INFORMATION AND ...AP® COMMUNITY

Open Source Toolchain

Red Hat's Peter Körner has worked with SAP partners to build an open source toolchain that will provide SAP customers with more flexibility, visibility, and quick wins. The goal is to orchestrate a composable ERP with open source tools. More on page 36

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Open Source Toolchain

Linux has been an open source operating system in the SAP community for more than twenty years. But open source is much more than that. The open source scene has evolved in recent years, and with IBM's acquisition of Red Hat, open source has received its B2B recognition. Currently, Red Hat provides a comprehensive open source toolchain for the SAP community, which allows a significant portion of the SAP community to build and orchestrate a composable ERP.

By Peter M. Färbinger

When it comes to open source, many SAP customers think of the Linux operating system, which is mandatory as the foundation for the Hana database. But the range of open source products in the SAP community has grown. „More and more open source projects are now being extended to include SAP aspects, thus enabling new services," explains Red Hat's Peter Körner at the beginning of the E3 interview. Three examples illustrate the wide range of services that open source offers in the SAP context: automation, the SAP Linux Lab, and security. „In the area of automation, Ansible is worth mentioning," said Körner. „With the established Red Hat Ansible Automation Platform, an enterprise solution with support and certified content, companies can automate everything from the IT landscape to the SAP environment.

Ansible can be used to automate not only initial deployments, installations, or provisioning for migrations to cloud instances, but also day-to-day operations, maintenance, and even housekeeping tasks. Peter Körner adds: „Red Hat Ansible Automation Platform can also be used to access a running SAP system, for example, to read user permissions and enter them into another system. Red Hat Ansible Automation Platform thus supports the automation of SAP workloads with respect to Day 1 and Day 2 operations. Finally, Red Hat Ansible Automation Platform and self-service enable organizations to address issues such as compliance, security, and governance that traditionally require a lot of manual effort.

Hand in hand with this is the open source initiative of the SAP Linux Lab, which facilitates the automated creation and management of SAP environments. It is based on standardized and modular code and tools developed and provided by SAP's technology partners. In the area of security, for example, the use of SELinux (Security Enhanced Linux) is now also certified for productive SAP instances. Also worth mentioning is Red Hat Insights, which includes proprietary rule sets for use within SAP. The service provides risk analysis, proactive infrastructure management, and automated remediation of potential software security and configuration issues. With a focus on operations, security, and business, this service analyzes platforms and applications for security and performance risks, enabling better management of SAP landscapes.

ERP modernization

With Hana and S/4, modernization is also expected in the ERP landscape. Can open source practices and products contribute to this modernization of the ERP architecture? „With open source principles, many problems and stumbling blocks in SAP modernizations and migrations can be avoided right from the start," says Peter Körner, adding, „Real-time transparency for all participants, adaptability, and collaboration during the project period form the basis for an ecosystem tool chain for S/4 and Rise projects that is currently emerging in the German-speaking region. On the one hand, these projects in the SAP community are based on an end-to-end IT platform for modernization on an open source basis—for example to address issues such as process adaptations, change management, interfaces, API management, legacy code, proprietary developments, data lakes, historization, hybrid cloud scenarios or non-SAP integrations. „This IT foundation creates a lot of synergies, so that business departments, IT departments, partner companies and many other stakeholders, who previously worked in complete isolation, can communicate and plan with each other," emphasizes Red Hat's Körner in the E3 interview.

Transformation and quick wins

In contrast to traditional transformation projects, the key feature of an integrated ecosystem toolchain is the continuous sharing of information, facts, insights and techniques throughout all project phases according to open source principles. Different departments share analysis results and project parameters, everyone leverages results and quick wins, and target platform specifications are automatically passed on to the next stakeholder.

The SAP community's knowledge and ability to act will allow this ecosystem to emerge with the help of open source. Professor August-Wilhelm Scheer will soon be publishing a book that describes this very future: The Composable Enterprise. The alternative to traditional ERP and the associated project work is the ERP that SAP and the open source community put together. SAP will continue to contribute to the FI/CO module. AI and IoT functionality will come from hyperscalers. End-to-end processes will be independently customized by the SAP community based on the SAP Business Technology Platform with steampunk (embedded Abap) and an ecosystem toolchain. Composable Enterprise is the alternative to traditional ERP architectures. SAP customers will define the next generation of ERP with open source tools.

What does open source offer? A framework of IT tools or strategic recommendations? Peter Körner defines: „Open source is not just about solutions, tools, technologies, and frameworks; it is also about principles such as openness, flexibility, independence, and freedom of choice to implement even highly complex projects at high speed and scale. These principles can also serve as recommendations for SAP modernization.

Hybrid cloud without lock-ins

The open source approach, which aligns technology, processes, and culture, is a key driver of digital transformation, and there is no alternative for SAP customers. According to Peter Körner, open source provides the independence to implement a true hybrid cloud strategy, as well as a high degree of strategic flexibility without lock-ins, which is becoming increasingly important in light of rapidly evolving markets and regulatory requirements. Just think of DORA, the

Peter Körner,
Principal Business Development Manager Red Hat SAP Solutions, Red Hat

Supply Chain Due Diligence Act, or the Digital Product Passport, or sustainability requirements.

The myth created with SAP R/3 is that all business and organizational functions should be integrated and ultimately have a single point of truth. At the same time, the ERP construct should also have degrees of freedom for diversification. With the three-tier client-server model, Professor Hasso Plattner succeeded in achieving perfect ERP integration, and at the same time SAP developed Abap as an IT tool for the necessary diversification. The structure and process organization of every company can thus be mapped within IT. A current discourse of the German-speaking SAP user association DSAG shows the following: A Business Technology Platform must be functionally convincing and not only aim at dazzling with innovative technology. The business aspect is the competitive advantage for SAP customers.

