35 Years of Computing: A Brief Timeline p56
Simulation is a gamechanger for Medical Devices industry p58
5 misconfigurations that make active directory a target for cybercriminals p69
How to make a career in Data Science and Analytics p72

₹125
VOL. 34 | ISSUE 8 | AUGUST 2021
www.pcquest.com

PCQUEST

UNDERSTAND • CHOOSE • IMPLEMENT IT

CyberMedia

35TH YEAR
1987 - 2021

Enterprises' verdict is out

VOL I: Commercial PC, Server, Storage, Networking, Virtualization, Data Centre Service



Special Subscription offer on page 54

76 pages including cover

APEEJAY EDUCATION

SOARING HIGH IS MY NATURE



Apeejay Stya Advantage (50+ Years of excellence in education)

Quality Education
from pre-nursery to doctoral level

2,500
Faculty

65,000
Strong alumni network

85+
Programmes to choose from

40,000
Students

24
Educational institutions across the country

Some of our Awards and Accolades

'Top Education Brands Award' (Academic Excellence in K–12) by Business World Education in 2020

Awarded as **'Best Education Society for promoting Social Cause in 2019'** by Centre for Education Growth and Research

Apeejay Schools

- Apeejay School, Mahavir Marg, Jalandhar, Punjab
- Apeejay School, Hoshiarpur Road, Jalandhar, Punjab
- Apeejay School, Tanda Road, Jalandhar, Punjab
- Apeejay School, Model Town, Jalandhar, Punjab
- Apeejay School, Panchsheel Park, New Delhi
- Apeejay School International (IB), Panchsheel Park, New Delhi
- Apeejay School, Saket, New Delhi
- Apeejay School, Pitampura, Delhi
- Apeejay School, Noida, U.P., Near Delhi
- Apeejay International School, Greater Noida, U.P.
- Apeejay School, Faridabad, Haryana
- Apeejay Svrán Global School, Faridabad
- Apeejay School, Charkhi Dadri, Haryana
- Apeejay School, Kharghar, Navi Mumbai
- Apeejay School, Nerul, Navi Mumbai
- Apeejay Rhythms Kinderworld, GK–2, New Delhi
- Apeejay Rhythms, Sector–15, Faridabad
- Apeejay Rhythms Kinderworld, Model Town, Jalandhar

W: www.apeejay.edu | E: aes@apeejay.edu

nixi



SECURE YOUR BUSINESS WITH YOUR OWN IP ADDRESS

KEY BENEFITS

- Only Indian Organization to delegate IP addresses (IPv4/IPv6).
- Only Organization that provide facility for payment in Indian currency.
- *Get IPv6 address free of cost along with IPv4 address.
- Support in local language for better connect.
- Get equipped to choose your peering and upstream providers.

***Fees higher of IPv4 or IPv6 as applicable**

Visit www.irinn.in

Call us on 011-48202005, 011-48202030

Email: helpdesk@irinn.in for more details about our offerings.

IRINN
Indian Registry for Internet Names and Numbers

PCQUEST 35 YEAR 1987 - 2021
UNDERSTAND • CHOOSE • IMPLEMENT IT
www.pcquest.com

EDITORIAL
MANAGING EDITOR: Thomas George
EDITOR: Sunil Rajguru
ASSOCIATE EDITOR: Soma Tah
ASSISTANT EDITOR: Supriya Rao
ASSISTANT EDITOR (Special Projects): Ankit Parashar
CONTENT WRITER: Boudhaditya Sanyal
DESIGN MANAGER: Nadeem Anees

VICE PRESIDENT RESEARCH: ANIL CHOPRA

CYBERMEDIA LABS
MANAGER LAB: Ashok Pandey

BUSINESS
SR. VICE PRESIDENT & GROUP HEAD: Rachna Garga (rachnag@cybermedia.co.in)

NORTH:
ASSOCIATE VICE PRESIDENT: Harminder Singh
MANAGER: Sudhir Kumar Arora, Mohammad Shoeb Khan

SOUTH:
MANAGER: Shubhadeep Sen

WEST:
MANAGER: Shubhadeep Sen

EAST:
MANAGER: Sudhir Kumar Arora

MARKETING & ALLIANCES
(marketing@cybermedia.co.in)
SR. VP & GROUP HEAD: Rachna Garga
MANAGER MARKETING: Rajiv Pathak

OPERATIONS, EVENTS & COMMUNITIES
SR. VP & GROUP HEAD: Rachna Garga
GENERAL MANAGER: CP Kalra
MANAGER, MIS & DATABASE: Ravi Kant Kumar
MANAGER: Ashok Kumar

CIRCULATION & SUBSCRIPTIONS
SR. VP & GROUP HEAD: Rachna Garga
SR. MANAGER: Sarita Shridhar
ASST. MANAGER: Alok Saxena
SR. PRESS CO-ORDINATOR: Harak Singh Ramola
CHENNAI: C Ramachandran

For subscription queries contact:
rsepcq@cybermedia.co.in

Send all your tech questions to:
pcquest@cybermedia.co.in

http://twitter.com/pcquest
http://facebook.com/pcquest
http://linkd.in/pcquest
http://gplus.to/pcquest

EXPLORE


p10

PCQ ENTERPRISE CHOICE AWARD 2021

Presenting the Top Enterprise Brands

CORPORATE OFFICE: Cyber House, B-35, Sec-32, Gurugram (NCR Delhi) 122001. India
email us pcquest@cybermedia.co.in
call us +91-124-482-2222, **fax us** +91-124-238-0694

OUR OFFICES

BENGALURU: Address: 205-207, Sree Complex (Opp. RBANMS Ground), # 73, St John's Road, Bangaluru - 560 042. Tel: +91 (80) 4341 2000, Fax: +91 (80) 2350 7971

MUMBAI: Address: 404 Trade Square, Mehra Industries Compound Safed Pool,, Sakinaka, Andheri East, Mumbai – 400072. Mobile: 9969424024

DELHI: Address: Cyber House, B-35, Sec 32, Gurugram, NCR Delhi-122001. Tel: 0124-4822222, Fax: 2380694

Printed and published by Pradeep Gupta on behalf of CyberMedia (India) Ltd, printed at printed at M/s Archna Printers, D-127, Okhla Industrial Area, Phase-1, New Delhi, published from D-74, Panchsheel Enclave, New Delhi-110017. Editor: Sunil Rajguru. Distributed in India by IBH Books & Magazines Dist. Pvt. Ltd, Mumbai. All rights reserved. No part of this publication may be reproduced by any means without prior permission.

NEW

#PCQuestTroubleShoot
p6

EXPLORE

35 Years of Computing: A Brief Timeline
p56

PCQ ENTERPRISE CHOICE AWARD 2021

Commercial PC
p12
Dell, and HP continue to lead he Commercial Desktop market

Commercial Laptop
p16
HP wins the Commercial Laptop race against Dell

Server
p22
Dell leads the Server space

NAS
p26
NetApp wins the NAS race

Software-Defined Storage
p30
Dell EMC sweeps the board in Software-Defined storage

Cloud-Based Storage
p34
From SDS to cloud-based storage, Dell EMC maintains its lead

Virtualization
p38
VMware rules the virtualization game

Networking Products
p42
Cisco dominates the enterprise networking space

Security Solutions
p46
McAfee wins the customer trust

Data Centre Service Provider
p50
Tata Comm wins hands down in the Data Centre space

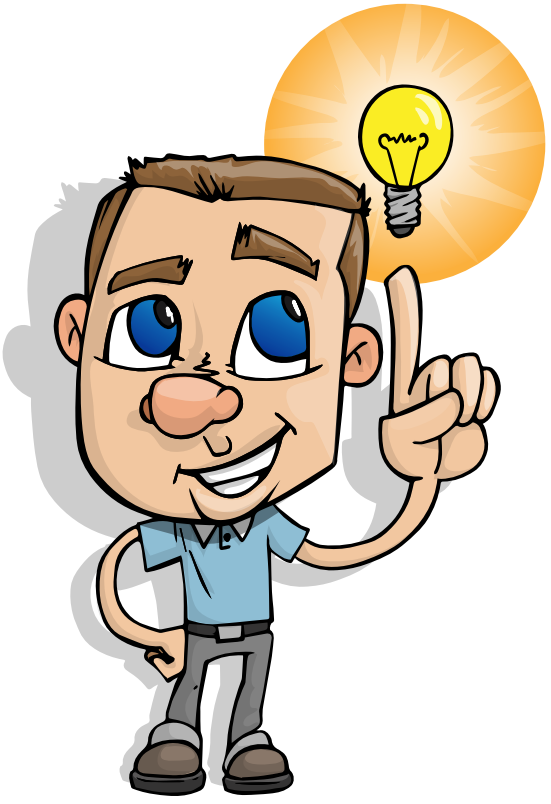
HEALTH TECH
p58
Simulation is a gamechanger for Medical Devices industry

AR/VR
p62
How AR and VR are transforming the Automobile Industry

DEVOPS
p66
Heart of the Platform Customer raceablity and Observability

SECURITY
p69
5 misconfigurations that make active directory a target for cybercriminals

SKILLING
p72
How to make a career in Data Science and Analytics



#PCQuestTroubleShoot

ashokpa@cybermedia.co.in

I'm an architecture student and having lightweight editing and rendering (AutoCAD, photoshop, rhino). What will be a good hardware combination for me?

Suvajit Majumder

As an architecture student, you should opt for a laptop with an Intel Core i5 or higher CPU coupled with at least 16 GB RAM, dedicated graphics, and an SSD. Such a configuration will be able to handle graphics-intensive applications like 3DS Max, Sketchup, Archicad, Autocad, Photoshop, etc.

As you are a professional, you should also consider security features to protect your PC against evolving malware threats, so it's recommended to buy a business laptop that comes with in-built security features.

Ashok Pandey, CyberMedia Labs

Which one is the best printer for home, required for assignment work of my kid and normal office use?

Pratik Zankat

Ink tank series of multi-function printers would be a better choice. You can choose Epson or HP Inktank printers as per your budget.

My recommendation would be HP Smart Tank 500 All-in-One. It costs around 12k and is a good option for home users. It can print up to 11 ppm black and 5 ppm colour. It comes with a 100 sheet tray so no need to fill a page every time. You can scan images with a scan resolution of up to 1200 dpi. With its Ink tank technology, you can easily refill the colours without any help of an expert. The best part is that the cost per print in these printers is much lower than traditional inkjet printers.

Ashok Pandey, CyberMedia Labs

What is the best all-in-one A3 color laser printer?

Rahul Biswas

I recommend to look at HP LaserJet Enterprise flow MFP M830z. This is an all in one laser printer with wireless connectivity and various productivity features like two-sided scanning, wireless direct printing and touch-to-print technology.



The printer is easy to use allowing you to print, scan or copy from it. It has HP EveryPage technology that detects potential errors or missed pages on the spot. It will save your time by capturing documents faster with two-sided, single-pass scanning.

The A3 printer has print speeds of up to 56 ppm (black) along with Automatic document feeder (ADF) to speed up the jobs. You can interact with it directly using the touchscreen. The printer costs Rs 6,96,730.

Ashok Pandey, CyberMedia Labs

Focused Digital Campaigns...

PCQUEST

VOICE&DATA

DATAQUEST

DQ Channels

CIOL

"IN THE MIDDLE OF DIFFICULTY LIES OPPORTUNITY"

Enable your business in this challenging time with CyberMedia digital offering...

We ENGAGE with your AUDIENCE

Large Enterprise / Medium Enterprise / Small And Medium / Channel Eco-System / Start-up / Developer / End Cosumers / Gaming Community

HOW TO BETTER A DIGITAL BRAND STRATEGY

- Branding
- Response Generation
- Webinar
- Virtual Round Table
- Custom Program
- Virtual Event

Create a successful brand focused campaigns with :

Harminder Singh, Associate Vice President - Online Expert, harminders@cybermedia.co.in



Sunil Rajguru
✉ sunilr@cybermedia.co.in

Now the enterprise speaks

Presenting Part 1 of the survey

In February this year we revived the PCQ User Choice Awards. You can check it in the online archives at www.pcquest.com. It is the most comprehensive study of what actual users think of devices and it will

help you choose all the best devices from the point of view of key usage alone. That Consumer survey covered as many as 10,000 users all across the country.

Now we move on to the Enterprise Choice Awards which are more difficult to conduct and probably more relevant from the business point of view. We have covered 2,010 enterprises, no mean feat. They are spread over all the major verticals such as Manufacturing, BFSI, IT/ITeS, Education, Healthcare, Retail, Media, FMCG etc. When it came to the brands, things like spontaneous awareness, current usage and future consideration were looked into.

We started with about 20 categories and that's why we have divided this survey across two issues of PCQuest: Part 1 in August (this issue), and Part 2 in the September one.

The world was already on the road to Digital Transformation when the Covid Era introduced techceleration (tech acceleration). That has affected every enterprise right from the very small to the very big. Now you simply cannot escape the digital bandwagon and have to embrace it fully.

There is a great deal of difference between the needs of the enterprise and that of the common consumer. While in the consumer space, we totally love our mobiles and find them indispensable, desktops and laptops still rule in the business space. Things like storage, networking and virtualization are key components of the modern enterprise. Cybersecurity is another issue which is becoming more important with each passing day.

While the new businesses are increasingly becoming cloud native, old businesses have had to scramble on to the cloud to stay relevant. Data Centers are mushrooming all over the world, getting larger and larger. The CIOs plate was already filled in the past and now it is simply overflowing.

The 2020s could be a make it decade for India. China's domestic consumption is on the decline, their global supply chains have become suspect and the government has started a crackdown on tech giants. Of greater worry is China's ageing population and by the end of this decade India will have the largest working population in the world.

Here's hoping that you find this survey useful and the Indian enterprise rises and becomes a global leader.

Also a reminder as PCQ has entered its 35th Year, please do Tweet us your memories and stories at our handle @pcquest with the hashtag #PCQ35Years.

Sunil Rajguru

PCQuest 35th Year
A Great Era for Technology

The first official edition of PCQuest was launched in July 1987, and this July we have officially entered our 35th Year.

In the last few decades, PCQuest has been a pioneering figure informing our readers and guiding the industry.



GRAB YOUR COPY TODAY

FOLLOW US FOR LATEST TECH NEWS & TRENDS:

@pcquest | @pcquest | pcquest

For partnership & alliances: Write to

Rajiv Pathak | rajivp@cybermedia.co.in | +91 8010757100

PCQ Enterprise Choice Awards 2021: Presenting the Top Enterprise Brands

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest
pcquest@cybermedia.co.in



We are back with our Enterprise Choice Awards 2021. The enterprise product survey, the largest of its kind in India undertaken by CyberMedia Research (CMR), covering as many as 2,010 enterprises

The Enterprise Choice Awards, as the name suggests, is a survey to determine the products that enterprises have bought and are likely to buy in the future. We have covered 2,010 enterprises spread over all major verticals such as Manufacturing, BFSI, IT / ITeS, Education, Healthcare, Retail, Media, FMCG etc.

EMPLOYEE SIZE OF ENTERPRISES	
< 100	197
100 - 250	254
250 - 500	272
500 - 1000	319
1000 - 2000	219
2000 - 5000	297
> 5000	452
Total	**2010**

We present a comprehensive analysis of awareness and usage of various brands with their reasons, future preferences, and the familiarity index. Check out the winners in each of the 10 categories and the reasons to understand why they came out on top.

Survey Methodology

The survey questionnaire sought information on the following dimensions.

Spontaneous awareness: It is the percentage of users who could recall different brands spontaneously when asked about awareness of brands in a particular product category.

Current usage: It is the percentage of users who primarily use any particular brand.

Future consideration: It is the percentage of users who would consider any particular brand at the time of their next purchase.

Dimensions	Weights
Awareness	30%
Usage	30%
Future Consideration	40%

The value of each parameter was standardised to represent all the parameters in one scale. The average weighted score of all the parameters was calculated to derive the Familiarity Index of all the brands in each category.

Awards Categories

The survey was conducted to identify the top brands across 20 different categories. Based on the survey, the winners have been declared. ■



Dell, and HP continue to lead the Commercial Desktop market

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



For citation details and process kindly connect with rajivp@cybermedia.co.in

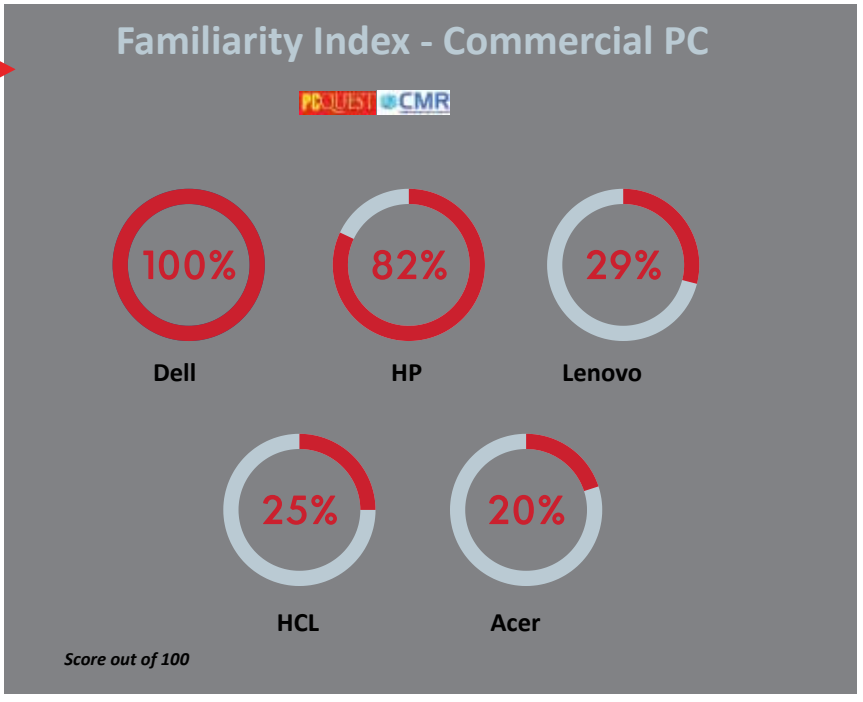
Two in every three users would like to consider Dell while buying their next Commercial PC

When we came up with PCQuest Users' Choice Awards in the month of February this year, HP was dominating (first place) the laptop segment, followed by Dell (second place). This time the story is the same with a little twist – both brands has exchanged their places – Dell is dominating commercial PC segment followed by HP (1st runner-up) and Lenovo (2nd runner-up). Dell grabbed the winner's spot in almost every aspect. The brand was loved by most of the professionals.

Though, professionals prefer to have a lightweight machine to carry along, yet most of the professionals prefer desktop PCs over laptops. Reasons could differ, a few might choose desktops for the ultimate computing power, while others for better expandability. One can also consider a commercial desktop for matched or better performance, at significantly lesser price.

In the Familiarity Index, Dell was the winner followed by its very close competitor HP. Lenovo grabbed the third spot followed by HCL and Acer. Amazingly HCL is still being recognized even after not producing any PC for the last couple of years. This shows, professionals who had HCL devices have been still using them and kind of happy with the performance.

