TELECOMUNICATION
EXPERTS

The equipment you need,
with the correct set-up

MANAGEMENT AND CONTROL

✉ **3av.sales@3av.us**

WWW.3AV.US

INFRAESTRUCTURE
SALES LEASING

There are occasions where buying new equipment is not the best option due to lack of budget, opportunity, or contingency. As a result, it has become essential to find a good provider that leases technology equipment such as servers and storage as an option instead of purchasing.

We are 3AV a company with more than17 years of experience with sales, leasing of Hardware and Computing, with complete solutions.
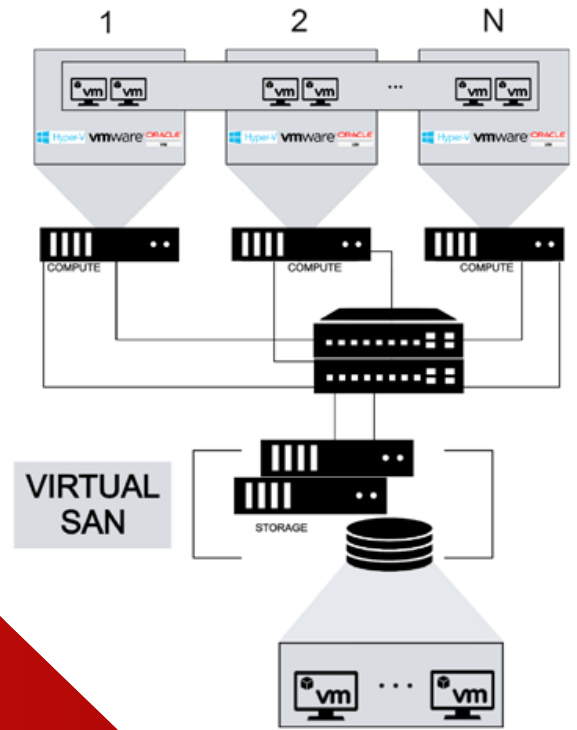
We offer a wide range of products to meet the needs of our customers

HP servers: DL380 G8, G9 and G10.

Storage: MSA 2050 SAN Storage & HPE 3PAR Storage

Hypervisors: Oracle Virtual Machine and VMware.

SERVERS

HP DL380 G10

Wide range of manufacturers servers most recognized. We can help you with complete systems configured to your needs and / or upgrades for your models existing or discontinued.

STORAGE

Wide range of manufacturers servers most recognized. We can help you with complete systems configured to your needs and / or upgrades for your models existing or discontinued.

HIPERVISORS

ORACLE

Oracle VM Server for x86 incorporates free and open source Xen hypervisor technology, is compatible with Windows, Linux and Solaris guests and includes an integrated Webbased management console.

vmware

VMware Inc., (VM of Virtual Machine) is a subsidiary of EMC Corporation that provides virtualization software available for X86. This software includes VMware Workstation, and the free VMware Server and VMware Player. VMware software can work on Windows, Linux, and MacOS X (INTEL), under the name of VMware Fusion.

NETWORKING
SWITCHES RADIOLINKS WIRELESS

Backup System

Servers

Port Trunking

VoIP Servers

Stacked Switches
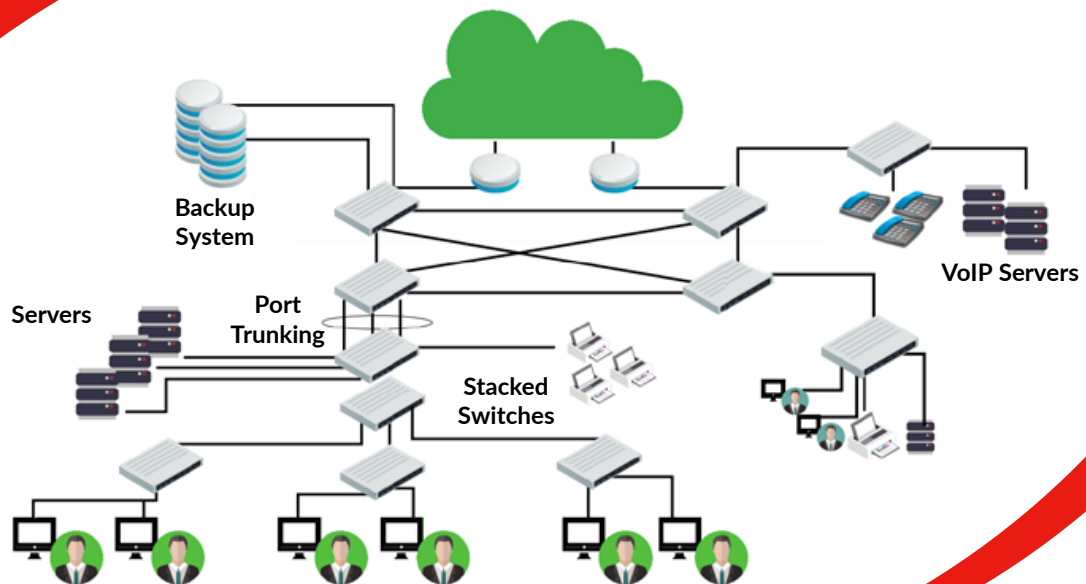
THE EQUIPMENT YOU NEED, WITH THE RIGHT SET UP

We know that implementing a more intelligent network isvital in the digital era. That's why we guarantee the correct configuration of your hardware before delivery

SWITCHES

Switch HPE 5130

Switch HPE 5510

Switch HPE 5700

Switch HPE 5900

Hewlett Packard Enterprise

The HP FlexNetwork architecture provides consistent, standards- based networking that is open to business networks in the data center, campus and branches.
HP network switches offer greater performance, scalability and a wide range of functions for perimeter connectivity that greatly reduces network complexity and cost of ownership.