A digital transformation of the organizational structure and processes cannot be achieved by a technical release upgrade. The system design of an ERP can be based on SAP components, but its essence will be composite IT solutions with an ecosystem toolchain. Composability will define future ERP architectures. Platforms will become even more important because they represent homogeneity. SAP's shift to open source platforms, democratic programming models, and AI and machine learning will quickly move SAP customers forward in their digital transformation.

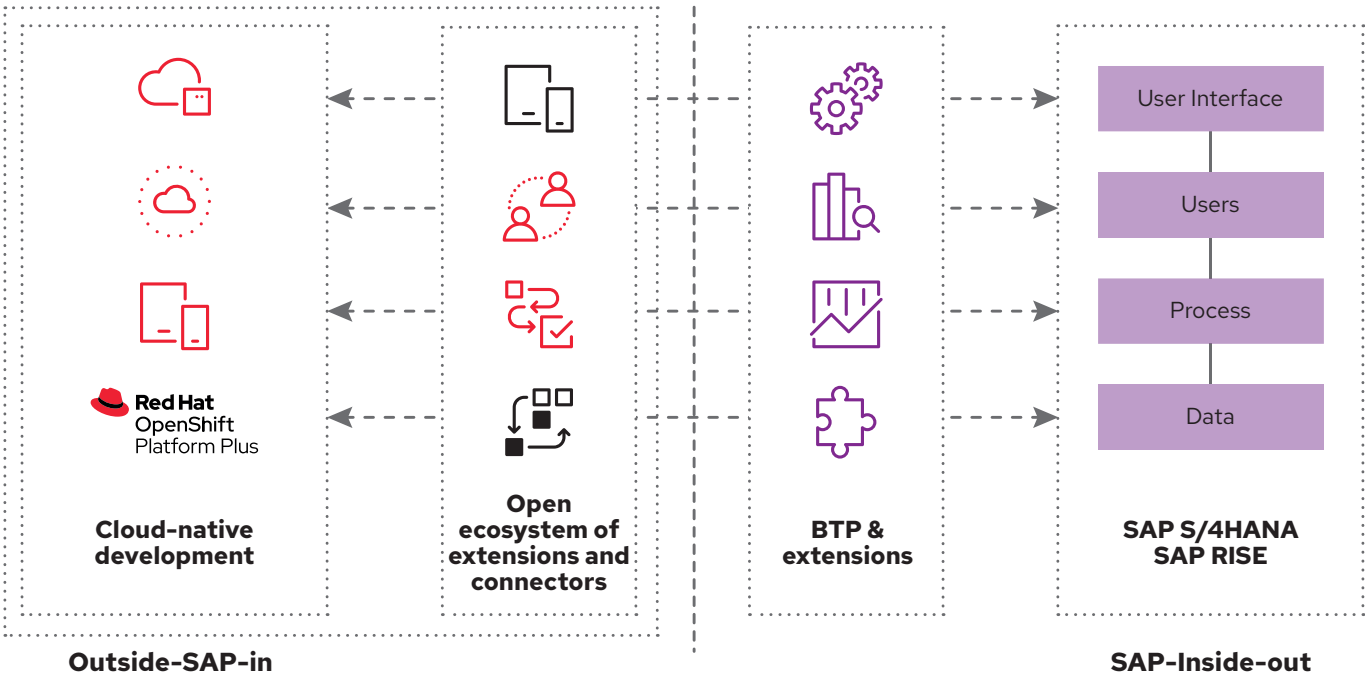
Composable ERP has a bit of cybernetics to it and is about the interrelationships of components. A highly composable system provides SAP customers with ERP components that can be assembled in different combinations to meet user needs. With an ecosystem toolchain, the SAP partner landscape will also change in a revolutionary way, as any kind of dependency and monopoly will disappear. Accordingly, composable ERP does not mean that every SAP legacy customer will be free to do as they please, but rather that there will be a common contextual understanding—a toolchain—across the SAP community. This composability will be a principle of ERP system design and a feature that belongs to the community. SAP and many other IT vendors will become tool providers.

In terms of modernization, how important are open source tools? How important are the experts who can use them? What should SAP customers be aware of? „Open source stands for innovation and is an integral part of the SAP world," says Peter Körner. Almost every player in the SAP ecosystem, be it a partner, an independent software vendor, or an add-on vendor, is embracing open source. However, caution is called for when choosing a solution or partner, says Red Hat's Körner: „Even if open source stands for high flexibility and interoperability in principle, its use is not always a trivial matter. Especially for productive use in a company's own development and operations, more is needed than just the download file from the open source community. Tried and tested guidelines for the secure and sensible use of open source can help customers. There are also many technology frameworks that simplify the modernization of the application landscape.

Enterprise-ready solution

It is important to be aware of frameworks that are supported only by small communities, which do not guarantee continuous development. Such frameworks are problematic for mission-critical applications. As a result, customers should instead select carefully curated, enterprise-ready solutions based on open source software, especially in terms of infrastructure and technology foundations, including support services and certifications. For SAP, this means components such as the Linux operating system, Ansible automation, API management, or the layers of a hybrid multi-cloud architecture," says Peter Körner.

Peter concludes his E3 interview by saying, „There is no question that open source solutions and technologies are the key drivers of modernization. Almost all innovations such as cloud, big data, artificial intelligence, machine learning and the Internet of Things are the result of open source ecosystems. „And SAP and SAP partners cannot ignore this development if they want to strengthen their competitiveness and increase their agility and flexibility," says Peter Körner. „In addition, customers should not overlook the fact that the added value of a solution no longer lies in the technical foundation, but in the orchestration of a complex world of new techniques and possibilities, which open source platforms serve as the basis for. Open source business models are here to stay, old silo thinking no longer works, and remaining open is now even more important than ever.



End-to-end SAP integration, scalable innovation, and cloud-native application development.