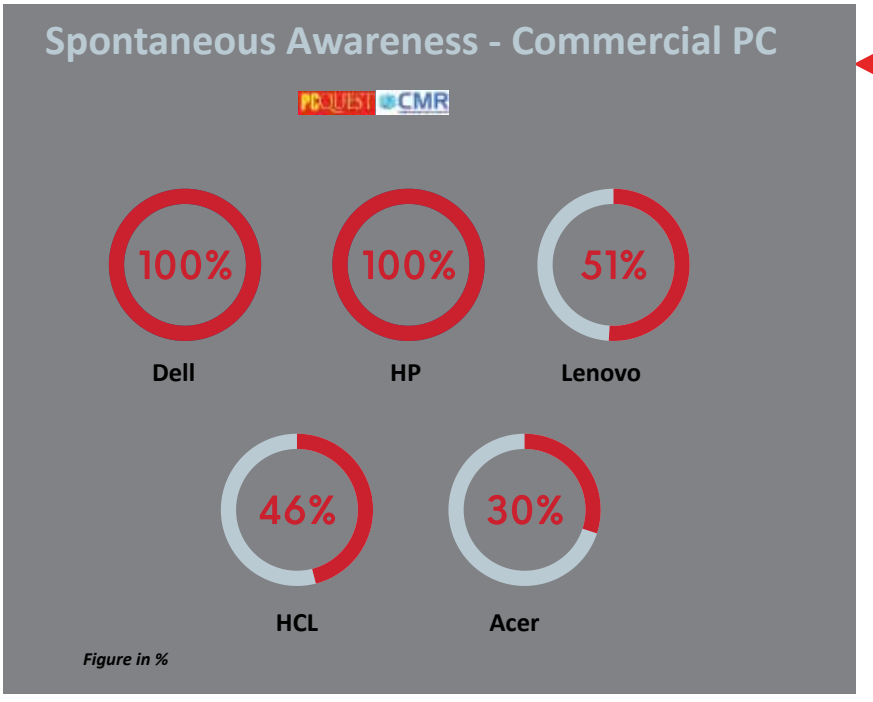






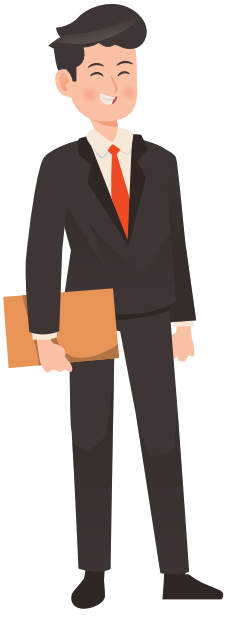
All the users could spontaneously recall Dell and HP

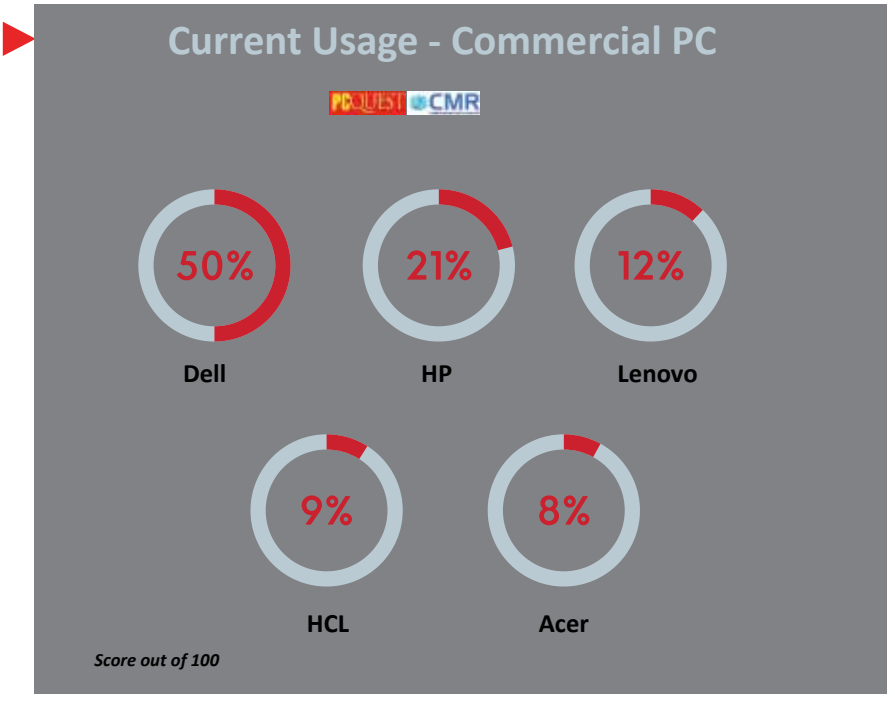
In the Spontaneous Awareness of the brands, Dell and HP both were on top with a score of 100. Lenovo was far behind with a score of 51, followed by HCL with a score of 46 and Acer with a score of 30.



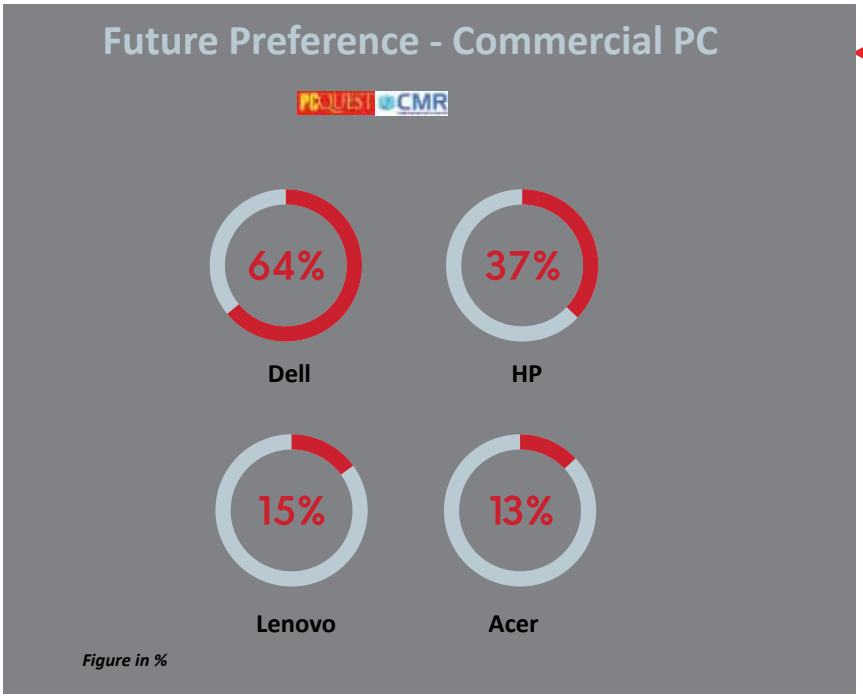


Current Usage of brands will give you a fair idea about the market captured by these brands. When we asked about the current commercial PC brand they are using, Dell scored the highest - 50. HP achieved the next spot with a score of 21 followed by Lenovo with a score of 12, HCL with a score of 9 and Acer with a score of 8.





But who is likely to grab the market in the future? The answer is Dell again with the highest score of 64. This means, professionals who are using Dell will surely continue with their existing brand (remember the current usage score of Dell, i.e. 50), plus it will steal some of the other brand users as well. HP will also likely to gain in future with a score of 37, followed by Lenovo with a score of 15 and Acer with a score of 13.





When we asked the commercial PC users about the reason for choosing their current brand, Dell and HP both impressed users with their brand name and quality, while Lenovo and Acer were preferred for their after sales support / service and HCL for price.

Reasons for Using Current Commercial PC

	Dell	HP	Lenovo	HCL	Acer
Brand Name					
Quality of Product					
Initial Price					
After Sales Support / Service					

High

Illustration by Nadeem Anees

HP wins the Commercial Laptop race against Dell

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



For citation details and process kindly connect with rajivp@cybermedia.co.in

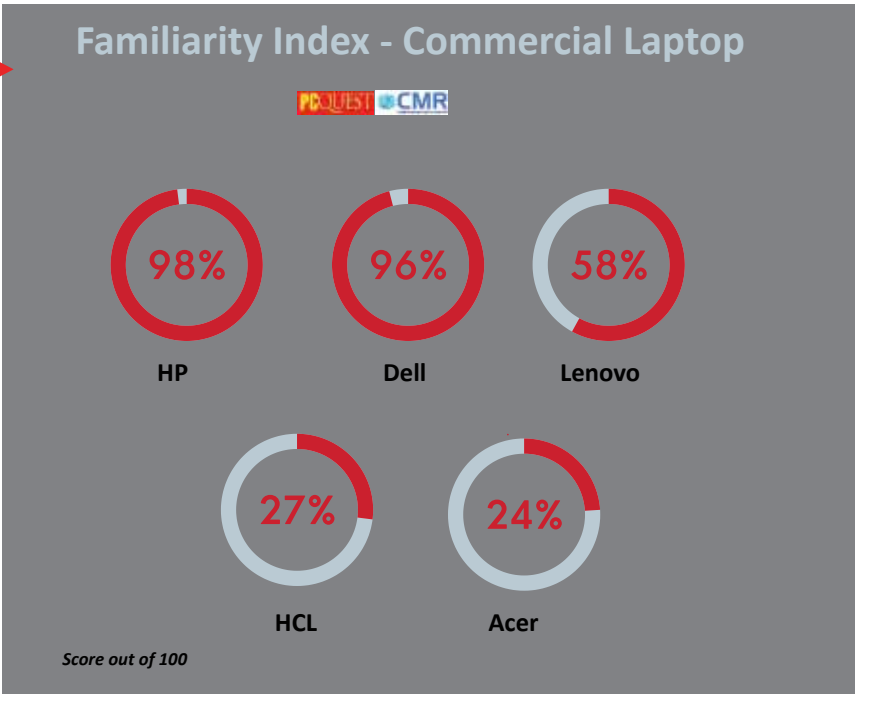
Brand name as well as the quality of product are the most important factors while selecting any brand of Commercial Laptop

The story got reversed this time with HP emerging as the winner in the commercial laptop segment. Dell grabbed 1st runner-up spot followed by Lenovo. Both the brands exchanged their places when compared to the Users' choice awards. In the desktop PC segment, HP was the winner and Dell was the winner in the laptop segment. But in the Enterprise choice awards, HP won the laptop category and Dell won the desktop category.

Due to the pandemic, most of the professionals have been working from home making them move to a powerful yet portable PC. The laptop sales have grown in the past two years, and commercial PCs have become more secure with numerous security features and added hardware.

In the Familiarity Index, HP grabbed the winner spot with a score of 98, however, Dell was not far behind also with a score of 96. Lenovo trailed behind and grabbed the third spot with a score of 58, followed by HCL a score of 27 and Acer a score of 24.

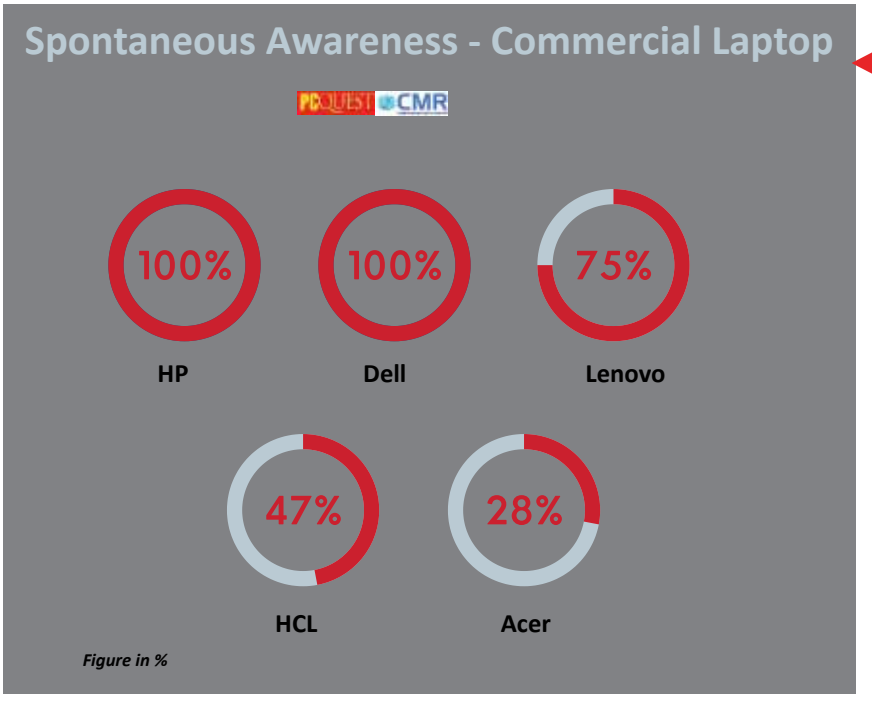






Three in every five users would consider HP while buying their next Commercial Laptop

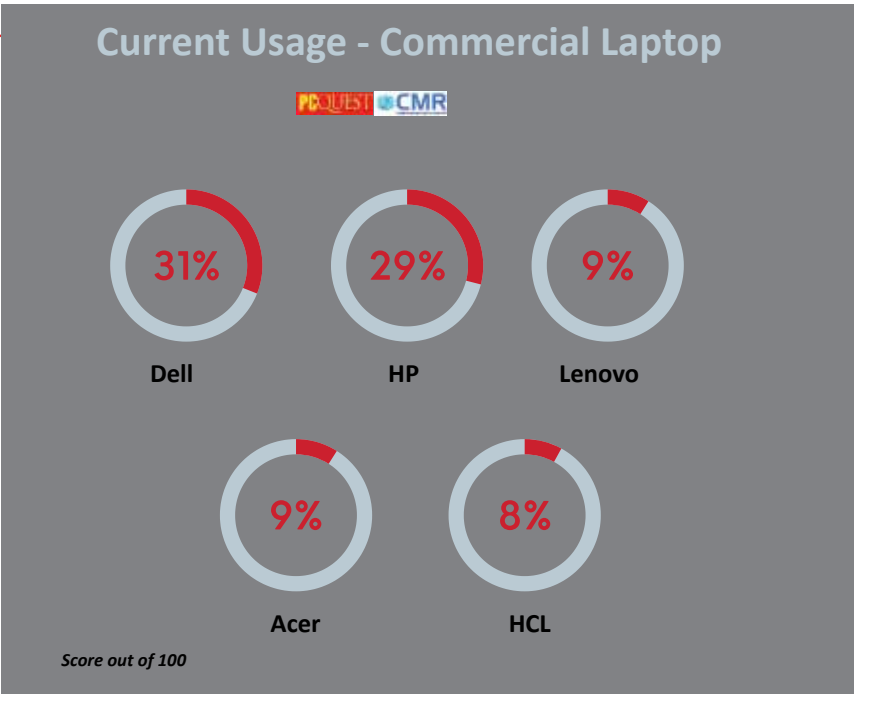
The story is no different in the Commercial laptop category also, as Dell and HP both were on top in the Spontaneous Awareness of brands with a score of 100, followed by Lenovo with a score of 75, HCL with a score of 47 and Acer with a score of 28.



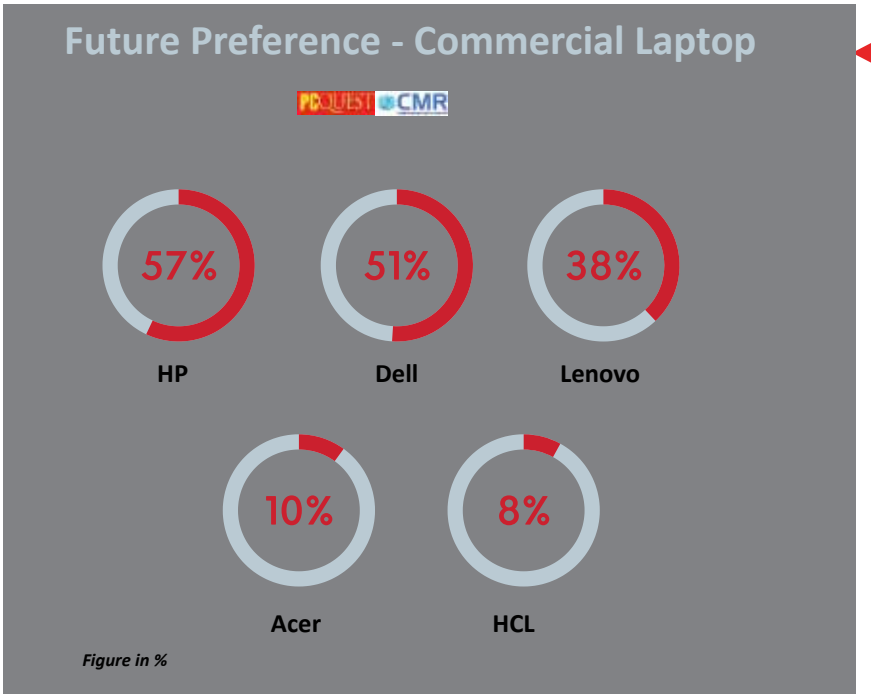


At least 31 per cent of our survey respondents are using Dell laptops. Although HP is the overall winner, 29 per cent of the respondents have been using HP laptops. The story of Dell and HP gets repeated once again here. Like the Users' Choice Awards, Dell and HP scored 31 and 29 respectively in the Enterprise Choice also. However, Lenovo's score of 19 from the Users' Choice fell to 9 sharing the score with Acer followed by HCL with a score of 8.





So who is likely to grab the market in the future? HP stands strong with a score of 57. Here's a slight worry for Dell- although the existing user base of HP is less, but more professionals are interested in buying HP laptops in the future. In the commercial PC segment, Dell has a strong-hold, but in the laptop segment HP is gaining. Dell scored 51 in the Future Preference, followed by Lenovo with a score of 38, Acer with a score of 10 and HCL with a score of 8.





When we asked the commercial laptop users about the reason for choosing their existing brand, Dell and HP both impressed with their brand name and quality again. While Lenovo and Acer were mostly preferred for their after sales support / service and HCL for price.

Reasons for Using Current Commercial Laptop

	HP	Dell	Lenovo	HCL	Acer
Brand Name	High	High			
Quality of Product	High	High			
Initial Price				High	
After Sales Support / Service			High		High

High

Illustration by Nadeem Anees

DATAQUEST DIGITAL LEADERSHIP CONCLAVE

28th ICT BUSINESS AWARDS

CyberMedia

New World Order

Time for Tech to Shine

Friday, 23 July 2021 | 9:30 – 5:30 PM

#ictawards

Watch on Demand

@Dataquest_India

https://shorturl.at/giDE3

Team Dataquest thanks speakers, panellist, delegates and partners for making Dataquest Digital Leadership Conclave & 28th edition ICT Awards a stellar success

10	26	33	1K+	23	3	510	5K+
Sessions	Topics	Speakers	Attendees	CIO Awards	Jury Leadership	minutes of unique content	Engagements

The Digital Imprint of the Vaccination Program



Dr. R S Sharma, National Health Authority

Dynamics of the new world order



Ajai Chowdhry, Founder, HCL

Digital Life & Society



Rajen Vagadia, Qualcomm India & SAARC

Digitisation – a catalyst in transforming society.



