

streamworks

Workload Automation



Patch Management in SAP Environments

Best Practice: Efficient Maintenance of Complex SAP Environments

This application example describes how networked components can be stopped and restarted in SAP landscapes for the purpose of maintenance work both automatically and in a controlled process.

Background Situation

You must stop the wide range of highly-networked components integrated in your modern SAP environments before you can begin to implement patches for operating systems, databases, and other infrastructure components, and you must do so in the correct sequence. This task is almost impossible to carry out manually due to all of the dependencies. Therefore, Arvato Systems has developed a highly automated solution based on developments to the patch processes in order to handle this frequent task. The standardized documentation of all SAP components including their dependencies serves as the basis for executing the start and stop scripts via „streamworks“.

Benefits



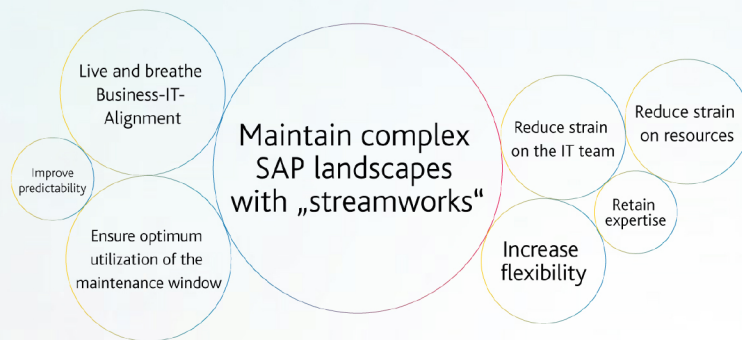
- Reduce strain on SAP Basis: Planning occurs during business hours and implementation is carried out overnight.
- Highly scalable: Automatization allows for maximum parallelization of patch actions.
- Optimum utilization of maintenance windows: Automatically self-adjusting process runtimes
- Reduction of manual activity: Automatization increases quality and ensures that audits and reports can be carried out properly.
- Standardization: Storing complex process logic in „streamworks“ enables patch actions to be carried out without special knowledge or expertise.





The Challenge: Stop and restart 400 SAP components on 160 servers automatically and in a controlled process

The objective of our project was to automatically stop and then restart SAP components distributed across a Linux server farm prior to a planned overnight operating system patch action. One crucial part of this task was to account for all the dependencies between the components, and therefore the order of the start and stop processes, so that the patch action could be carried out largely without SAP Basis support.



The Challenge: Optimum utilization of the patch windows

It is possible to use a simple web application to consult a central server list and a database of all SAP systems and components. This list can be used to determine which of the servers scheduled for patch maintenance contain SAP components. The database contains the necessary start and stop script for each SAP component. It also contains information on the dependencies and the sequence for stopping the complex systems containing ABAP and Java stacks, application servers, Business Connector, BO, PI, SolMan, Trex, and HANA instances. Using the web application, you can identify the necessary batch jobs in this mass of information and schedule them directly in the scheduler for the patch window using a command line interface. All necessary dependencies (sequences) are added automatically, for example, to ensure that NFS servers are only stopped once all components accessing these servers or running on these servers have been stopped first. This scheduling can take place several days in advance thanks to the way in which „streamworks“ typically separates master data from runtime data, allowing for quality assurance measures to be completed in advance of the patch action. Using the intuitive „streamworks“ GUI ensures a high level of transparency. SAP Basis administrators and the IT operations team can view the status of the process of every SAP system at a glance. Errors that occur in the central „streamworks“ incident view (such as problems when stopping a database) are documented in such a way that the name of the affected database is visible from the job name of the batch job, making it possible to promptly take automatic or manual action in response.

You have questions, need information or a contact?
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