Product Description

1. Intended use and areas of application

Streamworks is a Workload-Automation- and Service-Orchestration-and-Automation-Platform.

The Streamworks philosophy stems directly y from the arvato Systems data centers: Easy to learn and use, yet able to handle complex tasks. Made for heterogeneous IT landscapes with a high amount of individualized software and the maximum degree of automation and standardization at the customer's request

Streamworks is especially useful for IT enviroments for which one or several of the following points apply:

- The IT workload is entirely or partially organized in the form of batch processes, file transfers or REST-API-Calls.
- The daily number of processes carried out is so high, due to the quantity or number of repetitions, that it is necessary to centrally control and monitor them.
- The business processes running in batch format need to be better synchronized with the IT operational processes (IT housekeeping).
- Many and/or complex dependencies need to be mapped between individual process steps.
- The IT infrastructure landscape or application landscape is heterogeneous.
- There are narrow time frames for processing the batch processes.

Content

2. Scope

- Central creation of IT workflows (Streams in Streamwork) by connecting individual process steps (jobs) that may contain different program calls
- Connecting all business-related infrastructure components to the central engine via agents
- Defining dependencies between dedicated, virtual, and cloud-powered applications and infrastructure platforms
- Automated, regular or event-based implementation of process chains on all connected servers
- Central monitoring of all system components, agents, jobs and error alerts
- Comprehensive reports and statistics
- Logging and exporting all audit-related data

3. Use

- **Central documentation:** Access to all business- and mission-critical scripts, programs and (batch) processes from a single location.
- **Flexible orchestration:** Carry out batch processes on all hardware and software platforms.
- **High quality:** Permanently reduce error rates as well as time and cost requirements for projects and daily business.
- **Reduce employee workloads:** With Streamworks you no longer have to perform standard tasks regularly and manually.
- **Integration:** You can integrate existing central software solutions (monitoring and alerting, middleware, EAI, IT automation) into numerous interfaces.
- **Focus on the business cycle:** The process steps taking place during a business day will be integrated into a virtual production day. You can determine the start and end times separately while maintaining the sequences required from a business perspective.
- **An eye to the future:** You can plan, modify and control future production days in advance during business hours. Daily production plans are generated from the master data during preparation.
- **Flexibility:** You can carry out ad hoc changes flexibly and transparently. Up-to-the-minute changes have no effect on the master data and are logged in full.
- **Control:** Go live of large batch releases in a controlled manner. Transport between test and production environment is done via the export/import utility. Versioning flags ease the simultaneous deployment of many job networks.
- **Synchronization:** Use time slots for system maintenance and synchronization of Your IT operating and business processes optimally and avoid parallelism of disruptive activities.
- **Ability to provide information:** Get auditable logging at all times. The Stream Run Journal and central job log archiving meet the principles of proper accounting.
- **Information security:** Password rules, authentication technology and encrypted communication of streamworks components are state of the art.

4. Benefits

- High-quality software and consulting due to our many years of experience in our own IT operations.
- Minimal training and operating costs are required, thanks to the standard Windows components in the front-end and back-end.
- Working with templates and inheritance of central settings save time in everyday business.
- Automatic error handling results in a high degree of automation, which reduces the operational workload.
- A comprehensive set of data on workload analytics is provided, which allows continuous improvement in quality.
- High security standards and comprehensive logging help users with compliance and audit requirements.

5. Architecture, components and interfaces

Based on up-to-date software technology, the modular and expandable structure of the Streamworks architecture comprises the following components:

- Central database
- Processing server
- Application server
- Desktop client and agents

All central Streamworks components currently run on a Windows operating system, but agents are available for numerous other operating system platforms and applications. Databases and processing and application servers can be operated on physical or virtual hardware and the desktop client is terminal server-capable. All software, including standard setup routines and *.msi packages, is installed within four hours. Encryption is used for all communication between Streamworks components, which in turn use signed certificates to authenticate themselves to the master components.

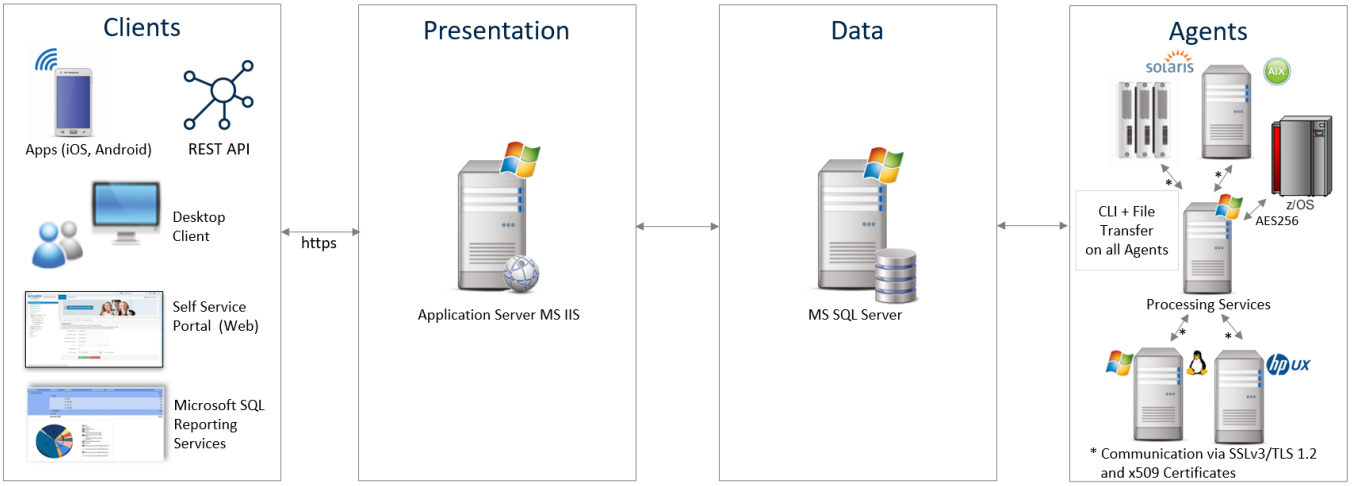


Fig.: Streamworks Components

In addition operation in Azure is possible. For this purpose, the streamworks backend processes are packed in containers and are operated by Azure Kubernetes Service. As database Azure SQL is used. The on-premises agents are connected via TCP/IP without the need of a VPN.

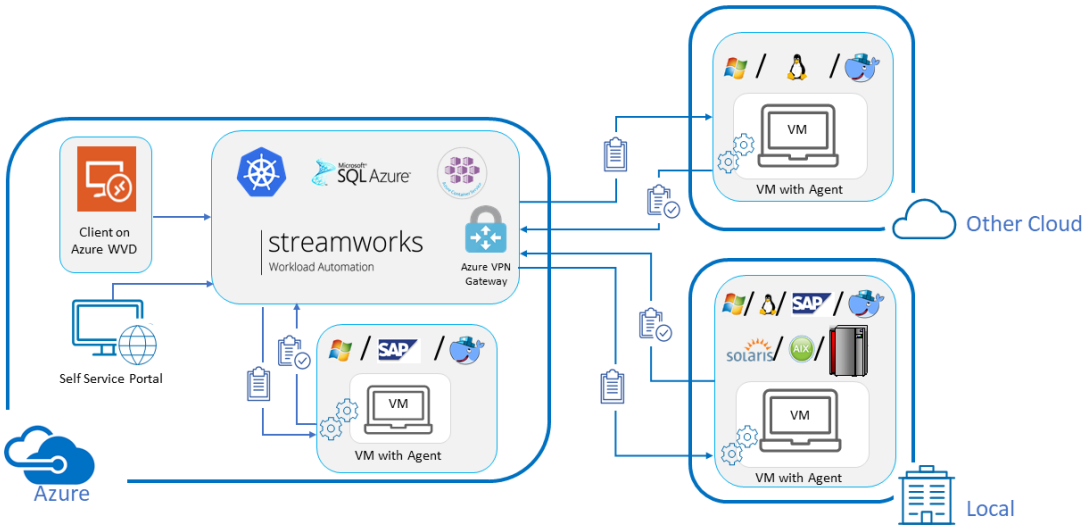


Fig.: Operating in Azure

Central data storage and data security

Streamworks offers the highest degree of data security with its central data storage. All master data, runtime data and messages are stored permanently in the Microsoft SQL Server database. High availability can be achieved through the use of Microsoft cluster technologies, virtualization solutions (e.g., VMware vMotion) or synchronous data mirroring. The processing server is made up of several Windows services that take over all agent communication, job implementation and central tasks for Streamworks

applications. The processing services can be installed multiple times and can thus be set to any scale for an increasing system load. The streamlined Streamworks agent acts as a guest on an active computer so it needs only minimal processing power, RAM and disk space. The agent receives data on the job start date from the processing service, reports back on completed jobs and sends regular vital signs, or 'heartbeats,' to the central services.

Central access for all end devices

The application server, a Microsoft IIS, controls communication with desktop clients and mobile access options such as smartphone apps or the web app, which the user can use to monitor and control the Streamworks production.

Scalability

The Streamworks architecture is scalable and can be implemented with single-server solutions or even multi-server operations with multiple application servers and database clusters. It doesn't matter whether there are fewer than 100 or more than 100,000 jobs per day waiting to be processed.

User interfaces

Streamworks can be operated via Web App or Windows Desktop Client, with the latter offering the (currently) greater range of functions. The intuitive, easy-to-learn interface and the ability to customize configuration options win you over the first time you login. Several different tab-based or graphical display options are available: Even complex job networks are displayed clearly. This makes it easier to learn to use the program, saves timeconsuming training, and guarantees simple and efficient use:

The Streamworks desktop client is divided into five domains:

- Start page with dashboard
- Administration / Master data area
- Stream design
- Runtime
- Reporting

A user's individual view depends on their respective permissions. Administration, stream design, and reporting are clearly organized in the explorer, properties, and workspace panels. There are numerous functions in the runtime area instead of the explorer. There are also shortcut menus (right-click on the mouse), selection dialogs, drop-down menus, drill-down men-us and buttons that facilitate the quick location of information and allow for the definition of new streams.

