

EDI

The EDI Adapter now also supports OFTP2 and AS2 formats:

- OFTP 2 is a specification for the secure transfer of business documents over the Internet.
- AS2 is a specification about how to transport data (like Edifact documents) securely and reliably over the Internet.

The feature includes pre-built service templates including a user interface for configuration of transport channels and communication partners.

OData Support

The BRIDGE now supports OData for querying and updating databases using REST. The protocol allows Web clients to get, publish and edit database resources using simple HTTP messages. Using OData, you can easily integrate with SAP NetWeaver Gateway, Microsoft Dynamics NAV, Microsoft Office 365, Microsoft Sharepoint and more.

For more information on the OData Adapter, please refer to [OData Adapter](#) and [Importing OData Entities and Services](#).

Alias Reader

The Alias Reader enables you to get the details that have been specified on any alias from the component diagram. You can now get the alias details with an action node with stereotype `<<AliasReader>>`. This adapter replaces the deployment macros `get...FromAlias()`.

For more information on the Alias Reader, please refer to [Alias Reader](#).

Persistent State Control Adapter

The Persistent State Control Adapter gives access to persistent state metadata directly from within a service (self context). With this adapter, you can:

- list all persistent state owners
- get the name of an owner
- list all available persistent state classes
- get an object count per persistent state class
- get the persistent state metadata
- query persistent state objects
- delete persistent state objects

The query functionality in particular is powerful and allows for very complex queries. See [Retrieving Persistent State Metadata with the PersistentStateControl Adapter](#) for more details.

Improved Adapters

Persistent State Adapter: Performance Improvements With External Persistent State Attributes

You can mark attributes of a persistent state class as external by applying stereotype `<<External>>`. This can speed-up persistent state performance if you have huge data objects (like e.g. big blobs, IDocs or PDFs) that are only used in few transitions.

External persistent data is handled differently compared to the internal data:

- External persistent data will be stored separately. You can even store external data to a different database (see [Persistent State Components](#)).
- External persistent data will only be loaded on demand.
- External persistent data will only be saved if loaded before.

For more information, refer to [Persistent State Classes](#) and [Getting Copies of Persistent State Objects](#).

xUML RUNTIME API

As of BRIDGE 7.5.0, the xUML Runtime provides a REST interface to the controller service of each xUML service. Initially, you can access persistent state resources via this API, but we plan to add more service related resources.

Bridges as of BRIDGE 7.5.0 provide an [OpenAPI 2.0 Specification](#) of the controller service for documentation and testing purposes. Via a link on the xUML service page, you can access a REST service documentation page where you can inspect the service interface and make HTTP calls on the service.

Continuous Delivery with the BRIDGE

- Based on a straightforward and repeatable process, the continuous delivery approach helps with building, testing and releasing software faster. You can automate your build, deploy, and testing processes using an automation tool together with the BRIDGE command line tools. For more information, please refer to [Continuous Delivery with the BRIDGE](#).
- For automation purposes, all Bridge functions can be accessed via a REST interface. For more information, please refer to [BRIDGE API](#).
- The BRIDGE Command Line Interface has been reworked and now offers many new features. You now can access most of the actions of the BRIDGE API via the CLI.
 - viewing and setting the service preferences and the service settings of xUML, Node.js and Java services
 - advanced handling of xUML services (list services, view status, view/change service documentation, list/cancel running sessions, download repository)
 - resource handling (list, upload, delete)
 - listing global variablesRefer to [GitHub](#) for more information.

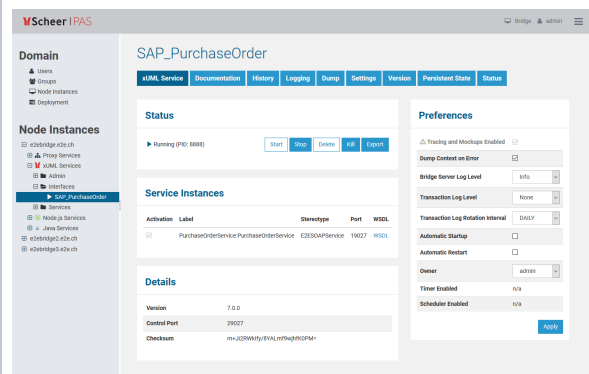
Operational Improvements

Operating System Support

The following operating systems now are supported officially as a system to run the BRIDGE on:

