

# DHCP Server

Carrier-grade IPv4 & IPv6  
with IPAM features you really need



## Introduction

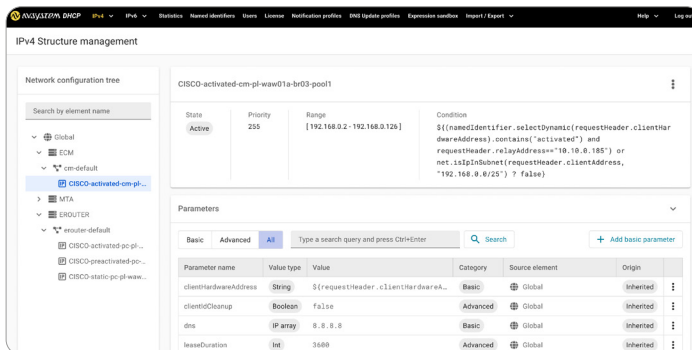
Contemporary networks – regardless of their purpose – only keep gaining in complexity. And while IP address assignment is at the core of all network operations, many still rely on inefficient

solutions that don't scale. This leads to a waste of time and resources, but more importantly, it results in errors and downtimes that affect not just the users but the network itself.

## DHCP Server

AVSystem's DHCP server is a solution for automated management of both IPv4 and IPv6 addresses. It includes an IP Address Management (IPAM) unit that matches complex assignment policies and business needs, resulting in efficient utilization of IP resources. This platform is highly reliable, offering active-active scalability and High Availability. In the event of any network issues, it comes equipped with mechanisms to restore your network operations quickly and effectively. Dedicated tools ensure rapid

troubleshooting and foolproof root-cause analysis. AVSystem's DHCP Server is designed with an intuitive graphical user interface (GUI) and simple, inheritable configuration, making it easy to use, regardless of network complexity. It also offers full flexibility, including runtime-defined contextual rules governing the IP assignment process. Last but not least, it is perfectly integrable with third-party systems. The outcome? A DHCP Server that meets your needs, saves resources and efficiently manages your entire network.



## Differentiators



Centralized management of multiple IPv4 and IPv6 networks in a single GUI.



Built-in IPAM module providing essential features even for complex assignment policies.



Toolbox for effective DHCP communication troubleshooting and network issues prediction.



High Availability as an inherent part of the design to ensure true carrier-grade capabilities.

## Features

- ✔ **Rule-based, dynamically defined IP assignment policies** for seamless management of heterogeneous network segments.
- ✔ **Intuitive web-based GUI** for easy configuration and maintenance that reduces workload and the number of human errors.
- ✔ **Built-in IPAM module for IP selection and static address reservation**, as well as monitoring and alerting of network segment utilization.
- ✔ **Multi-node architecture**, geo-redundant deployment capability, active-active scalability, and High Availability, which secure network stability and maintainability.
- ✔ **Correlation of DHCP requests and responses** enriched with detailed packet processing logs and error cause inference, which facilitates troubleshooting and root cause analysis.
- ✔ **Detailed history of IP address assignment** enabling generation of reports for regulatory and billing purposes.
- ✔ **Peak load handling** that prevents the “snowball effect” after outages and ensures efficient restoration of services.
- ✔ **Two-way integration with external systems** via REST API, and dynamic DNS updates for smooth, end-to-end data flow within the network.
- ✔ **Server performance and IP resources utilization** monitoring metrics exposed for third-party tools (e.g. Zabbix, Grafana).restoration of services.

## Benefits



### Network stability guaranteed

Regardless of how extensive and complex your network is, you can be sure AVSystem's DHCP server can handle it. High Availability and scalability are integral to its design. So are resilience mechanisms, thanks to which it can manage peak load effectively and quickly restore services after outages.



### Everything you need in one place

IP address management is just as important to network operations as address assignment. But you don't need a separate tool for that. AVSystem's DHCP server comes with a built-in IP address management module so that you can have everything you need in a single place.



### Faster and easier navigation

Thanks to the simple graphical user interface provided by AVSystem's DHCP server, network administrators can conveniently view and easily change all settings and parameters for both IPv4 and IPv6 networks in a single web-based interface. This makes their work faster and easier, all the while leading to a reduced number of configuration errors.



### Centralized management of heterogeneous network

No matter of access technologies, network architectures, and device vendors, AVSystem's DHCP server enables seamless management of IPv4 and IPv6 addresses and facilitates implementation of even complex business processes. Offering out-of-the-box support for NATed environments and IP overlapping networks, it perfectly fits the needs of telco companies of any size, including merged operators.

## Complementary solutions

### Available partner tracks:

#### ✔ Unified Management Platform

Transform your operations with TR-069 ACS & TR-369 controller in one

#### ✔ Cloud ACS

Embrace TR-069 and TR-369 with cloud-based ACS

#### ✔ Customer Experience Management Platform

Excel your customers' Wi-Fi experience and ensure access layer performance

#### ✔ Broadband Service Assurance Platform

AI-powered proactive maintenance and access network devices monitoring



## AVSystem

**Broadband services management and assurance on truly open standards.**

AVSystem was founded in 2006 with a focus on providing automation solutions for connected device ecosystems. Although the company started by serving the telecommunications industry, it has since expanded its services to various sectors in over 60 countries. Catering local internet service providers as well as multinational telco operators and enterprises, we develop top-notch solutions dedicated to telecommunications, WiFi VAS, and the rapidly growing Internet of Things. Our goal is to create flexible and dynamic technology based on open standards accessible to everyone. We not only follow the newest trends but also co-create them with other IT industry pioneers by actively participating in organizations such as the Broadband Forum.

**Get in touch!**

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