OSSIR

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making networks manageable

10 April 2012

Agenda

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- Mancala Networks
- The challenge
- The solution: Network Controller
- Architecture
- Demonstration

Mancala Networks background

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- Privately owned French SAS
- Headquarters: Grenoble, France
- Mission: Develop innovative network monitoring & control solutions for Enterprises & Managed Security Service Providers (MSSPs)
- Seasoned Executive & Technical team
- Experience developing mission critical systems: SITA, Thales, BT roaming platform (CSL), …

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The modern enterprise network

is a **complex**

jungle

Mancala Networks

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Mancala Networks develops software solutions that boost the security of enterprise networks

The **Mancala Network Controller** provides continuous network monitoring and control to protect the enterprise against unseen threats

Real-time visibility and control delivers:

- A more robust, more secure corporate network
- Continuous compliance with security policies aligned with your business objectives

Current solutions are insufficient

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80% of attacks with financial impact come from the internal network

Computer Security Institute, 2011

Tens of millions of HP LaserJet printers vulnerable to remote hacking

By Sebastian Anthony on November 29, 2011 at 9:15 am | 16 Comments

Playing catch-up to the BYOD security threats

MicroScope contributor

November 17, 2011 12:00 PM

ARTICLE

Rogue devices behind majority of attacks, study shows

Bill Brenner, Senior News Writer
Published: 5 Sep 2006

Security trust model evolution

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Focus has been on protecting the network from the outside

Leaving the inside either locked or poorly controlled

15% to 25% of devices are not managed

Sophos, IDC, 2011

Today's ongoing revolutions exacerbate the problem

By 2015, the number of connected devices will be 15 billion

Cisco VNI Forecast 2011

Sensors

B.Y.O.D.

95% of information workers use at least one self-purshased device at work

IDC, 2011

Enterprises must take back control over their networks!

Network security reality

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A large gap exists between the perceived and actual security state of the network

Threats are obscured by a rapidly changing, complex environment.

- 15 - 25% of devices on an enterprise network operate without an organization's knowledge, unknown to network and security managers.
- Management and security measures are applied irregularly

You can't secure what you can't see!

Contextual network visibility is key

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Error	detect_duplicate_ip	00:24:81:00:00...	10.10.0.32
Warning	detect_unauthorized_access_point_by_mac	00:0d:28:00:00...	
Critical	detect_unauthorized_dhcp_server_by_service	00:30:9d:00:00...	10.10.0.104
Error	request_dot1x_auth_before_dhcp	00:24:81:00:00...	
Warning	request_mac_auth_before_dhcp	00:24:81:00:00...	
Warning	detect_unauthorized_router_by_mac	00:30:9d:00:00...	

Undesirable behavior

Status: Active (online)
Hostname: desk-7
Operating System: Windows XP
Type: PC

Rogue
network equipment

Unauthorized
endpoints

Status: Active (online)
Hostname: Cisco_AIR-1120B
Operating System: ios 12.3(8)JEA
Type: WAP

Misconfigured
network equipment

Malfunctioning
endpoint agents

UBER APT - Can you detect it?

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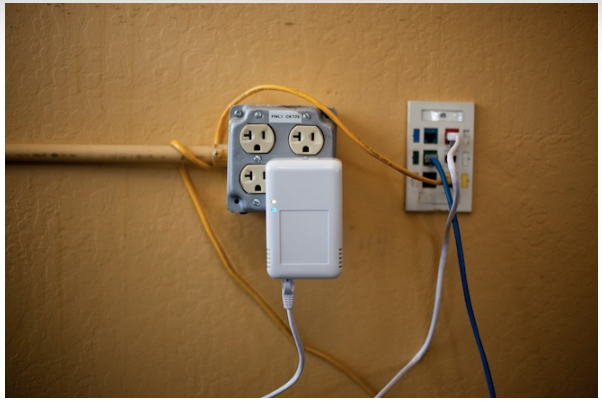

