

# IPAM Introduction

Open source IP Address Management Software Review

Shiraz University

# What is IPAM?

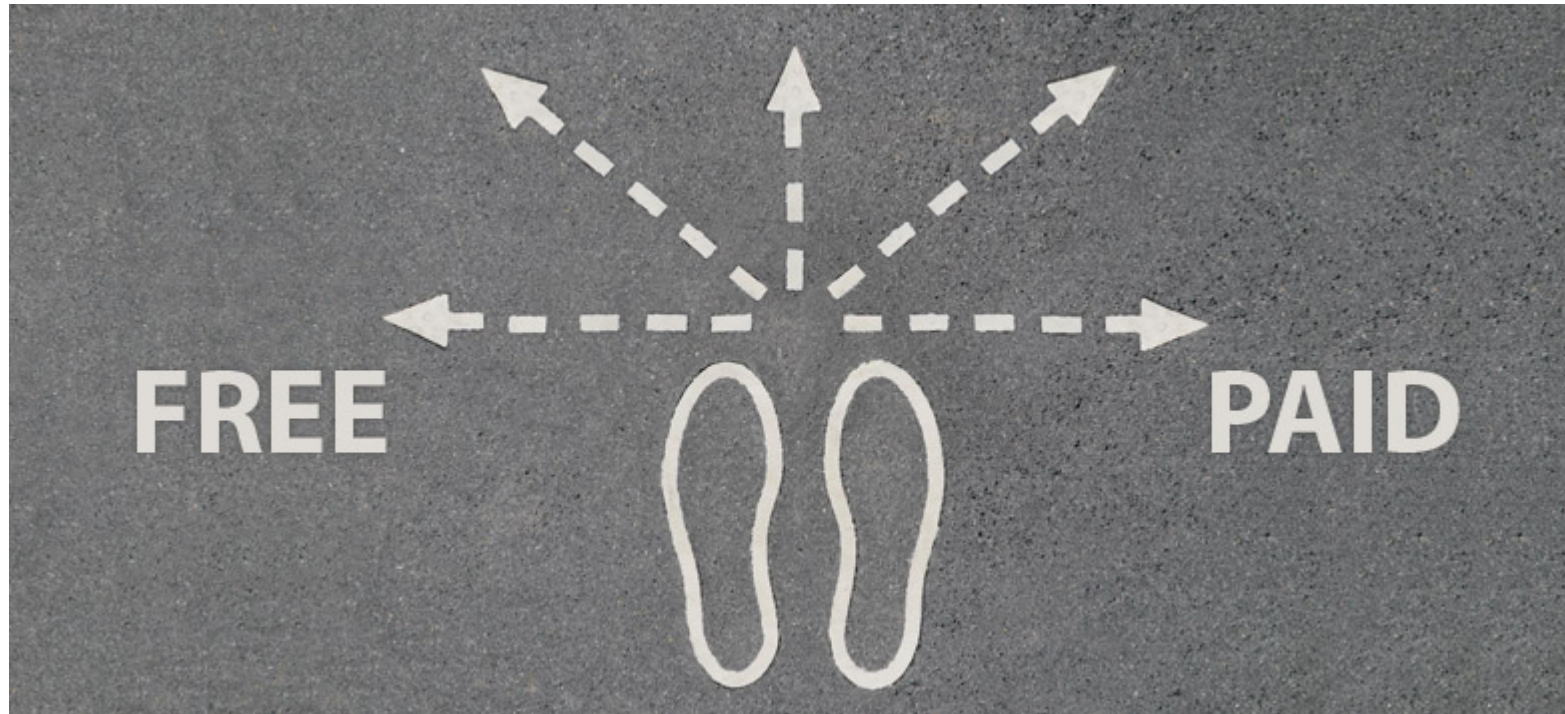
- ▶ Software for registering, tracking and managing IP's with database
- ▶ Integrates DNS and DHCP so that each one is aware of changes in the other one
- ▶ Helps your growth strategy
- ▶ Helps the Transition from IPv4 to IPv6
- ▶ Centralizes information

# Why should we use IPAM

As more devices and people connect to the internet, service providers face an increasing number of IPAM challenges, including:

- ▶ IPv4 exhaustion
- ▶ Conflicting IP's
- ▶ Subnet allocations
- ▶ IP address request fulfillment
- ▶ RIR reporting
- ▶ Deployment tracking