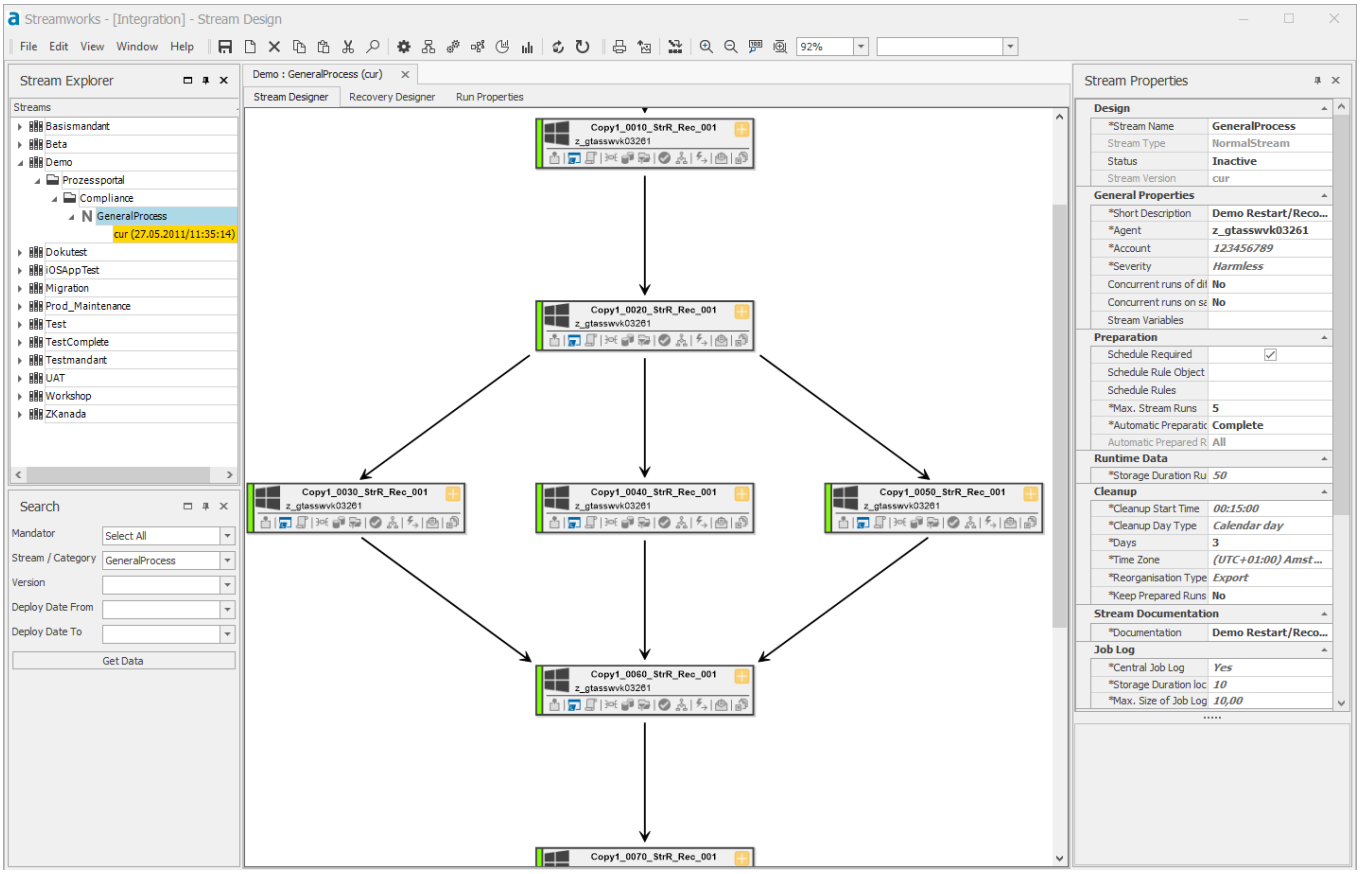


Fig.: Stream Designer at the Windows Desktop Clientt

The panel style, column selection (remove/add columns), column ordering, skins (color schemes), and auto-refresh function can be stored as a layout for each user. Several layouts can be created, with one layout defined as the default (layout on login).

The web app follows moderns standards in navigation and display of information.

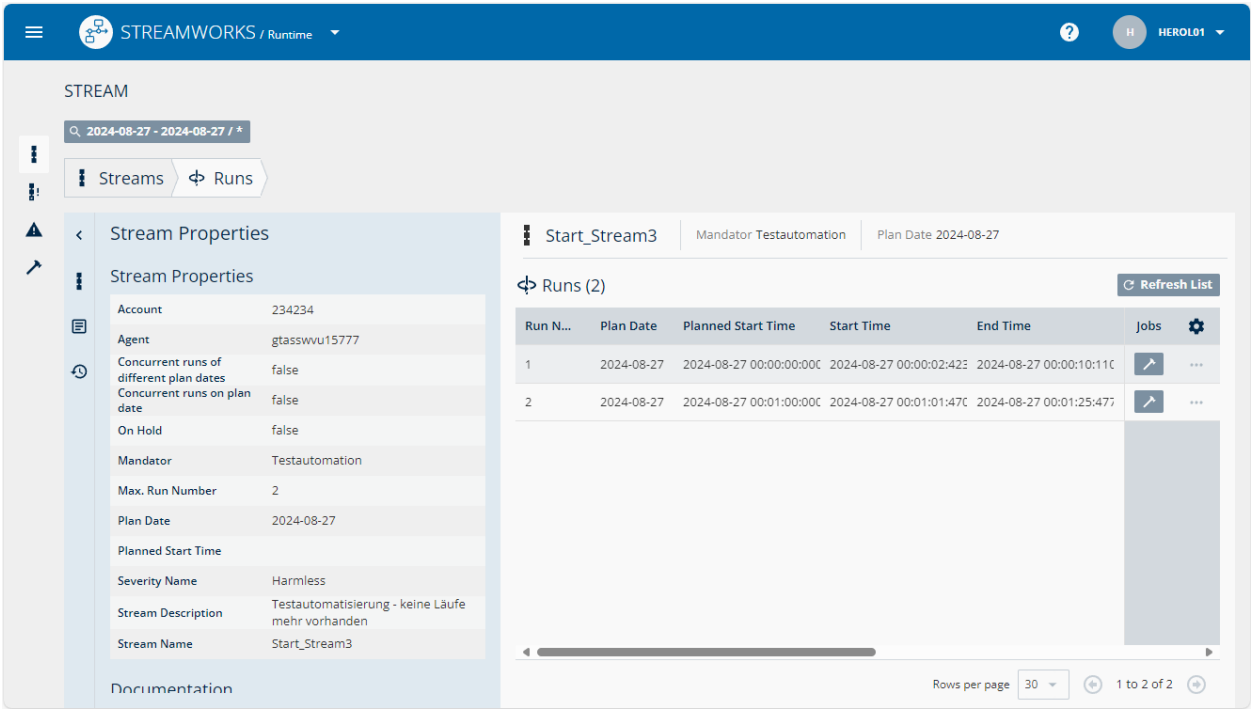


Fig.: Streamworks Web App with display of Stream Runs in desktop view

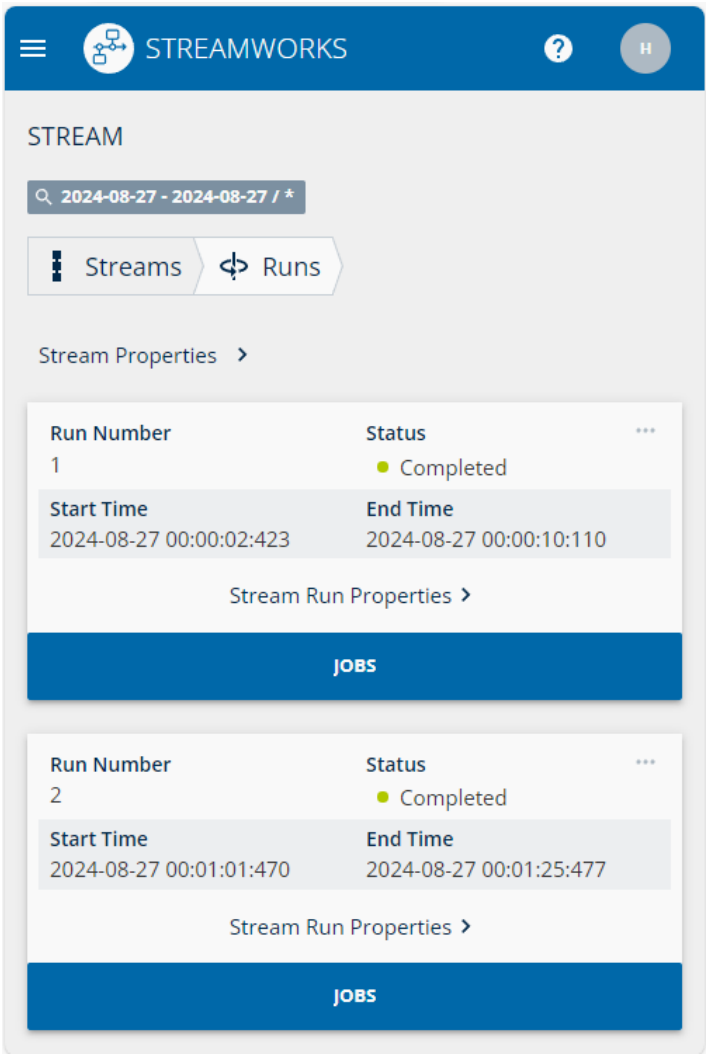


Fig.: Streamworks Web App with display of Stream Runs in mobile view

Cross-platform automation

Workload Automation will be supported by Streamworks across different platforms. The stream-lined Streamworks agent software solution reduces the demand on resources and is available for all standard Windows, Unix, and Linux operating systems as well as mainframe OSs (z/OS, System i, BS2000). Switching between Unix, Windows, z/OS, and SAP jobs within a process chain (stream) is completely transparent and effortless thanks to standardized operations. Encryption is used when Streamworks agents communicate with the central processing server. Likewise, the agents use signed certificates to authenticate themselves to the master components.

Streamworks agent software on the different operating systems automatically records all job processing event data in log files and stores this information locally on the systems. Each log file contains information on the agents themselves, as well as information produced by the called script/program during implementation of a job. Examples of this are a job's start date, description, possible errors that occur, etc. This log data is indispensable for error analysis, particularly in the case of a script/program termination.

