Proxy Networks, Inc.

Diagnostic Logging Subsystem

Introduction

All components of the PROXY Pro product line include diagnostic logging to facilitate troubleshooting. This logging is off in a default installation but can be enabled with registry entries (described later in this document). The logging subsystem has been carefully designed to ensure that enabling or disabling logging has no functional impact on the product and has minimal performance impact. When logging is enabled, log lines are written to text files in a specific directory for collection later. The logging subsystem automatically deletes old log files to ensure a limited amount of disk space is consumed. Note that the logging configuration is cached at process startup, so it's necessary to restart the application (e.g. Master) or restart the service(s) (e.g. Host and/or Gateway Server) to have them begin diagnostic logging.

This document discusses the diagnostic logging conventions & parameters. Logging is generally enabled by applying a diagnostic logging registry file (*.REG) provided by Proxy Networks support team to the system to set the appropriate registry keys. The keys and values set can be seen by examining the .REG file in a text editor, and the information in the rest of this document explains what these keys and values mean. Logging can be completely disabled by deleting the registry keys and restarting the PROXY Pro software.

Registry Keys

The diagnostic logging configuration is stored in the system registry, under one of the following keys:

- "HKLM\Software\Funk Software, Inc.\Proxy v5\Logging" for Proxy v5-v9
- "HLKM\Software\Proxy Networks, Inc.\Proxy v10\Logging" for Proxy v10 & later

Note that this key is the same on both x86 and x64 versions of Windows (as of v6.10.4 and v7.0.2) – it's never under the "Wow6432Node" subkey (even though other registration information about Proxy is). If these "Logging" keys do not exist or are deleted, then all PROXY Pro diagnostic logging is disabled.

The "Logging" key contains subkeys which specifying the logging configuration for individual Proxy products. These subkeys for v5-v9 are:

- PROXY Host Service: **Host**, **PhSession**, **PhTray**, **PhSvcUI**
- PROXY Host Control Panel / Administration: **Phost, PhSetup**
- PROXY Master: **Master, ConvertRecording**
- PROXY Remote Printing: **RemotePrintManager, PrxPrint**
- PROXY Gateway Server: **Gateway**
- Miscellaneous helper applications: **GWSCertMgr, PrxSInfo, ProxySafeMode, PrxUACContainer**
- All others / catchall: **Default**

In Proxy v10, the following subkeys are defined:

- PROXY Host Service: **Host**, **PhSession**, **PhTray**, **PhSvcUI, PhInstall**
- PROXY Host Control Panel / Administration: **PhAdmin, PhSetup**
- PROXY Master: **Master, ConvertRecording**
- PROXY Remote Printing: **RemotePrintManager, PrxPrint**
- PROXY Gateway Server: **Gateway**
- PROXY Identity Manager: **IdentityManager**
- PROXY Web Console: **WebConsole**
- Miscellaneous helper applications: **GWSCertMgr, OnDemandMgr, PrxSInfo, ProxySafeMode, PrxUACContainer, ServerConfigCheck, UpdateHostSettings**
- All others / catchall: **Default**

Registry Name/Value Pairs

Each subkey contains a list of name/value pairs that configure logging for that product. These include:

- **ExcludeProcess** (REG_SZ): comma delimited list of process names for which diagnostic logging should not occur. Default value if not specified is "regsvr32.exe". This value is useful under the "Default" key to prevent some processes from being diagnostic logged while most are.
- **LogFilePath** (REG_SZ): fully qualified path to logging file directory (default "C:\ProgramData\ProxyDiagnosticLogs" on Vista & later)
- **AlwaysOn** (REG_DWORD): bits set for all components (default 0x1F)
- **EnableDisk** (REG_DWORD): non-zero to enable disk output (default 1)
- **EnableOutputDebugString** (REG_DWORD): non-zero to enable OuputDebugString output (default 0)
- **Flush** (REG_DWORD): time in milliseconds to flush output to disk (default 15000)
- **Rollover** (REG_DWORD): size in bytes after which log file should rollover to new file (default 50*1024*1024 = 52428800)
- **TotalSpaceKB** (REG_DWORD): total size in kilobytes of accumulated log files for this product before old files get deleted (default 2048*1024 = 2GB; minimum is 100MB, maximum is 8GB).
- **MaxLogFileCount** (REG_DWORD): maximum number of accumulated log files to keep for this product before old files get deleted (default 100; minimum is 20, maximum is 1000).
- Various component name specifications with a DWORD value that specifies the logging flags for that component. (e.g. "Host"=dword:389A0F7F or "PhUMSC"=dword:00492000 etc.) See appendix for detailed information.

Note that the PROXY diagnostic logging subsystem includes crash dump creation. If a PROXY process crashes, typically via an unhandled program exception, a DMP file is created to capture the process state at the time of the crash. Diagnostic logging is automatically turned on if it's not already enabled in the event of a crash and the dump file is given the name of the current diagnostic log file (with .DMP extension). The *.LOG/*.DMP file pair is not counted against the "TotalSpaceKB" and "MaxLogFileCount" constraints, so these files must be located, submitted to Proxy Networks technical support for analysis, and deleted manually.

An important thing to note is that the "TotalSpaceKB" and "MaxLogFileCount" values pertain to each individual PROXY process that does diagnostic logging. This is important if the "Default" key is used (which enables logging in all PROXY products), and is relevant for Host logging if the logging script enables logging for each of the Host components (e.g. "Host", "PhSession", "PhTray"). In the Host case, each of the Host, PhSession, and PhTray components could use the "TotalSpaceKB" disk space, or a total of 6GB of disk space in the default configuration.