On new paths towards a holistic SAP modernization

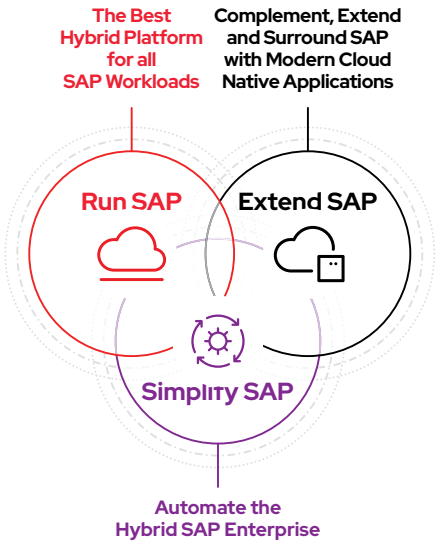
Navigation System

SAP's customers are caught between the conflicting priorities of migration and innovation, necessary changes which are associated with a wide range of strategic, technical, and business challenges. The key is that it's all about building an intelligent enterprise..

By Peter Körner, Red Hat

An entrepreneurial structure and process organization should overcome silos and achieve cross-functional end-to-end processes. The foundation for this is provided by open-source technologies and open source-based certified enterprise Kubernetes platforms and automation solutions.

The SAP world is changing—away from the classic ECC 6.0 to a new application landscape with the digital core in S/4 Hana as well as new services and frameworks. This means that SAP modernization is not simply a regular, routine upgrade. In addition to the 2027 deadline for migrating databases to SAP Hana and applications to S/4, there are several other challenges to address. These include the essential modernization of specialized applications and in-house developments with a cloud-ready or cloud-first approach, the implementation of automation to bridge organizational silos, the integration of modern solutions into daily operational processes, and the incorporation of SAP's innovation roadmap featuring cloud solutions like S/4 or RISE.

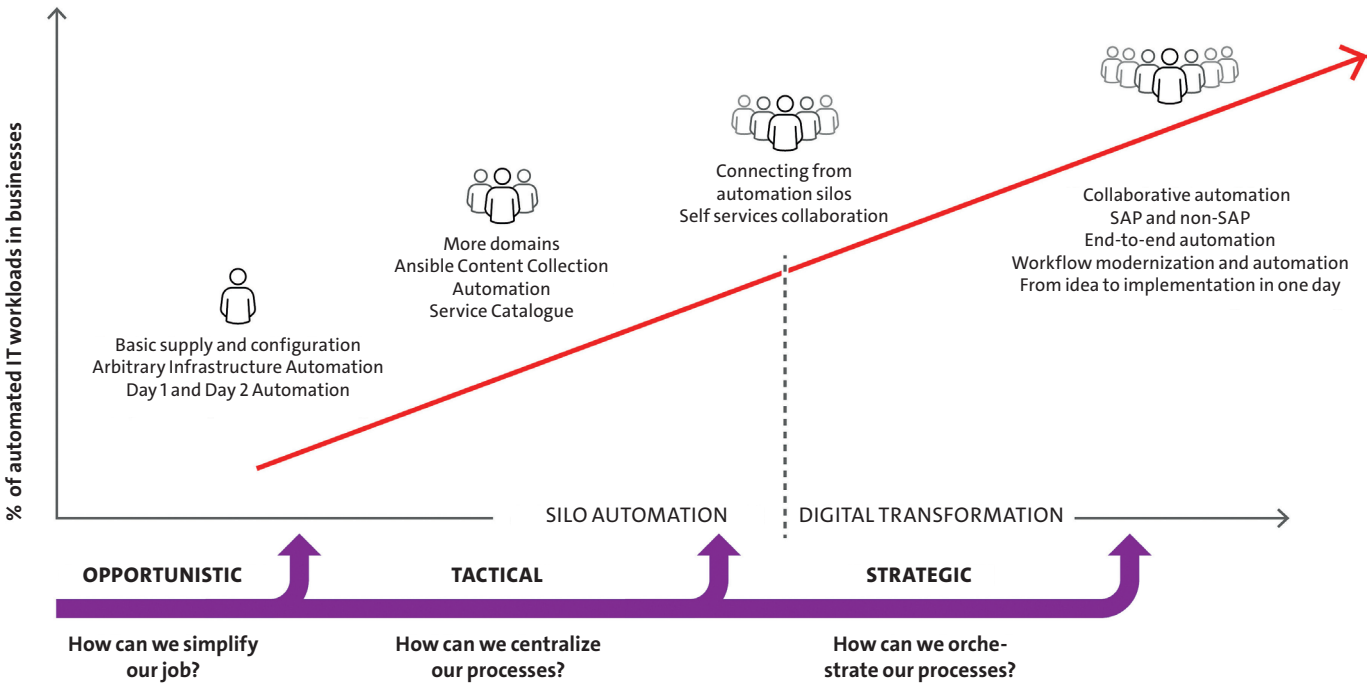


Holistic approach to SAP modernization.

The migration itself presents a challenge tasks, particularly when dealing with legacy systems, outdated solutions, non-cloud-enabled interfaces, and integrations designed solely for on-premises use. Instances of these challenges include backup and monitoring tools or Abap-based add-ons from the ECC landscape.

The changes are in the context of digital transformation, which is essential for almost every company. To remain competitive in the process, modern IT environments must be able to implement new ideas or additional functions agilely and at high speed. Agility also means being able to react immediately to failures, changing market and user requirements and unforeseeable situations—and this also applies to the SAP world.

Being locked into a particular solution is counterproductive; in essence, every company requires long-term strategic ad-



Merging of teams and increase in productivity through end-to-end automation.

aptability in this context. This is growing in significance, especially due to regulatory requirements. The regulation affects all types of financial companies, from credit institutions to insurance companies, investment firms, and all third-party providers of information and communication technologies that provide services to the financial services sector.

