BECKHOFF New Automation Technology

Handbuch | DE

TS1140

TwinCAT 2 | Management Server

Supplement | System

16.11.2022 | Version: 1.1

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BECKHOFF

Version: 1.1

1 Vorwort

1.1 Hinweise zur Dokumentation

Diese Beschreibung wendet sich ausschließlich an ausgebildetes Fachpersonal der Steuerungs- und Automatisierungstechnik, das mit den geltenden nationalen Normen vertraut ist.
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EP1590927, EP1789857, EP1456722, EP2137893, DE102015105702
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⚠ GEFAHR
Akute Verletzungsgefahr!
Wenn der Sicherheitshinweis neben diesem Symbol nicht beachtet wird, besteht unmittelbare Gefahr für Leben und Gesundheit von Personen!

⚠ WARNUNG
Verletzungsgefahr!
Wenn der Sicherheitshinweis neben diesem Symbol nicht beachtet wird, besteht Gefahr für Leben und Gesundheit von Personen!

⚠ VORSICHT
Schädigung von Personen!
Wenn der Sicherheitshinweis neben diesem Symbol nicht beachtet wird, können Personen geschädigt werden!

HINWEIS
Schädigung von Umwelt oder Geräten
Wenn der Hinweis neben diesem Symbol nicht beachtet wird, können Umwelt oder Geräte geschädigt werden.

● Tipp oder Fingerzeig

i Dieses Symbol kennzeichnet Informationen, die zum besseren Verständnis beitragen.

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2 Übersicht

Der TwinCAT Management Server ermöglicht die zentrale Administration von Beckhoff-Steuerungen. Softwareupdates können bequem von einer zentralen Stelle in ein Netzwerk eingespielt werden. Neben den Möglichkeiten, ausgewählte Geräte in einen anderen Arbeitsmodus zu versetzen oder diese aus der Ferne neu zu starten, bietet der TwinCAT Management Server die Möglichkeit vollständige Betriebssystemupdates zu erzeugen.

Der TwinCAT Management Server erlaubt es, die Geräte in einem Netzwerk in logische Gruppen zu unterteilen. Für jede Gruppe können dann Aktionen definiert werden, welche von den jeweiligen Geräten abgearbeitet werden. Dabei stehen Ihnen einige Basisaktionen wie zum Beispiel Kopieren, Löschen oder Umbenennen von Dateien und Ordnern in Form von Scripten zur Verfügung. Die Basisaktionen können dann zu komplexen Update-Szenarien zusammengefasst und in eigenen Scripten mit dem Script-Editor verwendet werden.

Voraussetzungen

Der TwinCAT Management Server ist auf allen Beckhoff Geräten lauffähig mit Ausnahme von:

- Beckhoff CX9000 Embedded PC

Das Produkt ist somit auf alle Plattformen lauffähig, welches folgende Komponenten bietet:

- Minimum TwinCAT CP

Hinweis:
Aktuell können keine Updates auf Geräten mit Windows XP oder Windows XP Embedded durchgeführt werden. Diese Funktionalität befindet sich derzeit noch in der Entwicklung.

Installation

Die Installation besteht aus 2 Schritten:

Schritt 1 : Installieren Sie die Supplement Software auf einem Host PC. Mit der Eingabe des erforderlichen Lizenzkeys und der Zustimmung zu den Lizenzvereinbarungen wird die Supplement Software unter .. \TwinCAT\TwinCAT Management Server installiert. Zudem werden die Installationsdateien für Windows CE in den Unterordner ..\TwinCAT\CE auf Ihrem PC hinterlegt.

Bsp.: TwinCAT Management Server : Bei der Installation der Software auf den Host PC wird der Ordner "..TwinCAT\CE\TwinCAT Management Server" erzeugt welcher die CE *.cab Installationsdateien wie z.B. (TcManagementServerCe.X86.CE500.CAB) enthält.**Schritt 2 :**Transfer der CE-Cab Installationsdateien auf das CE Gerät (per Memory-Stick/FTP/Public Folder/CF-Adapter...) Während das CE Gerät läuft, machen Sie einen Doppelklick auf die Cab Datei und klicken dann auf den OK Button ohne den Pfad zu ändern. Nach Ende der Installation löscht sich die Cab Datei von selbst.
Nach der Installation muss das CE System neu gestartet werden, d.h. über das Startmenü die Funktion Reset bzw. Suspend ausführen, damit der Server aktiv wird.

Installationsumfang auf dem Host PC:

- CE *.cab Installationsdateien in den Ordner "..TwinCAT\CE\TwinCAT Management Server"
- XP Konfigurationsdateien in den Ordner "..\TwinCAT\TwinCAT Management Server"

Installationsumfang auf dem CE Gerät:

- "\Hard Disk\System"
    - TcManagementService.exe
    - TcManagementSystem.dll
    - TcAmsServerCe.dll
    - TwinCAT.Ads.dll
    - TwinCAT.Ads.Server.dll

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3 Oberfläche
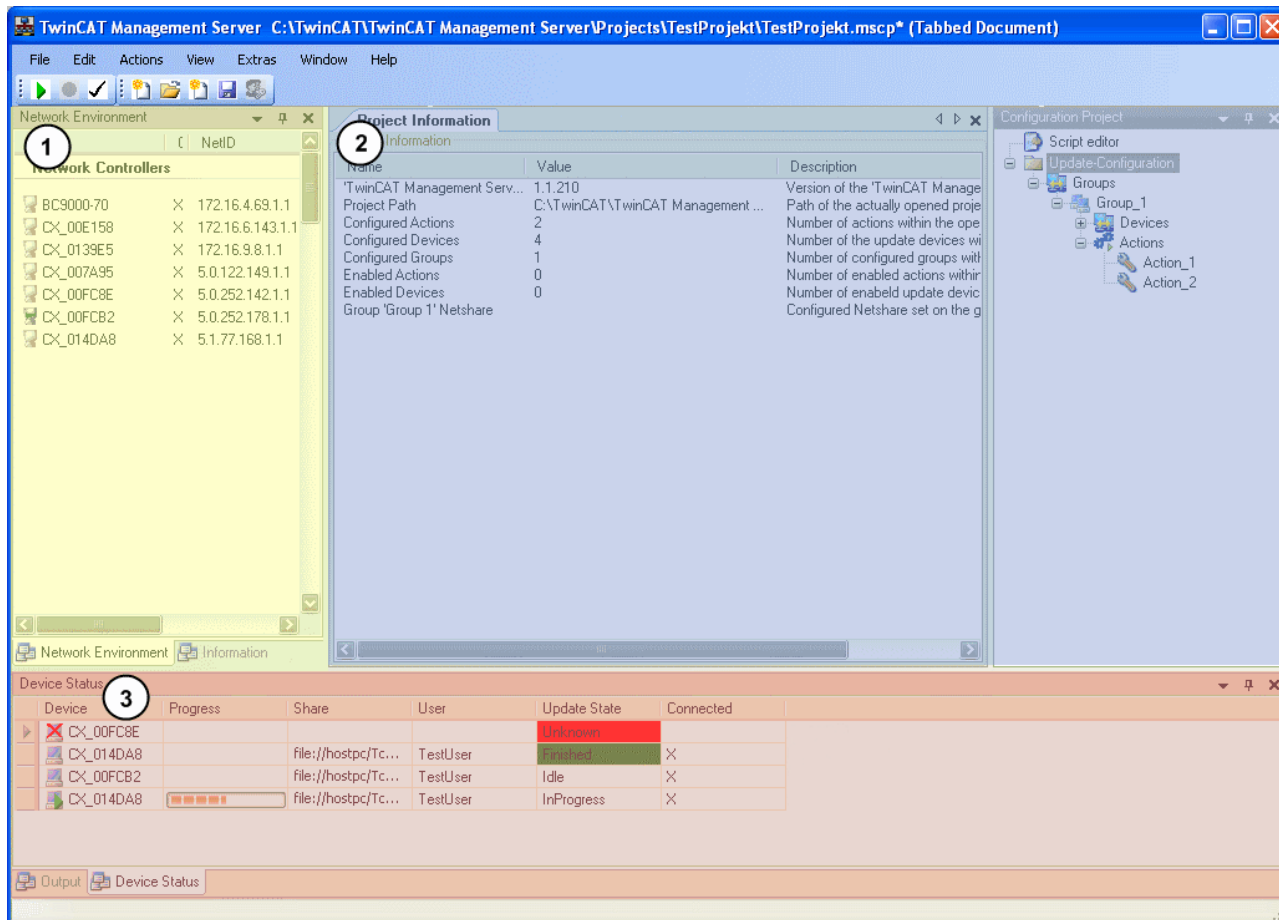
[▶ 10] ①	**Network Environment:** Beinhaltet alle gefundenen Geräte im Netzwerk. Weitere Informationen siehe: Netzwerkumgebung [▶ 10]
[▶ 12] ②	**Configuration Project:** Beinhaltet alle konfigurierbaren Komponenten eines Updateprojekts. Weitere Informationen siehe: Projekt Konfiguration [▶ 12]
[▶ 17] ③	**Device Status:** Beinhaltet alle Geräte, die in den verschiedenen Gruppen verwendet werden. Weitere Informationen siehe: Geräte Status [▶ 17]

3.1 Netzwerkumgebung

In der Netzwerkumgebung werden alle Geräte aufgelistet, die im Netzwerk gefunden werden. Die Geräte, welche auf Ihrem PC eine ADS-Route besitzen, werden in der Spalte "Connected" mit einem X gekennzeichnet. Des weiteren finden Sie die NetID, IP-Adresse, TwinCAT Version und das Betriebsystem der gefundenen Geräte aufgelistet.

An den kleinen Symbolen auf der linken Seite, können Sie auf schnelle und einfache Weise erkennen, welche Geräte verfügbar, verfügbar und mit einer Route versehen, oder nicht verfügbar sind. Den Status der Geräte können Sie mit einem "Refresh" immer auf den aktuellen Stand bringen. Sehen Sie weiter unten, wie ein "Refresh" ausgeführt werden kann.
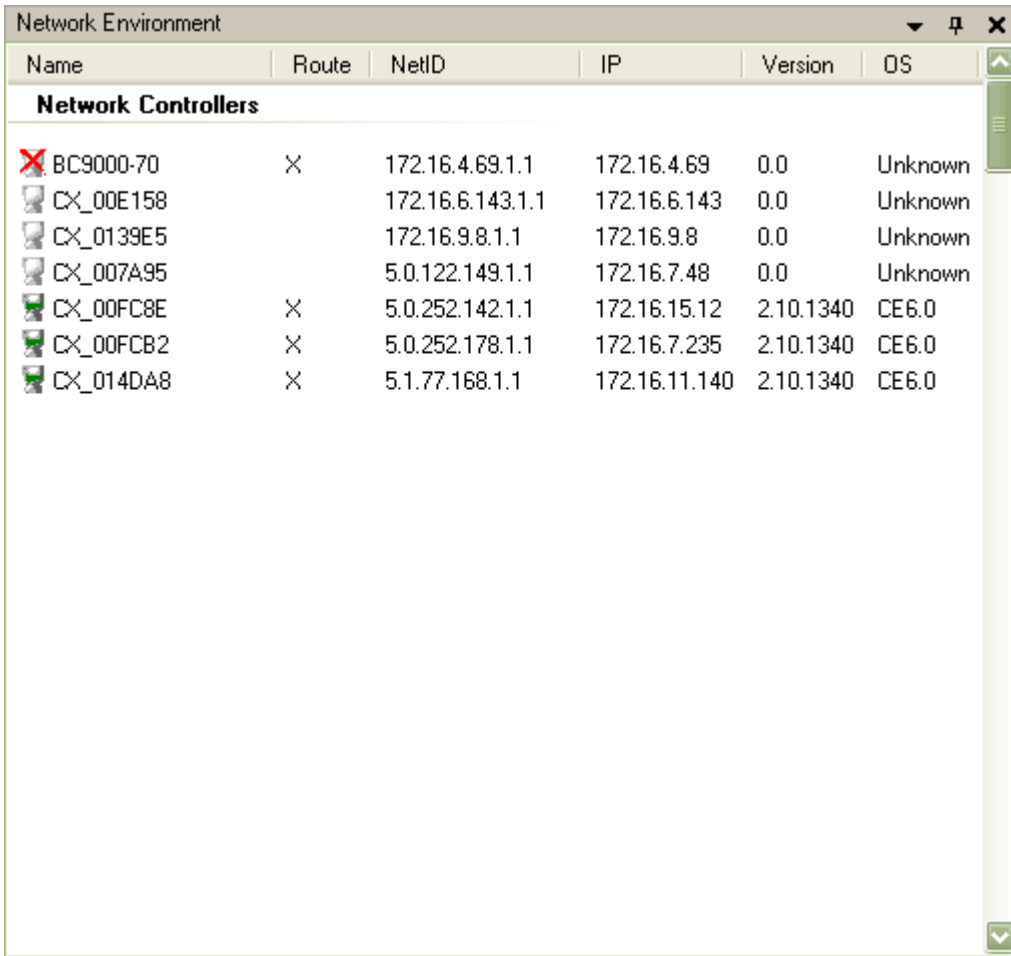
Abb. 1: NetworkEnvironment

Kontextmenü

Das Kontextmenü kann auf Grund des Status des ausgewählten Gerätes variieren. Im folgenden Bild sind alle möglichen Kontexteinträge beschrieben.

Voraussetzungen

	Kontextmenüpunkt	Beschreibung
	WebConfiguration ...	TcWebAccess: Web basierende Diagnose und Konfigurations-Schnittstelle. Die wichtigsten Geräteeinstellungen können hier vorgenommen werden
	Remote Desktop ...	Mit dieser Option können CE-Geräte ferngesteuert werden.
	Ping	Überprüft ob das ausgewählte Gerät in im IP-Netzwerk erreichbar ist.
	AdsPing	Überprüft ob das ausgewählte Gerät per ADS im Netzwerk erreichbar ist.

Kontextmenüpunkt	Beschreibung
Edit Remote Process commands ...	In einem weiteren Dialog können Prozesse editiert werden, die auf dem ausgewählten Gerät gestartet werden sollen. Die angelegten Prozesse können dann schnell und einfach aus dem Kontextmenü heraus gestartet werden.
Start Remote Process ...	Startet Prozesse auf dem ausgewählten Gerät
ShutDown ...	Fährt das ausgewählte Gerät herunter.
Config mode ...	Versetzt das TwinCAT System des ausgewählten Gerätes in den Config-Modus.
Restart System ...	Führt einen Neustart des TwinCAT Systems auf dem ausgewählten Gerät aus.
Show target routes ...	Listet in einem neuen Dialog die eingerichteten Sub ADS-Routen des ausgewählten Gerätes auf.
Remove route ...	Ist für das ausgewählte Gerät eine Route auf dem Host PC eingerichtet kann diese mit diesem Menüpunkt gelöscht werden.
Find Targets ...	In einem neuen Dialog haben Sie die Möglichkeit nach weiteren Geräten explizit zu suchen.
Refresh	Aktualisiert die Liste der Geräte und deren Status.
Properties ...	Listet TwinCAT-, Image-, und Hardwareinformation des ausgewählten Gerätes auf wenn möglich.

3.2   Projekt Konfiguration

In der Projekt Konfiguration können Sie verschiedene Geräte-Gruppen anlegen und verwalten. Sie haben die Möglichkeit den Gruppen verschiedene Geräte aus Ihrem Netzwerk zu zuordnen und hier hinterlegte Aktionen mit dem Befehl *Update* auf den einzelnen Geräten einer Gruppe auszuführen. Darüber hinaus haben Sie mit dem Script Editor die Möglichkeit, neben den vordefinierten Scripten, eigene komplexe Scripte zu definieren.
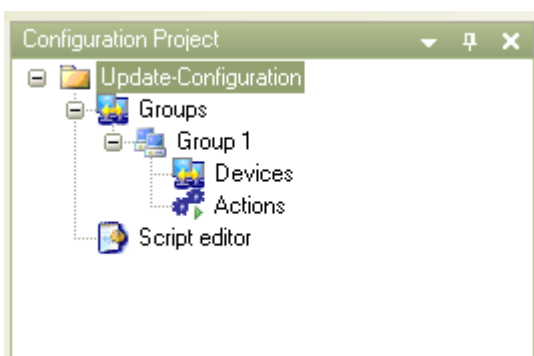
Der erste und wichtigste Schritt ist die Auswahl des so genannten NetShare Ordners. Die in den verschiedenen Scripten angegebenen Dateien (Dateipfade), welche auf das bzw. die Zielsysteme geladen werden sollen, werden im NetShare Ordner zusammengefasst und von dieser Stelle zentral an die Geräte der entsprechenden Gruppe gesendet. Um dieses Prinzip zu verdeutlichen, hilft das folgende Schaubild.
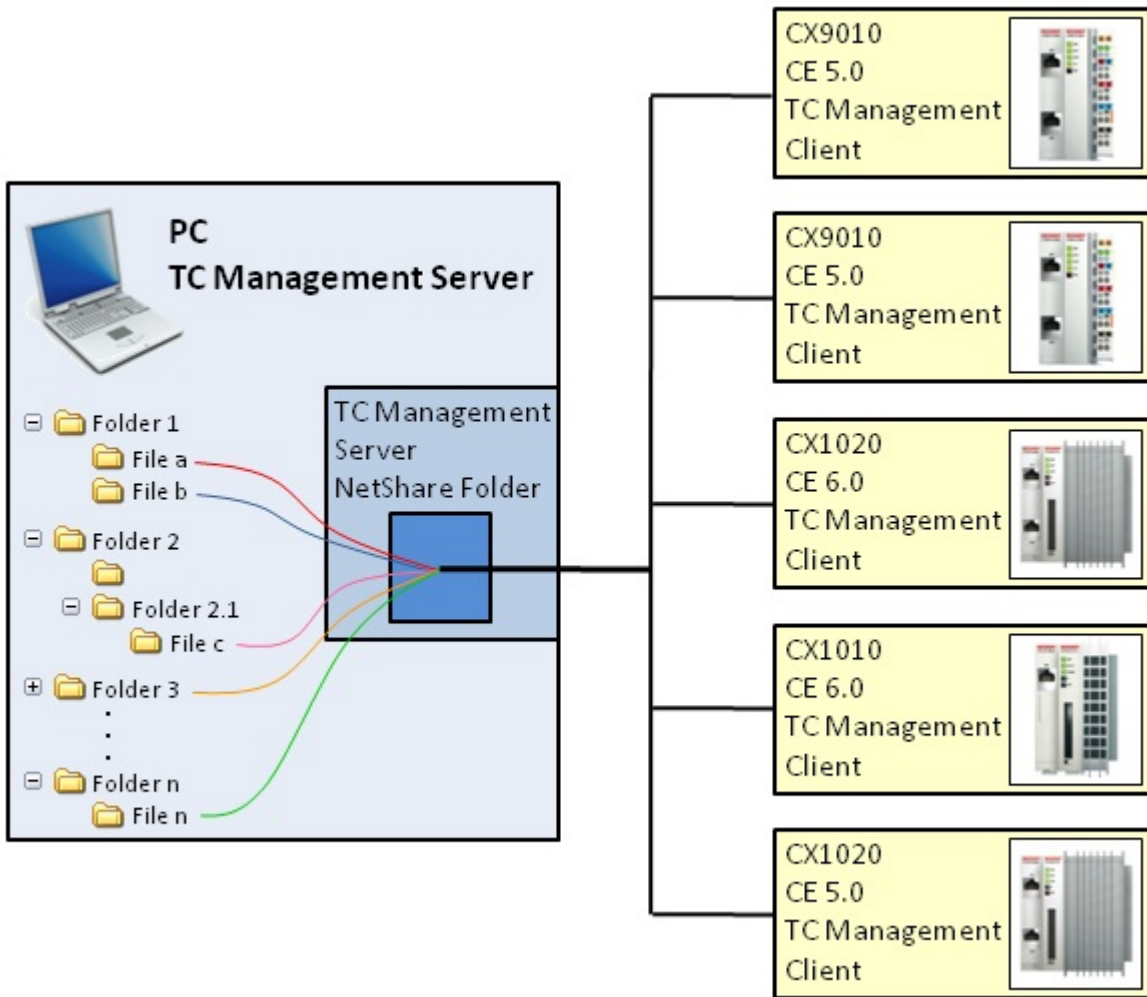
Die Einstellungen dazu kann man vornehmen, indem man im Konfigurationsbaum Groups anwählt (siehe dazu das Bild unter diesem Abschnitt: *Groups*). Der NetShare Ordner muss ein freigegebener Ordner mit Schreib- und Leserechten sein.

Des Weiteren muss man hier den Windows User und dessen Passwort eingeben, um die Zugriffsrechte auf den NetShare Folder zu erhalten. Ob die Zugriffsrechte gegeben sind, kann man bequem mit dem *Test* Button überprüfen. Alle Änderungen auf dieser Seite müssen explizit über den *Apply* Button bestätigt werden, sonst sind die Änderungen unwirksam und werden verworfen.

Mit dem *Start Update* Button können Sie ein Update für alle aktivierten Geräte in der aktuell ausgewählten Gruppe anstoßen.
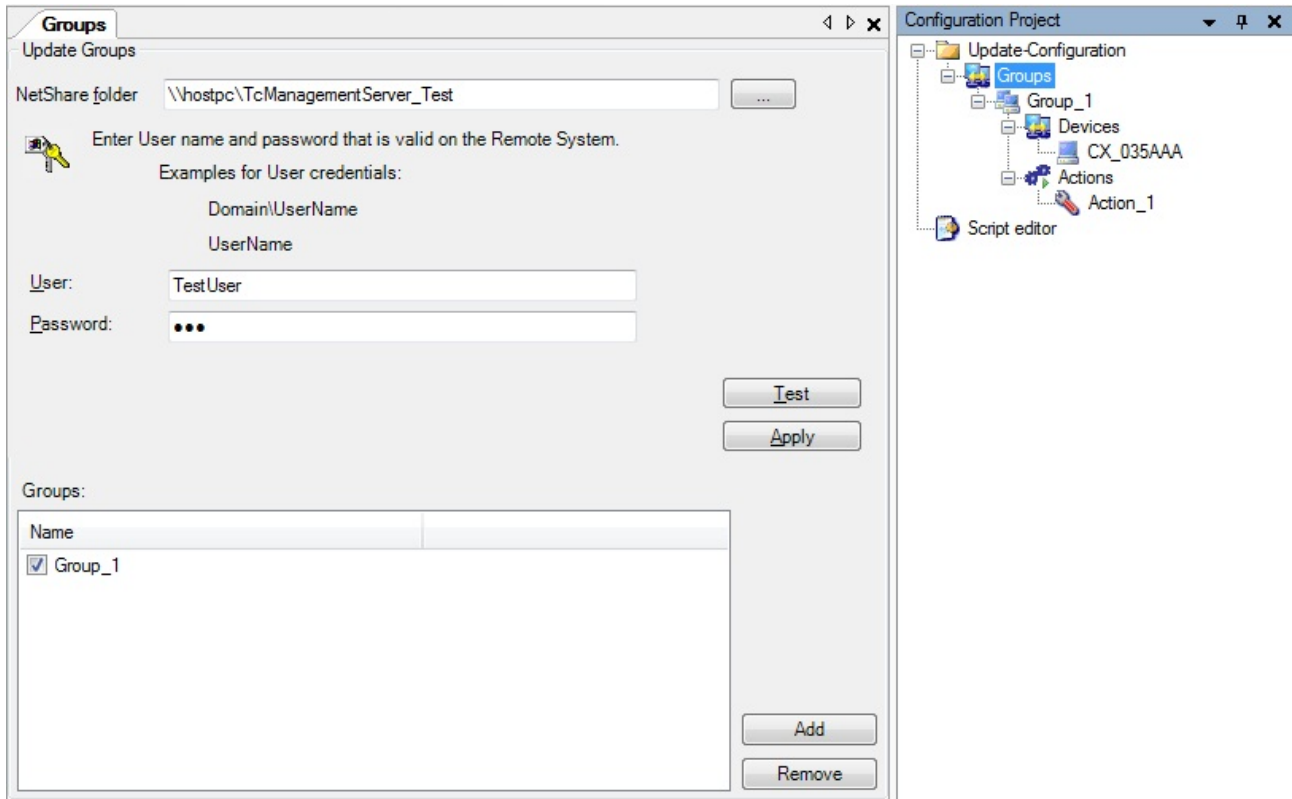
Groups, Devices und Actions:

Der Eintrag Groups zeigt darüber hinaus eine Übersicht über die bereits in der Projekt Konfiguration angelegten Gruppen. Weitere Gruppen können Sie durch die Betätigung des Add Buttons oder durch einen Rechtsklick im Konfigurationsbaum, durch das Kontextmenu mit *New* einfügen. Im Groups-Fenster können Sie durch Check-Boxen Gruppen aktivieren und deaktivieren.
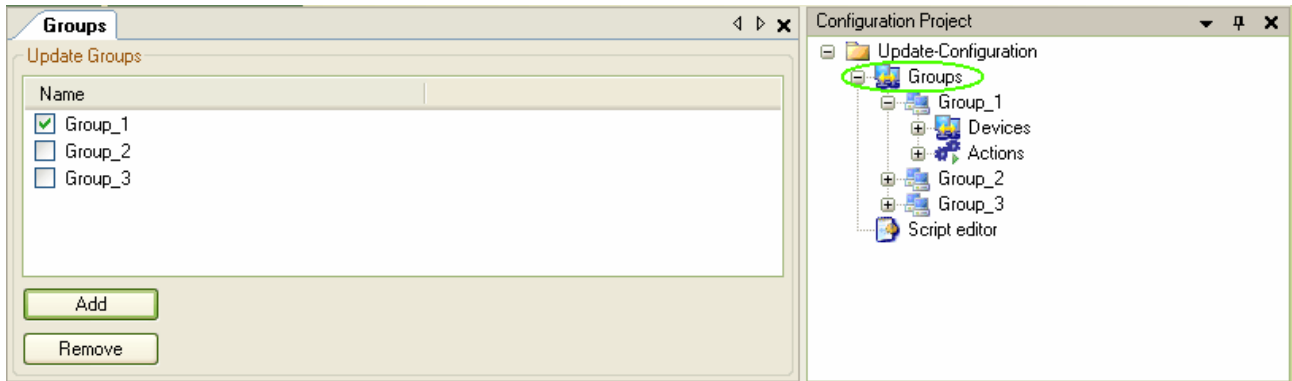
Ähnliches gilt für die Geräte einer Gruppe. Hier öffnet sich das Geräte-Fenster der entsprechenden Gruppe durch einen Klick auf *Devices*. Geräte können Sie im Kontextmenu des Projekt Konfigurators, im Geräte-Fenster durch den Add Button oder sehr einfach durch Drag and Drop von Ihrer *Network Environment* in das Geräte-Fenster ziehen und hinzufügen.
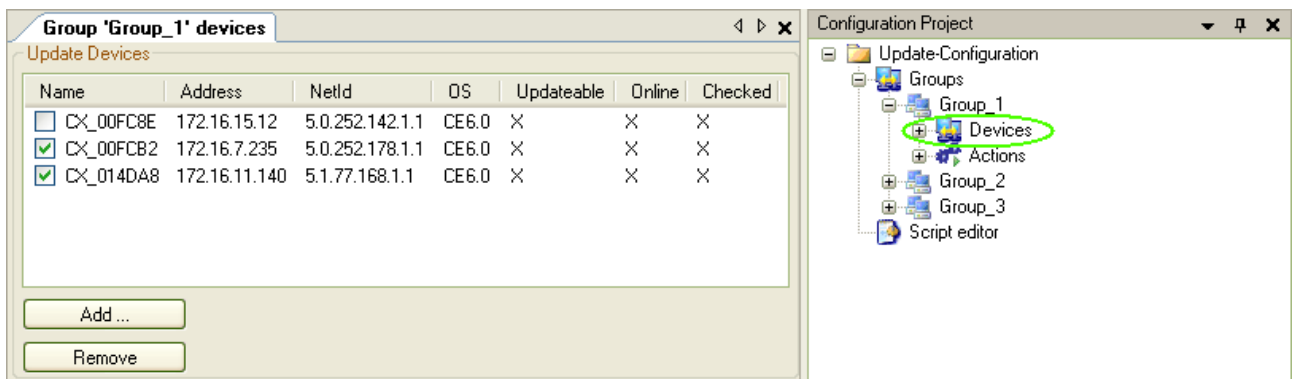
Das gleiche Handling ist bei den *Actions* anzutreffen, was die intuitive Bedienung der Software ermöglicht. Auch hier können einzelne Aktionen für gewisse Updates zu- oder abgeschaltet werden.
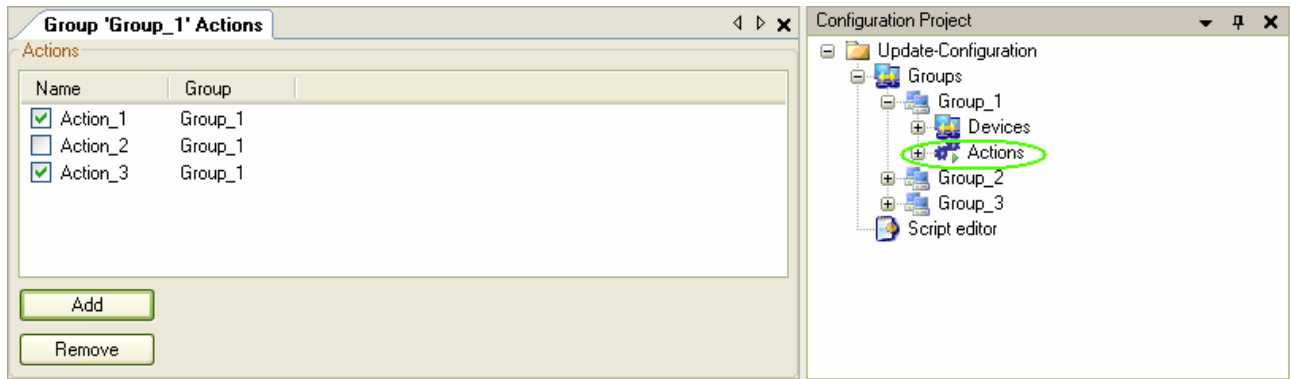
Beispielhaft wird in den drei zuvor dargestellten Bildern das nächste Update ausschließlich für die *Group_1* und dessen Embedded-Geräte *CX_00FCB2* und *CX_014DA8* mit den Aktionen *Action_1* und *Action_3* durchgeführt.

