Maximize

BIG DATA

Visualization with the Right Devices from Lenovo

Importance of the Right Devices
for the Right

White Paper

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Too Much Data?
Too Few Insights?

Big Data is increasingly becoming an integral part of technology deployment in most organizations. Mined efficiently, big data enables organizations to win over customers, drive competitive differentiation and pave the way for newer opportunities. Then what's keeping businesses from charging ahead and taking the lead? The answer is effective data interpretation and analysis to provide actionable recommendations.
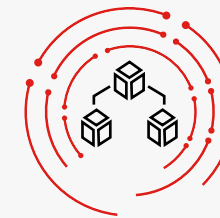
While gathering the data is half the battle won, you have to be able to view all your data in a way that you can make sense of it. Acquiring the right skills for the job is your first step. An equally critical step is equipping these skilled employees – data scientists and analysts – with the right end computing devices to maximize the value of data visualization.
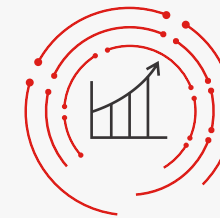
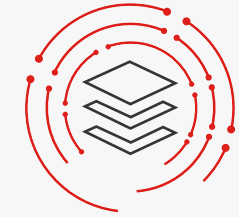Click here to explore Lenovo's
Big Data Solutions

Key Aspects of Data Visualization

Graphical Representations
2D or 3D representations of data, leverage the right frameworks to represent the data effectively.

Assess Multitude of Data Sets
To derive a holistic overview.

Visual Story Telling
Sequential depiction of data to help see the larger picture with impact, next steps, and benefits.

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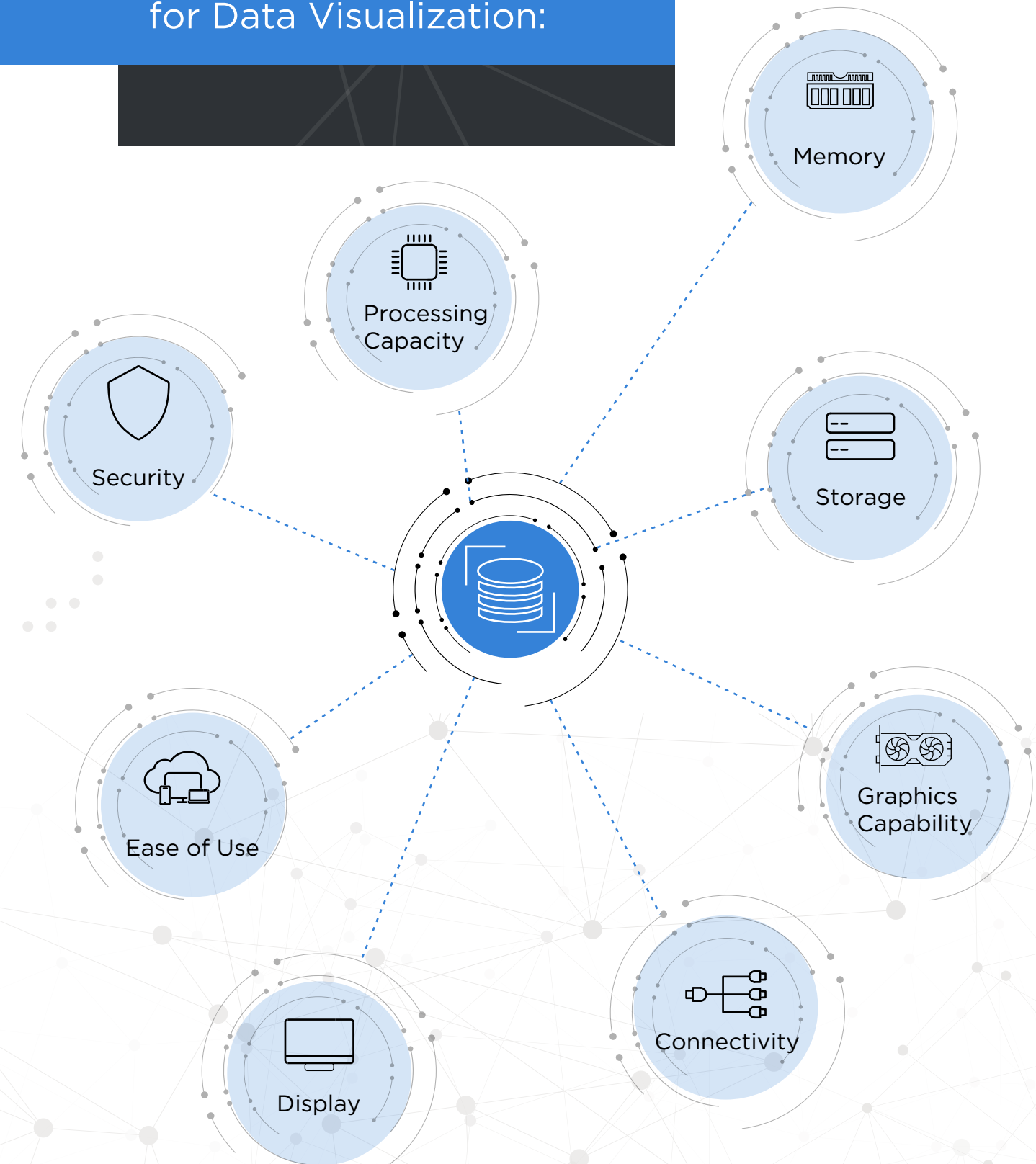# The Role of End User Computing in Effective Visualization

