



This article explains what RDP and VNC are, and what are the differences between RDP and VNC.

Sometimes you need to access a work computer from home and use the resources you have there. Or take control of your client's computer and show him how to fix an issue.

These feats are possible by many protocols and software, including the very popular Remote Desktop Protocol ([RDP](#)) and Virtual Network Computing ([VNC](#)).

In this article, we introduce these two technologies and compare RDP with VNC in detail.

What Is RDP?

Remote Desktop Protocol (RDP) is a protocol developed by Microsoft which lets users remotely take graphic control of another computer.

RDP servers work only with Windows although the client is available for almost [all operating systems](#) including Linux, Mac, and Android.

RDP is an actual semantic protocol; meaning, the data it transfers goes deeper than what is visually happening. This model makes the transfer fast and efficient.

RDP is used for **desktop sharing**, as well as letting many remote computers share the resources of a target computer, through different profiles.

What Is VNC?

Virtual Network Computing (VNC) is a desktop sharing system that uses a protocol named **RFB**. It lets people remotely control a computer whilst the main user can watch and interact as well.



VNC Viewer connects to your computer remotely from anywhere in the world and takes control.

VNC is pixel-based. Meaning it barely gets involved with the underlying graphic layout, making it flexible but less efficient. VNC is used mostly for technical support, as well as educational purposes.

VNC is platform-independent. You can use many cross-platform apps, including **TightVNC** and **RealVNC**, to share your desktop across different computers.

What Are the Differences between RDP and VNC?

It's not right to say RDP is better than VNC or vice-versa. These protocols have **different use-cases**, although they are commonly confused.



Here are the main differences between RDP and VNC:

READ: [Complete Guide to RDP Gateway\[2020\]](#)

1-The Way They Work(How is VNC Different from RDP)

As we mentioned, **VNC is a pixel-based protocol**. So it sends the changes across the network in what is essentially an image exchange. **This makes VNC slower than RDP**. But it also makes cross-platform sharing easier.

On the other hand, RDP is semantically involved with the underlying graphic layout. **This makes RDP much more efficient** as the data is much more compressed.

RDP also logs into the computer, creating a real desktop session. This means **you can use RDP to share the resources of the same computer between many remote users**, through different profiles. But it also means **RDP is not a screen-sharing platform** and will kick the extra user out of the session.

2-Their Use-cases(when use VNC, when use RDP)

VNC is used as a screen-sharing platform that also lets the remote computer take control. This is great for **remote customer support** and **educational demonstrations** because all users are sharing the same screen and the mentor can ‘show’ the steps to the students, or the customer can show the problem to the support technician.

RDP vs VNC performance:

RDP is a **fast** and **efficient** way to connect to a Windows computer and use it as if you are there. It is faster and easier to work with. It is not a screen-sharing solution, but rather a **resource sharing solution**. That's why it's used in VPS servers to let many users access the same physical server and use it separately.

3- The Platforms They Work Within



RDP is a Windows original and comes pre-installed on Windows computers. Also on the server-side, it works only on Windows computers. But many client-side applications let you use RDP on platforms such as **Linux, Mac, iOS, and Android**.

VNC is **platform-independent** and can be used across platforms. There are VNC applications for different operating systems, and there are no limits in using them to connect to different computers on different platforms.

4-Security issues[vnc vs rdp security]

RDP operates within an **encrypted channel**, and each update improves the encryption methods. The older versions of RDP are vulnerable to an attack called 'man-in-the-middle' that can result in the attacker gaining unauthorized access to your session.

You can use RDP securely through SSL/TLS on Windows Vista, Windows 7, Windows 8, Windows 10, and Windows Server 2003/2008/2012/2016.

VNC can use an SSH tunnel. But this is not a universal feature in VNC software. It also gives full access to the remote user, which can be an issue.

When Should I Use RDP and When Should I Use VNC?

✓RDP is useful in situations such as:

- **Sharing** the resources of one computer (e.g. A physical server) with several users
- **Accessing** a computer remotely without needing to share the screen

- When you need **Multi-monitor** support

✓VNC is useful in situations such as:

- **Support** services in which the technician and user both need access to the computer.
- **Educational** purposes when the teacher wants to show the steps to a student.
- When the server is on a **different platform** than Windows.

What Are Some RDP and VNC Alternatives?

RDP and VNC are still top-rated solutions for the purposes they serve. But there are other popular and up-to-date solutions that you can try:

1. **TeamViewer**
2. **NoMachine**
3. **AnyDesk**

READ: [TeamViewer vs RDP: Choosing Your Remote Desktop Solution](#)



One is the world-renowned [TeamViewer](#). As the name indicates, TeamViewer is an all-round solution for team interaction, including computer connection and desktop sharing. It is free and works across all popular platforms.

Another one is [NoMachine](#) which is free and uses NX technology for establishing the connection. It is accessible across all popular Platforms.

Finally, [AnyDesk](#), which is another popular and free tool for computer cross-platform remote access.

Conclusion

RDP and VNC are both prominent and great platforms, but they have different use-cases. RDP is a Windows-based solution for sharing resources of the same computer, whilst VNC is mostly a screen-sharing solution for support and educational purposes.

Source: <https://www.routerhosting.com/rdp-vs-vnc-remote-desktop-comparison/>