DYNAMIC
SWITCHES

CISCO

Cisco offers a complete portfolio of switch solutions for enterprise networks, data centers and growing businesses.
These solutions are optimized for a wide range of sectors that include service providers, financial, industrial, health, food & beverages and the public sector.

Cisco Catalyst 2960-X Series
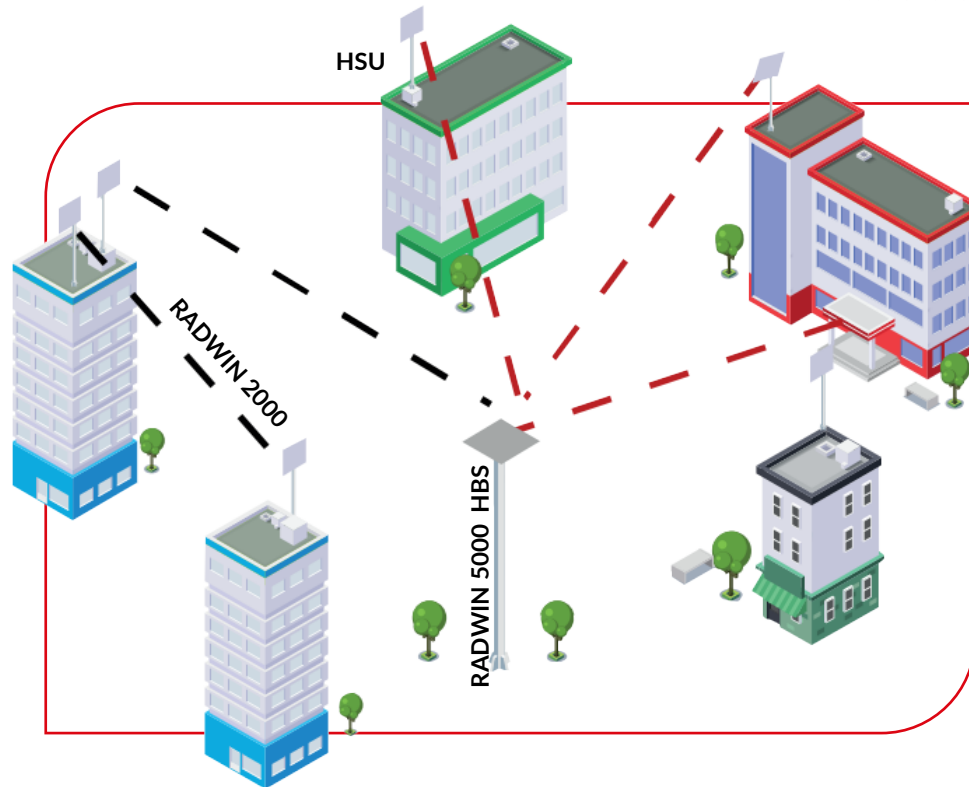
Cisco Catalyst 3850 Series

Cisco Catalyst 9200 Series

Cisco Catalyst 9300 Series

RADIOLINKS
POINT TO POINT

HSU

RADWIN 2000

RADWIN 5000 HBS

The RADWIN 2000 series offers between 25Mbps and 750Mbps in a wide range of sub-licensed and unlicensed bands below 6GHz, while supporting distances of up to 120km / 75 miles. RADWIN 2000 supports advanced network schemas.

The RADWIN 5000 HPMP base station supports up to 250 Mbps per sector, delivering high capacity in a single radio unit. Together with high capacity subscriber units (HSU), RADWIN 5000 HPMP allows a service capacity of up to 100 Mbps per subscriber.

RADWIN

WIRELESS
INDOOR SOLUTIONS

Aruba IAP325

With a maximum concurrent data rate of 1,733 Mbps in the 5 GHz band and 800 Mbps in the 2.4 GHz band (2.5 Gbps aggregate data rate), the 320 Series Access Points deliver the 802.11ac Wi-Fi infrastructure better in next generation class for environments of the highest density.

The high-performance, high-density 802.11ac 320 Series supports MU-MIMO (multi-user MIMO) and 4 Space Points Access Points (4SS). It provides simultaneous data transmission to multiple devices, maximizing data throughput and improving network efficiency.

WIRELESS
OUTDOOR SOLUTIONS

Innovative and aesthetically designed, they offer gigabit Wi-Fi performance to 802.11ac mobile devices in any weather
condition. It is the only outdoor AP that allows 802.11n clients to operate three times faster over long distances. Specially designed to survive in the most hostile outdoor environments.

It is completely sealed to prevent the entry of contaminants. With a maximum data rate of 1.3 Gbps in the 5 GHz band and 600 Mbps in the 2.4 GHz band, the IAP 275 supports simultaneous dual radio operation at speeds that greatly exceed the Fast Ethernet.

Aruba IAP275

WIRELESS
WI-FI 6

Digital applications such as HD video conferencing,virtual reality and augmented reality are emerging in scenarios such as education, office and industrial production.

Ruijie's Wi-Fi 6 wireless network provides seamless access to meet the growing requirements for high density and width of band within the LAN.

Wireless signals are easily affected by the construction of the building and its surroundings. Therefore, the deployment planning has to adapt to the characteristics of the building, business, access density and without professional tools. Ruijie has a wide range of solutions specially designed and sized for the specific needs of users.

