

Smarter empowers real-time collaboration

Enabling Hybrid and Remote
Collaboration Workflows

Solution Guide



NVIDIA
OMNIVERSE™
ENTERPRISE



Lenovo

Work is what you do, no longer where you go. Businesses from all industries are transitioning to a hybrid, dynamic, high-performance workforce.

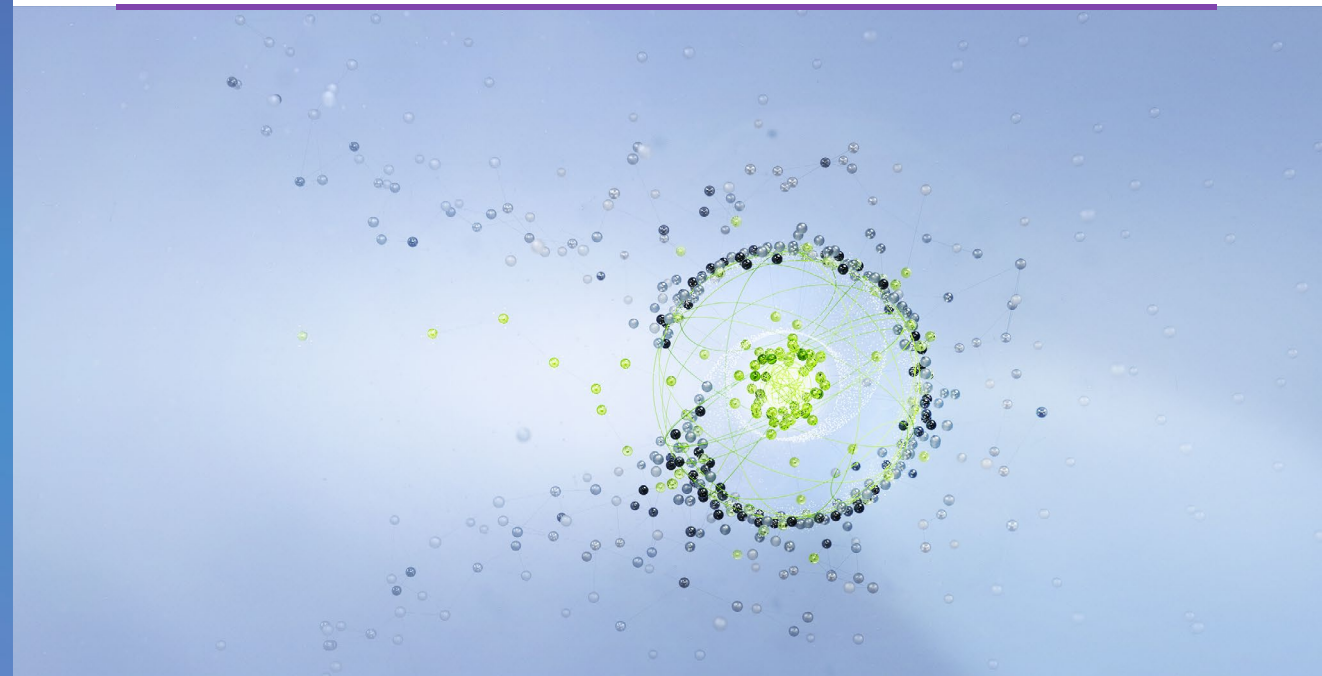
Next Level Collaboration & Productivity

NVIDIA Omniverse Enterprise, Powered by Lenovo Workstations

NVIDIA Omniverse™ Enterprise is a simple-to-deploy, end-to-end collaboration and true-to-reality simulation platform that fundamentally transforms complex design workflows for organizations of any scale.

Omniverse Enterprise unites teams, their assets, and software tools in a shared virtual space, enabling diverse workgroups to collaborate on a single project file simultaneously. With real-time interoperability across applications, infinite iterations come at no opportunity cost. Design teams can maximize creative risks to achieve new heights of quality and innovation with faster time-to-market.

The entire Omniverse Enterprise platform is optimized and certified to run on NVIDIA RTX-powered Lenovo ThinkPad and ThinkStation Workstations, as well as ThinkSystem GPU server systems in the data center.

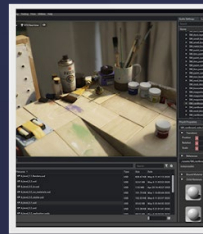
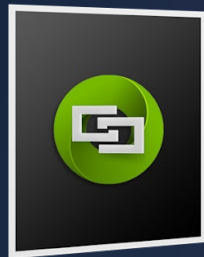
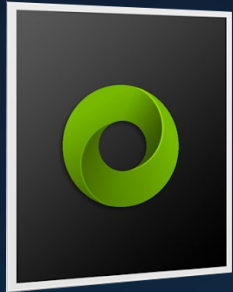


Omniverse Enterprise

Powered by NVIDIA RTX & Lenovo Workstations



The NVIDIA Omniverse Enterprise platform is designed for maximum flexibility and scalability. The platform consists of five core components:



Nucleus

NVIDIA Omniverse Nucleus works on a local machine, on premises, or in the cloud. Nucleus opens the portals that allow content-creation software tools to connect to the Omniverse platform and save USD (Pixar's Universal Scene Description) and NVIDIA's open-source Material Definition Language (MDL) content.

