

Enclosed Solutions for Growing Businesses

When one of India's leading ISPs faced a tenfold expansion of servers, they suddenly realized that booming business could have its own set of challenges. APW President made it possible for their IDC to scale up, with a rack of packaged solutions.

The dotcom boom gave birth to many new business opportunities. A pioneering Indian company was quick to sense the potential and make its mark with a host of Internet, networking and e-commerce services that delivered integrated end-to-end solutions for both corporate users & consumers. Its achievements were not un-noticed. In December 2000, the company made its mark in Fortune magazine as one of the world's ten hot technology companies.

CHALLENGES OF SCALING

As an early beginner, the company was the country's first to commission a Level 3 Internet Data Center (IDC) at Vashi Infotech Park, Navi Mumbai and began with a modest 45 servers. However with the rapid growth in business, the number of servers ballooned to 535 giving rise to concerns regarding manageability and storage. Top management was forced to think seriously about the maximum utilization of available space and how to deal with several new challenges that came with this growth:

Low Security: Some of the servers were mission critical servers and their safety and performance was indispensable and there was every possibility of the servers being vulnerable to physical damage if not housed in proper enclosures. **Improper Utilisation of Space:** As the company had several clients who frequented the IDC, they needed to maintain an aesthetic design, making optimum utilization of the available space.

No Ventilation: Most of the servers were Rack Mountable units. However the company had previously deployed conventional cabinets with glass doors which did not allow cross ventilation.

Cabling issues: Apart from the server racks there was a requirement of racks for network cabling. Earlier, the company used the 42Ux600Wx1000D rack for hosting switches, jack panels and other networking components but they were facing difficulty in routing and managing the cables in a 600Wx1000D rack.

HOW TO CHOOSE THE RIGHT SERVER RACK

Server racks and cabinets are an important component, so careful planning is required. Figure out your needs first, and then find the server rack that fits your needs. Once you have a good understanding of your requirements, you can shop and compare server racks based on the following primary features:

Size/Capacity

Make sure that the server rack has the right dimensions (height, width and depth). Check the weight capacity of the server rack to make sure it will work for your anticipated network equipment load. Also evaluate whether freestanding, desktop or wall-mounted server racks will work best for your equipment and environment.

Configuration

Consider how the equipment needs to be connected, which in turn impacts how the server racks will need to be configured. Server racks come with varying levels of adaptability and accessories (i.e. fixed or sliding shelves, vertical rails, etc.) so you will want to make sure that the server rack are customizable for your needs.

Security

Server rack security comes in many forms and options. In their least secure form, server racks are just frames and offer no additional barriers to the equipment. In the most secure form, server racks are fully protected with four solid panels and multiple locks. You can also get server racks with a medium level of security range. The choice for what level of security you need depends on what potential threats to your network equipment you perceive and predict.

ANATOMY OF A CYBERACK

STRUCTURED SOLUTIONS

The situation called for an expert solution to the problem and the company called in the number one specialist in the field. A team from APW President analyzed the situation at the IDC carefully and proposed the following solution to tackle the problems:

Security: For housing the servers, the widely accepted Cyberack range of enclosure of the dimension, 42Ux600Wx1000D, was proposed. Its sturdy and rigid aluminium extruded vertical profiles not only delivered the high weight carrying capacity but also presented a more robust and secure control thereby reducing the possibility of the servers being physically tampered.