RG -AP 620-L(V2) Indoor AP

RG -AP 180 Wall AP

G -AP 680 (CD) Outdoor AP

SWITCHES
CAMPUS

Ruijie Switches series are designed for SME customer applications, which can meet different levels of network access needs of SME customers.

Covers basic VLAN splitting and advanced security features like ACLs. They support PoE output and can meet the PoE power supply requirements of APs, digital cameras and other devices.

Adopting efficient hardware architecture design, providing larger input specifications and faster hardware processing performance, for a more efficient operation experience.

They integrate security, intelligence and 10 Gigabit interfaces launched by Ruijie and are particularly suitable for convergence or access of campus networks.

Flexible Gigabit port configuration, 10 Gigabit uplink interface, and continuous software update capabilities can be developed in accordance with changing network and application requirements to protect user investment.

XS-S1920

RG-NBS5200

**RG-NBS3100**

UTM SECURITY
FIREWALLS

The latest generation of SonicWall firewalls give you the security, control and visibility of the network your organization needs to Innovate and grow rapidly.

SonicWall virtual hardware and firewalls integrate closely with a wide range of products, services and technologies to create a complete high-performance security solution that suits your needs.

INTERNET

Router

Sonicwall

File Server   Email Server
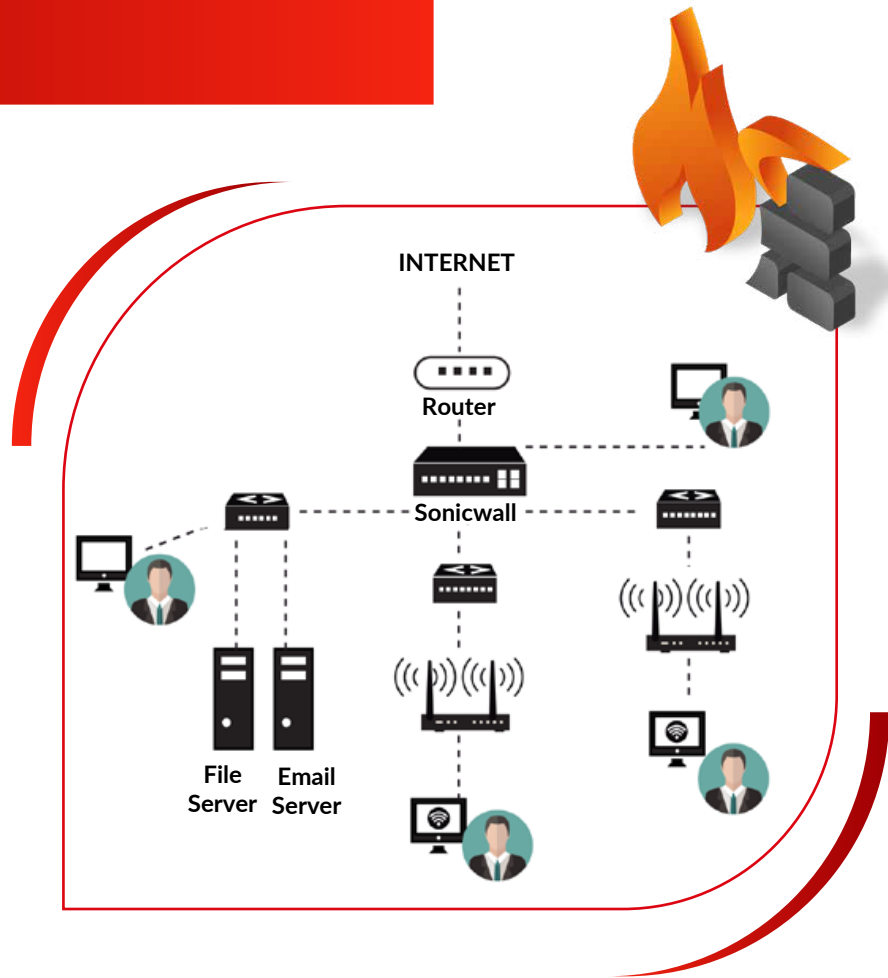
NETWORK VISIBILITY
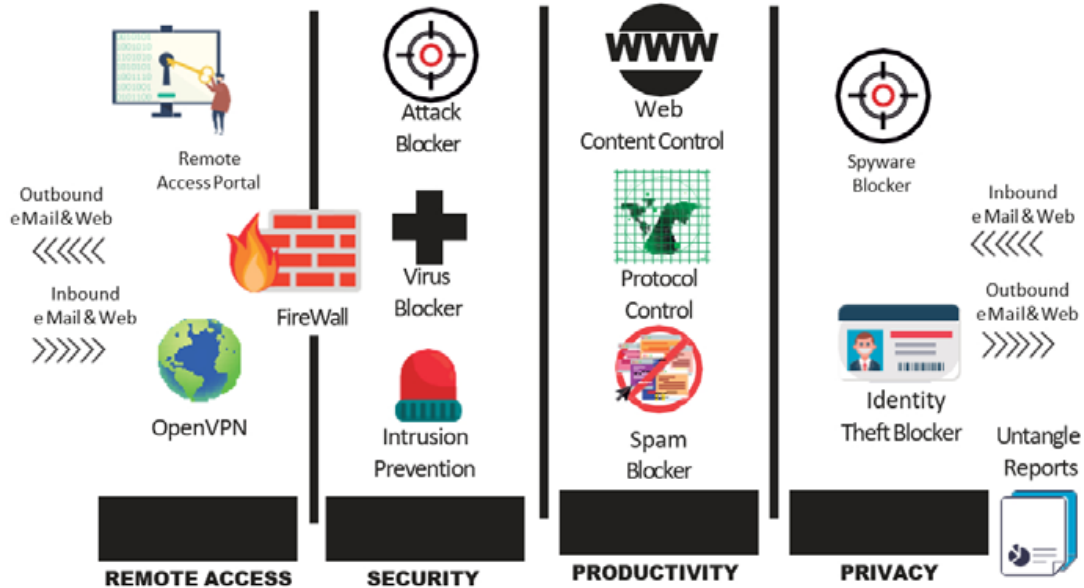
ENTRY LEVEL
FIREWALL

