

ASUS forges pathway for 3D creation and simulation with NVIDIA Omniverse Enterprise

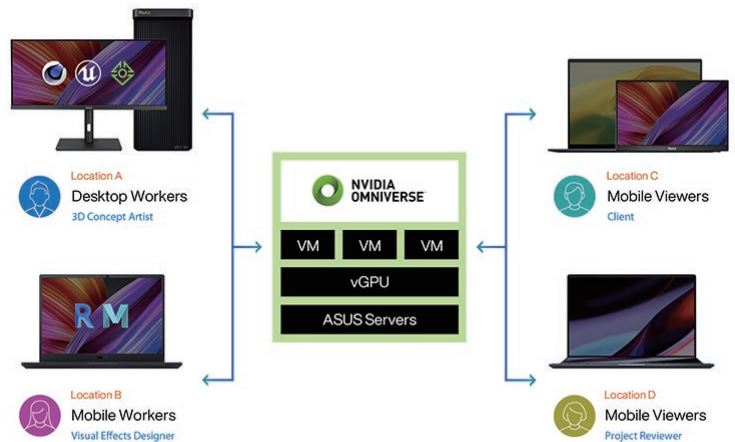


ASUS is a global technology leader that provides the world's most innovative and intuitive devices, components and solutions to deliver incredible experiences that enhance the lives of people everywhere. With over 25 years in server development and design, ASUS has a demonstrated track record of engineering and design excellence — plus a roll call of over 1,200 world records for top performance in computing-intensive workloads for both 2P and 1P servers.

ASUS is committed to R&D, with 5,000 staff dedicated to this discipline alone. We also have set ambitious climate-action goals, with the aim to reach 100%-renewable in local operations by 2030, and globally by 2035. As well, all ASUS products are backed by an extensive global support network, with 2,100 service points worldwide. And, to ensure the best compatibility, ASUS works closely with independent software vendors (ISV) to certify that our servers and workstations for reliable and effective performance with major professional software platforms. Factor in our diverse and extensive range of servers and workstations — and it is clear that ASUS equipment is primed for NVIDIA® Omniverse™ Enterprise projects for all shapes and sizes.

Primed for the Omniverse ecosystem

NVIDIA Omniverse is a scalable, end-to-end platform enabling enterprises to develop custom 3D pipelines and simulate large-scale, physically accurate virtual worlds. ASUS accommodates both the Omniverse Enterprise subscription and Omniverse individual users. NVIDIA-Certified™ ASUS servers and workstations with NVIDIA RTX™ GPUs support NVIDIA Omniverse Enterprise to provide a solid foundation for deployment across organizations of any scale. And for individual creators and artists, ASUS workstations offer state-of-the-art driver technology that has been extensively tested to meet the most demanding creative needs, all of which ensures the most optimal experience for NVIDIA Omniverse.





NVIDIA Omniverse and ASUS

Among the broad range of capabilities ASUS server products offer is comprehensive support for NVIDIA Omniverse. This open software platform was created to enable virtual creative collaboration and real-time physically precise simulation 'twins'. It allows for complex creator, designer and engineering workflows that enable users and teams to deploy major external design tools and assets to create collaborative projects in its shared virtual space.

ASUS is partnering with NVIDIA to bring these next-generation shared workflows to users in multiple sectors around the world with NVIDIA Omniverse Enterprise. ASUS server solutions provide the infrastructure for Omniverse Enterprise deployments on any scale. This powerful synergy enables collaboration on graphically-rich 3D projects wherever team members are located. Omniverse Enterprise facilitates development using broadly deployed professional applications such as Autodesk Maya and 3ds Max and Epic Games Unreal Engine, with support for many other major creative apps in the works. Omniverse Enterprise is a unique and powerful concept for 3D collaboration. The benefits of the Omniverse concept apply across a wide range of fields and endeavors. As the media and entertainment industry undergoes rapid change, new production methodologies are needed to streamline production of high-quality content using globally distributed teams.