> **PwnPlug** **(http://www.pwnieexpress.com)**

- Wireless, wired, 3G interfaces
- Automatic 802.1X and NAC bypass functionality
- Out of band SSH access over 3G/GSM
- 16 GB storage
- Tunnels through application aware firewalls & IPS
- Unpingable & no listening ports in in stealth mode
- Preloaded with Ubuntu, Metasploit, SET, Fasttrack, SSLStrip, nmap, dnsniff, netcat, nikto, nbtscan, scapy, ettercap, JRE, Medusa, …

The Network Controller could! *

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The Mancala response

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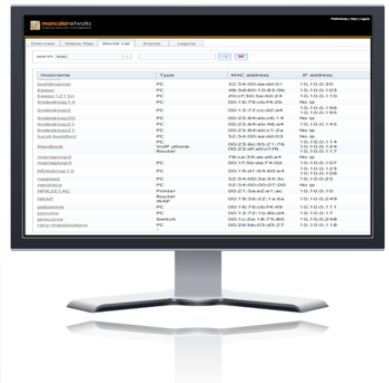
Network Controller
by mancalanetworks

Continuous network monitoring and control

real time, easy to deploy, modular, scalable

Optimizing the security investments of enterprise networks of any size



Mancala Network Controller

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Boosts the security and manageability of IP networks
for Enterprises and Managed Service Providers

- Complete **network visibility** including devices, users & locations
- Real-time **security** for all device categories, including mobile devices & BYOD
- Built-in service **automation** platform for IT organization and MSSP operational efficiency

Network Controller

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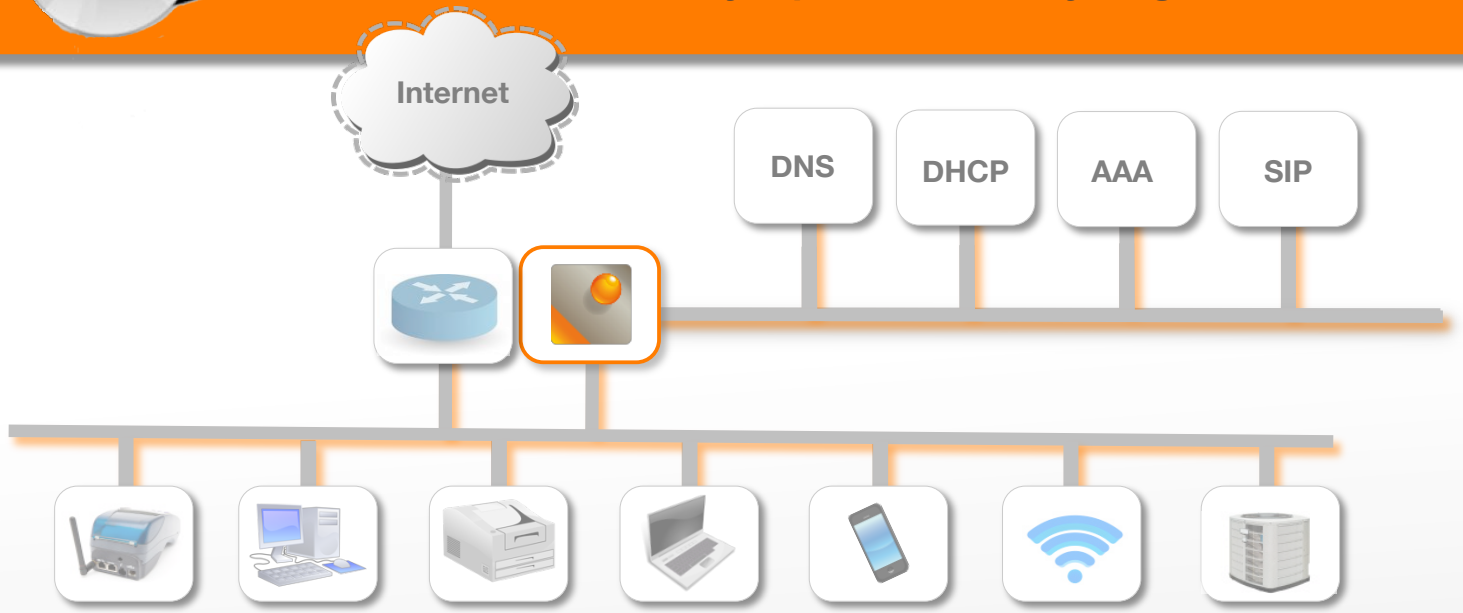
Single solution

