



MarvelClient Upgrade

Reference / Cheat Sheet

2026-02-16

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Additions and Updates since 2024-02-13 (= since MCUUpgrade Release 14.0.5)

Change	Option/Entry or Switch or Placeholder	Remark(s) / Available since
NEW	GrantUsersAccess When running as SYSTEM, MCUUpgrade grants 'Users' read+execute access to the upgrade directory. Also, 'Users' are granted generic write access to any .log files created. This can be disabled by setting ini:GrantUsersAccess=0	14.0.5
CHANGE	DeferralPrompt Can now also be set to 3 or 4 (3 is actually somewhat silly) When set to 4, DeferralPrompt is also enforced with Initiator	14.1.1
NEW	/diff	14.2.0
NEW	/instsvc and /instsvc_ow	14.2.0
NEW	NotesWorkspaceDirectoryOldSmartCleanup Set to 1 to enable cleanup of workspace folders .metadata (similar to roaming backup filter), and deletion of .config, .configbak, and logs	14.2.3
NEW	NotesFrameworkDirectoryDuplicatePluginsCleanup Set to 0 to disable cleanup of duplicate plugins in framework folder	14.2.7
REMOVED	SetProcessPriority	14.2.7
NEW	PreInstallIniSet*	14.5.1; similar to PostInstallIniSet*
NEW	/instsvc_silent, /instsvc_ow_silent, /uninstallsvc, /uninstallsvc_silent	14.5.10
NEW	/force, /repeat	14.5.10; sets/overrides ini:SourceDirectoryInitRepeat
NEW	/? , /help	14.5.11
NEW	MCSshutdown /auto /GUI="Your title" /Reason="Your reason"	14.5.15; for MCUUpgrade use ini:ShutdownBlockGUI and ini: ShutdownBlockReason

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List of MCUUpgrade.exe command line options

MCUpgrade.exe "Path\MCUpgrade.ini" [/ignoredeferralfilemustexist]

MCUpgrade.exe /option parameter(s) [/ignoredeferralfilemustexist]

MCUpgrade.exe /option ["Path\MCUpgrade.ini"] [/ignoredeferralfilemustexist]

Green highlighted rows are best configurable/configured using the MarvelClient Upgrade Configuration Wizard in the MarvelClient Config database.

Option	Description	Remarks
/pbar	Launches the Progress Bar	Automatically done by MCUUpgrade.exe
/pbartest	Launches the Progress Bar and sets labels and progress as if an upgrade was in progress – useful for testing custom splash screens	
/instsvc /instsvc_silent	Installs the panagendaInstallerService Requires MCUUpgrade_PublicKey.sig in same folder as MCUUpgrade.exe. Will not overwrite a pre-existing public key.	Must be launched with Administrative or SYSTEM rights. Adding _silent: see below
/instsvc_ow /instsvc_ow_silent	Same as /instsvc but overwrites public key if it already exists.	Adding _silent suppresses the dialogbox at end of installation when running elevated as non-SYSTEM account
/uninstsvc /uninstsvc_silent	Uninstalls the panagendaInstallerService and removes all files under	Must be launched with Administrative or SYSTEM rights. Adding _silent: see above
/zip	MCUpgrade /zip "f:\ilepath\of.zip" "f:\ile\toadd1" "f:\ile\toadd2"	
/unzip	Performs all UnzipArchive### instructions from MCUUpgrade.ini silently	Not allowed when running as SYSTEM
/unzipui	Performs all UnzipArchive### instructions from MCUUpgrade.ini with Progress Bar visualization	Not allowed when running as SYSTEM
/unzipselected parameter(s)	Executes all parameters following "/unzipselected " as command line for 7-zip silently - Example: MCUUpgrade.exe /unzipselected x - aoa MyFiles.7z	Not allowed when running as SYSTEM
/shutdown	Attempts to close the Notes Client and prompts the end user to make choices on unsaved open documents, for example	Must be launched in console session, NOT an admin or SYSTEM account
/shutdownsilent	Closes the Notes Client and automatically answers all messageboxes with No, Cancel, OK and similar (= will discard unsaved open documents, for example)	Must be launched in console session, NOT an admin or SYSTEM account

/smpptest	Sends an SMTP Test email according to SMTP settings in MCUUpgrade.ini	Used to test SMTP configuration Requires MCUUpgrade.mcu file
/smtpinfo	Sends an SMTP Info email according to SMTP settings in MCUUpgrade.ini	Used to update MC Analyze with progress tracking information
/sha	Calculates a SHA-256 hash in SHA.txt for the file passed as parameter – Example: MCUUpgrade /sha FilenameOrPath.Ext	
/sha1b64	Calculates a SHA-1 base64 hash for the file passed as parameter – Example: MCUUpgrade /shab64 FilenameOrPath.Ext	SHA-1 base64 hashes are used in Notes/Domino AUT(ouupdate)
/md5	Calculates a MD5 hash for the file passed as parameter – Example: MCUUpgrade /md5 FilenameOrPath.Ext	
/ignoredeferralfilemustexist	Suppresses DeferralFileMustExist check and Deferral Prompt	Special option for ReRun
/diff	Allows to compare the content of two zip files MCUUpgrade /diff “f:\ilepath\1.zip” “f:\ilepath\2.zip” [/start]	/start is optional. If specified, the result is also opened in a browser
/citrix or /vdi	Use either to prevent removing CITRIX=1 from install instructions	Only relevant with Coptim=2
/force or /repeat	Sets/overrides ini:SourceDirectoryInitRepeat	
/? or /help	Displays a help screen	

List of MUpgrade.ini entries

General

Entry	Default	Description	Remarks
UpgradeDirectory	MUpgrade.exe folder	Folder in / under which all Upgrade files are stored	Used to resolve %MC_UPGRADEDIRECTORY%
UpgradeDirectoryAuto	1	Set to 0 to disable automatic initialization of UpgradeDir before elevation attempt via MUpgrade service	If empty and RunAsService=1 2, UpgradeDirectory is automatically initialized to MUpgrade.exe folder
Logfile	%MC_UPGRADEDIRECTORY%\MUpgrade.log MUpgradeSMTPInfo.log MUpgradeSMTPTest.log	Location and filename of MUpgrade.log file	
UpgradePackageName	Unique hash of all Exec* names and values; initialized only once	Used to identify an Upgrade in MC Analyze / via SMTP Progress mails	Initialized only once and if not set; MUST NOT contain any of the following characters: \ / : * ? " < >
UpgradeLanguage	not set; automatically set to Windows Language if not set since MUpgrade 12.0.16	Used to control lookup of multi-language strings from MUpgrade_[UpgradeLanguage].ini	Falls back to English/strings in MUpgrade.ini if lookup file does not exist. (Lookup files have different entries than MUpgrade.ini!)
UpgradeResetLogOnEachRun	0	Reset log on MUpgradeMain run	Do not set
LicenseFilepath	not set	Optional additional full filepath of license.xml to check	