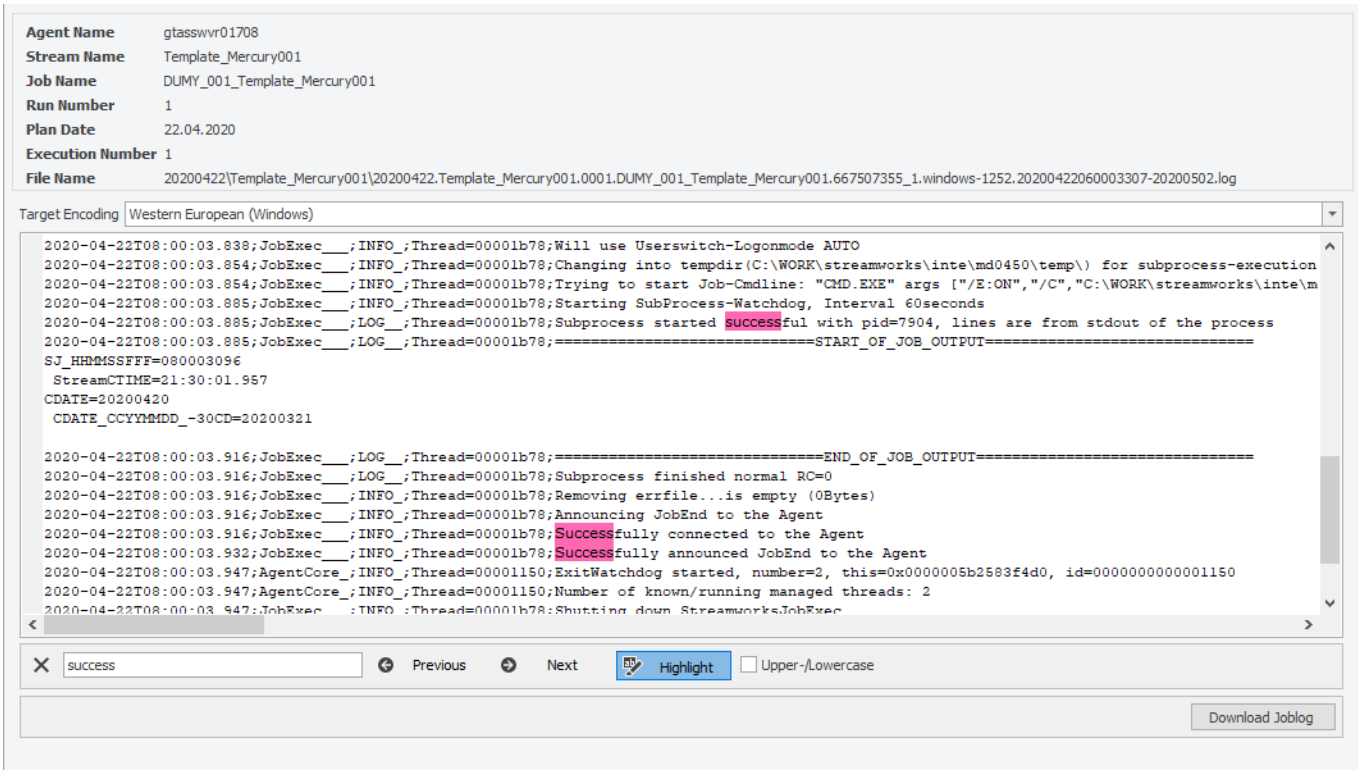


Fig.: Search in the central

Streamworks offers the possibility of copying log files immediately following completion of a job to a central Streamworks directory, separated by client. The transfer is completed asynchronously after execution of the job. There is no lag in batch processing. The local log files are then automatically deleted by the agent after a definable period of time.

Automatic monitoring of all agents

All agents are automatically monitored and the user receives a thorough overview of every agent's status (stopped, running, listening, disconnected, hold) on a main screen in the desktop client.

Agent Control

Agent	Port	Type	Status Agent Job Processing	Status Server Job Processing	Cluster Name	Heartbeat Interval...	Last Heartbeat
biasswc...	30100	PA	Running	Active	GTASSWCH...	300	22.04.2020 09:52:05:43...
biassw...	30100	PA	Running	Active		300	22.04.2020 09:49:52:84...
biassw...	30100	PA	Running	Active		300	22.04.2020 09:48:58:43...
dbmps...	30100	VA		Active	GTASSWCH...	300	
degtluv...	30100	PA	Running	Active		300	22.04.2020 09:50:32:75...
dezirwlr	30100	PA	Stopped	Hold	GTLNMIWC...	300	01.10.2019 15:04:04:49...
dezirwlu	30100	PA	Disconnected	Active	GTLNMIWC...	300	15.11.2019 09:57:33:98...
exassw...	30120	PA	Disconnected	Hold		300	20.04.2020 11:08:20:66...
exassw...	30121	PA	Disconnected	Hold		300	17.04.2020 09:49:50:21...
gtassw...	30100	PA	Running	Active	GTASSWCH...	300	22.04.2020 09:49:53:71...
gtassw...	30100	PA	Running	Active		300	22.04.2020 09:48:07:20...
gtassw...	30100	PA	Running	Active		300	22.04.2020 09:48:42:82...
gtassw...	30100	PA	Running	Active		300	22.04.2020 09:50:53:43...
gtassw...	30100	PA	Running	Active		300	22.04.2020 09:49:32:94...
gtlnmiw...	30100	PA	Running	Active		300	22.04.2020 09:52:33:09...
gtlswpp...	30100	VA		Active	GTLNMIWC...	300	
gtlswpp...	30100	VA		Active	GTLNMIWC...	300	

Fig.: Agent control in runtime area

Connection to IBM mainframes via z/OS agents

All the Streamworks functions can be used on IBM mainframes with Streamworks z/OS agents as well. Communication between the Streamworks processing server and the z/OS agents is based on the highest Advanced Encryption Standard available (AES-256). In addition, this Streamworks agent supports several z/OS-typical characteristics: The Streamworks z/OS agent has an uncatalog function. Before one or more z/OS jobs are repeated, the z/OS agent automatically uncatalogs all sequential files generated by these jobs. If necessary, files can also be excluded from uncataloging, which can be scheduled at the stream or job level. Every z/OS agent has access to its own previously filtered datasets from the System Management Facility (SMF) log data for this functionality.

Streamworks also supports z/OS-specific return codes (condition codes, user codes, system codes, JCL errors) up to the step and procedure step levels. Mainframe operators quite frequently use job routing in multiple computer networks (for example, JES2 MAS or JES3 systems). The Streamworks z/OS agent is able to transfer the start of a job and its monitoring from one agent to a second agent installed on the same computer network based on internal agent communication.

In doing so, Streamworks offers the best solution for batch load balancing in the IBM mainframe area.

Application integration

Alongside cross-platform capabilities, Workload Automation also requires cross-application capabilities. Terms like (Enterprise) application integration refer to the integration of standard application software, such as SAP, VMware, system management software, and file transfer process into batch processing. Streamworks offers this kind of integration for a wide variety of applications.

Streamworks SAP automation with jexa4S and jexa4BI

Both jexa4S and jexa4BI are available as interfaces in order to link SAP® NetWeaver systems on Windows, Linux, or Unix derivatives to Streamworks. Planning, operating and controlling SAP batch processing through XBP 2.0 and 3.0 interfaces is incredibly easy with jexa4S. Variations can also be installed, copied, modified and deleted, in addition to implementing batch jobs in SAP. SAP batch events are maintained exactly like parent/child functions and SAP's job interception logic. jexa4S possesses activity collections in which single blocks (BAPIs) of the XBP interface have been combined into sequences that are often required to facilitate the implementation of SAP batch jobs. For example, the creation, expansion, startup and monitoring of a job as well as the export of the job log and spool after job completion are carried out within one jexa4S call. All this can be done with only a single Streamworks job.

jexa4S was certified in accordance with the test catalogs prepared by SAP®. The functional range of jexa4S supports all of the functions of the XBP 2.0 and 3.0 interfaces and the SAP® Solution Manager.

jexa4BI is the SAP BI interface built in accordance with the SAP BW-SCH certification catalog. jexa4BI can implement and monitor special process chains and info packages available in SAP data ware-housing products through Remote Function Call (RFC). Activity collections in jexa4BI also replace the individual calls for SAP function modules offered for BW-SCH interfaces.

VMware vSphere and vCenter Server

Streamworks integrates the tools provided by VMware for managing one (vSphere) or many (vCenter Server) ESXi hosts through vCLI and PowerCLI APIs. The VMware tasks available together with Streamworks enable you to extensively automatize the most typical management tasks.

Additionally, each task comes with a documented example call as a template.

Integrated file transfer process

Files are encrypted and transferred between Streamworks agents without additional software. The integrated Streamworks transfer solution also includes both conversion for a variety of file formats and central control of all ongoing transfers.

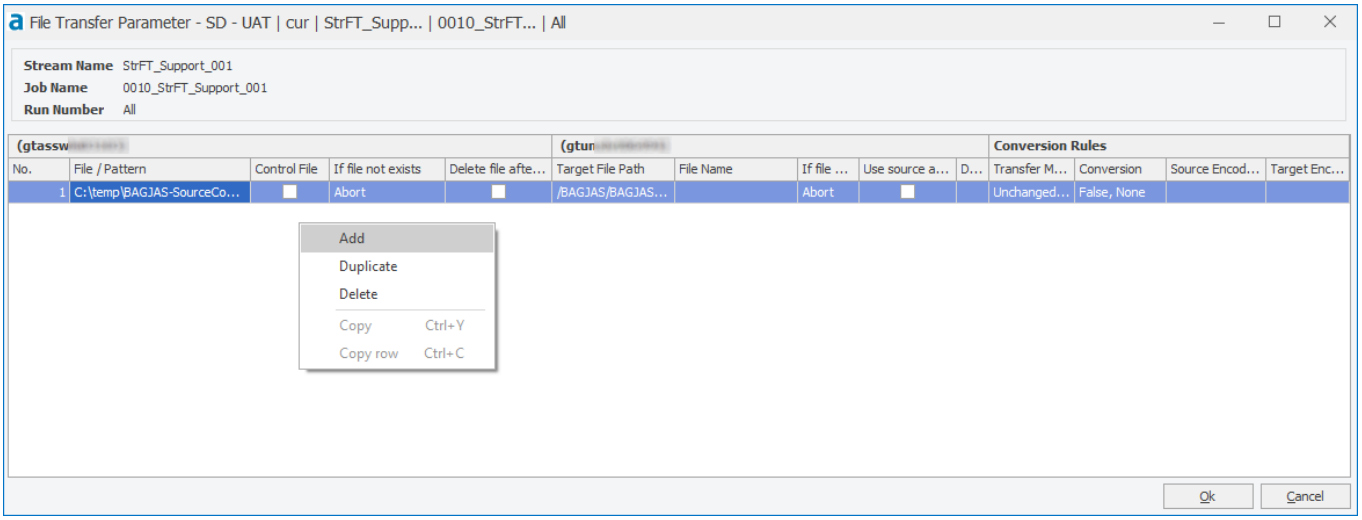


Fig.: File transfer definition, multiple files possible

The numerous file transfer options common to standard FTP protocols can be defined using the same intuitive menu navigation found in all Streamworks jobs. When using Streamworks agents, you no longer need to file SSH keys or maintain FTP clients and servers on computers, which saves you a great deal of time.