Different industry verticals have diverse data visualization needs. From the need to effectively visualize rapid prototyping to improving response times in healthcare to assessing the success of MOOC courses in education, data visualization can open up myriad opportunities for growth. But all this cannot be enabled without the right computing devices which offer the power to process large data sets along with the ability to run specialized visualization software.

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Attributes of a Good End User Computing Device for Data Visualization:

- Memory
- Processing Capacity
- Storage
- Security
- Graphics Capability
- Ease of Use
- Display
- Connectivity

Processing Capacity

Handling large volumes of data is no mean feat. End computing devices must not only have the capability to process such large volumes of data, but they must be able to do it fast. The ThinkCentre Tiny seems like a perfect fit in this scenario. **With 8th Generation Intel® Core™ vPro™ processors and Intel® HD Graphics**, the ThinkCentre Tiny can carry out intensive tasks like analyzing and visualizing big data much faster.

See the Bigger Picture

The ThinkCentre Tiny supports up to 3-4 independent displays in mosaic mode, ideal for data analysts to visualize big data and interpret it.

ThinkCentre Tiny

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Graphics Capabilities

To see your data as meaningful insights, you need to transform them into rich visuals like graphs and visuals. The end computing device that you choose must provide the graphics capabilities needed for effective visualization of big data. ThinkStation P series would easily fulfil this need. Featuring the latest **Intel® Xeon® processors** and NVIDIA® Quadro® graphics cards, ThinkStation P series workstations are just what you need.

Ultimate Flexibility to Customize

Get the most out of your ThinkStation P series workstation with unique configurations supported by Lenovo's Fully Loaded Experience (FLEX) features. The FLEX mezzanine adapter allows a direct connection to the PCIe bus without taking up a traditional PCIe slot, there by saving you precious space to customize your workstation as you need.
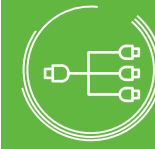
ThinkStation P710

Display

Pair the reliable ThinkStation P series workstation or the ThinkCentre Tiny with a ThinkVision monitor for a superior, full HD experience. With up to 75% color gamut, 16.7M colors, and a 1000:1 contrast ratio, the ThinkVision monitor is an outstanding choice. It also has a low blue light function that reduces eye strain over long viewing periods.

A Display Like None Other

The ThinkCentre Tiny supports up to 3-4 independent displays in mosaic mode, ideal for data analysts to visualize big data and interpret it.

Wide-angle Screen
IPS displays clear, crisp images edge-to-edge with a tilt adjustable stand for comfortable viewing

Compact Space Saving Design
With multiple Connectivity Options

Environment Friendly
Certified 'green' monitors

Budget-friendly
Graphic brilliance that's affordable

ThinkVision

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Connectivity

Big data is staggering and being able to visualize this data clearly and easily can help optimize productivity. End computing devices for analysts must be able to support multiple accessories that are required for data analysis. Additional ports like **Intel® Thunderbolt™** port for fastest connection and docking options are a must for analysts to be more efficient. The **ThinkPad Thunderbolt™ docking** allows 3x faster processing and easy single cable docking option to charge multiple devices at once. It can be supported by a range of devices like the ThinkPad P series, ThinkStation P series, ThinkCentre Tiny and Lenovo V series devices.

