

# Working Remotely with Bentley Applications

In these challenging times when COVID-19 is imposing significant disruptions to day-to-day activities and affecting normal business flow of our much-valued users and employees, we at Bentley are mindfully committed to ensuring smooth transition of work from office to remote location or home. Our innovative software and services are all geared for working from home or remote locations and do not impose the need to be in an office set-up.

To ensure smooth transition of work and effectiveness of your daily workflows with Bentley software, we have assembled information that you can refer to while working remotely or from home. We are working hard to deliver high levels of customer service, and welcome feedback, questions, and ideas on how we can serve you better in a remote work environment.

## MACHINE REQUIREMENTS

### What can we do to ensure our users' workflows are uninterrupted?

There are several options to work remotely. You may decide to install the software on your home computer. Please [click here](#) to see these minimum machine requirements for MicroStation.

<b>Processor</b>	Intel® or AMD® processor 1.0 GHz or greater. MicroStation is not supported on a CPU that does not support SSE2.
<b>Memory</b>	4 GB minimum, 16 GB recommended. More memory almost always improves performance, particularly when working with larger models.
<b>Hard Disk</b>	10 GB minimum, 10-25 GB depending on additional installations such as Companion Features and Companion Products.
<b>Video</b>	See the graphics card manufacturer for the latest information on DirectX drivers. 512 MB of video RAM or higher is recommended. Should there be insufficient video RAM, or a graphics card supported by DirectX can't be found, MicroStation attempts to use software emulation. For optimal performance, graphics display color depth should be set to 24-bit or higher. When using a color depth setting of 16-bit, some inconsistencies will be noted. For more information on recommended workstation profiles for MicroStation, see MicroStation System Requirements and Hardware Recommendations.
<b>Screen Resolution</b>	1024 x 768 or higher

## INTERNET CONNECTIVITY

### Internet Access

Internet access is required for downloading, installing, and licensing the software (unless the machine concerned has a checked-out license). As the MicroStation installer is almost 8 GB, it might take some time to install over a low bandwidth connection. Ensure the connection used has sufficient data allowance if it is not an unlimited data package. Many CONNECT Edition products are installed from a small installer file that pulls the rest of the installation files from our servers. If you encounter problems with this installation route, please refer to the DOWNLOADING SOFTWARE section below for links to full software downloads or guidance on the use of Deployment Images to take home.

### Internet Proxy Settings

MicroStation will try to obtain your Internet Proxy Settings from Internet Explorer browser. If that is not feasible, you can fill in the details manually as described in this page [located here](#).

### Connecting to Your Organization's Network via VPN

Virtual Private Network enables organizations to provide secure connection to their network over the internet so their employees can connect remotely or from public places. [Click here to follow these instructions to connect to Windows VPN](#). If your organization uses a different VPN software, contact your IT administrator to help guide you with the steps.

### MicroStation Features that Require Internet Connectivity

The following features of MicroStation may not work properly in the absence of internet connectivity.

- Bing Maps
- CONNECT Project
- CONNECT Licensing
- CONNECT Advisor
- Web Map Service
- Component Center
- Issue Resolution Service
- Reality Context Share Service
- User Feedback Service
- Send as Email
- Google Earth and Google Map integration
- Social interaction (Facebook, Twitter, YouTube, etc.)
- Online Help
- Publish iModel and PDF to ProjectWise Share
- CONNECT Notification Service
- RSS Feeds

## VIRTUALIZATION and VIRTUAL MACHINES

Virtualization enables organizations to create virtual machines from a single physical machine and administer them to their employees on demand. MicroStation is certified on Citrix XenApp. Follow the steps below to set it up. Bentley is exploring other virtualization providers like VMWare Horizon and Azure Virtual Desktop. If your organization uses any of these, please reach out to us with your questions, and we'll try our best to assist.

### Virtualization with Citrix

- Citrix XenApp Supported:  
7.15 64-bit on Windows Server 2012 R2
- Setup Instructions  
[Install Configure](#)  
[Application Groups Manage](#)
- [MicroStation Virtualization FAQ](#)

## Virtual Machines

Virtual machines are a great way to manage operating systems and work remotely with a running Remote Desktop Connection, login credentials, and a valid IP address. Installing virtualization software allows one or more virtual machines to share one physical computer. Your IT administrator can create VMs with a readymade image of Windows operating system that includes MicroStation and any other necessary software. When such a VM is provisioned to you, you can directly launch MicroStation and start working on your project.

You can create a new VM and install its operating system by [following these simple steps located here](#).

You can export and import existing VMs in Windows Hyper-V Server by [following these steps located here](#).