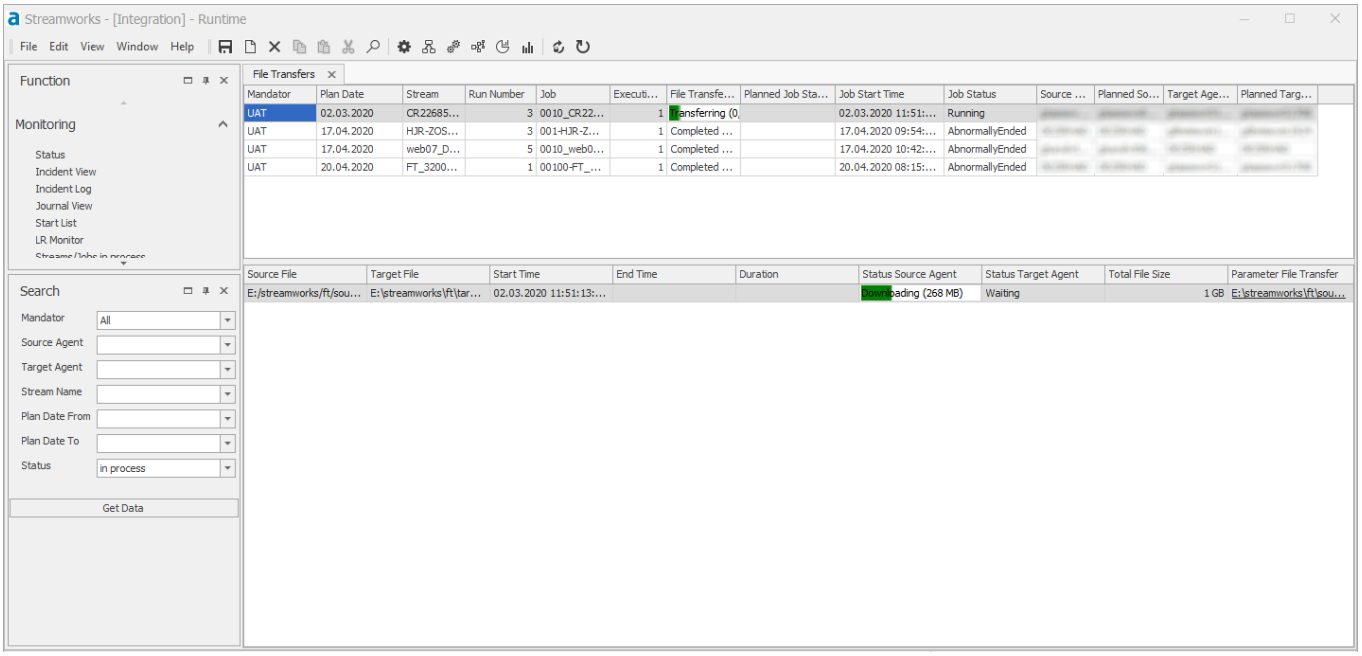


Fig.: Central management of ongoing file transfers

Additional standard interfaces

- Ticket Service: If you need to create a trouble ticket in an external system for events in Streamworks, such as job terminations or agent problems for example, you can use the Streamworks Ticket Service interface. In doing so, the return value, usually the number of tickets created, can be displayed on the list of incidents or in Incident View in the Streamworks desktop client.
- E-Mails and text messages: If necessary, Streamworks can automatically inform you via E-Mail and text message of the current processing status before and after a job has been implemented.
– GIT: Changes to stream definitions can be automatically pushed to GIT so that versioning can take place there.
- CLI: The Command Line Interfaces (CLI) can be used to initiate numerous actions and changes in the Streamworks runtime environment via the Streamworks agents. The Streamworks CLI is primarily used for the integration in application software, as the interface can be addressed directly from other programs.
- LDAP authentication: In addition to its own authentication functions, Streamworks also offers the option of LDAP (Lightweight Directory Access Protocol) authentication, which is typically used in Microsoft Active Directory environments.
- Export/Import: All of the process definitions or master file data can be transferred between clients of one or several Streamworks systems through the Streamworks export/import utility in XML format.
- External Job Script Management: You have the choice of maintaining scheduled job scripts within or outside of Streamworks. Streamworks provides an importable job script service for Job Control Language (JCL) or other job scripts stored outside of Streamworks in a separate software configuration management tool for the purpose of version management.
- REST API: You can carry out numerous actions using the application server's REST-based Service Management API. This way, you can automatically create agents and request the status of agents, streams and jobs, for example.

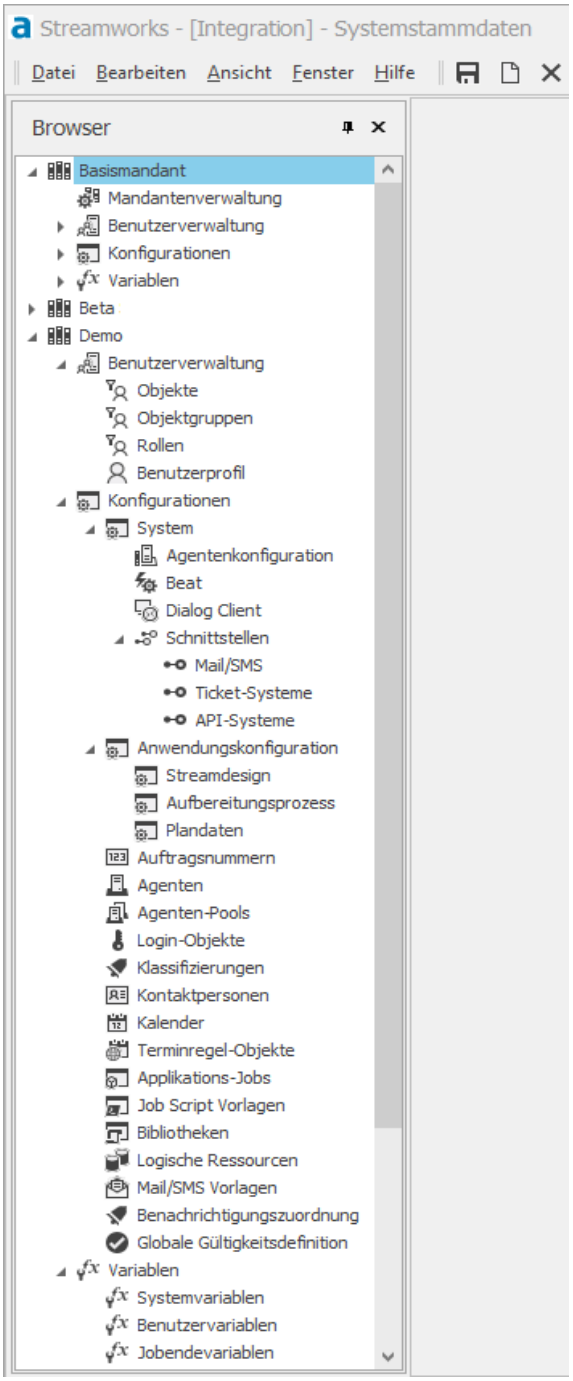
6. Operation

Streamworks users can carry out their Workload Automation from a single, central location. In Streamworks, a company's IT infrastructure is completely displayed in the form of agents, just as IT-supported business and IT housekeeping processes are displayed as streams. Dependencies, conditions and a number of rules ensure that individual streams in Streamworks are linked in such a way that a company's entire IT operations and IT-based business processes – its workload – can be carried out transparently and automatically.

Streamworks reveals what is possible nowadays in terms of uniform information provision for various user groups. Streamworks offers a genuine single point of information, thanks to central data storage and a sophisticated permission concept.

Streamworks system administrators can discover all the relevant facts in the central desktop client just as quickly and well prepared as in the process planner or work scheduler and application managers and the service desk can gain either a general idea or all the important details of current production with little effort. If all that wasn't enough, the integrated reporting engine offers access to all the information on the Streamworks database.

6.1. Configuration and administration of system master data



In the master data, users can configure all basic, general settings for operating Streamworks as well as for configuring, managing, and carrying out streams.

Clients

Following initial setup you can install additional clients within the base client in Streamworks. These clients can be used for various scenarios with separate data storage for users, agents and streams as a logically separate, self-contained Streamworks application within the Streamworks infrastructure.

Regardless of whether you need to keep separate customers and departments or make a distinction between testing and production environments, the Streamworks client concept offers an affordable alternative to operating several different automation environments. Above all, you operate a number of clients in Streamworks using a single user desktop client. Users with the appropriate permissions do not need to open a new user desktop client for each client or provide extra authentication each time.

Roles and rights

One or more highly detailed, configurable roles are assigned to users for each client in Streamworks. Roles are comprised of permissions for viewing or maintaining central objects, such as calendars or agents, permissions to read or modify certain streams, as well as permissions to implement single or multiple functions with these streams. Streams are not visible to those users without read or update permissions and functions that are not allowed are grayed out.

Futher settings

All other administrative system settings can also be reviewed and carried out within this menu panel. Standard values for many necessary parameters like calendars or time zones are defined once at a central location and inherited from the clients down to individual jobs, as long as they are not deliberately overwritten. Whitelists or templates, which are later available as a pull-down menu in the stream definition, are generated for other parameters like account numbers, agents or contact persons.

E-Mail and text messaging templates are centrally generated in Streamworks and are not tied to individual jobs. On the one hand, this allows for multiple usages of templates. On the other hand, it also allows for central and one-time maintenance of template changes compared to multiple changes for E-Mails associated with jobs. A number of Several system and user variables are used for the flexibility necessary in the contents of the templates.

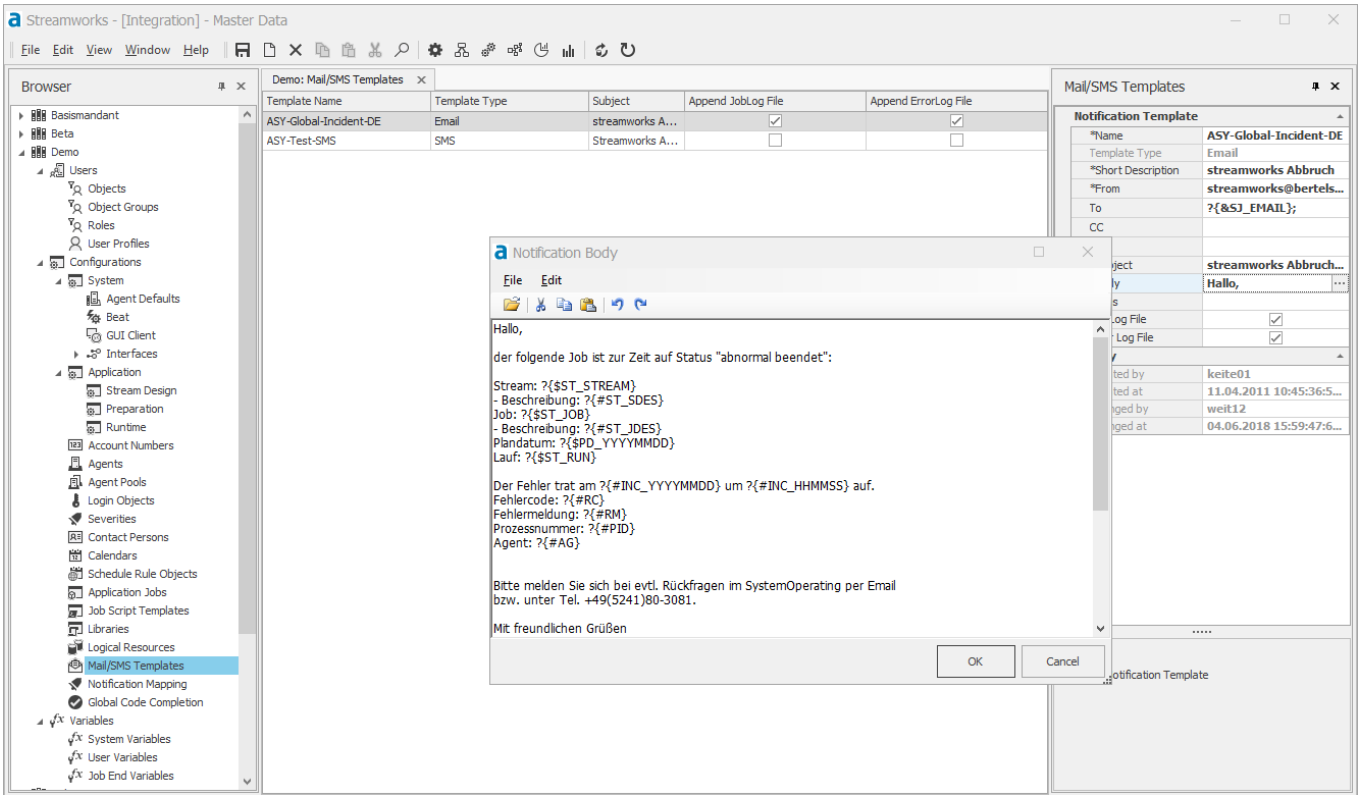


Fig.: E-Mail template managements

6.2. Stream design and maintenance

Generating templates and setting the standards for recurring requirements

Standardization is simple and efficient with Streamworks. Templates are available for recurring requirements and you can also develop them yourself. You can find the right template in Streamworks. Whether you need to send standard E-Mails, maintain a certain structure for all Java jobs, or perform standardized backup routines for all databases, it's no problem.