Acquire high-speed threat prevention in a flexible security solution integrated with the SonicWall SOHO and TZ370 series.

Designed for small networks and distributed businesses with remote locations and branches. Advanced administration and network features, such as Secure SD-WAN and Zero-Touch Deployment, make it easy to create new sites as needed.

Add optional capabilities that include PoE /PoE + support and 802.11ac Wi-Fi to create a unified security solution that protects your network and your data from the latest threats through wired and wireless connections.

SonicWall Network
Security Series
SOHO 270 Y TZ370

Achieve incredibly fast performance with speed optimized security processors. Access a deeper level of threat prevention through machine learning. Take advantage of shared threat intelligence for continually updated security. Start your firewall quickly with Zero-Touch implementation. Manage everything from one location with capture Security Center.

MIDDLE RANGE
LEVEL FIREWALL

Built on a multicore hardware architecture with 10 GigaE and 2.5 GigaE interfaces, the NSA Series is scaled to meet the performance demands of medium-sized networks, branches and distributed companies.

The series firewalls have cloud and box-based capabilities such as decryption and TLS / SSL inspection, intelligence and application control, secure SD-WAN, real-time visualization and WLAN management.

SonicWall NSa 4650

SonicWall NSa 5650

SonicWall NSa 9650

SonicWall NSa 6650

SonicWall NSa 9450

Block more attacks with Real-Time Deep Memory Inspection (RTDMI) and Reassembly-Free Deep Packet Inspection (RFDPI).

Prevent advanced threats with cloud and boxbased threat prevention.
Decipher and inspect TLS / SSL and SSH traffic in real time. Improve performance with 10 GigaE and 2.5 GigaE interfaces.

Ensure redundancy with two power supplies. Take advantage of the on-board storage module. Extend your network perimeter with the builtin wireless controller

SECURE SD-WAN

SOFTWARE-DEFINED NETWORKING IN WIDE AREA NETWORK (WAN)
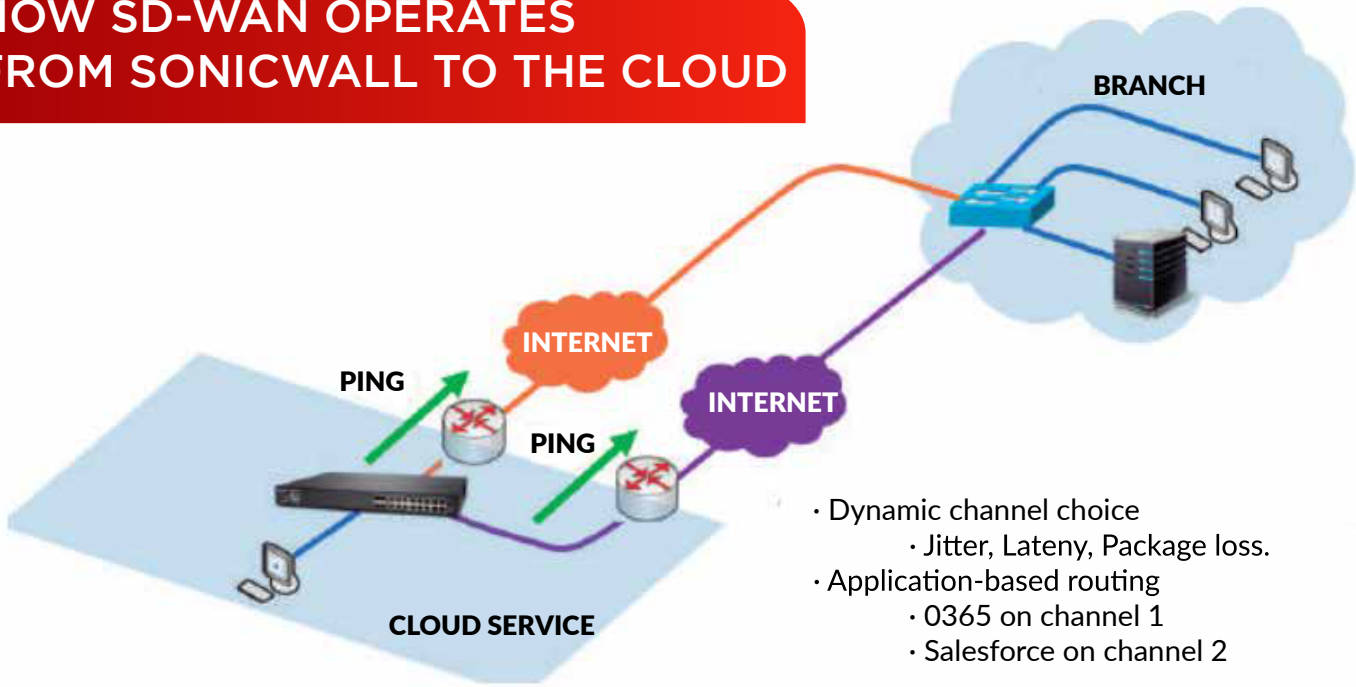
SONIC**WALL**®

Rapid adoption of use for branch connectivity.

