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## Highlights

- Reduces time taken to copy and refresh complete SAP systems from days to hours
  - Automates, standardizes and speeds up day-to-day operations for SAP systems, reducing the risk of mistakes caused by human error
  - Cuts time spent on complex, repetitive tasks, freeing up skilled staff for higher-value work
  - Delivers higher operational efficiency, helping to slash costs and accelerate time to value for new workloads
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# Automate SAP System Copy and Refresh to raise productivity and quality

*Reduce complexity with IBM Entry Cloud Configuration for SAP solutions on IBM z Systems*

Companies all around the world choose SAP software to support business-critical processes and gain deep insight into operations. Enterprises that manage their SAP systems effectively, even as business volumes increase, can drive greater operational efficiency and ensure that their IT departments can respond quickly to the changing requirements of the business.

## Improving efficiency of SAP operations

Many companies maintain several SAP system landscapes for different divisions or business functions. SAP system landscapes can be highly complex, usually comprising the production system plus separate SAP systems for development, testing and quality assurance. Some landscapes also contain additional SAP systems for pre-production and training.

Ensuring the smooth running of all these systems is key to keeping business-critical operations on track, and requires the combined efforts of many employees, including database administrators, system programmers and SAP Basis administrators. As computing environments grow in size and complexity, SAP solution administrators are increasingly challenged to deliver timely, cost-effective and flexible operations that meet the needs of the business.

A survey of IT organizations running SAP software conducted by RAAD GmbH<sup>1</sup> revealed that 40 percent of these companies consider “efficient SAP operations” to be a top priority, while 20 percent are also seeking “improved SAP infrastructure maintenance.” In a nutshell, SAP operators want a much shorter time to market for their new or renewed systems.



## Challenges of managing SAP software landscapes

Traditionally, the operations needed to maintain SAP systems have been complex and cumbersome, taking several days to perform and monopolizing skilled resources.

For example, SAP application lifecycle management presents a labor-intensive task for administrators. At several stages in the SAP application lifecycle, SAP Basis administrators need to create, refresh, clone and copy SAP systems. Traditionally, these actions are costly, time-consuming and labor-intensive, and can introduce manual errors:

- Configuring operating systems and storage is not automatic and must comply with best-practice rules for naming directories and storage volumes.
- Configuring a database for SAP is a complex process. A typical SAP instance utilizes more than 80,000 tables, and the database subsystem needs to be prepared accordingly.
- Special configurations for network, database connection, application server instances and SAP Central Services must typically be created manually by the system administrator. 8321 SAP system copies need a multi-step post-processing procedure to adapt to unique SAP naming and address conventions, which can comprise more than 100 tasks.

Many organizations have chosen to virtualize their SAP solution landscape to streamline operations, cut the number of physical servers, and simplify the creation of development and test instances. However, each environment still needs to be created from scratch, and the new SAP system or system copy must be installed and customized before going into operation.

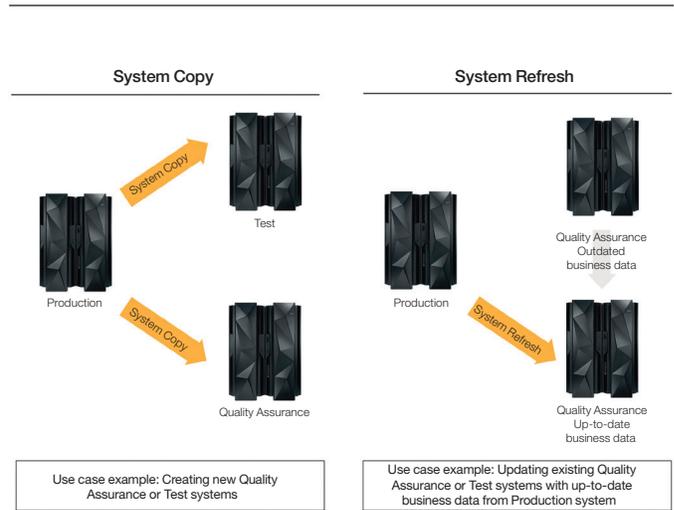


Figure 1. Typical tasks performed when operating an SAP environment – System Copy, System Refresh

The costs and complexity of manually operating and administrating a growing number of individual systems or system components is no longer an option. Companies seeking to improve the cost-efficiency of SAP environments must go one step further.

## IBM Entry Cloud Configuration for SAP solutions on z Systems

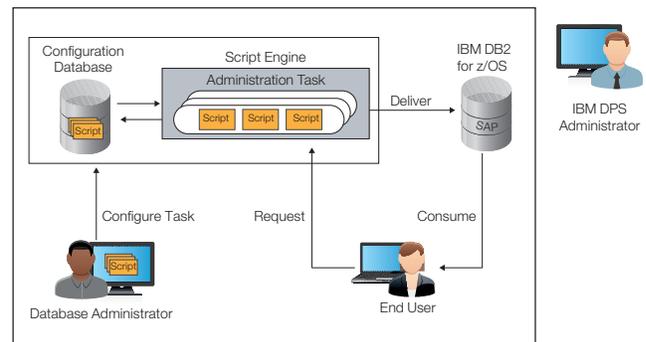
Cloning, copying and refreshing SAP systems are central activities for operational management. Accelerating these processes has an immediate and positive impact on cost control.

