RDP - RemoteFX and ICA (HDX) Overview

- Parallels Remote Application Server

Remote Desktop Protocol (RDP) is a proprietary protocol developed by Microsoft. It allows organizations to remotely access server resources from a client device. RDP works on TCP/IP and listens on port 3389. The current version comes with strong encryption and server authentication out-of-the-box.

Independent Computing Architecture (ICA) is developed by Citrix. This proprietary protocol of Citrix Systems enables businesses to access corporate resources from remote client devices. It supports multiple OS platforms. The ICA server listens on port 1494. Citrix?s remote display protocol was originally called ICA, but the company evolved the offering into the HDX suite in 2009 with the release of XenDesktop 3.0.

In the past, RDP had poor performance on graphic, flash and moving object compared to ICA. As a result, Microsoft made many improvements to Remote Desktop Protocol with RemoteFX. In fact, nowadays, in a LAN environment, performance on virtual applications when compared against Citrix HDX ? ICA are difficult to spot.

RDP can present not perfect performance over a low bandwidth WAN, in that case it is required a few optimization to guarantee satisfying user experience. Below the list of the optimization we can propose to the customer in order to improve the RDP performance.

Optimization Quick summary

1. **RemoteFX Optimization** - RemoteFX depending on the application can be configured differently, changing the balance between memory dedicated to the encryption and the bandwidth consumed. Further information can be found here
2. **Terminal Server Optimization** - in order to improve the performance of RDP, Terminal Server needs to be sized correctly and optimized. Further information can be found here
3. **Quality of Service (QoS) policy** - Defining a the amount of bandwidth dedicated to application display (70%) improves the RDP performance. Further information can be found here
4. **Wan Optimization** - A dedicated WAN optimizer such Riverbed or Citrix can definitely improve the quality of RDP, however it is expensive. (Still less than using CITRIX). Further information can be found here
5. **Remove unnecessary redirection from the client** - Switching off some unused redirection such as clipboard save bandwidth and improve the performance. Further information can be found here

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