

IDC Partner Spotlight

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Red Hat and Atos Innovate for Successful Application Modernisation and Digital Platforms: Spotlight on Atos Managed OpenShift (AMOS)

Introduction: Why Application Modernisation?

Digital application transformation (DX) is changing the way business is conducted. Business leaders want to innovate, to move with speed, be equipped to respond to fast-changing customer demands and increased competition from more digitally native companies. Technology leaders are under pressure to support these business needs, accelerating modernisation initiatives to help the business respond more quickly to both the challenges and the opportunities that the digital era creates.

This business environment is leading to increased pressure on IT to speed up and modernise applications in the enterprise, necessitating a new paradigm in application delivery. What we are experiencing is a fundamental change in how applications are built, deployed, and updated. In fact, the very nature of what an application *is* is being challenged. This has been brought about by a combination of the growing maturity of cloud platform adoption, more modern, automated application deployment methodologies, such as DevOps, and the rapid growth of low-code tools and developers. The combination of these factors is leading to an explosion of new applications. Over the next four years, IDC predicts that approximately 100 million new applications will be built in EMEA. To put this into perspective, this is equivalent to the number of applications developed in the last 40 years!

IDC describes this paradigm shift as the move to "hyperagile applications" — applications that are highly modular, distributed, continuously updated, and leverage cloud-native technologies such as multicloud, containers, serverless computing, and microservices architecture.

Red Hat and Atos have created a joint proposition to help their customers through this process of application modernisation — Atos Managed OpenShift (AMOS). This paper has been written to advise both business and IT leaders on what their key considerations should be when embracing an application modernisation and platform strategy, and how AMOS can support them.

In this Partner Spotlight

This Partner Spotlight describes the joint proposition Red Hat and Atos have developed for application modernisation and platform architecture. It is a solution that leverages the strength of Atos' deep vertical expertise, modern application engineering skills, integration and transformation services with Red Hat's container

“Atos and Red Hat collaborated to deliver a managed platform solution and adjacent services to give enterprises a blueprint to build a digital-native application infrastructure on the principles of consistency, repeatability and guarantee”

Florian Röhr, Atos

IDC predicts that 90% of all new applications will feature microservices architectures by 2022.

application platform (OpenShift), its management suites, and its open source innovation. This paper also explores Red Hat's strategic partnership with Atos — a partnership spanning over a decade — and the unique value their joint solution brings to their customers.

Red Hat is a global provider of enterprise open-source software and platform solutions, using a community-powered approach to deliver reliable and high-performing Red Hat Enterprise Linux (RHEL), hybrid cloud, container and Kubernetes technologies. Red Hat further supports customers with integration, automation, security, support, training and consultancy offerings, which are delivered through its network of trusted partners, including Atos.

Atos is a European headquartered, global services organisation which positions itself as "a global leader in digital transformation". It employs over 120,000 people, with an annual revenue in excess of €12 billion. It offers a wide range of solutions and services — from end-to-end orchestrated hybrid cloud, Big Data, application modernisation, platform infrastructure and Future of Work solutions — to propel full enterprise digital transformation.

The Atos and Red Hat proposition is a managed application platform: Atos Managed OpenShift (AMOS). AMOS is designed to give enterprises all the tools and technologies to conceptualise, design, build and deploy cloud-native applications with security at scale. Enterprises with existing traditional applications can also leverage the functionalities of the managed platform, eliminating the complexities of application modernisation and management.

The State of Application Modernisation

Survival in the digital era is increasingly linked to the organisation's ability to support and respond to change. Speed to innovate has never been more important, and successful transformation leadership requires alignment across people, process and technology. The key business triggers driving application modernisation are therefore all about improving speed to market and rapid innovation.

For most organisations, many critical applications are still traditional. Typically, only 10%–15% of all applications in an organisation are cloud-native. While this number is growing rapidly, true transformation can happen only when the bulk of traditional applications such as ERP are modernised and can leverage cloud-native technologies to become highly dynamic, responsive and scalable.

The Role of Open Source in Application Modernisation and Platform Strategies

How a company modernises, sustains, and scales digital IT platforms and operations may be the most important determinant of their success for the next 10 years. This is driving demand for open source solutions, as both business and IT leaders want the flexibility of an open and portable environment that allows the business units to adopt and use new technologies without worrying about lock in. They also want to give their developers the freedom to use open technologies.

