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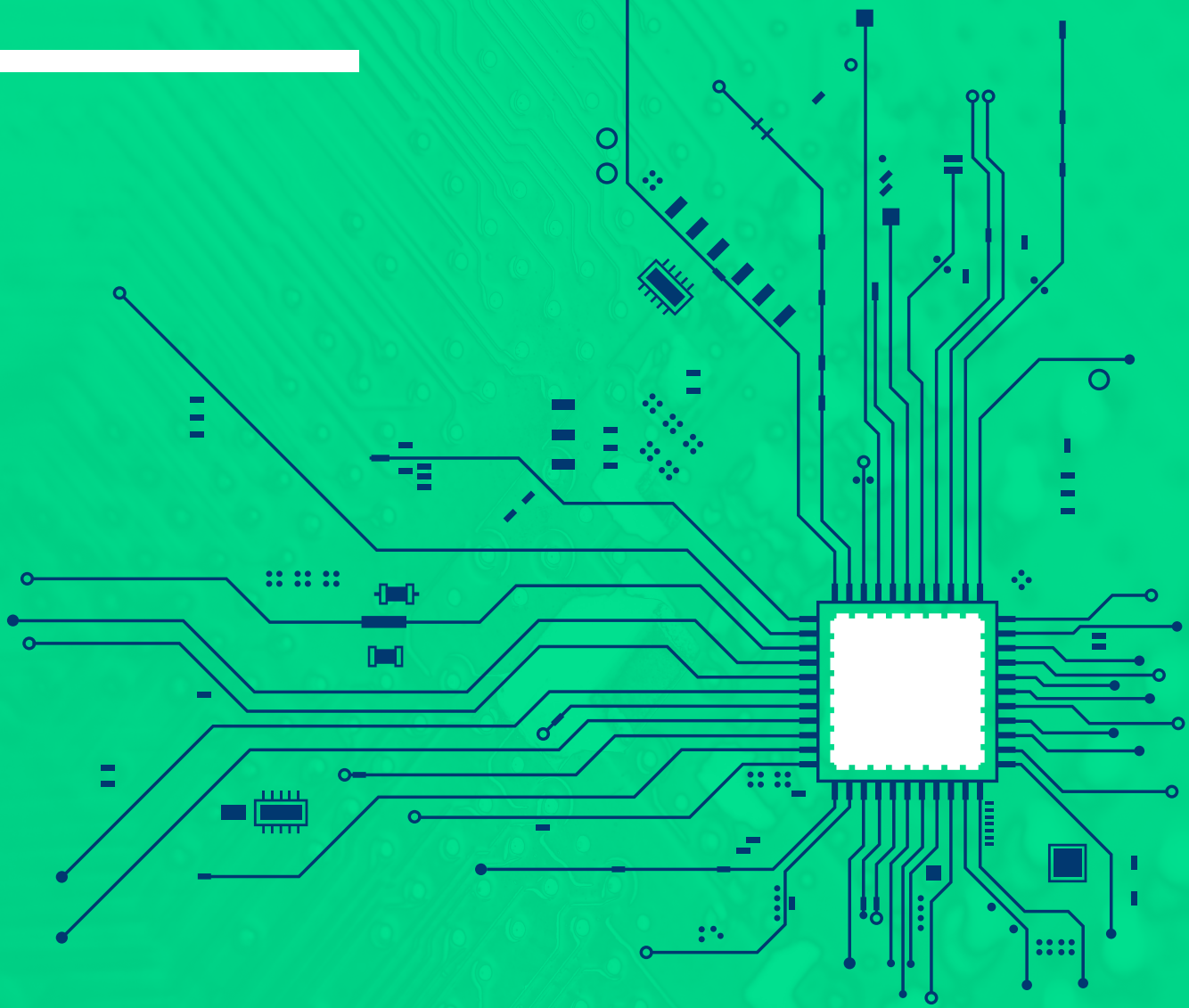
MODERNIZATION OF END USER COMPUTING (EUC) WITH INTEL V PRO



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OVERVIEW

Client-server communication technology is standard for most of the enterprise. While looking at few use cases, there is development in endpoint hardware's, service delivery method and virtualization that are leading organizations to centralized, shared resource delivery.