- **Multi-source network Scanner**
- **Next-generation, context-aware NAC**
- **Device aware IDS/IPS**

- **Pluggable with existing network Infrastructure and Services**
- **Orchestrated by a powerful Policy Engine**



Patent pending EP 10306073.7, USA 13/240,299

Optimize existing tools

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> Ensure 100% BYOD enrollment

Harden MDM deployments by eliminating unknown devices in order to maximize your MDM investment

> Optimize SIEM

Provide additional log information regarding network context changes for evaluation & create real-time enforcement policies easily

> Create a “Golden” CMDB

Make sure that your asset management tools truly reflect the reality of your network infrastructure and eliminate rogue devices.

> Target vulnerability assessment

Evolve from a periodic, ineffective and reporting centric assessment strategy toward targeted, real-time assessment

Optimize existing security investments

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Architecture

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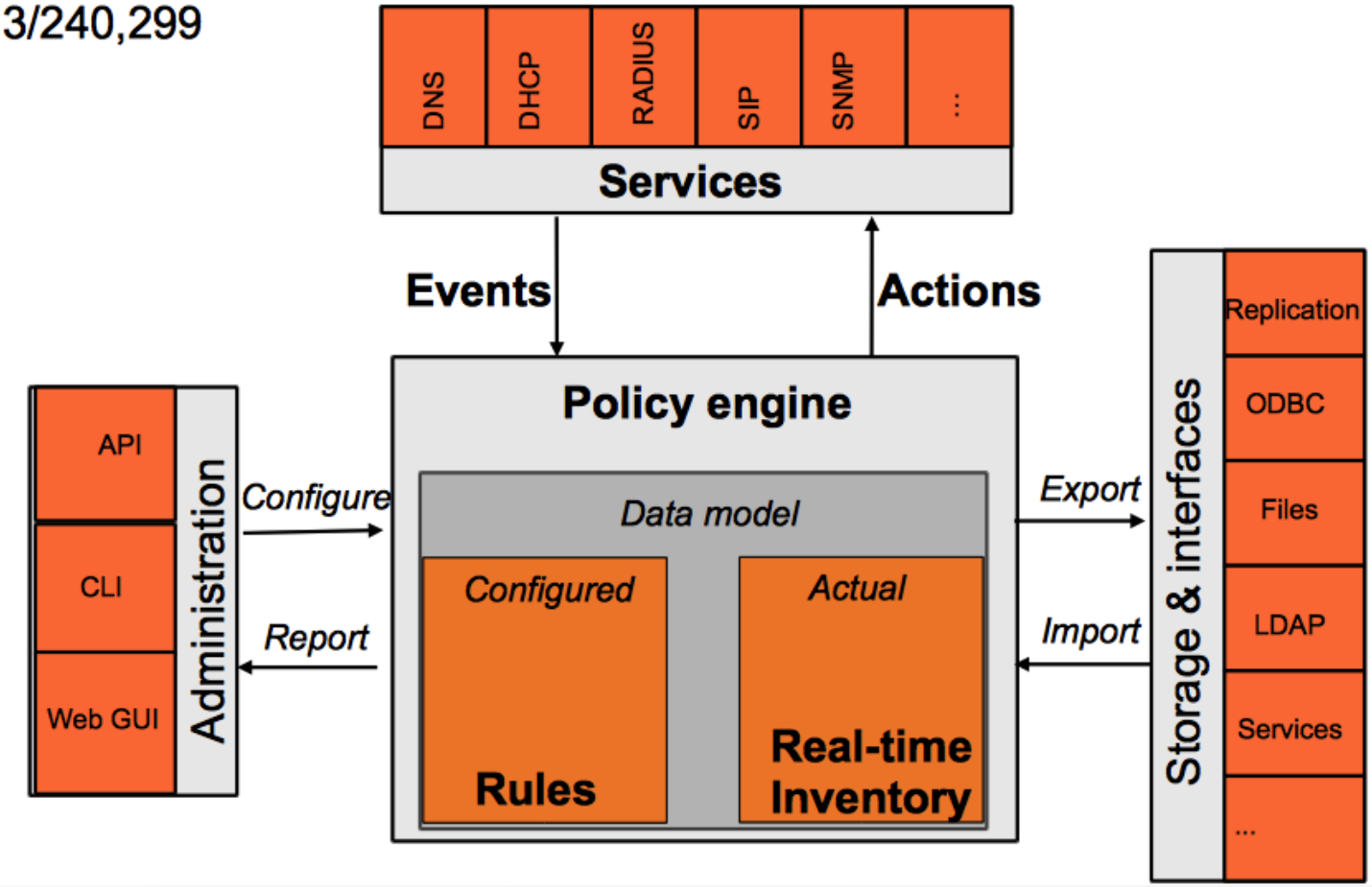
EP N°10306073.7
USA 13/240,299



