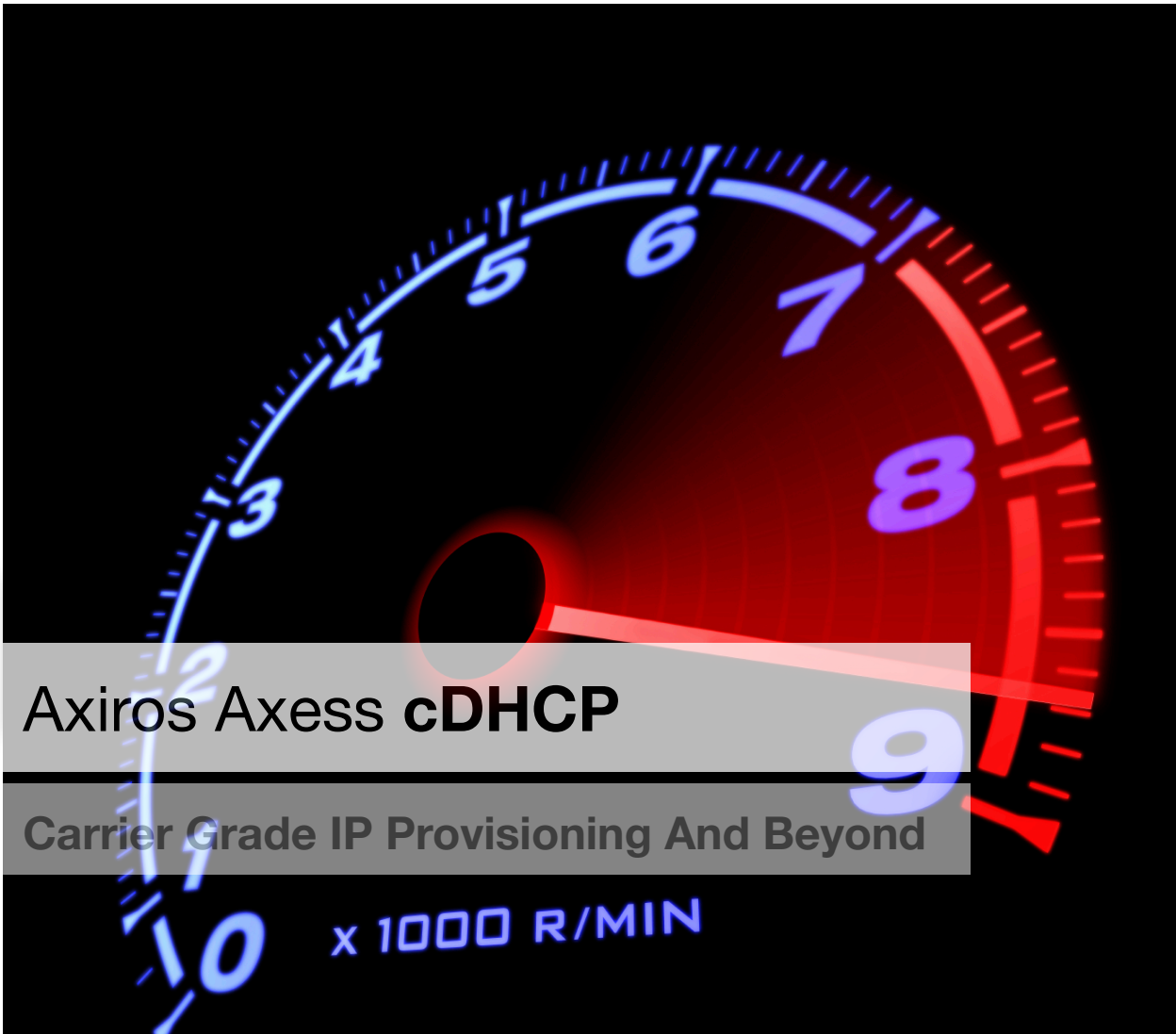


**axess**  
Device Management

**axiros**  
Lasting Advantage



## Axiros Axess **cDHCP**

Carrier Grade IP Provisioning And Beyond

x 1000 R/MIN

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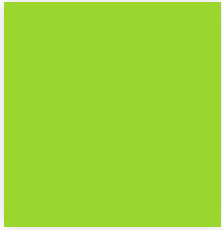
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# Axiros Axess **Product Sheet**

Bringing High End Device Management Into Your Network

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# Axess cDHCP Server

Bringing High End Device Management Into Your Network

executive summary

## The Reason Why

Automated provisioning and remote management of CPEs are vital service delivery activities of CSPs - helping to reduce costs, lead times and complexity as well as to efficiently roll out new customer services.