Pre-Upgrade / Upgrade Requirements

Entry	Default	Description	Remarks
ExitProcess###	not set	If any of the processes are running, exit upgrade	
ExitProcessMaxRuntimeMinutes###	not set	Only exit upgrade if the runtime of the corresponding ExitProcess### has not exceeded the number of maximum minutes	i.e. exit only if a process been running for less than 30 minutes; adding a corresponding KillProcess### is highly recommended; A possible use case is when other processes should be finished within 30 minutes, like other software deployment solutions
DeferralFileMustExist###	not set	Run upgrade only if the file(s) exist	
DeferralAdminMustExist	0	Run upgrade only if at least one of the usernames in mcu file is a direct member of the local administrators group	
ExitOnOtherInstallationInProgress	120	Waits the specified number of seconds in case another Windows installation is already in progress	Set to 0 to disable Other than ExitProcess###, this does not check for a running process like msiexec, for example, but queries the Global_MSIExecute mutex (see MSDN for details)
PackageAlreadyInstalledCheck	not set	See Initiator	
UpgradeIniMinLines	15	Minimum number of entries in MCUUpgrade section	If MCUUpgrade.ini does not exist, does not contain an MCUUpgrade section, or has less than the specified number of entries, upgrade will exit
UpgradeIniMinLines	15	If MCUUpgrade.ini has no [MCUUpgrade] lines, or less than the specified number, upgrade will exit	

Initiator

Entry	Default	Description	Remarks
SourceDirectoryInit	not set	File or web source to download upgrade files from	e.g., N:\... or <u>\\unc</u> \... or http(s)://... or ftp(s)://... NOTE: Resume is *not* supported for https://
SourceDirectoryInitSourceURL###	not set	Source filename(s) to download from above source	e.g., Notes_11_0_1_Win_English.exe
SourceDirectoryInitFileResume	0	En/disable file copy resume	Set to 1 to enable file copy pause & resume
Registry: HKLM\SOFTWARE\ panagenda\MarvelClient\Upgrade\ SourceDirectoryInit	not set	File or web source to download upgrade files from (MCUpgrade.ini wins!)	See SourceDirectoryInit above
SourceDirectoryInitLocalFallback	1	Enable local fallback in case SourceDirectoryInit is not reachable	Set to 0 to disable
HKLM\SOFTWARE\ panagenda\MarvelClient\Upgrade\ SourceDirectoryInitLocalFallback	not set	See SourceDirectoryInitLocalFallback above (MCUpgrade.ini wins!)	See SourceDirectoryInitLocalFallback above
SourceDirectoryInitRepeat	not set	If set to 1 (=enabled), allows to repeat a previously successful installation	By default, successful installations carried out via MarvelClient Upgrade Initiator cannot be repeated As an alternative to setting this option in MCUpgrade.ini, you can also place a file MCURpeat.txt into the first directory where MCUpgrade is executed, or into %PUBLIC%
PackageAlreadyInstalledCheck	not set	Set to 1 to also check for whether a package has already been installed when launching MCUpgrade with zip (without MCUpgrade.ini and without SourceDirectoryInit set in zip)	Successful upgrades are memorized in HKEY_LOCAL_MACHINE\SOFTWARE\ panagenda\MarvelClient\Upgrade\ SuccessfulUpgrades

Initiator Web Source

Entry	Default	Description	Remarks
CURLMOPT_MAX_TOTAL_CONNECTIONS	0 = no limit		
CURLOPT_SSL_VERIFYPEER	0 = disabled	If set to 1, verifies SSL connections	When enabling this option, you must provide a .pem file (see CURLOPT_CAINFO below)
CURLOPT_SSL_VERIFYHOST	not set = 2	Verifies the host when using SSL connections with VERIFYPEER	It is recommended to *not* disable this option
CURLOPT_CAINFO	not set	Filename of .pem file with CA certificate chain	It is recommended to use a filename instead of a full filepath

Shortcut Creation

Entry	Default	Description	Remarks
ShortcutCreateOnly	not set	1 = shortcut creation with info message and option to start the upgrade immediately, see ini_language: ShortcutCreateOnlyQuestion 2 = shortcut creation with info message, see ini_language: ShortcutCreateOnlyMessage 3 = silent shortcut creation	By default, a Shortcut is only created for failed upgrades
ShortcutCreateOnlyQuestion	A new Notes Client upgrade is ready for you! @LF@Do you want to upgrade now? @LF@If you select "No", you can run it later with a double-click on the link named "%ReRunShortCutName%" on your Windows Desktop.	Used if ShortcutCreateOnly=1	
ShortcutCreateOnlyMessage	A new Notes Client upgrade is ready for you! @LF@To run it, please double-click on the link named "%ReRunShortCutName%" on your Windows Desktop.	Used if ShortcutCreateOnly=2	
StartupLinkMode	not set	set to 1 to "recreate" any Notes startup links deleted during shortcut removal, set to 2 to create a common startup link in any case	

Deferral

Entry	Default	Description	Remarks
DeferralPrompt	0	Set to 1 to ask users once a day whether they want to defer an upgrade according to Deferral* 2 = always ask 3 & 4 = same as 1 & 2, but also ask when running with Initiator	Ignored when running as SYSTEM; also suppressed if NotesDatadirectoryOld and NotesProgramDirectoryOld are not set, which is when an initial client installation is assumed (no existing client installed yet), or other software is being installed
DeferralPromptAutoSuppress	1	Set to 0 to disable auto-suppressing of DeferralPrompt	
DeferralPromptTitle	Update		
DeferralPromptMessage	See remarks	Respectively the corresponding Message in language file	English: Do you want to upgrade your client experience?@LF@You have %DAYSLEFT% days / %PROMPTSLEFT% times left to choose ""No"" before the upgrade will be performed automatically.
DeferralNumberOfDaysMax	0 (no limit)	Maximum number of days a user is allowed to defer	
DeferralNumberOfUpdatePrompts Max	0 (no limit)	Maximum number of prompts a user is allowed to defer	
DeferralNumberOfUpdatePrompts MaxShortcut	0 (on first deferral)	Number of deferrals after which a shortcut is to be created on the Windows desktop for on demand re-run	Set to -1 to disable shortcut creation
DeferralNumberOfUpdatePrompts MaxShortcutTitle	Run Notes Client Upgrade	Title of Shortcut when created after exceeding above number	
DeferralPromptIfLaunchedDirectly	1	Display deferral prompt when launching MCUUpgrade directly	Set to 0 to not display deferral prompt on direct launch from Win Explorer/Desktop

Deferral - Email

Entry	Default	Description	Remarks
DeferralNumberOfUpdatePrompts MaxEmail	0	Number of deferrals until alert emails are sent for each deferral to monitor continued deferral	
DeferralNumberOfUpdatePrompts MaxEmailSMTPToAddress	not set	Email address to send deferral alerts to	SMTP auth → mcu file
DeferralNumberOfUpdatePrompts MaxEmailSubject	PMCU: User deferred upgrade	Subject of deferral alert email	
DeferralNumberOfUpdatePrompts MaxEmailBody	Number of deferrals by user [%USERNAME%] on [%COMPUTERNAME%]: %PROMPTS%/%PROMPTSMAX%.	Body of deferral alert email	
DeferralNumberOfUpdatePrompts MaxEmailBodyCont	Upgrade is no longer deferred for user [%USERNAME%] on [%COMPUTERNAME%].	Body of deferral alert email, if user chose to no longer defer	