## REMOTE DESKTOP CONNECTION

### Remotely Accessing Office Computer

If you work on a heavy-duty desktop machine that is difficult to carry or if your organization does not allow employees to move computers off office premises, Remote Desktop Connection offers a great way to log into that machine from your personal computer. You will require your computer name or IP address. [Click here to follow the instructions on this page](#).

## SHARING CONFIGURATIONS AND PROJECT DATA

When you're working remotely, you are still part of a team and therefore sharing project data is crucial. This is where the Configuration system shines. No matter where you are, you can be sure you are using the correct CAD standard with server-based Configurations. If your system has already been configured to use server-based resources virtualization, and remote desktop access results in a similar experience to working in the office, there may be some graphic latency, but the system will be identical.

Attempting to connect to a configuration on office-based shares via VPN may be possible, depending on your IT systems, but is likely to be subject to significant latency, especially with many more VPN users than usual. Working with a local copy of the network configuration may be more appropriate.

### Common Network Storage

One of the simplest and effective ways of work sharing is by storing the project data in a common network location and pointing every user's configuration to that location by setting MicroStation's `_USTN_CONFIGURATION` configuration variable. In addition, we recommend mapping a drive letter to your organization's network server path. For example, in `ConfigurationSetup.cfg`, the variable should be set as follows:

```
_USTN_CUSTOM_CONFIGURATION = Z:\SharedStandards\
```

To point to your WorkSpaces and WorkSets (if in another location) use the `WorkSpacesSetup.cfg` file and uncomment and set:

```
_USTN_WORKSPACESROOT = P:\ProjectsRoot\
```

It might be worth expending some effort.

### Storing Your Project Data on ProjectWise Share or OneDrive

Store your project data on ProjectWise Share or Microsoft OneDrive, which allow high levels of control. Easily manage and transfer without the need for additional software.

### Collaborating on Projects with ProjectWise

The beauty of working with ProjectWise is that work sharing is built-in and the concept of being tied to a location is foreign. In a Client-Server architecture the client can be anywhere. By storing standards and work files on a server you can ensure proper access by anyone. By establishing a digital environment for all project information, you can give access to people regardless of location and device type.

However, ensuring the correct access is the key to success. So, setting up ProjectWise Explorer locally is key.

[To install ProjectWise Explorer, click here](#).

## DOWNLOADING SOFTWARE

- [Software Downloads](#)

- **Portable Deployment Images**

We recommend that CAD/BIM administrators create Deployment Images to use as the source for multiple installations in normal circumstances. In this situation either an existing or a new Deployment Image can be copied to removable media and taken home to use as the installation source where internet availability/speed is limited (note: Internet access is still essential to sign-in to licensing services). The step to create a Deployment Image for MicroStation CONNECT Edition are explained here, [MicroStation CONNECT - How to create a Deployment Image](#). Creating a Deployment Image for other products is very similar.

## ACCESSING PRODUCT DOCUMENTATION

- [Online Documents](#)
- [MicroStation CONNECT Edition Update 13](#)
- [PowerDraft CONNECT Edition Update 13](#)
- [Bentley View CONNECT Edition Update 13](#)

## RESOLVING LICENSING ISSUES

- [Licensing Wiki](#)
- [Subscription Entitlement Service](#)
- [Bentley User Registration](#)
- [Offline Usage](#)
- [How to ensure usage from only one user on a shared workstation](#)
- [How remote usage is recorded with Subscription Entitlement Service \(SES\)](#)
- [How to check out licenses from Entitlement Management \(how to run offline\)](#)
- [How to bulk checkout licenses from Entitlement Management \(extended offline scenarios\)](#)

## HOW TO GET HELP

- [Service Request Manager](#)
- [Bentley Communities](#)
- [MicroStation Community](#)
- [CONNECT Center](#)
- [Bentley LEARNserver](#)
- [License Manager](#)
- [Entitlement Management](#)
- [User Management](#)
- [Roles and Permissions](#)

## USEFUL ARTICLES ABOUT WORKING REMOTELY

- [Super Evil Megacorp](#)
- [Suddenly Remote? Here's How to Regain Your Productivity in Record Time](#)
- [The Ultimate Guide to Remote Work](#)

## V8i SUPPORT

- [Software Download Instructions](#)
- [Working from Home using Bentley Licensing](#)

## VIDEOS

- Check-out a license: [Click HERE for video training](#)
- [How to Connect to ProjectWise Remotely](#)
- [ProjectWise and the Distributed Workforce](#)

## TIPS

### Printing

At home, set your default printer to PDF to avoid sending prints via a VPN to an unattended printer.