Samar Mittal, Nokia

Deep Tech Mission Critical Innovations



Debjani Ghosh, NASSCOM

Digital Acceleration



Palash Nandy, Numeric

Digital Identity suitable to Digital Entrepreneurs in India



Anil Jain, NIXI

Digital Life & Society



Meena Ganesh	UB Desai	Rajendra S Pawar	Sukanta Dey
Portea	IIT Hyderabad	NIIT	Sdela Consulting

Digital Enterprise



Bimal Khandelwal
STT GDC India

Kapil Mahajan
Safexpress

Anil Chopra
CMR



Harnath Babu
KPMG

Umesh Mehta
Jubiliant Lifesciences

Preparing for the 3rd Wave of COVID



Pradeep Gupta
CyberMedia Group

Vipul Singh
Aarav Unmanned Systems

Prakash Kumar
Wadhwani Institute of Technology & Policy



Arun Karna
AT&T

Amit Sinha Roy
Tata Communications

New World Order: Time for Tech to Shine



Som Mittal
NASSCOM

Sameer Garde
Cisco India and SAARC

Rajesh Gopinathan
TCS

Sunil Vachani
Dixon Technologies

Leaders' Talk



Arun Seth
Nasscom Foundation

Dr. Devi Prasad Shetty
Narayana Health

Digital Economy



Neeta Verma
NIC

Sukanta Dey
Sdela Consulting

Golok K Simili
Ministry of External Affairs



Vinish Bawa
Nokia

Yugal Kishore Sharma
One Broadband

NOKIA — Technology

STTelemedia Global Data Centres — Gold

NIXI National Internet Exchange of India — Internet

NIIT — Training

NUMERIC A Group brand legrand — Power

APEEJAY EDUCATION — Academia

IESA Taking India to ESDM Leadership — Associate

CMR Insights powered by research — Research

confex — Platform

Contact us for the post event coverage & reports

Rajiv Pathak, Manager Marketing | rajivp@cybermedia.co.in | +91 8010757100

Dell leads the Server space

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



For citation details and process kindly connect with rajivp@cybermedia.co.in

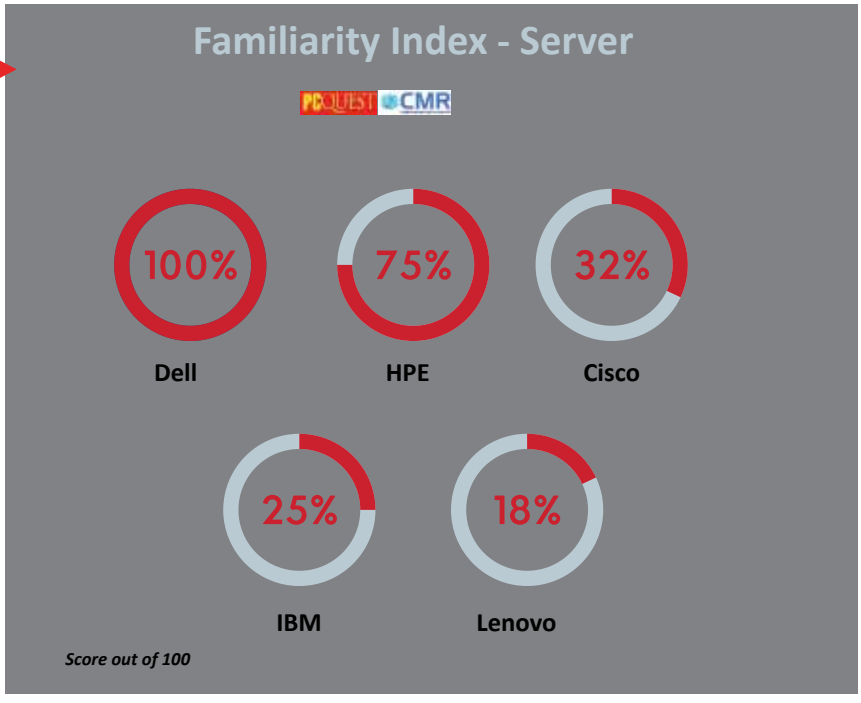
After sales service is considered as an important criterion for investing in any brand of Server than the initial cost of acquisition

The server story is not much different than the commercial PCs with the top two players, Dell and HPE, dominating the server market by grabbing the two top spots, followed by Cisco in the third spot.

As per IDC, the overall server market in India witnessed a 33.8 per cent YoY increase in terms of revenue to reach USD 310.6 million in Q1 2021 compared to USD 232.1 million in Q1 2020.

In the Familiarity Index for Server category, we got some interesting results. Dell is clearly the winner with a score of 100. HPE became the 1st runner-up with a score of 75. But the gap between the 1st and the 2nd runner-up is huge. Cisco grabbed the third spot with a score of 32, followed by IBM with a score of 25 and Lenovo with a score of 18.

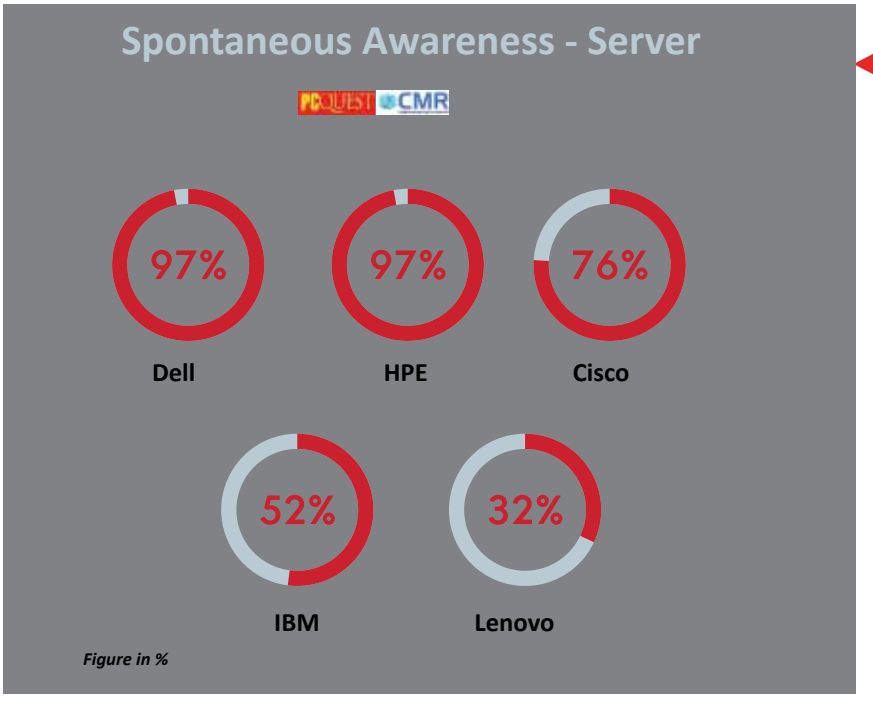






Almost all the users could spontaneously recall Dell and HPE

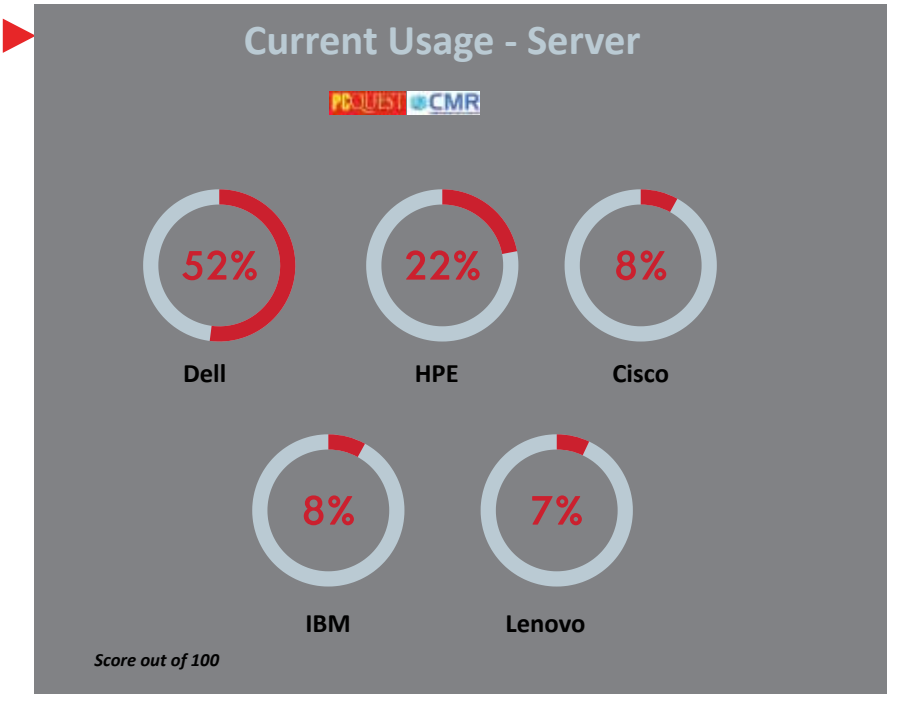
In the Spontaneous Awareness of brands, Dell shared the same score with HPE, i.e. 97 per cent, meaning both the brands have great recognition in the market. Cisco wasn't far behind, with a score of 76 per cent followed by IBM with a score of 52 and Lenovo with a score of 32 per cent.



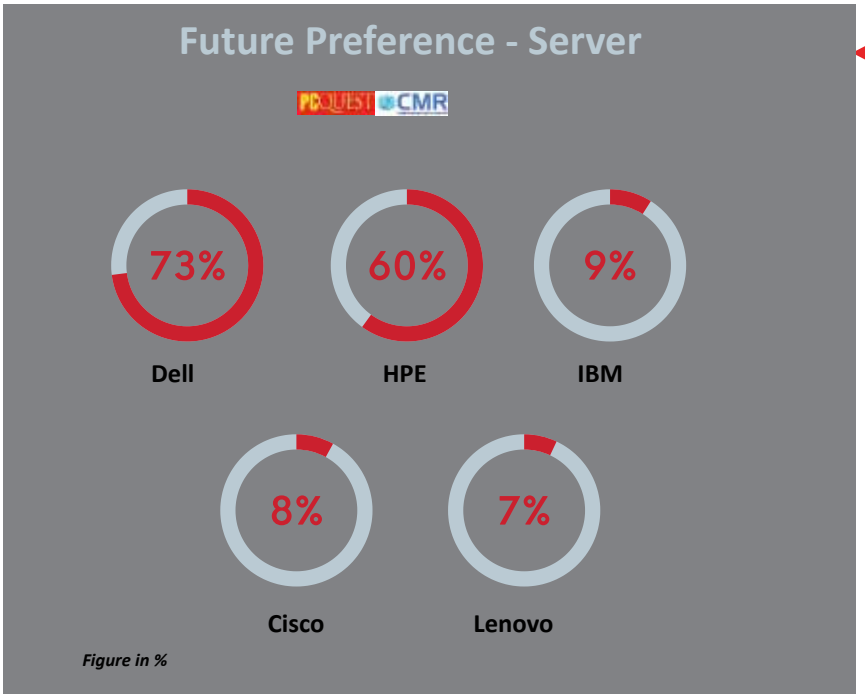


Who is using which brand's server? When we asked enterprises about their existing brand of servers, Dell scored the highest at 56 per cent. HPE got the second spot with a relatively low score of 22 per cent followed by Cisco and IBM sharing the same scores of 8 and Lenovo with a score of 7 per cent.





When we asked about their Future Preference, Dell again got the winner's spot. Dell happens to be a preferred brand of choice among the enterprises with 73 per cent voting for it. HPE also gained interest with the increased score of 60 when compared to the score of 22 it gained in the Current Usage. IBM got the next spot with 9 per cent, followed closely by Cisco with 8 per cent and Lenovo with 7 per cent.





The reason for choosing the brands is varied and interesting. While Dell's brand name and pricing seemed to be more appealing to customers, HPE caught attention for its brand name, and Cisco for its quality and after sales support / service. IBM was chosen for its quality and Lenovo for price.

Reasons for Using Current Server

	Dell	HPE	Cisco	IBM	Lenovo
Brand Name	High	High			
Quality of Product			High	High	
Initial Price	High				High
After Sales Support / Service			High		

High

Illustration by Nadeem Anees

NetApp wins the NAS race

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



For citation details and process kindly connect with rajivp@cybermedia.co.in

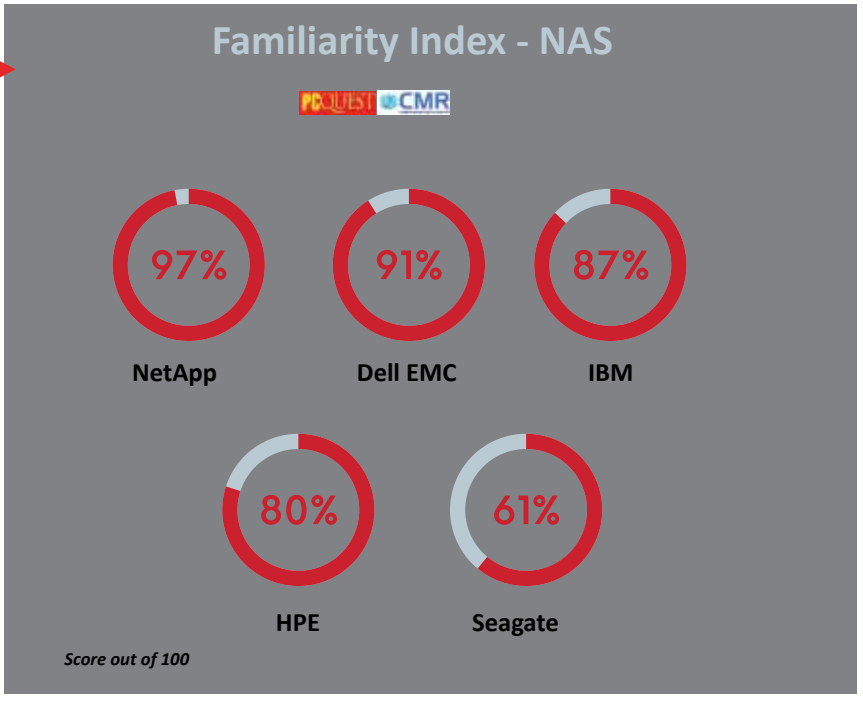
Apart from brand name and the quality of product, initial cost of acquisition and after sales service are equally important while selecting any brand of NAS

Similar to the server category, Network Attached Storage (NAS) market is also projected to grow from USD 23.2 billion in 2020 to USD 48.0 billion by 2025, at a CAGR of 15.7 per cent, according to Markets and Markets Research.

The key factors fueling the growth in the NAS space are the rapid adoption of 4G and 5G technologies. With the increased use of smartphones, laptops, and tablets, as well as the high-volume digital content created by the users are generating enormous volumes of data.

In our survey for NAS, NetApp and Dell were the close competitors. Dell, IBM, PureStorage, WD and Seagate were certainly the popular names, but in our Familiarity Index, the top three were NetApp, Dell, and IBM. NetApp won with a score of 97, followed by Dell with a score of 91 and IBM with a score of 87. In the top five list, HPE and Seagate got the recognition with 80 and 61 per cent scores respectively.

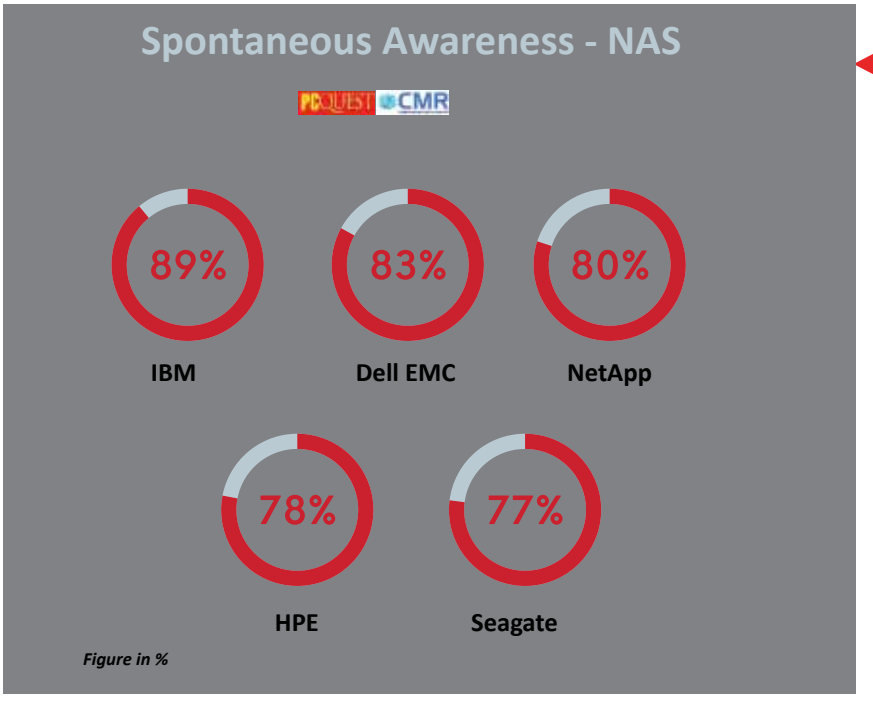






IBM has the highest spontaneous brand recall followed by Dell

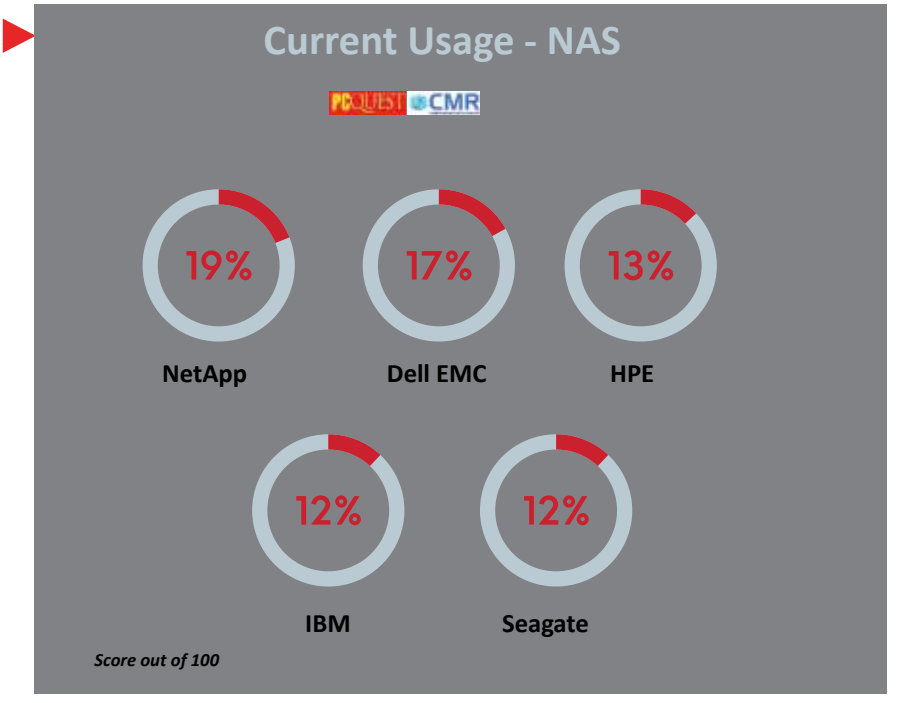
In the Spontaneous Awareness, most of the professionals recalled IBM, as it is in the market for many years and known for its quality products. Dell and NetApp also scored high. Interestingly, the winner of the NAS category has got the third spot in the Spontaneous Awareness followed by HPE and Seagate.



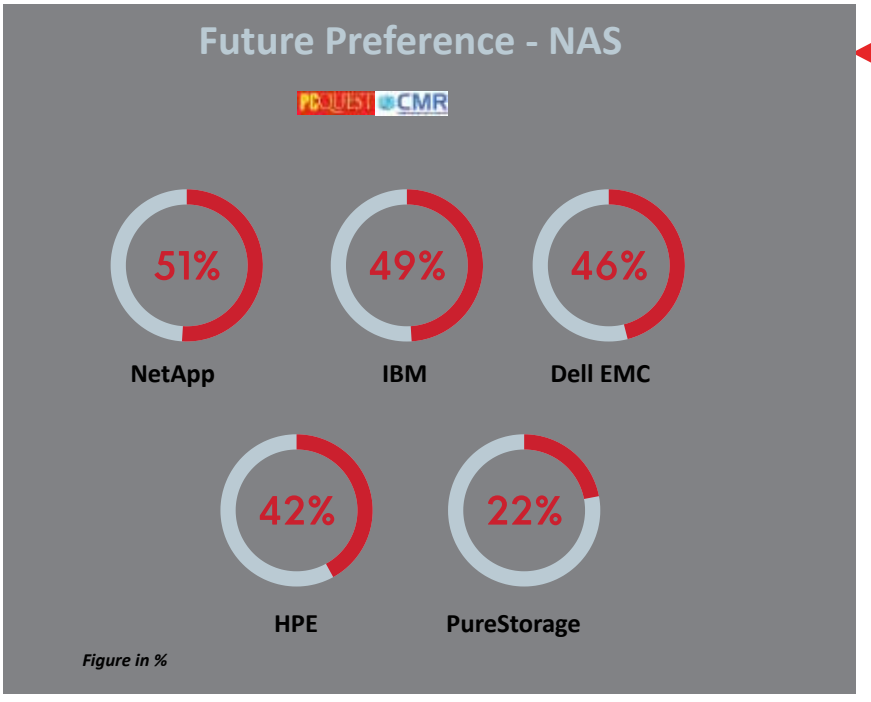


When we asked enterprises which brand's storage they are using currently, NetApp scored the highest, i.e. 19 per cent. Dell got the next spot with a score of 17 per cent, followed by HPE with a score of 13 and IBM and Seagate both scoring 12.