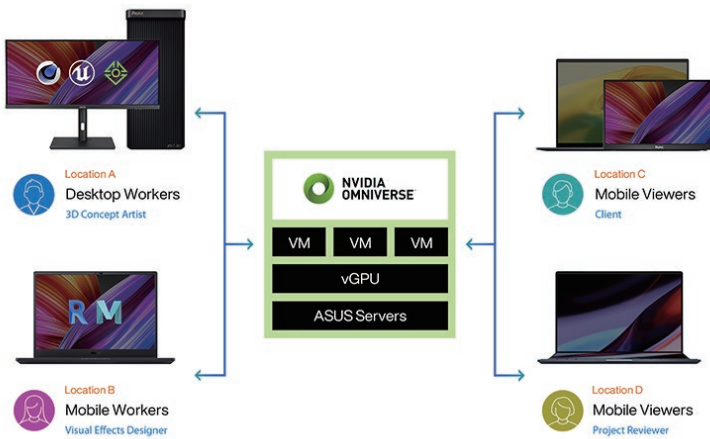
With highly-dispersed manufacturing in an increasingly globalized world, the product development and manufacture can be challenging. Various-located design and engineering teams must work in precise coordination with each other, outside contractors and numerous suppliers. NVIDIA Omniverse facilitates such collaboration in unprecedented ways. From early-stage concept prototyping to digital twin simulation to smart factory automation and robotics, Omniverse connects all stakeholders throughout the process.

In architectural design, there is a growing demand for efficient collaboration during the design process, with a necessity for accurate simulation, photorealism and faster rendering iterations. NVIDIA Omniverse affords unique capabilities to address challenges and assist architecture, engineering and construction (AEC) professionals in realizing building design projects across disparate locations. NVIDIA is establishing partnerships around the world to enable AEC experts to connect in real time on the same platform. NVIDIA Omniverse Enterprise accelerates design concepts and visualizations, while allowing team members to collaborate even when working with different software applications.

Components of NVIDIA Omniverse Enterprise

NVIDIA Omniverse Enterprise is an industrial software platform that empowers businesses of any size to transform their 3D production workflows. It supports projects with heavy design workloads, especially for multi-location and even trans-national remote collaboration. For smaller enterprises, NVIDIA Omniverse is an easily extensible platform for 3D design that focuses on small and local groups, and the individual version is free for any laptop or mini PC that has an NVIDIA RTX GPU.





The Omniverse Enterprise platform includes

- Omniverse Enterprise Connectors, plug-ins to industry-leading design applications
- End-user applications Omniverse Create and Omniverse View
- Omniverse Kit, developer toolkit for building extensions, apps, and microservices
- Omniverse Enterprise Launcher IT deployment tools
- Full Enterprise Support including Support, Upgrades, Maintenance (SUMs), 8x5 support via email, phone, and web portal

Connected Applications

The Omniverse platform is built on open standards including Universal Scene Description and Material Definition Language (MDL). USD is a powerful 3D format, framework, and ecosystem for collaborating within, describing, composing, and simulating 3D scenes and worlds. Depending on your favorite industry tool's support for USD, there are multiple ways to connect to Omniverse. Connect at the highest fidelity via Omniverse Connectors, plug-ins that enable live-sync collaboration and iteration across multiple software suites simultaneously—all brought together in Omniverse Enterprise.

There are several standard Omniverse Apps with various capabilities including particularly Create and View. Create accelerates advanced scene composition

and allows users to interactively assemble, light, simulate and render scenes in Pixar USD in real time. View is a powerful, physically-accurate and photorealistic visualization tool that enables collaborative review of design projects.



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ASUS solutions for Omniverse

ASUS solutions fully support the power, efficiency and flexibility of the Omniverse Enterprise platform and all of its components and apps.

ASUS is also partnering with NVIDIA to bring next-generation shared workflows to creative, professional and scientific users around the globe with NVIDIA Omniverse Enterprise, removing barriers to collaboration on graphically rich and complex 3D projects regardless of where contributing teams are located. Our partnership with NVIDIA provides the complex, high-performance server infrastructure and client-side hardware tools to fully enable the power and productivity of the Omniverse concept.

ASUS has the design and engineering expertise to enable enterprises to take full advantage of the power

and complexity of Omniverse Enterprise. The diversity and configurability of ASUS server options allows for creating solutions that precisely match the needs and budget requirements of enterprise clients of all type and levels, from smaller creative operations to large industrial companies. This also allows for scalability as needs grow or change. All ASUS GPU server options are NVIDIA Certified as Omniverse ready and fully compatible and interoperable with all Omniverse components.

How to determine your best ASUS solution for Omniverse

Your best ASUS solution for Omniverse may depend on which licensing plan you have determined is best for your company's purposes.