It allows companies to build high-performance WANs with low-cost internet access, replacing or reducing expensive technologies such as MPLS.

ADVANTAGES

- Cost Reduction with lower cost internet links. Simpler configuration and management.
- Zero-Touch configuration without requiring IT personnel on site.
- Greater agility in the handling of data channels.
- Availability improvements with smart load balancing. Interconnect all branches.
- Use low cost INTERNET services.
- Replace or reduce MPLS links.

- Have agility to add new applications.
- Increase uptime with smart load balancing.
- Give applications predictable performance.
- Make applications continuously available.
- Secure the network of threats.
- Manage unified (Single-Pane-Of-Glass).
- Easy and fast implementation with "Zero-Touch Deployment".

HOW SD-WAN OPERATES FROM SONICWALL TO THE CLOUD

BRANCH

INTERNET

PING

INTERNET

PING

CLOUD SERVICE

· Dynamic channel choice
    · Jitter, Lateny, Package loss.
· Application-based routing
        · 0365 on channel 1
        · Salesforce on channel 2

HOW THE SONICWALL SDWAN OPERATE BETWEEN BRANCHES

HEADQUARTERS

VPN 1

MPLS

PING

VPN 2

INTERNET VPN

PING

VPN 3

INTERNET VPN

PING

CLIENT
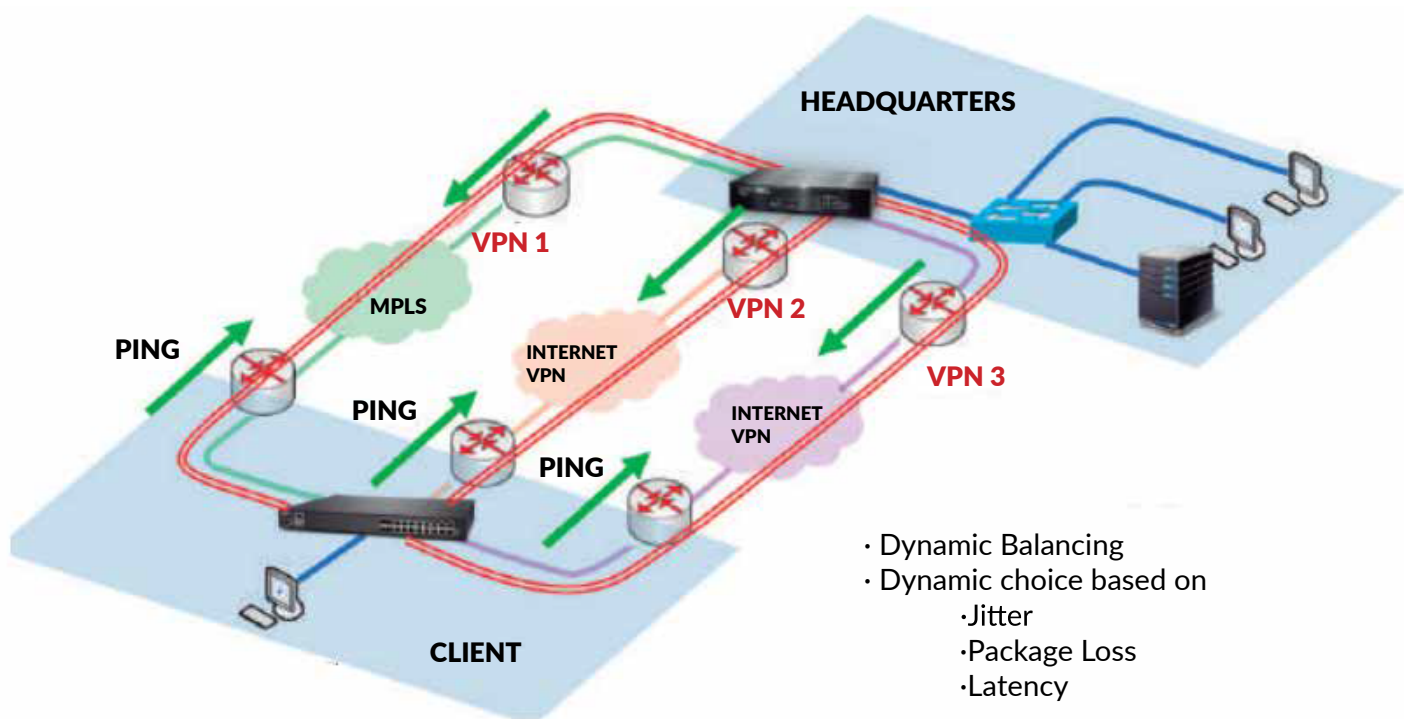
· Dynamic Balancing
· Dynamic choice based on
        ·Jitter
        ·Package Loss
        ·Latency

MANAGEMENT &
CONTROL TOOLS

SWITCHES · RADIOLINKS · WIRELESS

ITRADIUS (Remote Authentication Dialing User Service) is a network protocol that provides authentication, authorization and accounting of users and centralized administration devices.

It is widely used by ISPs and companies to control access to INTERNET, local services, wireless networks through WiFi access points, etc.

The RADIUS protocol is implemented at the application layer with a client-server architecture that could use TCP or UDP as a transport layer and communicates with a user database such as Active Directory, LDAP Service or Linux accounting system.