Wenn Sie die einzelnen Geräte in einer Gruppe anwählen, erhalten Sie eine Übersicht mit Informationen zu diesem Gerät. Unter anderem können Sie Name, NetId, IP, TwinCAT Version und das Betriebssystem des Gerätes entnehmen. Von hieraus können Sie auch gezielt Updates nur für das aktuell ausgewählte Gerät starten oder abbrechen (Cancel). Ebenso gibt es hier einen gerätespezifischen Logger, um detaillierte Informationen zum aktuellen Status des Gerätes zu erhalten.
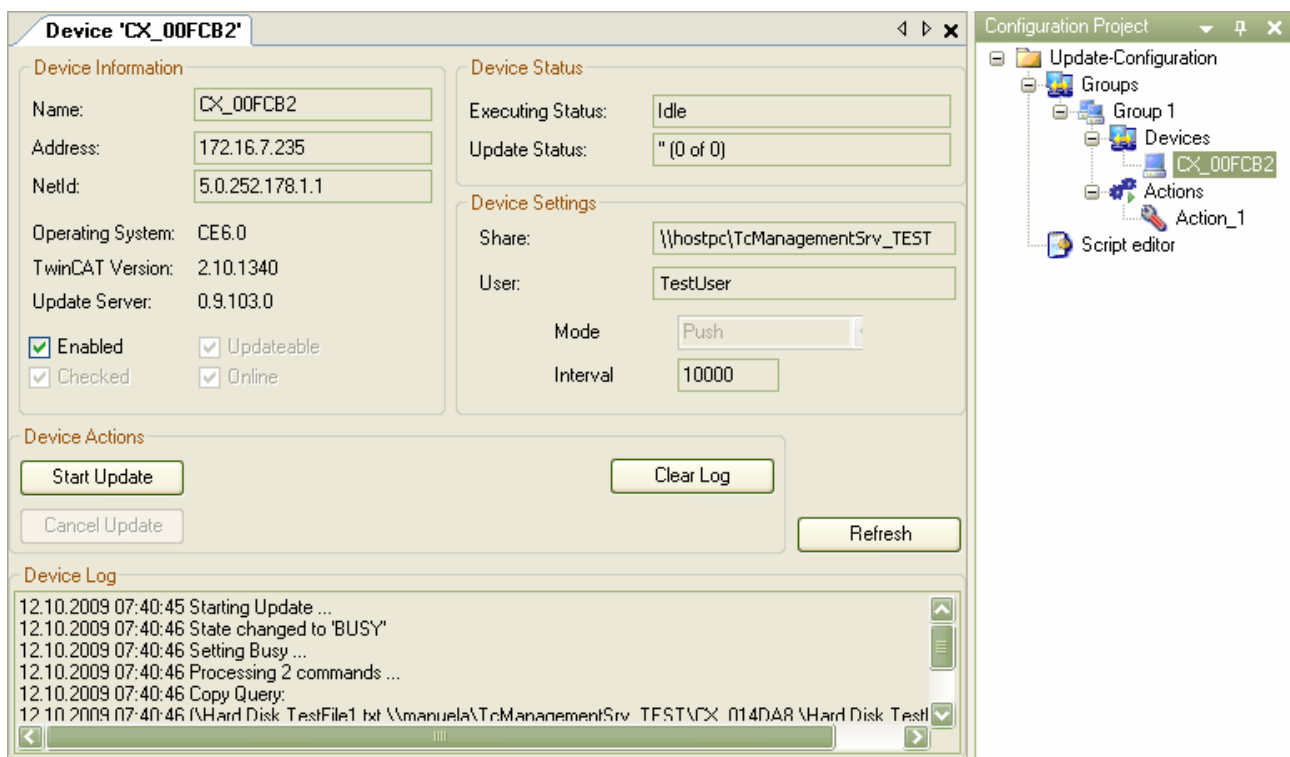
Wenn Sie zu Ihrer bisherigen Konfiguration von Gruppen und Geräten Aktionen hinzufügen, haben Sie die Möglichkeit zwischen mehreren Standard Scripten zu wählen. In diesen Scripten kann man letztendlich festlegen, was überhaupt auf dem bzw. den Zielgeräten gemacht bzw. ausgeführt werden soll. Welche Standard-Scripte zur Verfügung stehen und was diese für Funktionen haben erfahren Sie hier [▶ 18].

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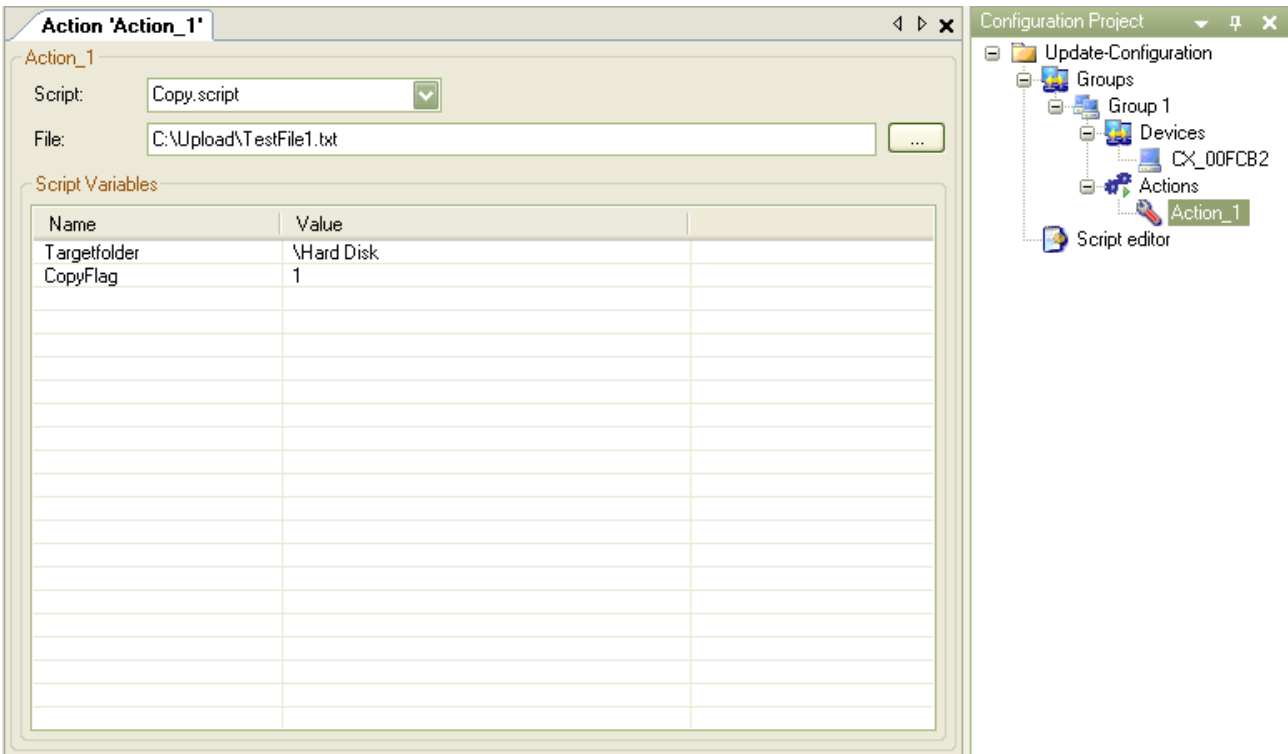
Sollten Sie mit den vorhanden Scripten nicht auskommen oder Sie wollen sich ein komplexes Script, welches mehrere Funktionen auf einmal ausführt, definieren, so haben Sie diese Möglichkeit mit dem Script Editor. Wie Sie solche Scripte erstellen, abspeichern und verwenden können, erfahren Sie hier [▶ 30].
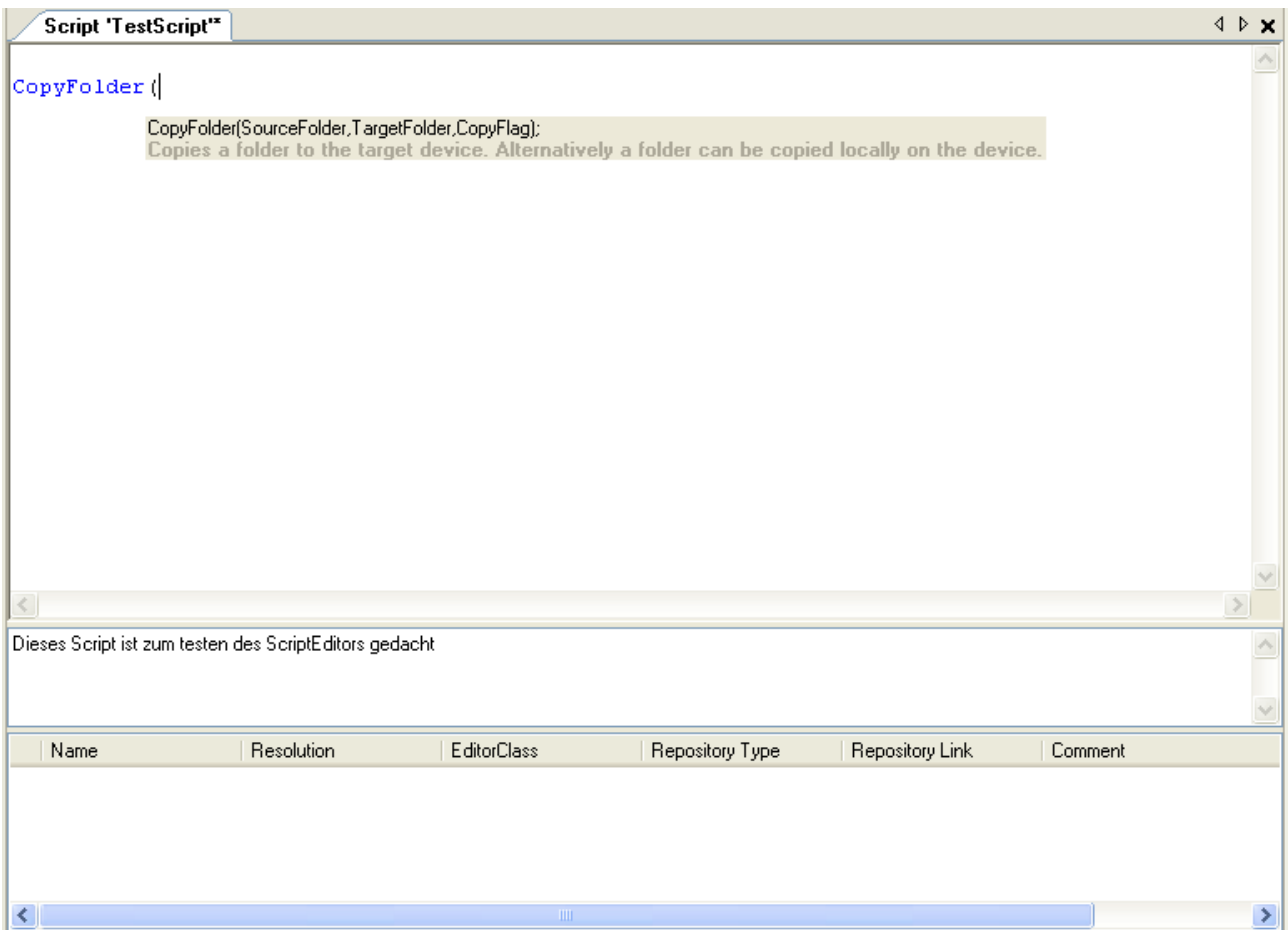
3.3 Geräte Status
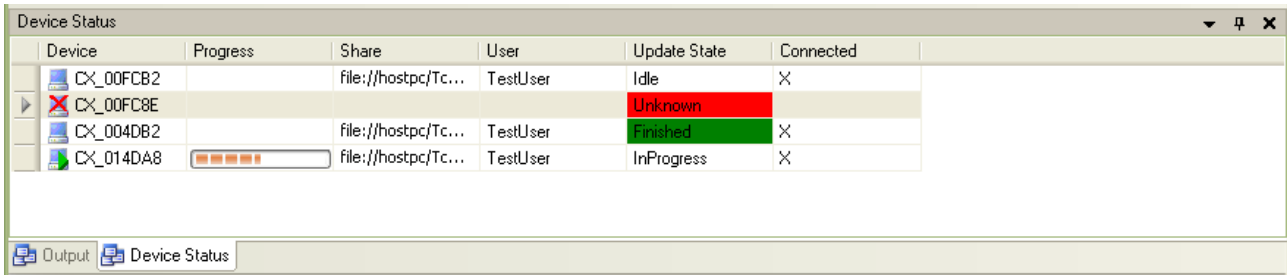
Abb. 2: DeviceStatus

Dieses Fenster dient dazu, den Status der deklarierten Geräte zu überblicken und den Verlauf der angestoßenen Updates zu verfolgen. Jedes Gerät aus jeder Gruppe wird in dieser Übersicht angezeigt. Auf einem Blick ist gleich zu erkennen welcher Benutzer und Netshare-Ordner den einzelnen Geräten zugeordnet ist und in welchem Status sich das Gerät im Augenblick befindet.

Die angezeigten Werte können von den aktuellen Werten abweichen. Nutzen Sie in diesem Fall einfach die "Refresh" Funktion des Kontextmenüs um die Werte zu aktualisieren.

Spalte "Update State"

In der Spalte "Update State" können 5 verschiedene Zustände angezeigt werden:

Voraussetzungen

Status	Beschreibung
Idle	Gerät ist bereit für Updates (immer nach einem Start/Neustart des Gerätes sichtbar)
Timeout (gelb unterlegt)	Client Software des TwinCAT Management Server ist nicht auf dem Gerät installiert (CE Installationsdatei *.cap wurde nicht auf dem Gerät ausgeführt) oder das Gerät ist im Augenblick nicht erreichbar.
Error (rot unterlegt)	Beim Update ist ein Fehler aufgetreten. Nähere Fehlerbeschreibung finden Sie im "Device Log" des betreffenden Gerätes.
Finished (grün unterlegt)	Das Update ist ohne Probleme durchgelaufen. Gerät ist bereit für weitere Updates.
InProgress	Auf dem Gerät wird aktuell ein Update ausgeführt.

Spalte "Connected"

In der Spalte "Connected" können Sie sehen, ob das Gerät per ADS erreichbar ist, ob auf dem Gerät die Client Software des TwinCAT Management Server installiert ist und ob das Gerät bei einem Update seiner Gruppe berücksichtigt wird, oder nicht.

4 Scripte

Für den Gebrauch des TwinCAT Management Servers können Sie verschiedene Aktionen definieren. Diesen Aktionen liegen so genannte Scripte zugrunde. Dabei können Sie auf einige Standard-Scripte zurückgreifen, welche im Folgenden erklärt werden.

Aktuell können die folgenden Standard-Scripte verwendet werden:

Script	Beschreibung
CopyFile Script [▶ 18]	Kopiert eine Datei auf das Remote Gerät.
CopyFolder Script [▶ 19]	Kopiert einen Ordner auf das Remote Gerät
CX10xxImageUpdate Script [▶ 20]	Führt ein Imageupdate auf allen x86 CX Geräten durch
CX90xxImageUpdatePrep Script [▶ 21]	Updatet die Systemdateien und setzen die Geräteeinstellungen zurück
CX90xxImageUpdate.Script [▶ 22]	Führt ein Imageupdate auf einem CX ARM Gerät aus
DeleteFile Script [▶ 23]	Löscht eine Datei auf dem Remote Gerät.
DeleteFolder Script [▶ 24]	Löscht einen Ordner auf dem Remote Gerät
Register Script [▶ 26]	Kopiert eine Registerdatei auf das Remote Gerät und führt diese aus.
ExportRegistry Script [▶ 25]	Schreibt einen Registrykey in eine Registerdatei auf dem Remote Gerät.
RenameFile Script [▶ 27]	Benennt eine Datei auf dem Remote Gerät um.
RenameFolder Script [▶ 28]	Benennt einen Ordner auf dem Remote Gerät um.
Restart Script [▶ 29]	Führt einen Restart auf dem Remote Gerät aus
Run Script [▶ 29]	Startet einen bestimmten Prozess auf dem Remote Gerät

Über die Standard Scripte hinaus können Sie auch Ihre eigenen Scripte definieren. Wie Sie dies machen können, erfahren Sie hier [▶ 30].

4.1 "CopyFile.script"

Mit dem "CopyFile.script" können Dateien von Ihrem lokalem Host PC auf die definierten Geräte an eine bestimmte Position kopiert werden. Die Kopierfunktion bietet verschiedene Kopieroptionen die Sie nach Bedarf auswählen können. Die verschiedenen Optionen sind in der unten angegebenen Tabelle beschrieben.
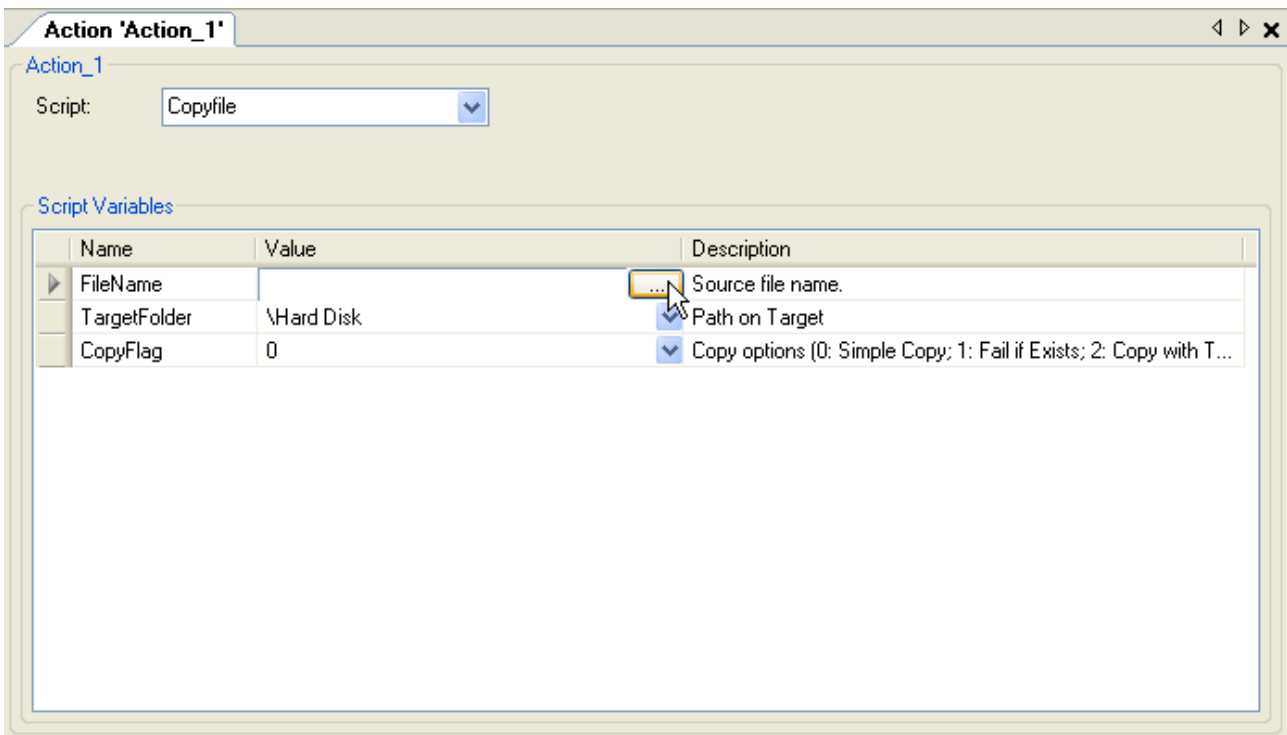
Script Variablen

Targetfolder:
Der "Targetfolder" enthält den Pfad auf dem Gerät in den die ausgewählte Datei kopiert werden soll.

Filename:
Unter "Filename" geben Sie bitte den lokalen Pfad der zu kopierenden Datei an. Nutzen Sie hierfür den Button rechts neben dem Textfeld.

CopyFlag:
Das "CopyFlag" enthält die Kopieroptionen die Sie nach Bedarf auswählen sollten. In der folgenden Tabelle sind alle möglichen Optionen aufgelistet.

0	Einfaches Kopieren einer Datei.
1	Kopieren schlägt fehl wenn die Datei bereits existiert.
2	Erzeugt zuerst ein Template der Datei, bevor Sie eingesetzt wird. Dieser Vorgang ist bei schlechten Verbindungen zu empfehlen, um zu verhindern, dass unvollständige Dateien kopiert werden.
4	Erstellt ein Backup der alten Datei.

4.2 "CopyFolder.script"

Mit dem "CopyFolder.script" können Ordner von Ihrem lokalem Host PC auf die definierten Geräte an eine bestimmte Position kopiert werden. Die Kopierfunktion bietet verschiedene Kopieroptionen die Sie nach Bedarf auswählen können. Die verschiedenen Optionen sind in der unten angegebenen Tabelle beschrieben.
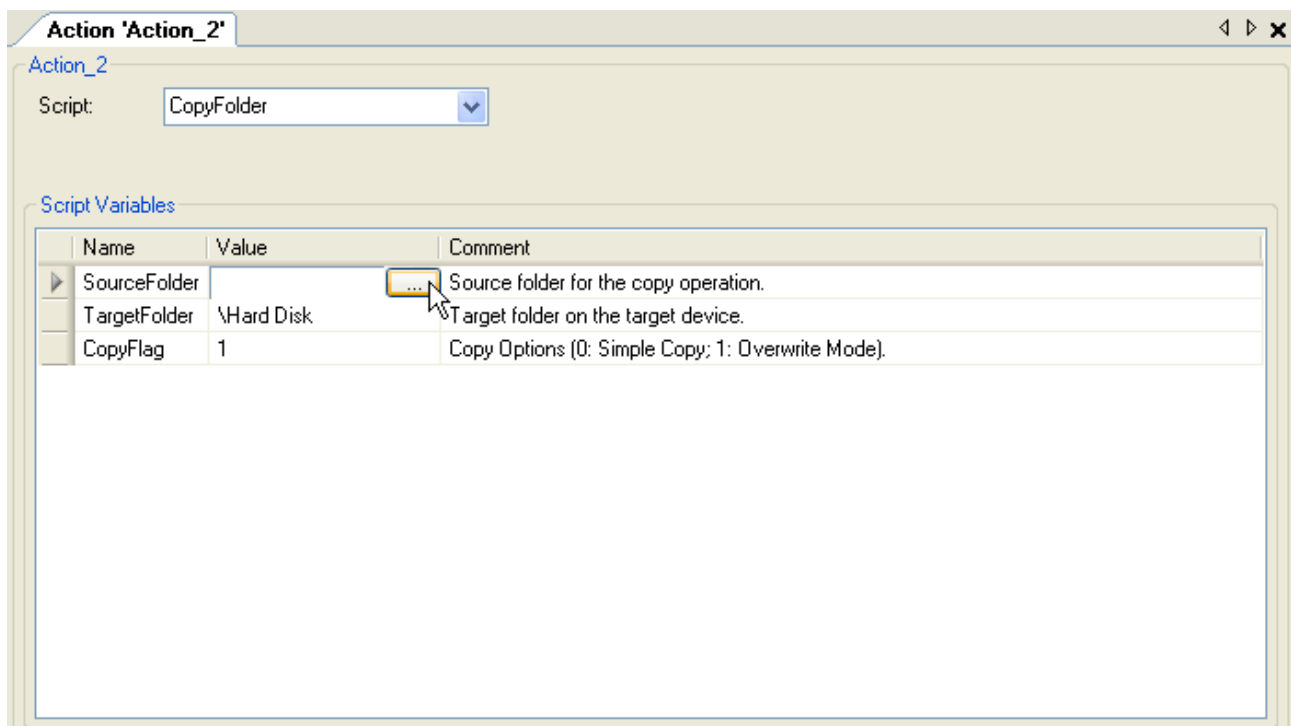
Script Variablen

SourceFolder:
Unter "Sourcefolder" geben Sie bitte den lokalen Pfad des zu kopierenden Ordners an. Nutzen Sie hierfür den Button rechts neben dem Textfeld.

TargetFolder:
Der Targetfolder enthält den Pfad auf dem Gerät in den die ausgewählte Datei kopiert werden soll.

CopyFlag:
Das CopyFlag enthält die Kopieroptionen die Sie nach Bedarf auswählen sollten. In der folgenden Tabelle sind alle möglichen Optionen aufgelistet.

0	Einfaches Kopieren eines Ordners
1	Kopieren schlägt fehl wenn der Ordner bereits existiert.

4.3 "CX10xxImageUpdate.script"

Mit dem "CX10xxImageUpdate.script" kann ein Update des CX Gerätes durchgeführt werden.
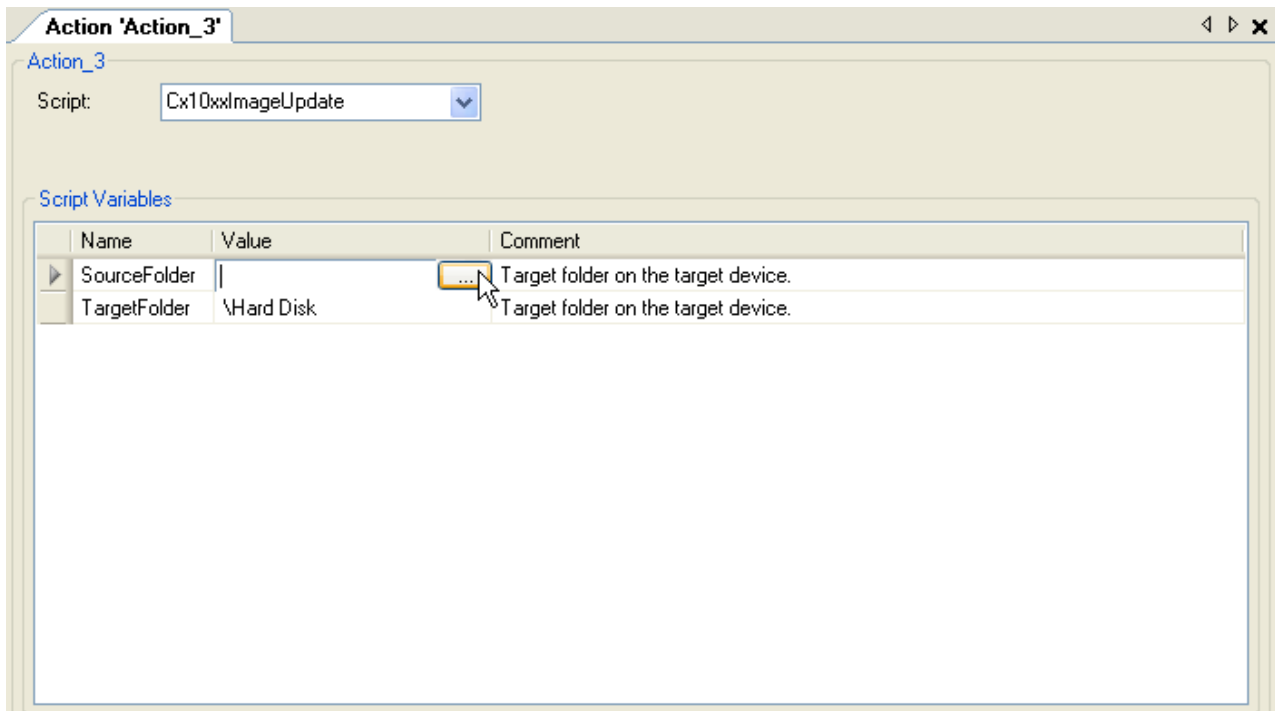
Script Variablen:

SourceFolder:
Unter "SourceFolder" geben Sie bitte den lokalen Pfad des zu kopierenden Ordners an. Nutzen Sie hierfür den Button rechts neben dem Textfeld. Der ausgewählte Ordner sollte alle Imagedateien in der richtigen Ordnerstruktur enthalten.

TargetFolder:
Der "TargetFolder" enthält den Pfad auf dem Gerät, wo der Ordner mit den Imagedatei hinkopiert werden soll.

4.4   "CX90xxImageUpdatePrep.script"

Mit dem "CX90xxImageUpdatePrep.script" können alle Systemdateien ausgetauscht und die Geräteeinstellungen in den Ursprungszustand zurückgesetzt werden.

Script Variablen:

SourceFolder:
Unter "SourceFolder" geben Sie bitte den lokalen Pfad des zu kopierenden Ordners an. Nutzen Sie hierfür den Button rechts neben dem Textfeld. Der ausgewählte Ordner sollte alle Systemdateien in der richtigen Ordnerstruktur enthalten.

TargetFolder:
Der "TargetFolder" enthält den Pfad auf dem Gerät, wo der Ordner mit den Imagedatei hinkopiert werden soll.