In an IDC IT Optimisation survey conducted on behalf of Red Hat in 2018, European organisations estimated that nearly 60% of their newly developed applications will be cloud-native by 2020. However, only a third (33%) were confident that their current infrastructure and management resources would meet the requirements of their application modernisation journey over the next three to five years. A lack of integration with modern cloud infrastructure, inflexibility, manual operations, and absence of modern automation features is forcing companies to evaluate new management and automation solutions. There is a real fear that existing infrastructure and management tools will hold their transformation back.

The intention to modernise infrastructure and management tools to achieve the desired scalability, cost-efficiency and modern automation and to tap into innovation is accelerating demand for open-source solutions. For instance, an overwhelming majority (87%) said that they will rely on multicloud infrastructures to avoid vendor lock-in and benefit from open-source innovation. 73% of respondents believe open source is mission critical or very important for supporting IT infrastructure strategies over the next three years.

Key Challenges With Application Modernisation

One of the key stumbling blocks in the IT modernisation journey is to assess, classify and match the right workload with the right infrastructure and modernisation approach. Ripping and replacing applications is costly and, in many cases, IT is not always allocated additional budget to allow for the cost of change. Additionally, critical applications are often still run on legacy infrastructure, so modernising the application environment also implies infrastructure modernisation and the costs associated with that.

Most enterprises still have a legacy organisational structure and culture where processes and operations haven't changed to support more agile working practices. This is compounded by the fact that there is a general lack of skills and expertise to deploy and manage cloud-native applications and platform environments.

Additionally, many organisations pursue a best-of-breed strategy for innovation, but this comes with its own challenges as multiple technologies and vendors have been introduced, making supplier management, traceability of roles, billing and addressing dependencies between parties difficult.

As a direct result, innovation efforts are often siloed, with a lack of standardisation and integration.

Given the changing dynamics in technology, regulations, security vulnerabilities and growing customer expectations, a multi-year transformation strategy requires commitment and alignment from all company stakeholders, a new culture of collaboration and innovation, and equally important, finding the right platform technology.

IDC strongly believes that standardising, automating and integrating technologies within a digital platform is key to scale transformation across the enterprise.

The Platform and its Role in Transformation

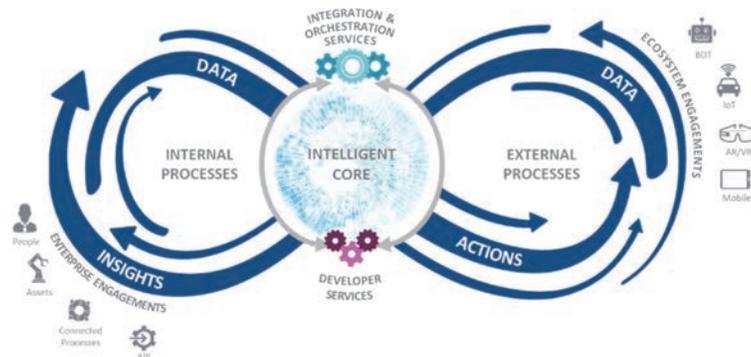
IDC's research has consistently found that organisations get "stuck" when trying to bring their transformation efforts to scale. One of the primary reasons is the absence of the right technology architecture to accelerate new capabilities, while at the same time aggressively modernising legacy (or core IT) environments. This has primarily been driven by the fact that digital IT environments were often being set up separately from the traditional enterprise IT platform, with application programming interfaces (APIs) and integration services connecting the two (often as an afterthought). A new approach is required with a new type of technology architecture that is integrated (as opposed to two parallel environments). IDC describes this new technology architecture as the DX platform.

The DX platform is the new battleground for innovation because it represents a paradigm shift in how applications are developed and deployed. Getting this right is key to becoming truly digitally transformed.

The objective of deploying a DX platform is to support the fast innovation dictated by digital transformation, while also enabling the modernisation of the existing applications. When modernisation is complete, new innovations and updated applications will share a common set of services that will enable more rapid continuous improvement at a much lower cost of ownership. This requires a shift in IT investment strategies to build a platform infrastructure that can accommodate both current and next-generation workloads to accelerate performance and business agility in a sustainable way. It also requires a fundamental shift in culture.

Instead of focusing on technology stacks, IDC advises companies to think rather in terms of an infinity loop, circling around an intelligent core. With this approach, data comes into the organisation through APIs, both from within and from the ecosystem. This data circulates through the intelligent core, which can pull out insights. Those insights circle back into the organisation as improved internal processes and data into actions to be taken when engaging with the ecosystem.