The Axiros Axess solution platform is the leading subscriber device management system - deployed and productive at more than 35% of Europe's TOP 50 operators and carriers.

The Axiros Axess cDHCP (clusterable DHCP) server is a carrier grade IP provisioning solution for CSPs - giving them the full competitive edge and service profitability right away from start.

## About the Product

A clusterable Carrier grade DHCP / IPAM (IP Address Management) solution that is seamless integrated within given provisioning platforms.

Axiros Axess cDHCP copes with FttH, ONT provisioning, VOIP and IPTV services.

## Essential Features

- High throughput at carrier grade level
- Flexibility to transcend all kind of business logic
- High-availability configurations that meet IETF failover standard
- Open architecture with seamless integration points

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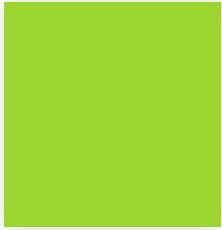
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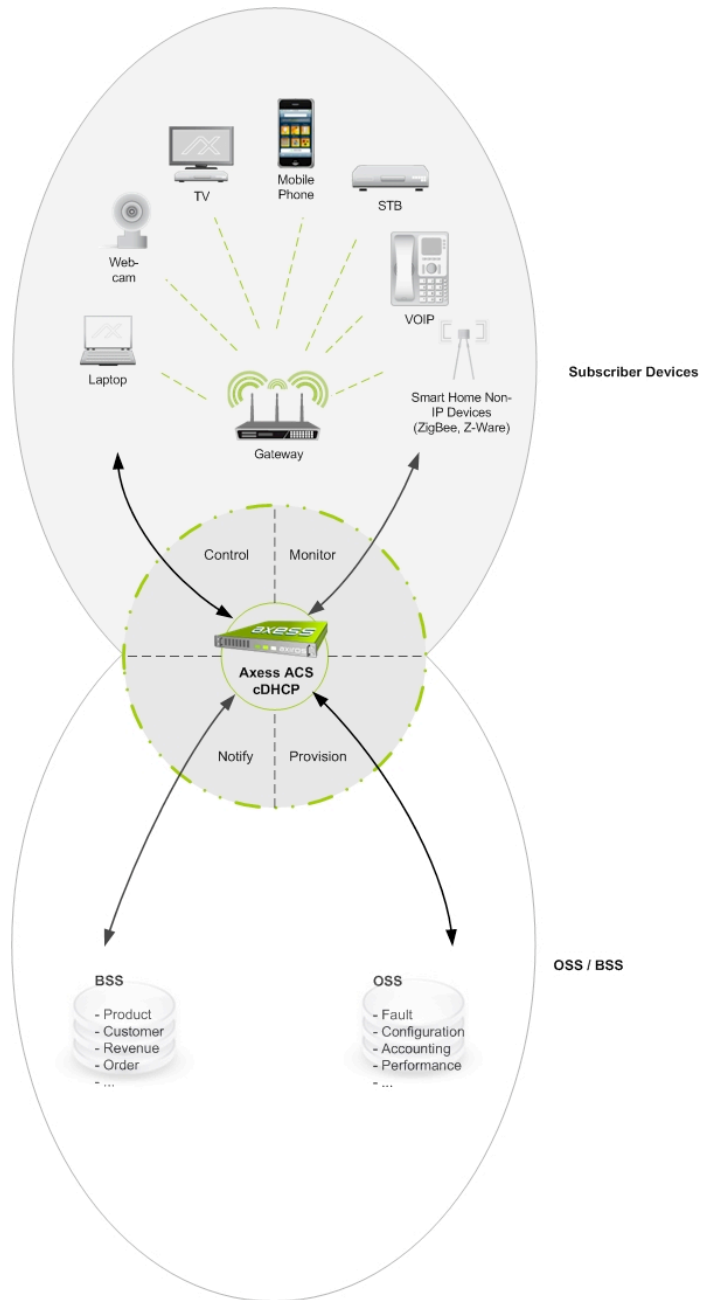