Standardization of job networks using the master/real concept

Frequently used operating procedures or business processes can be standardized with this unique master/real concept. The master stream acts as a fully defined template for job networks that share the same properties and structures as backups of databases, for example.

In defining a new stream, you have the option of selecting a master stream as a template and generating a completely new job network – a 'real stream' – at the click of a button. The real stream can contain additional definitions that deviate from or expand on those in the master stream. Subsequent changes that will affect all of a template's real streams defined this way only need to be carried out once in the master stream. Afterward they are inherited by every real stream. Real stream-specific definitions are not overwritten when this occurs. The concept is a building block for efficiently managing batch changes without sacrificing flexibility.

Standard templates for better management of job scripts

Streamworks offers you the option of defining standard templates that can appear as a default when creating new job scripts in order to keep job script management as easy as possible.

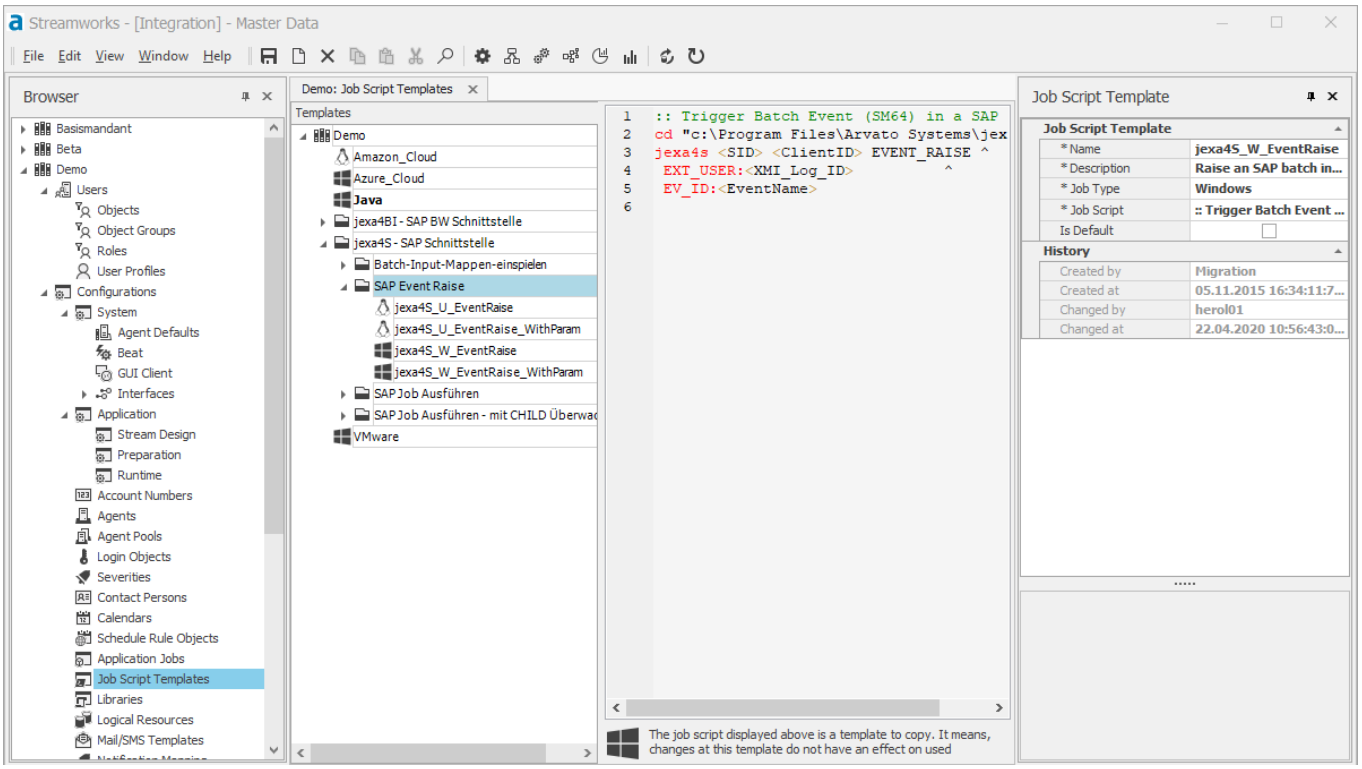


Fig.: Job Scrpit Templates

Additionally, pre-installed job script templates from the manufacturer can be used when calling Java, VMware, and cloud interfaces. These templates can also be accessed when changing job scripts and calling frequently used script passages. Changes to the template are not inherited with these job script templates.

Power Shell Integration

When executing a job under Windows, Power Shell scripts can be created fully integrated with appropriate highlighting.

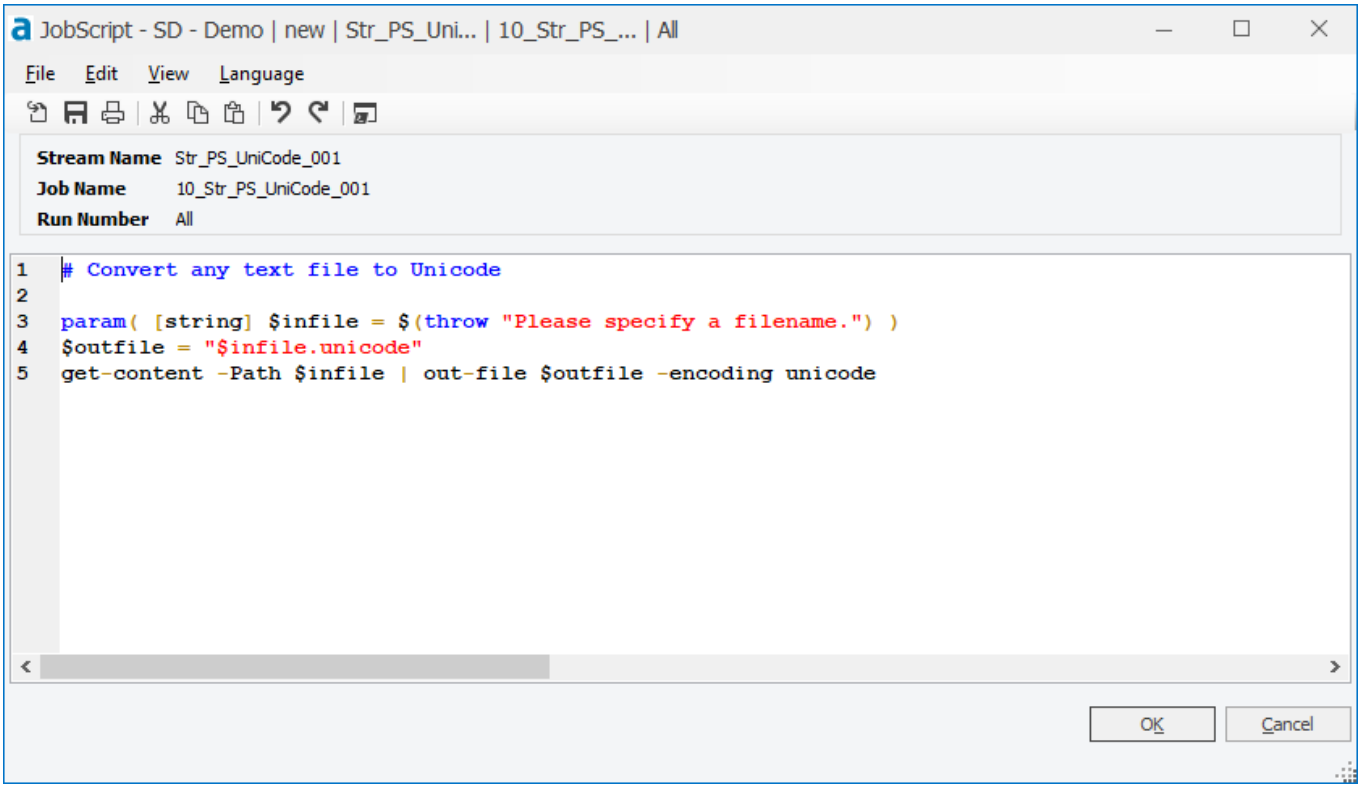


Fig.: Job script editor with a simple power shell script.

Faster access to data

The process planner and work scheduler have central access to all defined stream master data through the stream explorer and convenient search functions. A full-text search makes locating and replacing job contents or agents in the master data incredibly easy.

Versioning for efficient change management

Streamworks allows you to manage different versions of process chains / workflows (streams). There can be a planning version and several backup versions that are automatically generated upon activating a planning version alongside the current production version. The versioning enables you to conveniently manage batch releases, even within Streamworks clients. In following, you can use it as an alternative to or in combination with export/import-based release management.