Figure 1
The DX Platform



Source: IDC 2019

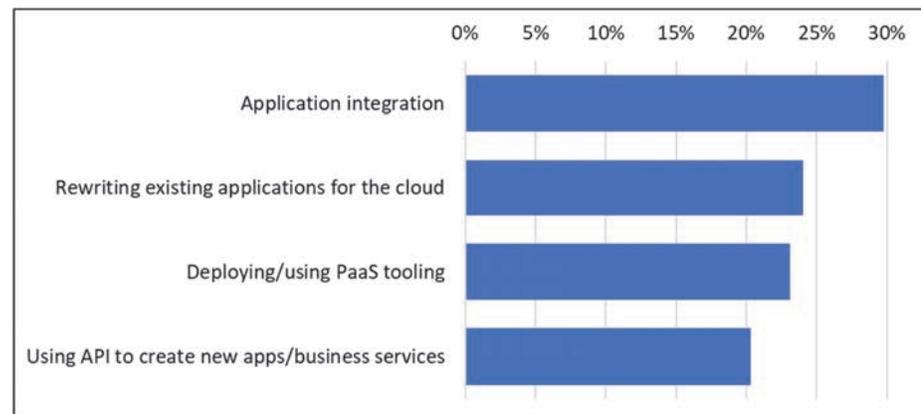
IDC predicts that by 2020, the number of companies who have deployed DX platform strategies will have more than doubled to 60% of organisations.

When developing a DX platform strategy, companies are making decisions around the technologies and partnerships that help them scale their modernisation initiatives to the enterprise quickly and cost-efficiently. Choosing the right technologies and partners is a vital consideration, as deploying a DX platform brings about its own set of hurdles to overcome.

The DX Platform: Key Hurdles to Overcome

Deploying a DX platform comes with its own set of challenges, notably the integration of applications, as revealed in IDC's 2018 DevOps & Developers Survey.

Figure 2
IT Challenges for Platform Modernisation



Source: IDC 2019

If migration is not done right, when scaling, these challenges cascade, resulting in siloed application delivery platform modernisation, which is often ineffective and unsustainable. Enterprises that align their IT and platform investment with business objectives have more success and meet the top business considerations effectively.

IDC believes it is imperative to think about scale, consistency, and standardisation right at the start of the new platform strategy to avoid silos of innovation or pockets of digital-native units. Enterprises need to evaluate the solutions and technology providers that can help scale and standardise the platform migration in a cost-effective, secure manner without lock-in.

Red Hat and Atos Collaborate for Platform and Application Modernisation Innovation

Atos and Red Hat aim to help bridge the old and new worlds of applications, giving their clients an opportunity to develop and manage modern, cloud-native applications while simultaneously migrating legacy workloads on hybrid cloud environments. They have partnered to develop a solution to help their customers overcome the challenges surrounding large-scale platform and application transformation programmes.

This approach for both modern and traditional workloads can enable scaling of the modern infrastructure and implement core IT tenets such as standardisation and automation.

The combination of Red Hat's infrastructure and open source engineering expertise with Atos' application modernisation services enables the partnership to deliver full stack services for their customers' transformation and DX platform objectives.

Introducing Atos Managed OpenShift

Atos Managed OpenShift (AMOS), was launched in 2018 and is the result of Red Hat and Atos co-investing in developing a cloud platform solution optimised for the needs of large, global enterprise customers with complex and fragmented application environments. Built on Red Hat OpenShift, AMOS leverages the breadth and depth of open-source capabilities in platform and application lifecycle management. The core value proposition is end-to-end ownership of the platform migration journey coupled with deep enterprise-grade capabilities in application reengineering.

Key Benefits AMOS Enables

AMOS is designed to accelerate large-scale migration programmes and to bring agility and consistency across the application development and delivery value chain. Based on conversations with large, multinational enterprises across financial services, manufacturing and retail segments, Atos and Red Hat developed AMOS to help offer consistency and repeatability of modernisation across the enterprise. At the heart of AMOS are features aimed at eliminating the siloed efforts of application modernisation that are so rampant across enterprises. It includes:

- Consistency, industrialisation and end-to-end value delivery.
- Cost predictability and containment of platform management.
- Tooling automation, platform/application integration, and at-scale security.
- Application standardisation and business process transformation.

Beyond this, the open source characteristics — modern technologies such as containers and enterprise-grade automation tools — help set a strong, sustainable platform foundation. The open source-driven interoperability means it can be used across multiple infrastructures, truly enabling hybrid and multicloud — a key priority for European enterprises.

Atos' approach is to understand the business challenges first and calibrate the platform to what the client wants to achieve, as well as where they are in terms of IT landscape maturity and broader application infrastructure and data architecture. It can also develop a blueprint for application and platform modernisation at scale.