TECHNICAL SPECIFICATIONS

IT RADIUS

- ✓ Server AAA.
- ✓ Support for physical and virtual NAS (network access server).
- ✓ Possibility of deploying a captive portal / Hotspot with multiple sites.
- ✓ Support for local storage in SQL databases.
- ✓ Asynchronous Web Administration.
- ✓ Support for the implementation of virtual network interfaces.
- ✓ Connectivity capability over VPN and SSH tunnels.
- ✓ Certification and certificate issuance authority on demand.
- ✓ VLANs support.
- ✓ Support of IP v4/ v6.

ITRADIUS
VIRTUAL MACHINE

FUNCTIONAL CHARACTERISTICS

- ✓ Ability to create distributed and customized environments by orchestrating IT Radius components as Docker containers
- ✓ Open public API for integration with general purpose applications
- ✓ External encryption or authentication layer: TLS, SSL, LEAP, EAP and PEAP.
- ✓ Support from different identity providers: OAuth 2
- ✓ Dictionary systems for automatic configuration of NAS (Network Access Server)
- ✓ Statistics and system status in real time.
- ✓ Automatic updates by subscription.
- ✓ Custom system of groups and attributes that define the properties of a user.

- ✓ Methods of communication with NAS (Network Access Server).
- ✓ Internal encryption: MSCHAP V.2.0, MD5 and GTC.
- ✓ Variations of Captive Portals / Hotspot.Standard captive portal: username and password (Local DB, ODBC, LDAP and ADC).
  Captive portal direct pass. Captive portal with access codes (PIN). Captive portal with MAC recognition (RADA - RADIUS Authenticated Device Access).
- ✓ System of exclusion of domain names and IP addresses through Garden in any of the Captive Portal / Hotspot methods.
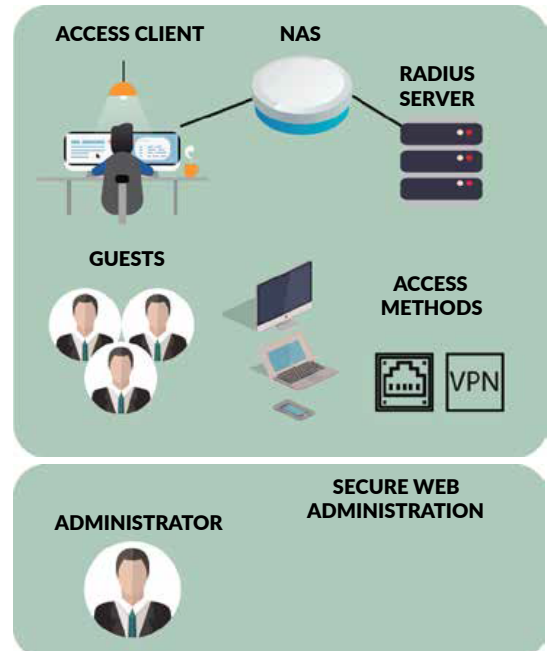
Uses of IT RADIUS

- ● Hospital networks
- ● Touristic centres
- ● Offices
- ● Clubs

- ● Events
- ● Gyms
- ● Malls
- ● Transport terminals

ADDED VALUES
FORMS

- ✓ ADDFLY System.
- ✓ Customized Advertising Splash System.
- ✓ Custom Widget system for captive portal visitors.
- ✓ System for excluding domain names and IP addresses through Garden in any of the captive portal / Hotspot methods.

ACCESS CLIENT **NAS**

RADIUS SERVER

GUESTS

ACCESS METHODS

ADMINISTRATOR

SECURE WEB ADMINISTRATION

MULTIPLE ACCESS

CREDENTIAL SOURCES

Business intelligence
Support from different providers of Local Identity DB,ODBC, OPENID, LDAP, ADC

- ✓ Captive Portal with access code (PIN) and data capture (Forms).
- ✓ Captive Portal for phantom users with delegated authority.
- ✓ Captive Portal with external synchronization (OpenID: Google, Facebook, Twitter).
- ✓ Captive Portal with MAC recognition (RADA RADIUS Authentificated Device Access).
- ✓ Captive Portal with application verification.
- ✓ Integration with external applications through public API, on HTTPS protocol in JSON format.
- ✓ Custom set of groups and attributes that define user properties.

IT RADIUS
RESULT

Access to Corporate Infrastructure

Access of Specific Applications

Internet access

Access to Private Networks

Access to Computer Resources

Access to Ecosystem Applications

OPERATION MODE

•User / Password
•RADA (Device Identifier)
•Authoritary Application Identity (Through API)
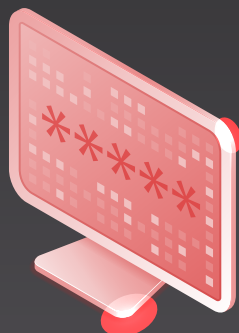
DICTIONARY SYSTEM FOR NAS AUTO-CONFIGURATION:
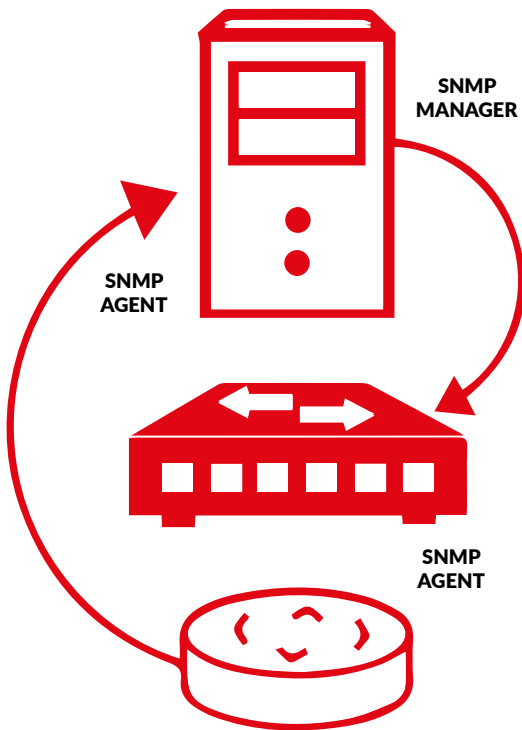
hp   aruba   JUNIPER NETWORKS   MikroTik   cisco   UBIQUITI NETWORKS