## Two types of IPAM software



# Open Source Applications

## Advantages

- ▶ Free to use, distribute, and modify
- ▶ More secure as the code is accessible
- ▶ Is not dependent on a specific company or author for development
- ▶ Do not have to think about complex licensing models

## Disadvantages

- ▶ Usually it doesn't have any support
- ▶ Many of the latest hardware are incompatible to the open-source platform

**MANDATORY**

# How to Choose an IPAM

Mandatory Features

# Support IPv6



Considering the IPv4 exhaustion and complexity of IPv6, an IPAM has to support IPv6 completely

# Simple to use

- Can be used by non professional users
- Can be used in some critical situation



# Secure and Reliable



- It contains very important information of a network
- It should respond every time

# Type of Database

choose the software compatible with your facilities (Database, Web Server and etc.)

# Support VRF

- Ability to add duplicate addresses for multiple locations of network
- Support private IP Addresses

# Control User's Rules

- Control the permissions
- Keep the events logs

# Advanced Search

- Search by every field
- Suggest free IP
- Export (CSV, PDF, XML, ...)

# Prevent Duplicate

Administrators should be aware of duplicates



# How to Choose an IPAM

Secondary Features

# Connectivity to RIR's

- Import information from RIR database
- Register, update and delete objects in RIR database



# Web service

- Allow other software to access data via API
- Use standard API's

# Backup and Restore



Export and import database and configurations

# Extra Reports

Visualize and extra reports



# Dynamic DNS and DHCP

- Register reverse DNS automatically
- Register DHCP Assigned IP's
- Add DNS record for DHCP assigned IP's

# Support Hardware

Register network hardware information into IPAM database (Routers, Switches, Servers, ...)

# IP Analyzer

The screenshot displays the LIR Portal IP Analyzer interface. The main content area is titled "IPv4 PA Allocations" and features a search bar for "Allocations (42)". A list of IP ranges is shown with their respective allocation percentages. A modal window titled "Overview of 80.81.160.0 - 80.81.191.255 (80.81.160.0/19)" is open, showing a progress bar for "Assigned" (50.1%), "INFRA-AW" (83.2%), and "Free" resources. Below this, a table lists 71 assignments with columns for Range, Registration date, Netname, and Status. A "Feedback" button is visible on the right side of the modal. The footer contains copyright information for RIPE NCC.

My LIR  
LIR Contacts  
Communication Preferences

My Resources  
IP Analyser  
IPv4  
IPv6  
ASN  
Resource Certification (RPKI)  
Request Forms  
Object Editors

Listing Service  
Browse Resources  
List Resources

Tools  
LIR Locator  
Training  
API Access Keys  
Glossary  
Events  
Other Tools

## IPv4 PA Allocations

Allocations (42)

62.142.0.0 - 62.142.255.255	85.6%
62.248.128.0 - 62.248.255.255	50.1%
<b>80.81.160.0 - 80.81.191.255</b>	<b>83.2%</b>
80.186.0.0 - 80.186.255.255	100%
81.197.0.0 - 81.197.255.255	90.6%
82.103.192.0 - 82.103.255.255	100%
82.118.192.0 - 82.118.223.255	93.4%
83.245.128.0 - 83.245.255.255	86.8%
84.230.0.0 - 84.231.255.255	50%
85.76.0.0 - 85.79.255.255	75%
85.156.0.0 - 85.156.255.255	100%
88.112.0.0 - 88.115.255.255	97.6%
91.152.0.0 - 91.159.255.255	62.5%
193.64.0.0 - 193.66.255.255	36.4%
193.94.0.0 - 193.94.255.255	19.7%
193.184.0.0 - 193.185.255.255	94.8%
193.199.0.0 - 193.199.255.255	94.8%
193.229.0.0 - 193.229.255.255	42.1%
194.86.0.0 - 194.86.255.255	72%
194.136.0.0 - 194.136.255.255	40.6%
194.157.0.0 - 194.157.255.255	61.5%
194.188.0.0 - 194.188.255.255	58.4%
194.211.0.0 - 194.211.255.255	75.1%
194.240.0.0 - 194.241.255.255	66.7%
195.14.192.0 - 195.14.223.255	60.2%

### Overview of 80.81.160.0 - 80.81.191.255 (80.81.160.0/19)

Assigned: 50.1%  
INFRA-AW: 83.2%  
Free: [Progress bar]