4.5 "CX90xxImageUpdate.script"

Mit dem "CX90xxImageUpdate.script" kann ein neues Windows CE Image eingespielt werden.
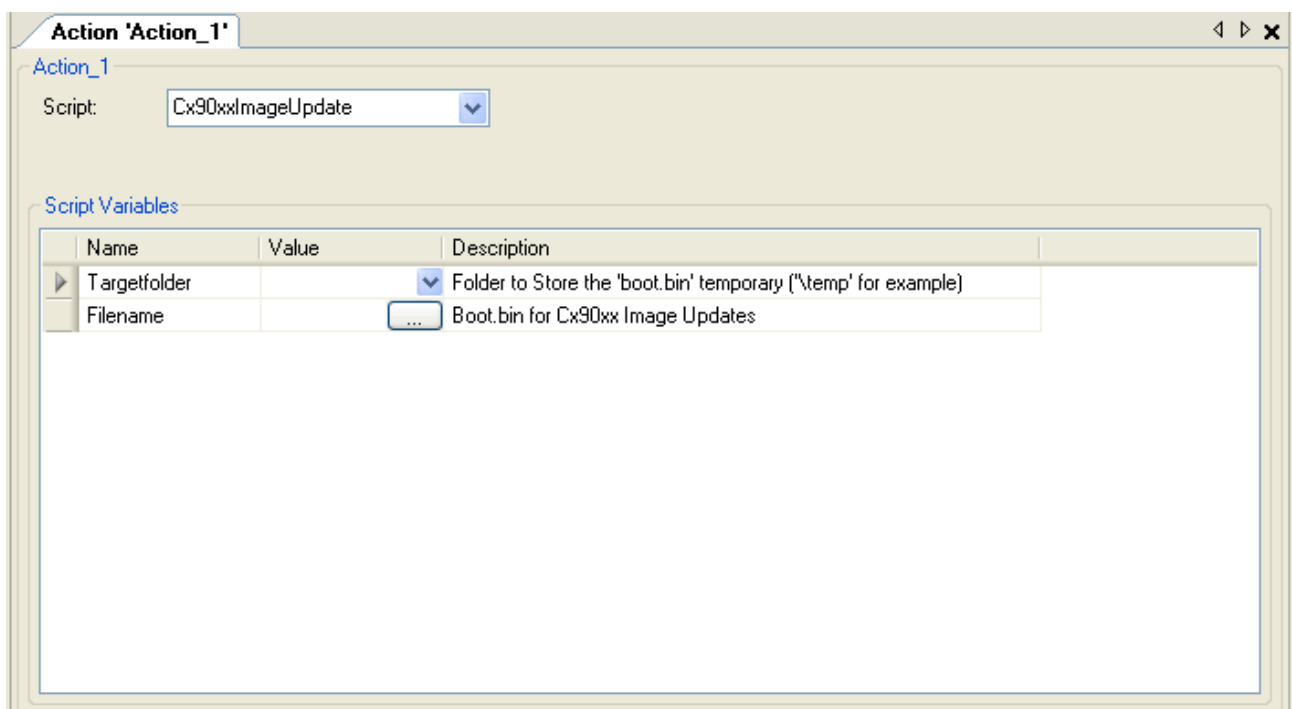
Script Variablen:

TargetFolder:
Unter "**TargetFolder**" geben Sie bitte den Pfad auf dem Zielgerät an in dem die Image-Datei temporär gespeichert werden soll. Es empfiehlt sich als Zielverzeichnis "\Temp" oder "\pubic" zu wählen, da diese Bereiche als RAM-Disk im Speicher und nicht im Flashbereich des Systems liegen.

Filename:
Hier geben Sie die Image-Datei an, welche auf das Gerät aufgespielt werden soll. Nutzen Sie den Button um nach der Datei zu suchen.

4.6 "CXImageBackup.script"

Mit dem "CXImageBackup.script" kann ein Backup des Embedded Gerätes durchgeführt werden. Dabei werden die Standard-Ordner *RegFiles*, *System*, *TwinCAT*, *UPnP* und *WWW* aus dem *HardDisk* Verzeichnis in einem Verzeichnis auf dem Gerät auf dem der TwinCAT Management Server läuft gesichert.
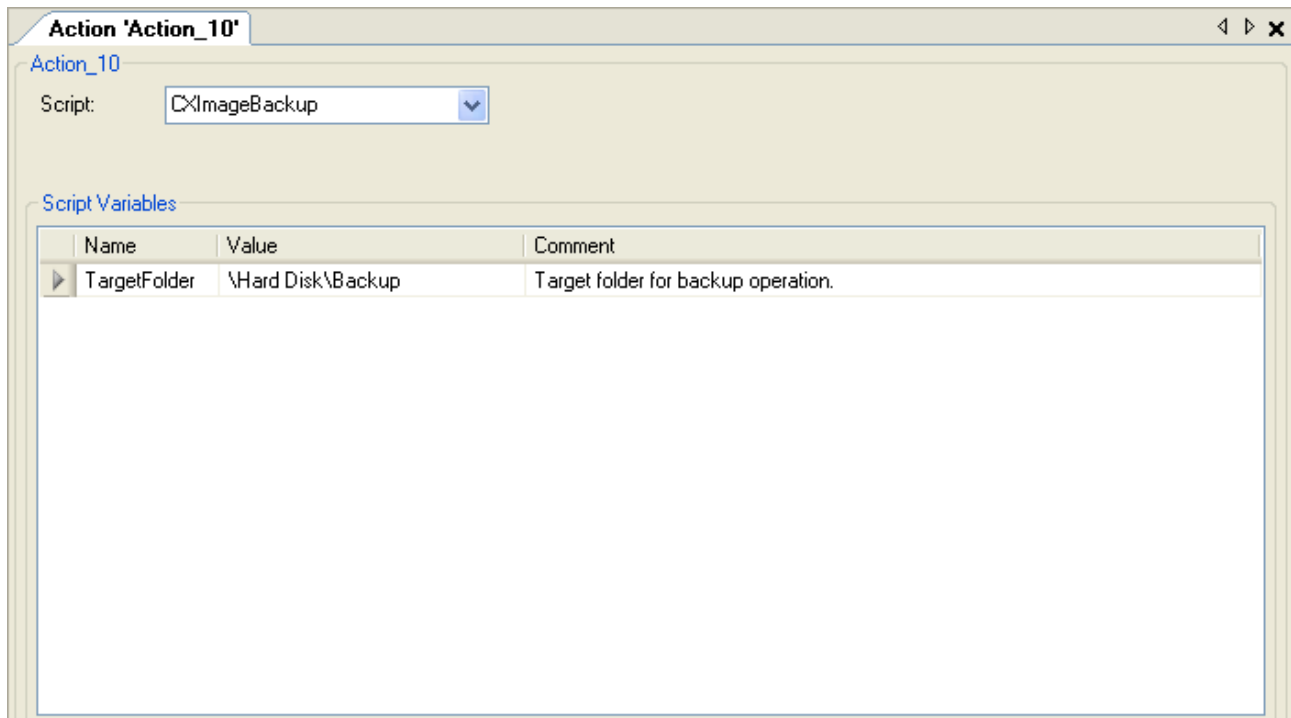
Script Variablen:

TargetFolder:
Der "TargetFolder" enthält den Pfad in dem das Backup auf dem Rechner des TwinCAT Management Servers abgelegt wird.

- Der Ordner Documents and Settings wird nicht gesichert. Registrierungen, welche für die einwandfreie Funktion Ihrer Applikation erforderlich sind, sollten als Reg-Files im RegFiles Ordner abgelegt sein.
- Das Sichern der Daten ist nur auf dem Rechner möglich, auf dem auch der TwinCAT Management Server ausgeführt wird.

4.7 "DeleteFile.script"

Mit dem "DeleteFile.script" können Dateien von Ihren definierten Geräten aus einem bestimmtem Ordner gelöscht werden.

Script Variablen

Filepath:
Der "Filepath" enthält den Pfad und den Dateinamen der Datei vom Gerät, die gelöscht werden soll.

DeleteFlag:
Mit dem "DeleteFlag" kann das Löschverhalten bestimmt werden.

0	Einfaches Löschen einer Datei. Im Fehlerfall wird der Vorgang abgebrochen und eine Fehlermeldung ausgegeben.
1	Versucht die angegebenen Datei zu löschen. Treten Fehlerf auf, wie schreibgeschützte Dateien, oder die Datei ist nicht vorhanden, werden diese ignoriert. Nachfolgende Aktionen werden weiterhin ausgeführt. **Die angegebene Datei wird im Fehlerfall nicht gelöscht.**

4.8   "DeleteFolder.script"

Mit dem "DeleteFolder.script" können Ordner von den zuvor ausgewählten Geräten gelöscht werden.
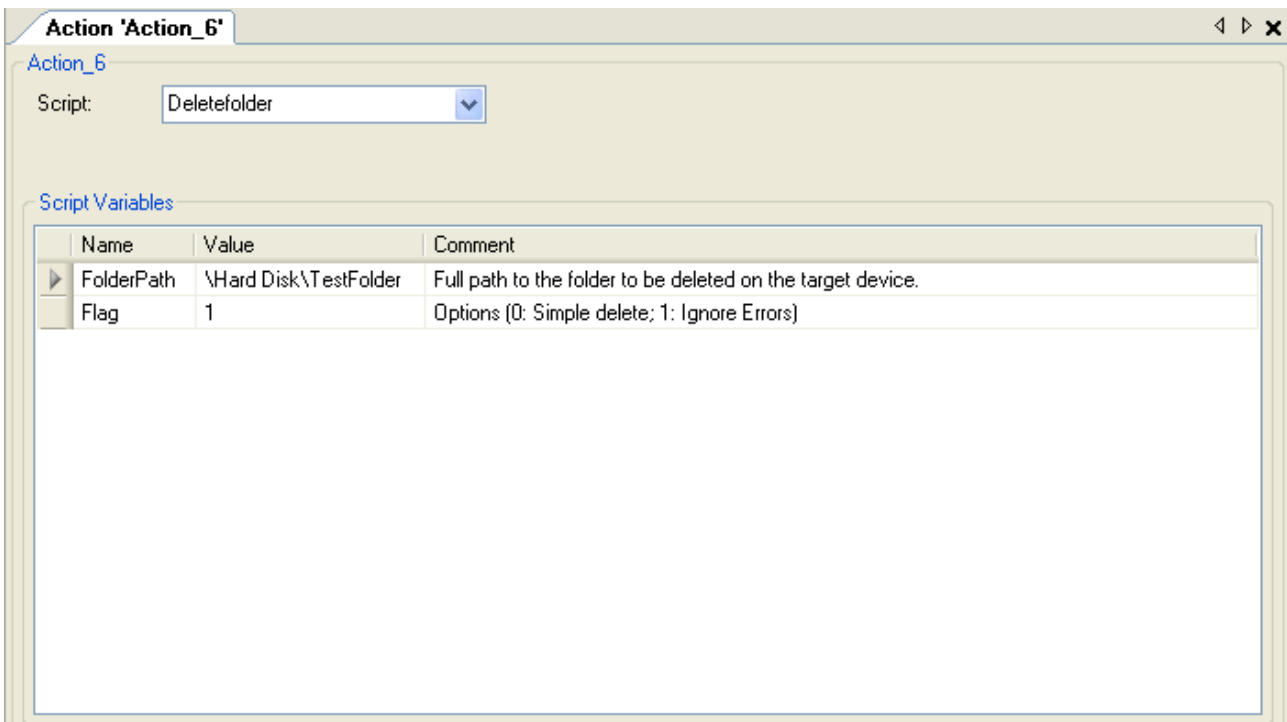
Script Variablen

Path:
Der "Path" enthält den Pfad auf dem Gerät, der gelöscht werden soll.

DeleteFlag:
Mit dem "DeleteFlag" kann das Löschverhalten bestimmt werden.

0	Einfaches Löschen eines Ordners. Im Fehlerfall wird der Vorgang abgebrochen und eine Fehlermeldung ausgegeben.
1	Versucht den angegebenen Ordner zu löschen. Treten Fehler auf, wie schreibgeschützte Dateien im inneren des Ordners, oder der Ordner ist nicht vorhanden, werden diese ignoriert. Nachfolgende Aktionen werden weiterhin ausgeführt. **Der angegebene Ordner wird im Fehlerfall nicht gelöscht.**

4.9 "ExportRegistry.script"

Mit dem "ExportRegistry.script" können Registrykeys aus der Registry von Ihren definierten Geräten in eine Registry-Datei geschrieben werden.
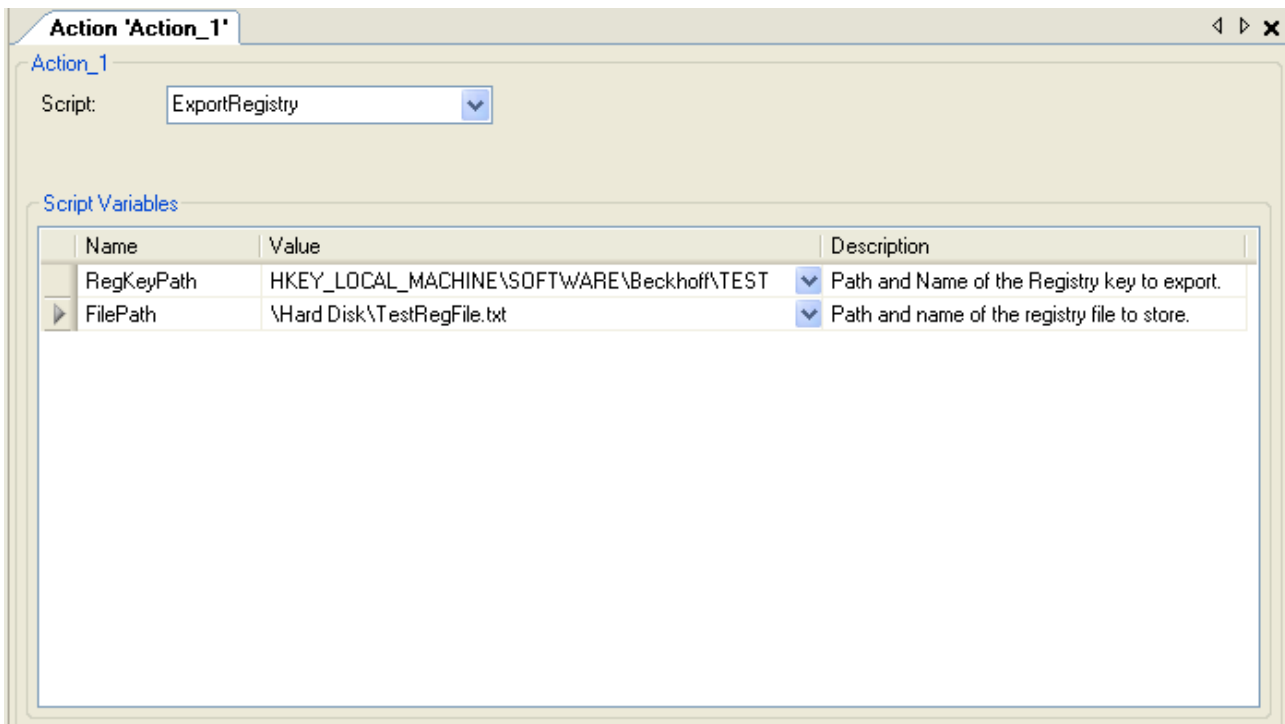
Script Variablen

RegKeyPath:
Der "RegKeyPath" enthält den Pfad des Registrykeys, welcher in die Registry-Datei geschrieben werden soll.

Filepath:
Der "Filepath" enthält den Pfad und den Dateinamen der Registry-Datei, in die der angegebene Registrykey geschrieben werden soll.

4.10   "Register.script"

Mit dem "Register.script" können Register-Dateien von Ihrem lokalem Host PC auf die ausgewählten Geräte an eine bestimmte Position kopiert und anschließend ausgeführt werden. Achten Sie darauf, dass die Register-Dateien auch auf den CE-Geräten ausgeführt werden können. Die Register-Dateien müssen als "Win9x/NT4 Registration File" gespeichert sein. Sie können das überprüfen, indem Sie die Datei im Notepad öffnen und dann die erste Zeile der Datei vergleichen. Lautet die erste Zeile "REGEDIT4", ist die Register-Datei auf CE-Geräten lauffähig.
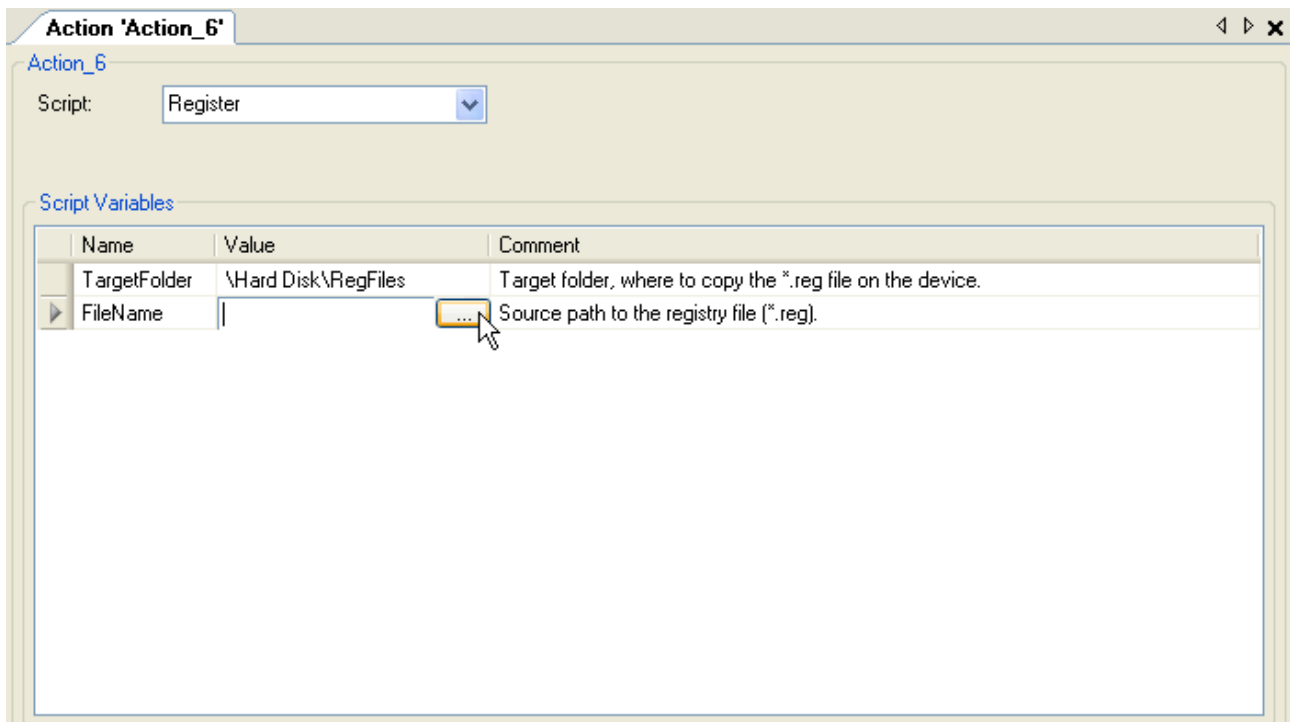
Script Variablen

Targetfolder:
Der "Targetfolder" enthält den Pfad auf dem Gerät in den die ausgewählte Datei kopiert werden soll.
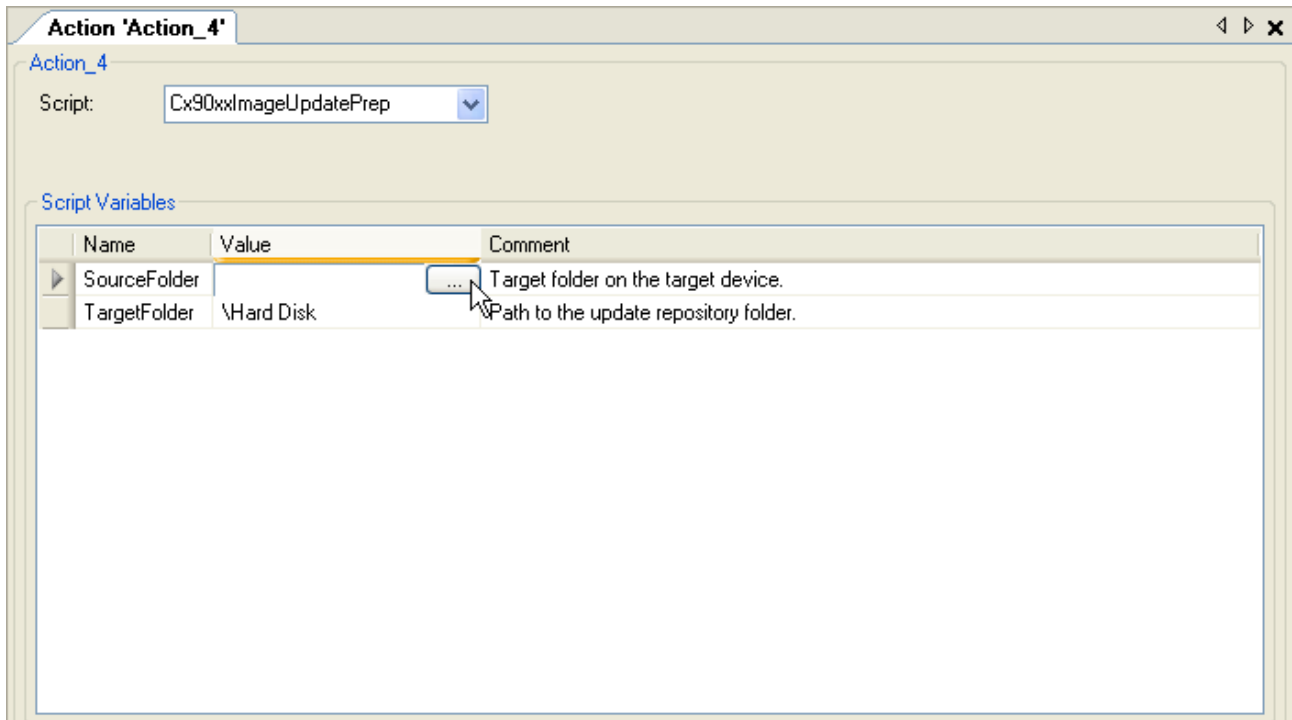
FileName:
Unter "FileName" geben Sie bitte den lokalen Pfad der zu kopierenden Register-Datei an. Nutzen Sie hierfür den Button rechts neben dem Textfeld.

4.11 "RenameFile.script"

Mit dem "RenameFile.script" können Dateien auf den ausgewählten Geräten umbenannt werden.
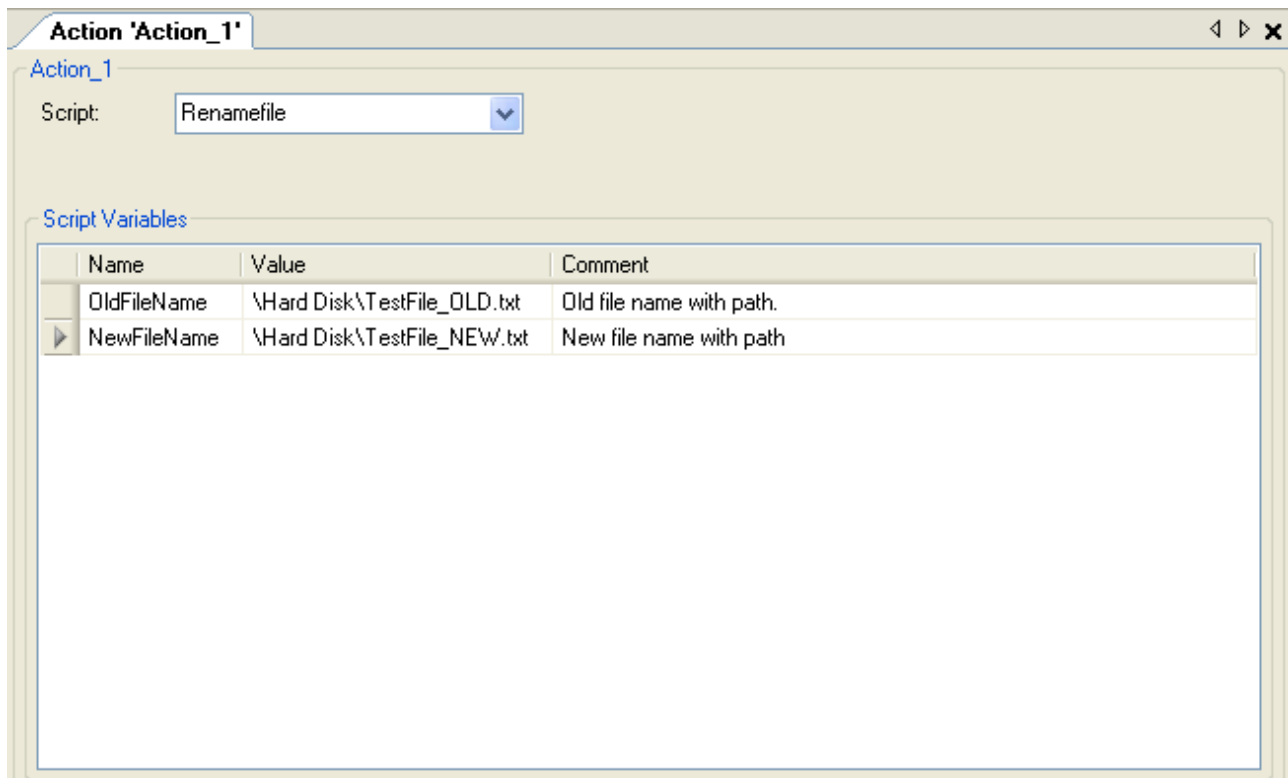
Script Variablen

OldFileName:
Der "OldFileName" enthält den alten Dateinamen der Datei mit Pfad.

NewFileName:
Der "NewFileName" enthält den neuen Dateinamen der Datei mit Pfad.

4.12   "RenameFolder.script"

Mit dem "RenameFolder.script" können Ordner auf den ausgewählten Geräten umbenannt werden.
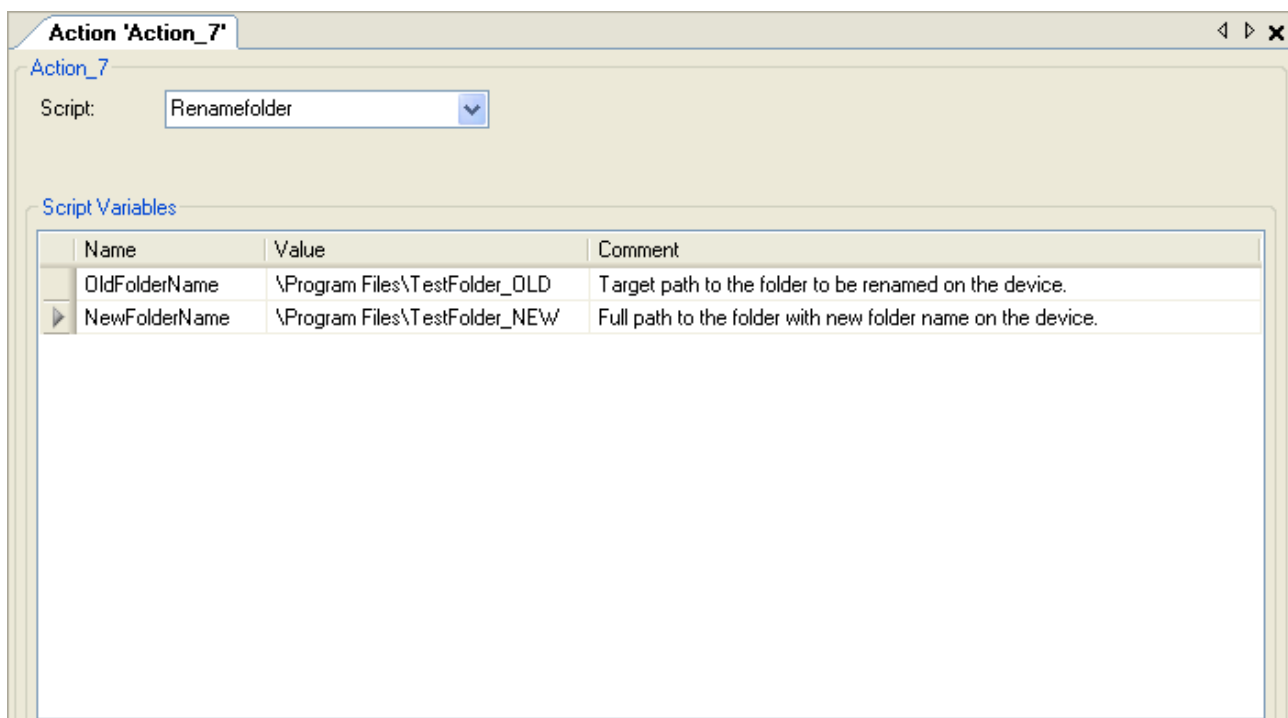
Script Variablen

OldFolderName:
Der "OldFolderName" enthält den Pfad mit dem alten Ordnernamen.

NewFolderName:
Der "NewFolderName" enthält den Pfad mit dem neuen Ordnernamen.