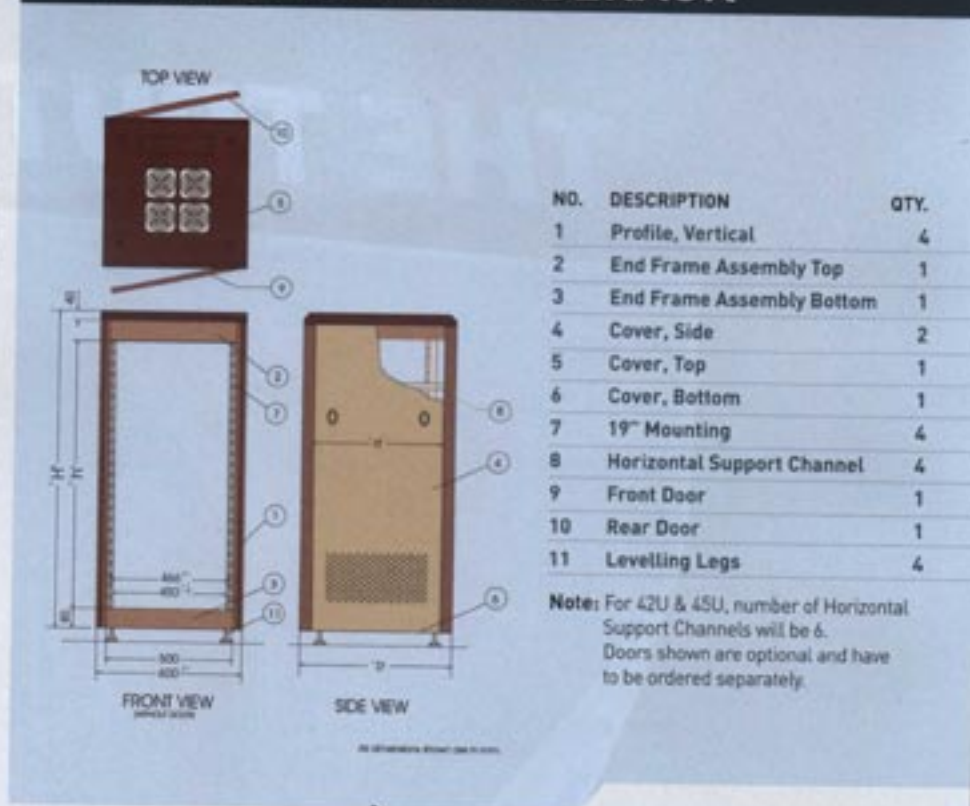
Optimum Space Utilisation: Every 10 racks were coupled together with a networking rack to form a single row, giving the IDC a world-class aesthetic design. Today the IDC has around 80 Cyberacks to host the 535 servers, and has helped use space to the optimum.

Proper Ventilation: Since the company hosted about 7 to 8 servers in each rack, ventilation was a concern. APW President had designed the bottom panel such that cool air from the false flooring enters the rack and travels through all servers to reach the top where 4 exhaust fans are fixed. As the front and rear doors are fully perforated no hot air stays inside the rack for a long time.

Efficient Cabling: APW President also proposed the Cyberack of 42Ux800Wx1000D for data cable termination. Since the new rack proposed was more spacious, they were able to route the cables in a structured manner. Split doors were provided in the front and rear side to reduce the space occupancy while opening and closing the doors. All the cables were routed through concealed cable ducts, which were specially designed for the customer to enhance the aesthetic appearance.

AND THE BONUS:

◆ Cyberack, being modular in nature, is flexible enough to accommodate any 19" devices such as KVM, LCD monitors.



NO.	DESCRIPTION	QTY.
1	Profile, Vertical	4
2	End Frame Assembly Top	1
3	End Frame Assembly Bottom	1
4	Cover, Side	2
5	Cover, Top	1
6	Cover, Bottom	1
7	19" Mounting	4
8	Horizontal Support Channel	4
9	Front Door	1
10	Rear Door	1
11	Leveling Legs	4

Note: For 42U & 45U, number of Horizontal Support Channels will be 6. Doors shown are optional and have to be ordered separately.

◆ The proposed solution also included a Communication Rack which was placed after every 5 Cyberacks. With the Communication rack placed between the rows, there was better balance of load & speed.

IN CONCLUSION

The company now has a solution that not only met its requirements of rapid growth, but one which is now capable of adding more equipment in the IDC as well. The solution helped synchronize their Data Center giving them ease of manageability and administration of the servers.

The right selection of technology is the hallmark of a company that ranks as India's only ISO 9001:2000 certified ISP.

Additional Features to Consider

Assembly - do you want the rack assembled or ready for assembly?

Metal - is steel or aluminum better for your needs?

Venting - do you want vented doors and/or panels?

Access - would you like to have access to the equipment through side or back panels?

Mobility - do you need to move the equipment and/or put castors on the server rack?

Locking - what type of locking mechanism(s) do you require on the server racks?

Rack Accessories - some of the available server rack accessories include fixed shelves, rollout shelves, monitors, fans, keyboard trays, utility drawers and so on.



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