Graceful Shutdown

Entry	Default	Description	Remarks
GracefulShutdown	1	If set to 1, attempts to gracefully shutdown the Notes client if it is running	
GracefulShutdownRetryAllowCancel	0	Number of GracefulShutdown attempts after which to also display a Cancel button in the shutdown dialog	
GracefulShutdownCancelMessage	If you click Cancel, the upgrade will be postponed for another hour.	Message to add to shutdown dialog if the Cancel button is displayed, too	
GracefulShutdownFinishedExec	not set	Executable to launch at end of successful shutdown	MCSHUTDOWN only
GracefulShutdownNoticeTitle	not set	Title of optional "Notice Dialog"	
GracefulShutdownNoticeMessage	not set	Message of optional "Notice Dialog"	
GracefulShutdownNoticeTimeout	60	Number of seconds to wait between client shutdown attempts	
GracefulShutdownRetryTitle	Notes Client Upgrade - Retry	Title of "Retry Dialog"	
GracefulShutdownRetryMessage	Notes appears to be locked or you have unsaved documents. @LF@ Please close any open dialogs and unsaved documents. Click OK when finished.	Message of "Retry Dialog"	
GracefulShutdownRetryLimit	50	Number of maximum retries	
GracefulShutdownRetryTimeout	30	Number of Seconds between retries	
ShutdownProcess###	not set	Optional process(es) to kill at end of successful shutdown	MCSHUTDOWN only; → KillProcess
ShutdownProcessWaitTime	120	Time to wait before starting to kill processes	
GracefulShutdownSilent	not set	Set to 1 to auto-answer all messagebox with "No"/"Discard"/"ESC(ape)"/"Exit etc.	Not recommended, unsaved data is lost
GracefulShutdownNoWindowsButProcessesTimeout	60	MUpgrade will terminate processes if no windows are left, or the same window without buttons appears more than once, for the specified number of seconds	

Network Drives

Entry	Default	Description	Remarks
DeltaCopyNotesDataIfOnNWDrive	0 (1 via Upgrade Config Wizard)	If old Notes data directory is on a network drive, copy it to new notes data directory using built-in delta copy	missing/changed only
DeleteNotesDataDirectoryOldIfOnNWDrive	0	If set to 1, deletes old Notes data directory after elevation, if accessible/remapped	
DeltaCopyDeleteSourceAfterCopy	0	Set to 1 to delete files after successful delta copy	
RestoreNetworkDriveMappings	0	Set to 1 to remap network drives after elevation	Forced to 0 when running as SYSTEM
RestoreNetworkDriveMappingsOption	0	0=permutated restore (mcu) 1=restore as elevated user only 2=net use permutated (mcu) 3=net use elevated user	
NetworkDriveMapping###	not set; set by MCUUpgrade.exe	Used to memorize mapped network drives before elevation	Do not set

Progress Bar

Entry	Default	Description
ProgressBarTitle	Notes Client Upgrade	Text to display on taskbar icon hover
ProgressBarText	Upgrade in progress - please wait ...	Text to display above the two progress bars and labels
ProgressBarTextColor	not set	Set to RRGGBB (Hex) to specify color of progress bar text, e.g. FFD900
ProgressBar1StaticText	not set	Used to display a static label above the first progress bar
ProgressBar2StaticText	not set	Used to display a static label above the second progress bar
ProgressBarAnimatedGIF	panagenda_Splash2.gif 321 129	Used to display any additional animated GIF on top of the progress bar image Format is: filename.gif X-Offset Y-Offset
ProgressbarHideInit	not set	If set to 1, hides the splash screen upon start of upgrade; the splash screen can still be displayed by double clicking on the tray icon then

Elevation

Entry	Default	Description	Remarks
RunAsService	0	0 = no 1 = if possible 2 = exclusively	If set to 2, we recommend to enable the corresponding setting in your keyfile
Keyfile	MCUpgrade.mcu	Filename of mcu file	
PermutatedLogon	1	Used to control whether multiple Usernames, Passwords and Domains in mcu file are supposed to be permutated or not 1: U1P1D1,U1P1D2,U1P2D1,U1P2D2,... 0: U1P1D1,U1P1D2,U2P2D1,U2P2D2,... -1: U1P1D1,U2P2D2,...	If the number of usernames, passwords and domains does not match, permutation is enforced 1=default=for each user try all domains and within each domain try all passwords 0=for each user try all domains; requires same number of usernames and passwords! -1=try each user, password and domain once; requires same number of usernames, passwords and domains!
LogonDomains (default value see next column since 12.0.20; previously not set!)	@LogonDomain @LogonDNSDomain @ComputerName @ComputerDomain	Set to only attempt switch to those domains which match .mcu keyfile entries	Set to 0 to disable = not filter mcu keyfile entries
DisableLocalAdminFallBack	0 (1 via Upgrade Config Wizard)	If set to 0 and elevation fails and end user is local admin, upgrade will be attempted as end user	
DisableLocalAdmin	0 (1 via Upgrade Config Wizard)	If set to 0 and user is local admin, then upgrade will be attempted without elevation(!)	
DeferralAdminMustExist	0	Run upgrade only if at least one of the usernames in mcu file is a direct member of the local admin group	

Elevation – Run Programs before or after elevation

Entry	Default	Description	Remarks
SuRunAsExec###	not set	Run program(s) before elevation	
SuRunAsExecParams###	not set	Run program(s) before elevation with these parameters	Requires SuRunAsExec###
SuRunAsExecCMD###	0	Set to 1 to not encapsulate SuRunAsExec and SuRunAsExecParam strings in “...” if missing	Requires SuRunAsExec###
SuRunAsExecShow###	0	Set to 1 to run program visible	
SuRunAsExecWait###	1	Set to 0 to not wait for program	
SuRunAsExecFinished...### SuRunAsExecFailed...###	Same as for SuRunAsExec	... but for successful and failed elevation	

SMTP

Entry	Default	Description	Remarks
SMTPServerDNSName	not set		SMTP auth → mcu file
SMTPFromName	%USERNAME% on %COMPUTERNAME%		SMTP auth → mcu file
SMTPFromAddress	%USERNAME%		SMTP auth → mcu file
SMTPToAddress	not set		SMTP auth → mcu file
SMTPUseSSL	0		SMTP auth → mcu file
SMTPPort	465 if not set and UseSSL=1 25 if not set and UseSSL=0		SMTP auth → mcu file
SMTPAttachFilename###	not set; set by MCUpgrade.exe	Used to memorize files to attach to upgrade result email	Do not set
SMTPAttachFileNamesOnErrorOnly	0	Set to 1 to only attach files to upgrade result email if upgrade fails	
SMTPAttachLogAsZip	not set	Set to 1 to attach MCUpgrade.log in zipped format	
SMTPProgressTracking	0	Set to 1, if SMTP emails should be sent for 1, 50, 75 and 99% progress (in addition to final email)	
SMTPProgressTrackingMinEmailSize	0	Set to 1 to reduce progress tracking email size	
SMTPMailSent	not set; set by MCUpgrade.exe	Used to memorize sending of final Upgrade email	Do not set

Operating System Environment Variables

Entry	Default	Description	Remarks
SetEnvName###	not set	Environment variables to set after elevation	
SetEnvValue###	not set	Environment variable values to set after elevation	
SetEnvOption###	not set	Set to %MCU_Merge% or %MCU_Unmerge% to merge/unmerge value. Optionally suffix separator (defaults to semicolon ; if not suffixed).	