For Future Preference, most professionals were with NetApp closely followed by the competitors like IBM, Dell, and HPE. All the four brands were competing closely with each other, but for the fifth rank had some major gap.





When we asked for the reason for choosing the brand, most of the respondents considered NetApp for its brand name, quality and after sales support / service. Dell was popular for its brand name and quality. IBM recognized for its after sales support / service, HPE for the quality and Seagate for its price.

Reasons for Using Current NAS

	NetApp	Dell	IBM	HPE	Seagate
Brand Name					
Quality of Product					
Initial Price					
After Sales Support / Service					

High

Illustration by Nadeem Anees

Dell EMC sweeps the board in Software-Defined Storage

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



For citation details and process kindly connect with rajivp@cybermedia.co.in

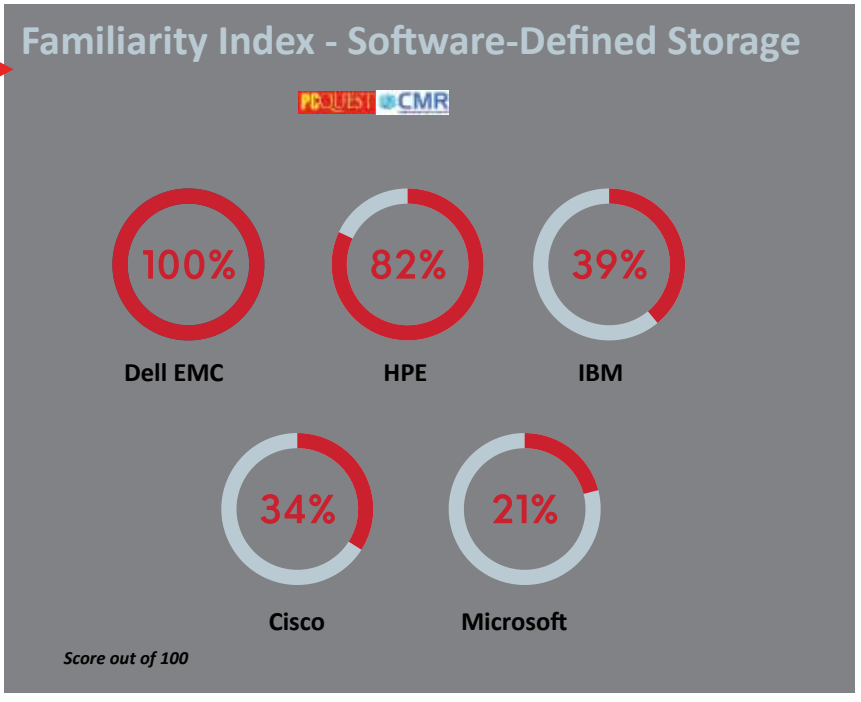
Dell EMC not only rules in the current usage segment, but scores higher in the future preference also

Software-defined storage (SDS) isn't meant only for data storage, it's also paired with programmability which enables storage to adapt to new demands rapidly. When administered correctly, this model increases performance, availability, and efficiency.

As vendors expand their SDS product offerings, the SDS market is expected to register 28 per cent growth through 2019 to 2023, according to Omdia. The SDS market has potential for growth simply due to its advantages over traditional storage system both in terms of functionality and cost effectiveness.

Dell EMC ruled the Familiarity Index and became the winner with 100 per cent score. It's closest competitor HPE secured the 1st runner-up place with a score of 82 per cent. There is a huge gap between the scores of the 1st and the 2nd runner-up IBM which scored 39 per cent, followed by Cisco at 34 per cent score and Microsoft at 21 per cent score.

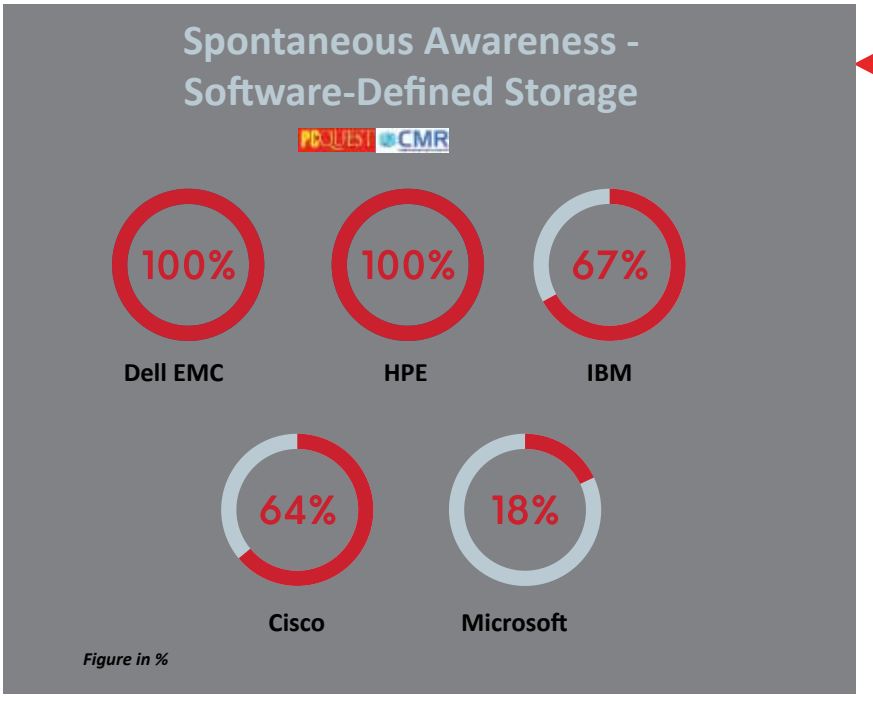






All the users could spontaneously recall Dell EMC and HP as SDS brands

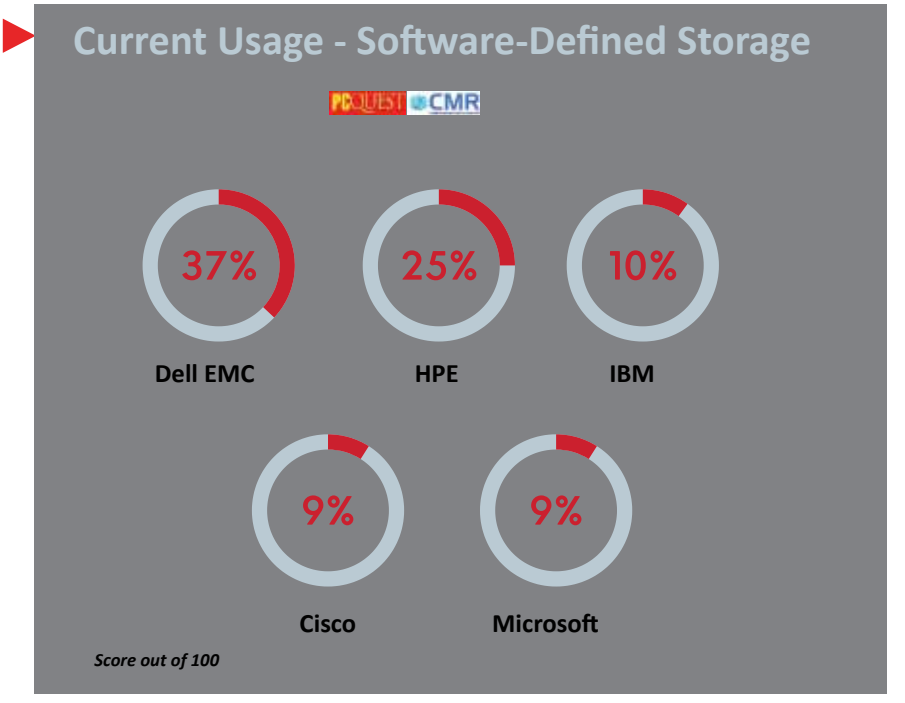
In the Spontaneous Awareness of brands, Dell EMC shared its first spot with HPE with 100 per cent score. This shows that both brands have good value in the market. IBM was in the next spot with 67 per cent score, followed by Cisco with a score of 64 and Microsoft with a score of 18.



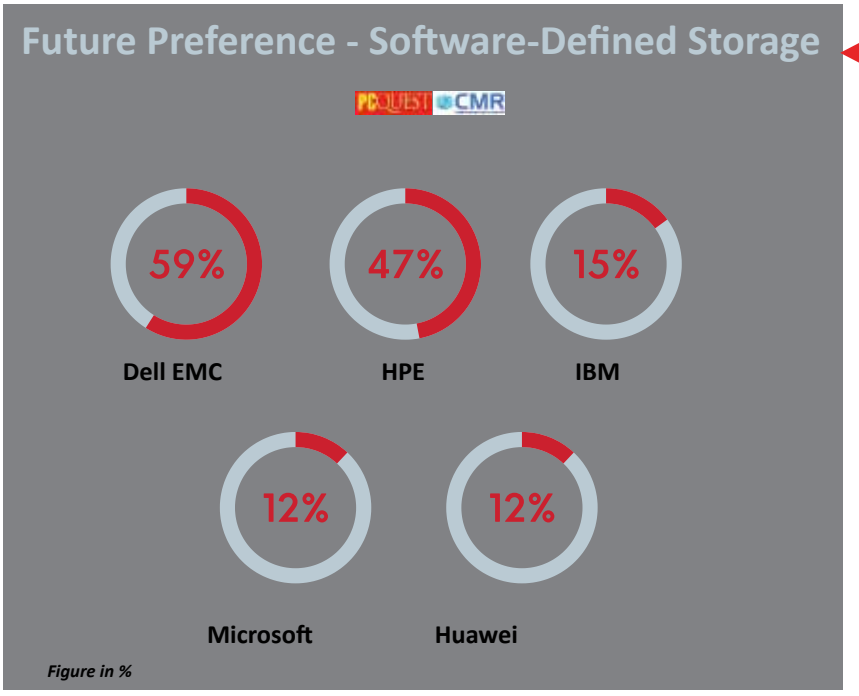


When we asked enterprises about their existing brand, Dell EMC was on the top with a score of 37 per cent. HPE got the second spot with a score of 25 per cent followed by IBM with a score of 10, Cisco and Microsoft with a score of 9 each.





So, who is likely to win in the future? It's likely to be Dell EMC once again, as the existing users said that they would like to consider Dell EMC for the future as well. HPE is also not far behind with a score of 47 per cent. IBM and Microsoft will also be there, however a new entry happens here with Huawei scoring 12 per cent, leaving Cisco at the fifth spot with a score of 11.





Both Dell EMC and HPE were considered for their brand names and for the quality of their products. IBM was popular for its pricing, Cisco for after sales support / service, and Microsoft for the quality of its product.

Reasons for Using Current Software-Defined Storage

	Dell EMC	HPE	IBM	Cisco	Microsoft
Brand Name	High	High			
Quality of Product	High	High			High
Initial Price			High		
After Sales Support / Service				High	

Illustration by Nadeem Anees

From SDS to cloud-based storage, Dell EMC maintains its lead

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



For citation details and process kindly connect with rajivp@cybermedia.co.in

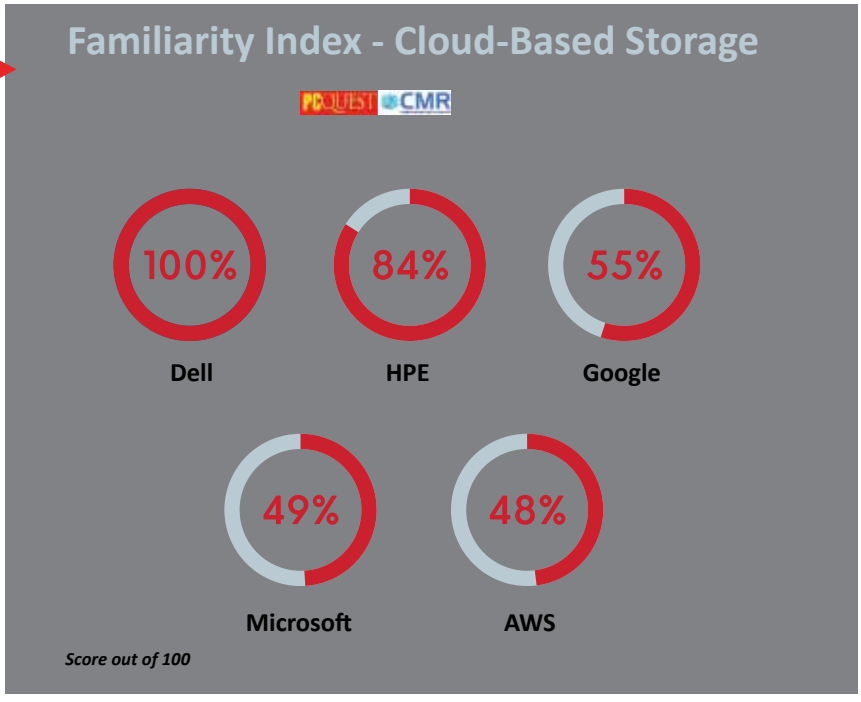
Initial cost of acquisition is more important than after sales service while selecting any brand of Cloud-based Storage

Like Software-defined storage, Dell EMC leads the Cloud-based storage category also, which proves that Dell EMC is the leader in storage space. According to a recent report published on ResearchAndMarkets.com, the Cloud Infrastructure Market is expected to expand at an annual growth rate (CAGR) of ~29.02% during the 2021 - 2025 period to reach INR 1,169.23 Bn by 2025. This again due to adoption of new technologies and requirements pushed by COVID-19.

In the Cloud-based storage category, Dell EMC become the champion brand followed by HPE as the 1st runner-up and Google as the 2nd runner-up.

In our Familiarity Index, Dell EMC scored 100 per cent leaving its competitors far behind. The first runner-up HPE scored 84 followed by Google with a score of 55, Microsoft with a score of 49 and AWS with a score of 48 per cent. Although Dell EMC got tough competition from HPE, but loved by most of the users.

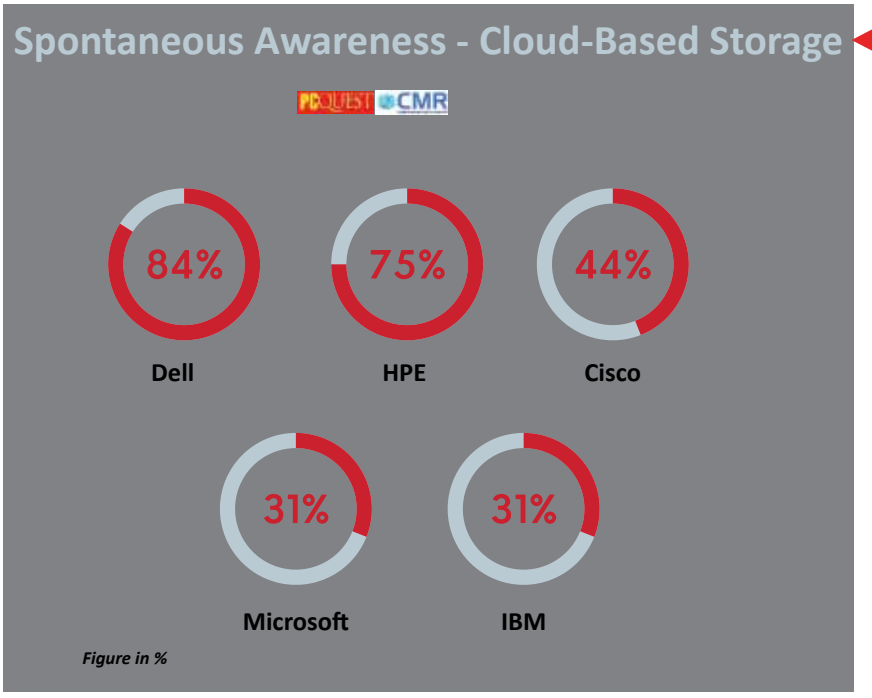






Two in every five users would consider Dell while buying their next Cloud-based Storage

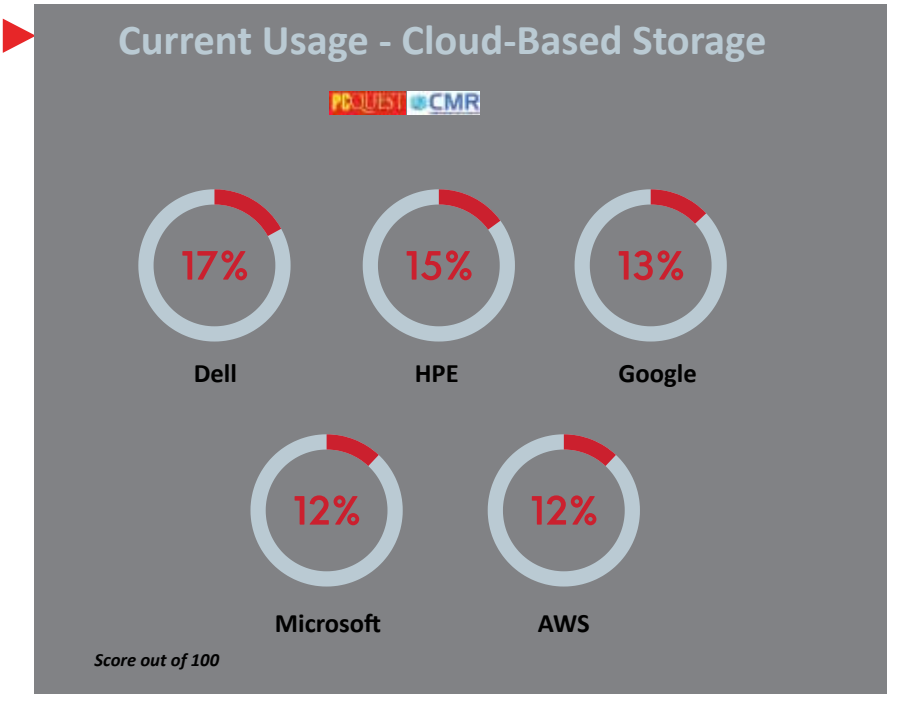
Spontaneously, most of the respondents were able to recall Dell EMC. HPE is the next. Cisco was the third most popular choice followed by Microsoft and IBM. Though in the Familiarity Index, IBM could not make a strong impact and got the seventh rank, but it was among the top five in the Spontaneous Awareness category, as people still recognize IBM for its cloud services.



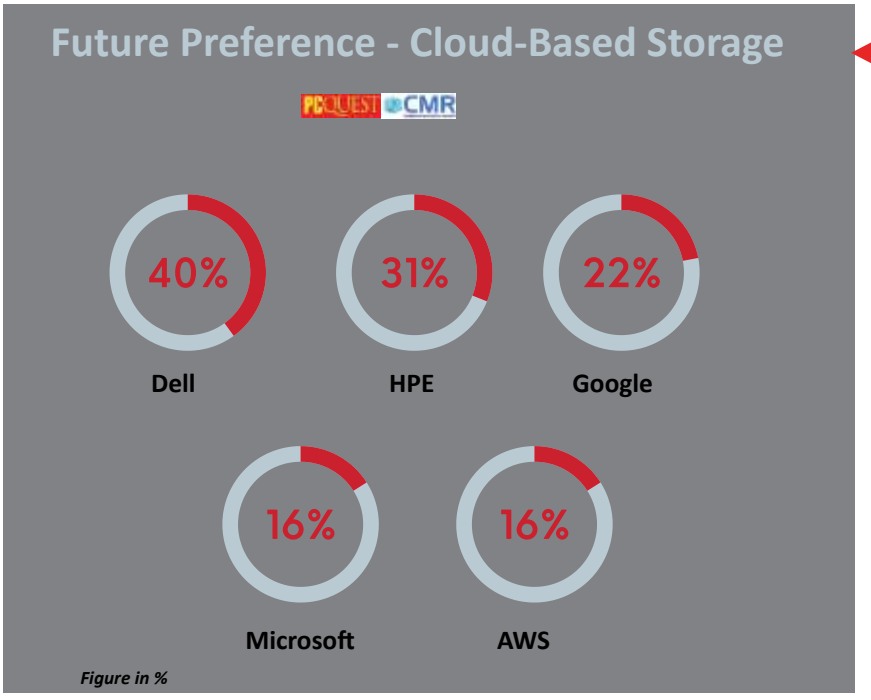


When we asked enterprises which brand's cloud storage they are using, Dell EMC and HPE were quite close in the competition. Google was the 2nd runner-up followed by Microsoft and AWS sharing the same score.