The IBM Entry Cloud Configuration for SAP Solutions on IBM z Systems® works hand-in-hand with SAP Landscape Management (SAP LaMa) - formerly known as SAP Landscape Virtualization Management (SAP LVM) to create an integrated end-to-end solution for managing complex SAP landscapes.

The configuration consists of advanced software for IBM DB2® for z/OS®, including the IBM Database Provisioning System (DPS), IBM DB2 Cloning Tool for z/OS and IBM implementation and support services that adapt the solution to your individual IT structure for SAP solutions. Once installed in your environment and configured to be used with SAP LaMa, system integrators and IT organizations can also adapt IBM DPS to act as a stand-alone automation solution, offering database provisioning for any application running on IBM DB2 for z/OS.

The solution also leverages the IBM DB2 Cloning Tool for z/OS to automate the cloning process and provide database clones within minutes, boosting efficiency and freeing up database administrator time.

The IBM Entry Cloud Configuration solution automates complex tasks typically performed by administrators of databases, operating systems, storage systems, and SAP Basis. When combined with SAP LaMa, the configuration can reduce the time it takes to copy and refresh complete SAP systems from days to hours. The high degree of automation also improves the quality and efficiency of SAP operations.



*Figure 2. Architecture of the IBM Database Provisioning System (DPS)*

The IBM Entry Cloud Configuration solution is the ideal productivity tool for any IT organization running SAP Business Suite on z Systems with IBM DB2 for z/OS. It is well-suited for computer services organizations hosting SAP systems for their clients, and for any IT organization seeking to run its SAP operations with z Systems in an on-premise, self-managed cloud computing environment.

### **Simplifying SAP lifecycle operations**

SAP Landscape Management is designed to cut data center complexity and costs by offering centralized management of entire SAP system landscapes. It relies on underlying infrastructure management tools and hypervisors to fulfill resource management requests. SAP LaMa provides a single point of control that allows system administrators to visualize, monitor, and manage data center tasks for deployed SAP solutions.

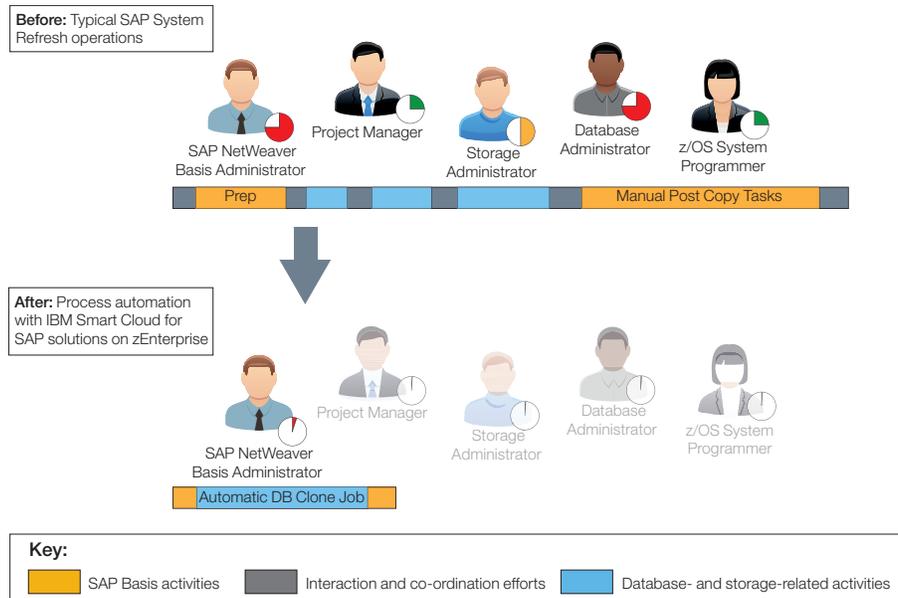


Figure 3. Simplifying operations with the IBM Entry Cloud Configuration for SAP solutions on z Systems—System Refresh example

SAP Landscape Management masks the underlying infrastructure complexity, enabling customers to manage virtualized database and application instances without the need to perform manual customization of the software each and every time. SAP LaMa uses the services provided by IBM Entry Cloud Configuration for SAP Solutions on z Systems to support the zEnterprise platform and IBM DB2 for z/OS. The enterprise edition of SAP LaMa is required to run the IBM Entry Cloud Configuration for SAP solutions on z Systems.

### Boosting efficiency of SAP infrastructure operations

IBM Entry Cloud Configuration for SAP Solutions on z Systems reduces the operational complexity involved in creating, managing and copying SAP database server environments on z Systems. The solution can be used to configure and fully automate the standard tasks needed to deploy an SAP database server environment.