Disallow Run

Entry	Default	Description	Remarks
DisallowRun###	not set	Filenames to prevent from running during an upgrade, e.g. notes.exe	

Remove Shortcuts

Entry	Default	Description	Remarks
RemoveShortCutsOnStart###	not set	Shortcut target filenames to remove from Windows desktop	Regular Expression
RemoveShortCutsAlsoInDirectory###	not set	Additional directories to process for shortcut removal	

Stop Services, Kill Processes

Entry	Default	Description	Remarks
StopService###	not set	Service(s) to stop before upgrade	
KillProcess###	not set	Process(es) to kill before upgrade	
KillProcessWaitTime	1	Time to wait before starting to kill processes	

Data Migration – Notes Data and Program

Entry	Default	Description	Remarks
NotesDataDirectoryOld	not set	Data directory of existing Notes client	Trailing backslashes are automatically removed
NotesDataDirectoryNew	not set	Data directory of target Notes client	Trailing backslashes are automatically removed
SkipNotesDataDirectoryMigration	0	Set to 1 as to not move old data directory to new location (if applicable)	
NotesDataDirectoryOldExclude	not set Example: *.ntf *.log as_*.nsf	Used to exclude files when moving/copying files from old to new Notes data directory	
NotesDataDirectoryOldExclude RegExp	0	Set to 1 to treat NotesDataDirectoryOldExclude as regular expression	
NotesDataDirectoryOldExclude Action	DELETE	Set to SKIP if excluded files during Data directory migration should be left behind	
NotesProgramDirectoryOld	not set	Program directory of existing Notes client	
NotesProgramDirectoryNew	not set	Program directory of target Notes client	
SkipNotesProgramDirectoryMigration	0	Set to 1 as to not move old program directory to new location (if applicable)	
NotesProgramDirectoryOldCopy	mc.dll pmc.dll	List of files to copy from old program directory prior to uninstall	
NotesProgramDirectoryOldCopy RegExp	0	Set to 1 to treat NotesProgramDirectoryOldCopy as regular expression	
DetectNotesClientFolders	1	Set to 0 to disable automatic detection of old Notes Client folders	
DetectNotesClientFoldersNewest	1	Set to 0 to disable detection of newest data folder in case multiple are found	Requires DetectNotesClientFolders=1

Data Migration – primary notes.ini

Entry	Default	Description	Remarks
DeleteNotesINI	0 with 0 Uninstall instructions 1 with >= 1 Uninstall instructions		Notes.ini is backed up, roamed into and adjusted for newly installed / upgraded client during upgrade
NotesIniFileOld	not set	Full path of old notes.ini file	
NotesIniFileOldAutoDetect	1	Set to 0 to disable auto-detection of notes.ini file	Will search old notes data and program directory for notes.ini file (newest wins, if multiple found)
NotesIniFileOldExclude	Directory SharedDataDirectory NotesProgram Cache KitType InstallMode InstallType AUTO_SAVE_USER* DYNINFOCR_* NewMailSeqNum* UseBasicNotes ENABLE_EARLY_AUTHENTICATION MC_LastActionUpdate MC_LastBackupDate TemplateSetup	List of notes.ini entries to not include in backup for built-in roaming	
NotesIniFileOldExcludeRegExp	0	Set to 1 to treat NotesIniFileOldExclude as regular expression	

Data Migration – Multi-User Shared Data

Entry	Default	Description	Remarks
MultiUserSharedDataOld	not set	Shared data directory of existing Notes client	
MultiUserSharedDataNew	not set	Shared data directory of target Notes client	If string ends on “/shared”, string until “/shared”
SkipMultiUserDataDirectory Migration	0	Set to 1 as to not move old shared data directory to new location (if applicable)	
MultiUserProfileIniHandling	CHANGE; will migrate multiuser installation folders, if applicable, including notes.ini entries (e.g., Lotus>HCL)	Set to DELETE to remove any old notes.ini files of multiuser installations Set to RENAME to rename any old notes.ini files of existing multiuser installations	
MultiUserSharedDataOldExclude	not set	Used to exclude files when moving/copying files from old to new shared data directory	
MultiUserSharedDataOldExclude RegExp	not set	Set to 1 to treat MultiUserSharedDataOldExclude as regular expression	
MultiUserSharedDataOldExclude Action	DELETE	Set to SKIP if excluded files during shared data directory migration should be left behind	
MultiUserSharedDataMigration	DELETE Deletes old shared data directory	Set to SKIP if old shared data directory should not be migrated and be left behind Set to MOVE if old shared data directory should be moved to new shared directory	Make sure that you re-deploy shared/root notes.ini, setup.txt, mc.dll etc. as needed via the Setup tab
MultiUserSharedDataCleanup	0 with 0 Uninstall instructions 2 with >= 1 Uninstall instructions	0=no cleanup 1=any subfolders under %ProgramData% that contain both a notes.ini file and a subfolder “shared” 2=any subfolders under %ProgramData% that contain a notes.ini file and where the path contains Lotus, Notes, IBM or HCL 3=any subfolders under %ProgramData% that contain a notes.ini file	
MultiUserSymlinkCleanup	1 with >= 1 Uninstalls	Set to 0 to not remove existing Symlinks	e.g., Lotus/IBM > HCL

Unzip

Archives (e.g. zip and 7z), compressed Executables, CAB files and more can be unzipped/decompressed using the following instructions:

UnzipCommand UnzipSwitches UnzipArchive UnzipAppendix

Entry	Default	Description	Remarks
UnzipText###	not set	Text to display in Progress Bar during unzip	
UnzipArchive###	not set	Name(s) of zip files to unzip at begin of upgrade	
UnzipCommand###	x		
UnzipSwitches###	-aoa -y	Overwrite all files without prompt (-aoa), assume Yes on all queries (-y)	
UnzipArchiveToSubfolder###	0	Set to 1 to unzip archive into subfolder with same name as zip file without extension	
UnzipAppendix###	not set	Appendix to add to “unzip command line”	
UnzipSkipODI###	0	Set to 1 to skip unzipping if MCUUpgrade was launched using /ignoredeferralfilemustexist	
UnzipDelete###	0	Set to 1, if the zip file should destroy itself after unzip	
UnzipDone###	not set; set by MCUUpgrade	Used to memorize which UnzipArchive instructions have already been processed	Do not set