Which brand will rule in the future? Again its Dell EMC, and HPE got the next spot. There will be no major change for both the brands in future, as most existing users will prefer the brand in the future. Google will also have a good hold in the Cloud market, followed by Microsoft and AWS.





Why are Dell and HPE more popular? Well, for their brand value and quality of the product. Google was only recognized for its price. Microsoft attracted professionals for its brand name and price. AWS is also popular for its brand name and after sales support / service.

Reasons for Using Current Cloud-Based Storage

	Dell EMC	HPE	Google	Microsoft	AWS
Brand Name					
Quality of Product					
Initial Price					
After Sales Support / Service					

High

Illustration by Nadeem Anees

VMware rules the virtualization game

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



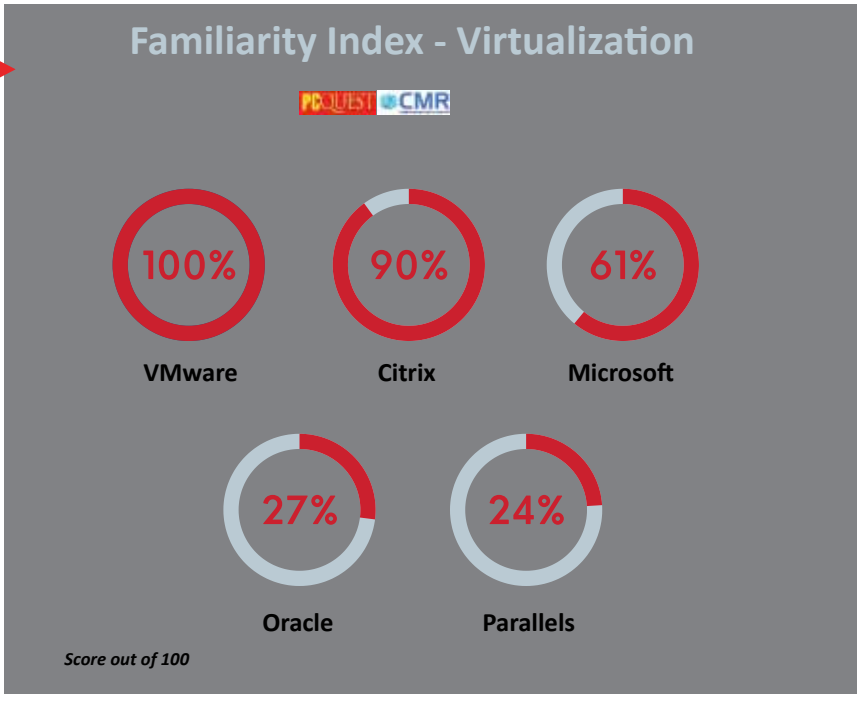
For citation details and process kindly connect with rajivp@cybermedia.co.in

Leaving the top three Virtualization players, a shake-up is likely to happen in the fourth and fifth spots in future

Which brand name comes to your mind when you think of virtualization? I guess you also thought about VMware. It is there since we started thinking of virtualization and that shows in our survey responses as well. VMware sweeped all the segments and became the champion brand in the virtualization category, followed by Citrix and Microsoft.

In our Familiarity Index, VMware grabbed 100 per cent score and became the no 1 choice of the enterprises. This is because of its brand name and most professionals think of VMware when they plan for virtualization. Citrix got the 1st runner-up ranking followed by Microsoft, Oracle, and Parallels.

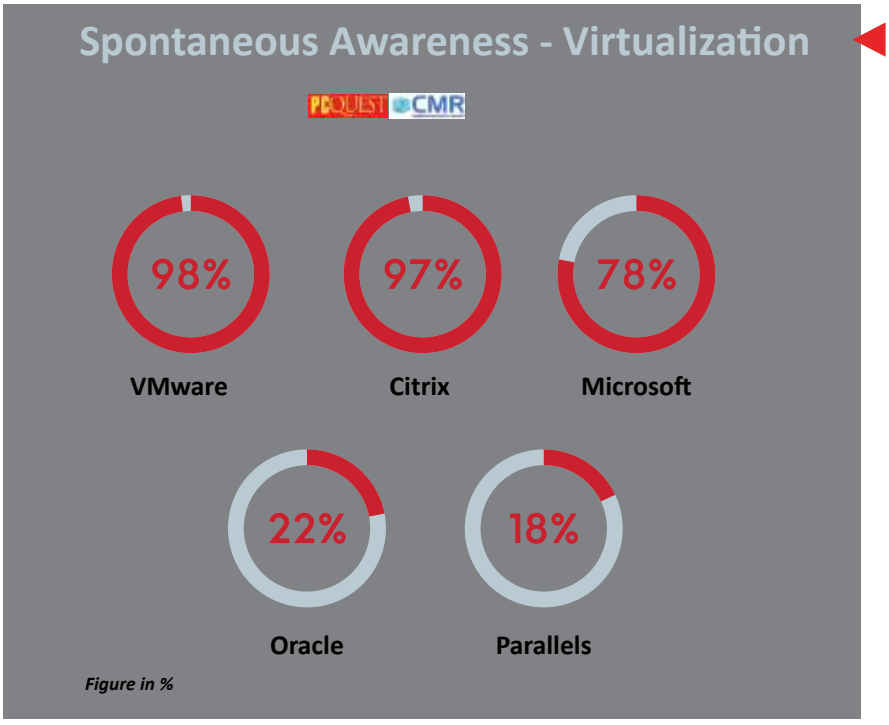






Three in every five users would consider VMware while buying their next Virtualization software

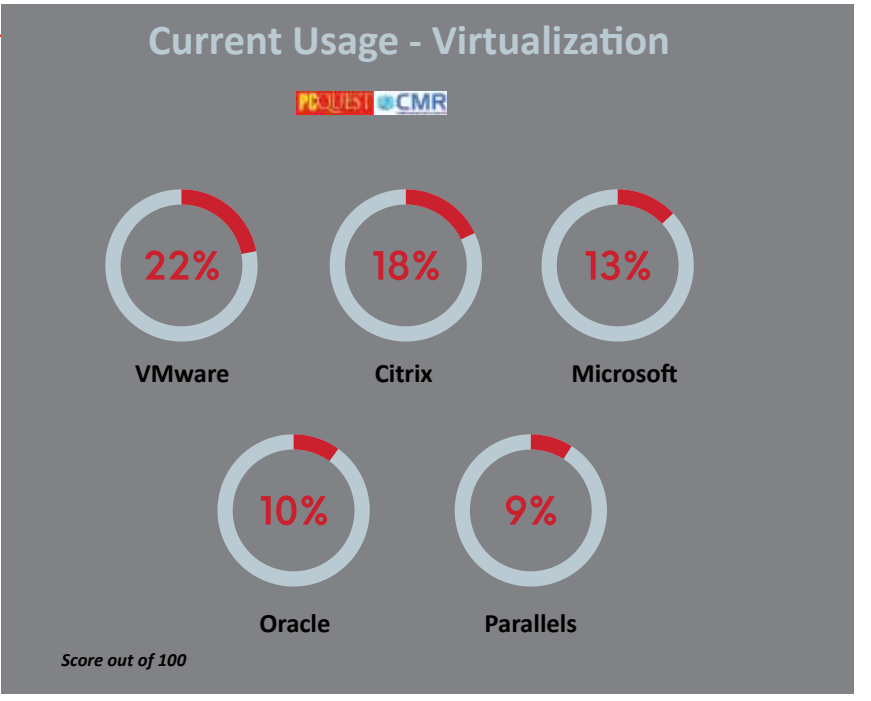
In our Spontaneous Awareness of brand segment, most of the respondents first mentioned VMware, and then Citrix. Microsoft was not far behind from Citrix, but the gap become huge for Oracle and Parallels.



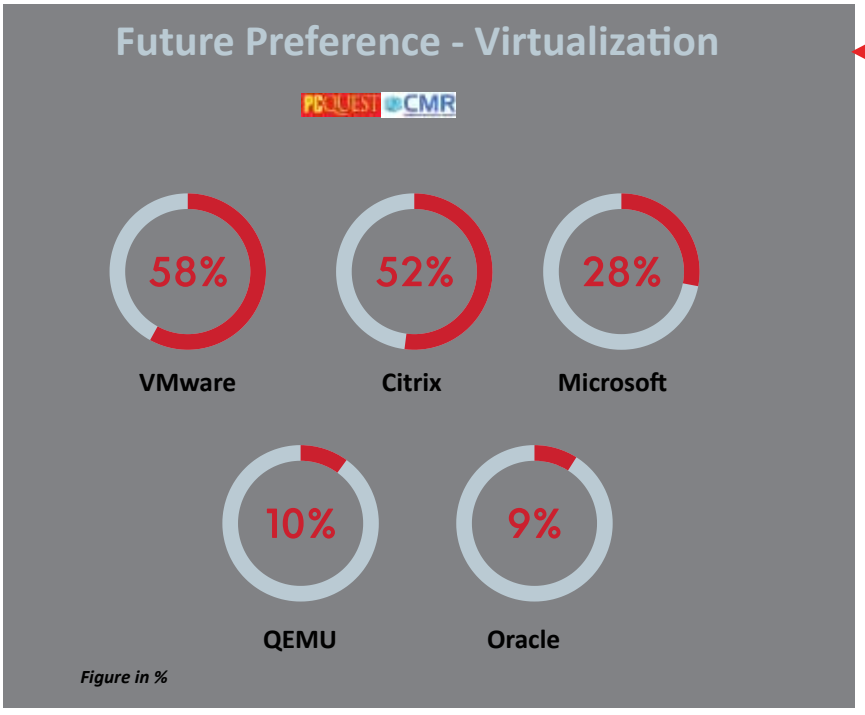


VMware became the champion once again in the Current Usage segment, as most of our respondents are currently using it for their virtualization requirements. Then Citrix is the next preferred choice followed by Microsoft, Oracle, and Parallels.





In the future as well, most of the professionals would prefer VMware. Citrix is the next most popular brand. Microsoft is the third preferred choice followed by the new entrant, QEMU which is a free and open source emulator and virtualizer. Even Oracle came later to QEMU, which was quite unexpected.





Why is VMware the most preferred choice of the users? Brand name and the quality of product seemed more appealing to the users. Citrix is considered for its quality and price. Microsoft was liked for its brand name and Oracle and Parallels for its price.

Reasons for Using Current Virtualization

	VMware	Citrix	Microsoft	Oracle	Parallels
Brand Name					
Quality of Product					
Initial Price					
After Sales Support / Service					

High

Illustration by Nadeem Anees

Cisco dominates the enterprise networking space

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



For citation details and process kindly connect with rajivp@cybermedia.co.in

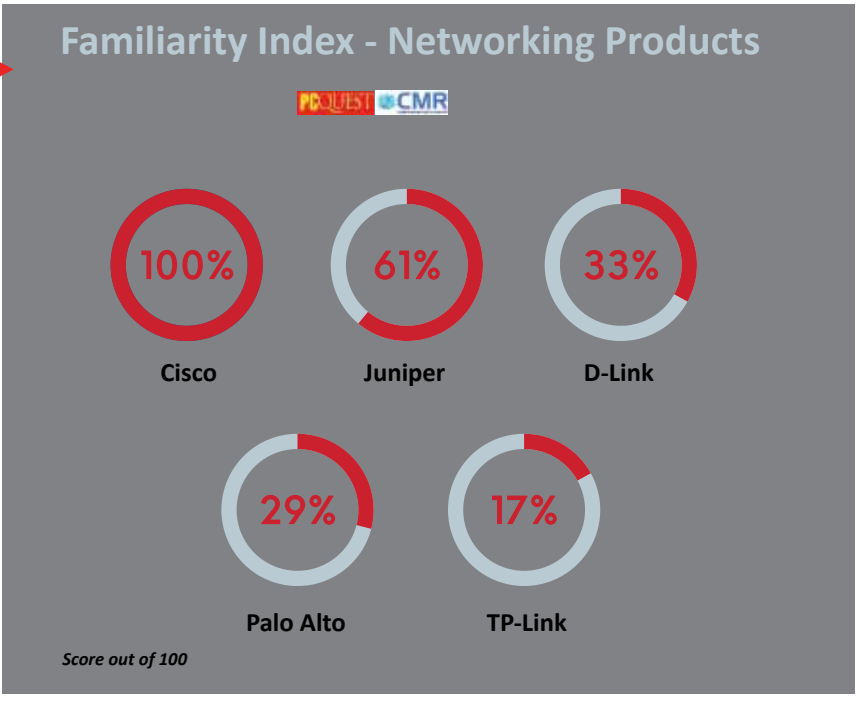
There's a gaping difference between Cisco and its closest competition and it is likely to further widen in future

From small to large enterprises, every business is connected to the internet and moving towards digitisation. But connectivity, wired or wireless, required some bridges, it could be a switch, router, access point, etc. No organization can think of Internet connectivity without these networking products.

Cisco is the champion brand in the networking category. Juniper Networks became the 1st runner-up and D-Link gained the 2nd runner-up spot.

Cisco was a clear winner in the category, sweeping competitors in all the segments. In our Familiarity Index it achieved a 100 per cent score. Juniper gained 61 per cent score, but had a huge gap with Cisco. Similarly, D-Link had a huge gap with Juniper. Seems like Cisco has grabbed the majority market share, followed by Juniper, D-Link, Palo Alto and TP-Link sharing rest of the market with a score of 33, 29 and 17 per cent respectively.

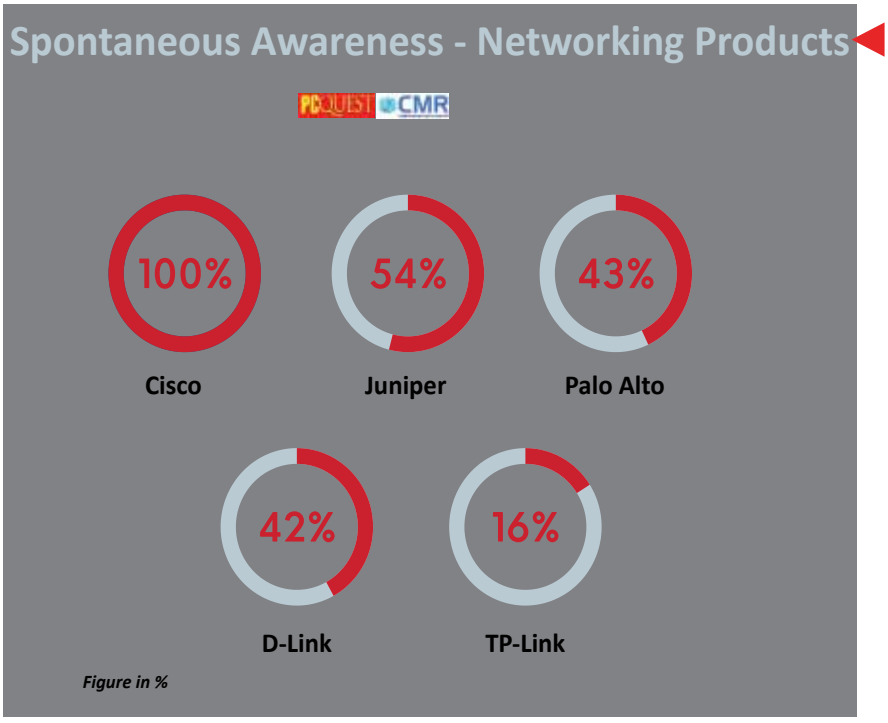






All the users could spontaneously recall Cisco

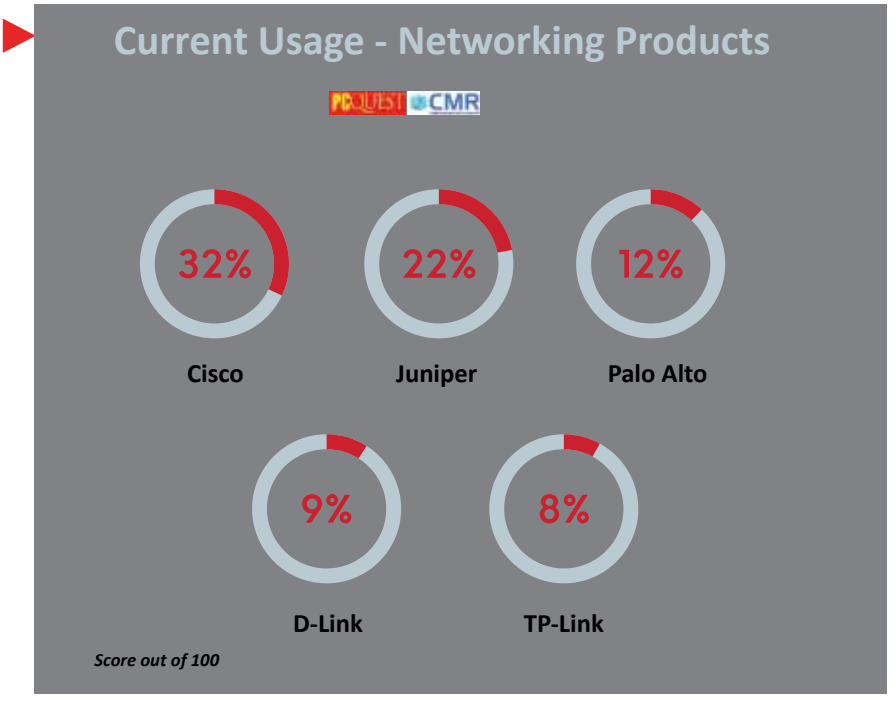
In our Spontaneous Awareness of the brands survey, all the respondents were able to recall Cisco. Juniper was in second place with a gaping difference of 50 per cent with Cisco. Palo Alto did better here than D-link followed by TP-Link.



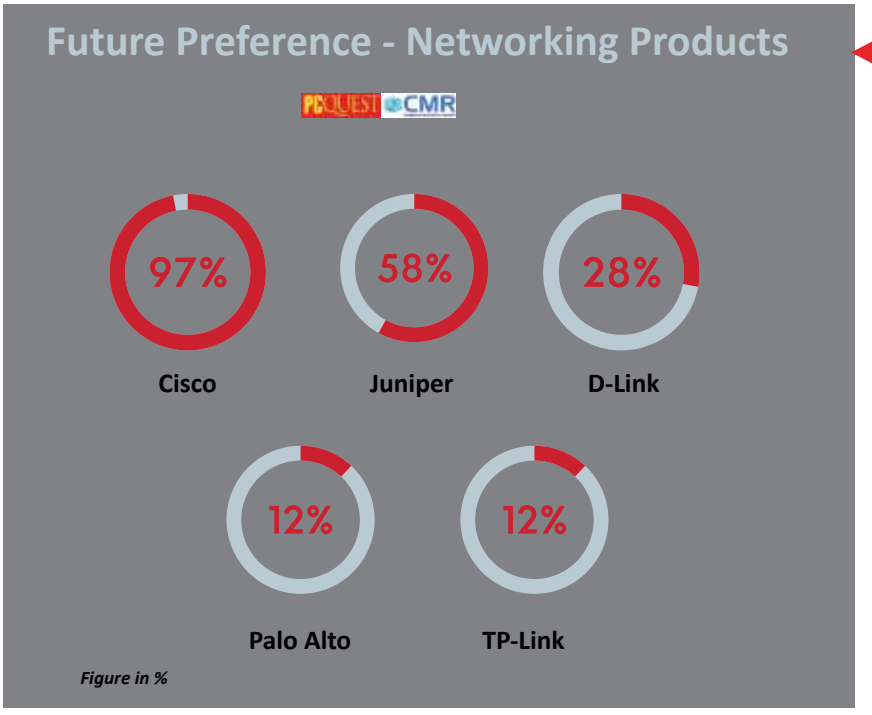


Once again, Cisco is on top, when asked about their current networking devices. With the highest score Cisco left everyone behind. Juniper, however, was not far away giving a strong competition to Cisco. Palo Alto, D-Link, and TP-Link got more or less similar scores here.





