innerspace
THE SIMULATOR COMPANY

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Configuration requirements

This document provides the specifications for setting up the Meta Quest 3, including the network requirements, minimum hardware specifications, and the software applications that need to be installed on the VR equipment.

Network requirements

Minimum Bandwidth:

- Download: 30MBit/s

- Upload: 10MBit/s

Endpoints and Ports

This are the endpoints and ports that need to be open in the firewall in order to ensure smooth operation of the Innerspace Simulator Solution.

Service	Endpoint	Port	Direction
Microsoft Intune *Device Management for Simulator Station* *Not required when the VR equipment is managed by the Customer.*	Required for authentication: - login.windows.net - login.microsoftonline.com - sts.windows.net - innerspacecustomers.onmicrosoft.com Requirements for Intune device management: Network endpoints for Microsoft Intune Requirements for Win32 app deployment: Network endpoints for Microsoft Intune Requirements for Windows Push Notifications: Hinzufügen von WNS-Datenverkehr zur Firewall-Zulassungsliste - Windows apps	443	Outbound *(LAN > Internet)*

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Service	Endpoint	Port	Direction
Meta Quest for Business *Device Management for Quest 3 Headset* *Not required when the VR equipment is managed by the Customer.*	• ∞Meta - Shop VR Headsets & Smart Glasses • ∞Meta Quest VR Headsets, Accessories & Equipment | Meta Quest • Facebook - log in or sign up • fbcdn.net • scontent.oculuscdn.com For IP based Firewall rules, please consider the following information. IP ranges used by Meta Quest for Business	80/443	Outbound *(LAN > Internet)*
Innerspace Application Insights *Analytics*	metrics.innerspace.at	443	Outbound *(LAN > Internet)*
PrismXR *Updates for the Puppis S1 Streaming router*	prismxr.net PrismXR checks internet connection via 8.8.8.8	8010 TCP 10081	Outbound *(LAN > Internet)*
Bomgar Cloud *Remote assistance* *Only required when Innerspace remote support solution is used.*	innerspace.bomgarcloud.com	443	Outbound *(LAN > Internet)*

Service	Endpoint	Port	Direction
Simulator Platform *Ensuring change control compliant content management*	• https://*.innerspace.at • https://innerspace-applications.s3.eu-central-1.amazonaws.com/ • https://innerspace-uploads.s3.eu-central-1.amazonaws.com/ • https://innerspace-applications.s3.eu-central-1.amazonaws.com/ • http://api-js.mixpanel.com/	443	Outbound *(LAN > Internet)*

Minimum Hardware Specification

The VR-Laptop needs to fulfill following minimum requirements in order to ensure smooth operation of the Innerspace Simulator Solution.

As in standard case Innerspace will be the VR Equipment Administrator and manages the VR-equipment this will be ensured by Innerspace.

Component	Minimal requirement
Operating System	Windows (11 22H2)
CPU	Intel i7 (14th gen)
RAM	16GB
GPU	Nvidia RTX4070 (laptop version)
Local Storage	500Gb SSD
Ports	• 2x USB-A 3.0 • 1x USB-C • 1x HDMI (optional)

Within the delivered Innerspace Simulator Hardware the current hardware requirements are covered by laptop model that is E2E tested with the Innerspace solution. This model ensures the

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best performance in combination with our software & settings.

Software applications

To run the Innerspace Simulator, the Innerspace Simulator Launcher App and supporting third party software, packages need to be installed, including:

As in standard case Innerspace will be the VR Equipment Administrator and manages the VR-equipment these applications will be installed by Innerspace.

Application	Supported Version	Functionalities
Innerspace Simulator Launcher App (Innerspace Hub)	3.6.0	- Authenticate with Simulator Cloud Services - Download content from content storage - Provide UI to start anonymous and e-documentation with PDF Simulator trainings - Start selected training module in one of the following use cases - UC-1: Perform a **VR Simulator training via LMS** - UC-2: Perform **VR Simulator training with e-documentation via Simulator Launcher App (PDF)** - UC-3: **Anonymous Simulator training** - Perform VR Simulator training without e-documentation via the Simulator Launcher app: Use cases (UC-x) described in the FS document - Process received data from VR trainings and store it in LMS and Simulator Cloud Services
SteamVR (Enterprise)	1.18.7	Streaming solution to connect the VR Headset to the PC (works together with ALVR) - Establish interface to hardware based on open XR standards - Configuration of specific VR software settings

Application	Supported Version	Functionalities
ALVR	20.8.1	Streaming solution to display the Simulator content to the headset (works together with SteamVR) • Establish wireless communication with VR device • Configuration of specific VR software settings for best performance of the solution.
Nvidia Driver	latest stable version tested by Innerspace	Supported driver for the GPU
DirectX	latest stable version tested by Innerspace	Package needed to run the Streaming of the VR content to the headset
Visual C++ Redistributable for Visual Studio	2015	Package needed to run the Streaming of the VR content to the headset
PrismXR desktop application (optional)	latest	Software to manage the VR Streaming Router functionality from the desktop.
Bomgar Remote support	latest	Software for remote support.

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