Industries such as healthcare, finance, education and public sector are facing challenges on **data security**, British Industry Standards, changing **work environments** and other factors.

Many companies are implementing new strategies to deliver a better user experience. They are concentrating on bringing better manageability, security and liveliness to the company. IT designers can meet the needs by aligning delivery models, profiles, endpoint hardware's along with taking the advantages of end-to-end Intel technology innovations.

Using end-to-end strategies and intel technology, companies can empower digital employees and strengthen the company's ability to achieve enterprise goals.

CURRENT ORGANIZATIONAL CHALLENGES IN END-USER COMPUTING

Now that we have a piece of high-level information on Modernization of EUC, let's discuss the challenges that organizations face with **End User Computing**.

Fast-moving business demands us to adopt modern EUC environment. Employees expect flexible work hours (work on the go). Managements are looking for tools that are agile, responsive and effective while working in collaboration. Customers/Consumers are looking for a streamlined, agile and user-friendly technology experience at every touchpoint.

In addition to the above issues, industries have added pressure from cybercriminals. The increase in Data theft makes it more crucial for organizations to protect their sensitive information from cybercriminals, who can use this information and cause national security threats. Financial and healthcare sector is more prone to data breaches which eventually leads to a loss in customer trust, thus affecting the organization dramatically.

Government, Finance and education services must maintain complex privacy and regulations and slipping may end in huge penalties. Policies may vary state to state, country to country or region to region. So, companies must manage complex security requirements and adjust their strategies based on new requirements and threats.

HOW TO MITIGATE THE ABOVE FACING EUC CHALLENGES WITH MODERNIZATION?

Optimizing the EUC estate often starts with revisiting process in place and refreshing the client's hardware. With performance and value-added enhancements, Intel technologies can enhance the company's agility, efficiency and make it easier for transformative innovations, which can stay up to date with regular changes. Organizations also gain built-in capabilities to protect sensitive data and quickly remediate damages if a breach occurs. Discarding aged devices also simplify client management and total cost of ownership.

Rather than seeking a universal strategy, EUC designers will plan a user-centered approach that matches the delivery model and devices in the estate along with company needs. By analyzing the end to end impacts, planning and deploying a modern architecture, along with innovations from Intel, the company can optimize on **security**, power and agility of the EUC environment.

EUC modernization requires entire project objectives, such as:

Enhance Operational Efficiency

Role-based application access

Streamline application updates

Enhance desktop management

Limitations like funds and Skills

Improving usability without reducing security

Streamline Remote Access

Expand life off endpoints

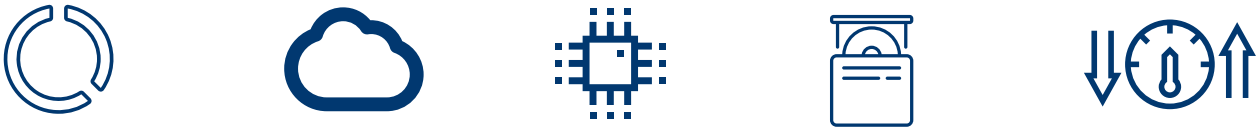
Offer BYOD (Bring your own device), CYOD (choose your own device), or corporate owned

Capital cost for buildout endpoints and needed Infra, telecommunication cost, data center power and cooling, Software costs like OS, security applications/devices and other IT elements

