



Cloud Native Application Modernization

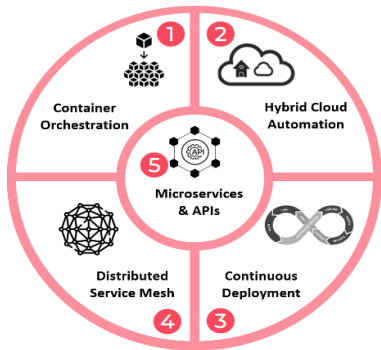
Why Cloud Native Modernization?

The transitions of applications in Cloud environments are in a "post-COVID" acceleration phase as evidenced by the market which will grow from €100 million to more than €500 million in 7 years. However, to deliver all the benefits of the Cloud in terms of optimization, resilience, modernization or innovation, it is necessary to consider a redesign of these applications according to the most ambitious "3 Rs": "**Refactor**", "**Rearchitect**" and **Rebuild**. In these 3 areas, the use of a Cloud Native approach, within the meaning of the CNCF, is at the heart of the architectures and methods used.

This is why Devoteam, in collaboration with its partner CAST, launched at the end of 2022 the Cloud Native Innovation Labs which aim to help their customers in this application modernization that will last over several years.

Possible modernization approaches

On the different possibilities of transition and transformation of applications, our approach mainly targets the **refactoring** of applications (hosting on Kubernetes bases with PaaS managed services) as well as their **rearchitecture** (use of microservices accessed via APIs and secured via a ServiceMesh).



This application modernization includes the 5 pillars of Cloud Native, presented above, with different evolution strategies. Devoteam, in collaboration with CAST, helps you define these modernization paths

Our strategic partners



How to deliver this modernization?

The implementation of an application modernization program involves 4 main steps:



- Business contextualized application analysis
- Vue « Outside-In » pour classifier les applications par type (COTS, Custom Dev...)
- Inside-Out to determine possible types of transformation
- Valuation of expected benefits according to the chosen approach (Migration vs. Modernization)

On the execution and transfer phases, Devoteam sets up an agile organization with 3 types of tribes: those in charge of "Rehost" activities, those in charge of "Replatforming" and those in charge of modernization strictly speaking, namely "Refactoring" and "Rearchitecting".

Throughout this journey, Devoteam relies on CAST and its CAST Highlight technology to assess, plan and execute application migration and modernization..

How do I plan for application modernization?

Planning goes through 4 main steps. First, the analysis of the business context of each application to define the constraint field. Then the impact analysis to determine the benefit/effort ratio in a macroscopic way. This leads to a first "high level" analysis of the expected return on investment (ROI). And finally the creation of the modernization backlog that will be refined later.

How to prepare the realization of this modernization?

In-depth application portfolio discovery starts with analysis of existing repositories and code analysis for Custom Dev applications. Possible modernization paths are then analyzed one by one, mainly for custom apps. Then, on the chosen modernization path, we define in detail the targeted level of transformation (managed services, microservices, automation, etc.) to finish with the detailed architectures including security aspects.

How do you execute these modernizations at scale?

The realization of this modernization requires an agile approach and organization with the 3 tribes mentioned above. These are based on a number of chapters (11 in all) that cover the phases of modernisation. Among other things, there are chapters related to the financial realization of the business case, planning, migration to "Lift & Shift", complete modernization, testing activities or the transition to production and the "hypercare" phase coupled with the adoption of new ways of working in Cloud Native.



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Why CAST and Devoteam?

CAST is the leader in software intelligence, provides software that 'understands' multi-technology software systems and automatically derives insights about their inner workings-interactions between all its elements, transaction flows, data access paths, changes needed to move to cloud, open-source risks, green impact, etc.



The 3 Clouders offer the CAST Highlight technology to plan, monitor and enhance Cloud transitions.

Devoteam is one of the major players in Cloud migrations and modernization in France on the 3 hyperscalers.

**"Partner of the year" 2021
des leaders du cloud.**



In particular, we have more than 1,500 certified in France on these 3 hyperscalers in addition to our hundred certified on VMware and Kubernetes.

Why Cloud Native with Devoteam?

[Blog : Cloud Native Platform Engineering](#)

Devoteam launched Cloud Native Labs at the end of 2022. This is an approach to help our customers on this journey, an approach that brings together many of our existing know-how. First of all on the technological side, we support the implementation of solutions necessary for any Cloud Native base, starting with Kubernetes technology with several dozen certified people.

On the "Platform Engineering" part, the adoption of the new methods mentioned above is at the heart of our approach. Not only do we co-build with our customers but we support the scaling up with the implementation of "Cloud Native Boosters" to facilitate team learning. All operational aspects are covered.

Finally, Cloud Native Advisory teams help define the vision, associated strategy, and delivery plan to ensure tailored adoption of Cloud Native technologies and practices.

We have also developed a Cloud maturity evolution model according to the 5 CMMI levels.

Our services around CAST Highlight

ENVISION



Perform an initial top-down analysis of applications to create the backlog and prioritize candidate applications.

Module : CloudReady

ENGAGE



Perform jointly with the customer the in-depth analysis of an application to identify modernization mechanisms.

Module : AppHealth

ACTIVATE



Complete analysis of the application portfolio to create the roadmap for migration and modernization of business applications.

Module : CloudReady

ACCELERATE



Manage application migration to the Cloud to track the benefits delivered, particularly for modernized "homemade" applications.

Module : AppHealth

What is the value brought to our customers?

- ✓ Each customer has their own destination and cloud journey, our approach adapts to everyone
- ✓ Application assets differ for each customer and this approach adapts to COTS and "Custom Dev"
- ✓ The CAST Highlight technology makes it possible to automatically analyze the entire application portfolio of a company
- ✓ Our skills on the 3 main hyperscalers allow to include modernization with their services
- ✓ Our Cloud Native Innovation Labs can support you on major application redesigns
- ✓ Our approach is intended to work closely with your teams to help develop skills with a "Cloud (Native) Center of Excellence"

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