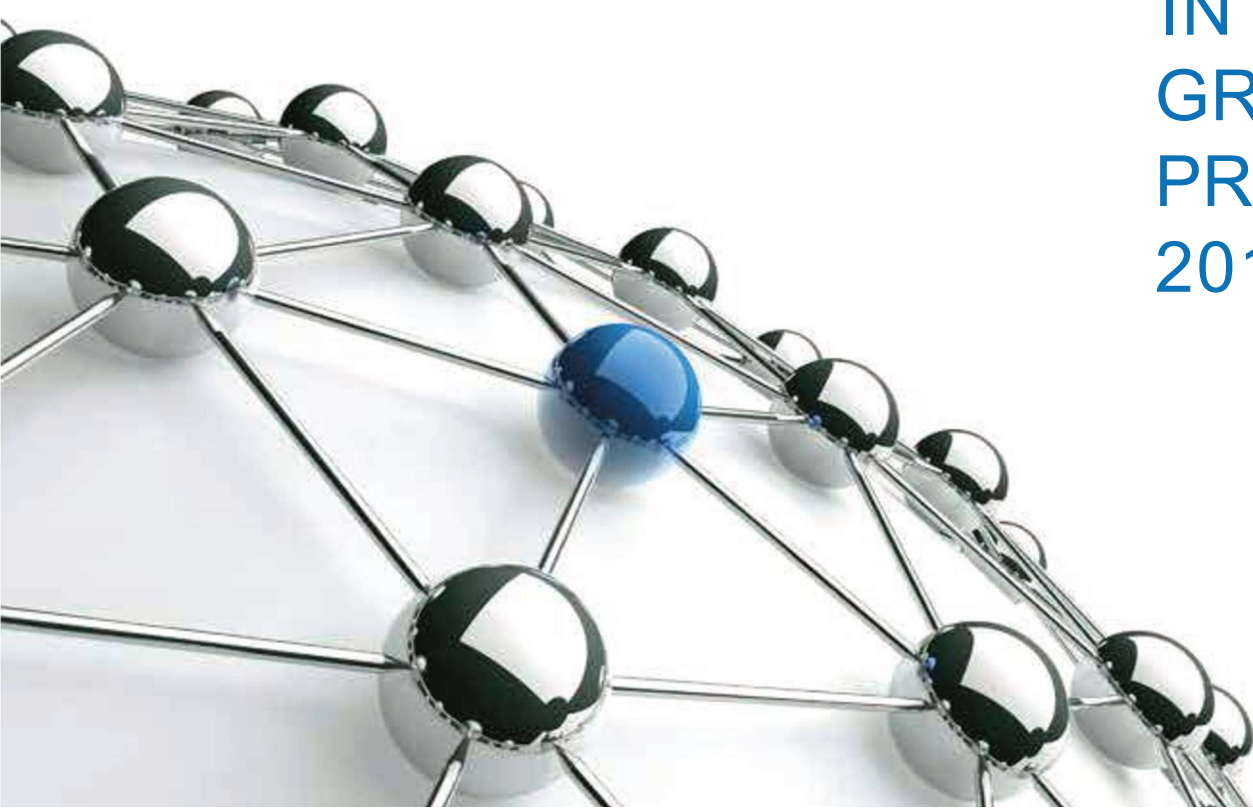




INTERNSHIP AND  
GRADUATION  
PROJECTS CATALOG  
2019-2020

[www.pivasoftware.com](http://www.pivasoftware.com)



# PIVA Software, An innovative company

PIVA Software is a software service & solution company that devotes its technical expertise and efficiency to design, develop and deploy software-based solutions in the Broadband industry.



**+13** years in  
the software  
development

have a solid team of skilled embedded software engineers with 10 years of experience in software development services



**+40** customers  
around  
the world

PIVA Software has customers and partners in three continent Europe, United States and Asia



**+350** successfully  
accomplished  
projects

PIVA Software delivered ample amount of projects mainly in Embedded Software development, IoT and Quality Assurance in the Broadband industry.