Assignments (71)

Range	Registration date	Netname	Status
80.81.190.0/23	04/02/2004	TIKKA3-FI-NET	ASSIGNED_PA
80.81.189.224/27	21/12/2004	FI-DYNAMOID-OY-NET	ASSIGNED_PA
80.81.189.192/27	08/12/2004	FI-NORDIC1-OY-NET	ASSIGNED_PA
80.81.189.128/26	16/08/2007	FI-SAKO-OY-NET	ASSIGNED_PA
80.81.189.0/26	12/09/2008	FI-MLOON-OY-LTD-NET	ASSIGNED_PA
80.81.188.0/24	16/01/2004	ENERMET-FI-NET	ASSIGNED_PA
80.81.184.0/22	12/05/2003	TIKKA2-FI-NET	ASSIGNED_PA
80.81.183.0/24	27/01/2003	MPOLI-FI-NET	ASSIGNED_PA
80.81.182.0/24	14/03/2008	FI-AMBIENTIA-OY-NET	ASSIGNED_PA

Showing 1-10 of 71

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# Compare Open Source IPAM's

Solution	License	Current release	Latest Release	IPv6	VRF	Database support
Collins	Apache	1.3.0	9/10/2014	Yes	No	MySQL
GestióIP	GPLv3	3.2	1/15/2015	Yes	Yes	MySQL
GLPI-IPAM	GPLv2	0.84	4/8/2013	Yes	No	MySQL
HaCi	GPLv2	0.98c	3/4/2015	Yes	No	MySQL, PostgreSQL
IPplan	GPLv3	6.00Beta	4/29/2010	Yes	No	PostgreSQL, MySQL, Oracle
MyIP	GPLv3	1	5/18/2011	Yes	Yes	MySQL
NetDB	GPLv2	4.6.2R1	8/25/2011	Yes	No	Oracle
NETDOT	GPL	1.0.7	1/8/2015	Yes	No	MySQL, PostgreSQL
Netmagis	CeCILL-B	2.3.1	8/29/2015	Yes	Yes	PostgreSQL
NIPAP	BSD	0.28.0	7/28/2015	Yes	Yes	PostgreSQL
NOC	BSD	15.05.1	5/20/2015	Yes	Yes	PostgreSQL
OpenIPAM	GPL	v0.1-alpha	3/10/2012	No	No	PostgreSQL
OpenNetAdmin	GPLv2	v13.03.01	3/1/2013	Yes	No	MySQL (via adodb)
phpIP	GPL	4.3.2	11/6/2006	No	No	MySQL
phpIPAM	GPLv3	1.1.0.10	12/11/2014	Yes	Yes	MySQL
RackTables	GPL	0.20.10	1/26/2015	Yes	No	MySQL
Sauron	GPL	0.7.3	2/19/2010	No	No	PostgreSQL
subnetsmgr	GPLv2	2	11/23/2011	Yes	No	PostgreSQL
Teemip	AGPLv3	2.0.1	5/26/2014	Yes	Yes	MySQL

### فرمانهای قابل اجرا

حذف مشترک ( راصد ) ✓

افزودن و حذف IP ✓

سخت افزارها ✓

گزارش های دسترسی مشترک ✓

ساخت Person Object ✓

### افزونه ها

تعداد IP های اختصاص یافته ۱۳۱۴

تعداد سخت افزارهای اختصاص یافته ۱۷۸

### مشخصات مشترک

شناسه مشترک: ۵۶

نام مشترک: راصد

نام لاتین: rased

شماره قرارداد: 1

تلفن: 6113918080

موبایل: 9351448515 ✓

فرد پاسخگو: امین کریمی

پاسخگو به لاتین: Amin Karimi

پست الکترونیک: Karimi@rased.ir

شناسه در RIPE: RMAJ10-RIPE

پهنای باند: 200 مگا بیت

وضعیت: فعال ✓

آدرس: کیانپارس - بین 8 و 9 غربی - ساختمان سپهر

آدرس لاتین: Sepehr Bld - Kiannars - Ahvaz

توضیحات: کاربر مربوط به ساختار اصلی شبکه

از نو

ذخیره

LDM

Lime Document Management



# Conclusion

- ▶ Recommended software:
  - ▶ LDM
  - ▶ phpIPAM
  - ▶ GestióIP
  - ▶ NETDOT

Questions?