4.13 "Restart.script"

Mit dem "Restart.script" kann ein Neustart der ausgewählten Geräte angetriggert werden. Nach dem Neustart werden, wenn vorhanden, weitere Aktionen automatisch weiter ausgeführt. Für das "Restart.script" werden keine weiteren Parameter benötigt.
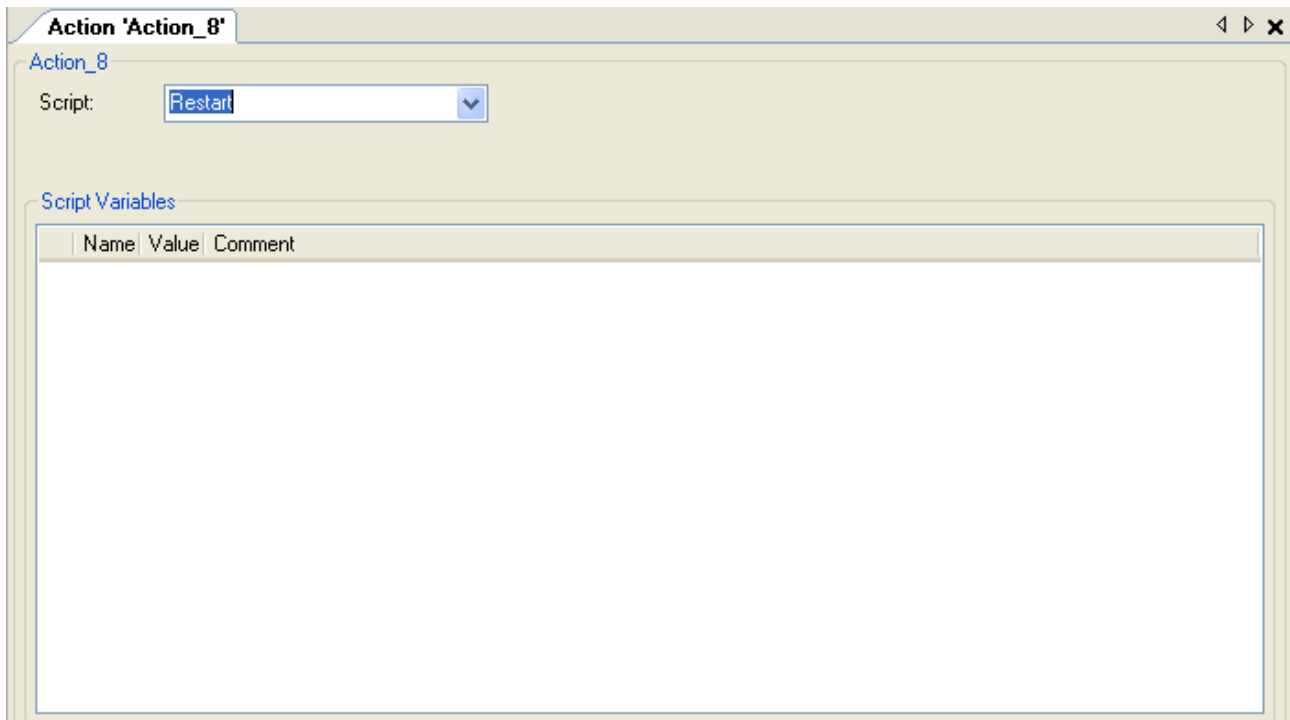
4.14 "Run.script"

Mit dem "Run.script" können Programme auf den ausgewählten Geräten gestartet werden. Diesen Programmaufrufen können auch Parameter mitgegeben werden.
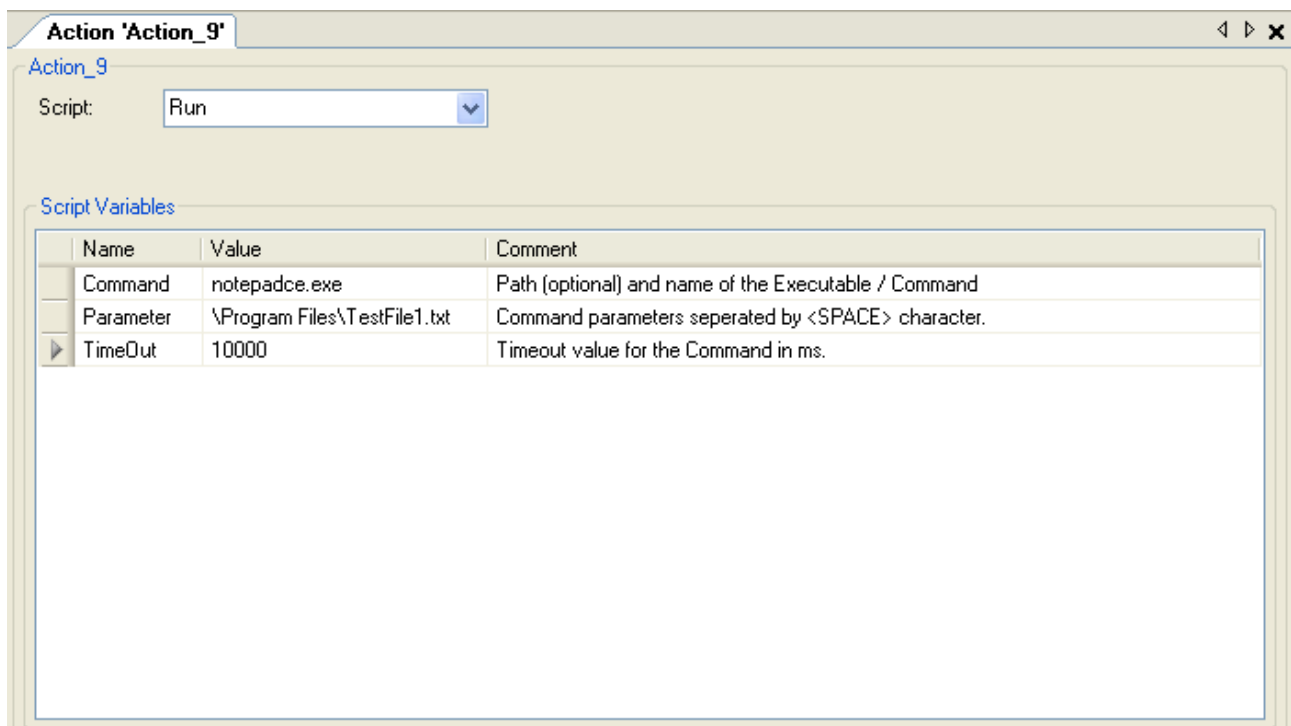
Script Variablen

Command:
Der "Command" enthält den Namen und gegebenenfalls den Pfad des Programms, welches ausgeführt werden soll

Parameter:
Unter "Parameter" können Parameter angegeben werden, die beim Programmaufruf mit angehängt werden sollen. Die Parameter müssen nur mit Leerzeichen voneinander getrennt sein.

TimeOut:
Mit dem "TimeOut" kann eine maximale Ausführungsdauer angegeben werden. Die Zeit wird in Millisekunden angegeben.

4.15 Script Editor

4.15.1 Script Editor Übersicht

Mit dem Script Editor ist es möglich, dass Sie sich Ihre eigenen komplexen Scripte bauen und abspeichern können. Die gespeicherten Scripte können Sie wiederum in Ihre Aktionen einsetzen und ausführen.
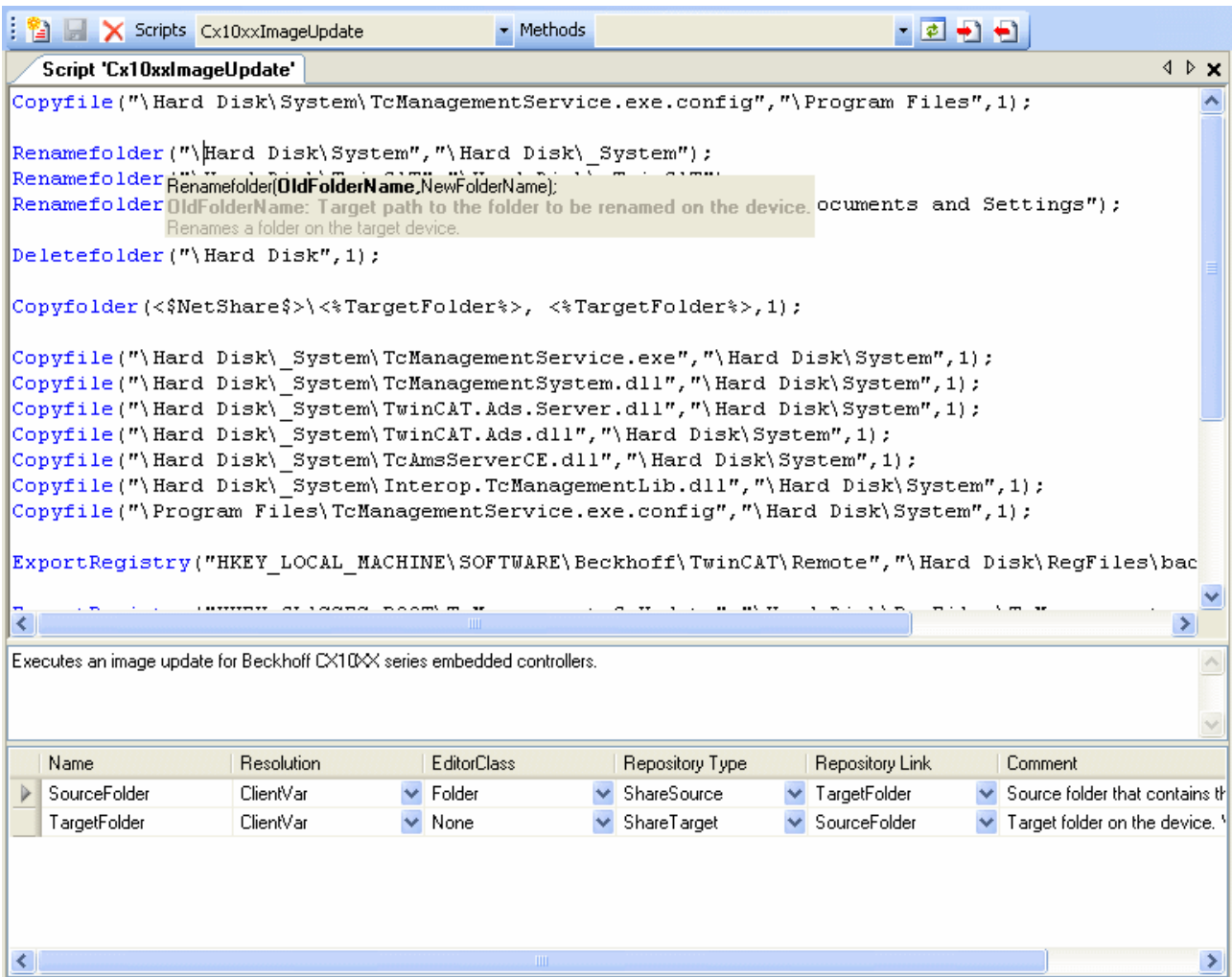
Die Oberfläche des Script Editors ist in vier Bereiche unterteilt.

1. Die Script Editor Toolbar zum Steuern des Script Editors (Script neu anlegen, Script öffnen/auswählen, Importieren, Exportieren, etc.)
2. Den Script-Code-Editor zum Ansehen / Editieren der Script-Anweisungen.
3. Ein Kommentarfeld zum Kommentieren des aktuell eingestellten Scriptes.
4. Den Script-Parameter-Editor zum Editieren der zum Script-Code gehörenden Script-Parameter.

Script Editor Toolbar
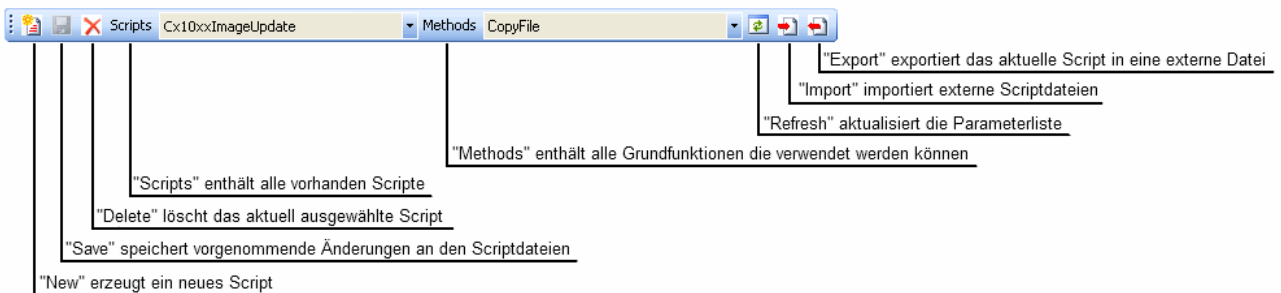
Aktuell können Sie folgende Standard-Funktionen verwenden:

Script	Beschreibung
CopyFile [▶ 33]	Kopiert eine Datei auf das Remote Gerät.
CopyFolder [▶ 35]	Kopiert einen Ordner auf das Remote Gerät
DeleteFile [▶ 36]	Löscht eine Datei auf dem Remote Gerät.

Script	Beschreibung
DeleteFolder [▸ 37]	Löscht einen Ordner auf dem Remote Gerät
Register [▸ 37]	Kopiert eine Registerdatei auf das Remote Gerät und führt diese aus.
ExportRegistry [▸ 37]	Schreibt einen Registrykey in eine Registerdatei auf dem Remote Gerät.
RenameFile [▸ 38]	Benennt eine Datei auf dem Remote Gerät um.
RenameFolder [▸ 38]	Benennt einen Ordner auf dem Remote Gerät um.
Restart [▸ 39]	Führt einen Restart auf dem Remote Gerät aus
Run [▸ 39]	Startet einen bestimmten Prozess auf dem Remote Gerät

Script-Code-Editor

Syntax-Highlighting Code-Editor mit Method-Tip Support.

Kommentarfeld

Kurzbeschreibung der Funktion des aktuell editierten Scripts.

Script-Parameter-Editor

Spalte	Beschreibung
Name	Name des Parameters, wie er im Script Code auftaucht (als *<%ParameterName%>* oder *<$ParameterName$>*).
Resolution / Auflösung	Die Spalte "Auflösung" legt fest, wer den Parameter-Wert einsetzt. Dies kann durch den Konfigurator beim Starten des Updates geschehen ("*ClientVar*") oder im Kontext des Zielsystems ("*ServerVar*"). Gültige Werte: "*ClientVar*" für Auflösung des Parameter-Wertes auf der Konfigurator-Seite. "*ServerVar*" für Auflösung des Parameter-Wertes auf der CX-Seite
EditorClass	Bestimmt den Parameter-Wert-Editor für Konfigurator-seitige Parameter-Wert-Auflösung ("*ClientVar*"). Z.B. Gültige Werte: *"None"* für keinen Editor *"Folder"* für eine Verzeichnis-Auswahl-Dialog *"File"* für einen Datei-Auswahl-Dialog ...
Repository Type	Bestimmt die Bedeutung des aktuellen Parameters (Quelle oder Ziel) für den NetShare-Folder. Wird in Kombination mit dem "*Repository Link*" Eintrag genutzt. Gültige Werte: "*None*" : "*ShareSource*" : Parameter beizeichnet einen Wert aus dem Configurator-Kontext bzw. auf der Quellseite (z.B. zur Übergabe des Dateinamens von der Quelldatei auf das Target) "*ShareTarget*" : Parameter gültig im Kontext des Zielsystems / CX bzw. auf der Zielseite (z.B. zur Bestimmung des Zielverzeichnis einer Kopieroperation auf dem Target).
Repository Link	Definiert den zugehörigen komplementären "*Repository Type*" Parameter. Z.B. für das *ShareTarget* für das aktuelle *ShareSource* oder umgekehrt. Wird in Kombination mit dem "*Repository Type*" Feld genutzt.
Comment	Beschreibungstext des aktuellen Parameters.

4.15.2 CopyFile

Tab. 1: Extracted nested table 6

0	Einfaches Kopieren einer Datei.
1	Kopieren schlägt fehl wenn die Datei bereits existiert.
2	Erzeugt zuerst ein Template der Datei, bevor sie eingesetzt wird. Dieser Vorgang ist bei schlechten Verbindungen zu empfehlen um zu verhindern, dass unvollständige Dateien kopiert werden.
4	Erstellt ein Backup der alten Datei.

Tab. 2: Extracted nested table 0

0	Einfaches Kopieren einer Datei.
1	Kopieren schlägt fehl wenn die Datei bereits existiert.
2	Erzeugt zuerst ein Template der Datei, bevor sie eingesetzt wird. Dieser Vorgang ist bei schlechten Verbindungen zu empfehlen um zu verhindern, dass unvollständige Dateien kopiert werden.
4	Erstellt ein Backup der alten Datei.

Mit dieser Scriptfunktion können zwei verschiedene Kopiervorgänge durchgeführt werden.

- 1. Dateien vom Host PC zum Zielgerät kopieren.
- 2. Dateien lokal auf dem Zielgerät von einem Ort zum anderen kopieren.

1. Vom Host PC zum Zielgerät kopieren:

Copyfile(<$NetShare$>\<%Targetfolder%>\<%Filename%>,<%Targetfolder%>,<%CopyFlag%>);

Parameter	Beschreibung
<$NetShare$>	Name der Freigabe in welcher die Ordnerstruktur zu finden ist. Beispielwert: "\\hostPc\TcManagementSrv_TEST"
<%Targetfolder%>	Gibt den Namen des Verzeichnisses an, in das die Datei auf dem Gerät kopiert werden soll. Beispielwert: "\Hard Disk\TestFolder"
<%Filename%>	Gibt den Speichernamen der zu kopierenden Datei auf dem Gerät an. Beispielwert: "TestFile1.txt"
<%Targetfolder%>	Gibt den Pfad der Ordnerstruktur an, welche kopiert werden soll. (In der Regel der selbe Name wie beim ersten "Targetfolder"-Parameter. Deshalb der selbe Parametername) Beispielwert: "\Hard Disk\TestFolder"
<%CopyFlag%>	Optionsauswahl der Kopierfunktion. Beispielwerte:

Parameter	Beschreibung
	see "Extracted nested table 0"

Beispiel:

Copyfile("\\hostPC\TcManagementSrv_TEST\Hard Disk\TestFile1.txt","\Hard Disk",1);

2. Lokal auf dem Zielgerät kopieren:

Ändern Sie für diesen Zweck die Parameterbezeichnungen so um, wie Sie es hier vorfinden:

Copyfile(<%LocalShare%>\<%Sourcefolder%>\<%Filename%>,<%Targetfolder%>,<%CopyFlag%>);

Parameter	Beschreibung
<%LocalShare%>	Lokaler Pfad in welcher die Ordnerstruktur zu finden ist. Beispielwert: "\Hard Disk"
<%Sourcefolder%>	Gibt den Pfad der Ordnerstruktur an, welche kopiert werden soll. Beispielwert: "\TestFolder"
<%Filename%>	Gibt den Speichernamen der zu kopierenden Datei auf dem Gerät an. Beispielwert: "TestFile1.txt"
<%Targetfolder%>	Gibt den Namen des Verzeichnisses an, in das die Datei auf dem Gerät kopiert werden soll. Beispielwert: "\Hard Disk\System\TestFolder"
<%CopyFlag%>	Optionsauswahl der Kopierfunktion. Beispielwerte: see "Extracted nested table 6"

Beispiel:

Das folgende Beispiel kopiert die Datei "TestFile1.txt" vom Ordner "\Hard Disk\System" in den Ordner "\Hard Disk\TestFolder":

Copyfile("\Hard Disk\System\TestFile1.txt","\Hard Disk\TestFolder",1);

4.15.3 CopyFolder

Tab. 3: Extracted nested table 11

0	Einfaches Kopieren eines Ordners
1	Kopieren schlägt fehl wenn der Ordner bereits existiert.

Tab. 4: Extracted nested table 1

0	Einfaches Kopieren eines Ordners
1	Kopieren schlägt fehl wenn der Ordner bereits existiert.

Mit dieser Scriptfunktion können zwei verschiedene Kopiervorgänge durchgeführt werden.

- 1. Ordner vom Host PC zum Zielgerät kopieren.
- 2. Ordner lokal auf dem Zielgerät von einem Ort zum anderen kopieren.

1. Vom Host PC zum Zielgerät kopieren:

Copyfolder(<$NetShare$>\<%Targetfolder%>,<%Targetfolder%>,<%CopyFlag%>);

Parameter	Beschreibung
<$NetShare$>	Name der Freigabe in welcher die Ordnerstruktur zu finden ist. Beispielwert: "\\hostPc\TcManagementSrv_TEST"
<%Targetfolder%>	Gibt den Namen des Verzeichnisses an, welches auf dem Gerät erstellt werden soll Beispielwert: "\Hard Disk\TestFolder"
<%Targetfolder%>	Gibt den Pfad der Ordnerstruktur an, welche kopiert werden soll. (In der Regel der selbe Name wie beim ersten "Targetfolder"-Parameter. Deshalb der selbe Parametername) Beispielwert: "\Hard Disk\TestFolder"
<%CopyFlag%>	Optionsauswahl der Kopierfunktion. Beispielwerte: see "Extracted nested table 1"

Beispiel:

Copyfolder("\\hostPC\TcManagementSrv_TEST"\"\Hard Disk","\Hard Disk",1);

2. Lokal auf dem Zielgerät kopieren:

Ändern Sie für diesen Zweck die Parameterbezeichnungen so um, wie Sie es hier vorfinden:

Copyfolder(<%LocalShare%>\<%Sourcefolder%>,<%Targetfolder%>,<%CopyFlag%>);

Parameter	Beschreibung
<%LocalShare%>	Name der Freigabe in welcher die Ordnerstruktur zu finden ist. Beispielwert:

Parameter	Beschreibung
	"\Hard Disk"
<%Sourcefolder%>	Gibt den Pfad der Ordnerstruktur an, welche kopiert werden soll. Beispielwert: "\TestFolder"
<%Targetfolder%>	Gibt den Namen des Verzeichnisses an, welches auf dem Gerät erstellt werden soll. Beispielwert: "\Hard Disk\System\TestFolder"
<%CopyFlag%>	Optionsauswahl der Kopierfunktion. Beispielwerte: see "Extracted nested table 11"

Beispiel:

Das folgende Beispiel kopiert den Ordner "TestFolder" von "\Hard Disk\System" nach "\Hard Disk".

Copyfolder("\Hard Disk\System\TestFolder","\Hard Disk\TestFolder",1);

4.15.4 DeleteFile

Tab. 5: Extracted nested table 7

0	Einfaches Löschen der Datei (Bei Fehlerfall wird Updatesequenz abgebrochen und eine Fehlermeldung ausgegeben)
1	Versuchtes Löschen der Datei (Fehlerfälle werden ignoriert. Updatesequenz wird fortgeführt. Ordner wird nicht zwangsläufig gelöscht)

Mit der Scriptfunktion "Deletefile" können Dateien vom Zielgerät gelöscht werden.

Deletefile(<%FilePath%>,<%DeleteFlag%>);

Parameter	Beschreibung
<%FilePath%>	Der Pfad mit Dateiname der zu löschenden Datei. Beispielwert: "\Hard Disk\TestFile.txt"
<%DeleteFlag%>	Optionsauswahl der Löschfunktion. Beispielwerte: see "Extracted nested table 7"

Beispiel:

Deletefile("\Hard Disk\TestFile1.txt",0);

4.15.5   DeleteFolder

Tab. 6: Extracted nested table 10

0	Einfaches Löschen des Ordners (Bei Fehlerfall wird Updatesequenz abgebrochen und eine Fehlermeldung ausgegeben)
1	Versuchtes Löschen des Ordners (Fehlerfälle werden ignoriert. Updatesequenz wird fortgeführt. Ordner wird nicht zwangsläufig gelöscht)

Mit der Scriptfunktion "DeleteFolder" können Ordner auf dem Zielgerät gelöscht werden.

Deletefolder(<%Path%>,<%DeleteFlag%>);

Parameter	Beschreibung
<%Path%>	Der Pfad des zu löschenden Ordners. Beispielwert: "\Hard Disk\TestFolder"
<%DeleteFlag%>	Optionsauswahl der Löschfunktion. Beispielwerte: see "Extracted nested table 10"

Beispiel:

Deletefolder("\Hard Disk\TestFolder",0);

4.15.6   ExportRegistry

Mit der Scriptfunktion "ExportRegistry" können Registrykeys in eine Reg-Datei geschrieben werden.

ExportRegistry(<%RegKeyPath%>,<%FilePath%>);

Parameter	Beschreibung
<%RegKeyPath%>	Der Pfad des Registrykeys, welcher in eine Registrydatei geschrieben werden soll. Beispielwerte: "HKEY_LOCAL_MACHINE\SOFTWARE\Beckhoff\TEST;
<%FilePath%>	Der Pfad mit Dateiname in die der Registrykey geschrieben werden soll. Beispielwert: "\Hard Disk\TestRegFile.reg"

Beispiel:

ExportRegistry("HKEY_LOCAL_MACHINE\SOFTWARE\Beckhoff\TEST","\Hard Disk\TestRegFile1.reg");

4.15.7   Register

Mit dieser Scriptfunktion können Reg-Dateien auf dem Zielgerät registriert werden. Die Reg-Datei muss bereits auf dem Gerät vorhanden sein.

Register(<%Filepath%>,<%Filename%>);

Parameter	Beschreibung
<%Filepath%>	Speicherort der auszuführenden Reg-Datei. Beispielwert: "\Hard Disk\RegFiles"
<%Filename%>	Der Name des Reg Files welches registriert werden soll. Beispielwert: "TestRegFile.reg"

Beispiel:

Register("\Hard Disk\RegFiles","TestRegFile.reg");

4.15.8 RenameFile

Mit dieser Scriptfunktion können Dateien auf dem Zielgerät umbenannt werden.

Renamefile(<%OldFileName%>,<%NewFileName%>);

Parameter	Beschreibung
<%OldFilename%>	Alter Dateiname mit Pfad Beispielwert: "TestFile1.txt"
<%NewFilename%>	Neuer Dateiname mit Pfad Beispielwert: "TestFile2.txt"

Beispiel:

Renamefile("\Hard Disk\TestFilenameOld.txt","\Hard Disk\TestFilenameNew.txt");

4.15.9 RenameFolder

Mit der Scriptfunktion "Renamefolder" können Ordner auf dem Zielgerät umbenannt werden.

Renamefolder(<%OldFoldername%>,<%NewFoldername%>);

Parameter	Beschreibung
<%OldFoldername%>	Alter Ordnername mit Pfad Beispielwert: "\Hard Disk\TestFolder1"
<%NewFoldername%>	Neuer Ordnername Beispielwert:

Parameter	Beschreibung
	"\Hard Disk\TestFolder2.txt"

Beispiel:

Renamefolder("\Hard Disk\OLDFoldername","\Hard Disk\NEWFoldername");

4.15.10   Restart

Mit der Scriptfunktion "Restart" kann ein Neustart auf dem Zielgerät angestoßen werden. Weitere Funktionen die nach der "Restart"-Funktion deklariert wurden, werden automatisch nach dem Neustart weiter abgearbeitet.

Restart();

4.15.11   Run

Mit der Scriptfunktion "Run" können Applikationen auf dem Zielgerät ausgeführt werden.

Run(<%Command%>,<%Parameter%>,<%Timeout%>);

Parameter	Beschreibung
<%Command%>	Anwendung welche ausgeführt werden soll. Beispielwert: "notepadce.exe"
<%Parameter%>	Startparameter der Anwendung. Beispielwert: "\Hard Disk\TestFile1.txt"
<%Timeout%>	Maximale Ausführungsdauer in Millisekunden. Der Wert -1 bewirkt eine unbegrenzte Ausführungsdauer Beispielwert: "10000"

Beispiel:

Run("notepadce.exe","\Hard Disk\TestFile.txt",10000);

5   Beispiele

5.1   Beispiel 1: Image Update eines CX1020 über den TwinCAT Management Server

In diesem Beispiel wird gezeigt, wie Sie über den TwinCAT Management Server ein Image Update auf einem CX1020 durchführen können. Es wird empfohlen zunächst die Installationshinweise [▶ 8] sorgfältig zu lesen. Dieses Beispiel setzt eine korrekte Installation auf Server und Client Seite voraus.

Schritt 1: Projekterstellung
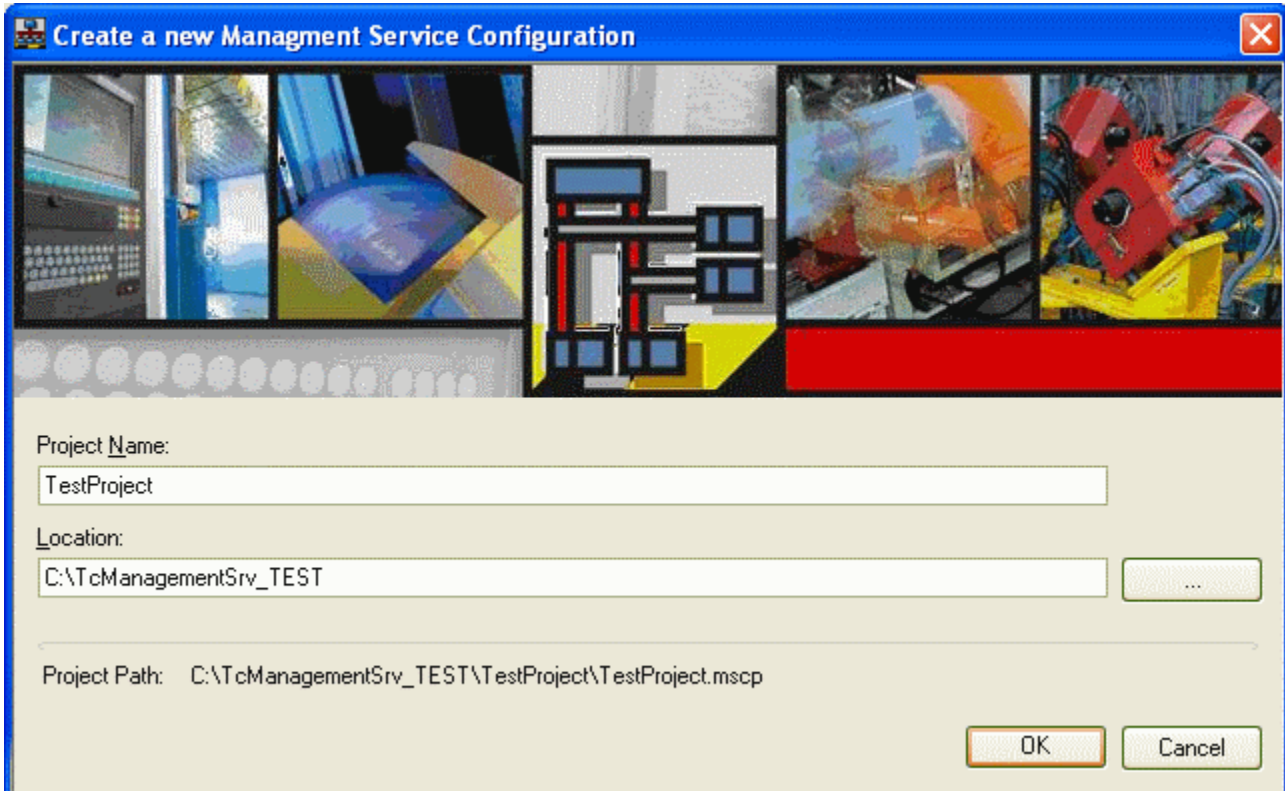
Zunächst müssen Sie im Konfigurator ein neues Projekt erstellen. Durch die Angabe von Projektname und Speicherort, wird eine .mscp (*Management Server Config Project*) Datei erstellt, welche die individuellen Projektinformationen beinhaltet.