OMNIVERSE FOR INDIVIDUALS

OMNIVERSE ENTERPRISE

COLLABORATION	Between multiple apps and one other user	Between multiple apps and licensed creators
LICENSING	Free for individuals	Subscription licenses, annual and multi-year
SUPPORT	Public Forums, Training Videos & Community	Full enterprise support
NUCLEUS	Nucleus Workstation only	Enterprise Nucleus server Nucleus workstation
CONNECTORS	Use of all Connectors, including beta	Use of all production connectors
APPS	All Omniverse apps, including beta	Omniverse Create Omniverse View

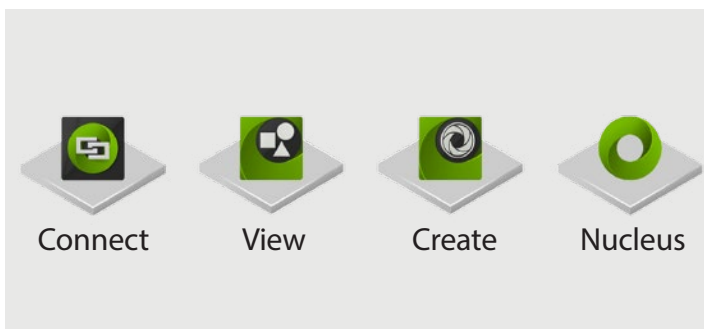
* Each internal app developed using Kit requires creator license

Based on the chosen Omniverse license plan, we can classify operators into three groups:

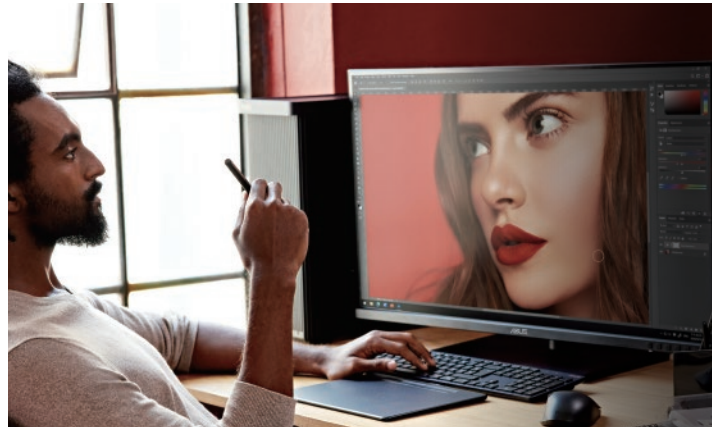
- Creators
- Reviewers
- Nucleus subscriptions

Creators

Most Omniverse operators will be in the creator class, made up of content creators who are greatly concerned about the performance required to run third-party applications from ISVs like Adobe, Autodesk and Blender, among others. The more complex a project is, the more creators it will need. These creators may be based in different locations, which can increase project-management complexity. Thanks to the creation of NVIDIA Omniverse, ASUS can offer innovative NVIDIA-Certified servers to install remote desktop support for Omniverse Enterprise to resolve this issue.



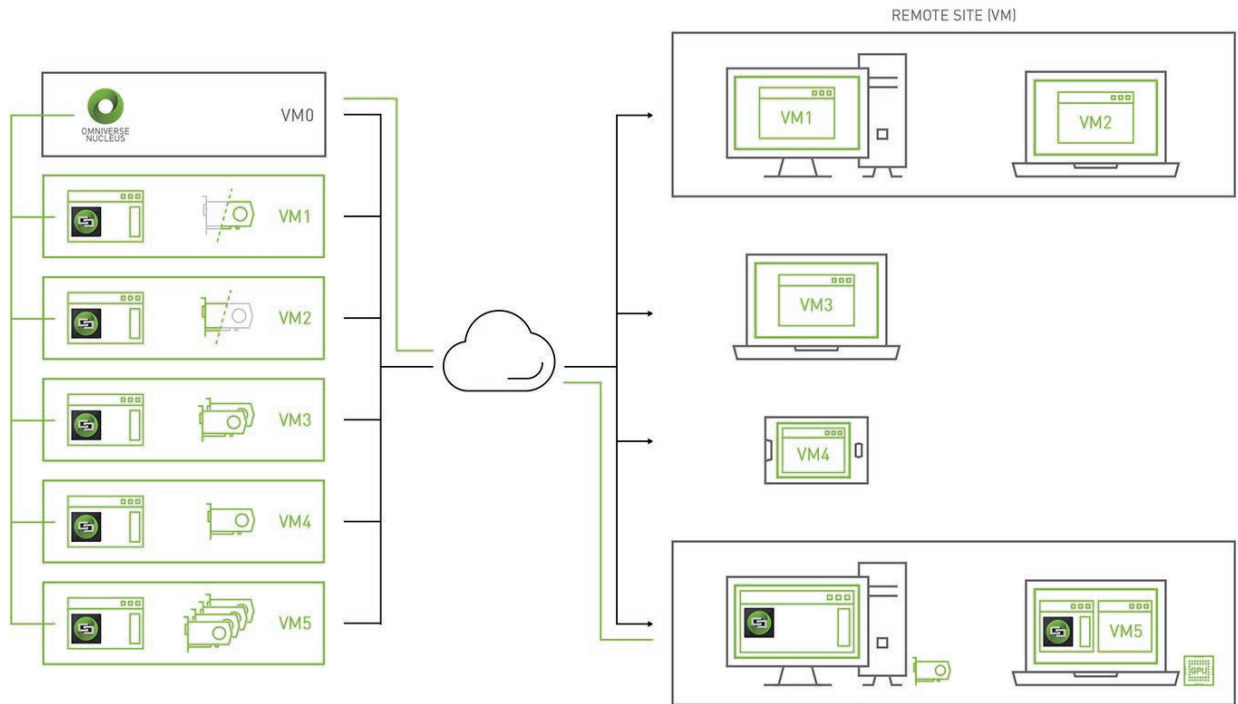
For remote content creators, ASUS GPU servers are well-suited to deploy VMware to support Virtual Desktop Infrastructure (VDI) instances. VDI requirements will vary depending on project scope. You can refer to the table below for some suggested configurations for different types of project such as entry-level interior design, mid-range engineering and high-end 3D workloads.