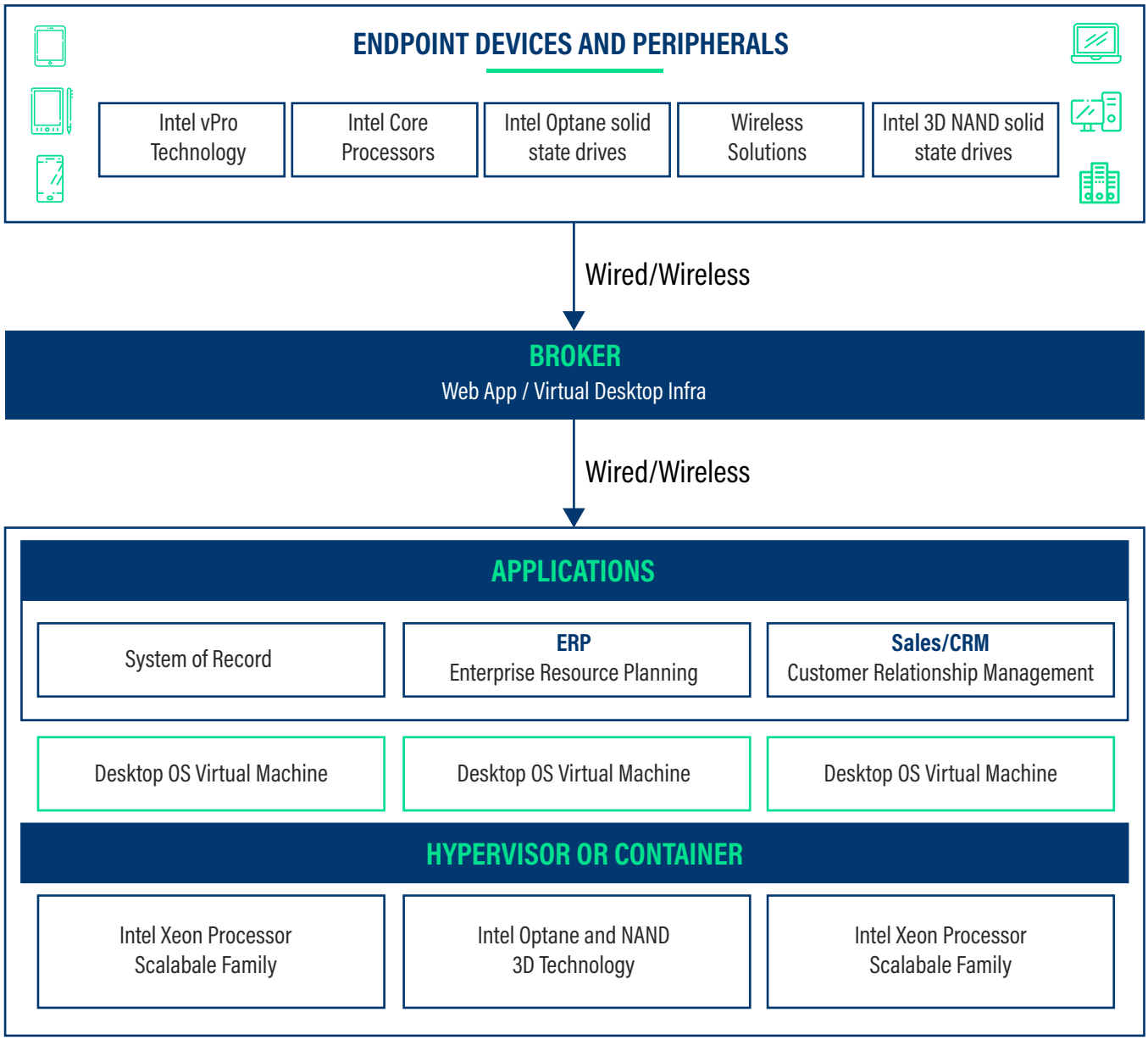
Metric scales such as satisfaction survey, Application response time, Peak hours, Bandwidth, actual v/s planned costs for infra

