

# CASE STUDY

## SYSTEM U CUTS APPLICATION DEPLOYMENT COSTS BY 40% USING DROPS ON IBM i AND LINUX



### The Customer



**System U** is the fourth largest retail group in France employing 63,000 staff. It operates five supply centers and 1600 points of sale. In 2011, the U GIE-IRIS entity was formed to manage all aspects of IT for the System U group. U GIE-IRIS now consists of 400 IT staff across R&D, technical support and operations, managing 2 dedicated datacenters in western France. ♦



### IT Background

System U rely on several core IBM i applications written in-house in RPG, plus multiple Web and client/server applications written in Java on Linux and ORACLE. The IBM i applications are voluminous and constitute 65% of the deployment workload at the group. In all, System U manage over 600 distinct applications, performing around 20,000 deployments per year across 2,000 logical servers.

System U outsource their operations activity to a service company. The organization of Development and Operations departments is still fairly traditional, with formal hand-offs from Dev to Ops and quite distinct toolsets used by each. A move to a more collaborative "DevOps" organization is in the planning stages, to achieve a continuous and end-to-end delivery pipeline across each development platform.

Back in 2015, application deployment at System U was perceived as slow and high-risk. Most deployment processes were still manual, representing a significant cost for the group. Different tools and processes were used for IBM i, Web and client/server, creating a multitude of home-grown scripts that needed regular maintenance. Staff would work weekends, to perform deployments and check results manually.

In the same year, Vincent Le Guern, Software Architecture Manager at System U, launched a project to radically increase the level of automation in application deployment. "Our overriding requirement was to accelerate our deployments and reduce operational cost. We could only achieve this through automation. We also needed to simplify, and get round the issues we were facing due to all the separate tools we used to deploy to different platforms".

Le Guern's team selected DROPS from ARCAD Software after an extended Proof of Concept. Le Guern explained their reasons: "We preferred DROPS because it was clearly way ahead in terms of support for IBM i which is our core system. Also with DROPS we could standardize on one single tool for deploying all of our technologies, Java, ORACLE, DB2, and RPG. DROPS made deployment simple by masking all the complexity and technical detail, so that operators no longer needed to know which technology was behind".

Further, thanks to a tight collaboration with ARCAD R&D staff, the System U team were able to actively participate in the specification of certain DROPS features, which enhance the performance of the product in a multi-platform production environment. ♦



### How DROPS works now

DROPS is the principal deployment solution used for applications at System U. Around 200 applications are already configured within DROPS. On the Linux side, System U use GitHub and SVN for source code management, and Jenkins with Maven to orchestrate the build process and transfer binaries into an Artifactory release repository. Currently DROPS drives the scheduling of deployments, collecting deliverables directly from Artifactory and automatically transferring to any of 900 target servers.

On the IBM i side, 70 target IBM i partitions are defined. DROPS collects an ARCAD version directly and deploys application artifacts to a target partition. ARCAD is used both for version control and for automating the build process on IBM i. However DROPS can work with any tooling on IBM i, including Git and Jenkins.

Le Guern explains: "The power of DROPS is that it is now very easy to pilot and synchronize deliveries across both IBM i and Linux. We can define dependencies between deliveries very easily from the studio GUI. We now have a single interface to track and configure all our deployments, and rollback if necessary".

System U have 160 deployments permanently scheduled in DROPS. On average, they deploy one major release bimonthly, plus many minor releases during the week to keep pace with the business. ♦



