Performance Issues
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PREFACE
This document briefly outlines causes for slowness of performance when using Compulink Advantage software.

GENERAL NETWORKING
Compulink Advantage software is accessed through the network via TCP/IP Protocols. Data requests and responses are sent through the mapped drive and/or UNC (Universal Naming Convention) path. The following settings and processes can affect the performance of Compulink Advantage software throughout the network.

NETWORK SPEED AND LATENCY
With the volume of today’s paperless/electronic data, the size of files and requests being sent through the network have increased exponentially. Gigabit Network hardware (e.g. 10/100/1000 Network switch and router) is recommended for optimal performance.

NETWORK TRAFFIC
Increased traffic on the network, transferring and copying files, downloading and uploading files to and from the Internet, live streaming music and video can affect network speeds for all users.

NETWORK CABLEING
Older cabling configurations, which worked on 10/100 mbps networks, may no longer function properly when upgrading to Gigabit networking. Compulink recommends the use of Gigabit network, which requires installation of Cat5e or newer cabling and patch cables.

NETWORK APPLIANCE
Occasionally a managed switch or router may “remember” a slower connection speed from a port. Resetting/power cycling the switch can restore normal operations.

COMPUTER RESOURCES
WORKSTATION
If the workstation is performing tasks other than Compulink Advantage software, the Memory and CPU resources on that station may need to be upgraded to accommodate the requirements of Multi-tasking.

SERVER
Processes such as scheduled or manual Backups during business hours, SQL related software, Anti-Virus real-time protection, Exchange Services, etc. could limit the server’s response time. Make sure the Server has enough resources to accommodate all the requested demands.

INTERNET OPTIONS SECURITY
Certain features of Compulink Advantage software, such as posting charges, navigating Exam screens, Spectacle screens, etc. can be hindered by Internet Explorer Security settings. Please add the Compulink server to the Local Intranet Trusted Sites. (Internet Options > Security Tab> Local Intranet > Sites > Check all boxes > Advanced > Add this website to the zone: File://servername. Uncheck the Require server verification (https)).
For step by step instructions, please review the Workstation Setup instructions.
ADVANTAGE DATABASE SERVER
The Advantage Database Server from Sybase manages all data requests made of the server. The best practice is to configure the Advantage Database service to use a specific UDP Port (usually 4000). Setting up this service for “discovery bypass” (instead of using any available port) can decrease performance.

Please review the Server Migration and Advantage Database Server installation document for instructions.

VIRTUAL SERVERS/HYPER-V
In some Virtual environments, the Advantage Database Server takes 50% of the processing power and memory and may cause performance issues and errors accessing the Virtual Server.

Problem Description:
On a 64-bit system running Hyper-V, Windows Virtual PC or VMWARE, if the ADS is installed on the host OS and the ADS service is running, a child partition/virtual machine may fail to start. An error is given indicating that the memory has already been allocated. This occurs even if Advantage has no tables currently open. In addition, this may apply to other applications with large memory requirements as well.

Solution:
The cause is ADS' cache allocation. By default, 64-bit ADS will use up to 50% of the available physical memory for its cache. The memory is not actually in use until the indexes and temporary files are read into it, but Hyper-V still sees the memory as allocated, so it won't start a partition that requires more than the remaining memory.

Add or modify the registry setting

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\Advantage\Configuration\MAX_CACHE_MEMORY (DWORD)

Give it a value in MB that will leave enough memory unallocated for the child partition to start.

This may not be an issue in future versions of Hyper-V if memory overcommit is implemented. The current version of Hyper-V is 1.5.

This information can be found on Sybase's Knowledgebase here: http://devzone.advantagedatabase.com/dz/content.aspx?Key=17&RefNo=100210-2248

REMOTE ACCESS
If using Remote Desktop sessions, have your IT Administrator check resources allocated to remote users on the Terminal server. In such environments, the Terminal server’s memory, CPU and each site’s bandwidth play a big role in the performance of Advantage software.

If the remote site is utilizing a VPN to access the Advantage software, VPN encryption may contribute to a decrease in the performance of Advantage software. High resolution Graphics and Imaging can also impact the refresh rate of a remote session. In low bandwidth environments, compression and acceleration software such as Ericom Blaze may increase performance.