VIRTUALIZATION USING END-TO-END INTEL TECHNOLOGY

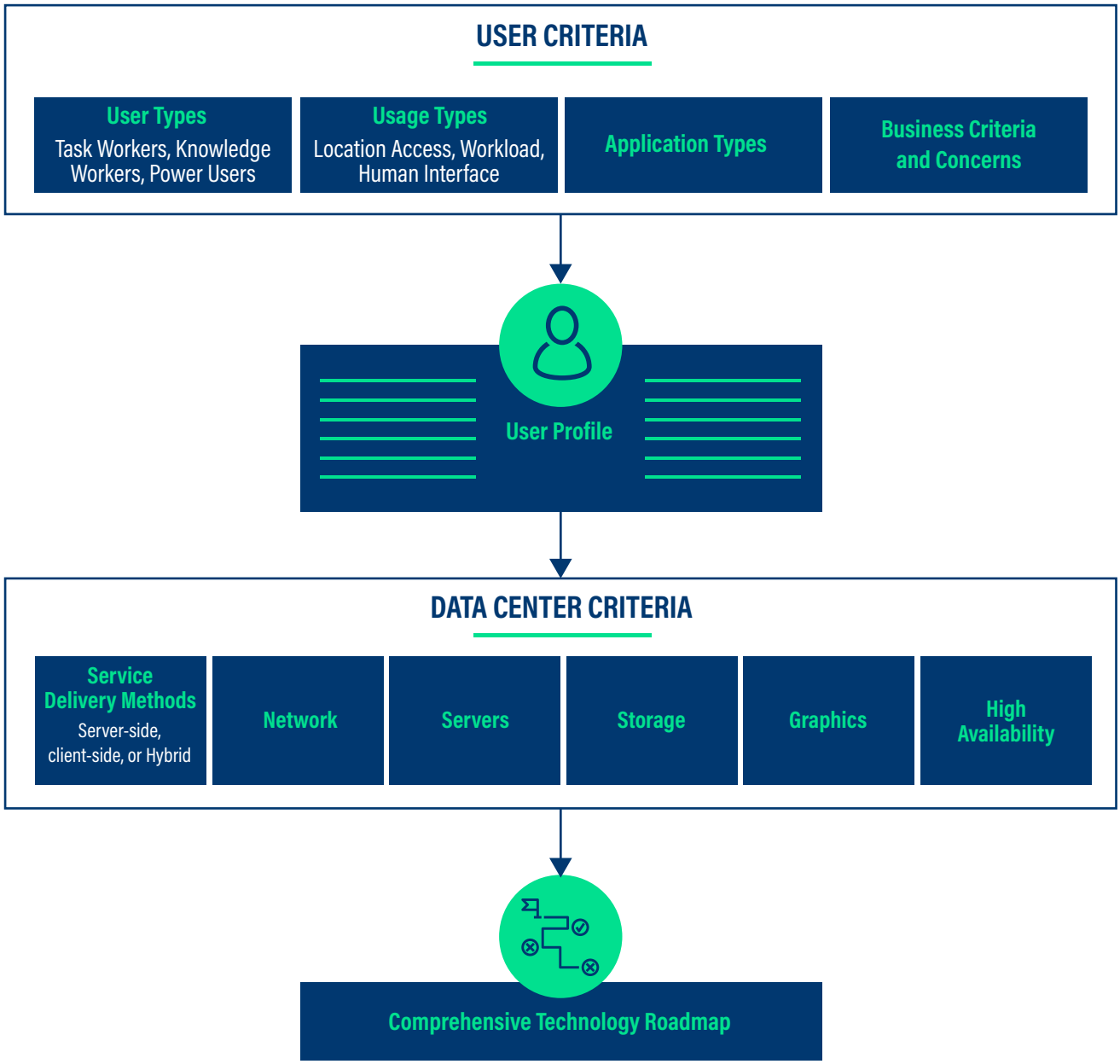
Virtualization methods help in cost reduction and complexity of enterprises by moving to a cloud platform. In order to prepare for these infrastructure impacts, user analysis along with peak and average figures of the workload trait methodology that needs to be followed.