Policy engine

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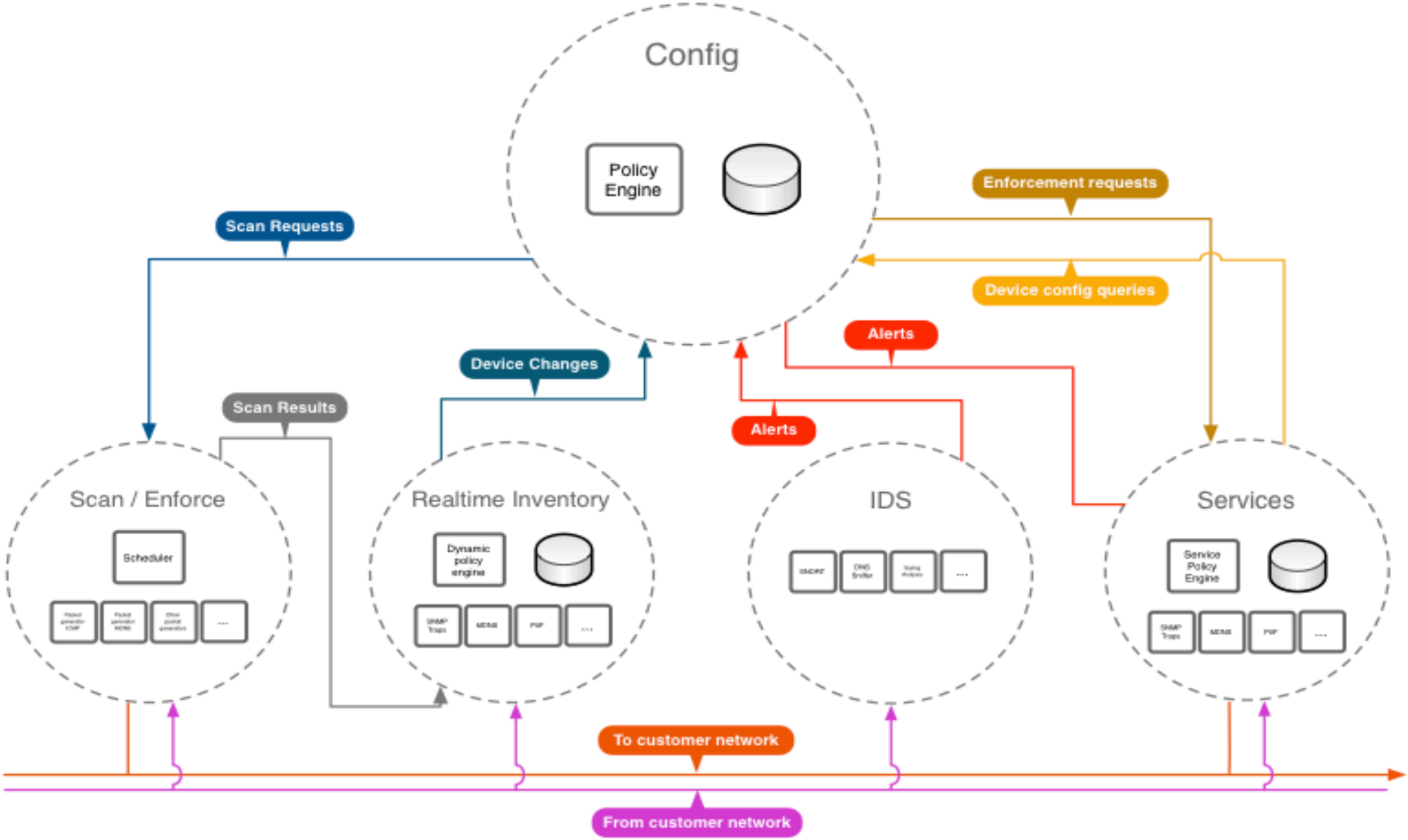