AUTHENTICATION
AUTHORIZATION
ACCOUNTING

ZABBIX

SNMP MANAGER

SNMP AGENT

SNMP AGENT

Zabbix is a system to monitor the capacity, performance and availability of servers, equipment, applications and databases, also offers advanced monitoring, alerting and visualization features that even some of the best commercial applications of this type do not offer.

ZABBIX

CLOUDS · CONTAINERS · HARDWARE · DATABASES · APPLICATIONS · SERVICES
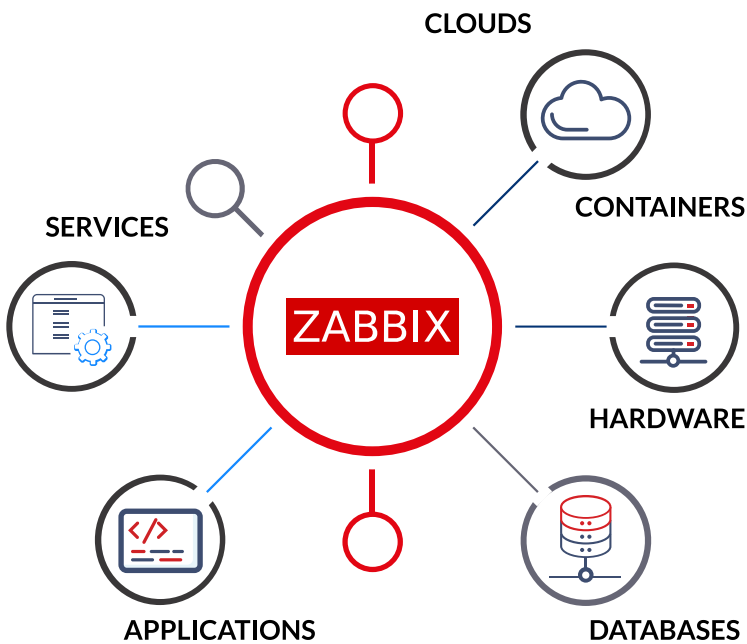
- ✓ Collect metrics from any device, system or application.
- ✓ Detect problem states within the incoming metric flow automatically.
- ✓ The native Web interface provides multiple ways to present an overview of your IT environment.
- ✓ Being notified in case of any problem is guaranteed.
- ✓ Protect your data at all levels.
- ✓ Save time using ready-to-use templates.
- ✓ Automate monitoring of large and dynamic environments.
- ✓ Create a distributed monitoring solution while maintaining centralized control.
- ✓ Integrate Zabbix with any part of your IT environment.

MANAGEMENT TOOLS

{php} IPAM

PHPIPAM (IP Address Management Application IPAM).
Provides IPv4 / IPv6 address management in a light, modern and useful way.

IPAM has an intuitive Web interface that allows you to easily detect IP address space problems.

IPAM allows engineers to plan the growth of the network, ensure that the use of IP space meets standards and helps resolve IP address conflicts.

OTHER CHARACTERISTICS

- ▪ IPv4 / IPv6 address management. Section Management / Subnet. Automatic display of free space for subnets. IP subnet display.
- ▪ Automatic subnet scanning /IP status checks.
- ▪ POWER DNS integration. NAT support.
- ▪ RACK Management.
- ▪ Domain authentication (AD,LDAP, Radio).
- ▪ Permissions section of device types.

- ▪ XLS / CVS subnet import.
- ▪ IP request module.
- ▪ API REST.
- ▪ Locations module VLANs management.
- ▪ VRF management.
- ▪ IPv4 / IPv6 calculator.
- ▪ IP database search. Email notifications.
- ▪ Support of custom fields.
- ▪ Translations.
- ▪ Records Changes.

ANTHONY

LISTEN TO WHAT YOU WANT, WHEN YOU WANT

Experience a world-class audio center with remote access and control of content playback, with a clean, friendly, practical and responsive interface, with a wide array of streaming music options and Online Radio libraries. In addition to an Autonomous or Distributed management platform within a CLOUD environment, and most importantly, you can enjoy all your favorite services so you can listen to what you want, when you want and how you want

DEVELOPMENT
SERVICES

DEVELOPMENT OF CUSTOM LINUX DISTRIBUTIONS

Build Debian-based Linux distributions for any compatible hardware platform. Customized distributions focus particularly on a small number of services, thereby achieving higher levels of performance than those offered by their generic solutions.

SOFTWARE DEVELOPMENT

Construction of applications and services for all kinds of environments focused on performance, stability and security

INFRASTRUCTURE SERVICES ON LINUX

We offer deployment of integral computing solutions on the Linux platform, with open source tools, and services. It meets all the logical infrastructure needs of an identity, allowing easy integration with external resources.