Schritt 2: Updatekonfiguration
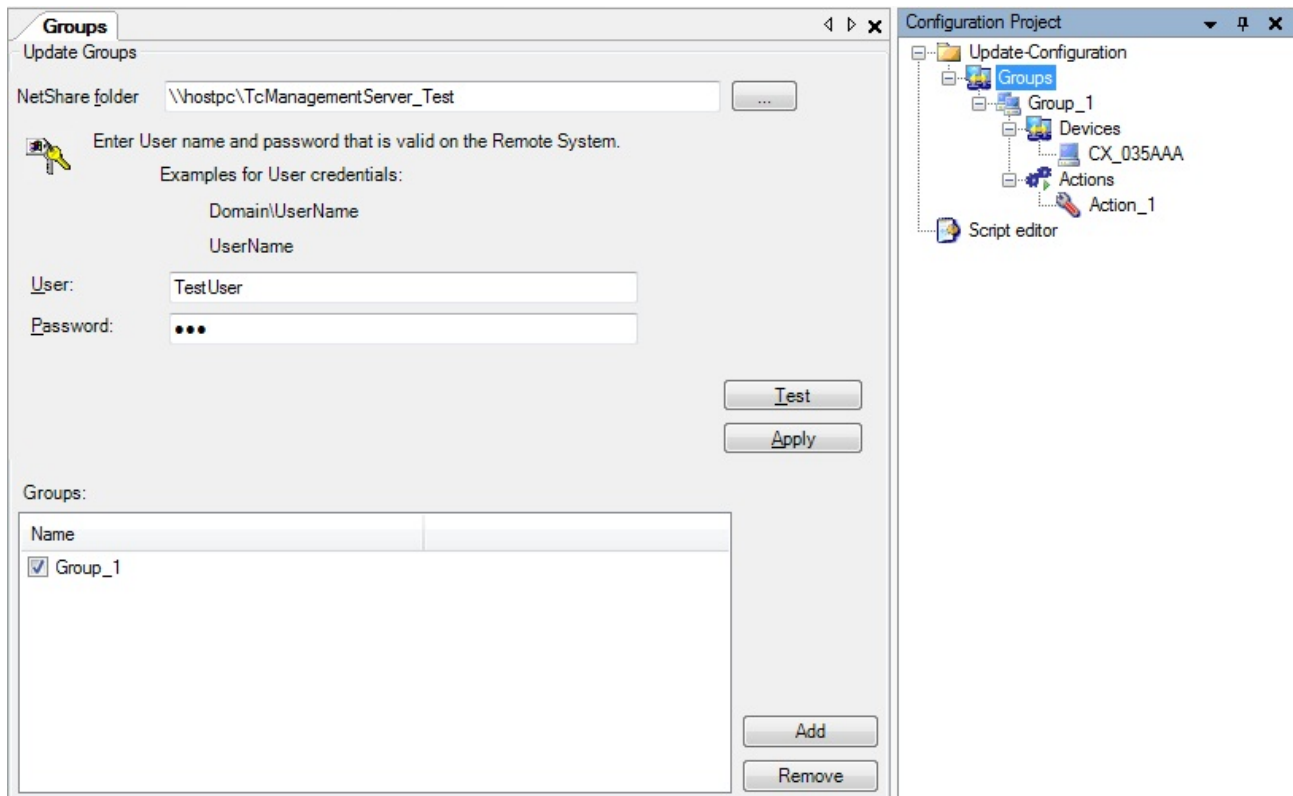
Um einen Datenaustausch zwischen dem zentralen Server und den verschiedenen Geräten zu realisieren, müssen Sie zunächst den *NetShare* Ordner anlegen und im *Configuration Project* unter *Groups* eingetragen. Bestätigen Sie die hier gemachten Angaben mit *Apply*.

Schritt 3: Hinzufügen von Geräten
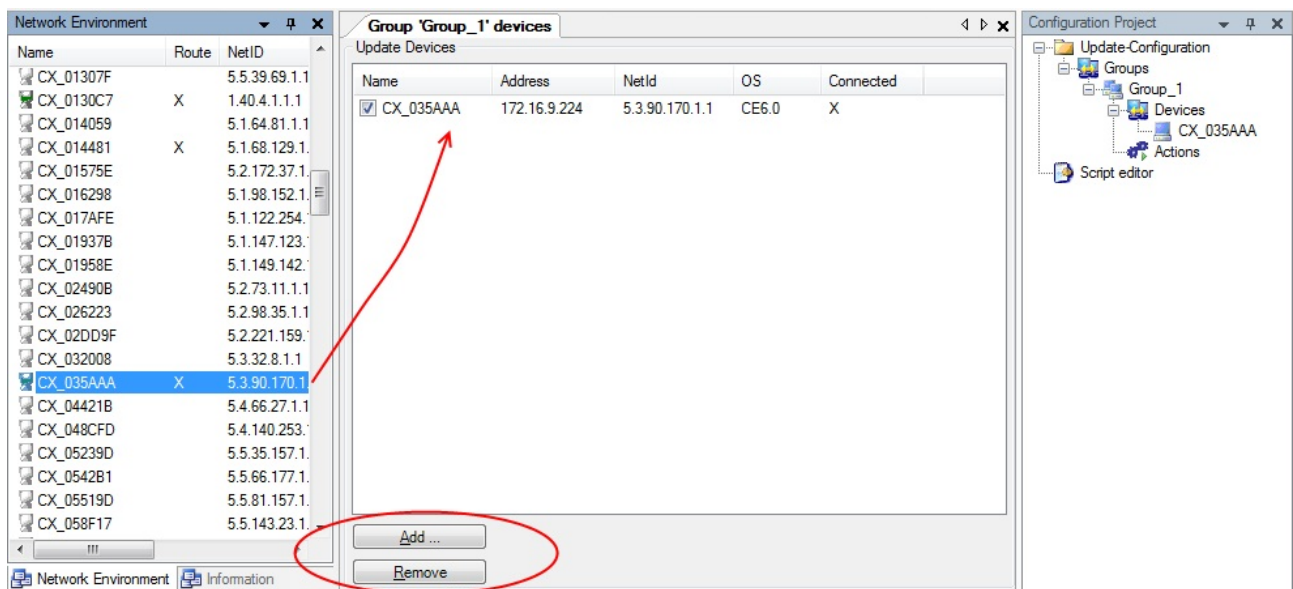
Zu den Geräten, mit welchen Sie arbeiten möchten, müssen entsprechende TwinCAT Routen eingetragen sein. Dies können Sie klassisch über den TwinCAT System Manager machen oder direkt hier im Konfigurator durch einen Rechtsklick auf das ausgewählte Gerät in der *Network Environment*. In dem sich dann öffnenden Kontextmenü können Sie ein *Add Route* vornehmen und in gleicher Weise wie im System Manager eine Route eintragen. Jetzt können Sie per Drag and Drop die Geräte aus der *Network Environment* in das Fenster des Unterpunkts *Devices* kopieren. Alternativ können Sie dafür den *Add* Button im *Devices* Fenster benutzen. Wenn das Cab File auf dem Zielgerät zuvor richtig installiert wurde, wird nach wenigen Sekunden ein "X" in der Spalte *Connected* erscheinen. Wenn dieses "X" erscheint ist das Zielgerät fähig, die im Konfigurator angelegte Scripte abzuarbeiten.
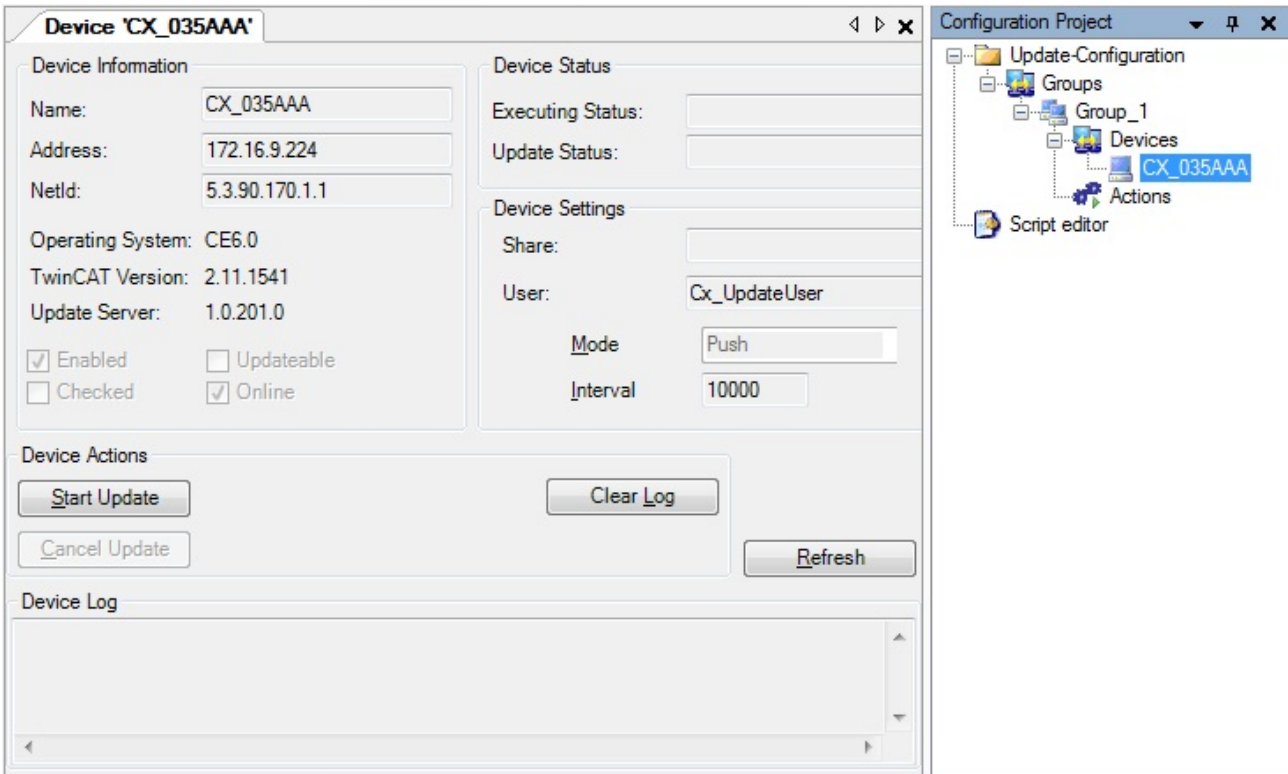
Weitere Informationen zu den jeweiligen Geräten erhalten Sie, wenn Sie das Gerät im *Configuration Project* anwählen.

Schritt 4: Hinzufügen von Aktionen

Im Unterpunkt *Actions* einer Gruppe können scriptbasierte Aktionen angelegt werden, welche auf den Geräten gestartet werden sollen.

Für dieses Beispiel sollen zwei Aktionen angelegt werden. Mit der ersten Aktion soll das vollständige Image des zuvor ausgewählten CX1020 von HPS 3.21d auf HPS 3.21h upgedatet werden. Die zweite Aktion soll ein einfacher Datei-Kopiervorgang werden.
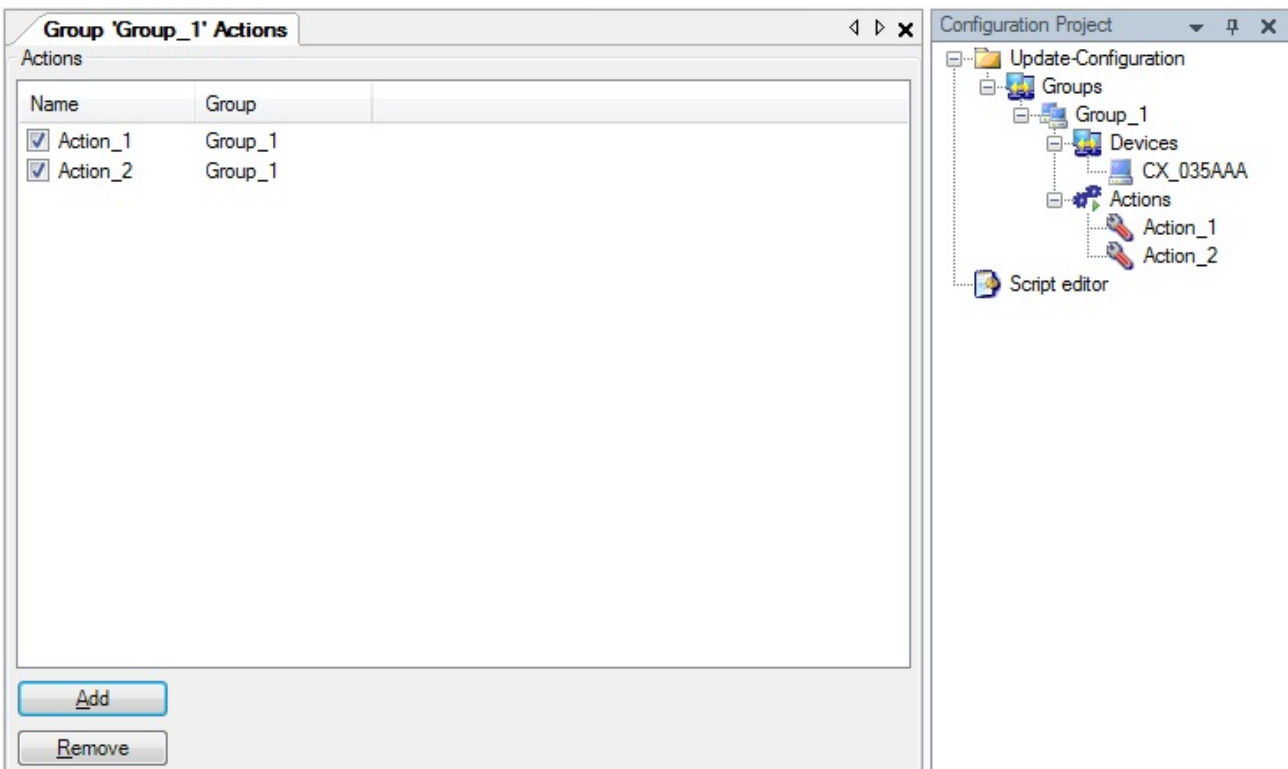
Aktionen können Sie per Rechtsklick im *Configuration Project* durch den Unterpunkt *New* im Kontextmenu oder durch *Add* im *Actions* Fenster einfügen.
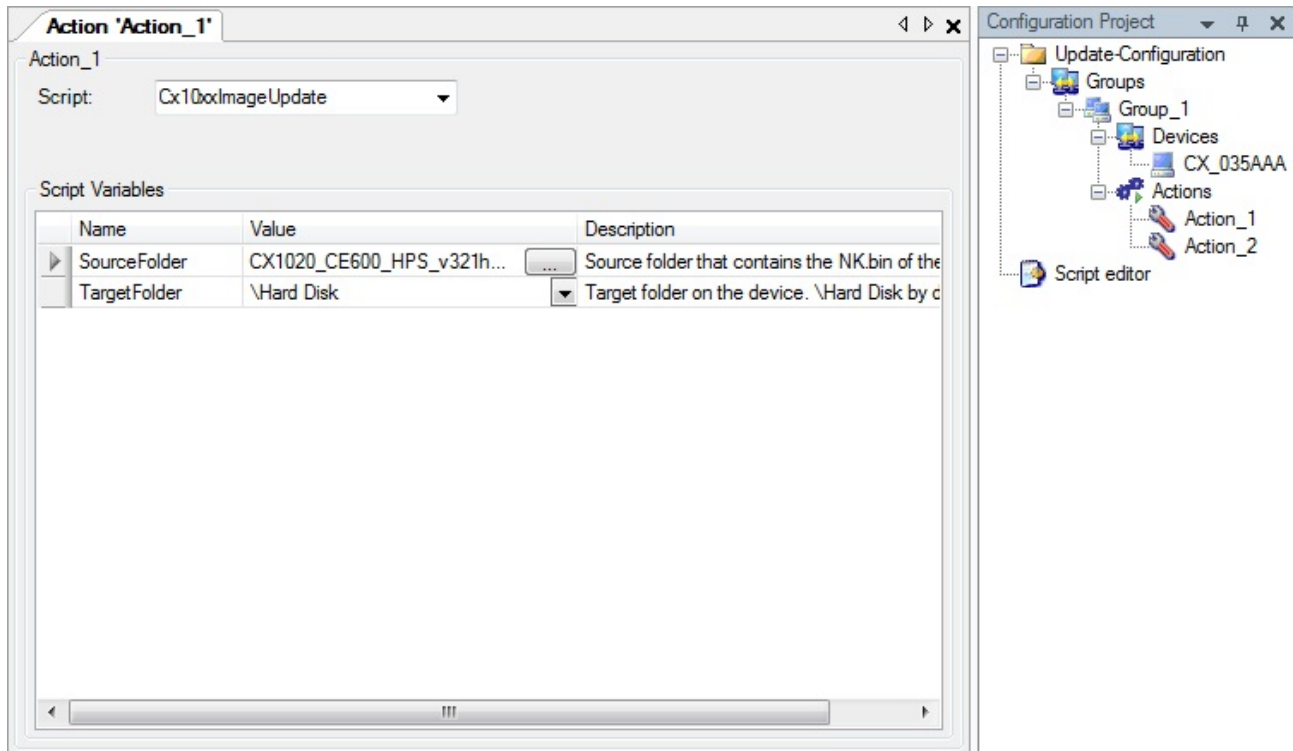
Für die erste Aktion müssen Sie das Script *Cx10xxImageUpdate* auswählen. Geben Sie im *SourceFolder*-Feld den Ordner des neuen Images an. Den können Sie bequem mit dem Browser Button erreichen. Wählen Sie als *TargetFolder* für ein Image Update "\Hard Disk" als Verzeichnis auf dem Gerät aus. Mit den beschriebenen Eingaben sind die Vorbereitungen für die erste Aktion abgeschlossen.
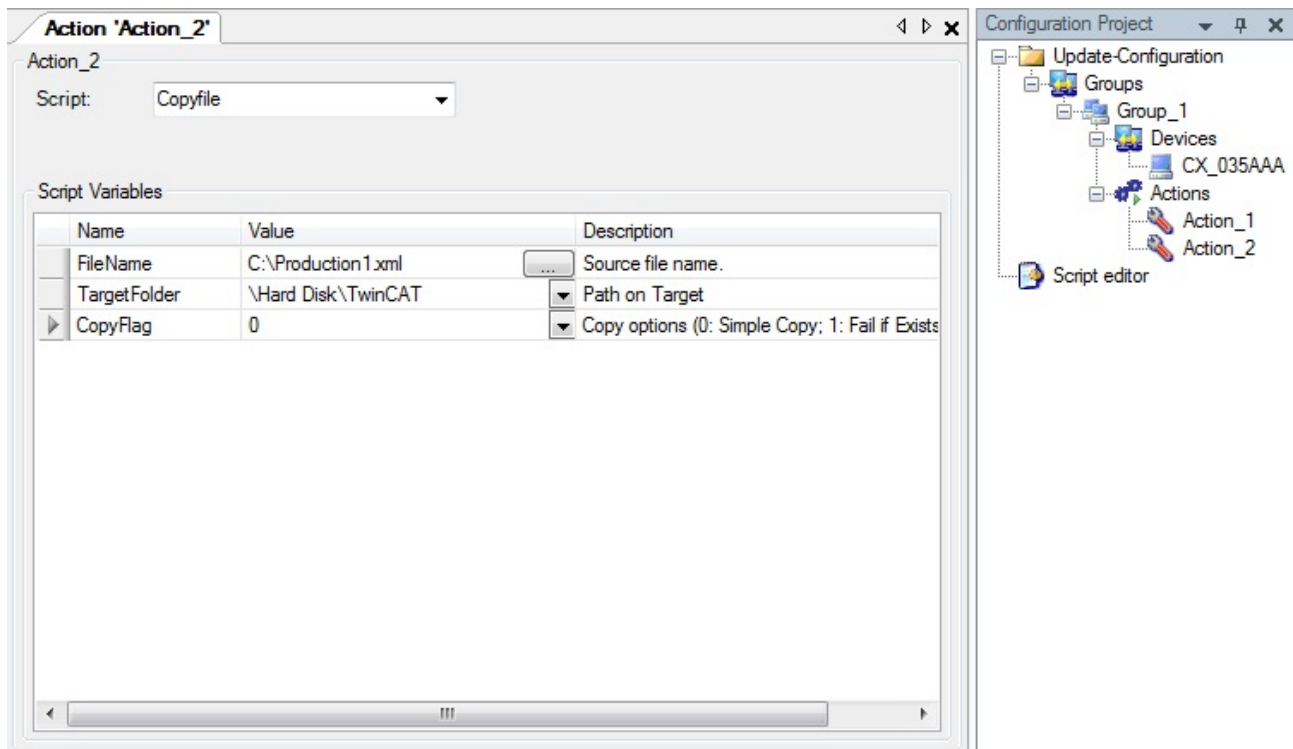
Für die zweite Aktion wählen Sie bitte das *Copyfile* Script aus. Es soll eine wichtige Produktionsdatei auf das Gerät kopiert werden. Unter *FileName* können Sie wieder zu der gewünschten Datei browsen. Im TargetFolder geben Sie das Zielverzeichnis und unter *CopyFlag* die Kopieroption [▶ 18] an. In diesem Fall wird die Kopieroption "0" gewählt, was einen einfachen Kopiervorgang bedeutet.

Schritt 5: Update starten
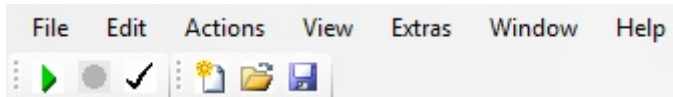
Das Update kann nun von verschiedenen Stellen im Konfigurator gestartet werden. Eine Möglichkeit bietet der *Play* Button in der Konfigurator-Toolbar. Diese Option würde für alle verfügbaren Gruppen, alle aktivierten Aktionen starten. Alternativ können Sie auch das entsprechende Gerät im *Configuration Project* anwählen und im sich öffnenden Fenster die konfigurierten Aktionen speziell für dieses Gerät starten.

Unter *Device Status* sehen Sie den Fortschritt der eingeleiteten Operationen. Wenn unter *Update State*, grün unterlegt, *Finished* steht, sind die Operationen für das entsprechende Gerät erfolgreich abgeschlossen worden. Detaillierte Informationen über das Update erhalten Sie gerätespezifisch durch einen Klick auf das jeweilige Gerät im *Configuration Project*.

Schritt 6: Abschließende Schritte

Das Script *Cx10xxImageUpdate.script* tauscht alle Systemdateien auf dem CX aus und setzt alle Einstellungen und Registryeinträge zurück (mit Ausnahme der Routen-Information). Des weiteren wird ein Neustart des Gerätes durchgeführt, um das Image Update abzuschließen. Damit das Gerät sofort wieder zur Verfügung steht, werden die Routen-Informationen gespeichert. Dies bedeutet das die Route zu Ihrem Server PC weiterhin zur Verfügung steht und nicht manuell erneuert werden muss.

5.2　Beispiel 2: Image-Update für CX9010 über den TwinCAT Management Server

Dieses Beispiel zeigt, wie man über den TwinCAT Management Server ein Image-Update für den Beckhoff IPC CX9010 realisiert.

Bitte lesen Sie dazu gründlich die <u>Installationsbeschreibung [▶ 8]</u>. Die korrekte Installation von Server und Client ist die Voraussetzung für die Funktion dieses Beispiels.

Schritt 1: Projekt Erstellung
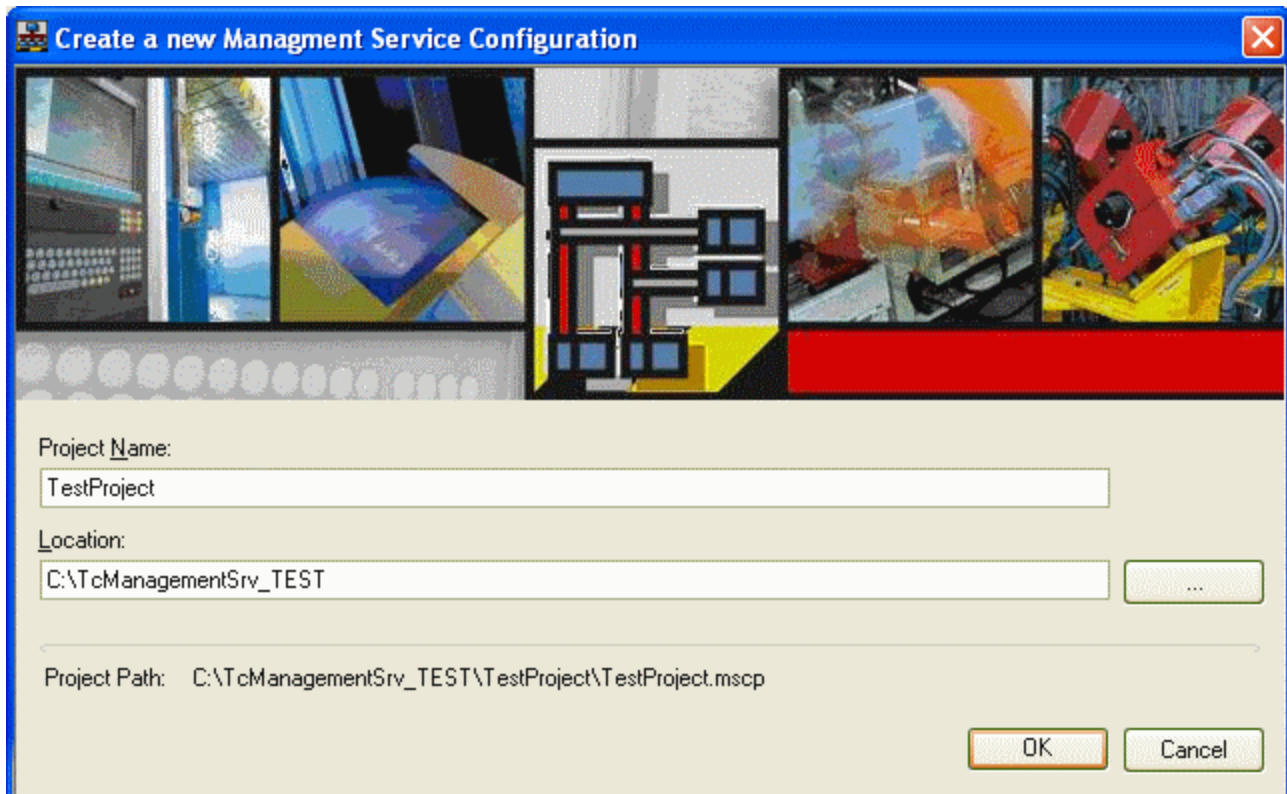
Erstellen sie als erstes ein Projekt im Konfigurator. Tragen sie den Projektnamen ein und legen sie einen Speicherort für ihre *.mscp Datei (Management **S**erver **C**onfig **P**roject) fest. Diese Datei beinhaltet die speziellen Projektinformationen.

Schritt 2: Update der Konfiguration
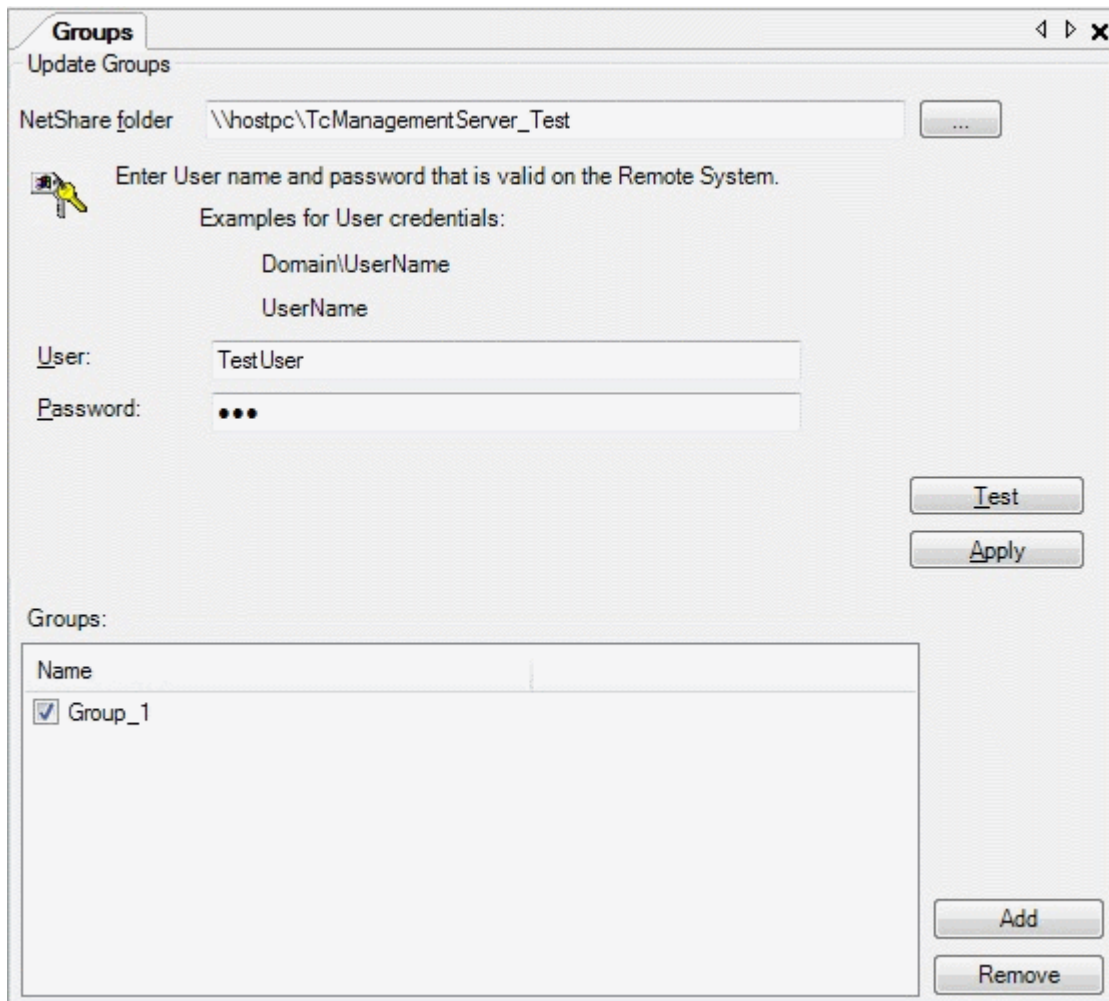
Um den Datenaustausch zwischen dem zentralen Server und den ausgewählten Geräten zu ermöglichen, legen Sie das NetShare- Verzeichnis in 'Configuration Project' unter 'Groups' an. Bestätigen Sie mit 'Apply'.