Compatibility matrix

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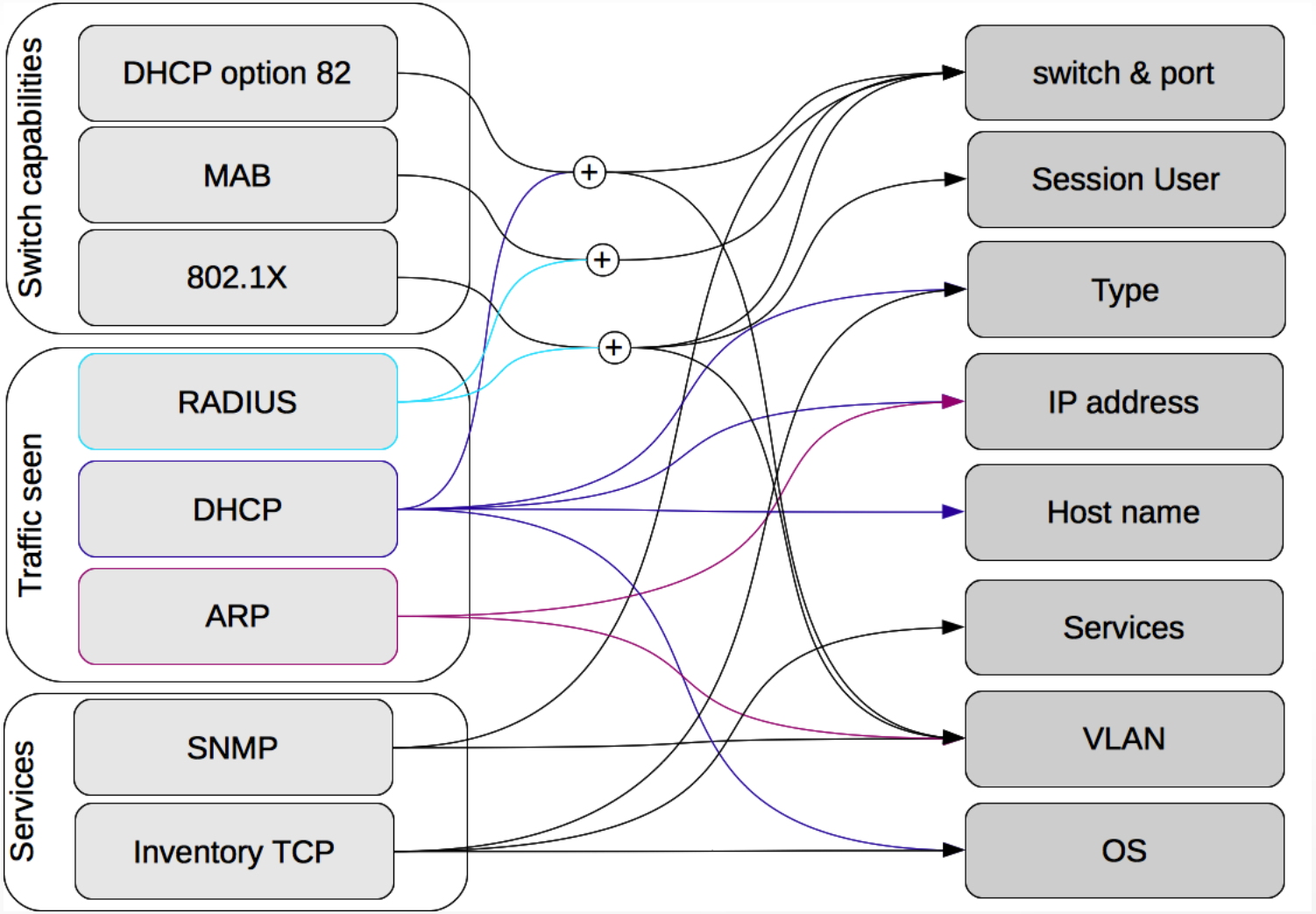