What about the future! Cisco showed the stronghold here once again too. Juniper's popularity was similar to its popularity in the Current Usage segment. D-link might gain in the future, but Palo Alto seemed to lose here from the current market share. TP-Link could remain in the same spot.





Why do users prefer Cisco? So on our four segments, Cisco scored highest on three – Brand Name, Quality of product, and After Sales Support / Service. So you can understand how strongly Cisco has captured the market. Juniper was preferred for its brand name and quality of product. D-link for its quality. Palo Alto and TP-Link both for their pricing.

Reasons for Using Current Networking Products

	Cisco	Juniper	D-Link	Palo Alto	TP-Link
Brand Name					
Quality of Product					
Initial Price					
After Sales Support / Service					

High

Illustration by Nadeem Anees

McAfee wins the customer trust

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



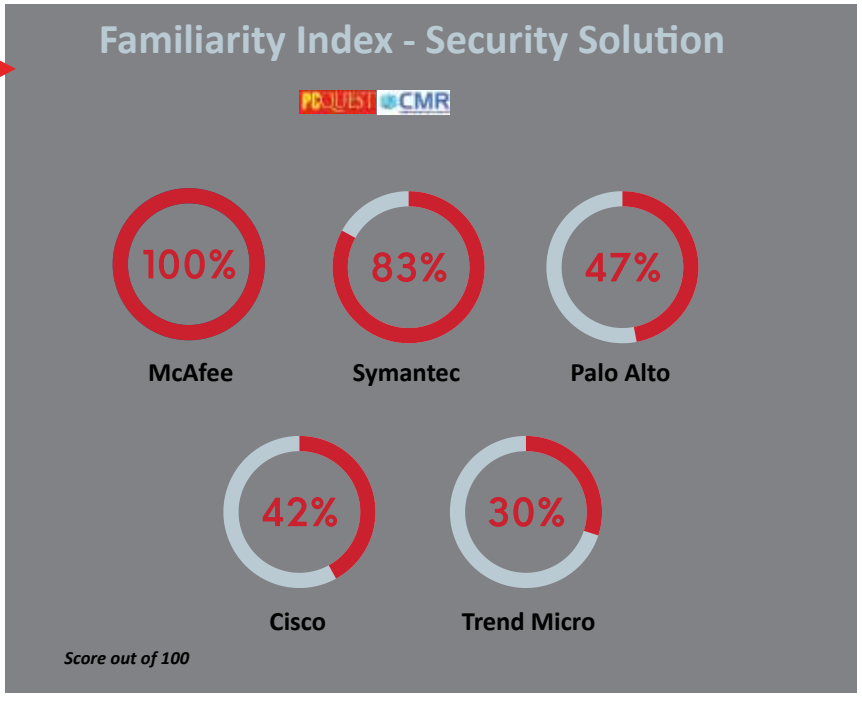
For citation details and process kindly connect with rajivp@cybermedia.co.in

Future Preferences in selecting the security solutions provider are changing fast as we see new entrants into the top five list

Amid the COVID-19 pandemic, cyber attacks rose by almost 300 per cent last year in the country to reach 1,158,208 compared to 394,499 in 2019, according to the data from Computer Emergency Response Team (CERT-In). We all need strong security and for that most users prefer McAfee. McAfee is the Champion brand in the Security Solutions category followed by Symantec and Palo Alto.

McAfee won all the segments, and scored 100 per cent on our Familiarity Index. Symantec was the 1st runner-up with 83 per cent and Palo Alto was the 2nd runner-up with 47 per cent score, followed by Cisco with a score of 42 and Trend Micro with a score of 30 per cent.

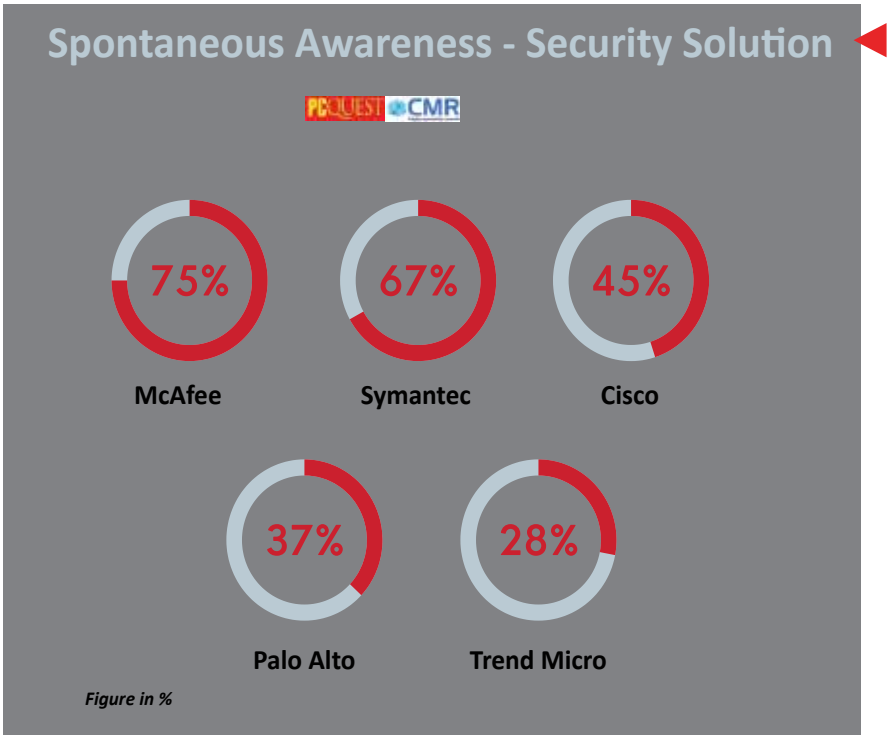






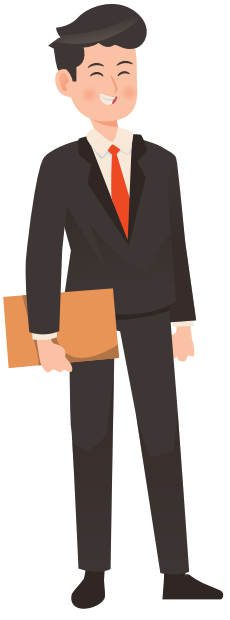
Around half of the users would consider McAfee while buying Security Solutions

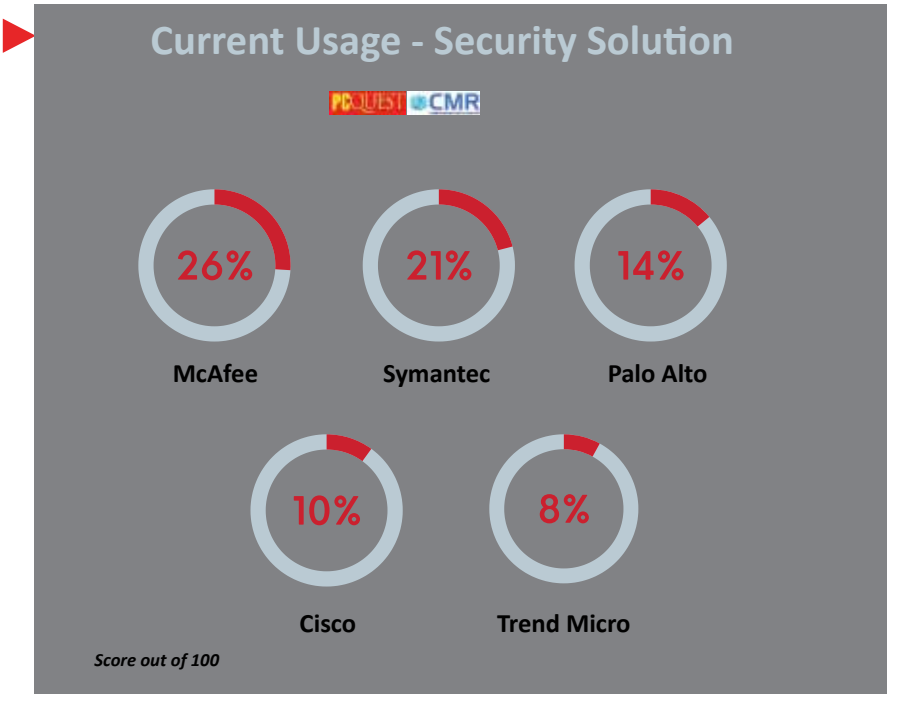
In our Spontaneous Awareness of the brands survey, three in every four users could spontaneously recall McAfee. Symantec was the next most popular brand followed by Cisco, Palo Alto, and Trend Micro.



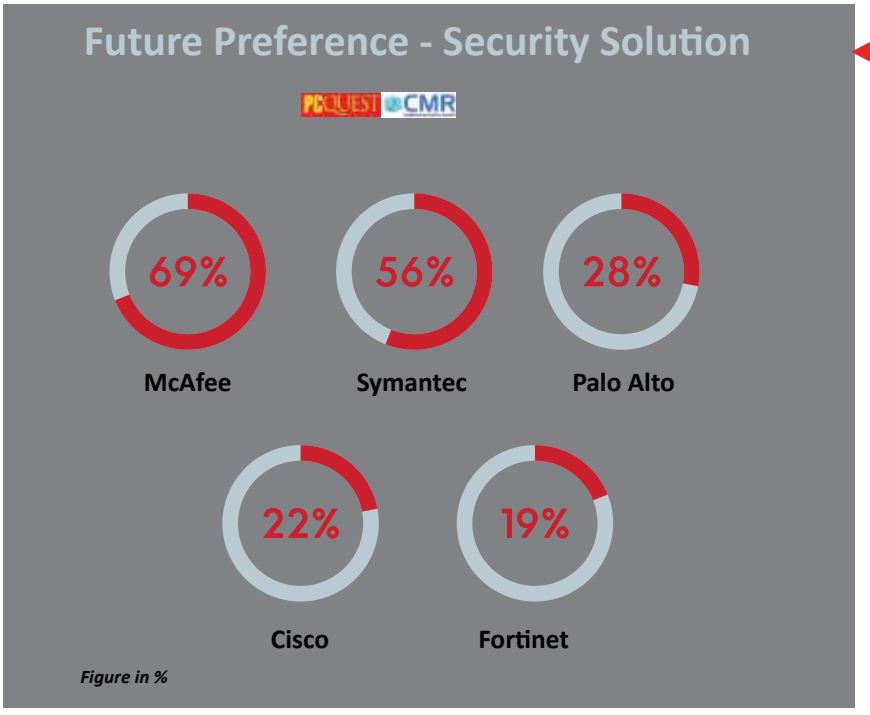


When we asked who is using which brand's security solution, McAfee again scored the highest. Symantec was the next most used solution followed by Palo Alto. Cisco slipped from its position in the Spontaneous Awareness, where it was in the third spot. Trend Micro sustained its position.





Future looks not so different with McAfee being on the top and Symantec as the second most popular choice. The top four list is the same as we saw in the Current Usage segment, while Fortinet makes its entry in the top five list replacing Trend Micro.





McAfee is popular among the users for its brand name, quality of the product and after sales support / service. Symantec attracted users with its brand name and quality. Palo Alto impressed users with its price, Cisco for its brand name and Trend micro for the quality of product.

Reasons for Using Current Security Solution

	McAfee	Symantec	Palo Alto	Cisco	Trend Micro
Brand Name					
Quality of Product					
Initial Price					
After Sales Support / Service					

High

Illustration by Nadeem Anees

DATA CENTRE SERVICE PROVIDER

Tata Comm wins hands down in the Data Centre space

Satya Sundar Mohanty, CyberMedia Research
Ashok Pandey, PCQuest, Soma Tah, PCQuest
pcquest@cybermedia.co.in



For citation details and process kindly connect with rajivp@cybermedia.co.in

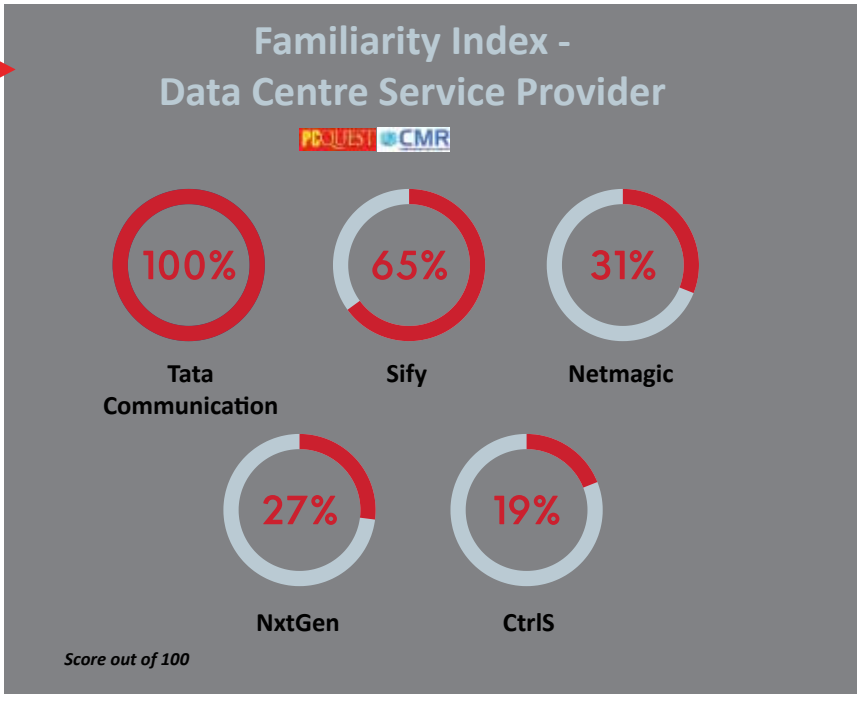
Competitors will have to put a lot of effort to create differentiation and get recognised in the market

According to the Department of Telecommunications (DoT), the data consumption touched 300 PB between March 22 and March 28, 2020, during the nationwide lockdown. And India witnessed a growth of over 30 per cent in internet usage consumption. The demand for data centers has gone up to facilitate this increased access to internet-related services. An analysis by Reportlinker says, the India data center market size will witness investments of USD 8 Bn by 2026. It will get push from the deployment of 5G networks which is likely to boost the digital economy and the demand for high bandwidth networking infrastructure.

When we asked the professionals about the service providers and their preferences, Tata Communications won the race hands down. Sify got the second highest ranking followed by Netmagic.

In our Familiarity Index, Tata communications scored 100 per cent, meaning it has swept the competition in all the segments. Sify was the 2nd runner-up throughout the segments. Netmagic got the third rank followed by NxtGen and CtrlS.

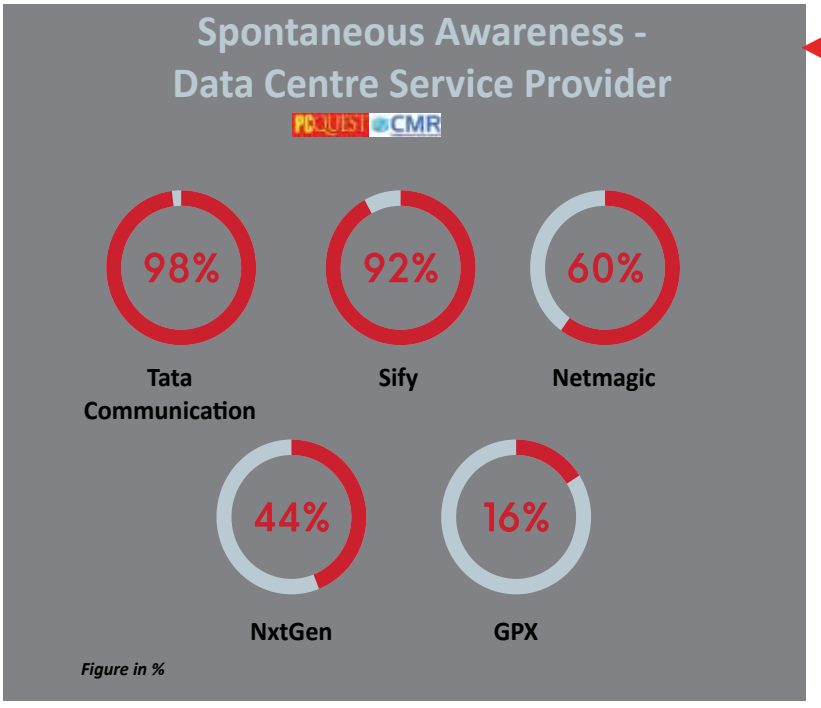






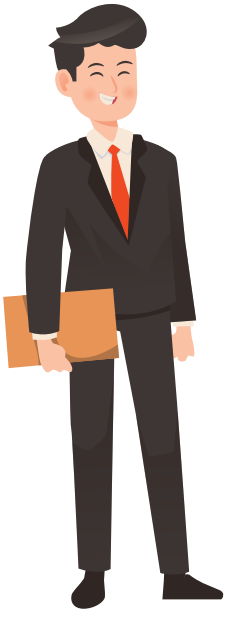
Almost all the users could spontaneously recall Tata Comm and Sify as Data Centre Service Providers

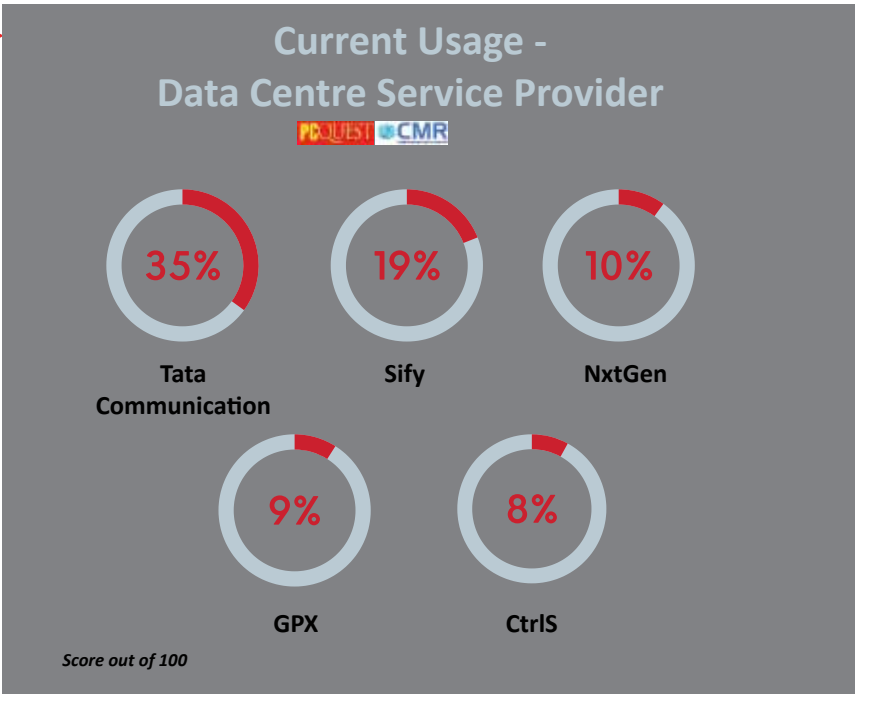
All our respondents were able to spontaneously recall Tata communications and Sify, scoring 98 and 92 per cent. Netmagic scored 60 per cent followed by NxtGen and GPX. The fight for the fifth spot was interesting throughout all the surveys- in the Familiarity index, it was grabbed by CtrlS, but in the Spontaneous Awareness it's GPX.