Schritt 3: Geräte hinzufügen
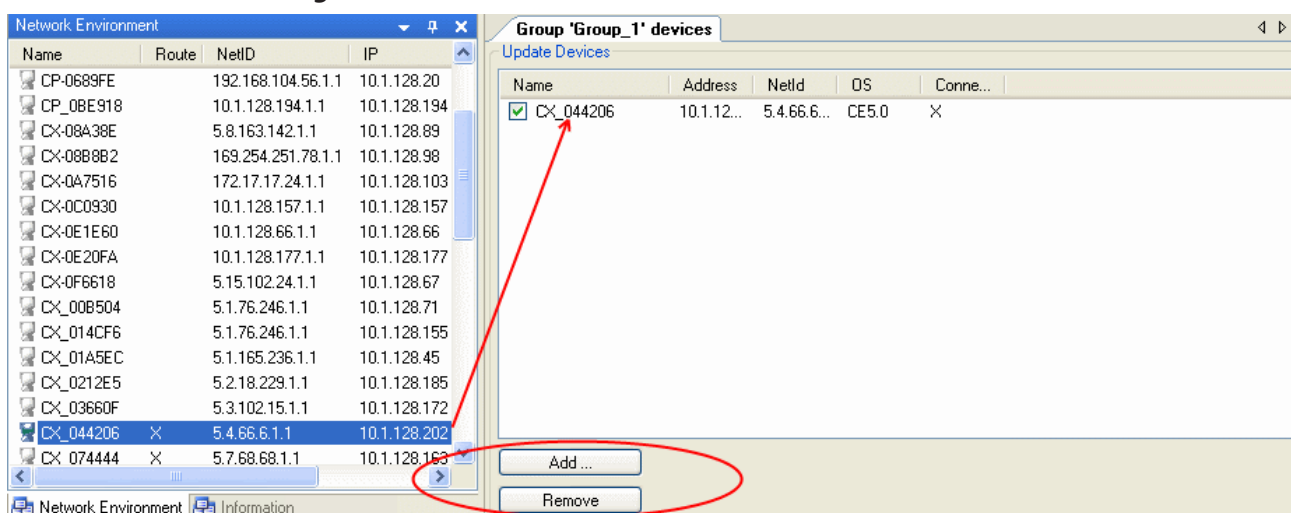
Für die zu managenden Geräte müssen TwinCAT "Routen" (konfigurierte ADS-Verbindungen) eingerichtet sein. Sie können diese wie gewohnt im TwinCAT System Manager erstellen, oder direkt im Konfigurator des TwinCAT Management Servers. Hierzu im Konfigurator das gewünschte Gerät in "Network Environment" mit der rechten Maustaste anklicken. Nutzt Sie die 'Add Route'-Schaltfläche Im Kontextmenü, um eine

Verknüpfung Route) herzustellen. Das Gerät kann nun durch 'Drag and Drop' von "Network Environment" in das "Devices"-Fenster kopiert werden. Alternativ kann auch die "Add"-Schaltfläche im "Devices" Fenster benutzt werden.

Wurde die Cab-Datei vorher korrekt auf dem Zielgerät installiert, erscheint nach einigen Sekunden ein "X" in der Spalte "Connected". Sobald das "X" erscheint, ist das Zielgerät in der Lage, die vom Konfigurator erstellten Scripts zu verarbeiten.
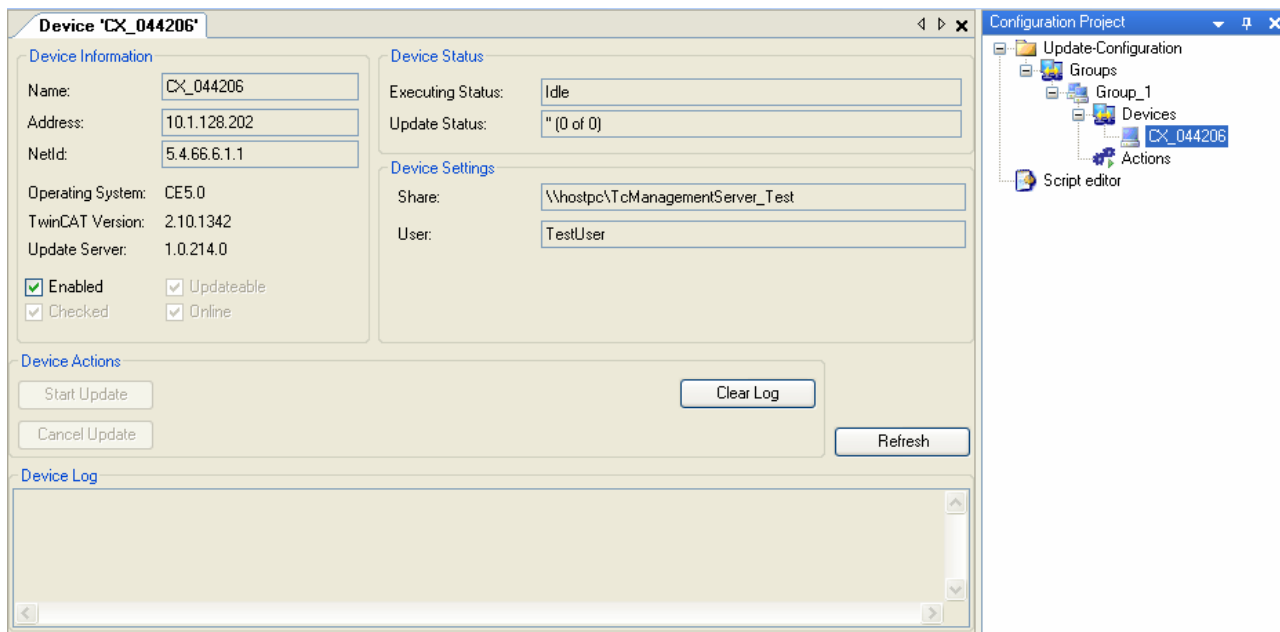
Zusätzliche Geräteinformationen erhält man durch Anklicken des Gerätes in "Configuration Project" .

Schritt 4: Aktionen hinzufügen

Unter dem "Actions"-Unterpunkt einer Gruppe erstellt man die Script-basierende Funktion für das Gerät.

Für dieses Beispiel werden drei Funktionen erstellt. Die erste Funktion aktualisiert die Dateien im Image der zuvor ausgewählten CX9010-IPCs von HMI 2.26 bis HPS 3.12. Die zweite Funktion ist ein volles Image-Update, das die Datei "boot.bin" des Gerätes überschreibt. Die letzte Funktion ermöglicht das Kopieren einer zusätzlich benötigten Datei auf das Gerät.
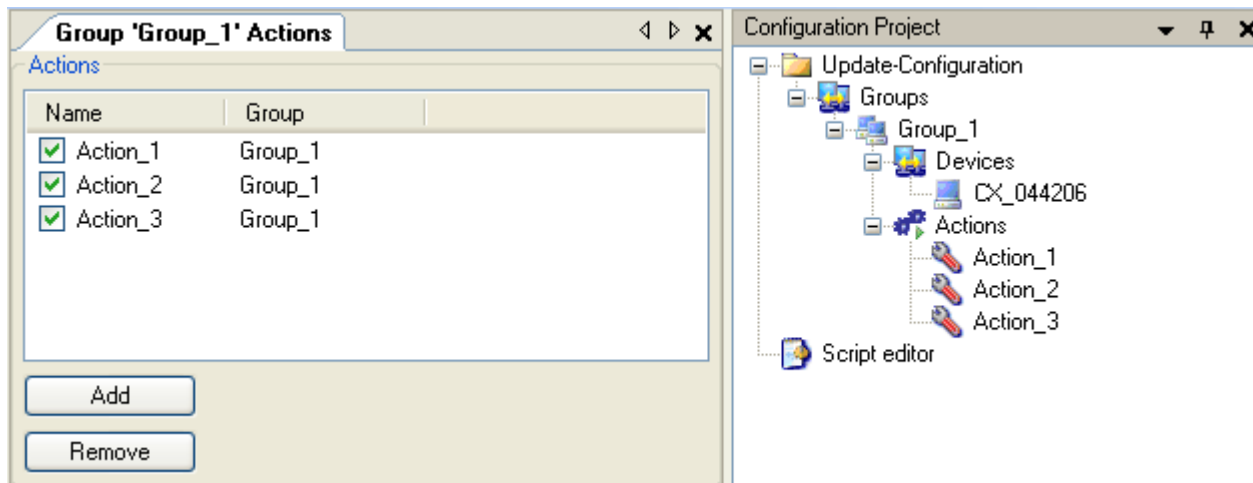
Aktionen können hinzugefügt werden durch Anklicken mit der rechten Maustaste des Unterpunktes "New" im Kontextmenü von "Configuration Project", oder durch "Add" im "Action"-Fenster
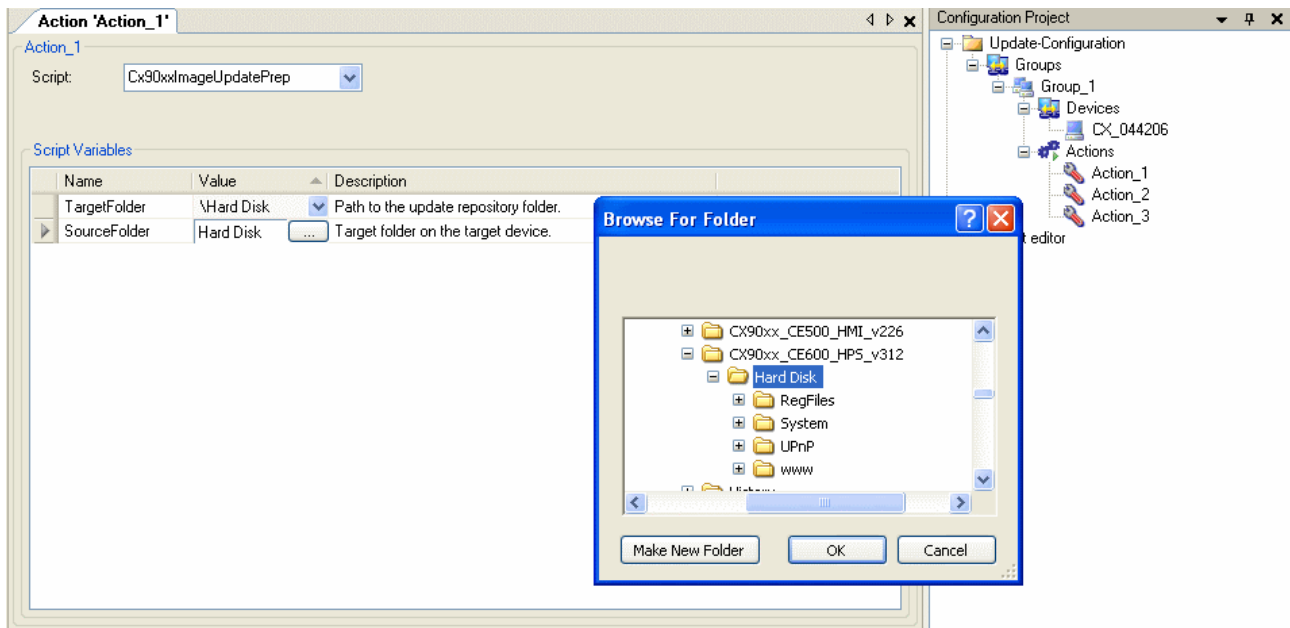
Für die 1. Aktion wählen Sie das Skript "Cx90xxImageUpdatePrep" aus. Geben Sie über die Browser-Schaltfläche im Feld "SourceFolder" das Verzeichnis für das neue Geräte-Image an. (Es muß die Unterverzeichnisse "www", "System" und "UPnP" enthalten.) Wählen sie "\Hard Disk" als Zielverzeichnis für ein Image-Update des Gerätes aus. Die Vorbereitungen für die 1. Aktion sind nun abgeschlossen
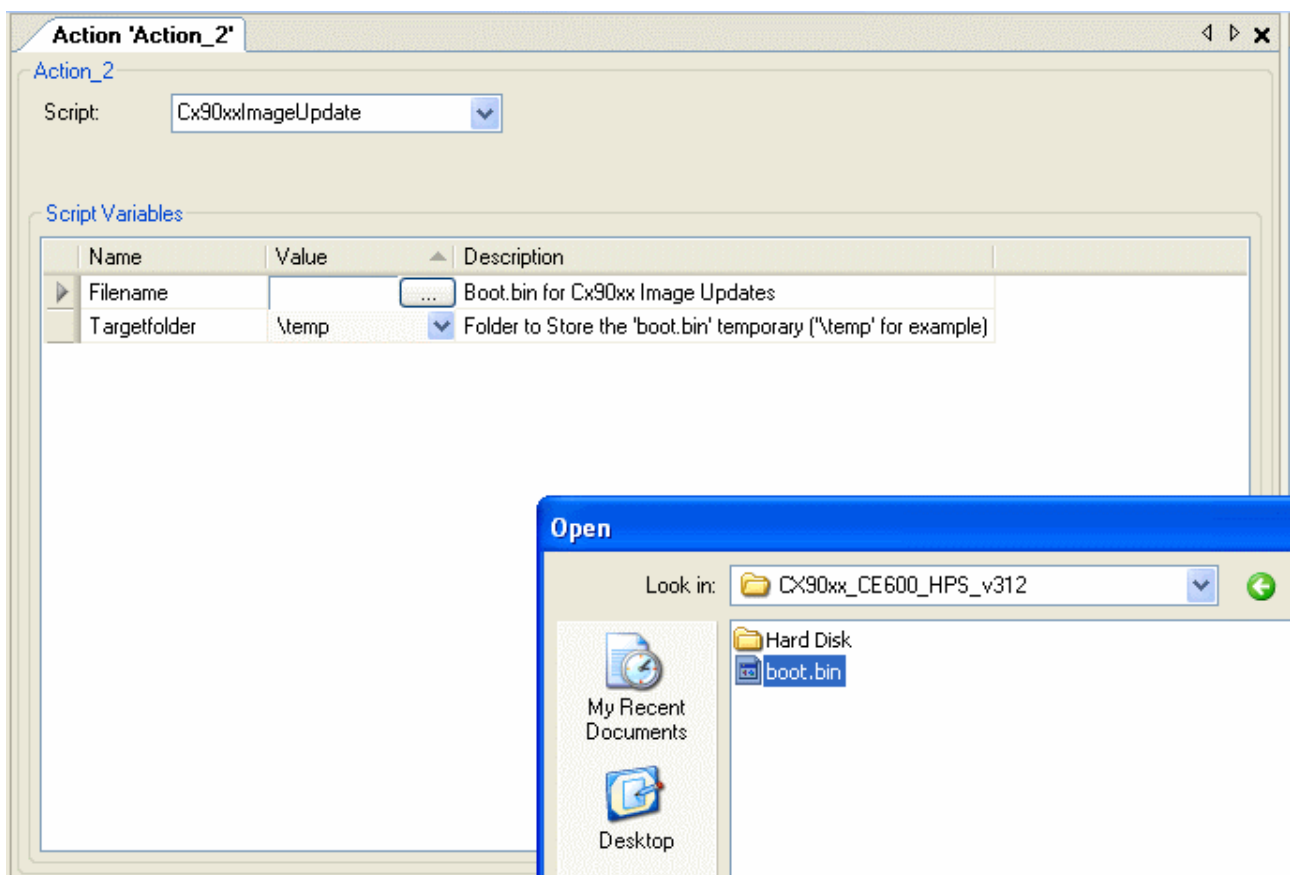
Für die 2. Aktion wählen sie das Skript "Cx90xxImageUpdate" aus. Wählen Sie die gewünschte neue Datei "boot.bin" in "Filename" aus. Im Feld "Zielverzeichnis" sollte "\temp" stehen. Die Vorbereitungen für die 2. Aktion sind nun abgeschlossen.
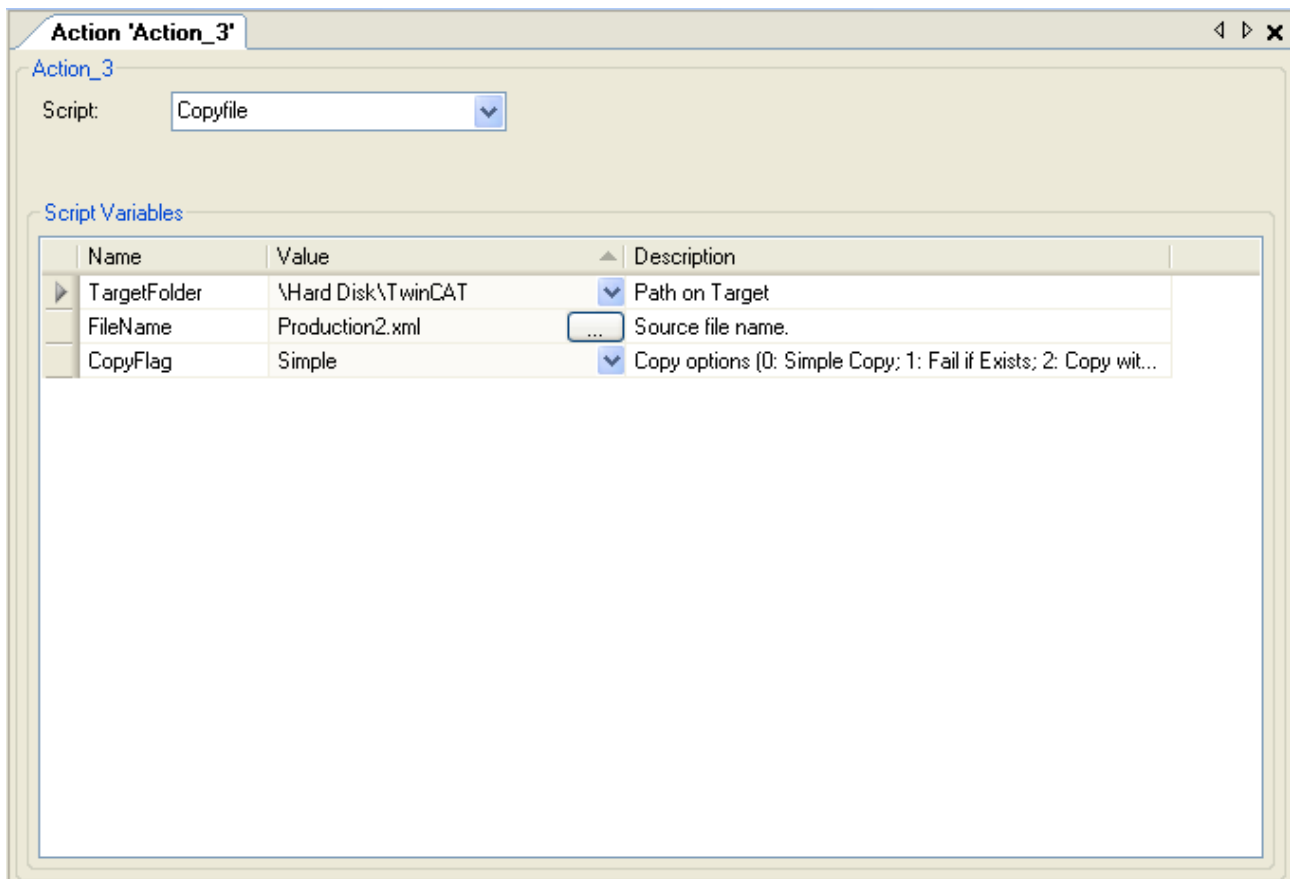
[optional] For the third action please select the *Copyfile* script. The aim is to copy an important production file to the device. Under *FileName* you can navigate to the required file. Specify the target directory under TargetFolder and the under *CopyFlag*. In this case copy option "Simple" is selected, which means a simple copy process.

[optional] Für die 3. Aktion wählen Sie das Skript "Copyfile" aus. Das Ziel ist, eine wichtige Produktionsdatei auf das Gerät zu kopieren. Wählen Sie über "FileName" die gewünschte Datei aus. Geben sie das Zielverzeichniss auf dem Gerät in "TargetFolder", und die gewünschte Kopieroption [▶ 18] in "CopyFlag" an. In diesem Fall ist die Kopieroption "Simple" ausgewählt, es ist also ein einfacher Kopierprozess erwünscht.

Schritt 5: Update starten
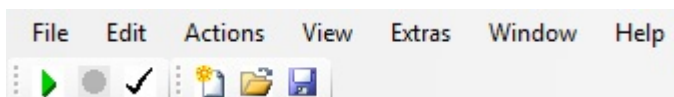
The update can now be started from various places in the configurator. One option is the *Play* button in the configurator toolbar. This option would start all activated actions for all available groups. Alternatively you can select the respective device in the *Configuration Project* and start the configured actions for this device in the window that opens.

Das Update kann nun von verschiedenen Stellen im Konfigurator aus gestartet werden. Eine Option ist die Schaltfläche "Play" in der Funktionsleiste des Konfigurators. Diese startet alle aktivierten Aktionen für alle verfügbaren Gruppen. Alternativ kann man auch ein einzelnes Gerät in "Configuration Project" auswählen und die konfigurierten Aktionen in einem Popup-Fenster starten.
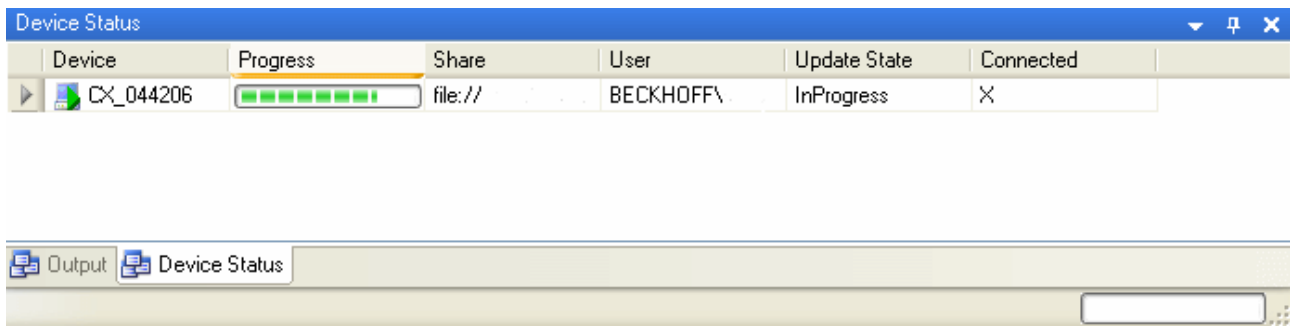
Unter "Device Status" kann man den Fortschritt der Operationen verfolgen. Sobald "Finished" (grün hinterlegt) unter "Update State" erscheint, wurden die Operationen auf dem gewählten Gerät erfolgreich abgeschlossen. Weitere detaillierte Informationen über das gerätespezifische Update erhält man durch Anklicken des jeweiligen Gerätes in "Configuration Project".

Schritt 6: Abschluß

The script *Cx90xxImageUpdate.script* replaces all system files on the CX and resets all settings and registry entries (except the routes information). The device is restarted to complete the image update. The routes information is stored to ensure that the device is immediately available again. This means the route to your server PC continues to be available and does not have to be refreshed manually.

Das Skript "Cx90xxImageUpdate.script" ersetzt alle Systemdateien auf dem CX9010 und führt ein Reset aller Einstellungen und Registry-Einträge durch (ausgenommen die Route-Informationen). Ein Neustart des Gerätes vollendet das Image-Update. Die Route-Information ist gespeichert, damit eine sofortige weitere Verbindung zum Gerät möglich ist. Das bedeutet, da die Route zum Server-PC erhalten bleibt, und nicht manuell aktualisiert werden muss.

6 Anhang

6.1 Win32 Error Codes

The following table provides a list of Win32 error codes.

100 [▶ 51], 200 [▶ 51], 1001 [▶ 51], 1100 [▶ 51], 1200 [▶ 51], 1400 [▶ 51], 1600 [▶ 51], 1800 [▶ 51], 2000 [▶ 51], 3000 [▶ 51], 5000 [▶ 51], 6000 [▶ 51], 8000 [▶ 51], 8500 [▶ 51], 9001 [▶ 51], 10004 [▶ 51], 12000 [▶ 51],

Code (dec)	Code (hex)	Description	Name
0	0x00000000	The operation completed successfully.	ERROR_SUCCESS
1	0x00000001	Incorrect function.	ERROR_INVALID_FUNCTION
2	0x00000002	The system cannot find the file specified.	ERROR_FILE_NOT_FOUND
3	0x00000003	The system cannot find the path specified.	ERROR_PATH_NOT_FOUND
4	0x00000004	The system cannot open the file.	ERROR_TOO_MANY_OPEN_FILES
5	0x00000005	Access is denied.	ERROR_ACCESS_DENIED
6	0x00000006	The handle is invalid.	ERROR_INVALID_HANDLE
7	0x00000007	The storage control blocks were destroyed.	ERROR_ARENA_TRASHED
8	0x00000008	Not enough storage is available to process this command.	ERROR_NOT_ENOUGH_MEMORY
9	0x00000009	The storage control block address is invalid.	ERROR_INVALID_BLOCK
10	0x0000000A	The environment is incorrect.	ERROR_BAD_ENVIRONMENT
11	0x0000000B	An attempt was made to load a program with an incorrect format.	ERROR_BAD_FORMAT
12	0x0000000C	The access code is invalid.	ERROR_INVALID_ACCESS
13	0x0000000D	The data is invalid.	ERROR_INVALID_DATA
14	0x0000000E	Not enough storage is available to complete this operation.	ERROR_OUTOFMEMORY
15	0x0000000F	The system cannot find the drive specified.	ERROR_INVALID_DRIVE
16	0x00000010	The directory cannot be removed.	ERROR_CURRENT_DIRECTORY
17	0x00000011	The system cannot move the file to a different disk drive.	ERROR_NOT_SAME_DEVICE
18	0x00000012	There are no more files.	ERROR_NO_MORE_FILES
19	0x00000013	The media is write protected.	ERROR_WRITE_PROTECT
20	0x00000014	The system cannot find the device specified.	ERROR_BAD_UNIT
21	0x00000015	The device is not ready.	ERROR_NOT_READY
22	0x00000016	The device does not recognize the command.	ERROR_BAD_COMMAND
23	0x00000017	Data error (cyclic redundancy check).	ERROR_CRC
24	0x00000018	The program issued a command but the command length is incorrect.	ERROR_BAD_LENGTH
25	0x00000019	The drive cannot locate a specific area or track on the disk.	ERROR_SEEK

Code (dec)	Code (hex)	Description	Name
26	0x0000001A	The specified disk or diskette cannot be accessed.	ERROR_NOT_DOS_DISK
27	0x0000001B	The drive cannot find the sector requested.	ERROR_SECTOR_NOT_FOUND
28	0x0000001C	The printer is out of paper.	ERROR_OUT_OF_PAPER
29	0x0000001D	The system cannot write to the specified device.	ERROR_WRITE_FAULT
30	0x0000001E	The system cannot read from the specified device.	ERROR_READ_FAULT
31	0x0000001F	A device attached to the system is not functioning.	ERROR_GEN_FAILURE
32	0x00000020	The process cannot access the file because it is being used by another process.	ERROR_SHARING_VIOLATION
33	0x00000021	The process cannot access the file because another process has locked a portion of the file.	ERROR_LOCK_VIOLATION
34	0x00000022	The wrong diskette is in the drive. Insert %2 (Volume Serial Number: %3) into drive %1.	ERROR_WRONG_DISK
36	0x00000024	Too many files opened for sharing.	ERROR_SHARING_BUFFER_EXCEEDED
38	0x00000026	Reached the end of the file.	ERROR_HANDLE_EOF
39	0x00000027	The disk is full.	ERROR_HANDLE_DISK_FULL
50	0x00000032	The request is not supported.	ERROR_NOT_SUPPORTED
51	0x00000033	The remote computer is not available.	ERROR_REM_NOT_LIST
52	0x00000034	A duplicate name exists on the network.	ERROR_DUP_NAME
53	0x00000035	The network path was not found.	ERROR_BAD_NETPATH
54	0x00000036	The network is busy.	ERROR_NETWORK_BUSY
55	0x00000037	The specified network resource or device is no longer available.	ERROR_DEV_NOT_EXIST
56	0x00000038	The network BIOS command limit has been reached.	ERROR_TOO_MANY_CMDS
57	0x00000039	A network adapter hardware error occurred.	ERROR_ADAP_HDW_ERR
58	0x0000003A	The specified server cannot perform the requested operation.	ERROR_BAD_NET_RESP
59	0x0000003B	An unexpected network error occurred.	ERROR_UNEXP_NET_ERR
60	0x0000003C	The remote adapter is not compatible.	ERROR_BAD_REM_ADAP
61	0x0000003D	The printer queue is full.	ERROR_PRINTQ_FULL
62	0x0000003E	Space to store the file waiting to be printed is not available on the server.	ERROR_NO_SPOOL_SPACE
63	0x0000003F	Your file waiting to be printed was deleted.	ERROR_PRINT_CANCELLED
64	0x00000040	The specified network name is no longer available.	ERROR_NETNAME_DELETED
65	0x00000041	Network access is denied.	ERROR_NETWORK_ACCESS_DENIED
66	0x00000042	The network resource type is not correct.	ERROR_BAD_DEV_TYPE
67	0x00000043	The network name cannot be found.	ERROR_BAD_NET_NAME
68	0x00000044	The name limit for the local computer network adapter card was exceeded.	ERROR_TOO_MANY_NAMES