# Services

## Embedded Software Development

Linux, VxWorks, UC Linux, Android  
IP stack, BSP, Drivers, GUI, User space applications, Kernel space modules



## Mobile & Internet of Things

IOS, Android, Windows Apps  
Peer-to-peer / client-server networks application, Embedded system developing for smart devices, Native mobile Apps



## Quality Assurance

Linux, Windows, Test specification, Test automation, Test bed implementation, Crash analysis, Bug fixing, Support and Followup



# EasyCwmp

TR-069 Open Source Stack  
[www.easycwmp.org](http://www.easycwmp.org)



## EasyCwmp Premium Solution

- ▶ Data Model in C
- ▶ XMPP
- ▶ STUN
- ▶ UPNP
- ▶ Data Model Generator
- ▶ Support all data models
- ▶ TR-157 Bulk Data
- ▶ TR-143 Diagnostics
- ▶ Automatic Test Tool



**+15 000**

Downloads each year



**+150** Countries

With deployed installations



**+10** Millions

New devices each year

# EasyCwmp Professional Services

- Integration & porting
- Customization
- Support & Maintenance contract
- Training

Deployed by



## REF 01

### Contribution to the development of the standard TR-369 USP - Client side

- Description

The TR-369 USP standard is a management protocol published in 2018 by Broadband Forum to manage connected objects and gateways through a management server or from mobile applications. The project consists of developing the client part of the protocol that will run on the gateways.

- Required Profile

Engineer training with required knowledge in Network,  
Linux, *CI C++*, Cross compilation

## REF 02

### Facial-recognition based application for employee's attendance management

- Description

This work consists in:

- Developing a module to integrate face detection authentication in the process of attendance management (ODOO).
- Adding Real-time notification & check in/out control.
- Using pre/post processing technics for re-identification purpose to improve results of the deep learning methods and reduce running-time needed.

- Required Profile

Engineer training with required knowledge Deep Learning , Linux, C/C++, Python , AI.

## REF 03

### Contribution to the development of an ACS TR-069 Server

- Description

Contribution to the development of an ACS TR-069 Server

Description: The standard TR-069 is a management protocol published by Broadband Forum to manage CPEs from WAN. The project consists of starting from a highly recognized ACS open source and making the necessary changes to align with the operators' needs.

- Required Profile

Engineer Student with required knowledge in Network, Linux, J2EE



## REF 04

### Contribution to the development of the standard TR-369 USP - Server Side

- Description

The standard TR-369 USP is a management protocol published in 2018 by Broadband Forum to manage connected objects and gateways through a management server or from mobile applications. The project consists of developing the server part of the protocol that manages gateways and connected objects.

- Required Profile

Engineer Student with required knowledge in Network,  
Linux, J2EE

## REF 05

### Contribution to the development of a proxy TR-069 cwnp

- Description

The standard TR-069 is a protocol published by broadband forum to manage CPEs from wan. The project consists in developing a TR-069 proxy which allows to intervene between the client and the server in order to intercept certain TR-069 sessions in order to collect data periodically via TR-069.

- Required Profile

Engineer Student with required knowledge in Network, Linux, C/C++

## REF 06

### Contribution to the development of TR-064 standard - client part

- Description

The standard TR-064 is a protocol published by broadband forum to manage the CPEs / modems lan side. The purpose of the protocol is to standardize the manner of configuring and managing routers and residential modems by users. The project consists of developing the client part on android smartphones.

- Required Profile

Engineer Student with required knowledge in Network and Java  
Android

## REF 07

### Contribution to the development of the TR-064 server part standard

- Description

The standard TR-064 is a protocol published by Broadband Forum to manage the CPEs / modems LAN side. The purpose of the protocol is to standardize the configuration and management of routers and residential modems by ISP clients (users). The project consists in developing the server part of protocol TR-064 on modems.

- Required Profile

Engineer Student with required knowledge in Network,  
Linux, *CI C++*

GOOD

LUC K



## Contact

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