Uninstall

Entry	Default	Description	Remarks
PreUninstallRemoveRegistryKey Name###	not set	Name(s) of registry keys to remove	
PreUninstallRemoveRegistryKey Value###	not set	Value(s) of registry keys to remove	Use * (asterisk/star) for entire key removal
PreUninstallSetRegistryKeyName###	not set	Name(s) of registry keys to Set	
PreUninstallSetRegistryKeyValue###	not set	Value(s) of registry keys to Set	Use (Default) or @ (case insensitive) for (Default)
PreUninstallSetRegistryKeyType###	not set	Type(s) of registry keys to Set For REG_BINARY, the KeyValue must be prefixed with 0x (zero followed by an x), to represent Hex. Example: 0xbadeaffebadeaffe For REG_MULTI_SZ, separate multiple entries with @LF@, without a trailing @LF@!	REG_SZ REG_MULTI_SZ REG_EXPAND_SZ REG_DWORD REG_QWORD REG_BINARY
PreUninstallSetRegistryKeyTypeValue###	not set	Type Value(s) of registry keys to Set	
PreUninstallSetRegistryKeyOption###	not set	Option for setting of registry keys. Optionally set to one of the values in the next column. If not set, registry change is always performed. Optionally suffix separator to %MCU_*% (defaults to semicolon ; if not suffixed).	onlyifempty 1 onlyifset 2 %MCU_Merge% %MCU_Unmerge%
UninstallText###	not set	Progress bar text for uninstall instruction(s)	
UninstallExec###	not set	Command line to execute for uninstall(s)	
UninstallExecErrorRegExp###	^(?!0\$).*	Regular expression to compare exit code of uninstall instruction with	
UninstallExecErrorSearchRegExp###	not set	Regular expression to search for in logfile (if Uninstall uses logging instruction)	
PostUninstallRemoveRegistry...	not set	Same as / see PreUninstallRemoveRegistryKey	
PostUninstallSetRegistry...	not set	Same as / see PreUninstallSetRemoveRegistryKey	
PostUninstallRegistryCleanup	1	HKEY_USERS*\SOFTWARE\Lotus\IBM\HCL\Notes are automatically removed if more than one uninstall instruction contains \nice.exe	

Install

Entry	Default	Description
PreInstallRemoveRegistry...	not set	Same as / see PreUninstallRemoveRegistryKey
PreInstallSetRegistry...	not set	Same as / see PreUninstallSetRemoveRegistryKey
InstallText###	not set	Progress bar text for Install instruction(s)
InstallExec###	not set	Command line to execute for Install(s)
InstallExecErrorRegExp###	^(?!0\$).*	Regular expression to compare exit code of Install instruction with
InstallExecErrorSearchRegExp###		Regular expression to search for in logfile (if Install uses logging instruction)
PostInstallRemoveRegistry...	not set	Same as / see PreUninstallRemoveRegistryKey
PostInstallSetRegistry...	not set	Same as / see PreUninstallSetRemoveRegistryKey

Post Install ini Management

Entry	Default	Description
PostInstallIniSetFileDefault	not set	Default ini file to add entries to
PostInstallIniSetSectionDefault	not set	Default ini section to add entries to
PostInstallIniSetName###	not set	Name of entry to add to default or specific ini file
PostInstallIniSetValue###	not set	Value of entry to add to default or specific ini file
PostInstallIniSetFile###	not set	Specific ini file to add entry to, if not default
PostInstallIniSetSection###	not set	Specific ini section to add entry to, if not default
PostInstallIniSetFileMustExist###	0	Set to 1 to only manage entry in ini file if it already exists

Start Services, Disable Services

Entry	Default	Description
StartService###	not set	Service(s) to start at end of upgrade; Use MCUUpgrade_StoppedServices to start all services that were stopped via StopService### (and still exist)
DisableService###	not set	Service(s) to stop and disable at end of upgrade

Citrix Optimization

Entry	Default	Description
Coptim	0	Set to 1 to enable Citrix Optimization If set to 2, only runs if a Citrix / Terminal Server environment is detected
CoptimWoptim	1	Set to 0 to disable Workspace Optimization when ini:Coptim=1
CoptimDisableDEP	1	Set to 0 to not disable Data Execution Prevention (DEP)
CoptimCompactTemplates	1	Set to 0 to not compact Notes database templates in the (new) shared data directory
CoptimCompactTemplatesTimeout	-1 (=no timeout)	Set to number of seconds after which CoptimCompactTemplates shall no longer wait for compact to finish NOTE: If used, we strongly suggest a minimum value of 300 = 5 minutes just to be on the safe side, especially with many languages
CoptimGrantEveryoneAllAccessToXPDPLAT	1	Set to 0 to not grant Everyone All Access to the xpdplat directory
CoptimDisableService###	not set	Service(s) to stop and disable when ini:Coptim=1
WoptimWaitTimeUntilOpen	120	Wait time in seconds until we give up waiting for Notes to open
WoptimWaitTimeAfterOpen	30	Wait time in seconds after the Notes client user interface is displayed

Re-Run Shortcut

Entry	Default	Description
ReRunShortcutTitle	not set	Title of Re-Run shortcut placed on Windows Desktop in case upgrade fails
ReRunShortcutIconNumber	249	Icon number from shell32.dll for Re-Run shortcut
ReRunShortcutName	MC Upgrade ReRun.lnk	Filename of Re-Run shortcut placed on Windows Desktop in case upgrade fails
Also see: DeferralNumberOfUpdatePrompts MaxShortcut*		

Exit

Entry	Default	Description	Remarks
CloseProgressBarOnExit	1	Set to 0 to prevent closing of progress bar at end of upgrade	
InstallFinishedExec	not set	Run program at end of successful upgrade	Sample use case: launch fullpath\notes.exe at end of upgrade
InstallFinishedExecCMD	0	Set to 1 to not encapsulate InstallFinishedExec string in “...” if missing	
InstallFinishedTitle	not set	Display a messagebox at end of successful upgrade	Requires InstallFinishedText
InstallFinishedText	not set	Display a messagebox at end of successful upgrade	Requires InstallFinishedTitle
InstallFinishedTimeout	not set	Automatically close messagebox at end of successful upgrade after specified number of seconds	Number of seconds, e.g. 60
InstallFailedTitle	not set	Display a messagebox at end of failed upgrade	Requires InstallFailedText
InstallFailedText	not set	Display a messagebox at end of failed upgrade	Requires InstallFailedTitle
InstallFinishedCleanup	0 (1 via Upgrade Config Wizard)	Delete all files in and underneath UpgradeDirectory at end of successful upgrade	Will leave MCUUpgrade.exe, Splash Screen and MCUUpgrade.log behind
InstallFinishedIcon	not set	Search for an icon on the windows desktop at the end of a successful upgrade and, if found, show preview where to find it	e.g., HCL Notes
InstallFinishedIconText	not set	Text to append to InstallFinishedText if InstallFinishedIcon is set and icon was found	