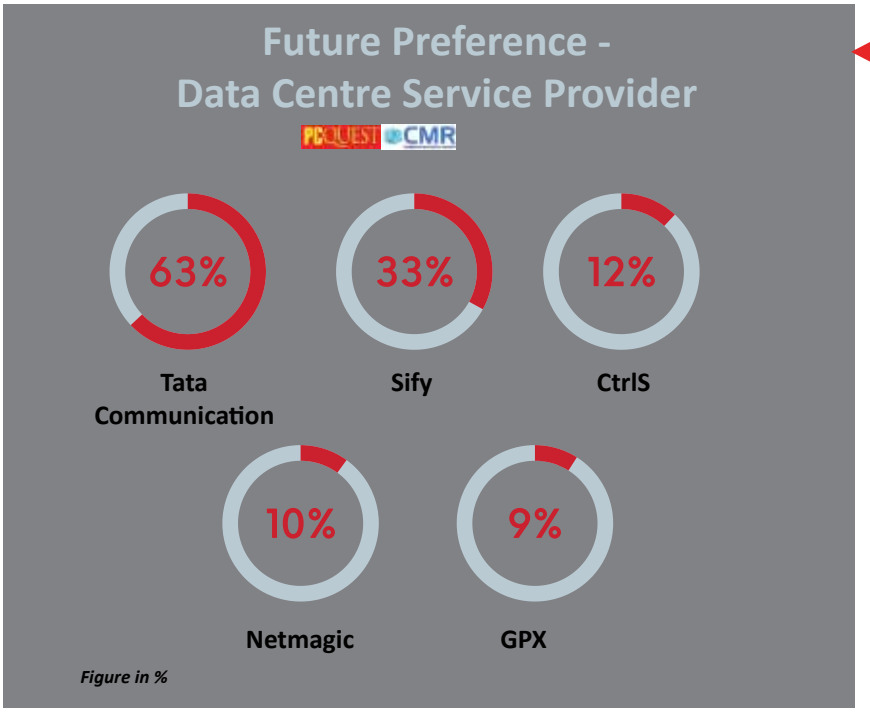


Who is using which Data Centre services? Tata Communication is voted as the most used brand right now in our Current Usage survey. Sify once again holds the second spot followed by NxtGen, GPX. There was no clear winner in the fifth spot, with Ctrls, IBM, and Netmagic- all having similar scores.





In future as well Tata Communications and Sify are likely to rule the Data Centre service. The scores didn't differ much for the rest of the brands. This data shows that competitors will have to put a lot of efforts to create differentiation and get recognised in the market.





Tata Communications and Sify both are popular for their brand name and quality of product. Netmagic impressed with its after sales support / service. NxtGen and Ctrls were preferred for their price. It seems that Tata and Sify need to work on their price and after sales support / service if they want to increase their market share.

Reasons for Using Current Data Centre Service Provider

	Tata Communication	Sify	Netmagic	NxtGen	CtrlS
Brand Name					
Quality of Product					
Initial Price					
After Sales Support / Service					

High

Illustration by Nadeem Anees

PCQUEST

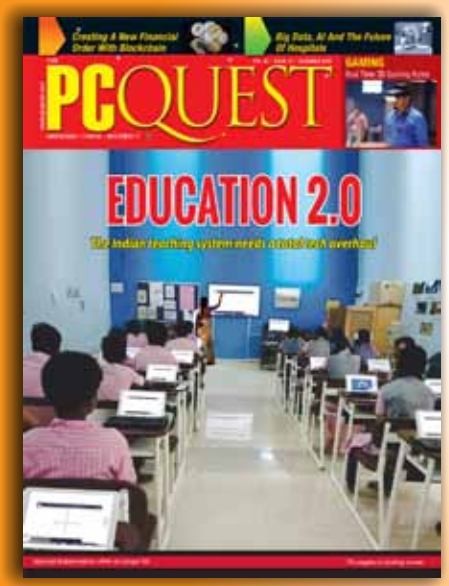
CyberMedia

Celebrating 38 years of Tech Journalism

Subscribe To PCQuest To Know More About Latest

- Tech Products
- Gadgets
- Product Reviews

Digital Subscription also available on Magzter, Readwhere and Readly.







4 EASY WAYS TO SUBSCRIBE

1. **Visit:** subscriptions.cybermedia.co.in/pcquest.aspx

2. Through Cheque/DD in favour of **'CyberMedia (India) Ltd'**

3. **Bank Transfer via RTGS/NEFT**
Bank Details: ICICI Bank Limited, A/c no. 017705000132, Branch & IFS Code: Gurgaon, ICIC0000177

4. **Call:** 0124-482-2222, +91-9810499208

For any subscription related query please email : rsepcquest@cybermedia.co.in

Yes!
I want to subscribe to PCQuest



Subscribe to Digital Edition @ ₹1300

	Period	Issues	Print Subscription Rate		Digital Subscription Rate
			New Subs.	Renewal	
☐	1 Year	12	₹1500/-	₹1350/-	₹1300/-
☐	2 Year	24	₹3000/-	₹2700/-	₹2340/- Save 10%
☐	3 Year	36	₹4500/-	₹4050/-	₹3120/- Save 20%

or Subscribe online: subscriptions.cybermedia.co.in/pcquest

Please tick your subscription choice above, fill the form below in CAPITAL LETTERS and mail it to us at rse@cybermedia.co.in

☐ I want to avail premium service of receiving my subscription copy by courier. Tick which ever is applicable.

☐ ₹500/- 1 year, ☐ ₹950/- 2 years, ☐ ₹1400/- 3 years

Name: Mr/Ms _____ Date of Birth: M M Y Y Y Y

Organisation: _____ Designation: _____

Delivery Address: _____

_____

City: _____ State: _____ Postal Code: _____

Mob [•]: _____ Tel: _____ Email [•]: _____

☐ I am paying ₹ _____ by DD/Cheque No.: _____ Dated: M M Y Y Y Y

Payable at (specify bank and city) _____

OR

☐ **Please Remit for ₹ _____ Through RTGS/NEFT to our A/C details given below:**

Bank Name: ICICI Bank Limited A/c No. 017705000132, Branch & IFS Code: Gurgaon, ICIC0000177

[•] Essential fields

Signature _____ Date: M M Y Y Y Y Subscription No. (for renewal) _____

Order form can be mailed with payment (cheque/DD) to:

Sarita Shridhar, Cyber Media (India) Ltd, Cyber House, B-35, Sector 32, Gurgaon - 122001 Tel: 0124 - 4822222, 91-9810499208

Terms & Conditions:

• This offer is valid for a limited. • Rates and offer valid only in India. • Please allow 4-6 weeks for delivery of your first copy of the magazine by post & 8-10 weeks for delivery of your assured free gift. • Send crossed Cheques in favour of Cyber Media (India) Ltd. • Please write your name and address on the reverse side of the cheque or DD. All outstation cheques should be payable at par. • Cyber Media (India) Ltd. will not be responsible for postal delays, transit losses or mutilation of subscription form. • Cyber Media (India) Ltd. reserves the right to terminate or extend this offer or any part thereof. The decision to accept or reject any or all forms received is at the absolute discretion of the publishing company without assigning any reason. • Please include pin code for prompt devlivery of your copy. • In case payment is through credit card, date of birth must be mentioned. • Request for cancellation of subscription will not be entertained once the free gift has been dispatched. • All disputed shall be subjected to Delhi jurisdiction only.

35 TH YEAR 1987 - 2021

35 Years of Computing: A Brief Timeline

How computers evolved from their humble beginnings to the machines of today



IBM's Personal System/2 (PS/2) machines

1987

Microsoft ships Windows 1.04



Steve Jobs, co-founder Apple, unveils the NeXT Cube

1988

Apple's Macintosh Portable introduced



Intel introduces the 80486 microprocessor

1989



Apple PowerBook series of laptops introduced

1991

AMD released AM386 processors



The Intel Pentium microprocessor advances the use of graphics and music on PCs

1993

PCs become gaming machines

1994



IBM released the ThinkPad 701C

1995



Sony Vaio introduced

1996

AMD released its first x86 processor K5

1998



Apple iMac launched

1999

Intel released the Pentium III processor

2000

Intel Pentium 4 processor introduced

Research by Ashok Pandey



Microsoft launched Windows 7



Google releases the Chromebook, a laptop that runs on Google Chrome OS

2011

Raspberry Pi introduced, the credit card-sized computer

2012



Windows 8 OS announced

2016

AMD introduced RyzenCPU based on the Zen microarchitecture

IBM's Roadrunner supercomputer

2009



2017

Intel officially launched 11th Gen Intel Core-H series

2021

AMD Ryzen 5000 series of CPUs entered to the market

The first reprogrammable quantum computer created



2008

The MacBook Air released

Intel introduced vPro technology

2007



Intel's Core-i3, i5 and i7 processors launched

2006

2001



The first 64-bit processor, AMD's Athlon 64 launched

Apple introduces the MacBook Pro



2003



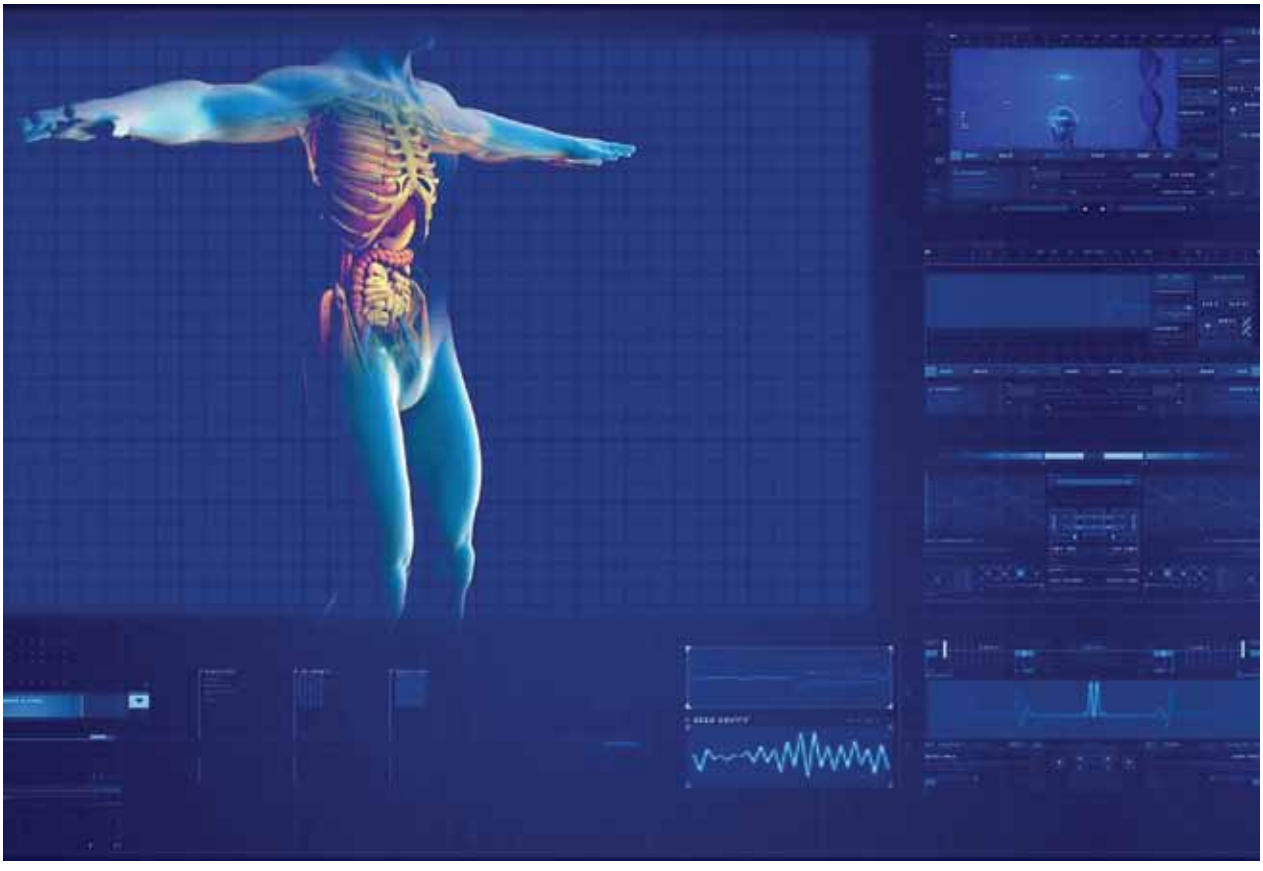
Apple unveils the Mac OS X operating system

AMD introduced the first consumer-oriented 64-bit x86 processor

Intel Core 2 Duo launched

Simulation is a gamechanger for Medical Devices industry

Soma Tah
somat@cybermedia.co.in



Rafiq Somani, Area Vice President- India and South Asia Pacific, Ansys explains how India can leverage simulation technology to reduce product development cost, improve reliability, performance, and speed up innovations in the Healthcare sector

Medical innovations generally take a long time, but with the ongoing pandemic crisis, there has been mounting pressure on the entire healthcare ecosystem including the healthcare solution providers, the pharma companies, the medical device manufacturers to innovate more quickly than ever before. But as the development cycles are long and the costs are high, this sudden heightened push towards innovation can make the journey unsustainable altogether.

When a patient's life is at stake, product failure is not an option. Hence, engineers who work in the medical devices and healthcare sector face extreme design challenges sometimes, not to mention the human body is complex, and hence, the healthcare industry has some tough regulations, rightfully so, which makes it even more difficult for the engineers to develop effective products that meet the tough regulatory norms, standards.



Physical testing of the medical devices consumes time and money also. The designers may not be able to identify optimal configurations since it is difficult to physically test every possible scenario. That's where simulation and modeling come into play- Simulation modeling provides a safe way to test and explore different "what-if" scenarios without putting production at risk.

Virtual experiments with simulation models are also less expensive and take less time than experiments with real assets. It is great for the healthcare solution providers, since they are the proven tools to address the high and unsustainable costs and time required for design and regulatory approval of increasingly complex healthcare solutions and they can also use the simulation insights to prevent risk to patients, when delivering new and advanced treatments. Here are some ways how healthcare ecosystem is leveraging simulation to bring innovations faster to market:

▾ Medical Devices

Applying engineering simulation throughout the device development cycle and the regulatory approval process is the only cost-effective way to bring new treatments to patients faster, while meeting safety standards and satisfying time-to-market deadlines.



▾ Clinical Applications

Clinicians are increasingly turning to

extensively validated computer models of patient-specific surgical procedures to provide critically important insights during pre-surgical planning.



▾ Pharma and Biopharma

Physics based simulation optimizes drug production processes. Application of engineering simulation and mechanistic modeling helps to scale up production equipment from lab scale to mass production, identify the best delivery route, etc.

"Medical uses for simulation are as diverse as medical specialties," said **Rafiq Somani, Area Vice President- India and South Asia Pacific, Ansys**. "Companies can look at In Silico methods for everything from cardiovascular stents and pacemakers to custom 3D-printed orthopedic implants to smart wearables like insulin pumps. Medical system design benefits from simulation by not only looking at detailed behavior of a component using 3D physics-based modeling but also by efficiently evaluating the performance of the whole system and not just its parts. This is definitely an advantage over the physical testing of integrated systems and subsystems, which can be costly and doesn't always identify all the potential issues and shortcomings," said he.

He also explains some of the use cases in detail:

▾ For testing medical devices

Simulation solutions enable device manufacturers to carry out more tests and gain more insights than is possible with traditional physical testing. This allows more rapid prototyping, integrated designs that



RAFIQ SOMANI, Area Vice President- India and South Asia Pacific, Ansys

function from day one and the ability to fix operational problems before going into the physical testing phase. Let us look at some examples.

Faster time to market: The new generation wearables and implantables can be brought to market faster using simulations that accurately model the body interactions with the Class II & III devices. This accelerates design and amplifies testing to meet the regulatory norms with digital evidence.

Optimize performance: Simulation can also help maximize the performance and management of medical and hospital supplies by enabling engineers to predict and understand its behavior across diverse scenarios to ensure reliable performance at an affordable price.

Validating performance: Simulation helps develop accurate physiological models that can better validate medical devices. Accurate modelling of the complexities of human or animal physiology can validate the performance of a medical device in its real working environment.

Ensure reliability: Engineering simulation can also maximize reliability of hospital equipment without compromising on the safety of the patient. Simulation reduces the

risk of incurring functional problems among critical hospital equipment with large capital expenditure way before they occur.

Thus, from ideation to post-market adjustments, simulation drives better development and higher performance for medical devices.

▾ For regulatory compliance

In order to comply with regulatory norms and minimize clinical testing, companies can take the help of simulation. In silico approaches that are powered by physics-based simulation make it possible to shorten the regulatory approval process, while ensuring maximum patient safety. What simulation does is to avoid the costly 'build and test' cycles, which is the industrial practice today. For a device, virtual Design of Experiments (DoE) over full parametric space can be conducted. For certain applications like drug delivery for oncology, patient specific models can be used to build confidence for a wide range of scenarios. Regulators in many countries are encouraging medical devices companies to use Computer Modeling & Simulations (CM&S) to speed up the approval process. This can certainly be explored in India.

▾ How do Indian healthcare and medical devices companies stand to gain from simulation technologies?

For any nation, the ability to provide medical products that are safe and trusted not only by the doctors, but also the patients is crucial and India is no exception. With technological advancements, medical device companies also need to innovate and come up with solutions that are better, safer and cost effective.

There has been a significant growth in the healthcare and medical device sectors in India in the last decade or so but a huge gap still exists in the current demand and supply of medical devices. The Government of India has started many initiatives including Production-Linked Incentives (PLI) Scheme for Medical Devices 2020, introduction of Medical Parks etc. to strengthen the medical devices sector, with a special emphasis on R&D and even a 100 per cent FDI for medical devices to boost the market. However, India still has a 75-80 per cent import dependency on medical devices and in order to be self-sufficient, medical companies need innovation leading to reduced cost of development without compromising the safety and reliability.

Also, starting April 2020, Indian regulators have a new policy that all the medical devices available in the market need approval. A window of 36 months is given to all the companies to get their existing devices approved. In these two aspects of efficient product development and regulatory approvals for medical devices, simulations can add significant value. ■



How AR & VR are transforming the Automobile Industry

Ajay Torgal
pcquest@cybermedia.co.in



Immersive technologies can help in resolving many challenges faced by the automotive industry ranging from designing and prototyping to making the buying decision of customers easy, from training technicians to making ensuring vehicle safety

The automotive industry has come a long way over the decades. Modern technology has allowed us to produce fuel-efficient, rapid acceleration and cost-effective vehicles that deliver greater comfort and infotainment from combustion engines to semi-autonomous electric vehicles. By and large, industries and organizations are largely hesitant of big change. However, the automobile industry is at the forefront of adopting change and technological transformation.

The automotive industry players, especially the original equipment manufacturers (OEMs), face many challenges ranging from design and prototyping to enhancing safety measures, which impact the quality and profitability of products and services. These challenges can be resolved through pertinent technological interventions and augmented and virtual reality (AR and VR) can play a key role in addressing numerous challenges without costing a fortune.

As per a 2017 PWC report, 30 per cent of automotive executives surveyed believed that their companies were making significant investments in AR technologies. The domain of new age technology is rapidly rising, with the US VR market estimated to reach USD 14,727.9 million in 2027 from USD 759.3 million in 2019, with an estimated CAGR of 45.1 per cent.

Design and Prototyping

Design and prototyping processes require immense collaboration of different engineers, analysts, testers and quality control specialists. The conventional method for prototyping includes physical trials, which are cumbersome, time-consuming, and a major drain on allocated resources. With AR and VR, design engineers can now collaborate and work from remote locations. Armed with statistics, data and other performance metrics of the mockup, design engineers can communicate with each other as team members across geographies and can simultaneously contribute to the same design and configuration. They can also implement modifications instantly right from their remote virtual laboratory. As the work is coordinated from closer to home virtual laboratories, the ease of working together



AJAY TORGAL, Managing Director-Bengaluru, ATCS

is notched up significantly. Needless to say but if one has to state a crucial advantage of AR and VR, the word feasible would be an understatement.

Ford created "Ford's Immersive Vehicle Environment" for its design engineers and analysts as a case-in-point. Also known as "FIVE", the realistic environment is created in a special room where employees are equipped with sensors along with the motion-capture markers. In order to visualize the ideation concept, a mini prototype of the vehicle is constructed using a 3D printer.