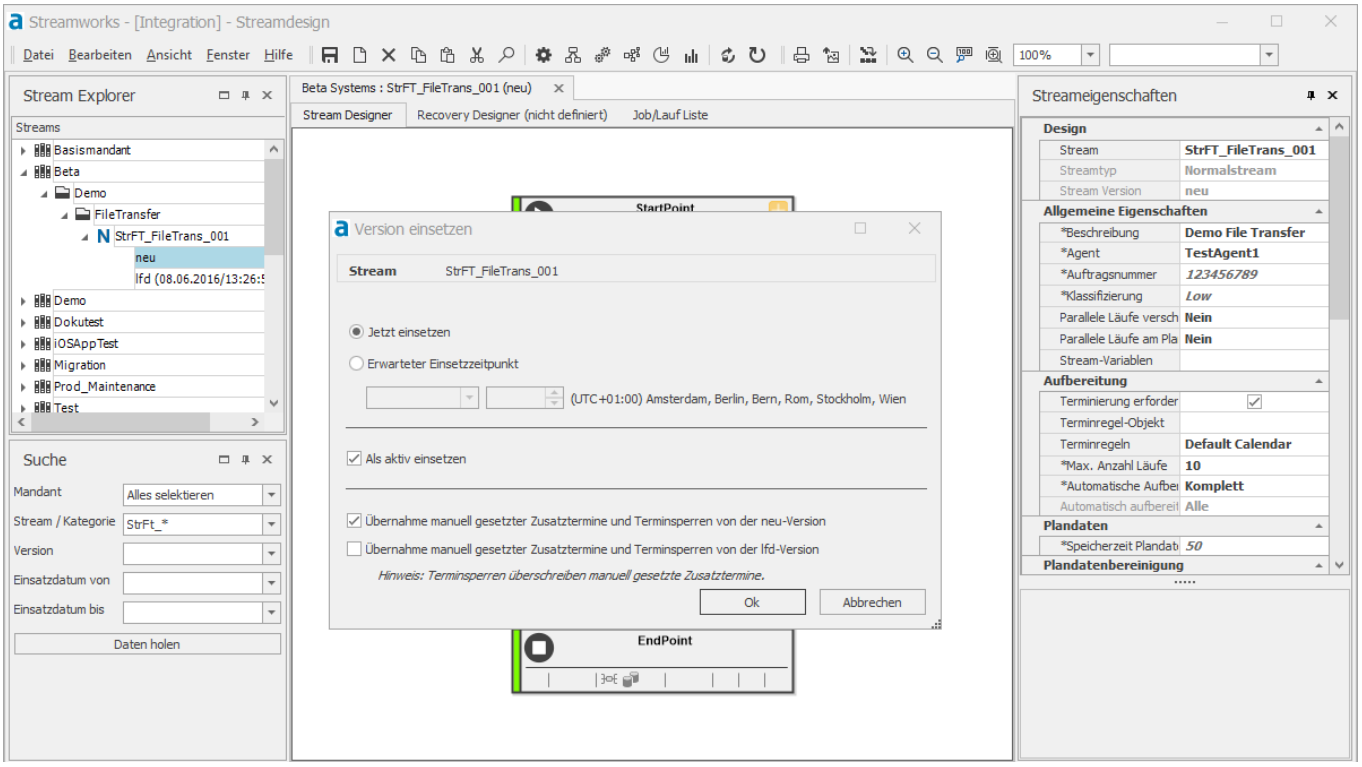


Fig.: Version deployment and stream search

Should a new batch release comprise several streams, you can detect all the associated planning versions by a common flag in Streamworks. You can simply search by flag and activate all planning versions for a planned deadline simultaneously.

The backup versions can be reactivated as necessary and also provide information on a stream's change history. Should a user change a stream, Streamworks ensures all versions of this stream are securely blocked for all other users.

Change history for traceability

Even without using versioning, changes to the stream can be traced with the help of snapshots. For this snapshots are created when saving a stream. Later, these snapshots can be viewed and compared with each other.

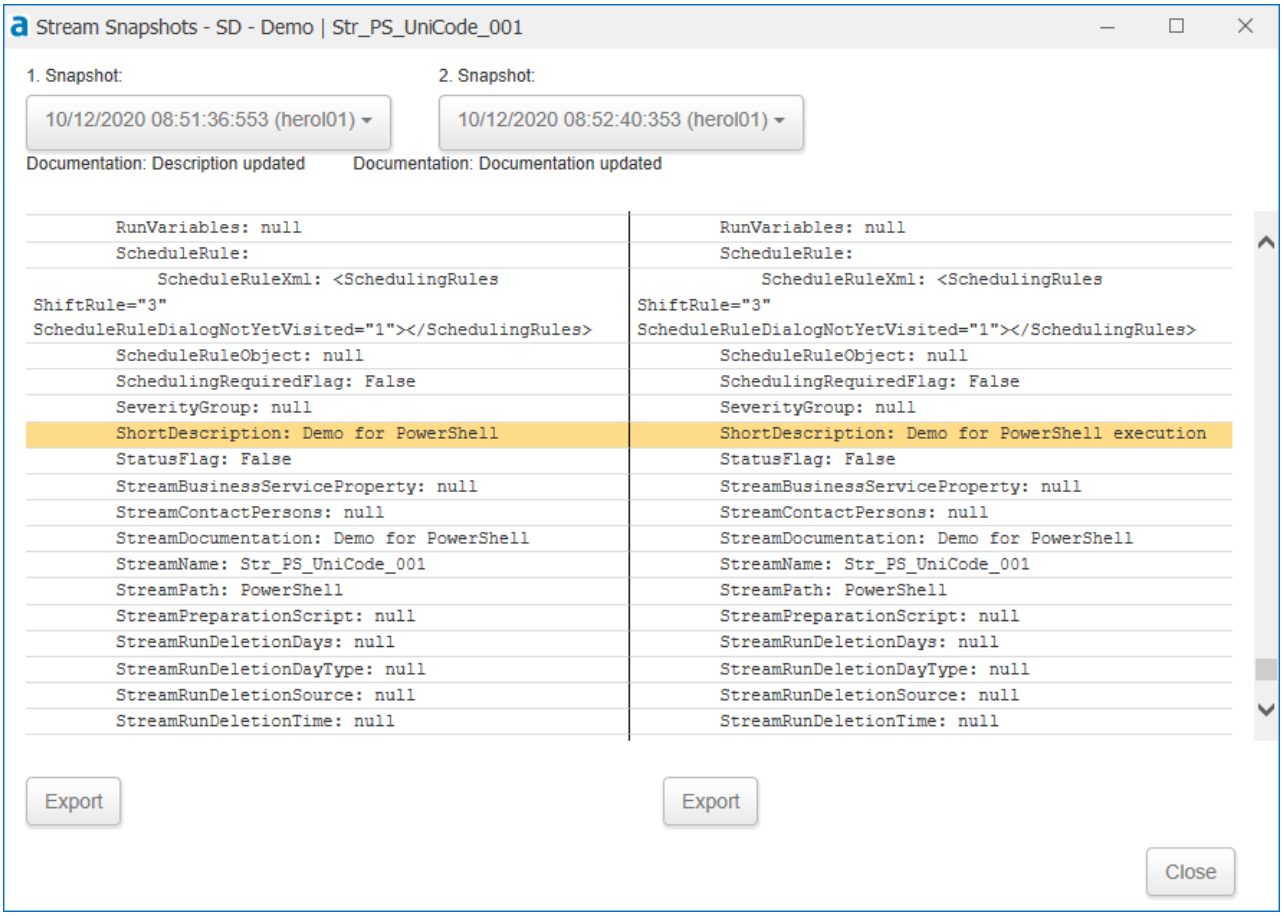


Fig.: Comparison of two snapshots

In addition, GIT can be connected, into which changes to streams are automatically pushed.

Rule editors for intuitively defining process logic

Streamworks contains numerous ready-to-use options to trigger event-driven or event-based batch processing. File and filing system events, numerous trigger events such as logical resources, predecessors and command line interface calls complement the conventional calendar and time-based management options. These events can be combined with these options to map complex requests using logical links. You or external applications can also deliver important events in Streamworks, for example by using a special dialog box to add missing parameters to a batch start and trigger the start of processing.

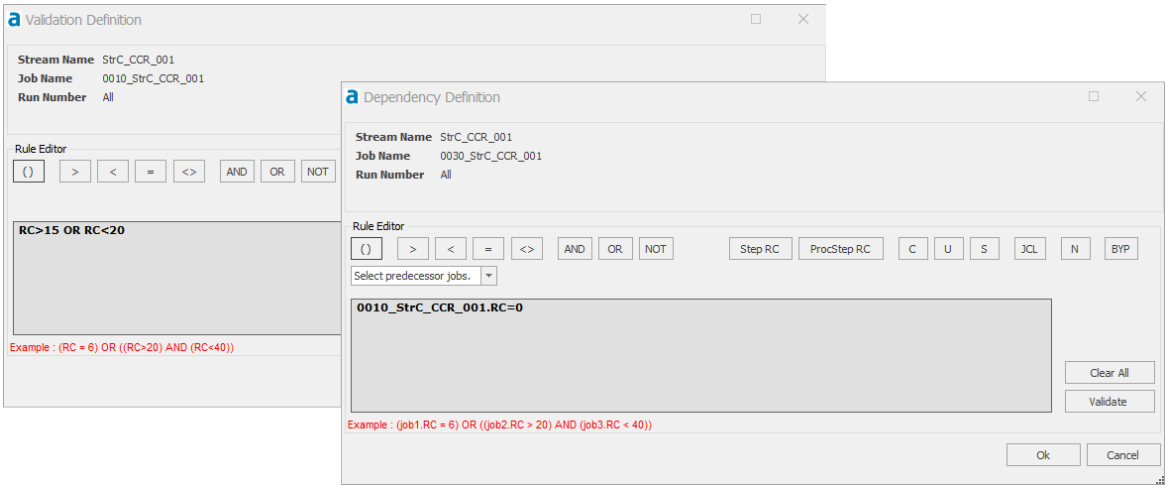


Fig.: Rule editors – left: authorizing return codes; right: dependency definition

Using complex results with the job log parser

Streamworks gives you the option of incorporating a parser job (or analysis job) into a stream. With the help of this job type, the job log and/or job error log files from direct or indirect predecessor jobs in the stream can be searched for the availability of defined strings. The searched string is defined using Microsoft .NET regular expressions. Log files of normal and file transfer jobs can be searched. Depending on the results, return codes can be set for the parser jobs, which are then treated in customary form by the follow-up processes for the next stream/job management.