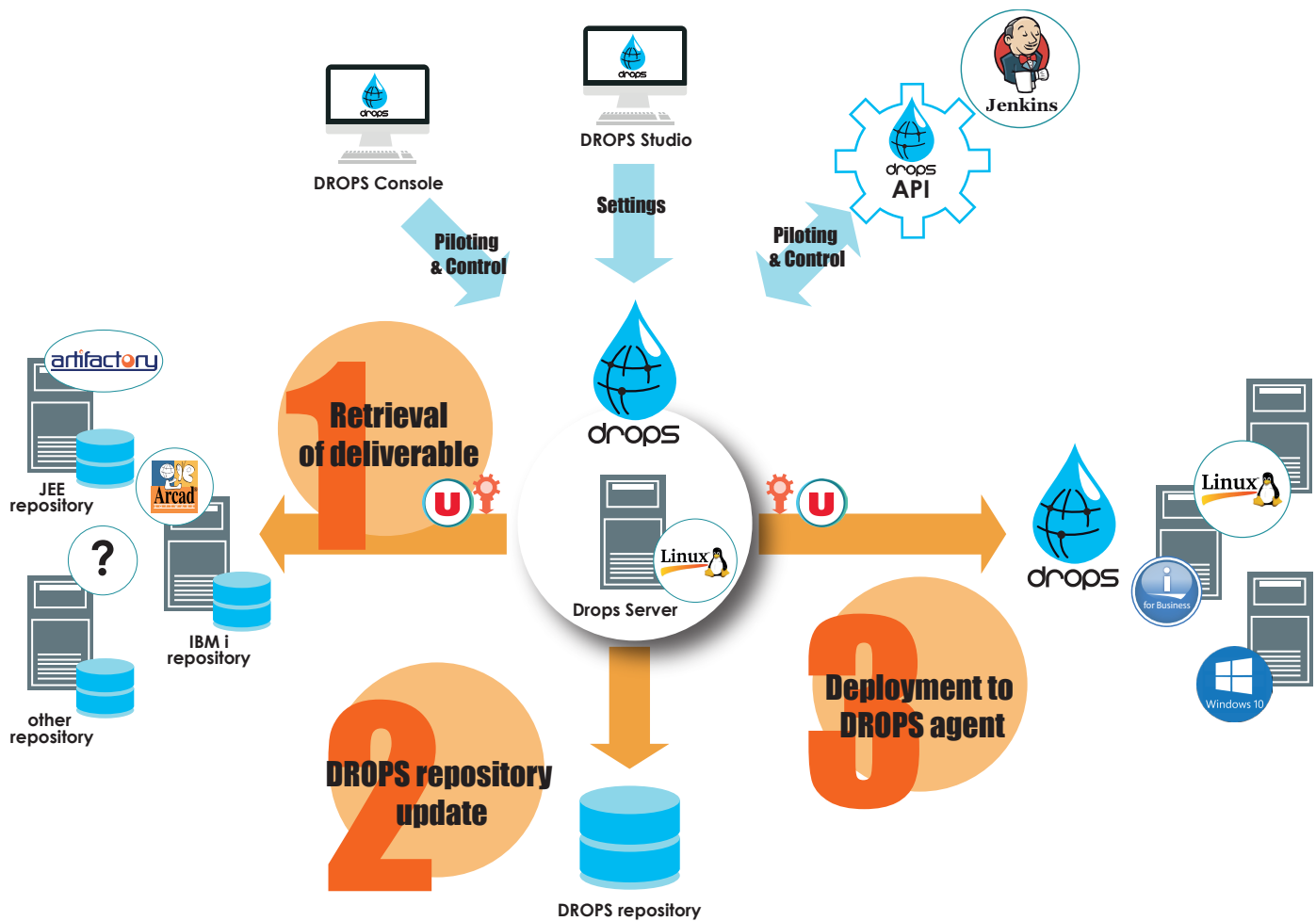


Fig 1. Current DROPS configuration at System U

## Gains from DROPS

Le Guern summarizes their achievements: *"We are well on track to achieve our original goal of a 40% saving in deployment workload, meaning a return on investment from DROPS in under 3 years. We have already reduced the time spent in deployment by a factor of 3"*.

System U end-users have rapidly adopted the new tooling. *"Feedback is very good, DROPS is easy to use and we have seen a fast learning curve with our staff"*. ♦

## Future plans for DROPS

System U intend to use DROPS in a more DevOps oriented manner in the near future, to build a continuous delivery pipeline right from the commit of a code change to its delivery to production. To achieve this, they will utilize Jenkins as overall orchestration tool, and Jenkins will be configured to call DROPS directly. This way DROPS deployments can be triggered as and when software changes are made available.

System U intend to configure DROPS to automatically stop and restart servers during deployment. Further, they will automate "smoke testing" of releases, to check that an application has started correctly and is online. For this they will use Selenium with DROPS.

They will add more deliverables, including database and SQL scripts for both DB2 and ORACLE. *"We already automate the vast majority of our deployments with DROPS and we are on target for reducing our deployment costs by 40%"*, concluded Le Guern. ♦