New EU regulation

Through the new regulation, the EU is addressing the growing digitalization of the financial sector and the accompanying elevated security risks, including concerns related to the concentration of data in the cloud. This entails that companies should reduce their IT and business-critical risks while enhancing their operational resilience. In this regard, open source-based solutions, known for their consistent avoidance of vendor lock-in and their emphasis on independence and interoperability, are growing in significance.

The essential transformation within the SAP landscape primarily demands the seamless integration of new applications, technologies, platforms, architectures, and frameworks. This includes areas like AI and ML, data analytics, big data, RPA, and IoT. Notably, AI and ML are currently gaining significant importance, especially among SAP users. Many companies are actively developing and training models using SAP data, subsequently deploying them in production environments, such as factory and edge scenarios.

Hybrid cloud as target architecture

The different requirements raise the question of the optimal target architecture and basis for implementing concepts that link migration scenarios with modernization and innovation topics. The solution lies in open-source technologies, cloud-native development approaches involving containers and microservices, certified enterprise Kubernetes platforms, and automation solutions, specifically Red Hat OpenShift and Red Hat Ansible Automation Platform. It's precisely this infrastructure that an increasing number of SAP partners, tools, and solutions are opting to integrate the SAP landscape into a more agile process environment.

SAP itself is also increasingly taking this path and relying on solutions from Red Hat. The two companies announced an intensified partnership at the beginning of the year. Within the framework of this partnership, SAP is gradually migrating an ever larger part of its internal IT landscape and its SAP Enterprise Cloud Services portfolio to the standardized base of Red Hat Enterprise Linux.

That is, SAP is also primarily using Red Hat as the foundation for new SAP RISE customer environments. This joint initiative to extend SAP software workloads on Red Hat Enterprise Linux is designed to make it easier for SAP customers to increase business agility, accelerate cloud deployments, and drive business innovation by building on Red Hat's scalable, flexible, and open hybrid cloud infrastructure. A curated enterprise open-source platform, such as Red Hat OpenShift, that is uniformly available across all infrastructures and optimized for SAP users and partners, serves as the foundation for both the deployment and integration of non-SAP applications and the modernization and extension of existing Abap custom developments. Notably, an open source-based hybrid cloud offers SAP users the ability to quickly implement the SAP philosophy of „keep the core clean", while also implementing side-by-side extensions and integrations of SAP and non-SAP solutions in hybrid end-to-end processes. Such an infrastructure foundation is ultimately indispensable for SAP users on the path to the intelligent, integrated enterprise. In addition, companies gain maximum strategic flexibility with cloud agnostic hybrid cloud use. In line with the guiding principle „Develop once—deploy anywhere", they can choose to use on-premises environments, hyperscaler infrastructures or supplement the RISE with SAP offering. This flexibility with the free choice of foundation is also essential in terms of operational resilience.

Automation as a bridge builder

Open source-based hybrid cloud platforms and integrated end-to-end architectures are pivotal components for the success of SAP migration and modernization. Automation serves as a central link and plays a crucial role. Today, it stands as

one of the central themes in the world of IT, including within the SAP domain. To tackle both present and future challenges during this era of digital transformation, companies must embrace automation that extends beyond simple deployment, reaching into comprehensive end-to-end automation of the entire process landscape. This entails automation spanning from deployment through maintenance to the operation of the entire IT stack. The versatile and established open source automation solution, Ansible, provides invaluable support in this regard. For enterprise-grade usage, the Red Hat Ansible Automation Platform has proven itself, offering certified, preconfigured modules, automation workflows, and advanced security concepts that enable seamless scaling across various domains a

Tactical and strategic

An effective strategy for deploying Red Hat Ansible Automation Platform enterprise-wide involves a phased approach. It typically commences with an opportunistic approach, progresses to a tactical one, and finally to a strategic deployment. This entails starting by simplifying individual processes, then centralizing automation procedures, and finally orchestrating entire automation workflows. SAP landscapes have now seamlessly integrated into this overarching strategy.

The potential spectrum of Ansible deployment within the SAP context is extensive. On one hand, it encompasses infrastructure and maintenance tasks related to deployment, installation, and provisioning. On the other hand, it involves „housekeeping" activities within ongoing SAP operations, which includes automating processes within SAP applications. Extensions from the partner ecosystem facilitate direct automation in SAP through Ansible, such as managing rights, creating users, reading system data, or even executing processes.

The use cases that Ansible covers are continuously increasing. Red Hat Ansible Automation Platform, for example, currently has more than 130 certified and maintained content collections that are developed and provided by hardware and software manufacturers and Red Hat, and with regards to automation in SAP environments. According to Red Hat's experience, the Content Collections provide use cases for about 80 percent of typical application scenarios, while ensuring easy customization to meet specific customer and requirements.

In addition, the flexibility of Red Hat Ansible Automation Platform enables SAP users to easily integrate automation with existing tools and processes using RESTful APIs and a self-service portal. For example, they can address issues such as compliance, security and governance that traditionally require a great deal of manual effort. Automation eliminates this effort and also supports, for instance, faster implementation of the new supply chain due diligence law by seamlessly connecting different data sources.

SAP RISE

One might begin to question whether the hybrid cloud serves as a viable alternative to SAP RISE and whether, in any case, RISE by itself represents a comprehensive and all-encompassing solution. However, it is not a question of replacing RISE or the SAP Business Technology Platform (BTP), but of integrating and balancing an outside-in and inside-out view of processes. There are several reasons for this. First, it should be noted that SAP users receive many pre-integrated and useful extensions for SAP processes thanks to the BTP. In addition, an open hybrid cloud as an often already established foundation in the customer's IT landscape offers users the necessary and desired flexibility in terms of development and operation. The key to success lies in the connection. With Red Hat OpenShift, for example, an abstraction and integration layer is available for hyperscaler platforms with their native services as well as for the SAP-BTP environment.

