



King Juan Carlos University

Updating IP addressing plan for a unified and automated architecture



King Juan Carlos University (URJC) is the youngest public university in the Community of Madrid. Founded in 1996, it has more than 45,000 students and is the second public university with the most enrollments in the region. Its academic offerings and its commitment to digitalization through the URJC Online platform make it a benchmark in face-to-face and distance education. It is also the university with the highest employability rate in the Community of Madrid.

Project Objectives

- Unify the control of IP addressing and DNS and DHCP services
- Incorporate advanced functionalities such as network integrations

Key Benefits

- Greater agility in resolving incidents and requests from students, teaching staff, and administration.
- IP configuration control from a single point, with automatic synchronization between IPAM, DNS, and DHCP.
- Ease of delegating different operations to the appropriate technicians with the strictly necessary permissions.
- Decentralization and optimization of workload.
- Greater ease of maintenance, updating, and evolution of the platform.
- Access to a complete and documented API for future integrations.
- Optimization of daily work and reduction of error margins.

“The EfficientIP team advised us at all times to configure the tool, adapting it to our needs, taking into account where we started from and the DHCP and DNS architecture we wanted to achieve”

Adrián Orellana, Head of Technological Infrastructure Section,
URJC Communications Group



The Project

With the aim of improving its services and adapting to the growing digitalization requirements in the classrooms, King Juan Carlos University identified the need for a centralized and scalable tool for managing all IP addressing that was also robust to guarantee IPAM, DNS, and DHCP services.

Until that moment, the URJC had three separate solutions installed on virtualization: basic proprietary IPAM, DHCP on Windows, and DNS Bind on Linux.

This situation led to the need to support and maintain three separate solutions, in addition to the workload involved in replicating different changes in addressing/DNS/DHCP. Another factor to improve was avoiding the limitations in the management and configuration of the Microsoft DHCP solution. Finally, they faced inflexible and unintuitive DNS configuration through configuration files.

The EfficientIP Solution Selected

With their clear objectives on paper, the IT department of King Juan Carlos University analyzed different alternatives. They finally opted for the solution installed in their virtual infrastructure, with high-availability management nodes and EfficientIP's own DNS and DHCP services.

“For the configuration of these services, we opted for the intelligent architectures offered by the solution due to their greater compatibility with all the functionality. They greatly facilitate management and configuration”

Adrián Orellana, Head of Technological Infrastructure Section, URJC Communications Group

Implementing a mix of 2270, 1170, 570, and 260 SOLIDserver™ appliances from EfficientIP was the chosen solution as they offer a much more open management of all IP addressing than other market options and have a totally friendly management console.

The deployment and administration of this architecture is completely automated and is carried out in an integral process through SmartArchitecture™. This innovation provides a set of DNS/DHCP architecture templates that can be applied to a range of servers. Once the model is chosen (for example, one-to-one or one-to-many DHCP failover), SmartArchitecture™ automatically configures all servers according to their role in the architecture.

Project Phases

Phase 0: Planning and Migration

A detailed plan was defined with milestones and responsible parties, which allowed for a fluid migration from the previous tools. The university team received complete training from the EfficientIP support team, which facilitated their adaptation to the new platform.

«The training we received in this first phase was very complete and polished, allowing us to adapt to its use due to its great versatility, despite the complexity»

Phase 1 – Implementation and Go-Live:

During this stage, the IPAM architecture was adapted to the URJC environment. The integration of DNS and DHCP was carried out based on the specific needs of the university. A deployment plan proposed by EfficientIP was applied, which allowed service continuity to be maintained without impact on users.



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Day 2 – Operation and Maintenance

The solution provides a fast, stable, and flexible interface that allows granular assignment of roles and permissions. Furthermore, the ease of the update process and continuous improvement thanks to new versions have been highlighted.

Finally, but almost most importantly, the IPAM-DHCP-DNS integration, which is transparent once configured, greatly accelerates day-to-day work and reduces the possibility of errors.

Key Benefits

According to URJC, the interface of EfficientIP's IPAM solutions provides great visibility of their resources, fully covering their demands. Users, students, professors, and administrative staff have their incidents and requests resolved faster.

“Effective and easy management of our daily operations on DNS and the use of our IP addresses was achieved, being able to delegate tasks to less specialized people, which was previously impossible”

Adrián Orellana, Head of Technological Infrastructure Section,
URJC Communications Group

Next Steps

The URJC plans to continue its digital transformation by developing new capabilities on the current solution:

1. Advance in automation and integration with other tools using the API and customization capabilities offered by EfficientIP
2. Implement user identification monitoring systems from EfficientIP for a global view of the network from a single point.



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As one of the world's fastest growing DDI vendors, EfficientIP helps organizations drive business efficiency through agile, secure and reliable network infrastructures. Our unified management framework for DNS-DHCP-IPAM (DDI) and network configurations ensures end-to-end visibility, consistency control and advanced automation. Additionally, our unique 360° DNS security solution protects data confidentiality and application access from anywhere at any time. Companies rely on us to help control the risks and reduce the complexity of challenges they face with modern key IT initiatives such as cloud applications, virtualization, and mobility. Institutions across a variety of industries and government sectors worldwide rely on our offerings to assure business continuity, reduce operating costs and increase the management efficiency of their network and security teams.

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