Special

Entry	Default	Description	Remarks
NotesLanguageOld	not set	Used to set %MC_MYLANGUAGE%	Use case: Can be used as parameter for language pack installation if needed
(Un)InstallExecWaitForProcessAfter###	not set	Set to list of processes to wait for to end after an (Un)install instruction according to WaitTimeForProcessAfter	
(Un)InstallExecWaitTimeForProcessAfter###	60	Set to number of seconds to wait for process(es) to end after an (Un)install instruction	
(Un)InstallExecWaitTimeAfter###	0	Set to number of seconds to wait for after an (Un)install instruction	
InstallService	not set	Set to 1 to install the panagendaInstallerService if missing	Requires MCUUpgrade_PublicKey.sig in UpgradeDirectory
InstallChangePersonalFolder	1	Set to 0 to not set PersonalFolder location before installation. By default, IBM and HCL installers write logs to the Documents folder.	If Documents points to a network resource, Admin and/or System may not have access. If enabled (=default), MCUUpgrade changes the log location to UpgradeDirectory\logs
NotesWorkspaceDirectoryNewSmartCleanup	1	Set to 0 to not cleanup a previously non-existing workspace directory generated during installation	
WinDefenderExcludeDefaults	0	Set to 1 to exclude default / best practice processes and paths from WinDefender	
WinDefenderExcludePath###	not set	Add paths to exclude from WinDefender	
WinDefenderExcludeProcess###	not set	Add processes to exclude from Defender	
WinDefenderExcludeForce	not set	Set to 1 to force re-applying settings	If set to 1 will ignore hash in registry

Do not set → maintained by MCUUpgrade

Entry	Default	Description	Remarks
SuRunAsStartTime	not set; set by MCUUpgrade.exe	Used to memorize start time of first run	Do not set; first run comparable to double-clicking. MCUUpgrade.exe might re-run itself, then not setting time again
MCUpgradeMainStartTime	not set; set by MCUUpgradeMain.exe	Used to memorize start time of MCUUpgradeMain	Do not set
UpgradeProgress	not set; set by MCUUpgrade.exe	Stores progress information for calling MCUUpgradeMain.exe	Do not set
UpgradeProgressLast	not set; set by MCUUpgrade.exe	Stores progress information for calling MCUUpgradeMain.exe	Do not set
UpgradeSucceeded	not set; set by MCUUpgrade.exe	Stores progress information for calling MCUUpgradeMain.exe	Do not set
SMTPMailSent	not set; set by MCUUpgrade.exe	Used to memorize sending of final Upgrade email	Do not set
PreviousUser PreviousUserProfileDir PreviousUserDesktopFolder PreviousUserStartMenuFolder	not set; set by MCUUpgrade.exe	Used to memorize user information from before elevation for fallback reasons	Do not set
UnzipDone###	not set; set by MCUUpgrade	Used to memorize which UnzipArchive instructions have already been processed	Do not set

Index of MCUpgrade.ini entries

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Appendix A: MarvelClient Upgrade Files and Folders

%MC_UPGRADEDIRECTORY% Files (Mandatory)

File	Description	Remarks
license_upgrade.xml	MCUpgrade license file	If not customized via ini:LicenseFilePath
MCUpgrade.exe	MCUpgrade executable	
MCUpgrade.zip OR MCUpgrade.ini	MCUpgrade zip or ini file	

%MC_UPGRADEDIRECTORY% Files (Depending on Use Case)

File	Description	Remarks
MCUpgrade_[language].ini	MCUpgrade language file	Optional
MCKeyfileEditor.exe	Keyfile Editor to edit .mcu files	Not needed for end users
MCKeyfileEditor.dll	Keyfile Editor Dynamic Link Library (DLL) for .NET >= 3 < 4	Maintained by KeyfileEditor; Not needed for end users
MCKeyfileEditor40.dll	Keyfile Editor Dynamic Link Library (DLL) for .NET >= 4	Maintained by KeyfileEditor; Not needed for end users
MCUpgradeMain.exe (removed since 14.1.0)	MCUpgradeMain executable for UAC elevation	Maintained by MCUpgrade.exe
MCUpgrade.log	MCUpgrade log file	Maintained by MCUpgrade
MCUpgrade.log- YYYYMMDDHHMMSS-Result.html	MCUpgrade log file in HTML format	Maintained by MCUpgrade
MCUpgradeSMTPInfo.log	MCUpgrade SMTP Info log file	Maintained by MCUpgrade
MCUpgradeSMTPTest.log	MCUpgrade SMTP Test log file	Maintained by MCUpgrade
MCUpgrade_deferral.ini	MCUpgrade Deferral ini	Maintained by MCUpgrade
MCUpgrade_PrivateKey_ STORE_SAFELY_ DO_NOT_SHARE.sig	MCUpgrade private key for Whitelisting	This file must only be used for Whitelisting and not be distributed to end users
MCUpgrade_PublicKey.sig	MCUpgrade public key for Whitelisting	When using the MCUpgrade service, this file must be in %PROGRAMFILES(x86)%\panagenda\MCUpgrade
panagenda_Splash.png	Optional custom Splash Screen	
panagenda_Splash2.gif	Optional custom animated GIF for Splash Screen	
Logo.png or Logo.gif	Optional custom logo for message/dialog boxes	If both files exist, png wins
SHA.txt	Resulting SHA-256 hash when using MCUpgrade.exe /sha	
MCUpgrade_checksum.log	Resulting SHA-256 hash, full b64 MD5 hash + 50 MB chunks	Created when indexing an installer
MCUpgrade_*.log	Created for various command line options	Created when indexing an installer or publishing an upgrade