SAP and non-SAP

Due to various factors like functional, technical, business, or compliance considerations, SAP RISE may not be well-suited for all non-SAP workloads. This is particularly evident in cases involving security requirements, such as in public and military contexts, as well as edge application scenarios. In contrast, a cloud-native runtime environment as a foundation supports a wide range of environments, including hybrid, on-premises, and edge environments, thereby accommodating diverse customer-specific and application-specific requirements.

Overall, every migration and modernization project in the SAP area should be seen in the context of a redesign and consolidation of the entire IT landscape. The ideal technological foundations for this are certified open source-based operating systems, hybrid cloud platforms, and automation solutions such as Red Hat Enterprise Linux, Red Hat OpenShift, and Red Hat Ansible Automation Platform. It is no coincidence that more and more partners from the SAP ecosystem are using precisely this technology substructure for SAP modernizations as an integrated open source-based toolchain. The rationale behind this is quite compelling: there is a substantial room for enhancement in terms of how SAP modernizations and migrations are calculated, streamlined, and expedited.

From Run SAP via Simplify SAP to Extend SAP

From a strategic point of view, the advantages of the open hybrid cloud in the SAP context are Run SAP, Extend SAP, and Simplify SAP.

Run SAP refers to the use of a certified substructure, i.e. a hybrid cloud infrastructure for operating an SAP landscape. Such an infrastructure serves as the basis for securing, scaling, and managing traditional and cloud SAP workloads in any environment, allowing freedom of platform choice for current and future SAP workloads, and eliminating vendor lock-in with respect to a cloud provider.

Extend SAP addresses the integration of SAP with non-SAP systems and includes the addition of SAP applications and SAP-BTP implementations. Rapidly changing cloud-native applications in digital channels, continuous development and deployment processes, edge scenarios, latency, and privacy requirements require an agile, open platform in all infrastructures. This platform should seamlessly integrate into the SAP system and establish a direct connection to the SAP digital core.

Finally, **Simplify SAP** relates to management and automation, i.e. the simple and seamless management of platforms and automation across hybrid environments—from deployment to operations. With self-services and end-to-end automation of IT processes, a company can bridge the gap between silos—down to the business applications.

On the path to the future SAP with an ecosystem toolchain

Universal Tools

Holistic SAP modernization should address migration and innovation issues simultaneously and accelerate both. Open-source principles and platforms form the basis for this disruptive approach.

By Peter Körner, Red Hat

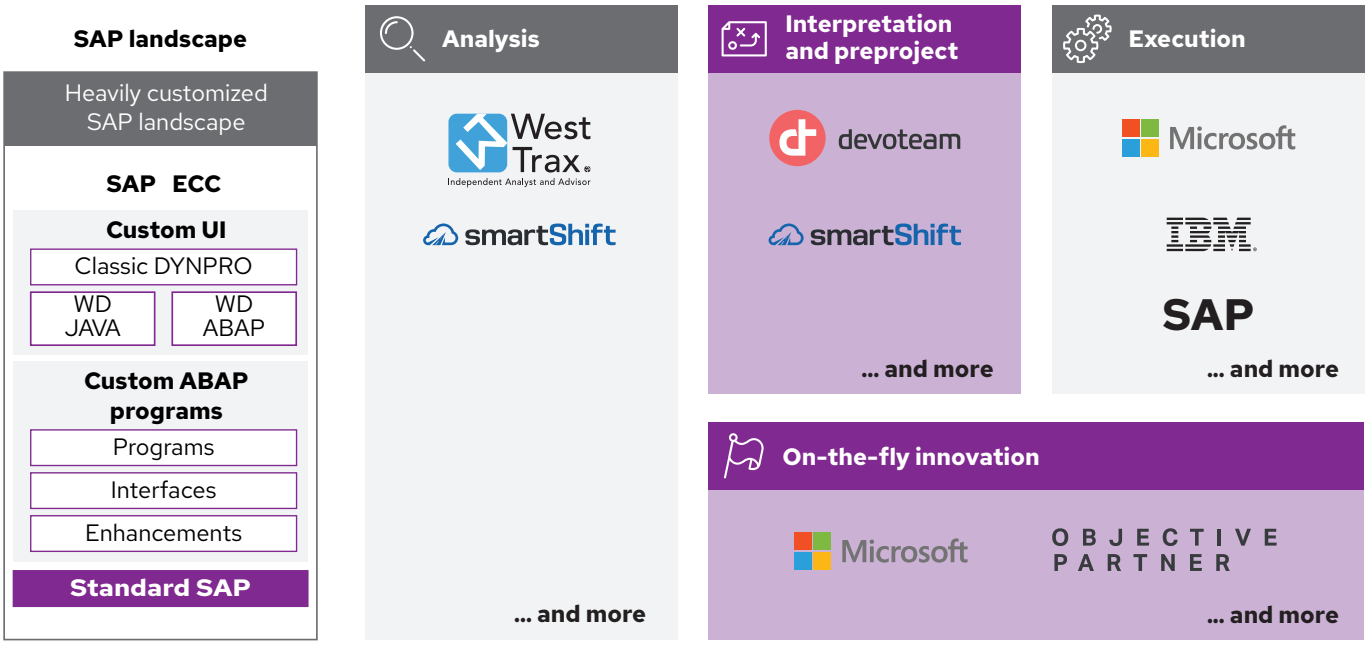
More and more partners from the SAP ecosystem are using open-source principles and platforms as the methodological and technological foundation for SAP modernization within an integrated open source-based toolchain. Whether it's Rise with SAP, Move to Cloud, or hybrid target platforms, SAP users are actively driving necessary migrations. These transformation projects are not a simple update—they are complex, time-consuming, and instead of being at the forefront, innovation is forced to take a backseat.