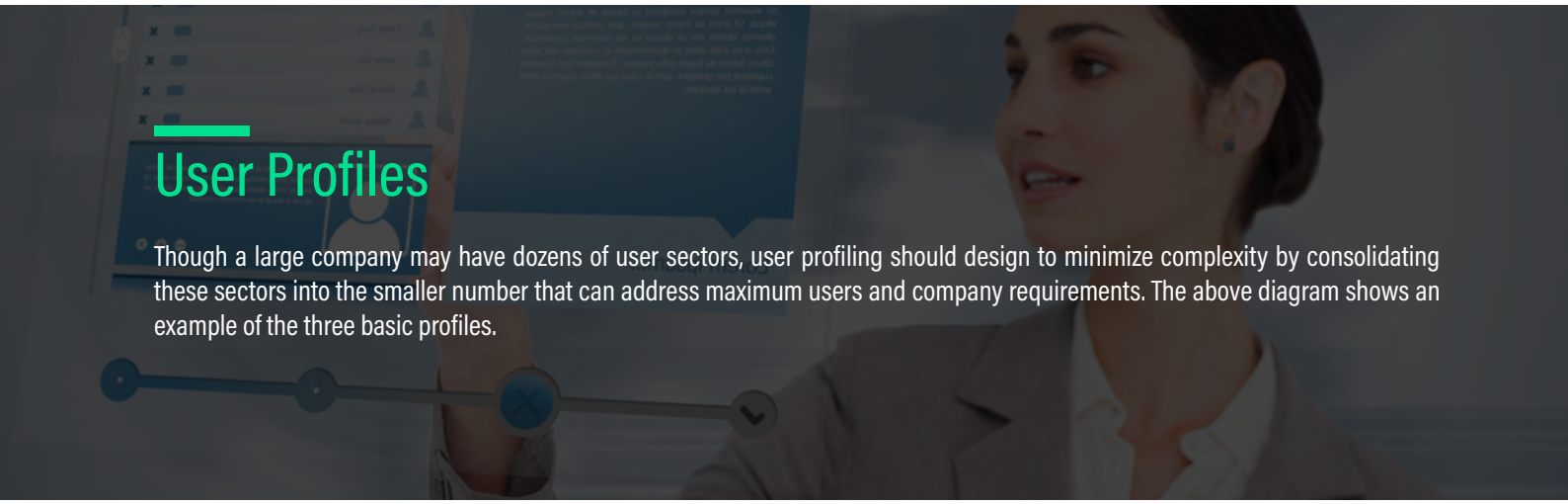


Memory and CPU usage	Storage for virtual desktops, stored user data and user profiles	Disk I/O operations (IOPS)	Disk read and write speed	Bandwidth consumption