802.1X

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The Network Controller approach:

Simplify Migration Process

- Open Network → (Learn devices) → MAC Auth Network
- MAC Auth Network → (Auto Migrate ACL) → 802.1X Network

Give visibility on non migrated devices

Fine granularity for migration (up to switch port)

Administer once migrated

802.1X deployment

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Without the Network Controller:

- Configure the switch port for 802.1X access
- The device(s) can no longer connect :(
- Configure the device(s) to perform 802.1X
- Repeat for each port... :(

A common strategy: Migrate all port and devices over a WE... Good luck !

802.1X deployment

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Without the Network Controller:

A smarter alternative:

- Configure the switch port for 802.1X access and Mac Auth for the devices connected to that port.
- The device can still connect (better !)
- Configure the device(s) to perform 802.1X
- Remove Mac Auth for the device(s)
- Repeat for each port... :(

What if device was mis-configured ?

- Device Can no longer connect :(

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Demo

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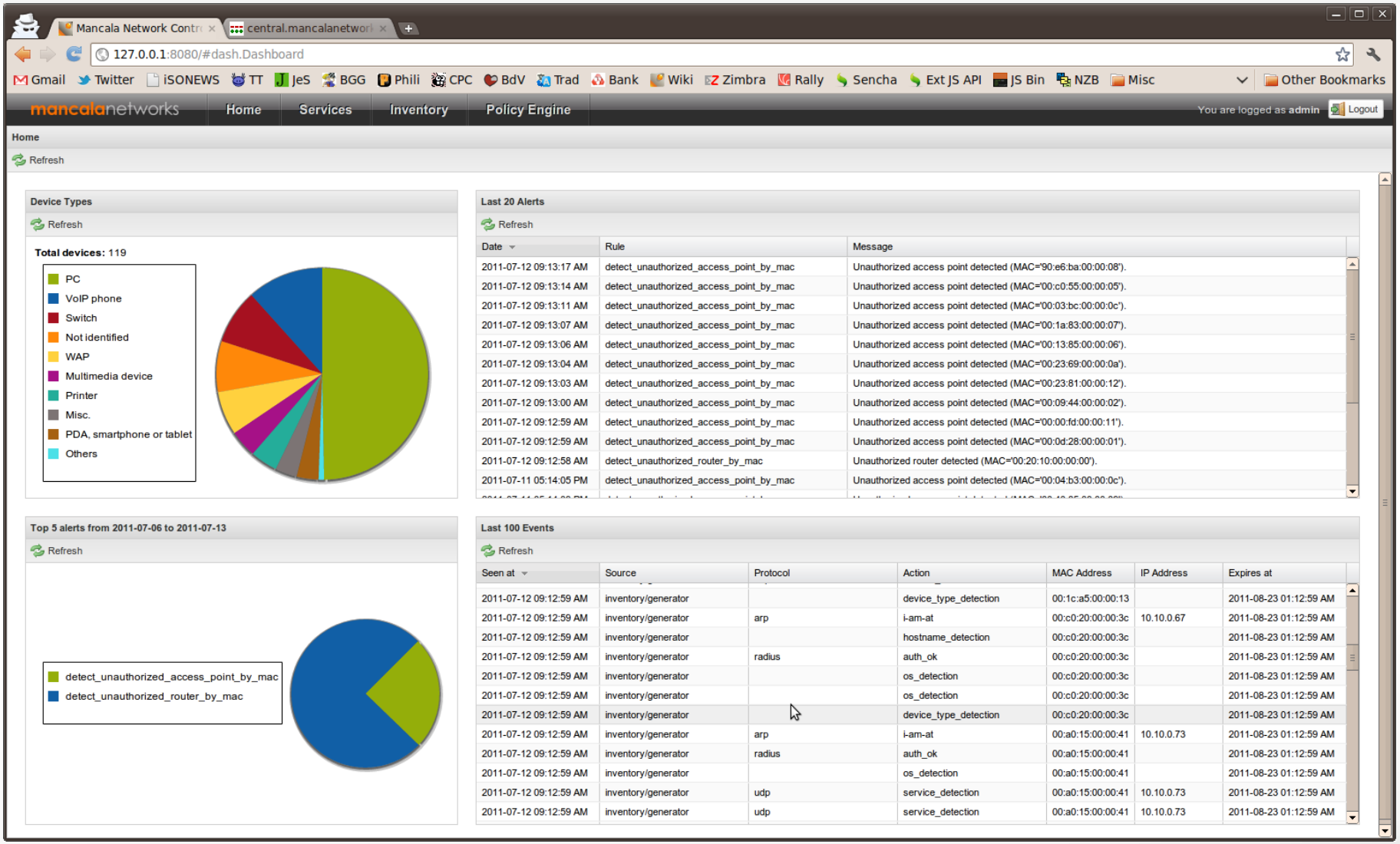

Functionality