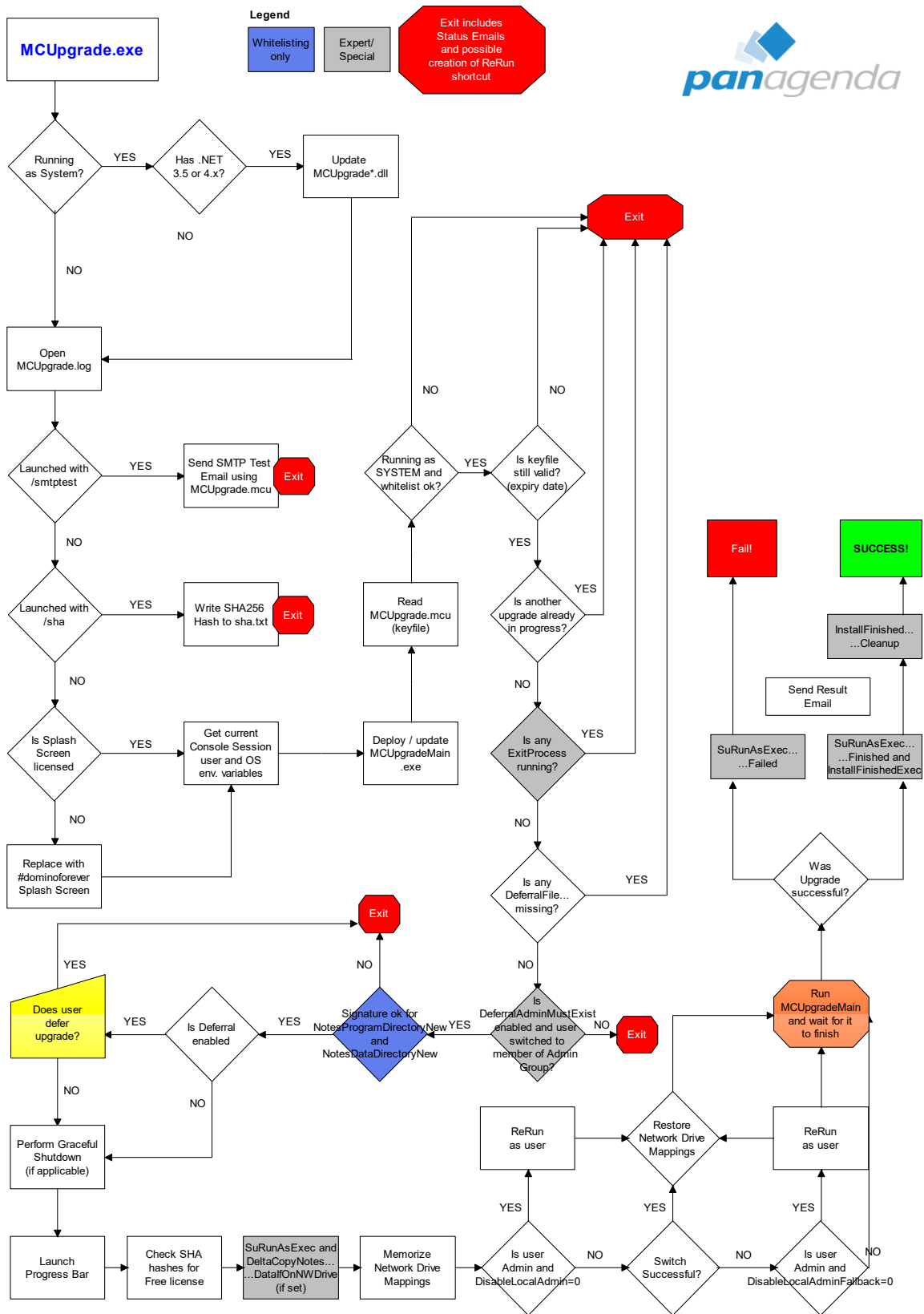
%MC_UPGRADEDIRECTORY% Folders

Folder	Description	Remarks
Backup	Maintained by MCUUpgrade	Stores index.txt, root.ini, notes.ini and notes#.ini during Data Migration
CopyToProgramNew	Copies any missing subfolders and files to NotesProgramDirectoryNew	.ini, .properties and .txt files are merged if target file already exists
CopyToProgramNewOverwrite	Copies/overwrites any subfolders and files to NotesProgramDirectoryNew	.ini, .properties and .txt files are merged if target file already exists
CopyToMultiUserSharedDataNew	Copies any missing subfolders and files to MultiUserSharedDataNew	.ini, .properties and .txt files are merged if target file already exists
CopyToMultiUserSharedDataNewOverwrite	Copies/overwrites any subfolders and files to MultiUserSharedDataNew	.ini, .properties and .txt files are merged if target file already exists
Coptim	Contains files for Citrix optimization	Populated via Config Wizard

%ProgramFiles(x86)%\panagenda\MCUUpgrade (for MCUUpgrade Service)

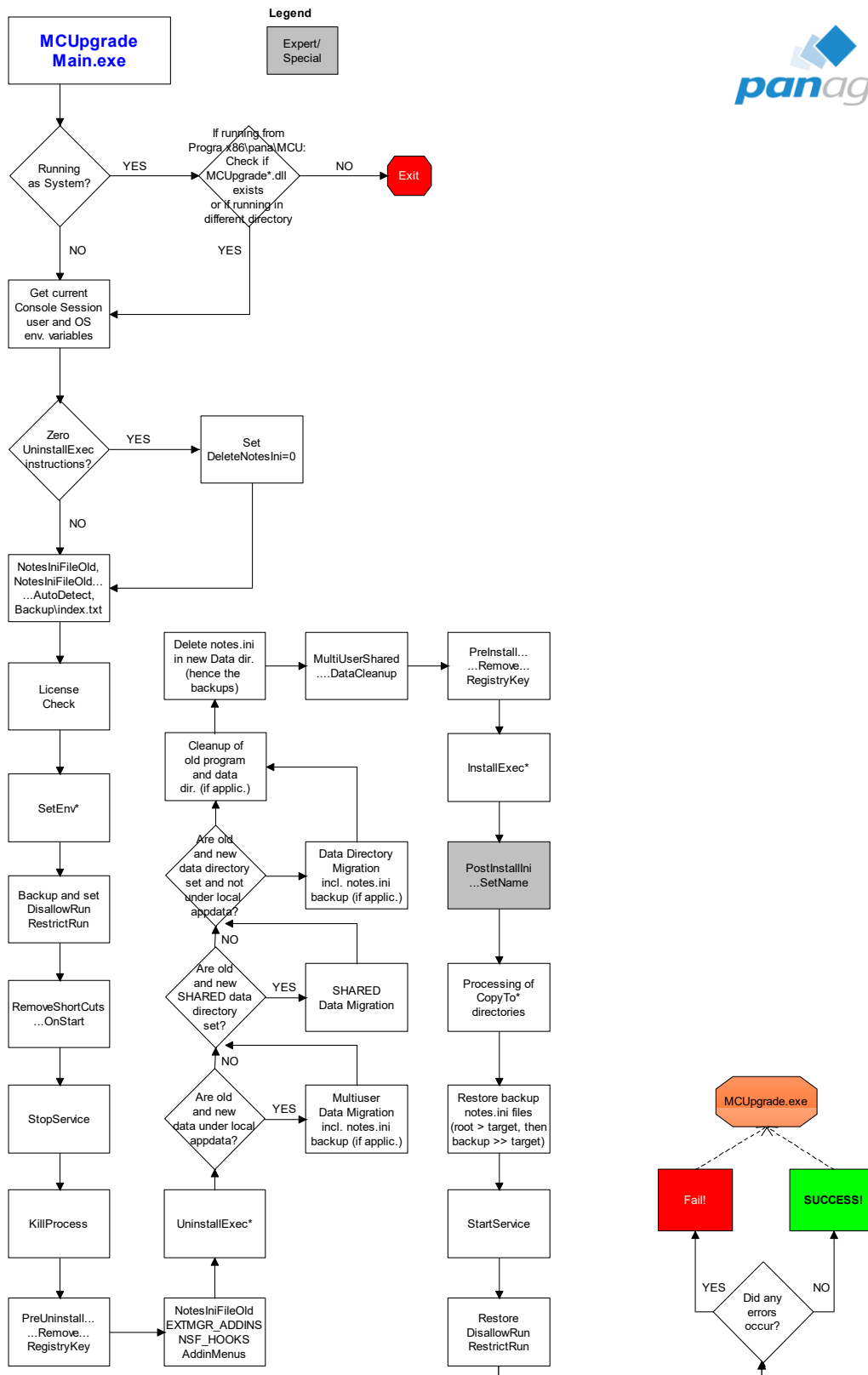
File or Folder\	Description	Remarks
MCUpgrade.dll	Service Dynamic Link Library (DLL) for .NET >= 3 < 4	Maintained by MCUUpgrade
MCUpgrade40.dll	Service Dynamic Link Library (DLL) for .NET >= 4	Maintained by MCUUpgrade until < 14.5.0
MCUpgrade_Publickey.sig	Custom public key file	Mandatory for Service
MCUpgradeService.exe	Service Executable	Mandatory for Service
MCUpgradeService.exe.config	Service config file for .NET	Mandatory for Service until < 14.5.0
MCUpgradeService.log	Service log file	Maintained by Service
Temporary Subdirectory (ini UpgradePackageName)	During an upgrade via Service, all whitelisted files are moved into a temporary subdirectory (safe location) and moved back at end of upgrade	Maintained by MCUUpgrade