Code (dec)	Code (hex)	Description	Name
69	0x00000045	The network BIOS session limit was exceeded.	ERROR_TOO_MANY_SESS
70	0x00000046	The remote server has been paused or is in the process of being started.	ERROR_SHARING_PAUSED
71	0x00000047	No more connections can be made to this remote computer at this time because there are already as many connections as the computer can accept.	ERROR_REQ_NOT_ACCEP
72	0x00000048	The specified printer or disk device has been paused.	ERROR_REDIR_PAUSED
80	0x00000050	The file exists.	ERROR_FILE_EXISTS
82	0x00000052	The directory or file cannot be created.	ERROR_CANNOT_MAKE
83	0x00000053	Fail on INT 24.	ERROR_FAIL_I24
84	0x00000054	Storage to process this request is not available.	ERROR_OUT_OF_STRUCTURES
85	0x00000055	The local device name is already in use.	ERROR_ALREADY_ASSIGNED
86	0x00000056	The specified network password is not correct.	ERROR_INVALID_PASSWORD
87	0x00000057	The parameter is incorrect.	ERROR_INVALID_PARAMETER
88	0x00000058	A write fault occurred on the network.	ERROR_NET_WRITE_FAULT
89	0x00000059	The system cannot start another process at this time.	ERROR_NO_PROC_SLOTS
100	0x00000064	Cannot create another system semaphore.	ERROR_TOO_MANY_SEMAPHORES
101	0x00000065	The exclusive semaphore is owned by another process.	ERROR_EXCL_SEM_ALREADY_OWNED
102	0x00000066	The semaphore is set and cannot be closed.	ERROR_SEM_IS_SET
103	0x00000067	The semaphore cannot be set again.	ERROR_TOO_MANY_SEM_REQUESTS
104	0x00000068	Cannot request exclusive semaphores at interrupt time.	ERROR_INVALID_AT_INTERRUPT_TIME
105	0x00000069	The previous ownership of this semaphore has ended.	ERROR_SEM_OWNER_DIED
106	0x0000006A	Insert the diskette for drive %1.	ERROR_SEM_USER_LIMIT
107	0x0000006B	The program stopped because an alternate diskette was not inserted.	ERROR_DISK_CHANGE
108	0x0000006C	The disk is in use or locked by another process.	ERROR_DRIVE_LOCKED
109	0x0000006D	The pipe has been ended.	ERROR_BROKEN_PIPE
110	0x0000006E	The system cannot open the device or file specified.	ERROR_OPEN_FAILED
111	0x0000006F	The file name is too long.	ERROR_BUFFER_OVERFLOW
112	0x00000070	There is not enough space on the disk.	ERROR_DISK_FULL
113	0x00000071	No more internal file identifiers available.	ERROR_NO_MORE_SEARCH_HANDLES
114	0x00000072	The target internal file identifier is incorrect.	ERROR_INVALID_TARGET_HANDLE

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Code (dec)	Code (hex)	Description	Name
117	0x00000075	The IOCTL call made by the application program is not correct.	ERROR_INVALID_CATEGORY
118	0x00000076	The verify-on-write switch parameter value is not correct.	ERROR_INVALID_VERIFY_SWITCH
119	0x00000077	The system does not support the command requested.	ERROR_BAD_DRIVER_LEVEL
120	0x00000078	This function is not supported on this system.	ERROR_CALL_NOT_IMPLEMENTED
121	0x00000079	The semaphore timeout period has expired.	ERROR_SEM_TIMEOUT
122	0x0000007A	The data area passed to a system call is too small.	ERROR_INSUFFICIENT_BUFFER
123	0x0000007B	The filename, directory name, or volume label syntax is incorrect.	ERROR_INVALID_NAME
124	0x0000007C	The system call level is not correct.	ERROR_INVALID_LEVEL
125	0x0000007D	The disk has no volume label.	ERROR_NO_VOLUME_LABEL
126	0x0000007E	The specified module could not be found.	ERROR_MOD_NOT_FOUND
127	0x0000007F	The specified procedure could not be found.	ERROR_PROC_NOT_FOUND
128	0x00000080	There are no child processes to wait for.	ERROR_WAIT_NO_CHILDREN
129	0x00000081	The %1 application cannot be run in Win32 mode.	ERROR_CHILD_NOT_COMPLETE
130	0x00000082	Attempt to use a file handle to an open disk partition for an operation other than raw disk I/O.	ERROR_DIRECT_ACCESS_HANDLE
131	0x00000083	An attempt was made to move the file pointer before the beginning of the file.	ERROR_NEGATIVE_SEEK
132	0x00000084	The file pointer cannot be set on the specified device or file.	ERROR_SEEK_ON_DEVICE
133	0x00000085	A JOIN or SUBST command cannot be used for a drive that contains previously joined drives.	ERROR_IS_JOIN_TARGET
134	0x00000086	An attempt was made to use a JOIN or SUBST command on a drive that has already been joined.	ERROR_IS_JOINED
135	0x00000087	An attempt was made to use a JOIN or SUBST command on a drive that has already been substituted.	ERROR_IS_SUBSTED
136	0x00000088	The system tried to delete the JOIN of a drive that is not joined.	ERROR_NOT_JOINED
137	0x00000089	The system tried to delete the substitution of a drive that is not substituted.	ERROR_NOT_SUBSTED
138	0x0000008A	The system tried to join a drive to a directory on a joined drive.	ERROR_JOIN_TO_JOIN
139	0x0000008B	The system tried to substitute a drive to a directory on a substituted drive.	ERROR_SUBST_TO_SUBST
140	0x0000008C	The system tried to join a drive to a directory on a substituted drive.	ERROR_JOIN_TO_SUBST
141	0x0000008D	The system tried to SUBST a drive to a directory on a joined drive.	ERROR_SUBST_TO_JOIN

Code (dec)	Code (hex)	Description	Name
142	0x0000008E	The system cannot perform a JOIN or SUBST at this time.	ERROR_BUSY_DRIVE
143	0x0000008F	The system cannot join or substitute a drive to or for a directory on the same drive.	ERROR_SAME_DRIVE
144	0x00000090	The directory is not a subdirectory of the root directory.	ERROR_DIR_NOT_ROOT
145	0x00000091	The directory is not empty.	ERROR_DIR_NOT_EMPTY
146	0x00000092	The path specified is being used in a substitute.	ERROR_IS_SUBST_PATH
147	0x00000093	Not enough resources are available to process this command.	ERROR_IS_JOIN_PATH
148	0x00000094	The path specified cannot be used at this time.	ERROR_PATH_BUSY
149	0x00000095	An attempt was made to join or substitute a drive for which a directory on the drive is the target of a previous substitute.	ERROR_IS_SUBST_TARGET
150	0x00000096	System trace information was not specified in your CONFIG.SYS file, or tracing is disallowed.	ERROR_SYSTEM_TRACE
151	0x00000097	The number of specified semaphore events for DosMuxSemWait is not correct.	ERROR_INVALID_EVENT_COUNT
152	0x00000098	DosMuxSemWait did not execute; too many semaphores are already set.	ERROR_TOO_MANY_MUXWAITERS
153	0x00000099	The DosMuxSemWait list is not correct.	ERROR_INVALID_LIST_FORMAT
154	0x0000009A	The volume label you entered exceeds the label character limit of the target file system.	ERROR_LABEL_TOO_LONG
155	0x0000009B	Cannot create another thread.	ERROR_TOO_MANY_TCBS
156	0x0000009C	The recipient process has refused the signal.	ERROR_SIGNAL_REFUSED
157	0x0000009D	The segment is already discarded and cannot be locked.	ERROR_DISCARDED
158	0x0000009E	The segment is already unlocked.	ERROR_NOT_LOCKED
159	0x0000009F	The address for the thread ID is not correct.	ERROR_BAD_THREADID_ADDR
160	0x000000A0	The argument string passed to DosExecPgm is not correct.	ERROR_BAD_ARGUMENTS
161	0x000000A1	The specified path is invalid.	ERROR_BAD_PATHNAME
162	0x000000A2	A signal is already pending.	ERROR_SIGNAL_PENDING
164	0x000000A4	No more threads can be created in the system.	ERROR_MAX_THRDS_REACHED
167	0x000000A7	Unable to lock a region of a file.	ERROR_LOCK_FAILED
170	0x000000AA	The requested resource is in use.	ERROR_BUSY
173	0x000000AD	A lock request was not outstanding for the supplied cancel region.	ERROR_CANCEL_VIOLATION
174	0x000000AE	The file system does not support atomic changes to the lock type.	ERROR_ATOMIC_LOCKS_NOT_SUPPORTED
180	0x000000B4	The system detected a segment number that was not correct.	ERROR_INVALID_SEGMENT_NUMBER
182	0x000000B6	The operating system cannot run %1.	ERROR_INVALID_ORDINAL

Code (dec)	Code (hex)	Description	Name
183	0x000000B7	Cannot create a file when that file already exists.	ERROR_ALREADY_EXISTS
186	0x000000BA	The flag passed is not correct.	ERROR_INVALID_FLAG_NUMBER
187	0x000000BB	The specified system semaphore name was not found.	ERROR_SEM_NOT_FOUND
188	0x000000BC	The operating system cannot run %1.	ERROR_INVALID_STARTING_CODESEG
189	0x000000BD	The operating system cannot run %1.	ERROR_INVALID_STACKSEG
190	0x000000BE	The operating system cannot run %1.	ERROR_INVALID_MODULETYPE
191	0x000000BF	Cannot run %1 in Win32 mode.	ERROR_INVALID_EXE_SIGNATURE
192	0x000000C0	The operating system cannot run %1.	ERROR_EXE_MARKED_INVALID
193	0x000000C1	%1 is not a valid Win32 application.	ERROR_BAD_EXE_FORMAT
194	0x000000C2	The operating system cannot run %1.	ERROR_ITERATED_DATA_EXCEEDS_64k
195	0x000000C3	The operating system cannot run %1.	ERROR_INVALID_MINALLOCSIZE
196	0x000000C4	The operating system cannot run this application program.	ERROR_DYNLINK_FROM_INVALID_RING
197	0x000000C5	The operating system is not presently configured to run this application.	ERROR_IOPL_NOT_ENABLED
198	0x000000C6	The operating system cannot run %1.	ERROR_INVALID_SEGDPL
199	0x000000C7	The operating system cannot run this application program.	ERROR_AUTODATASEG_EXCEEDS_64k
200	0x000000C8	The code segment cannot be greater than or equal to 64K.	ERROR_RING2SEG_MUST_BE_MOVABLE
201	0x000000C9	The operating system cannot run %1.	ERROR_RELOC_CHAIN_XEEDS_SEGLIM
202	0x000000CA	The operating system cannot run %1.	ERROR_INFLOOP_IN_RELOC_CHAIN
203	0x000000CB	The system could not find the environment option that was entered.	ERROR_ENVVAR_NOT_FOUND
205	0x000000CD	No process in the command subtree has a signal handler.	ERROR_NO_SIGNAL_SENT
206	0x000000CE	The filename or extension is too long.	ERROR_FILENAME_EXCED_RANGE
207	0x000000CF	The ring 2 stack is in use.	ERROR_RING2_STACK_IN_USE
208	0x000000D0	The global filename characters, * or ?, are entered incorrectly or too many global filename characters are specified.	ERROR_META_EXPANSION_TOO_LONG
209	0x000000D1	The signal being posted is not correct.	ERROR_INVALID_SIGNAL_NUMBER
210	0x000000D2	The signal handler cannot be set.	ERROR_THREAD_1_INACTIVE
212	0x000000D4	The segment is locked and cannot be reallocated.	ERROR_LOCKED

Code (dec)	Code (hex)	Description	Name
214	0x000000D6	Too many dynamic-link modules are attached to this program or dynamic-link module.	ERROR_TOO_MANY_MODULES
215	0x000000D7	Cannot nest calls to LoadModule.	ERROR_NESTING_NOT_ALLOWED
216	0x000000D8	The image file %1 is valid, but is for a machine type other than the current machine.	ERROR_EXE_MACHINE_TYPE_MISMATCH
230	0x000000E6	The pipe state is invalid.	ERROR_BAD_PIPE
231	0x000000E7	All pipe instances are busy.	ERROR_PIPE_BUSY
232	0x000000E8	The pipe is being closed.	ERROR_NO_DATA
233	0x000000E9	No process is on the other end of the pipe.	ERROR_PIPE_NOT_CONNECTED
234	0x000000EA	More data is available.	ERROR_MORE_DATA
240	0x000000F0	The session was canceled.	ERROR_VC_DISCONNECTED
254	0x000000FE	The specified extended attribute name was invalid.	ERROR_INVALID_EA_NAME
255	0x000000FF	The extended attributes are inconsistent.	ERROR_EA_LIST_INCONSISTENT
258	0x00000102	The wait operation timed out.	WAIT_TIMEOUT
259	0x00000103	No more data is available.	ERROR_NO_MORE_ITEMS
266	0x0000010A	The copy functions cannot be used.	ERROR_CANNOT_COPY
267	0x0000010B	The directory name is invalid.	ERROR_DIRECTORY
275	0x00000113	The extended attributes did not fit in the buffer.	ERROR_EAS_DIDNT_FIT
276	0x00000114	The extended attribute file on the mounted file system is corrupt.	ERROR_EA_FILE_CORRUPT
277	0x00000115	The extended attribute table file is full.	ERROR_EA_TABLE_FULL
278	0x00000116	The specified extended attribute handle is invalid.	ERROR_INVALID_EA_HANDLE
282	0x0000011A	The mounted file system does not support extended attributes.	ERROR_EAS_NOT_SUPPORTED
288	0x00000120	Attempt to release mutex not owned by caller.	ERROR_NOT_OWNER
298	0x0000012A	Too many posts were made to a semaphore.	ERROR_TOO_MANY_POSTS
299	0x0000012B	Only part of a ReadProcessMemory or WriteProcessMemory request was completed.	ERROR_PARTIAL_COPY
300	0x0000012C	The oplock request is denied.	ERROR_OPLOCK_NOT_GRANTED
301	0x0000012D	An invalid oplock acknowledgment was received by the system.	ERROR_INVALID_OPLOCK_PROTOCOL
302	0x0000012E	The volume is too fragmented to complete this operation.	ERROR_DISK_TOO_FRAGMENTED
303	0x0000012F	The file cannot be opened because it is in the process of being deleted.	ERROR_DELETE_PENDING
317	0x0000013D	The system cannot find message text for message number 0x%1 in the message file for %2.	ERROR_MR_MID_NOT_FOUND
487	0x000001E7	Attempt to access invalid address.	ERROR_INVALID_ADDRESS

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Code (dec)	Code (hex)	Description	Name
534	0x00000216	Arithmetic result exceeded 32 bits.	ERROR_ARITHMETIC_OVERFLOW
535	0x00000217	There is a process on other end of the pipe.	ERROR_PIPE_CONNECTED
536	0x00000218	Waiting for a process to open the other end of the pipe.	ERROR_PIPE_LISTENING
994	0x000003E2	Access to the extended attribute was denied.	ERROR_EA_ACCESS_DENIED
995	0x000003E3	The I/O operation has been aborted because of either a thread exit or an application request.	ERROR_OPERATION_ABORTED
996	0x000003E4	Overlapped I/O event is not in a signaled state.	ERROR_IO_INCOMPLETE
997	0x000003E5	Overlapped I/O operation is in progress.	ERROR_IO_PENDING
998	0x000003E6	Invalid access to memory location.	ERROR_NOACCESS
999	0x000003E7	Error performing inpage operation.	ERROR_SWAPERROR
1001	0x000003E9	Recursion too deep; the stack overflowed.	ERROR_STACK_OVERFLOW
1002	0x000003EA	The window cannot act on the sent message.	ERROR_INVALID_MESSAGE
1003	0x000003EB	Cannot complete this function.	ERROR_CAN_NOT_COMPLETE
1004	0x000003EC	Invalid flags.	ERROR_INVALID_FLAGS
1005	0x000003ED	The volume does not contain a recognized file system. Please make sure that all required file system drivers are loaded and that the volume is not corrupted.	ERROR_UNRECOGNIZED_VOLUME
1006	0x000003EE	The volume for a file has been externally altered so that the opened file is no longer valid.	ERROR_FILE_INVALID
1007	0x000003EF	The requested operation cannot be performed in full-screen mode.	ERROR_FULLSCREEN_MODE
1008	0x000003F0	An attempt was made to reference a token that does not exist.	ERROR_NO_TOKEN
1009	0x000003F1	The configuration registry database is corrupt.	ERROR_BADDB
1010	0x000003F2	The configuration registry key is invalid.	ERROR_BADKEY
1011	0x000003F3	The configuration registry key could not be opened.	ERROR_CANTOPEN
1012	0x000003F4	The configuration registry key could not be read.	ERROR_CANTREAD
1013	0x000003F5	The configuration registry key could not be written.	ERROR_CANTWRITE
1014	0x000003F6	One of the files in the registry database had to be recovered by use of a log or alternate copy. The recovery was successful.	ERROR_REGISTRY_RECOVERED
1015	0x000003F7	The registry is corrupted. The structure of one of the files containing registry data is corrupted, or the system's memory image of the file is corrupted, or the file could not be recovered because the alternate copy or log was absent or corrupted.	ERROR_REGISTRY_CORRUPT

Code (dec)	Code (hex)	Description	Name
1016	0x000003F8	An I/O operation initiated by the registry failed unrecoverably. The registry could not read in, or write out, or flush, one of the files that contain the system's image of the registry.	ERROR_REGISTRY_IO_FAILED
1017	0x000003F9	The system has attempted to load or restore a file into the registry, but the specified file is not in a registry file format.	ERROR_NOT_REGISTRY_FILE
1018	0x000003FA	Illegal operation attempted on a registry key that has been marked for deletion.	ERROR_KEY_DELETED
1019	0x000003FB	System could not allocate the required space in a registry log.	ERROR_NO_LOG_SPACE
1020	0x000003FC	Cannot create a symbolic link in a registry key that already has subkeys or values.	ERROR_KEY_HAS_CHILDREN
1021	0x000003FD	Cannot create a stable subkey under a volatile parent key.	ERROR_CHILD_MUST_BE_VOLATILE
1022	0x000003FE	A notify change request is being completed and the information is not being returned in the caller's buffer. The caller now needs to enumerate the files to find the changes.	ERROR_NOTIFY_ENUM_DIR
1051	0x0000041B	A stop control has been sent to a service that other running services are dependent on.	ERROR_DEPENDENT_SERVICES_RUNNING
1052	0x0000041C	The requested control is not valid for this service.	ERROR_INVALID_SERVICE_CONTROL
1053	0x0000041D	The service did not respond to the start or control request in a timely fashion.	ERROR_SERVICE_REQUEST_TIMEOUT
1054	0x0000041E	A thread could not be created for the service.	ERROR_SERVICE_NO_THREAD
1055	0x0000041F	The service database is locked.	ERROR_SERVICE_DATABASE_LOCKED
1056	0x00000420	An instance of the service is already running.	ERROR_SERVICE_ALREADY_RUNNING
1057	0x00000421	The account name is invalid or does not exist, or the password is invalid for the account name specified.	ERROR_INVALID_SERVICE_ACCOUNT
1058	0x00000422	The service cannot be started, either because it is disabled or because it has no enabled devices associated with it.	ERROR_SERVICE_DISABLED
1059	0x00000423	Circular service dependency was specified.	ERROR_CIRCULAR_DEPENDENCY
1060	0x00000424	The specified service does not exist as an installed service.	ERROR_SERVICE_DOES_NOT_EXIST
1061	0x00000425	The service cannot accept control messages at this time.	ERROR_SERVICE_CANNOT_ACCEPT_CTRL
1062	0x00000426	The service has not been started.	ERROR_SERVICE_NOT_ACTIVE
1063	0x00000427	The service process could not connect to the service controller.	ERROR_FAILED_SERVICE_CONTROLLER_CONNECT
1064	0x00000428	An exception occurred in the service when handling the control request.	ERROR_EXCEPTION_IN_SERVICE
1065	0x00000429	The database specified does not exist.	ERROR_DATABASE_DOES_NOT_EXIST

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Code (dec)	Code (hex)	Description	Name
1066	0x0000042A	The service has returned a service-specific error code.	ERROR_SERVICE_SPECIFIC_ERROR
1067	0x0000042B	The process terminated unexpectedly.	ERROR_PROCESS_ABORTED
1068	0x0000042C	The dependency service or group failed to start.	ERROR_SERVICE_DEPENDENCY_FAIL
1069	0x0000042D	The service did not start due to a logon failure.	ERROR_SERVICE_LOGON_FAILED
1070	0x0000042E	After starting, the service hung in a start-pending state.	ERROR_SERVICE_START_HANG
1071	0x0000042F	The specified service database lock is invalid.	ERROR_INVALID_SERVICE_LOCK
1072	0x00000430	The specified service has been marked for deletion.	ERROR_SERVICE_MARKED_FOR_DELETE
1073	0x00000431	The specified service already exists.	ERROR_SERVICE_EXISTS
1074	0x00000432	The system is currently running with the last-known-good configuration.	ERROR_ALREADY_RUNNING_LKG
1075	0x00000433	The dependency service does not exist or has been marked for deletion.	ERROR_SERVICE_DEPENDENCY_DELETED
1076	0x00000434	The current boot has already been accepted for use as the last-known-good control set.	ERROR_BOOT_ALREADY_ACCEPTED
1077	0x00000435	No attempts to start the service have been made since the last boot.	ERROR_SERVICE_NEVER_STARTED
1078	0x00000436	The name is already in use as either a service name or a service display name.	ERROR_DUPLICATE_SERVICE_NAME
1079	0x00000437	The account specified for this service is different from the account specified for other services running in the same process.	ERROR_DIFFERENT_SERVICE_ACCOUNT
1080	0x00000438	Failure actions can only be set for Win32 services, not for drivers.	ERROR_CANNOT_DETECT_DRIVER_FAILURE
1081	0x00000439	This service runs in the same process as the service control manager. Therefore, the service control manager cannot take action if this service's process terminates unexpectedly.	ERROR_CANNOT_DETECT_PROCESS_ABORT
1082	0x0000043A	No recovery program has been configured for this service.	ERROR_NO_RECOVERY_PROGRAM
1083	0x0000043B	The executable program that this service is configured to run in does not implement the service.	ERROR_SERVICE_NOT_IN_EXE
1084	0x0000043C	This service cannot be started in Safe Mode.	ERROR_NOT_SAFEBOOT_SERVICE
1100	0x0000044C	The physical end of the tape has been reached.	ERROR_END_OF_MEDIA
1101	0x0000044D	A tape access reached a filemark.	ERROR_FILEMARK_DETECTED
1102	0x0000044E	The beginning of the tape or a partition was encountered.	ERROR_BEGINNING_OF_MEDIA
1103	0x0000044F	A tape access reached the end of a set of files.	ERROR_SETMARK_DETECTED
1104	0x00000450	No more data is on the tape.	ERROR_NO_DATA_DETECTED

Code (dec)	Code (hex)	Description	Name
1105	0x00000451	Tape could not be partitioned.	ERROR_PARTITION_FAILURE
1106	0x00000452	When accessing a new tape of a multivolume partition, the current block size is incorrect.	ERROR_INVALID_BLOCK_LENGTH
1107	0x00000453	Tape partition information could not be found when loading a tape.	ERROR_DEVICE_NOT_PARTITIONED
1108	0x00000454	Unable to lock the media eject mechanism.	ERROR_UNABLE_TO_LOCK_MEDIA
1109	0x00000455	Unable to unload the media.	ERROR_UNABLE_TO_UNLOAD_MEDIA
1110	0x00000456	The media in the drive may have changed.	ERROR_MEDIA_CHANGED
1111	0x00000457	The I/O bus was reset.	ERROR_BUS_RESET
1112	0x00000458	No media in drive.	ERROR_NO_MEDIA_IN_DRIVE
1113	0x00000459	No mapping for the Unicode character exists in the target multi-byte code page.	ERROR_NO_UNICODE_TRANSLATION
1114	0x0000045A	A dynamic link library (DLL) initialization routine failed.	ERROR_DLL_INIT_FAILED
1115	0x0000045B	A system shutdown is in progress.	ERROR_SHUTDOWN_IN_PROGRESS
1116	0x0000045C	Unable to abort the system shutdown because no shutdown was in progress.	ERROR_NO_SHUTDOWN_IN_PROGRESS
1117	0x0000045D	The request could not be performed because of an I/O device error.	ERROR_IO_DEVICE
1118	0x0000045E	No serial device was successfully initialized. The serial driver will unload.	ERROR_SERIAL_NO_DEVICE
1119	0x0000045F	Unable to open a device that was sharing an interrupt request (IRQ) with other devices. At least one other device that uses that IRQ was already opened.	ERROR_IRQ_BUSY
1120	0x00000460	A serial I/O operation was completed by another write to the serial port. (The IOCTL_SERIAL_XOFF_COUNTER reached zero.)	ERROR_MORE_WRITES
1121	0x00000461	A serial I/O operation completed because the timeout period expired. (The IOCTL_SERIAL_XOFF_COUNTER did not reach zero.)	ERROR_COUNTER_TIMEOUT
1122	0x00000462	No ID address mark was found on the floppy disk.	ERROR_FLOPPY_ID_MARK_NOT_FOUND
1123	0x00000463	Mismatch between the floppy disk sector ID field and the floppy disk controller track address.	ERROR_FLOPPY_WRONG_CYLINDER
1124	0x00000464	The floppy disk controller reported an error that is not recognized by the floppy disk driver.	ERROR_FLOPPY_UNKNOWN_ERROR
1125	0x00000465	The floppy disk controller returned inconsistent results in its registers.	ERROR_FLOPPY_BAD_REGISTERS
1126	0x00000466	While accessing the hard disk, a recalibrate operation failed, even after retries.	ERROR_DISK_RECALIBRATE_FAILED

Code (dec)	Code (hex)	Description	Name
1127	0x00000467	While accessing the hard disk, a disk operation failed even after retries.	ERROR_DISK_OPERATION_ FAILED
1128	0x00000468	While accessing the hard disk, a disk controller reset was needed, but even that failed.	ERROR_DISK_RESET_FAILE D
1129	0x00000469	Physical end of tape encountered.	ERROR_EOM_OVERFLOW
1130	0x0000046A	Not enough server storage is available to process this command.	ERROR_NOT_ENOUGH_SE RVER_MEMORY
1131	0x0000046B	A potential deadlock condition has been detected.	ERROR_POSSIBLE_DEADLO CK
1132	0x0000046C	The base address or the file offset specified does not have the proper alignment.	ERROR_MAPPED_ALIGNME NT
1140	0x00000474	An attempt to change the system power state was vetoed by another application or driver.	ERROR_SET_POWER_STAT E_VETOED
1141	0x00000475	The system BIOS failed an attempt to change the system power state.	ERROR_SET_POWER_STAT E_FAILED
1142	0x00000476	An attempt was made to create more links on a file than the file system supports.	ERROR_TOO_MANY_LINKS
1150	0x0000047E	The specified program requires a newer version of Windows.	ERROR_OLD_WIN_VERSION
1151	0x0000047F	The specified program is not a Windows or MS-DOS program.	ERROR_APP_WRONG_OS
1152	0x00000480	Cannot start more than one instance of the specified program.	ERROR_SINGLE_INSTANCE _APP
1153	0x00000481	The specified program was written for an earlier version of Windows.	ERROR_RMODE_APP
1154	0x00000482	One of the library files needed to run this application is damaged.	ERROR_INVALID_DLL
1155	0x00000483	No application is associated with the specified file for this operation.	ERROR_NO_ASSOCIATION
1156	0x00000484	An error occurred in sending the command to the application.	ERROR_DDE_FAIL
1157	0x00000485	One of the library files needed to run this application cannot be found.	ERROR_DLL_NOT_FOUND
1158	0x00000486	The current process has used all of its system allowance of handles for Window Manager objects.	ERROR_NO_MORE_USER_ HANDLES
1159	0x00000487	The message can be used only with synchronous operations.	ERROR_MESSAGE_SYNC_O NLY
1160	0x00000488	The indicated source element has no media.	ERROR_SOURCE_ELEMENT _EMPTY
1161	0x00000489	The indicated destination element already contains media.	ERROR_DESTINATION_ELE MENT_FULL
1162	0x0000048A	The indicated element does not exist.	ERROR_ILLEGAL_ELEMENT _ADDRESS
1163	0x0000048B	The indicated element is part of a magazine that is not present.	ERROR_MAGAZINE_NOT_P RESENT
1164	0x0000048C	The indicated device requires reinitialization due to hardware errors.	ERROR_DEVICE_REINITIALI ZATION_NEEDED
1165	0x0000048D	The device has indicated that cleaning is required before further operations are attempted.	ERROR_DEVICE_REQUIRES _CLEANING