## DEPLOYMENT OF DOCKER / KUBERNETES ENVIRONMENTS

We deploy construction or Migration of applications and services to the Docker container scheme, with support for the Kubernetes orchestrator. It offers maximum performance and flexibility for the deployment of software solutions, with the minimum consumption of computing resources.

WEB DEVELOPMENT

Creation of Web applications under high quality standards, which take full advantage of the emerging technologies of the modern web, offering a satisfactory and congruent user experience at all times.

DATA ENGINEERING

Construction, management and operation of data banks, whether they are of a classical scheme (SQL), or oriented to documents or of a dispersed nature. Information is the most precious asset for any entity, so keeping it always safe and accessible is a vital priority

IT SERVICE

PROFESSIONAL SERVICES
NETWORKING AND ORACLE
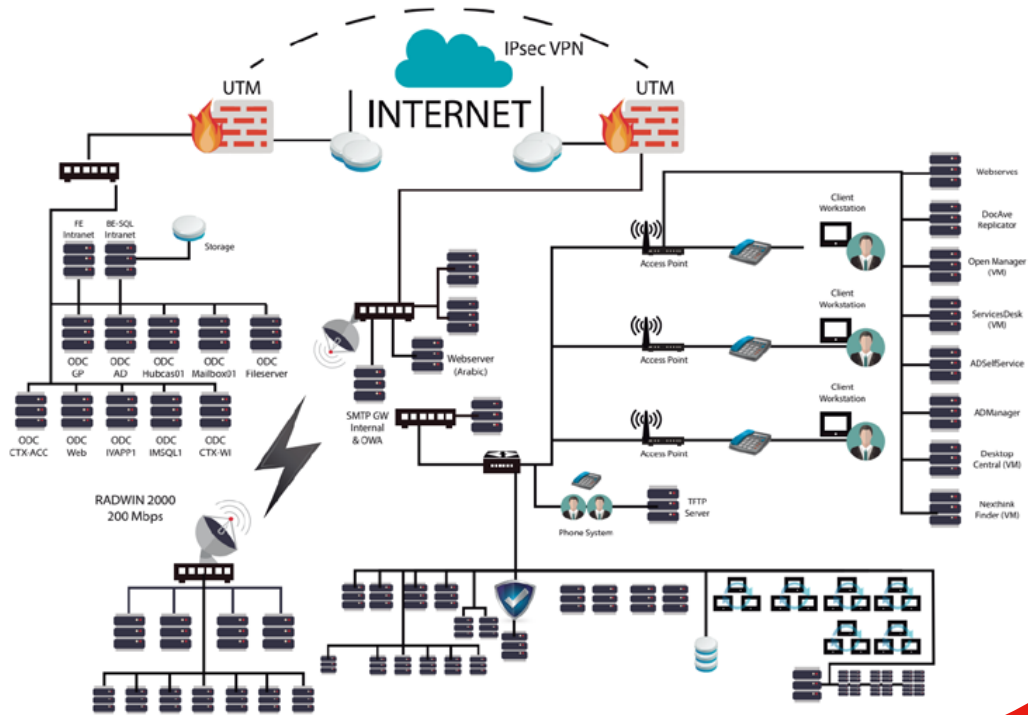
PROFESSIONAL NETWORKING SERVICES

- Configuration and commissioning of switched data networks (Switch L2 - L4 on HPE, Aruba Networks, Dell Force 10, Cisco Meraki and others)
- WI-FI wireless network configuration (Aruba Networks, HP, Cisco, others)
- Installation and configuration of Web tools to manage IPv4 and IPv6 addressing
- Installation and configuration of Web tools for the management and monitoring of devices based on SNMP and RMON groups.

- Installations and configuration of AAA (ITRADIUS) and Hotspot solutions.
- Sizing of VLSM / CIDR in IPv4.
- Migration of IPv4 networks to IPv6.
- Configuration of UTM SonicWall and Fortinet solutions.
- Virtualization solutions, configuration in VMware and ORACLE VM.

DRP (DISASTER RECOVERY PLAN)

We have the technology to turn your production environment into a virtual environment, without the need to shut down your servers and / or stop the services provided.

Conversion of physical to virtual servers as a backup measure.

Configuration of data protection agents, to keep the copies updated in a differential, incremental, total way, both local and remote.

Logical and physical network graph of your current computer center

DRP (DISASTER RECOVERY PLAN)

• Knowledge and experience in the ORACLE database engine:
 -Installation, configuration and adjustment in contingent scenarios.
 -Design, application, maintenance and testing of contingent scenarios.
 -Business continuity plans, with Oracle's own tools such as RMAN, Data Guard, RAC and third-party tools such as ORACLE shareplex replication.
• Great strength in refining processes through the ORACLE enterprise manager and / or directly with the dynamic views of the engine since we have experience in the development in PL/SQL, thus being able to detect processes with a high consumption of time, resources or that generate blockages.
• Design of strategies for backup and disaster recovery (DRP) according to the production environment, from version 9 to 12 (manual and / or automatic copies).
• All this experience has been tested and demonstrated in real production environments and in critical applications

TUNNING

Database
Business Process

BACKUP AND RECOVERY

Manual
EXP/IMP
RMAN
Standby Database

MIGRATION

Between Plaforms
Between different manufacturers or types of databases Between RDBMS versions

REPLICATION

DataGuard
Share Plex
RAC

SECURITY POLICIES

Database Profiles
Access by product
Logs Generation
Logs Review Oracle audit