The FIVE systems developed by Ford have helped the automaker to reduce employee injuries by 70 per cent and ergonomic problems by 90 per cent. Without AR and VR, the whole process of design and modification implementation would need to be executed on the physical model. The technology, therefore, allows for speedier production, is cost-effective and drastically reduces the engineering design flaws that usually creeps up later on.

Easing decision-making for purchasers

OEMs create a massive product line of automobiles with multiple variants to suit the budget and needs of various customer segments. Dealers experience space crunch

to accommodate all unsold inventory and put each variant on display. The overhead costs are high and the unsold vehicles suffer a depreciation in a few months and years.

Consequently, buyers are left to their imagination. They have to rely on their intuition in order to gauge their liking for their specific model with customized features. There may only be a handful of high-quality pictures, videos and a persuasive sales pitch about a particular specification of a vehicle but none of them gives a realistic feel of the automobile to the buyer without the physical presence of the model.

However, with AR and VR, companies and dealers can now create an immersive experience for buyers, which will give them a near 100 per cent realistic feel of the actual model which they are looking forward to purchasing. Customers can use the 3D configuration of automobiles to gauge their liking for a particular color, engine displacement, gear box, customized seats and infotainment systems before arriving at the exact specification to buy their vehicle. The technology allows for interaction with future purchases without the actual model. With both dealers and buyers benefiting with the technology, it is a win-win scenario.

Head-up displays (HUD) powered by AR and VR are able to project everything onto the front windshield in sync with the line of sight to the driver. This creates a relaxed driving environment as attention is not needed to be diverted anywhere

Imparting training and upskilling

To err is to human; however, sometimes human errors end up costing much to be ignored. In the automobile industry, engineers and service technicians work on the physical model under meticulous supervision before they are well acquainted with all the nitty gritty details of a new model. Today, the training and upskilling process can be made extremely efficient and cost-effective through an immersive AR and VR environment, with no risk of damage, while offering service technicians the liberty to explore the new model. The virtual environment will also minimize occupational hazard and fatalities, ensuring a safer work environment. According to Fortune Business Insights, VR is expected to be used mostly for the training segment in the automotive industry.

HUD Displays

OEMs invest immensely to make automobiles and driving safe. However, a momentary distraction due to viewing of secondary displays, such as mobile phones, can disturb the driver's judgement and cause fatal accidents. Head-up displays (HUD) powered by AR and VR are able to project everything onto the front windshield. From the speed of other automobiles on the road, traffic signals, navigation arrows, adaptive cruise control to the lane-departure warning, someone coming in from the sideways, automobiles at the behind and their distance with yours, everything is projected on the windshield in sync with the line of sight to the driver. This creates a relaxed driving environment as attention is not needed to be diverted anywhere. The only requirement is a cheap power source and a GPS connection via mobile data.

A brighter future lies ahead

With the AR and VR market expected to grow at a CAGR of 175.7 per cent, the technologies are producing great innovative solutions to handle the challenges of the automotive industry. It is only a matter of a decade where every participant in this industry, ranging from manufacturers, service technicians to buyers and drivers, will enjoy a better designing and buying experience. ■

The author is Managing Director- Bengaluru, ATCS

DATAQUEST T SCHOOL 2021

RANKING OF TOP 100 ENGINEERING COLLEGES

EMPLOYABILITY INDEX

SEPTEMBER 2021

CMR Insights powered by research



HOW EMPLOYABLE ARE STUDENTS OF INDIA'S TOP T-SCHOOLS: A RANKING OF WHERE THE ENGINEERING COLLEGES STAND.

Dataquest – CMR T-School Survey & Ranking is the most referred study by the aspiring students, HR leaders, L&D experts across India. Dataquest along with research partner CyberMedia Research is coming up the Employability Index of engineering colleges to assess the overall recruitment scenario of the top engineering colleges across India.

- Survey of **1000+** engineering colleges
- Ranking of **100 engineering colleges**
- **Focus on the challenges faced** by the Institutes
- **Interviews, Viewpoint** by the Industry leaders

Leverage the Dataquest T-School platform & network to stay ahead of your peers.

[WEBINARS]

[VIRTUAL CONFERENCE & AWARDS]

[VIDEO INTERVIEWS]

[SOCIAL MEDIA]

[ONLINE]

[PRINT]

Calling all the engineering colleges to participate in India's leading survey
For nominations, write to: **Ravi Kant |** ravik@cybermedia.co.in
Marking & Alliances: **Rajiv Pathak |** rajivp@cybermedia.co.in **|** +91 8010757100

Heart of the Platform: Customer Traceability and Observability

Vidya Sridharan & Rahul Rao
pcquest@cybermedia.co.in



Observability helps DevOps and developers understand what is happening at different layers of the architecture and a good platform is a responsible one that operates on the highest level of Observability

The more you understand your customers, the greater the chances are that you will offer them value that they truly appreciate. This means that it's not enough to simply conduct surveys and hand out questionnaires to know what your customers are thinking and what they want; It's essential to study their behaviours and extrapolate that data into actionable information. It's been many years since the retail industry has been quietly observing the movements and behaviours of visitors to stores. The most famous example of this is when Sam Walton and his team used learnings from early observations to experiment with store layouts, product placements, and flash sales timings to maximize revenue and customer satisfaction. E-commerce companies do this as well, tracking customers on their portals, conducting A/B tests on website layouts, sales timings, and product recommendations to increase sales and profitability. In technology parlance, I would call these features traceability and observability.



VIDYA SRIDHARAN, Co-founder, Riskcovry

End-to-end Traceability

Any SaaS platform worth its salt must have the capability of logging and observing customer activities and events. This is not only helpful in debugging any issues that might arise but also in providing feedback that helps to improve the platform's reliability and observability.

Traceability is enabled by setting up and reviewing Observability at the right places.

Observability

Observability helps DevOps and developers understand what is happening at different layers of the architecture. At the server-infrastructural level, it helps understand why response times are slow, which servers are not responding, and what should be done as a remedial action. At the service-infrastructural level, it helps to know which functional service (API, Micro-service, etc.) is working, understand performance metrics, and analyze request/response values at various stages.

It is important for any insurance tech platform to provide Observability at all levels by providing tools and tutorials in an efficient manner. By making systems observable, the goal should be that any decision-maker within the technology and operations teams can easily identify the cause and effect in a production system.

> Any SaaS platform worth its salt must have the capability of logging and observing customer activities and events. This is not only helpful in debugging any issues that might arise but also in providing feedback that helps to improve the platform's reliability and observability

Enabling Observability in an organization

Observability must be role-based. Not everyone needs access to all information. Too many unnecessary attributes, usually referred to as Cardinality, leads to incorrect

monitoring.

Severity 1 issues such as Outages, Server, or service down are available as alerts to the C-level team, the decision-makers, and the communication team. An escalation matrix is created as a layered mechanism where information is quickly flashed to the most relevant layer.

Severity 2 issues such as performance issues and aborted customer transactions are available via the event logging tools that provide all levels of information via a "tools" approach mentioned below.

Severity 3 and 4 issues like one-off customer issues related to discarded payments and non-functioning OTPs are available in logs that are visible in the logger dashboards, available to all members of the production support team.

▾ Top 5 tools and techniques operated at various layers

API Request and Response Logs: Shows the attributes configured and related performance metrics. This is set up B2B customer-wise isolated from other B2B customers.

Application Layer Logs: This includes application-related logs for the front-end and backend tech stacks. Database Logs are pre-set as well as front-end console logs that include errors, warnings, and time stamps. If the application service is down, the ping service that pings every minute flashes an alert to the required escalation layer.



RAHUL RAO, Strategy Lead, Riskcovry

Application Server Logs: Syslogs and server logs are set to Debug mode or Info mode as per requirements. Fatal errors and particular patterns that are known to cause high severity issues are set up as a quick view in the dashboard and set as alerts.

Business Dashboard: Shows metrics at the highest level in order to provide business insights.

To add to this, cloud CDN, and firewall logs, customer behaviour logs, and marketing campaign-based logs add to the depth of what's possible with observability.

To end, it is important to stress that a good platform is a responsible one that operates on the highest level of Observability. Customer operations and systems are traced end-to-end for quick turnarounds and incident management. ■



Vidya Sridharan is Co-founder, Riskcovry &
Rahul Rao is Strategy Lead, Riskcovry

5 misconfigurations that make Active Directory a target for cybercriminals

Kartik Shahani
pcquest@cybermedia.co.in



Not enough attention is given to AD security. As the demands on AD grow, it is likely to deviate to an insecure, non-compliant state where it becomes an organizational risk

As we delve deeper into high profile cyberattacks such as SolarWinds and Microsoft Exchange, it's clear that an organization's Active Directory (AD) is highly sought after by cybercriminals and grossly overlooked by organizations.

What is Active Directory?

Microsoft AD is the dominant identity management platform in enterprise environments used for authentication and control of permissions and privileges. The use of AD is so common that 90 percent of the Fortune 1000 organizations use AD as their primary method to provide seamless authentication and authorization.

Once an attacker gains control of AD, they effectively have the "keys to the kingdom", which they can use to move laterally to any device, gain control of privileged accounts, leave backdoors, add new machines to the network, deploy ransomware, compromise sensitive systems and steal sensitive data.

Given the fluid nature of AD, it can change to adapt to an organization's architecture and changes are made constantly. That means if AD security hygiene isn't managed or secured properly, it can get ugly really fast. Here are five AD misconfigurations security teams need to resolve now.

1. Users are over privileged

One of the most common mistakes that pave the way for a compromised AD is when administrators give too many users access to privileged groups to make the job easier – opting for the path of least resistance. But more often than not, when users are granted domain access, they are allowed to operate with these privileges for a longer than necessary period of time.

The greater the number of users with Domain Admin privileges, the greater the odds that an attacker will be able to find an unsuspecting victim and use their privileges to move laterally throughout the organization.

AD administrators must follow the path of least privilege. This means providing users with only the privileges they need to perform a particular task. This access should be given and revoked for the duration of the task.



KARTIK SHAHANI, Country Manager, Tenable India

Administrators must also rectify accounts with too much access periodically.

2. Lack of change monitoring

AD requires continuous monitoring and analysis so security teams can stay on top of changes to environments and group policies. Adding to this complexity, the event logs from AD would require security teams to manually search for anomalies, sifting through the volumes of false-positives. It is a time-consuming process to collect and aggregate Windows event logs making AD a prime target for cybercriminals who know that manually monitoring it is next to impossible.

3. Weak user account security hygiene

In many organizations, privileged access is granted to service accounts and are left unmonitored. Security teams do not have full visibility into all accounts with domain admin access as inactive accounts of former employees are often forgotten.

As AD configurations remain unchanged, weak and non-expiring passwords, no password lockouts and weak encryption are often present. These misconfigurations are what cybercriminals look for while trying to gain access to the AD. Since security teams do not have full visibility into the misconfigured systems, breaches may go undetected for weeks, months and sometimes even years.



4. Vulnerabilities in Active Directory

While vulnerabilities that directly impact AD are not commonplace, attackers tend to chain vulnerabilities together to gain access to legitimate accounts and perpetrate attacks on sensitive systems on a network. Two prominent vulnerabilities – Zerologon (CVE-2020-1472) and ProxyLogon (CVE-2021-26857 and others) are commonly used by attackers.

Zerologon allows attackers to impersonate any system on the network and reset the domain controller's password. ProxyLogon could be used along with other Exchange Server vulnerabilities to plant webshells on affected hosts. Attackers can compromise service accounts and move laterally within the network.

5. Existing tools to secure AD are not enough

Existing tools do not contribute to continuously monitoring AD. Adopting automated tools that can holistically map the AD network, monitor Group Policy Object changes, monitor unencrypted passwords and send alerts for deviations regularly can go a long way in providing full visibility into AD. Automated tools can identify weaknesses and fix them, detect threats real-time and monitor attack pathways before they can be exploited.

Despite AD forming the backbone of organizations worldwide, not enough attention is given to AD security. The reality is that as the demands on AD grow, it will very often deviate to an insecure, non-compliant state where it becomes an organizational risk rather than the trusted platform that facilitates business optimisation and growth. Neglecting to effectively manage security configuration errors pose a great risk to an organization. Therefore, enforcing AD security in the five circumstances mentioned above is paramount. ■

The author is Country Manager, Tenable India

https://SKILLING

How to make a career in Data Science & Analytics

Sudeshna Datta
pcquest@cybermedia.co.in



If you love numbers and data, and have an analytical mindset, you can make a career in Data Science & Analytics by picking up few technical skills

Today, the availability of data and demand for data-driven decision-making has skyrocketed. This has led to large-scale collection, storage, management, and analysis of data generated across multiple channels within organizations. Hence, there's no denying that Data Science and Analytics have become hot subjects for students to pursue of late.

Moreover, the growing use cases of emerging technologies are only adding to their overall appeal. These technologies generate more datasets - down to the level of metadata - that need to be constantly identified, stored, analyzed, and structured for higher efficiency operations. The big global data and business analytics market size was valued at $193.14 billion in 2019. By 2027, it is projected to reach $420.98 billion, growing at a CAGR of 10.9 per cent. This means demand for analytics jobs will further increase across sectors. The future demand is likely to be high in retail, e-commerce, BFSI, manufacturing, healthcare, etc.

In this regard, let's look at how you can best prepare and skill yourself for this burgeoning market.

Create a Roadmap for Yourself

Many of you are obsessed with data and data science. This has indeed left you asking about what skills are needed to pursue careers in data science. To begin with, you need a proper roadmap that perfectly aligns with your interests.

Data science and analytics market is a broad segment with several roles, applications, and approaches. You will have to zero in on what exactly you wish to do? While Google will want you to shape business and technical strategies as its Quantitative Analyst by processing, analyzing, and interpreting massive datasets, Amazon will want you to create and deliver a roadmap of the most challenging Machine Learning business problems as its Data Scientist. In the segment, some of the roles include Data Analyst, Data Engineer, Database Engineer, Machine Learning Engineer, Data Scientist, and Data Architect, to name a few. So, do your research and find what augurs well with your core competencies and interests.

Next, you will have to prepare yourself for that role. One of the best ways to do so is to enroll yourself in online courses, boot camps,



SUDESHNA DATTA, Co-founder & EVP, Absolutdata

and an advanced degree program. Several certification-based professional upskilling programs are offered by renowned universities and tech platforms that can make your CV stand out against others. You can pick a program as per your needs and availability. For instance, Udacity has nano degree programs, wherein you can engage in 4 to 8-week courses to upskill yourself. Similarly, several online learning platforms such as Udemy and Coursera enable you to drive learning at your own pace.

You must also develop additional skills in statistics, mathematics, and programming. It would help if you focused specifically on statistics, computer science, physical sciences, linear algebra and calculus, and social sciences for your choice of major.

In addition, choosing a STEM major at an early stage of a career will allow you to get exposure to the field early and create a solid base in applied math and statistics, which is a crucial skill for analyzing the massive volumes of data and data trends collected by organizations.

Analytical Mindset and Soft Skills

Now, it's essential that as a data analyst or scientist, you must possess an analytical mindset to be effective in your role. Analysts and scientists don't approach a question or problem with a preconceived answer. They use data to conclude. Data research also plays a vital role and will help you better understand how to

leverage a chunk of data in your current position. Further, skills like communication, organization, project management, leadership, and critical thinking are essential regardless of any industry. A few other soft skills that are good to pick up include:

Strong Business Acumen: Possessing this skill will help you identify any problem and potential challenges that need to be solved for an organization to grow. Remember, you will have to engage with business stakeholders to convince them about your technological idea. If it is not aligned with the core business interests, it might not be able to gather steam. So, try to develop business acumen, especially the company's key objectives that you aim to or are working for.

Strong Communication Skills: As a data scientist or analyst, it isn't just about how to extract, understand, and analyze data. You should also be able to effectively communicate your findings with other team members in an easy-to-comprehend way.

Great Data Intuition: While learning technical skills is essential, data intuition is one of the most critical skills for a data scientist. This makes data scientists or analysts more efficient in their work, and gaining this skill comes from experience and the proper training.

In addition to these soft skills, you will also need to learn the technical skills necessary to perform the job.

Technical Skills

By now, you have understood that data analytics means statistical analysis and computing, mining, extracting, and processing large data sets. To do so, some of the most in-demand technical, analytical skills that you need to learn include machine learning, predictive analytics, data visualization, MapReduce, etc. Besides, it is equally imperative to have an understanding of:



> Data science and analytics market is a broad segment with several roles, applications, and approaches. Some of the roles include Data Analyst, Data Engineer, Database Engineer, Machine Learning Engineer, Data Scientist, and Data Architect, to name a few. You will have to zero in on what exactly you wish to do?

Programming: A basic knowledge of various programming or coding languages, such as Python, Perl, C/C++, SQL, and Java, is required in data science roles. These programming languages help data scientists organize unstructured data sets.

Knowledge of SAS and Other Analytical Tools: You are also required to understand analytical tools for extracting valuable information from an organized data set. Some of the most data analytical tools that you can learn and use are SAS, Hadoop, Spark, Apache Hive, Apache Pig, MongoDB, and R. Certifications can help you establish your expertise in these analytical tools.

In a nutshell, you can't become a data analyst or scientist overnight. There is no shortcut to becoming a data analyst. If you love numbers and data, you can enter the profession by acquiring the skills mentioned above. If you are somebody who is into numbers and has an eye for spotting patterns, you will find the career as exciting as it can get! ■

The author is Co-founder & EVP, Absolutdata

CyberMedia

LEADING TECH MEDIA PLATFORM & NETWORK SINCE 1982



6
Brands

3500+
Impact Articles

20+
Webinars & Virtual Roundtables

9000+
Attendees Across Verticals

90,000+
People Influenced

90+
Industry Leaders & Tech Experts

COMMUNITIES

Technology Decision Makers - Enterprise and SMB, Telecom, Channel Partners, Start-ups, DeepTech, Functional Heads and many more

MOVED THE NEEDLE DURING COVID-19 CRISIS

CREATING HIGH IMPACT & INFLUENTIAL CONTENT

IN THE LAST 390 DAYS

CMR
- From Survival to Revival
- Proactive Business Recovery
- Changing Customer Expectation in Crisis
- Cyber-Sanitize your business
- Proactive Sales Strategies for faster business recovery
- New IT Priorities 2020

CIOL
- CXO of the Week
- CiOL Live Video Series
- Start-Up Circle
- CiOL Cloud Burst
- CiOL Live Tech News

DQ Channels
- Are There any Make in India IT Products for Us to Use?
- Cloud Adoption in Digital World
- Govt to Harness IT to Empower MSME Sector

DATAQUEST
- DQ Tech Talk Series
- Business Continuity Planning Series
- Dataquest Digital Indexing
- DeepTech (India's largest Virtual Conference)

PCQUEST
- Secure Smart & Intelligent Network
- App Modernisation
- Collaboration in WFH environment
- DevOps
- CyberMedia Labs Product Review

VOICE&DATA
- Business After Covid
- TLF Dialogue Series
- 25 Years of Mobile Telephony India

and many more....

Rajiv Pathak | rajivp@cybermedia.co.in | 8010757100

RNI No. 45949/87 DPR No. DL(S)17/3319/2020-22 (Published on 1st of every month)
Posting Date: 3&4 every month. Posted at Lodhi Road HPO

nemasis®
Vulnerability Management Suite



Secure your organizations IT ecosystem with a potent & proactive Vulnerability Management Suite – Nemasis VMS.

Key Features:

- Passive Vulnerability Scanner (PVS)
- Alerting Actions
- Distributed Scanner Support
- Data Analysis and Output Formats
- Reports in Compliances format.
- Real-time Customizable Dashboards
- Credential Management for Authenticated Scans
- Integration with other solutions (SIEM, CRM, Log Aggregators)

Scan QR code & get your FREE trial for **Nemasis** NOW!!!

MicroWorld Technologies Inc.
Email: sales@nemasisva.com

An ISO 27001 Certified Company
Website: www.nemasisva.com