Appendix B: How MCUpgrade.exe works in detail



Appendix C: How elevated upgrade works in detail

Until MCUUpgrade < 14.1.0, this was a separate executable (MCUUpgradeMain.exe)



Appendix D: List of MarvelClient Error Codes (since 11.0.56)

- 1 Most likely MCUUpgradeMain.exe was killed/terminated unexpectedly
- 1203 Undocumented Windows Installer error: Remove all blanks from your installer filename! Don't forget to re-index your installer (including adjusting the filepath!) and re-publish your upgrade afterwards
- 12-3010 <https://docs.microsoft.com/en-us/windows/win32/msi/error-codes>
<https://docs.microsoft.com/de-de/windows/win32/debug/system-error-codes--1300-1699->
- 4698 Another MarvelClient Upgrade is already in progress
- 4699 Default value if no other exit code could be computed
- 4700 MCUUpgradeMain.exe is not the correct version
- 4701 Unable to (re-)deploy correct MCUUpgradeMain.exe
- 4705 MCU: No compatible .Net framework found - even tried multi; exiting.
- 4710 Unable to open MCUUpgrade log file
- 4711/4712 No License found (4711), No License found and checkout failed, too (4712)
- 4713 MCUUpgrade.ini has less than UpgradeIniMinLines (defaults to 15) – exiting
- 4720 RunAsService is set to [%], but ini file and hence whitelist are missing
- 4721 Unable to read keyfile [%s] - RunAsService is set to [%], but ini file and hence whitelist are missing
- 4722 Unable to read keyfile [%s]
- 4730 DeferralAdminMustExist is ENabled: [0] username(s) to switch to are direct members of local Administrators group
- 474x Exiting due to whitelist mismatch for NotesProgramDirectoryNew (4740) / NotesDataDirectoryNew (4741)
- 4750 [Whitelisting error detail], exiting due to RunAsService=[%]
- 4751 Whitelist signature does not match or has been tampered with
- 4752 Whitelisting: One or more file(s) do not match checksum
- 4760 Hash check failed (MCUpgrade Free Edition)
- 4761 Unable to delete and deploy licensed splash screen - exiting. (MCUpgrade Free Edition)
- 4770 Exiting due to running as SYSTEM and unsupported command line parameter
- 4771 Workspace optimization failed due to missing Administrative rights
- 4800 MCDeltaCopy run FAILED - aborting operation.
- 4780 !InitiatorLocalFallback! DISABLED
- 4781 SourceDirectory\Init not specified
- 4782 % download(s) failed from ...
- 4783 UpgradeDirectory not specified in [...\MCUpgrade.ini]
- 4784 NOTE: Could not find/access source
- 4785 An error occurred during upgrade file copy
- 4786 No files specified for download
- 4787 An error occurred during upgrade file download
- 4900 Unable to compute days left until keyfile expires
- 4901 Keyfile has expired [%s]
- 5000 WAITING for other installation: Another Windows installation is already in progress
- 5001 WAITING for user: Failed to close all relevant windows - exiting due to GraceFulShutdown=1
- 5002 WAITING for user: User deferred upgrade
- 5003 WAITING for user: User declined UAC elevation request
- 5010 Unable to get process creation time for found ExitProcess
- 5011 Found ExitProcess which has not exceeded ExitProcessMaxRuntimeMinutes
- 5012 ExitProcessMaxRuntimeMinutes not specified for found ExitProcess
- 5020 WAITING for user: ShortCutCreateOnly option is set and parent process unknown
- 5030 WAITING for file(s): DeferralFileMustExist
- 6000 Could not instantiate Administrative rights through rerun
- 6001 Could not rerun
- 6002 Insufficient rights for running with /upgrade option
- 7000//7001 Failed to install/update Service executable // Failed to stop Service executable
- Other Most likely return codes from installers e.g., Notes client, fix pack or any other executable

Appendix E: List of MarvelClient Registry entries

Entry	Description
HKEY_LOCAL_MACHINE\ Software\panagenda\MarvelClient\Upgrade\ SourceDirectoryInit	File or web source to download upgrade files from Usually configured in MCUUpgrade.ini, also see chapter Initiator
HKEY_LOCAL_MACHINE\ Software\panagenda\MarvelClient\Upgrade\ SourceDirectoryInitLocalFallback	Set to 0 to disable SourceDirectoryInitLocalFallback Usually configured in MCUUpgrade.ini, also see chapter Initiator
HKEY_LOCAL_MACHINE\ Software\panagenda\MarvelClient\Upgrade\ SuccessfulUpgrades\%packagename%	List of successful upgrades by ini:UpgradePackageName set to date/time of successful upgrade. Used to suppress repeated installation of a same package.
HKEY_LOCAL_MACHINE\ Software\panagenda\MarvelClient\Upgrade\ WindDefenderExcludeLast	SHA-256 Hash of last applied WindDefender instructions, if any
HKEY_LOCAL_MACHINE\ Software\panagenda\MarvelClient\Upgrade\ Installer	Backup of PersonalFolder for IBM and HCL installers (installer log location) During an upgrade, HKCU\Software\%Vendor%\Notes\Installer\PersonalFolder are set to ini:UpgradeDirectory to ensure proper log file collection (%Vendor%=IBM and HCL)
HKEY_LOCAL_MACHINE\ Software\panagenda\MarvelClient\Upgrade\ Backup\Explorer	No longer used since MCUUpgrade 14.2.5 (still supported for backwards-compatibility) See next entry used since including 14.2.5
HKEY_USERS\S-*\ Software\panagenda\MarvelClient\Upgrade\ Backup\Explorer	S-* = any S-* entry under HKEY_USERS that does not match S-1-5-18, S-1-5-19 or S-1-5-20 and that does not end on _Classes Used to backup pre-existing DisallowRun and RestrictRun settings prior to applying ini:DisallowRun### settings
HKEY_USERS\S-*\ Software\Microsoft\Windows\ CurrentVersion\Policies\Explorer\ DisallowRun	Set at the beginning of an upgrade according to ini:DisallowRun### settings, Unset at the end of an upgrade (in any case = both success and fail)
HKEY_USERS\S-*\ Software\Microsoft\Windows\ CurrentVersion\Policies\Explorer\ RestrictRun	Set at the beginning of an upgrade according to ini:DisallowRun### settings, Unset at the end of an upgrade (in any case = both success and fail)
HKCU\Software\panagenda\MarvelClient\ WindowPlacement	Stores 0-n entries for Window placement coordinates of the Notes Client and MCUUpgrade components

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