Connect

NVIDIA Omniverse Connect allows ISV Software Applications and Services to communicate easily with each other through the Omniverse platform (via Nucleus). These allow you to store, share, and collaborate on project data live across multiple applications.

Kit

NVIDIA Omniverse Kit is the powerful toolkit for developers to create new Omniverse Apps and extensions. Kit Extensions are plug-ins to Omniverse and extend the capabilities for developers to enhance their own workflows and user interface (UI).

Simulation

NVIDIA Omniverse Simulation is powered by a collection of core NVIDIA technologies that simulate the world, including PhysX®, Flow, Blast, and Rigid Body Dynamics. Omniverse can help anyone who is interested in a simulation environment, including Robotics, Special Effects, Drive Simulation, Architecture, Engineering, and Construction (AEC), Media and Entertainment (M&E), Games Development, Synthetic Data Generation (AI) & HPC Visualization.

RTX Renderer

NVIDIA Omniverse RTX Renderer is an advanced, multi-GPU enabled renderer based on NVIDIA RTX technology. RTX Renderer supports both real-time ray tracing and ultra-fast path tracing using NVIDIA Ampere-based RTX GPUs inside Lenovo ThinkPad and ThinkStation Workstations and ThinkSystem GPU Server systems.

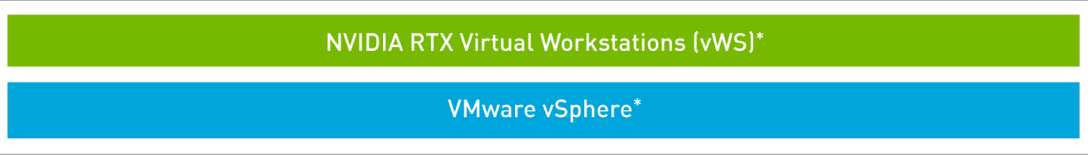
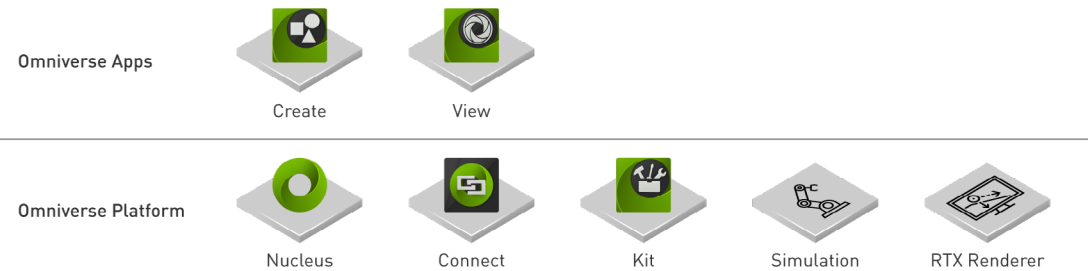
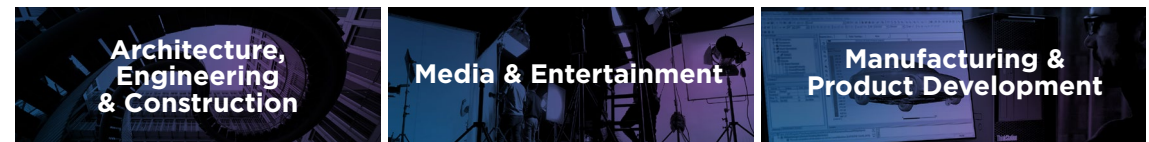


Building Productivity—At Scale

NVIDIA Omniverse Enterprise, Powered by Lenovo Workstations

The Omniverse Enterprise platform includes:

- **Omniverse Nucleus:** the collaboration engine which manages asset interchange and version control
- **Omniverse Enterprise Connectors:** plug-ins to industry-leading design applications
- **End-user applications:** Omniverse Create and Omniverse View
- **Omniverse Kit:** developer toolkit
- Full Enterprise Support



*VMware vSphere and NVIDIA RTX vWS only required for virtualized deployment

Benefits of Omniverse Enterprise

NVIDIA Omniverse Enterprise simplifies complex design workflows for both individual users and globally dispersed teams of any scale.



Easily Connect Your Workforce

Give employees the freedom to collaborate from anywhere and access fully 3D-capable virtual workstations.



Achieve Faster Time for Production

Maximum iterations at no opportunity cost mean shortened design cycles and superior quality.



Reduce cost and waste

Provide a single source of truth workflow to eliminate redundant file copies.



Increase Value

Increase value of existing infrastructure by tapping into your powerful workstation investment.

Media & Entertainment/Game Development



Initial Concept Design

Artists can quickly and efficiently develop and refine conceptual ideas to bring the director's vision to life.



Gaining Competitive Edge

Art departments can produce innovative ideas swiftly, with infinite iterations at no opportunity cost to meet bid deadlines, win new projects, and maximize profitability.