- Windows Server 2016
- Windows Server 2019

New BRIDGE Design



The screenshot displays the BRIDGE web interface for managing the 'SAP_PurchaseOrder' service. The interface is divided into several sections: a left sidebar with navigation links (Domain, Node Instances), a top navigation bar with tabs (xUML Service, Documentation, History, Logging, Share, Settings, Version, Persistent State, Status), and a main content area. The main content area includes a 'Status' section with a 'Start' button, a 'Service Instances' table listing the 'PurchaseOrderService' with its 'E2ESAPService' stereotype and '19027' port, and a 'Details' section showing version '7.1.0' and a 'Checksum'. A 'Preferences' panel on the right allows configuration of settings like 'Bridge Server Log Level' and 'Automatic Startup'.

We have redesigned the user interface of the BRIDGE to give you a smoother user experience.

Improved Search in Log Files

Deployment

xUML RepositoryHelloWorldExample.rep

Service NameHelloWorldExample

Deploy Settings and Preferences from Repository☐

Startup Service☐

	New	Deployed
Service Version	1.1	1.0
Compiler Version	7.1.0	7.1.0
Build Time	2018-10-09 11:00:41	2018-10-05 09:24:42

OverwriteCancel

You now can specify a service version in the component diagram, similar to the library version number (see [Creating a Component Diagram > Defining the Composite](#)). The service version will be visible on the BRIDGE in several places, e.g. on the improved **Version** tab (see [Additional xUML Service Tabs](#)).

The deployment dialog now shows a table with service details, e.g. the new service version (see [Deployment of xUML Services](#)). Additionally, if the service to be deployed is already existent, you can now compare the service details of the new and the deployed service. This helps you to better decide, if you are deploying the correct repository.

Technical Changes

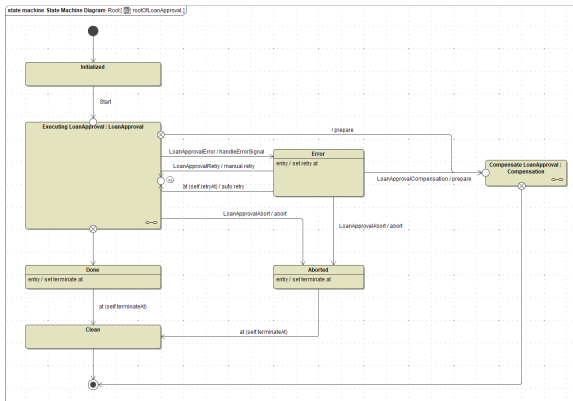
We updated some underlying software to newer versions:

- Node.js updated to version 12
- Java updated to version 11
- proxy updated to Apache httpd version 2.4
- TLS 1.3 supported
- Tomcat updated to version 9

New Features for Developers

Lots of new features, improvements and bug fixes for BUILDER, ANALYZER and BRIDGE help developers to create better services:

- Extended BRIDGE API: delete service, export xUML service, deploy service, get/put global setting variables, get/delete service sessions, kill service, managing users and groups (see [BRIDGE API](#))
- REST, HTTP and SOAP services support IPv6
- REST Adapter supports media type parameters
- SQL Adapter requests can be cancelled (see [BRIDGE Status Tab](#))
- Improved BPMN root state machine with more complex error and retry handling (see [The Model Implementing the BPMN Process](#) and [BPMN Default Error Handling](#))



- File System Adapter and Flat File Adapter allow for setting a static root path together with a dynamic file name (see [File System Components](#))
- Analyzer allows to start a test suite via command line (see [Running Regression Tests From Command Line](#))
- Possibility to implement a shutdown activity for Node.js and Java services (see [Developing Node.js Services](#) and [Java Services Reference Guide](#))
- Improved deployment view on the BRIDGE: service details displayed (see [Deployment of xUML Services](#))
- and many, many more ...