ASUS GPU servers allow local users in different locations to leverage vGPU resources doing bi-directional workflows using tools such as Unreal Engine, 3ds Max or Maya. All local users only need to log in to the platform to complete their work and collaborate in real time.

LARGE, VIRTUALIZED ENTERPRISE

Connect teams to the same Omniverse environment whether they're working virtualized from the data center with NVIDIA RTX Virtual Workstations (vWS), or using local NVIDIA RTX professional mobile workstations and laptops.



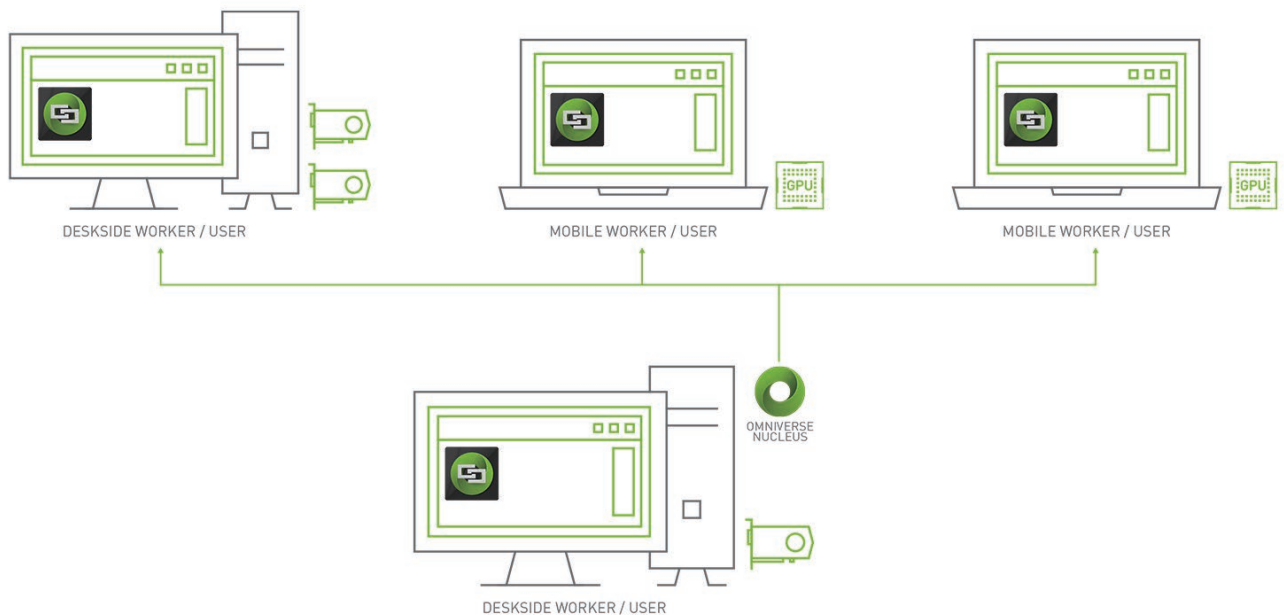
Here are some suggested configurations for VDI setups