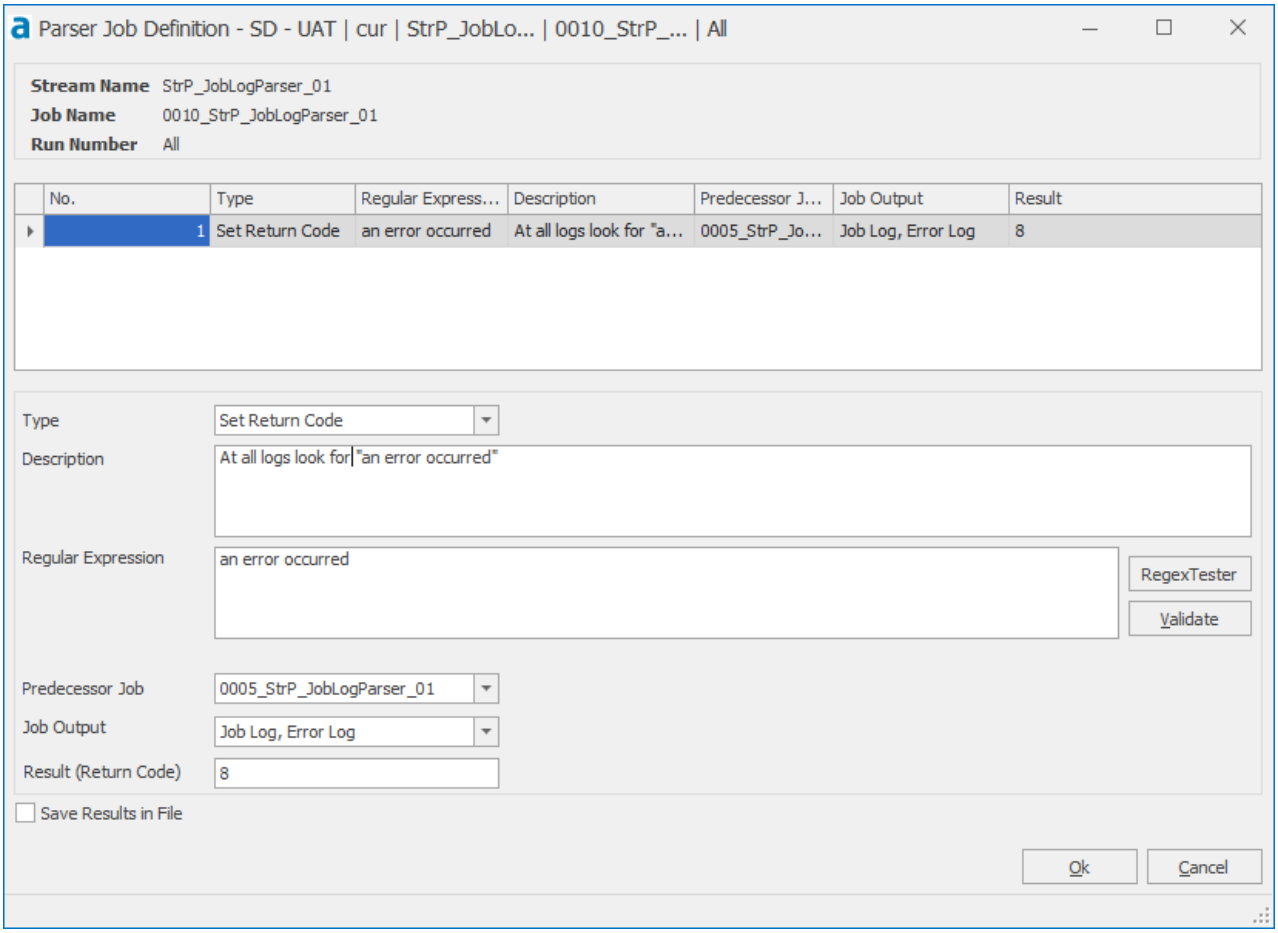


Fig.: Definition of parser jobs

Encapsulate recurring complex processes in the Application Job

Recurring processes, such as the call of applications including preprocessing and postprocessing can be encapsulated by parameterizable so-called Application Jobs. Application Jobs that have been created once can be used in the same way as regular jobs in stream design with the optional specification of parameters. Application Jobs are defined in the widely used JSON format.

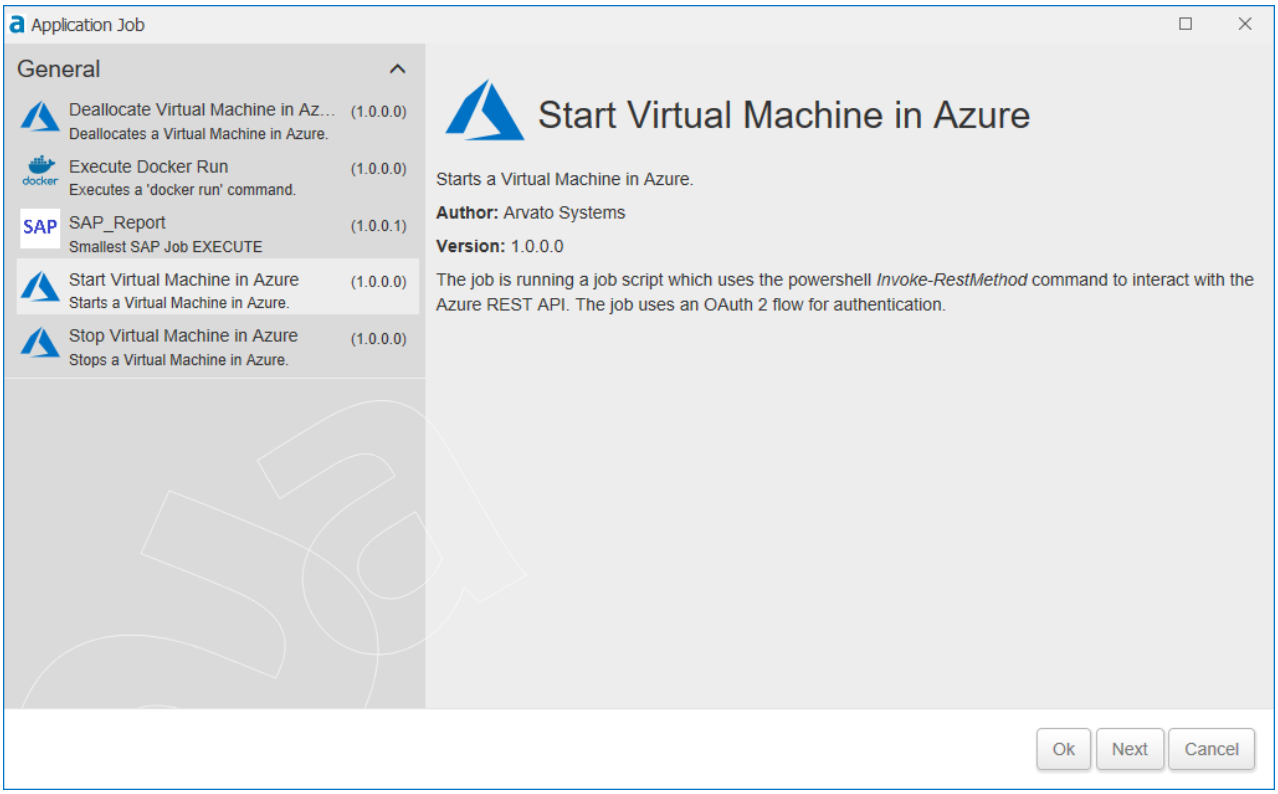


Fig.: Selection menu of Application Jobs

Load distribution at job execution

Instead of specifying a single agent to execute a job, an agent pool can be specified, which consist of several agents. Before the job is executed, a check is made to determine which agent has the largest number of free slots available. This agent will execute the job.

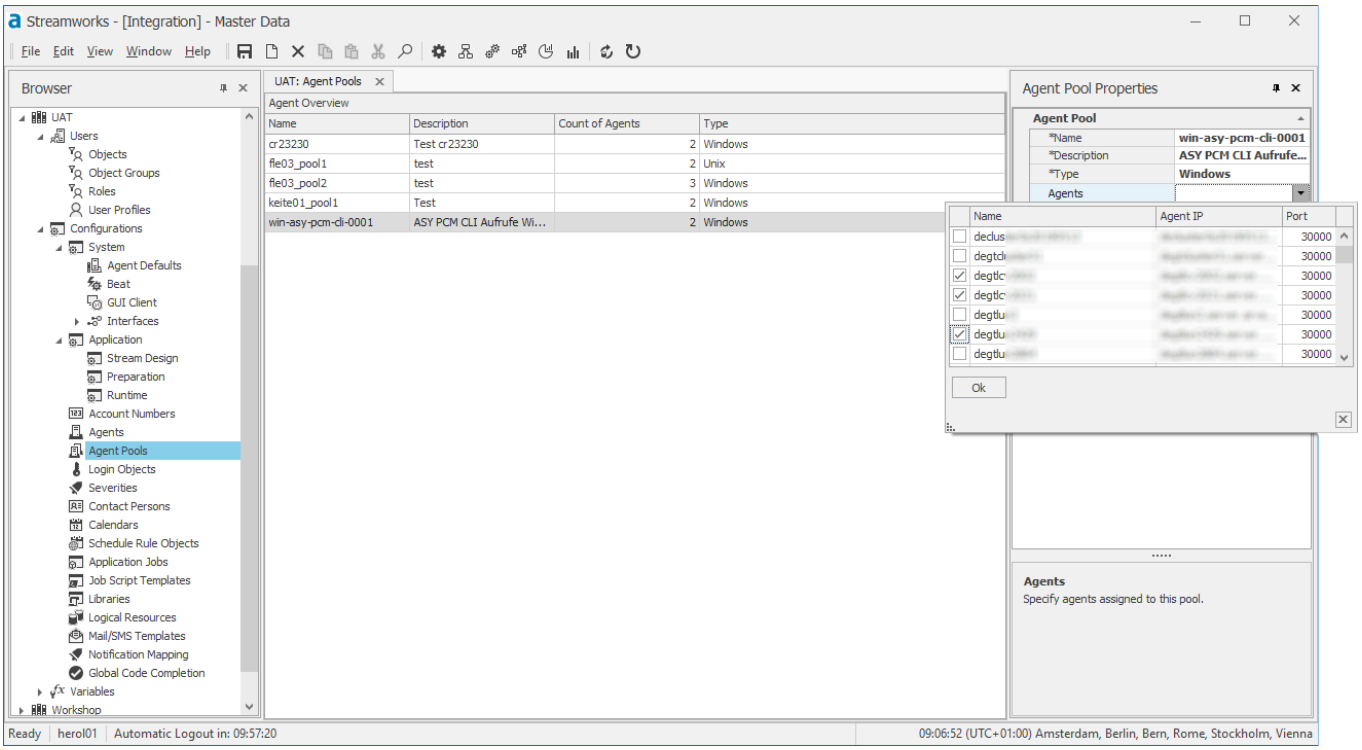


Fig.: Definition of agent pools

6.3. Runtime or plan data

There is a clear view of all information for monitoring the status of planned, ongoing, and incorrectly terminated jobs, as well as for file transfers and agents available in the desktop client's runtime area.

Important runtime data always in sight

The incident view offers a single point of access for monitoring and making manual changes to the Workload Automation in Streamworks. All unplanned incidents are visualized there. All the options for analysis and error handling are directly accessible via a shortcut menu.