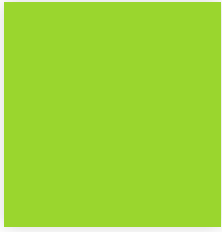
# Scope of **Axess cDHCP**

Enabler for Service Aware Device Provisioning

introduction

Axiros Axess cDHCP - a clusterable 3rd Generation IPAM (IP Adress Management) suite - enables CSPs to perform all relevant IP management tasks and is the basis for future service aware device management.





# Key Features

features

## Flexibility - Think About DHCP Monitoring and Service Aware Notifications

- DHCP request handling can be customized regarding parsing and synthesis of static and dynamic information
- Exchange arbitrary and vendor specific options via DHCP
- Parse the complete DHCP information stream and have access to the complete information set within the DHCP stream
- Data gathering and aggregation from and to Axiros Axess or 3rd party ACS platform
- No parameterization through static configuration files
- Freely programmable IP provisioning logic - no limitations through hard coded functionality
- IP pools can be addressed through Python scripts - with the whole flexibility of an object oriented scripting language
- Command line dhcpclient to simulate various device options

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## End-to-End Device Provisioning Starts With IP

- Configurable caching of responses
- Integrated within Axiom ACS provisioning flows
- IP calculation from Option 82 information
- ACS URL by DSLAM port
- TR-069 inform generation directly from DHCP process
- Dynamic TFTP or HTTP server forwarding to CPE

## Seamless North- , South- And Westbound Integration - Transcend Business Logic Between Your OSS / BSS, Databases And Your Subscriber Devices

- External interfaces adaptable at deployment time to fit operators' needs
- Information PUSH / PULL from and to northbound backend systems via SOAP, SQL, XML RPC, ...
- Databases supported: Oracle, MySQL, SQLite, PostgreSQL

## Performance - Dynamic IP

*DHCPDISCOVER*: 1.497 Five-way handshakes per second

*DHCPRENEW*: 4.171 *DHCPRENEW* transactions per second

## Performance - Static IP

*DHCPDISCOVER*: 4.171 Five-way handshakes per second

*DHCPRENEW*: 10.666 *DHCPRENEW* transactions per second

## Scalability

*RENEW* performance scales linear with amount of processor

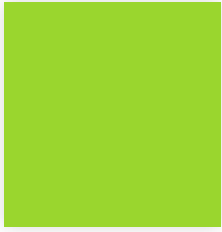
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### Test Setup

Tested with DHCPPerf version 1.0.1.0 on standard COTS (commercial off-the-shelf) HW, HP ProLiant DL380 G5 Intel(R) Xeon(R) CPU 5160 @3.00GHz, 2 processor

## Redundancy And Availability

- Redundancy models (e.g. failover, standby) adoptable to operator needs
- Cluster setup with load balancing
- Clusterable node synchronization via Axiom CM (Cluster Manager)
- Meets the IETF failover standard



# Technical **Specification**

specification

Axiros Axess cDHCP Server support all of the widely implement DHCP RfCs.

## **DHCP Protocol And Standards**

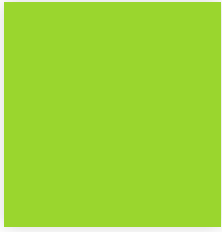
- DHCP implementation according to RFC 2131
- Send and receive all options specified in RFC 2132
- Send and receive arbitrary vendor specific options, as specified by the vendor
- ACS auto-discovery as specified in TR-069 Amendment 2
- Information about DHCP leases can be loaded and/or stored via SQL, XML RPC, SOAP or other protocols to/from arbitrary systems

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# Hard- & Software Specification

specification

## Recommended Hardware:

- AMD / Intel x86 Dual Core CPU
- RAM: 4GB
- HDD: 160GB S-ATA, RAID 1
- 2 x Gb Ethernet

## Software:

- Debian Linux Stable Operating System
- MySQL 5 or Oracle 10g

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