The Resulting technology provides the basis for an effective EUC strategy

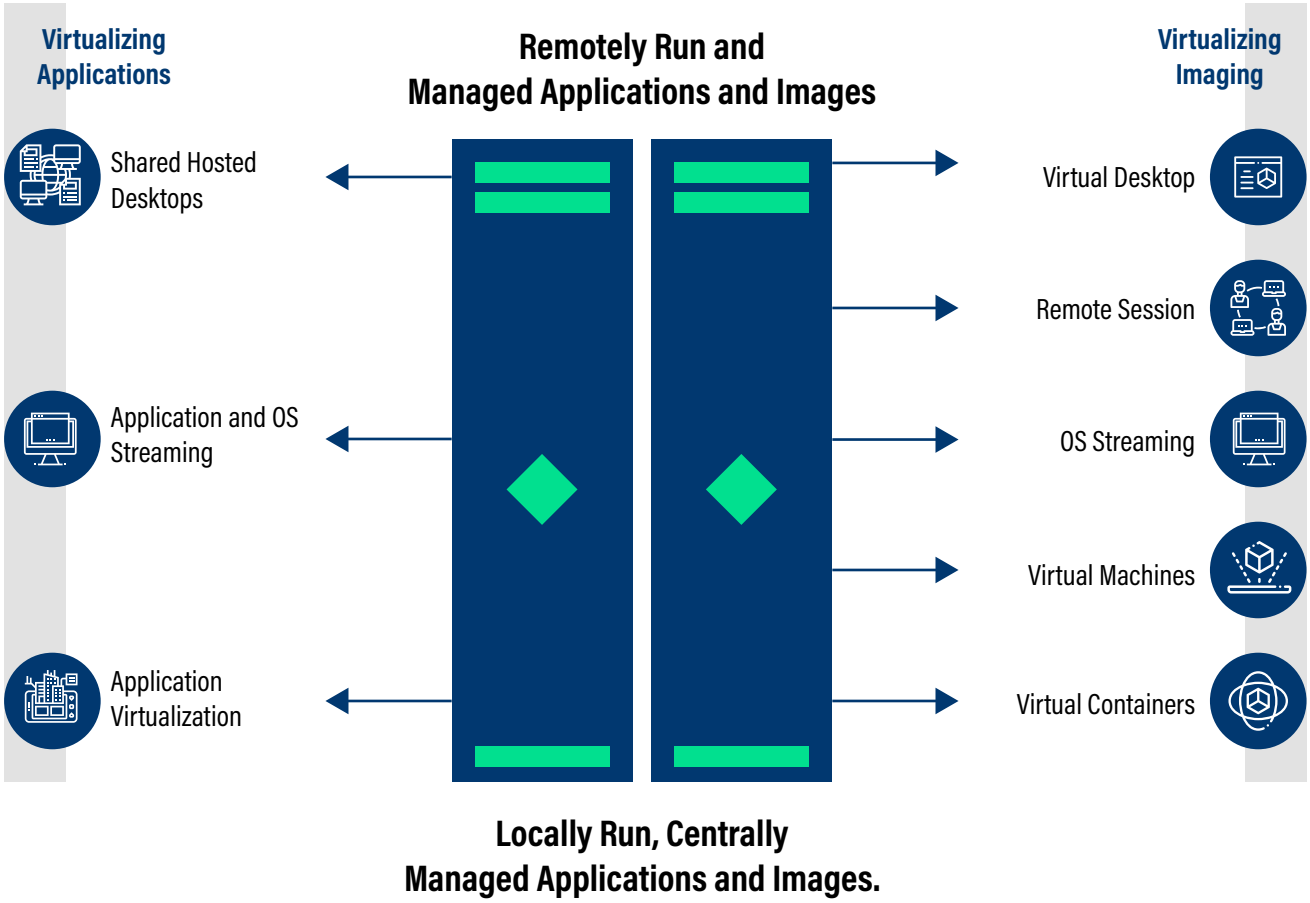




User Profiles

Though a large company may have dozens of user sectors, user profiling should design to minimize complexity by consolidating these sectors into the smaller number that can address maximum users and company requirements. The above diagram shows an example of the three basic profiles.

Service Delivery Basics



EUC architects who want to adopt virtualized service delivery can select a variety of approaches, and the delivery models differ based on factors like layers of the software stack which is virtualized against vertical requirement, layers to interact, elements run on servers or locally. The above diagram explains the approaches for service delivery.

WHY MODERNIZATION USING INTEL V PRO TECHNOLOGY IS NEEDED FOR AN ORGANIZATION?

Endpoints strongly impact user satisfaction, TCO (Total Cost of Ownership) and requirements makes endpoint solutions critical to EUC architect team.

Below table explains how client virtualization is not equal to a thin PC. Instead, the architect team should consider delivery models together as they select endpoints.

Delivery Model	Summary	Suitable endpoints
Virtual Container	Installs virtual desktops and executes in isolated containers	**Rich Client**
Application Streaming	Can cache streamed apps on laptops, so mobile users can work offline	**Rich Client**
OS Streaming	Streams OS and Application for execution on local client storage	**Rich Client**
Application Layering	Executes Virtual applications on the client	**Rich Client**
Shared Hosted Desktops	Executes codes in shared session on server with no local storage	**Rich or Thin client depending on application**
Virtual Desktop	Computation and storage are centralized, but users get a complete virtual machine and customized desktop	**Rich or Thin client depending on application**
Desktop as a Service	Delivers virtual and nonvirtual applications as a service	**Rich or Thin client depending on application**

Intel energetically innovates to ensure that companies can deploy robust and compatible endpoints whatever their client computing preferred device type. Along with consistent architecture and extensive product, families were chosen from EUC, and architects can deploy thin and rich endpoints that help optimize the user experience at the same time secure, manageable and cost-effective IT environment.