The IBM Entry Cloud Configuration solution includes all the necessary sets of scripts and templates required by an SAP database server environment. Administrators can send their resource requests to the IBM DPS workflow engine, which delivers the new database server instance. IBM DPS supports standard IBM DB2 for z/OS subsystems, as well as shared IBM DB2 members (IBM DB2 servers in clusters) in a Parallel Sysplex® cluster environment on IBM z Systems.

The solution can transform the complex SAP product test environment into self-service cloud type of environment. The z Systems porting test team has deployed more than 1,000 SAP infrastructures using the self-service interface.

With the introduction of SAP LaMa and since DPS Release 3 has become generally available, customers can copy or refresh SAP systems even across z/OS Parallel Sysplex boundaries. Furthermore, this DPS release added latest DB2 support for the entire lifecycle management tasks of database instances.

The IBM Entry Cloud Configuration solution offers a flexible framework, which allows administrators to customize, extend and adapt pre-defined workflows to their needs. In addition, the solution's integrated IBM DPS functionality can be used for all IBM DB2 for z/OS environments—not just those running SAP systems.

**End-to-end platform management**

End-to-end SAP deployment operation scenarios are enabled through the co-ordination and integration of IBM DPS and SAP LaMa. The IBM Entry Cloud Configuration for SAP solutions on z Systems brings together the best of both companies:

1. SAP knows best how to manage SAP components and applications. Since the tasks used to create, copy and clone SAP instances are common to all supported computing platforms, the SAP LaMa solution is optimized to handle complex SAP-specific workflows.

2. IBM knows best how to manage the infrastructure components consisting of IBM servers, storage, virtualization technology and operating systems. For this reason, IBM DPS and the IBM DB2 Cloning Tool for z/OS combine to support the specific requirements of the SAP database server environment on z Systems.

**Benefit from innovative cloud solutions**

Through a high degree of automation, the IBM Entry Cloud Configuration for SAP solutions on z Systems can significantly lower operational effort and cost, and help to improve the quality of maintenance and operations.

The IBM Entry Cloud Configuration solution helps to simplify the SAP system refresh process, streamlining a number of labor-intensive jobs—each comprising numerous administrative tasks—into a single, automatic end-to-end workflow. The solution's self-service interface reduces the need for system programmers, storage administrators or database administrators to be assigned to the job.

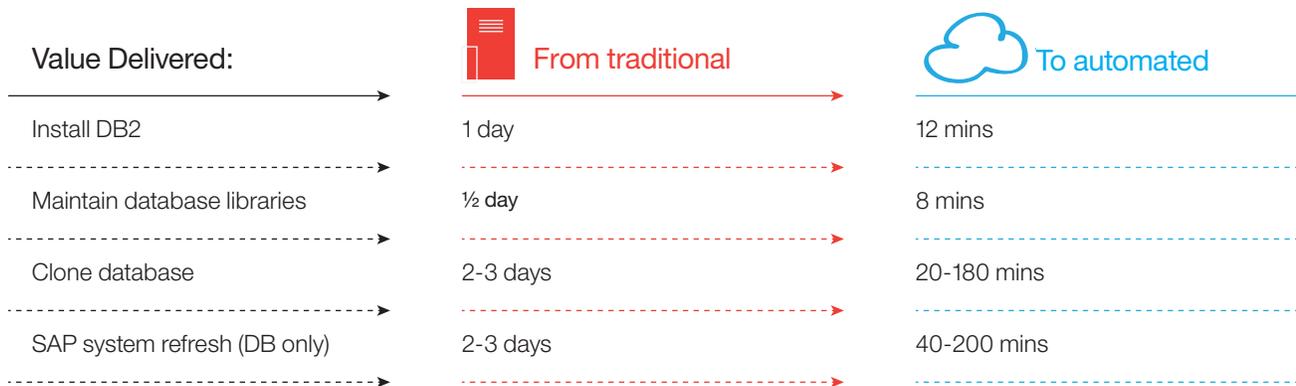


Figure 4. Value delivered by the solution—based on IBM internal use; may vary depending on underlying infrastructure

The solution combines technology and services to automate, standardize, and speed up day-to-day operations for SAP by reducing the time to refresh and copy complete SAP systems from days to hours. The solution can help enterprises to reduce their operational costs and accelerate time to value.

The bottom line: The IBM Entry Cloud Configuration for SAP solutions on z Systems releases SAP system administrators from routine tasks, allowing them to focus on the creative innovation needed to deliver outstanding business results.

### For more information

To learn more about running SAP applications on IBM z Systems, contact your IBM sales representative or IBM Business Partner, or visit us at: [ibm.com/systems/z/solutions/editions/sap-applications.html](http://ibm.com/systems/z/solutions/editions/sap-applications.html) or [ibm.com/services/us/en/sap/solutions/systemz.html](http://ibm.com/services/us/en/sap/solutions/systemz.html)

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<sup>1</sup> [Kostentoptimierung bei SAP-Kunden: Betrieb frisst Innovation](#), RAAD Research, March 3, 2010



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