Company size	Entry	Mid-range	High-end
Scene	Interior design	Engineering	3D Animation
Model	ESC4000A-E10	ESC4000-E10	ESC8000A-E11
Dimension	800mm x 440mm x 88.9mm (2U)	800mm x 440mm x 88.9mm (2U)	800mm x 440mm x 175.6mm (4U)
CPU	AMD EPYC 7453 (28C)	2 x Intel 6348 (56C)	2 x AMD EPYC 7663 (108C)
Memory	8 x DDR4 3200 32G	16 x DDR4 3200 32G	32 x DDR4 3200 64G
GPU	2 x NVIDIA A5000 GPU	4 x NVIDIA A6000 GPU	8 x NVIDIA A40 GPU
SSD	2 x 3.84TB NVMe	4 x 7.68TB NVMe	2 x 7.68TB NVMe
VDI QTY	5~8	8~12	12~16
GPU-VDI	6GB	16GB	24GB

If content creators want to use local resources to do some rendering work on platforms such as Photoshop, Cinema4D or others, we recommend at least a mainstream ASUS workstation or a high-end Studiobook. We also recommend using an ASUS ProArt display monitor to make sure video color, CG or special effects are as expected and required for the target audience.

SMALL, LOCAL WORKGROUPS

Deploy Omniverse across a small workgroup on a local network with NVIDIA RTX professional mobile workstations and desktops.



Here are some example recommended models for local content creators:

Model	ExpertCenter E500 G9	ProArt Studiobook Pro 16 OLED
CPU	Intel® Core™ i7-12700K	Intel® Core™ i7-11800H
Memory	2 x DDR5 4800/ECC U-DIMM 32GB	2 x DDR4 SO-DIMM 32GB
GPU	1 x NVIDIA RTX™ A5000 GPU	1 x NVIDIA RTX™ A5000 GPU
SSD	1TB M.2 2280 NVMe PCIe® 4.0	1TB M.2 NVMe PCIe® 4.0

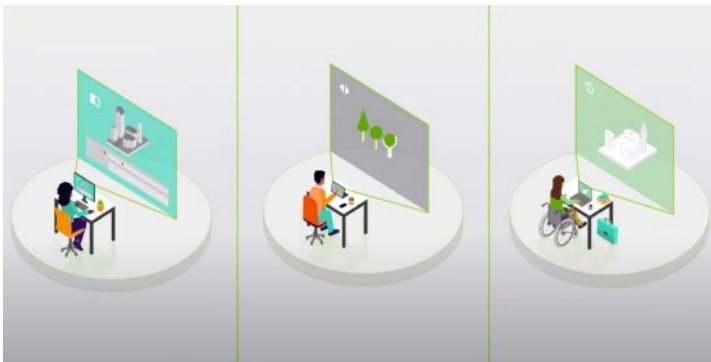
Reviewers

Reviewers will be an employer or supervisor who might want to have the designer/creator revise a draft version. They are probably not deeply familiar with how to use 3ds Max, Maya CAD or similar professional tools, but they can use a local laptop to view the prototype remotely. We highly recommend that reviewers use a high-end ProArt Display product to check the color fidelity, saturation and so on.



Nucleus subscriptions

A Nucleus subscription includes all team members, which enables collaboration between creators and reviewers. Principle will be the project manager (PM), who controls project member authorities and file version control. The PM is responsible for deploying the total Omniverse solution based on the project scope, so they are the one to identify the Omniverse package requirements, for which by the following suggestions will be useful.



Personal or mid-range studio	OVI package
Staffing	Allows a maximum of two collaborating creators
Hardware	Uses a mini PC to host Nucleus, which connects to the creators and stores data

International animation studio	OVE package
Staffing	Multi-user collaboration for more than two users
Hardware	Uses ASUS servers to create the VDI, and the VDIs can have different configurations to support different roles, be that creator, reviewer or nucleus

These ASUS server solutions are designed and certified to fully support the NVIDIA Omniverse Enterprise platform and all of its components, with configuration options to fit practically any use scenario and budget. This diverse portfolio allows you to tailor a package to be fully compatible with any requirements. As our long-term partnership with NVIDIA and ISVs show, ASUS is fully invested in the Omniverse ecosystem and is ready to help partners develop options for this exciting platform.

Please [contact us](#) for more information on ASUS Omniverse solutions.