Intel Technology-based thin clients provide powerful capabilities for task workers with value-focused environments where workload needed only server-centric delivery.

Intel also has technology-based thin clients in various form factors, and these endpoints have smaller footprints, value for money and that meets both user and company needs.

Intel NUC	Intel Compute Stick	Intel Compute Card
4X4 inch mini PC based on Intel Core 3 or I5 processors.	Device size of that turns any HDMI display into a PC by Intel Atom or Core M3 processors.	A Visiting card Sized computer that is portable and available in Celeron, Pentium and Core processors.

Security and Compliance

Security and Non-compliance cut across verticals, Intel has numerous built-in abilities in its latest V-Pro processors and storage solutions for better security. Particularly value for the company that mandated to implement data encryption, MFA (multifactor or biometric authentication), geofencing (Monitor data movement inside the company and outside).

BENEFITS OF MODERNIZATION OF EUC

Centralized Management

When you think about an IT enterprise and its infrastructure needs, you can imagine the workload, time and resource required by the IT administrator in installing new software application for each workstation. This would directly/indirectly affect the overall efficiency of the organization without any user downtime.

End-user computing resolves these issues with centralized management. Install and scale new application, manage the OS, and provision new users from one place and with just one click, you can install apps, updates and security patches to the end-user system. Centralized management of your desktop task force is a priceless asset. It makes it immensely easier to manage many desktops which limit the requirement of IT professionals.

Bring Your Own Device (BYOD) Support

Traditionally, in all industries when it comes to communication devices like Routers, switches, computers and mobile devices were distributed across the globe. But in today's digital era, employees prefer to choose their own device and don't mind using the same for both personal and professional work which can result in better efficiency and faster configuration. These benefits are unique to sectors like Government, NGO's, as well as educational institutions. They can utilize EUC technology that can bring more flexibility to use their own device.

Secure End-User Environment

We have covered how end-user computing technology enhances collaboration. But one area which is given the least importance is security. Security and Non-Compliance cut across segments and Intel has abundant built-in capabilities into latest V-Pro processors and storage solutions for better security. V-Pro has solutions that allow you to access company data without storing anything on disk or cache. You can control access using the latest authentication and authorization technologies.

OUR OWN STORY ON MODERNIZING EUC

SCENARIO ONE

For an Educational Institution

Educational institutions always spend a lot of time and efforts to deploy applications and updates. Facing audits were very tough; the number of working hours was huge, and tracking users on travel and leave was challenging. IT professionals in larger institutions were facing a lot of challenges to maintain **compliance**. Past year, we introduced modernizing EUC with Rich and Thin PC and found excellent results to compliance, maintaining OS standards and updates handling, with a lot of time and working hours saved.

SCENARIO TWO

IT Sector Big and Small scale

As we were aware of how financial, educational and other prominent organizations were always worried about their security compliance due to the increase in cyber-attacks. And as the business expands the number of devices procurement continues to increase.IT professionals had to face a lot of a challenge in maintaining a big team without compromising on security and compliance.

We introduced modernized EUC with rich and thin PC, along with different delivery models and found excellent results with respect to security. The client was very happy and appreciated the project teams for providing the best solution by saving time and cost to the organization without impacting or disturbing the users.

CONCLUSION

No Single delivery model fits every segment, industry or company. Effective planning focusing on user experience, dividing the user base, finding the devices and models that meet user and company needs and modernizing the **infrastructure** to absorb the server-side models.

End to end innovations from Intel can help the company IT team in optimizing their EUC environment. With end to end planning and Intel technologies, IT can increase user satisfaction, security and empower the company to tackle the changing environment.

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About Happiest Minds Technologies

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