Pre-projects and housekeeping are reduced to a minimum out of necessity, and yet project durations remain extended. But this does not necessarily need to remain the case: Migrations can be closely integrated with modernization and innovation topics, while simultaneously being significantly accelerated. The basis for this is, in part, open-source technologies, cloud-native development models as well as certified Enterprise Kubernetes platforms and automation solutions such as Red Hat Enterprise Linux, Red Hat OpenShift and Red Hat Ansible Automation Platform. Additionally, SAP services partners as well as ISV and solution providers have been relying increasingly on precisely this foundation, when integrating the SAP landscape into an agile process environment. And the best thing about it is that the SAP ecosystem has formed a community, an integrated open source-based approach to join forces, tools, and services along the modernization journey for SAP S/4 Hana and Rise projects. Said ecosystem is an open community where more partners are welcome and can participate.

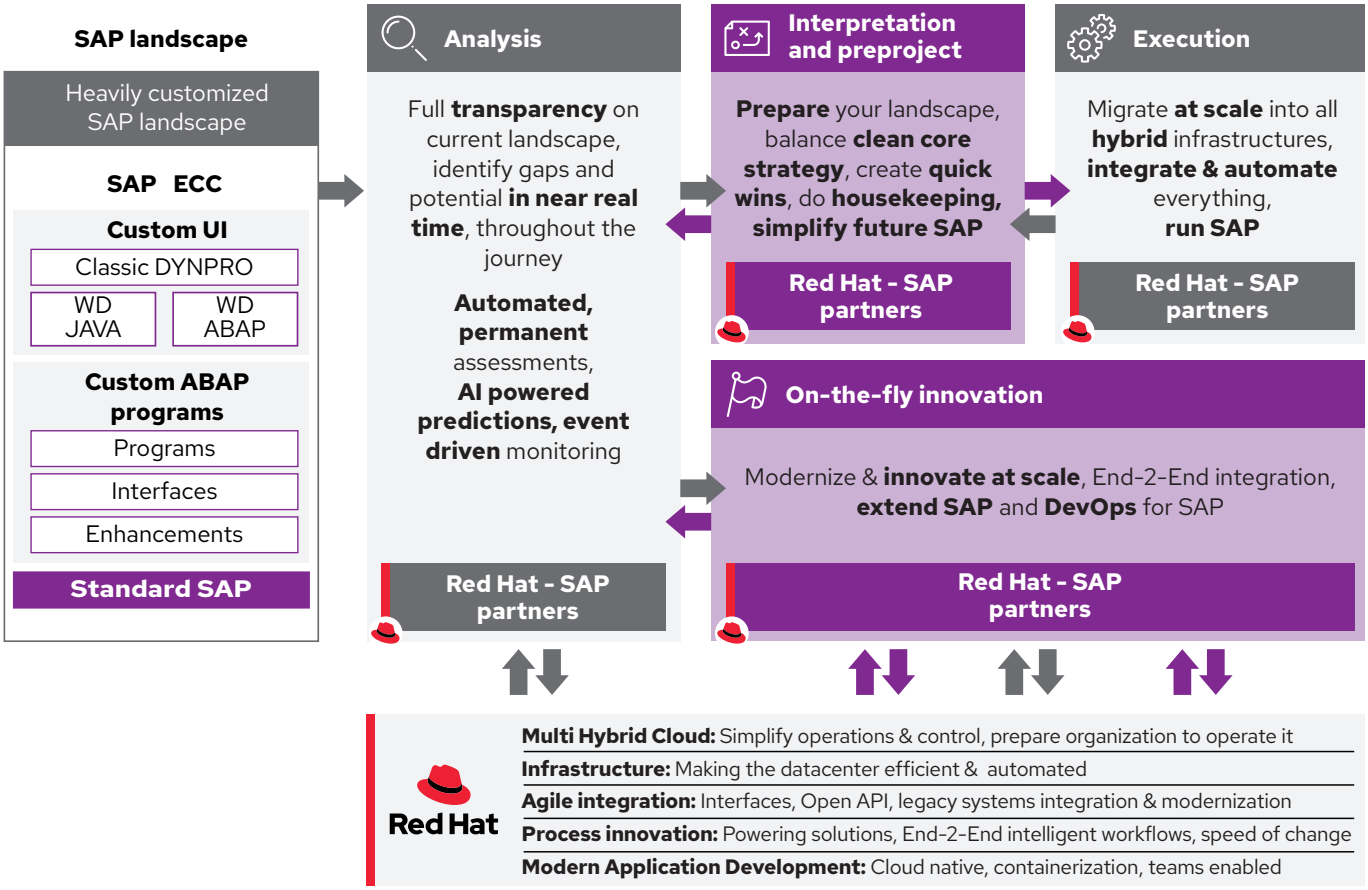
Disruption and services

As an example for a recent project, the new disruptive approach and interaction can be illustrated across modernization phases based on solutions and services from West Trax, Red Hat, Microsoft, IBM, SmartShift, Devoteam, and Objective Partners. Historically m any SAP customers used to take a step-by-step approach to transforming the SAP landscape: only after the most necessary preliminary projects and technical migration have been completed is modernization tackled. This approach corresponds to a more SAP-focused in-side-out approach, for example with a transfer of ECC systems to the cloud using the Rise-with-SAP offering, to a certain extent in line with the "lift and shift" motto. This means that customizing, or the integration and realization of outside-in added value from the non-SAP area, is postponed until the end of the migration phase. However, with the new ecosystem toolchain, there is also an alternative strategy where innovation is an integral project component of the IT migration from the very beginning.

A first step in the implementation of an SAP migration project and a core component of the SAP ecosystem toolchain for modernization is the analysis of the existing SAP system landscape. This was also the case in the past. What is new, however, is the ability to perform these analyses automatically, without workshops, and in near real-time. This is where the



Example of an implementation of SAP modernization.



KPI Analyzer from the company West Trax comes into play. It is a SaaS application that helps companies evaluate their SAP systems. The Analyzer generates usage metrics to measure the health and efficiency of SAP systems. The tool not only analyzes individual aspects or modules of the SAP system, but looks at the system as a whole. For example, in terms of maturity, productivity, costs, performance, storage, quality, or security.