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INTERFACES

- Interface d'administration extensible et documentée (CLI)
- Interface graphique intuitive et unifiée (GUI)
- Connectivité aux sources de données les plus courantes (LDAP, SQL, Active Directory…)
- SDK/REST API

EXPLOITATION

- Administration à distance
- Découverte et inventaire temps réel
- Déploiement en deux phases sans impact
- Support de la virtualisation
- Information dynamique de l'administrateur

FLEXIBILITE

- Architecture modulaire évolutive
- Moteur de génération de rapport spécifique
- Paramétrage des politiques de sécurité
- Disponible en image logicielle ou préchargée sur un serveur (appliance)

MANAGEMENT

- Portail captif
- Services DNS, DHCP, RADIUS embarqués
- Traçabilité complète et exhaustive
- Mise en place sans agent

ROBUSTESSE

- Système d'exploitation éprouvé
- Module de Haute Disponibilité
- Délégation d'administration fine
- Gestion d'accès et contrôle d'utilisation
- Option de by-pass pour les Appliances

PERFORMANCE

- Fonctionnement garanti avec tous les fournisseurs respectant les normes*
- Testé avec plus de 1000 équipements connectés simultanément
- Supporte un débit de plus de 3000 requêtes à la seconde (v1.3)
- Capacité de gestion multisite (v.2)

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Thank you!