With AMOS, Atos helps its customers overcome the challenges associated with application modernisation and deploying a platform strategy:

- **Skills** — IDC's research shows that the lack of experience, skills and talent in the container platform space is one of the most critical hurdles facing enterprises as they bring a modern DX platform strategy into production. The

automation and managed services features of AMOS help to address the talent gap, and Atos clients also benefit from its own talent pool. As strategic partners, Atos and Red Hat have deep levels of engineering collaboration. Additionally, Atos, through its acquisition of Syntel, has bolstered its talent pool in the platform space. It believes its talent and resources, services and Red Hat's technologies can help its enterprise customers overcome the skills challenges of platform and application transformation.

- **Costs** — In conversations with IDC, many enterprises state this application classification as a major challenge. In one instance, an organisation migrated "chatty applications" on to public cloud and ended up paying huge egress charges. Atos helps businesses in the assessment of application, cost and asset impact, and how to modernise legacy applications, as part of its Application Modernisation and Migration (AMM) service.
- **Speed to Market** — A fully managed container platform means enterprises can leverage modern technologies quickly. Complementing the platform solutions, Atos has a portfolio of services to enable DevOps and modern development methodologies to further accelerate speed of business. This also helps industrialise development, management, and operations.
- **Rapid Innovation** — With an open source foundation, AMOS provides developers with the tools and technologies including containers, microservices and security to build new applications at scale and with consistency.
- **Openness and Interoperability** — AMOS supports frictionless movement of applications across multicloud and hybrid clouds with the mantra of "build once, run everywhere" because of OpenShift's native support of Kubernetes, the industry standard for container deployment.
- **Management and Security** — AMOS is enterprise-grade, thus mitigating the risks around the complex management and security of new container environments.
- **Bridging Old and New IT** — With experience across large, complex IT environments across multiple sectors, Atos can support traditional legacy applications as well as modern cloud-native environments, providing support for both worlds of IT.
- **Introducing New Methodologies** — AMOS is underpinned by modern container platform and microservices architecture, which offers new ways of collaboration and application testing and development, bringing DevOps to the enterprise.
- **Supplier Management** — Providing a unified, one-stop-shop for IT management simplifies the transformation journey by avoiding multiparty involvement in the migration effort; customers can avoid "bolt-on" and the related management overhead for in-house IT.

IDC predicts that by 2022, the acceleration of legacy application modernisation and net-new development will lead to 35% of production applications being cloud-native — utilising microservices, containers, and dynamic orchestration.

Future Outlook/Challenges

Enterprises need the technology, people and processes to enable agility and adaptability and adopt the right culture to capitalise on existing investments while transforming application delivery with optimised budgets. Ultimately, enhanced security, reduced downtime and speed of application deployment are the top priorities for next-generation management and automation strategies.

IDC advises enterprises embarking on an application modernisation and platform strategy to consider that a long-term strategy is required to enable the ability to create, consume and discard applications at cloud-native speed. IDC advises enterprises to consider three key elements to build a future-proof strategy:

1. The first step is to overcome legacy cultural barriers by introducing change agents, encouraging cross-team collaboration and fostering a culture of innovation and ownership.
2. Embrace technologies that help lay the foundation for multicloud, software-defined architectures, automation and orchestration, Big Data and DevOps. Cloud and open source are launchpads for innovation and play a critical role in digital transformation. It's a balance of finding solutions that bring cloud scale and agility with enterprise-grade security, IT control and freedom from lock-in.
3. The last piece of the "speed" puzzle is automation. Automation plays a central role in allowing organisations to successfully deliver better performance. There is clear realisation that automation positively impacts business productivity.

Conclusion

Atos recognises the shift happening among customers trying to integrate innovation into their business, with a desire not to procure technologies for technology's sake but to meet needs across the business. Its commitment to the cloud-native and platform environment is evident through deep collaboration with the Red Hat OpenShift container platform and certifications, its end-to-end portfolio of application modernisation to ensure consistency, repeatability and scale, as well as its acquisition of cloud-native engineering talent and technologies through Syntel.

IDC considers the Atos and Red Hat partnership as one that demonstrates co-innovation. Both companies recognise that customers are requiring more sophisticated solutions that can meet the requirements of both traditional workloads and cloud-native applications, and over the years, and in combination, the partnership helps enable these companies to become platform-driven.

Atos and Red Hat are delivering new technologies, open source tools, automation, and management, at scale and costs that are within a customer's reach. The collaboration aims to make their customers' application modernisation and platform strategies a reality so they can compete effectively in this digital age.

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