The KPI Analyzer also uses a benchmark database to compare and evaluate the performance of the analyzed SAP system with other systems in the same industry and across industries. On this basis, any potential for improvement can be identified. In principle, the KPI Analyzer enables companies to immediately identify the current state with weaknesses and inefficiencies in their SAP system. Initial results can be available within 30 minutes, which can serve as a recommendation for the use of solutions from the entire downstream ecosystem toolchain.

Red Hat acts as the foundation

Depending on the analysis results, a clear recommendation can be made for either modernization, selection, or addition of appropriate target platforms for suitable partner solutions. A curated enterprise open-source platform consisting of Red Hat Enterprise Linux, Red Hat OpenShift, and Red Hat Ansible Automation Platform, optimized for SAP users and partners, acts as the technological and methodological substructure for modernization and integration scenarios.

This allows operations, automation, and integration to be mapped end-to-end, weighted according to customer specifications, but always as a part of modernization. But this platform is also the foundation of an integrated ecosystem toolchain, whose defining characteristic is sharing information, facts, and insights during a concrete modernization project. Departments exchange analysis results and project parameters, everyone utilizes results and quick wins, target platform specifications and sizing are automatically transferred to the next stakeholder.

Operating SAP in the cloud is increasingly becoming a reality, but is still associated with limitations. For example, cloud providers have little insight into SAP landscapes and can, more or less, focus only on infrastructure and not on supporting companies in managing SAP. A new approach to this comes in the form of the Azure Center for SAP Solutions (ACSS), which is combined with solutions from Red Hat, such as Red Hat OpenShift and Red Hat Ansible Automation Platform—which can also be pre-connected if so desired.

S/4 deployment

ACSS is a modern operating environment for SAP that guides users through the deployment of SAP systems, automating many steps—down to configuring the operating system, database, and security. Ultimately, ACSS „understands“ the SAP landscape and monitors the status and integrity of all systems. Users can thus dispense with separate monitoring solutions. They can easily start and stop SAP systems at the push of a button and, in the future, also use services that were previously only available at the infrastructure level. These include a special Azure Backup for SAP, Azure Cost Management and Billing which supports cost optimization, and Threat Intelligence.

Again, the results of West Trax‘s analyses provide templates, sizing-specifications and recommendations, and meaningful Microsoft Azure services in both SAP and non-SAP contexts. Microsoft designed Azure Center for SAP Solutions as a modular and open framework that users and partners can extend and

connect to other solutions.

By integrating Red Hat OpenShift and Ansible into Azure Center for SAP Solutions, enterprises and SAP ecosystem partners gain a unified foundation for developing modern, cloud-native applications and running third-party solutions that extends from the cloud to the on-premises data center and connects the SAP world with other application landscapes. Thanks to the close partnership between Red Hat and Microsoft, customers can access more than just virtual machines with Red Hat OpenShift. Billing can also be done directly through the existing Azure contract, which can notably simplify management for many customers.

IBM's tool-based Rapid Discovery methodology benefits from analytics and automation capabilities, providing a structured, functional framework for the business-focused innovation and migration of the SAP landscape. In the context of the IBM Rapid Discovery Method, the technology agnostic clean core approach is integrated. This approach places the aforementioned technical platforms and solutions in a targeted, strategic framework to enable customers to achieve a sustainably optimized SAP ecosystem. For this purpose, IBM uses its own IBM Garage approach, which is a framework for accelerating digital transformation in the SAP environment using hybrid cloud environments.

Cooperation with Red Hat and partners from the ecosystem toolchain is taking on an increasingly important role. For example, experts from IBM and SNP are jointly performing selective data migrations and data transformations in a competence center using CrystalBridge. The SNP solutions for accompanying data migration, archiving, and general data management provide an optimal basis for efficient SAP landscape migration or transformation.

The actual migration is associated with numerous technical and process-related challenges. Here, ecosystem partners provide support with various solution approaches. Ultimately, SAP landscapes are migrated to the desired target environment on a turnkey basis. Finally, many activities and transactions in SAP and the surrounding systems are subject to regulatory requirements. Recording and documenting these processes usually involves a great deal of manual effort. An example of this is the Supply Chain Act, which came into force on January 1, 2023, and sets out requirements for responsible supply chain management. Because of this, companies must connect various data sources and external information. Devoteam solutions can automate and accelerate these processes. They are delivered as Ansible Content Collection, Ansible Certified Content, and OpenShift Certified Applications, which are tested, verified, and ready to run anywhere. This creates the desired synergy of using a unified platform, regardless of the target infrastructure.

Conclusion

All in all, the consistent use of modern open source-based technology and infrastructure options, as well as proven methodology concepts from the non-SAP area, result in completely new opportunities for SAP users—especially with regards to the close integration of migration and innovation. After an analysis phase with the determination of the innovation potential, quick wins can be quickly realized without extended project runtimes. SAP users receive comprehensive support through a currently emerging ecosystem toolchain for S/4 and Rise modernizations. The foundation for this is provided by the ecosystem of solutions, add-ons, and concepts that SAP and Red Hat partners have already built up in recent years based on Red Hat Enterprise Linux, Red Hat OpenShift, and Red Hat Ansible Automation Platform—an ecosystem that is open to partners and that will, crucially, be gradually expanded.