Prepare to be Thunderstruck

With **ThinkPad Thunderbolt™ docking** station, experience dual 4k display, fast charging, peer to peer data transfer. **Thunderbolt™ 3** moves massive files, images and video at speeds 8x faster than USB 3.0, accelerating data access and archiving of large files on your external **Thunderbolt™ 3 storage.**

ThinkPad Thunderbolt™ 3 Docking Station

Storage

Big data needs big space. With the volumes of data we're talking about, it's easy to run out of space. The computing devices used by big data analysts need to be scalable as needed, to keep up with the constant data flow and analysis. The ThinkStation P series workstations come with the perfect storage solution for big data needs.
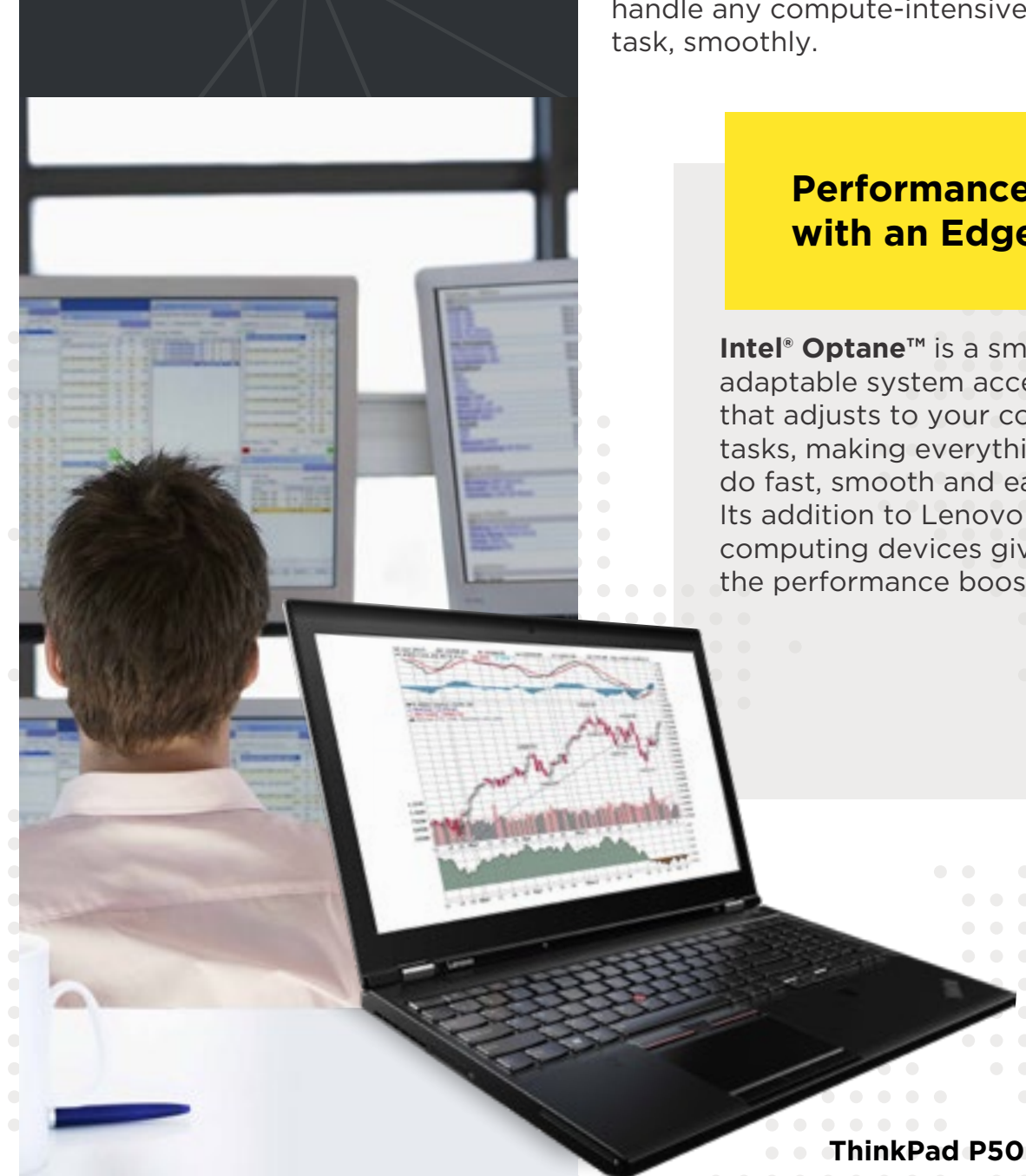
More HDD Without More Space