Location of Resulting Logs

The default location of the diagnostic logging can be controlled with the "LogFilePath" registry entry. Note that the location must be writable by the process identity of the product component doing the logging; this generally requires that the location be writable by members of the "Users" group of the machine. The default location meets these requirements and is recommended as the location to use unless there are specific reasons to use a different location. The default location is computed from the Windows CSIDL_COMMON_APPDATA directory path, with "ProxyDiagnosticLogs" appended. This location differs on different generations of the Windows operating system:

- Windows XP and earlier systems generally map this to "C:\Documents and Settings\All Users\Application Data\ProxyDiagnosticLogs".
- Windows Vista and later systems generally map this to "C:\ProgramData\ProxyDiagnosticLogs".

Appendix: Component Names

Within a diagnostic logging registry key, there are individual logging flags for each component within the product or executable that the logging key applies to. These correspond to the COM component OCX files, or DLLs, that the product is comprised of. The following table lists the component names (that appear as a name/value pair in the diagnostic logging registry key), a brief description of the functionality of that component, and what diagnostic logging registry key(s) that component is relevant to.

Component Name	Description	Appears in Registry Key(s)
ConvertRecording	Master Export Recording support	[ConvertRecording]
Deploy	Deployment Tool MMC snapin	[Default] or [MMC.EXE]
Gateway	Main Gateway Server service executable	[Gateway]
GWAdmin	Gateway Administrator MMC snapin	[Default] or [MMC.EXE]
GWApps	Gateway Server internal applications	[Gateway]
GWHost	Gateway Server Host-for-services support	[Gateway]
GWMaster	Gateway Server client-for-services support	[Gateway]
GWPolling	Gateway Server polling and host status	[Gateway]
GWSCertMgr	Gateway Server Certificate Manager main executable	[GWSCertMgr]
HOD	Host on Demand helpers	[HOD]
IdentityManager	Server: Identity Manager (IIS application) (v10)	[IdentityManager]
Master	Master main application executable	[Master]
NetSessionMgr	Proxy SDK: Network Transport support	Any/All
NetSessionMgrEx	Proxy SDK: Network Transport support (extended flags)	Any/All
OnDemandHelper	Server: OnDemand Manager helper library (v10)	[OnDemandMgr]
OnDemandMgr	Server: OnDemand Manager executable (v10)	[OnDemandMgr]
PhAdmin	Host Administration main executable (v10)	[PhAdmin]
PhChat	Host Chat service support	[Host]
PhCLS	Host Clipboard service support	[Host]
PhCpl	Host Administration control panel applet (v9)	[PHost]
PhFTS	Host File Transfer service support	[Host]
PhInstall	Host Installation/Upgrade support (v10)	[Host]
PHost	Host Administration main executable (v9)	[PHost]

PhRp9	Host Remote Printing service support	[Host]
PhSession	Host user login session support	[PhSession]
PhSettings	Host settings support	[Host], [PhSetup], [PhAdmin]
PhSetup	Host configuration utility	[PhSetup]
PhSvcUI	Host interactive UI support	[PhSvcUI]
PhTray	Host taskbar tray icon support	[PhTray]
PhUMSC	Host User mode screen capture support	[PhSession], [Host]
PhWmi	Host Remote Management service support	[Host]
PhWmiPM	Host WMI provider	[Default]
PmCLW	Master Cycling Window support	[Master]
PmCP	Master Control Panel support	[Master]
PmCW	Master Connection Window support	[Master]
PmFrame	Master Frame Window support	[Master]
PmPW	Master Playback Window support	[Master]
ProxySafeMode	Host: Restart in Safe Mode helper executable	[ProxySafeMode]
PrxADLib	Server: Active Directory interface library (v10)	[IdentityManager]
PrxChat	Proxy SDK: Chat support	Any/All, most commonly [Default]
PrxCmn	Proxy SDK: Common/shared code support	Any/All
PrxEnc	Proxy SDK: Media Encoder support	Any/All, most commonly [Default]
PrxFT	Proxy SDK: File Transfer support	Any/All, most commonly [Default]
PrxGW	Proxy SDK: Gateway Administration support	Any/All, most commonly [Default]
PrxHA	Proxy SDK: Host Administration	Any/All, most commonly [Default]
PrxPrint	Host+Master: Remote Printing print XPS to Printer utility helper	[PrxPrint]
PrxRC	Proxy SDK: Remote Control support	Any/All, most commonly [Default]
PrxRegLib	Proxy SDK: Registry redirection used in Host on Demand only	Any/All
PrxRp9	Proxy SDK: Remote Printing support	Any/All, most commonly [Default]
PrxSE	Proxy SDK: Security Editor support	Any/All, most commonly [Default]
PrxSInfo	Shared: PROXY System Information utility main executable	[PrxSInfo]
PrxSP	Proxy SDK: Security/Authentication support	Any/All
PrxUACContainer	Proxy SDK: UAC Prompt Helper executable	[PrxUACContainer]
PrxUACUtils	Proxy SDK: UAC Prompt Helper COM objects	Any/All, most commonly [Default]
PrxUI	Proxy SDK: User Interface components library	Any/All, most commonly [Default]
PrxWmiUI	Proxy SDK: Remote Management support	Any/All, most commonly [Default]
RemotePrintManager	Host+Master Remote Printing Manager main executable	[RemotePrintManager]
ServerConfigCheck	Server: Server Configuration Check executable (v10)	[ServerConfigCheck]
UpdateHostSettings	Deployment: Update Host Settings executable (v10)	[UpdateHostSettings]
WebConsole	Server: Web Console (IIS application) (v10)	[WebConsole]