Abap custom code

Abap custom code in legacy systems, in particular, poses a considerable challenge during migration and modernization. Companies that have been using SAP systems for an extended period of time have a large amount of custom code that has been developed over time to support ever-changing business requirements. Much of this code can become obsolete over time as it is not designed with today's requirements in mind, such as security, performance, or maintainability. The code also presents difficulties because it is typically tightly coupled to the monolithic approach of traditional ECC 6.0 systems. A like-to-like migration would be only the first step. Moreover, in many cases the code is no longer executable in the new S/4 environments and must be adapted at great expense. With intelligent code modernization and an adequate target architecture, companies can get a handle on the challenges associated with Abap custom code, making even complex transformation projects relatively simple, quick, and cost-optimized. SmartShift, a Red Hat partner, takes on exactly these tasks with a custom code modernization, starting with the initial S/4 transformation and ending with the implementation of a clean-core SAP system. With the aforementioned KPI Analyzer, companies gain insights into SAP users' individual challenges within a condensed timeframe. Based on this analysis, pertinent components for the migration are selected, and optimization and innovation potentials are identified. The new migration method with Red Hat additionally has many advantages. Thanks to the quick and secure platform, companies can count on a tried-and-tested and reliable migration. But how does the customer benefit from this? A quick return on investment is tangible and there is more room for innovation. Pertinent departments can also respond more quickly to market needs. Red Hat OpenShift is a particularly suitable target environment because the platform supports multiple architectures, including on-premises and edge, with a single development approach. In addition, users can easily create combined Red Hat, SAP, and non-SAP proof-of-concept environments in Microsoft Azure, for example, which significantly accelerates the implementation of end-to-end processes.

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Red Hat

COMMENT

By **Peter Körner,** Red Hat

C-Level Competence Is Key

Peter Körner is the Principal Business Development Manager Red Hat SAP Solutions at Red Hat.

SAP users are currently facing many far-reaching challenges. Not only do they need to drive migration, but also address innovation topics in terms of competitiveness and cover them from an IT perspective.

With an open hybrid cloud strategy and platform as a foundation, SAP users can succeed in their balancing act. Moreover, non-SAP and SAP applications and processes can be considered equal and can be methodically integrated together in a uniform manner. This also offers maximum independence and flexibility, where CIOs can regain a sense of freedom through this strategic approach.

Many companies today are facing similar challenges: digital transformation, increasing competitiveness, cost optimization, the shortage of skilled workers, and/or new regulatory requirements. The latest regulations, in particular, demand a high degree of flexibility within the IT infrastructure to ensure swift implementation of both current and forthcoming requirements. Examples of this are DORA, the supply chain act, the digital product passport or upcoming sustainability, governance, and compliance guidelines.

To strengthen their future viability, companies must first and foremost also address new topics such as AI and ML, data analytics, Big Data or IoT. AI and ML are particularly gaining increasing relevance across industries, including among SAP users, due to the hype surrounding large language model (LLM) services. Machine Learning (ML) can be used efficiently in a wide variety of SAP areas, such as master data analysis optimization of production processes, supply chains and quality control. Many companies are currently developing and training models with SAP data, which they then run in production environments.

The scope of tasks encompasses all facets of corporate IT, implying that SAP users will inevitably find themselves compelled to advance their modernization initiatives. The overarching objectives are centered around simplicity, agility, productivity, and innovation, all of which the new SAP landscape must align with, while adhering to the principles of „keep the core clean“ and „side-by-side extensibility“ in the SAP approach.

A company can only optimally master the diverse challenges with a holistic view and an end-to-end IT strategy. Silo-like IT landscapes are not conducive to achieving this goal. From an SAP perspective, innovation topics are closely linked primarily to Rise with SAP and the SAP BTP (Business Technology Platform). This fulfills many, but not all, of a CIO‘s wishes and needs. When selecting a target platform, they will want to gain independence and freedom, yet also retain strategic control for the best possible implementation of future innovation topics. Above all, they will also want to ensure a high level of agility in corporate IT. This will only be possible if the SAP landscape does not run in isolation, but rather is embedded in an integrated process landscape, and not just through interfaces, but via operating models, automation, and end-to-end development models.

Often a CIO’s overriding goal is transforming the often siloed SAP landscape into an integrated corporate IT as part of an innovation strategy. For many companies, key components of success in this stage are open source-based hybrid cloud environments, which are based on enterprise Kubernetes platforms such as Red Hat OpenShift and which have been well-established for several years.

Through the adoption of an agnostic hybrid cloud approach, enterprises attain strategic flexibility. This approach enables any innovation or concept to be deployed and scaled in any environment without the need to adapt its technical foundation, all in line with the core principle of „develop once—deploy anywhere.“ Applications can seamlessly choose to operate in on-premises environments, at the edge, within private clouds, or across hyperscaler infrastructures. SAP is no longer excluded, as an open platform now supports the SAP concept of „side-by-side extensions,“ empowering companies to implement end-to-end processes in an agile manner. This integration capability also facilitates the seamless integration of the SAP landscape with non-SAP systems. For instance, Red Hat OpenShift serves as an ideal foundation for the development and deployment of AI solutions in the context of SAP data sources.

An open hybrid cloud environment additionally supports—or rather links—the two different innovation approaches for SAP via modern APIs and development environments. That is, outside-SAP-in and SAP-inside-out, i.e. a business-led view from both the non-SAP and SAP worlds. Both worlds refine each other constantly and with agility which has not been conceivable through traditional approaches. The user can decide, for example, to go the Rise route with SAP and use BTP. This approach offers clear advantages, as the BTP features numerous pre-integrated extensions tailored for SAP processes. These extensions can now be expanded to encompass all target environments, with an open hybrid cloud serving as the underlying framework. Consequently, an open platform serves as the foundation for an „outside-SAP-in“ approach, facilitating the connection of any modern cloud-native, edge, or factory applications to SAP.

Nonetheless, a single platform is insufficient to tackle all the challenges posed by various environments, be it on-premises, at the edge, in a hybrid multi-cloud setup, or in the context of non-SAP systems. The primary overarching objective during the modernization phase is to enhance the application development strategy with agile SAP integration. Furthermore, as part of the modernization process, SAP users receive comprehensive support from the expanding ecosystem of open source-based SAP tools, encompassing cultural, methodological, and technological aspects.