

Juniper Networks: An Overview of the Concept

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Abstract— The present research paper discusses the Juniper network including its history, growth and development, merits-demerits and future scope. Juniper is found to be more advantageous due to its free accessibility, open architecture, smart automation and many other reasons. This has led Juniper to form a huge market across the world in a few years of time. Thus, Juniper is believed to have a huge scope in future.

Key words: Juniper Networks

I. INTRODUCTION

Let's understand the term "Juniper": Juniper is mainly meant for those requirements which can use your computer device for the powerful network tool[1].

It mainly access the distributed instruments for the innovation. Juniper mainly use the data for the analytical purpose and the data visualization. Juniper mainly optimize some products that can fortify high end operation of network and it basically includes:

- Security Controls for the multiple layers such as network, routing engines and several impact applications
- The formal carrier grade reliability with network six nines availability

Juniper also provides few modules such as security, switching and routing hardware and software. Juniper network has also adopted a data-driven strategy and build a marketing data lake called verity that integrates data from the web logs.

II. BENEFITS OF JUNIPER

Juniper networks have many advantages than other networks as mentioned below:

- It do not require to replace its existing infrastructure. It allows users to accept SDN as well as network visualization without having more investments.
- It provides open architecture that interoperates with large networking and service operations by physical as well as virtual means which may be in the form of hardware and software.
- It also provides intelligent automation because it has the ability to simplify operations and decrease operating expense with policy driven framework[2].

III. HISTORY

The concept of Juniper was originated in 1995 by a scientist, Pradeep Sindu working at Xerox. His idea was to form packet-based routers that could be computed for internet traffic whereas majority of the routers employed for internet traffic back then, were used for phone calls and contained dedicated circuits for each caller[3]. Later, Sindhu was teamed with engineers Bjorn Liencre (Sun Microsystems) and Dennis Ferguson (MCI Communications). Juniper that was started with an initial

funding of \$2million raised an investment of \$40 million over the period of two years i.e., late 1997.

IV. LATER GROWTH & DEVELOPMENT

Following annual revenue of \$3.8million in year 1998, Juniper's only product, M40 router got market by 50 telecommunications companies. Signing deals with Alcatel and Ericsson helped it in gaining international market. The company expanded having headquarters in Europe (UK), Asia-Pacific (Hong Kong) and offices in Japan and Korea[4].

Juniper implements a technical certification program and it was involved in the first optical internet network in China[5]. Juniper's growth slowed in an year 2001 because the telecommunications sector experienced a slowdown and revenues fell by two-thirds during the dot-com bust. 9 to 10% of its workforce was laid off in technology purpose.

V. ADVANTAGES & DISADVANTAGES OF JUNIPER NETWORK

Advantages	Disadvantages
Free accessible source	Lesser market proportion in comparison to CISCO
Additional services can be added/ removed	Does not have a product line in every network category
Supply maximum speed than CISCO	Expensive
Supplies services accessible at lower investment.	Complex configuration
Unlike CISCO, Juniper provides one-box solution.	Decreased backbone routing speed due to hardware design
Contains significant security options even in low end Juniper devices.	Proprietary implementation of networking standards can lead to vendor lock-in
Available in industry providing cost-effective solutions.	Not much highly experienced engineers in market.

Table 1: Advantages & Disadvantages of Juniper Network

VI. CONCLUSION

Today, networks are complex arrangements that cannot be left to chance. Each design must be researched, assembled, proven, and then implemented. This cycle never ends; as one design is implemented, another is in the research stage. That's because technology is moving at such a fast pace; if a network is left to its own devices, it will be obsolete in a very short time.

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