Global Collaboration

Globally-dispersed content teams with a broad range of disciplines can now collaborate and communicate easily, increasing creative flow across different departments.



Virtual Production

With the move to shooting visual effects in-camera on virtual production stages, virtual art departments can collaborate directly with the set, making directorial edits in real-time.



Real-Time Dailies

Remote teams and supervisors can review beautiful, photoreal shots from almost any device, allowing them to convey ideas effectively, reducing the number of review cycles, keeping projects on track, and accelerating the path to approvals.



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Benefits of Omniverse Enterprise

Product Design & Manufacturing



Design Reviews

Easily collaborate to inform critical decisions throughout the entire design process. Share and evaluate physically accurate, interactive ray-traced visualizations of product concepts with teammates, customers, suppliers, and third-party consultants from anywhere in the world.



Supplier Communication

Quickly review engineering changes with suppliers and manufacturers around the world, viewing photorealistic interactive models in real-time to facilitate high-quality decisions quickly and easily across a wide range of disciplines.



AI Training & Simulation for Production Robotics

Take advantage of NVIDIA's comprehensive AI training and inferencing modules to automate robotic systems from warehouse logistics, to assembly, to welding cells and PCB pick-and-place equipment.



Visualize Massive Factory Simulations

NVIDIA Omniverse can display full plant and factory layouts supporting interactive fly-throughs and evaluations of entire facilities to provide a seamless collaboration experience across data formats, departments, and development processes.

Benefits of Omniverse Enterprise

Architecture, Engineering, & Construction (AEC)



Initial Concept Design

Architects, engineers, and designers can create and quickly iterate on initial ideas for building designs, delivering first phase design concepts quicker and easier than ever before.



Competition and Proposal Submissions

Teams can iterate on ideas swiftly to drive innovation, with the ability to create compelling photorealistic renders faster, in order to meet deadlines and win new business projects.



Client Presentation

Clients, owners, and developers can view beautiful, photoreal visualizations from almost any device, allowing teams to convey ideas effectively with stunning realism.



Global Collaboration

Globally dispersed project teams with a broad range of disciplines can now collaborate and communicate more easily, which helps reduce the likelihood of design flaws and delays to agreeing on design decisions.



Speedy Design Reviews

Accurate visualizations and enhanced team collaboration make each design review more effective, helping reduce review cycles and rework. This keeps projects on track and allows design teams to explore more options.



End-to-End Omniverse Enterprise Solutions

Powered by Lenovo ThinkPad, ThinkStation & ThinkSystem

Lenovo is pleased to offer a complete portfolio of hardware products that have been designed, performance optimized, and certified to work with NVIDIA Omniverse Enterprise.



Lenovo ThinkPad P1

- 16" Powerful Mobile Workstation
- ~17mm Thin - Lightweight 1.8Kg
- 16:10 WQUHD Dolby Vision Display
- 100% Adobe RGB - HDR400
- Intel Core i9 8C CPU - Max 5.0GHz
- 64GB DDR4-3200 Memory
- Up to 4TB of PCIe Gen.4 SSD Storage
- Microsoft Windows or Linux OS

Lenovo ThinkStation P620

- #1 Most Powerful 1CPU Workstation
- Tower Desktop Workstation
- AMD Threadripper Pro CPU - 64C
- Up to 1TB DDR4-3200 ECC Memory
- Support for 4x NVIDIA RTX GPUs
- Blazing Fast PCIe Gen.4 SSD Storage
- Integrated 10GbE Networking
- Microsoft Windows or Linux OS



Lenovo ThinkSystem SR670 v2

- The Ultimate RTX Render Platform!
- 2x Intel Xeon 3rd Gen. Scalable CPUs
- Max. 2TB of DDR4-3200 ECC Memory
- Up to 8x NVIDIA RTX A40 48GB GPUs
- Integrated 10/25Gb Ethernet
- Optional NVIDIA Bluefield DPU Support
- Rack Dense 3U Design
- Redundant Power Supplies & Cooling
- Hypervisor Support w/NVIDIA vGPU



For a comprehensive list of all Lenovo platforms designed for NVIDIA Omniverse Enterprise, please speak with a Lenovo account representative.

Smarter Technology for All

Leveraging the entire portfolio of enterprise class, legendarily reliable P Series portfolio, Lenovo are pleased to be market leaders in digital transformation; delivering the broadest portfolio of industry certified, high-performance, remote, collaborative, and hybrid working solutions to power your new normal.

These powerful, highly versatile workstation solutions enable businesses of all sizes to scale their growing IT requirements with ease, from multiple locations, no matter how complex their end user workflow may be.

Additionally, to simplify procurement, Lenovo are pleased to offer their entire suite of Remote & Collaborative Solutions, including NVIDIA Omniverse Enterprise, through TruScale. Delivering everything from hardware, to software licensing, service, support and management as-a-service, from a single source, TruScale offers a truly global everything as-a-service offering. Optimized with one Lenovo contract and one point of contact, meaning customers can easily package their purchase with all the other tools needed to meet today's growing collaboration needs.

For more information, please visit:
www.Lenovo.com/Omniverse