Lenovo's newly designed HDD tray for the ThinkStation P910 workstation supports both 2.5" and 3.5" hard drives. With one tray supporting up to two hard drives, you can add a staggering 14 drives on the ThinkStation P910.

ThinkStation P910

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Memory

Working with big data requires a large memory capacity. Computing systems must be able to launch and run apps and select software essential for big data analysis. The ThinkPad P50 mobile workstation is a powerful performer with a high memory capacity. It's got a 64GB DDR4 memory capacity; equipped to handle any compute-intensive task, smoothly.

Performance with an Edge

Intel® Optane™ is a smart and adaptable system accelerator that adjusts to your computing tasks, making everything you do fast, smooth and easy. Its addition to Lenovo end computing devices gives them the performance boost they need.

ThinkPad P50

Ease of Use

Big data analysts use selected software for data analysis and interpretation that are not always supported by all devices. Lenovo ensures that its workstations are Independent Software Vendor (ISV) certified to support applications that analysts need. The ThinkPad P series workstations are ideal for such usage.

ISV Certified and Ready to Perform

The ThinkStation P series workstations and the ThinkPad P series mobile workstations are certified to support all major ISV applications, including Adobe, Autodesk, Avid, Dassault, PTC, Siemens and more.

ThinkPad P71

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Security

With the massive amounts of data accumulating from various sources, it's hard to say when the next hacker is going to attack your big data. Collecting and storing data is just one side of the coin, the other side being protection of this data. Lenovo has a 360° approach to security which is a cohesive mesh of features and technologies that deliver maximum protection in a business PC.

User Access Control
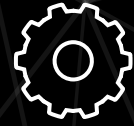Ensures PC access for authorized personnel only.

Port and Physical Protection
Prevent data theft from USBs or other access ports on company PCs.

Data Protection
Prevent data theft and loss.

Protected Devices and Workstations

ThinkPad devices – laptops, workstations and mobile workstations come with complete 360° security features. This includes industry-leading hardware security from Lenovo and identity protection and data security with **Intel® Authenticate** as well as Pro SSD Integration with Intel® Remote Secure Erase from **Intel® Active Management Technology (Intel® AMT).**

Services

Encryption Services
Hard drive encryption is essential to prevent unauthorized access to data sophisticated attacks.

Laser Tagging
A misplaced laptop can be costly. Help deter theft and increase brand recognition by having Lenovo laser etch as your laptop cover during manufacturing.

Asset Tagging
Having your IT manually apply asset tags to your organization's computers is a time-consuming and expensive process. However, Lenovo Asset Tagging reduces your costs by having Lenovo apply your asset tag during manufacturing.
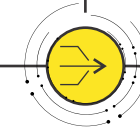
First Boot Services
With Lenovo First Boot, automate the processes for any image type and move the activities into Lenovo manufacturing. As a result, you save time, resources, and costs right from the start.

Deployment Automation Services
Enabling organizations to Increase capacity through shifting specialized technical activities such as image design and delivery to hardware manufacturing.

Smart Image
Manage multiple images and drivers, as well as tackle driver installation issues with Lenovo's Smart Image that gives you compatibility across all Lenovo-based hardware platforms.

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Conclusion

Lenovo offers an industry-leading combination of features to provide you with the right visualization tools for your big data project.

Think Big Data. Think Lenovo.

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5 reasons
why Lenovo is a difference maker

Trusted around the world

Expertise across categories

Choose Lenovo with confidence

Business-boosting technology

Flexible support network

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