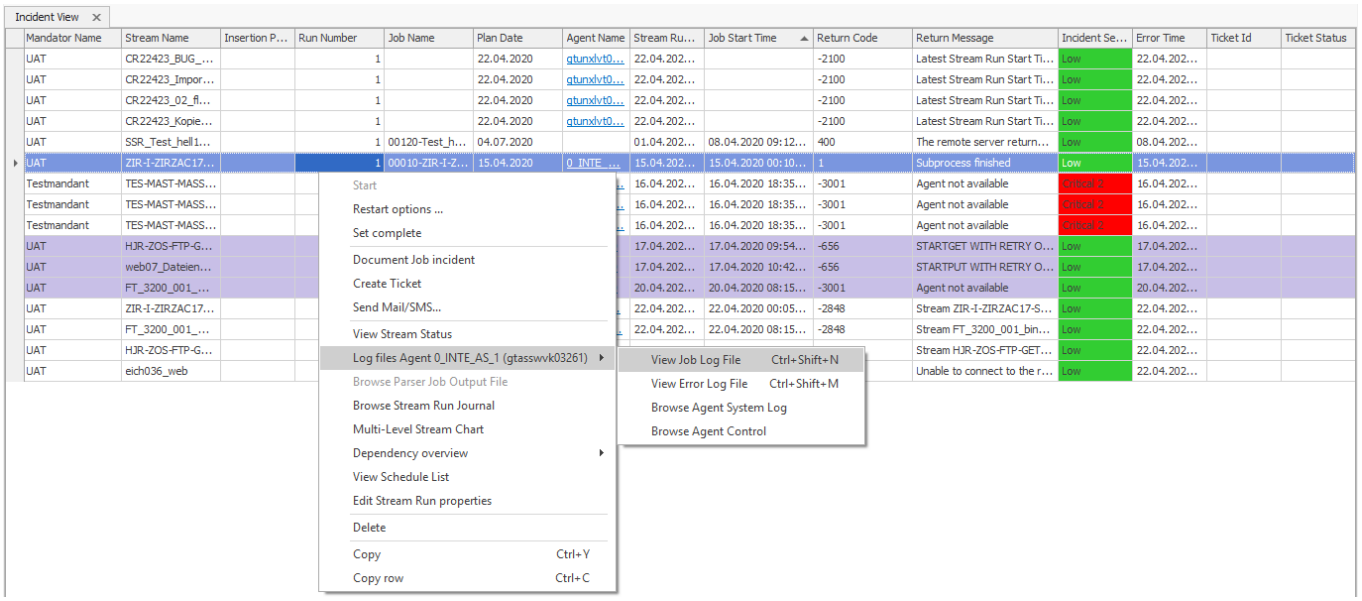


Fig.: Incident View

The status of agents, fill levels, the processing of Streamworks database queues and the assignment of logical resources can be quickly and easily determined and modified. The completion level of ongoing file transfers or runtime forecasts for planned streams are only a mouse click away.

Each stream run's historical runtime data is available for a definable number of days in the Streamworks runtime area. Stream runs planned for the future are also available for several days based on customized definitions. Using the desktop client, you can: change, manually start or repeat all stream runs; view log data and stream journals; manage the documentation (of unplanned events, for example). Runtime data can be regularly reorganized using the included utility in order to prevent continuous growth of the database. In the process, the data is exported in an archivable format and can be used for auditing purposes.

Comprehensive data collection in a stream journal

Streamworks gathers all information regarding automatic process control and manual changes or interventions in a stream journal in an audit compliant manner. This information is available via the desktop client and for archiving purposes each time a process is performed.

Professional approval of follow-up processing

For a job execution the condition of a professional approval can be configured. Is a job ready to run, an email with a link to a defined recipient will be sent. Only after clicking this link the job execution will start.

6.4. Graphic multi-stream display

The Multi-Level Stream Chart – the graphic process display in Streamworks – presents a visualization of external dependencies between several streams or jobs/runs. In several ways, these dependencies are responsible for whether a job is executed or not. Existing dependencies can be identified quickly and easily based on the Multi-Level Stream Chart. There is an appropriate overview showing the precise location where this dependency is to be placed in the complex Stream structures, even for a new dependency to be defined. In the case of failure, you can use the Multi-Level Stream Chart to quickly detect and analyze the causes and effects.

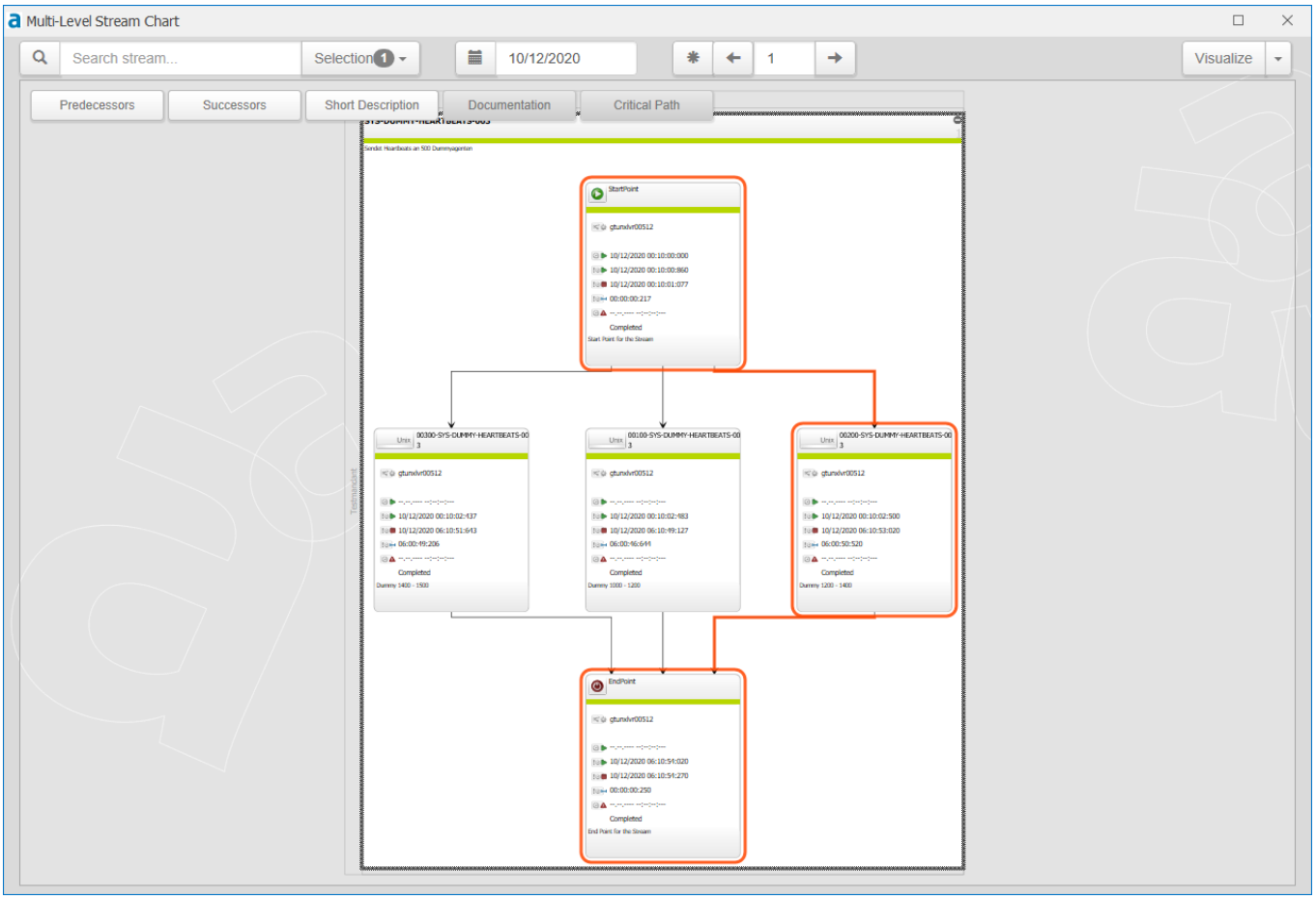


Fig.: Multi-level Stream Chart entry screen with overview

6.5. Forecasting, Workload Analytics and Reporting

Streamworks supports the user before, during and after the execution of jobs and streams with numerous additional information. Based on historical runtime data, forecasts for future or current running times are displayed in various views. In the Duration Monitor, running times for individual streams are graphically displayed on a time axis. With the help of different colors, you can see whether the displayed running times are forecasts or real data. In the Status View, running time forecasts are displayed for running jobs and streams.

In the graphical multi-stream display, cross-stream analyzes are also possible for large, linked processing. In addition to the display of running times, the visualization of the critical path serves as an additional aid.
In addition, Streamworks contains a complete reporting engine. Based on Microsoft SQL Server Reporting Services, Streamworks automatically makes a large number of different reports available. You access the reports via the desktop client or the Self Service Portal. In addition to the standard reports already included, you can also define your own reports with Microsoft Reporting Services. By this other data sources can also be used to create reports. All results can be exported in numerous data formats (csv, pdf, doc).

The report server must be started separately and the connection will be configured in the system master data. Individual reports are generated in the Report Designer (the report server's reports manager) and uploaded into the Streamworks reports directory in the report server or sent as an E-Mail via the report server's subscription service.

Streamworks Beat

For external processing and visualization of Streamworks events like finishing a job execution these events are pushed out by a flexible adapter concept e.g. by calling an external REST API.

7. Migration

In order to save costs and time when replacing existing schedulers, tools for data migration are available from the following schedulers:

- Control-M from BMC
- Automic from Broadcom
- Crontab
- Windows task schedulerr
- SAP

The aim is to migrate the largest possible number of data / jobs fully automatically and to keep the manual effort as low as possible.

8. Support and training

You will be dealing with colleagues experienced in the data center area the very first time you contact arvato Systems. We rely on in-house consultants with years of production experience for the first joint analysis of your automation requirements. A testing period is accompanied by experienced production planners who will choose and automate suitable pilot processes with you. This is how success is achieved in a short time – it instills trust and confidence in working with Streamworks and helps you achieve a high level of acceptance at your company.

From a trial copy to data-center-wide production operations, you'll receive competent assistance from arvato Systems, for example, when determining conventions or integrating into system management.

In constant contact

In order to remain at the forefront of technology, the software is continuously upgraded to take our customers' specific practical needs into account. Topics related to the release will be collectively discussed and adopted at regularly scheduled user group meetings.

You will soon benefit in many ways from arvato Systems' experience in working with Streamworks in productive use. For one thing, new releases come with the assurance that you are receiving tried and tested software. For another, a number of specialists are on hand from many different departments at arvato Systems to answer questions and advise you on a wide range of topics and not just on work automation.

Arvato Systems' qualified consultants provide support for migration projects and appropriate, tailor-made tools for data conversion are provided as required.

Streamworks users have a direct link to arvato Systems' second- and third-level support – 24 hours a day, 7 days a week. But arvato Systems offers even more if you plan to implement Streamworks. We design custom, individualized service packages together with you, from the license itself up to full service.

Training

We offer training for optimal support in dealing with Streamworks. Expertise and experience at all levels and system platforms are prepared in a user-friendly way from practice, individually, target group-oriented and logically structured. Based on this, we are happy to advise you on the best approach to mapping your own individual IT processes in Streamworks.

What can we inspire you with today?

You have questions, need information or a contact? Get in touch with us.

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Arvato Systems is an international IT specialist that supports major companies in Digital Transformation. We stand for strong industry knowledge, in-depth technology expertise and a clear focus on customer requirements. Working as a team, we develop innovative IT solutions, transition our clients into the Cloud, integrate digital processes, and take on IT systems operation and support. As part of Bertelsmann, we are built on the solid foundations of a German global corporation. At the same time, we rely on our strong strategic partner network with top international players such as AWS, Google, Microsoft and SAP. We make the digital world easier, more efficient and more secure and our customers more successful. We Empower Digital Leaders. arvato-systems.com

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