Code (dec)	Code (hex)	Description	Name
1166	0x0000048E	The device has indicated that its door is open.	ERROR_DEVICE_DOOR_OPEN
1167	0x0000048F	The device is not connected.	ERROR_DEVICE_NOT_CONNECTED
1168	0x00000490	Element not found.	ERROR_NOT_FOUND
1169	0x00000491	There was no match for the specified key in the index.	ERROR_NO_MATCH
1170	0x00000492	The property set specified does not exist on the object.	ERROR_SET_NOT_FOUND
1171	0x00000493	The point passed to GetMouseMovePointsEx is not in the buffer.	ERROR_POINT_NOT_FOUND
1172	0x00000494	The tracking (workstation) service is not running.	ERROR_NO_TRACKING_SERVICE
1173	0x00000495	The Volume ID could not be found.	ERROR_NO_VOLUME_ID
1175	0x00000497	Unable to remove the file to be replaced.	ERROR_UNABLE_TO_REMOVE_REPLACED
1176	0x00000498	Unable to move the replacement file to the file to be replaced. The file to be replaced has retained its original name.	ERROR_UNABLE_TO_MOVE_REPLACEMENT
1177	0x00000499	Unable to move the replacement file to the file to be replaced. The file to be replaced has been renamed using the backup name.	ERROR_UNABLE_TO_MOVE_REPLACEMENT_2
1178	0x0000049A	The volume change journal is being deleted.	ERROR_JOURNAL_DELETE_IN_PROGRESS
1179	0x0000049B	The volume change journal is not active.	ERROR_JOURNAL_NOT_ACTIVE
1180	0x0000049C	A file was found, but it may not be the correct file.	ERROR_POTENTIAL_FILE_FOUND
1181	0x0000049D	The journal entry has been deleted from the journal.	ERROR_JOURNAL_ENTRY_DELETED
1200	0x000004B0	The specified device name is invalid.	ERROR_BAD_DEVICE
1201	0x000004B1	The device is not currently connected but it is a remembered connection.	ERROR_CONNECTION_UNAVAIL
1202	0x000004B2	The local device name has a remembered connection to another network resource.	ERROR_DEVICE_ALREADY_REMEMBERED
1203	0x000004B3	No network provider accepted the given network path.	ERROR_NO_NET_OR_BAD_PATH
1204	0x000004B4	The specified network provider name is invalid.	ERROR_BAD_PROVIDER
1205	0x000004B5	Unable to open the network connection profile.	ERROR_CANNOT_OPEN_PROFILE
1206	0x000004B6	The network connection profile is corrupted.	ERROR_BAD_PROFILE
1207	0x000004B7	Cannot enumerate a noncontainer.	ERROR_NOT_CONTAINER
1208	0x000004B8	An extended error has occurred.	ERROR_EXTENDED_ERROR
1209	0x000004B9	The format of the specified group name is invalid.	ERROR_INVALID_GROUPNAME
1210	0x000004BA	The format of the specified computer name is invalid.	ERROR_INVALID_COMPUTERNAME
1211	0x000004BB	The format of the specified event name is invalid.	ERROR_INVALID_EVENTNAME

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Code (dec)	Code (hex)	Description	Name
1212	0x000004BC	The format of the specified domain name is invalid.	ERROR_INVALID_DOMAINNAME
1213	0x000004BD	The format of the specified service name is invalid.	ERROR_INVALID_SERVICENAME
1214	0x000004BE	The format of the specified network name is invalid.	ERROR_INVALID_NETNAME
1215	0x000004BF	The format of the specified share name is invalid.	ERROR_INVALID_SHARENAME
1216	0x000004C0	The format of the specified password is invalid.	ERROR_INVALID_PASSWORDNAME
1217	0x000004C1	The format of the specified message name is invalid.	ERROR_INVALID_MESSAGENAME
1218	0x000004C2	The format of the specified message destination is invalid.	ERROR_INVALID_MESSAGEDEST
1219	0x000004C3	The credentials supplied conflict with an existing set of credentials.	ERROR_SESSION_CREDENTIAL_CONFLICT
1220	0x000004C4	An attempt was made to establish a session to a network server, but there are already too many sessions established to that server.	ERROR_REMOTE_SESSION_LIMIT_EXCEEDED
1221	0x000004C5	The workgroup or domain name is already in use by another computer on the network.	ERROR_DUP_DOMAINNAME
1222	0x000004C6	The network is not present or not started.	ERROR_NO_NETWORK
1223	0x000004C7	The operation was canceled by the user.	ERROR_CANCELLED
1224	0x000004C8	The requested operation cannot be performed on a file with a user-mapped section open.	ERROR_USER_MAPPED_FILE
1225	0x000004C9	The remote system refused the network connection.	ERROR_CONNECTION_REFUSED
1226	0x000004CA	The network connection was gracefully closed.	ERROR_GRACEFUL_DISCONNECT
1227	0x000004CB	The network transport endpoint already has an address associated with it.	ERROR_ADDRESS_ALREADY_ASSOCIATED
1228	0x000004CC	An address has not yet been associated with the network endpoint.	ERROR_ADDRESS_NOT_ASSOCIATED
1229	0x000004CD	An operation was attempted on a nonexistent network connection.	ERROR_CONNECTION_INVALID
1230	0x000004CE	An invalid operation was attempted on an active network connection.	ERROR_CONNECTION_ACTIVE
1231	0x000004CF	The network location cannot be reached. For information about network troubleshooting, see Windows Help.	ERROR_NETWORK_UNREACHABLE
1232	0x000004D0	The network location cannot be reached. For information about network troubleshooting, see Windows Help.	ERROR_HOST_UNREACHABLE
1233	0x000004D1	The network location cannot be reached. For information about network troubleshooting, see Windows Help.	ERROR_PROTOCOL_UNREACHABLE
1234	0x000004D2	No service is operating at the destination network endpoint on the remote system.	ERROR_PORT_UNREACHABLE
1235	0x000004D3	The request was aborted.	ERROR_REQUEST_ABORTED

Code (dec)	Code (hex)	Description	Name
1236	0x000004D4	The network connection was aborted by the local system.	ERROR_CONNECTION_ABORTED
1237	0x000004D5	The operation could not be completed. A retry should be performed.	ERROR_RETRY
1238	0x000004D6	A connection to the server could not be made because the limit on the number of concurrent connections for this account has been reached.	ERROR_CONNECTION_COUNT_LIMIT
1239	0x000004D7	Attempting to log in during an unauthorized time of day for this account.	ERROR_LOGIN_TIME_RESTRICTION
1240	0x000004D8	The account is not authorized to log in from this station.	ERROR_LOGIN_WKSTA_RESTRICTION
1241	0x000004D9	The network address could not be used for the operation requested.	ERROR_INCORRECT_ADDRESS
1242	0x000004DA	The service is already registered.	ERROR_ALREADY_REGISTERED
1243	0x000004DB	The specified service does not exist.	ERROR_SERVICE_NOT_FOUND
1244	0x000004DC	The operation being requested was not performed because the user has not been authenticated.	ERROR_NOT_AUTHENTICATED
1245	0x000004DD	The operation being requested was not performed because the user has not logged on to the network. The specified service does not exist.	ERROR_NOT_LOGGED_ON
1246	0x000004DE	Continue with work in progress.	ERROR_CONTINUE
1247	0x000004DF	An attempt was made to perform an initialization operation when initialization has already been completed.	ERROR_ALREADY_INITIALIZED
1248	0x000004E0	No more local devices.	ERROR_NO_MORE_DEVICES
1249	0x000004E1	The specified site does not exist.	ERROR_NO_SUCH_SITE
1250	0x000004E2	A domain controller with the specified name already exists.	ERROR_DOMAIN_CONTROLLER_EXISTS
1251	0x000004E3	This operation is supported only when you are connected to the server.	ERROR_ONLY_IF_CONNECTED
1252	0x000004E4	The group policy framework should call the extension even if there are no changes.	ERROR_OVERRIDE_NOCHANGES
1253	0x000004E5	The specified user does not have a valid profile.	ERROR_BAD_USER_PROFILE
1254	0x000004E6	This operation is not supported on a Microsoft Small Business Server.	ERROR_NOT_SUPPORTED_ON_SBS
1255	0x000004E7	The server machine is shutting down.	ERROR_SERVER_SHUTDOWN_IN_PROGRESS
1256	0x000004E8	The remote system is not available. For information about network troubleshooting, see Windows Help.	ERROR_HOST_DOWN
1257	0x000004E9	The security identifier provided is not from an account domain.	ERROR_NON_ACCOUNT_SID
1258	0x000004EA	The security identifier provided does not have a domain component.	ERROR_NON_DOMAIN_SID
1259	0x000004EB	AppHelp dialog canceled thus preventing the application from starting.	ERROR_APPHELP_BLOCK

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Code (dec)	Code (hex)	Description	Name
1260	0x000004EC	Access to the requested resource has been disabled by your administrator.	ERROR_ACCESS_DISABLED _BY_POLICY
1261	0x000004ED	A program attempt to use an invalid register value. Normally caused by an uninitialized register. This error is Itanium specific.	ERROR_REG_NAT_CONSU MPTION
1262	0x000004EE	The share is currently offline or does not exist.	ERROR_CSCSHARE_OFFLI NE
1300	0x00000514	Not all privileges referenced are assigned to the caller.	ERROR_NOT_ALL_ASSIGNE D
1301	0x00000515	Some mapping between account names and security IDs was not done.	ERROR_SOME_NOT_MAPP ED
1302	0x00000516	No system quota limits are specifically set for this account.	ERROR_NO_QUOTAS_FOR_ ACCOUNT
1303	0x00000517	No encryption key is available. A well-known encryption key was returned.	ERROR_LOCAL_USER_SES SION_KEY
1304	0x00000518	The password is too complex to be converted to a LAN Manager password. The LAN Manager password returned is a NULL string.	ERROR_NULL_LM_PASSWO RD
1305	0x00000519	The revision level is unknown.	ERROR_UNKNOWN_REVISI ON
1306	0x0000051A	Indicates two revision levels are incompatible.	ERROR_REVISION_MISMAT CH
1307	0x0000051B	This security ID may not be assigned as the owner of this object.	ERROR_INVALID_OWNER
1308	0x0000051C	This security ID may not be assigned as the primary group of an object.	ERROR_INVALID_PRIMARY_ GROUP
1309	0x0000051D	An attempt has been made to operate on an impersonation token by a thread that is not currently impersonating a client.	ERROR_NO_IMPERSONATI ON_TOKEN
1310	0x0000051E	The group may not be disabled.	ERROR_CANT_DISABLE_MA NDATORY
1311	0x0000051F	There are currently no logon servers available to service the logon request.	ERROR_NO_LOGON_SERVE RS
1312	0x00000520	A specified logon session does not exist. It may already have been terminated.	ERROR_NO_SUCH_LOGON_ SESSION
1313	0x00000521	A specified privilege does not exist.	ERROR_NO_SUCH_PRIVILE GE
1314	0x00000522	A required privilege is not held by the client.	ERROR_PRIVILEGE_NOT_H ELD
1315	0x00000523	The name provided is not a properly formed account name.	ERROR_INVALID_ACCOUNT _NAME
1316	0x00000524	The specified user already exists.	ERROR_USER_EXISTS
1317	0x00000525	The specified user does not exist.	ERROR_NO_SUCH_USER
1318	0x00000526	The specified group already exists.	ERROR_GROUP_EXISTS
1319	0x00000527	The specified group does not exist.	ERROR_NO_SUCH_GROUP
1320	0x00000528	Either the specified user account is already a member of the specified group, or the specified group cannot be deleted because it contains a member.	ERROR_MEMBER_IN_GROU P
1321	0x00000529	The specified user account is not a member of the specified group account.	ERROR_MEMBER_NOT_IN_ GROUP

Code (dec)	Code (hex)	Description	Name
1322	0x0000052A	The last remaining administration account cannot be disabled or deleted.	ERROR_LAST_ADMIN
1323	0x0000052B	Unable to update the password. The value provided as the current password is incorrect.	ERROR_WRONG_PASSWORD
1324	0x0000052C	Unable to update the password. The value provided for the new password contains values that are not allowed in passwords.	ERROR_ILL_FORMED_PASSWORD
1325	0x0000052D	Unable to update the password. The value provided for the new password does not meet the length, complexity, or history requirement of the domain.	ERROR_PASSWORD_RESTRICTION
1326	0x0000052E	Logon failure: unknown user name or bad password.	ERROR_LOGON_FAILURE
1327	0x0000052F	Logon failure: user account restriction.	ERROR_ACCOUNT_RESTRICTION
1328	0x00000530	Logon failure: account logon time restriction violation.	ERROR_INVALID_LOGON_HOURS
1329	0x00000531	Logon failure: user not allowed to log on to this computer.	ERROR_INVALID_WORKSTATION
1330	0x00000532	Logon failure: the specified account password has expired.	ERROR_PASSWORD_EXPIRED
1331	0x00000533	Logon failure: account currently disabled.	ERROR_ACCOUNT_DISABLED
1332	0x00000534	No mapping between account names and security IDs was done.	ERROR_NONE_MAPPED
1333	0x00000535	Too many local user identifiers (LUIDs) were requested at one time.	ERROR_TOO_MANY_LUIDS_REQUESTED
1334	0x00000536	No more local user identifiers (LUIDs) are available.	ERROR_LUIDS_EXHAUSTED
1335	0x00000537	The subauthority part of a security ID is invalid for this particular use.	ERROR_INVALID_SUB_AUTHORITY
1336	0x00000538	The access control list (ACL) structure is invalid.	ERROR_INVALID_ACL
1337	0x00000539	The security ID structure is invalid.	ERROR_INVALID_SID
1338	0x0000053A	The security descriptor structure is invalid.	ERROR_INVALID_SECURITY_DESCR
1340	0x0000053C	The inherited access control list (ACL) or access control entry (ACE) could not be built.	ERROR_BAD_INHERITANCE_ACL
1341	0x0000053D	The server is currently disabled.	ERROR_SERVER_DISABLED
1342	0x0000053E	The server is currently enabled.	ERROR_SERVER_NOT_DISABLED
1343	0x0000053F	The value provided was an invalid value for an identifier authority.	ERROR_INVALID_ID_AUTHORITY
1344	0x00000540	No more memory is available for security information updates.	ERROR_ALLOTTED_SPACE_EXCEEDED
1345	0x00000541	The specified attributes are invalid, or incompatible with the attributes for the group as a whole.	ERROR_INVALID_GROUP_ATTRIBUTES
1346	0x00000542	Either a required impersonation level was not provided, or the provided impersonation level is invalid.	ERROR_BAD_IMPERSONATION_LEVEL

Code (dec)	Code (hex)	Description	Name
1347	0x00000543	Cannot open an anonymous level security token.	ERROR_CANT_OPEN_ANONYMOUS
1348	0x00000544	The validation information class requested was invalid.	ERROR_BAD_VALIDATION_CLASS
1349	0x00000545	The type of the token is inappropriate for its attempted use.	ERROR_BAD_TOKEN_TYPE
1350	0x00000546	Unable to perform a security operation on an object that has no associated security.	ERROR_NO_SECURITY_ON_OBJECT
1351	0x00000547	Configuration information could not be read from the domain controller, either because the machine is unavailable, or access has been denied.	ERROR_CANT_ACCESS_DOMAIN_INFO
1352	0x00000548	The security account manager (SAM) or local security authority (LSA) server was in the wrong state to perform the security operation.	ERROR_INVALID_SERVER_STATE
1353	0x00000549	The domain was in the wrong state to perform the security operation.	ERROR_INVALID_DOMAIN_STATE
1354	0x0000054A	This operation is only allowed for the Primary Domain Controller of the domain.	ERROR_INVALID_DOMAIN_ROLE
1355	0x0000054B	The specified domain either does not exist or could not be contacted.	ERROR_NO_SUCH_DOMAIN
1356	0x0000054C	The specified domain already exists.	ERROR_DOMAIN_EXISTS
1357	0x0000054D	An attempt was made to exceed the limit on the number of domains per server.	ERROR_DOMAIN_LIMIT_EXCEEDED
1358	0x0000054E	Unable to complete the requested operation because of either a catastrophic media failure or a data structure corruption on the disk.	ERROR_INTERNAL_DB_CORRUPTION
1359	0x0000054F	An internal error occurred.	ERROR_INTERNAL_ERROR
1360	0x00000550	Generic access types were contained in an access mask which should already be mapped to nongeneric types.	ERROR_GENERIC_NOT_MAPPED
1361	0x00000551	A security descriptor is not in the right format (absolute or self-relative).	ERROR_BAD_DESCRIPTOR_FORMAT
1362	0x00000552	The requested action is restricted for use by logon processes only. The calling process has not registered as a logon process.	ERROR_NOT_LOGON_PROCESS
1363	0x00000553	Cannot start a new logon session with an ID that is already in use.	ERROR_LOGON_SESSION_EXISTS
1364	0x00000554	A specified authentication package is unknown.	ERROR_NO_SUCH_PACKAGE
1365	0x00000555	The logon session is not in a state that is consistent with the requested operation.	ERROR_BAD_LOGON_SESSION_STATE
1366	0x00000556	The logon session ID is already in use.	ERROR_LOGON_SESSION_COLLISION
1367	0x00000557	A logon request contained an invalid logon type value.	ERROR_INVALID_LOGON_TYPE
1368	0x00000558	Unable to impersonate using a named pipe until data has been read from that pipe.	ERROR_CANNOT_IMPERSONATE

Code (dec)	Code (hex)	Description	Name
1369	0x00000559	The transaction state of a registry subtree is incompatible with the requested operation.	ERROR_RXACT_INVALID_STATE
1370	0x0000055A	An internal security database corruption has been encountered.	ERROR_RXACT_COMMIT_FAILURE
1371	0x0000055B	Cannot perform this operation on built-in accounts.	ERROR_SPECIAL_ACCOUNT
1372	0x0000055C	Cannot perform this operation on this built-in special group.	ERROR_SPECIAL_GROUP
1373	0x0000055D	Cannot perform this operation on this built-in special user.	ERROR_SPECIAL_USER
1374	0x0000055E	The user cannot be removed from a group because the group is currently the user's primary group.	ERROR_MEMBERS_PRIMARY_GROUP
1375	0x0000055F	The token is already in use as a primary token.	ERROR_TOKEN_ALREADY_IN_USE
1376	0x00000560	The specified local group does not exist.	ERROR_NO_SUCH_ALIAS
1377	0x00000561	The specified account name is not a member of the local group.	ERROR_MEMBER_NOT_IN_ALIAS
1378	0x00000562	The specified account name is already a member of the local group.	ERROR_MEMBER_IN_ALIAS
1379	0x00000563	The specified local group already exists.	ERROR_ALIAS_EXISTS
1380	0x00000564	Logon failure: the user has not been granted the requested logon type at this computer.	ERROR_LOGON_NOT_GRANTED
1381	0x00000565	The maximum number of secrets that may be stored in a single system has been exceeded.	ERROR_TOO_MANY_SECRETS
1382	0x00000566	The length of a secret exceeds the maximum length allowed.	ERROR_SECRET_TOO_LONG
1383	0x00000567	The local security authority database contains an internal inconsistency.	ERROR_INTERNAL_DB_ERROR
1384	0x00000568	During a logon attempt, the user's security context accumulated too many security IDs.	ERROR_TOO_MANY_CONTEXT_IDS
1385	0x00000569	Logon failure: the user has not been granted the requested logon type at this computer.	ERROR_LOGON_TYPE_NOT_GRANTED
1386	0x0000056A	A cross-encrypted password is necessary to change a user password.	ERROR_NT_CROSS_ENCRYPTION_REQUIRED
1387	0x0000056B	A new member could not be added to or removed from the local group because the member does not exist.	ERROR_NO_SUCH_MEMBER
1388	0x0000056C	A new member could not be added to a local group because the member has the wrong account type.	ERROR_INVALID_MEMBER
1389	0x0000056D	Too many security IDs have been specified.	ERROR_TOO_MANY_SIDS
1390	0x0000056E	A cross-encrypted password is necessary to change this user password.	ERROR_LM_CROSS_ENCRYPTION_REQUIRED
1391	0x0000056F	Indicates an ACL contains no inheritable components.	ERROR_NO_INHERITANCE
1392	0x00000570	The file or directory is corrupted and unreadable.	ERROR_FILE_CORRUPT

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Code (dec)	Code (hex)	Description	Name
1393	0x00000571	The disk structure is corrupted and unreadable.	ERROR_DISK_CORRUPT
1394	0x00000572	There is no user session key for the specified logon session.	ERROR_NO_USER_SESSION_KEY
1395	0x00000573	The service being accessed is licensed for a particular number of connections. No more connections can be made to the service at this time because there are already as many connections as the service can accept.	ERROR_LICENSE_QUOTA_EXCEEDED
1396	0x00000574	Logon Failure: The target account name is incorrect.	ERROR_WRONG_TARGET_NAME
1397	0x00000575	Mutual Authentication failed. The server's password is out of date at the domain controller.	ERROR_MUTUAL_AUTH_FAILED
1398	0x00000576	There is a time difference between the client and server.	ERROR_TIME_SKEW
1399	0x00000577	This operation can not be performed on the current domain.	ERROR_CURRENT_DOMAIN_NOT_ALLOWED
1400	0x00000578	Invalid window handle.	ERROR_INVALID_WINDOW_HANDLE
1401	0x00000579	Invalid menu handle.	ERROR_INVALID_MENU_HANDLE
1402	0x0000057A	Invalid cursor handle.	ERROR_INVALID_CURSOR_HANDLE
1403	0x0000057B	Invalid accelerator table handle.	ERROR_INVALID_ACCEL_HANDLE
1404	0x0000057C	Invalid hook handle.	ERROR_INVALID_HOOK_HANDLE
1405	0x0000057D	Invalid handle to a multiple-window position structure.	ERROR_INVALID_DWP_HANDLE
1406	0x0000057E	Cannot create a top-level child window.	ERROR_TLW_WITH_WSCHILD
1407	0x0000057F	Cannot find window class.	ERROR_CANNOT_FIND_WND_CLASS
1408	0x00000580	Invalid window; it belongs to other thread.	ERROR_WINDOW_OF_OTHER_THREAD
1409	0x00000581	Hot key is already registered.	ERROR_HOTKEY_ALREADY_REGISTERED
1410	0x00000582	Class already exists.	ERROR_CLASS_ALREADY_EXISTS
1411	0x00000583	Class does not exist.	ERROR_CLASS_DOES_NOT_EXIST
1412	0x00000584	Class still has open windows.	ERROR_CLASS_HAS_WINDOWS
1413	0x00000585	Invalid index.	ERROR_INVALID_INDEX
1414	0x00000586	Invalid icon handle.	ERROR_INVALID_ICON_HANDLE
1415	0x00000587	Using private DIALOG window words.	ERROR_PRIVATE_DIALOG_INDEX
1416	0x00000588	The list box identifier was not found.	ERROR_LISTBOX_ID_NOT_FOUND
1417	0x00000589	No wildcards were found.	ERROR_NO_WILDCARD_CHARACTERS

Code (dec)	Code (hex)	Description	Name
1418	0x0000058A	Thread does not have a clipboard open.	ERROR_CLIPBOARD_NOT_OPEN
1419	0x0000058B	Hot key is not registered.	ERROR_HOTKEY_NOT_REGISTERED
1420	0x0000058C	The window is not a valid dialog window.	ERROR_WINDOW_NOT_DIALOG
1421	0x0000058D	Control ID not found.	ERROR_CONTROL_ID_NOT_FOUND
1422	0x0000058E	Invalid message for a combo box because it does not have an edit control.	ERROR_INVALID_COMBOBOX_MESSAGE
1423	0x0000058F	The window is not a combo box.	ERROR_WINDOW_NOT_COMBOBOX
1424	0x00000590	Height must be less than 256.	ERROR_INVALID_EDIT_HEIGHT
1425	0x00000591	Invalid device context (DC) handle.	ERROR_DC_NOT_FOUND
1426	0x00000592	Invalid hook procedure type.	ERROR_INVALID_HOOK_FILTER
1427	0x00000593	Invalid hook procedure.	ERROR_INVALID_FILTER_PROC
1428	0x00000594	Cannot set nonlocal hook without a module handle.	ERROR_HOOK_NEEDS_HMOD
1429	0x00000595	This hook procedure can only be set globally.	ERROR_GLOBAL_ONLY_HOOK
1430	0x00000596	The journal hook procedure is already installed.	ERROR_JOURNAL_HOOK_SET
1431	0x00000597	The hook procedure is not installed.	ERROR_HOOK_NOT_INSTALLED
1432	0x00000598	Invalid message for single-selection list box.	ERROR_INVALID_LB_MESSAGE
1433	0x00000599	LB_SETCOUNT sent to non-lazy list box.	ERROR_SETCOUNT_ON_BAD_LB
1434	0x0000059A	This list box does not support tab stops.	ERROR_LB_WITHOUT_TABSTOPS
1435	0x0000059B	Cannot destroy object created by another thread.	ERROR_DESTROY_OBJECT_OF_OTHER_THREAD
1436	0x0000059C	Child windows cannot have menus.	ERROR_CHILD_WINDOW_MENU
1437	0x0000059D	The window does not have a system menu.	ERROR_NO_SYSTEM_MENU
1438	0x0000059E	Invalid message box style.	ERROR_INVALID_MSGBOX_STYLE
1439	0x0000059F	Invalid system-wide (SPI_*) parameter.	ERROR_INVALID_SPI_VALUE
1440	0x000005A0	Screen already locked.	ERROR_SCREEN_ALREADY_LOCKED
1441	0x000005A1	All handles to windows in a multiple-window position structure must have the same parent.	ERROR_HWNDS_HAVE_DIFF_PARENT
1442	0x000005A2	The window is not a child window.	ERROR_NOT_CHILD_WINDOW
1443	0x000005A3	Invalid GW_* command.	ERROR_INVALID_GW_COMMAND

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Code (dec)	Code (hex)	Description	Name
1444	0x000005A4	Invalid thread identifier.	ERROR_INVALID_THREAD_ID
1445	0x000005A5	Cannot process a message from a window that is not a multiple document interface (MDI) window.	ERROR_NON_MDICHILD_WINDOW
1446	0x000005A6	Popup menu already active.	ERROR_POPUP_ALREADY_ACTIVE
1447	0x000005A7	The window does not have scroll bars.	ERROR_NO_SCROLLBARS
1448	0x000005A8	Scroll bar range cannot be greater than MAXLONG.	ERROR_INVALID_SCROLLBAR_RANGE
1449	0x000005A9	Cannot show or remove the window in the way specified.	ERROR_INVALID_SHOWWIN_COMMAND
1450	0x000005AA	Insufficient system resources exist to complete the requested service.	ERROR_NO_SYSTEM_RESOURCES
1451	0x000005AB	Insufficient system resources exist to complete the requested service.	ERROR_NONPAGED_SYSTEM_RESOURCES
1452	0x000005AC	Insufficient system resources exist to complete the requested service.	ERROR_PAGED_SYSTEM_RESOURCES
1453	0x000005AD	Insufficient quota to complete the requested service.	ERROR_WORKING_SET_QUOTA
1454	0x000005AE	Insufficient quota to complete the requested service.	ERROR_PAGEFILE_QUOTA
1455	0x000005AF	The paging file is too small for this operation to complete.	ERROR_COMMITMENT_LIMIT
1456	0x000005B0	A menu item was not found.	ERROR_MENU_ITEM_NOT_FOUND
1457	0x000005B1	Invalid keyboard layout handle.	ERROR_INVALID_KEYBOARD_HANDLE
1458	0x000005B2	Hook type not allowed.	ERROR_HOOK_TYPE_NOT_ALLOWED
1459	0x000005B3	This operation requires an interactive window station.	ERROR_REQUIRES_INTERACTIVE_WINDOWSTATION
1460	0x000005B4	This operation returned because the timeout period expired.	ERROR_TIMEOUT
1461	0x000005B5	Invalid monitor handle.	ERROR_INVALID_MONITOR_HANDLE
1500	0x000005DC	The event log file is corrupted.	ERROR_EVENTLOG_FILE_CORRUPT
1501	0x000005DD	No event log file could be opened, so the event logging service did not start.	ERROR_EVENTLOG_CANT_START
1502	0x000005DE	The event log file is full.	ERROR_LOG_FILE_FULL
1503	0x000005DF	The event log file has changed between read operations.	ERROR_EVENTLOG_FILE_CHANGED
1601	0x00000641	The Windows Installer service could not be accessed. Contact your support personnel to verify that the Windows Installer service is properly registered.	ERROR_INSTALL_SERVICE_FAILURE
1602	0x00000642	User cancelled installation.	ERROR_INSTALL_USEREXIT
1603	0x00000643	Fatal error during installation.	ERROR_INSTALL_FAILURE
1604	0x00000644	Installation suspended, incomplete.	ERROR_INSTALL_SUSPEND
1605	0x00000645	This action is only valid for products that are currently installed.	ERROR_UNKNOWN_PRODUCT

Code (dec)	Code (hex)	Description	Name
1606	0x00000646	Feature ID not registered.	ERROR_UNKNOWN_FEATURE
1607	0x00000647	Component ID not registered.	ERROR_UNKNOWN_COMPONENT
1608	0x00000648	Unknown property.	ERROR_UNKNOWN_PROPERTY
1609	0x00000649	Handle is in an invalid state.	ERROR_INVALID_HANDLE_STATE
1610	0x0000064A	The configuration data for this product is corrupt. Contact your support personnel.	ERROR_BAD_CONFIGURATION
1611	0x0000064B	Component qualifier not present.	ERROR_INDEX_ABSENT
1612	0x0000064C	The installation source for this product is not available. Verify that the source exists and that you can access it.	ERROR_INSTALL_SOURCE_ABSENT
1613	0x0000064D	This installation package cannot be installed by the Windows Installer service. You must install a Windows service pack that contains a newer version of the Windows Installer service.	ERROR_INSTALL_PACKAGE_VERSION
1614	0x0000064E	Product is uninstalled.	ERROR_PRODUCT_UNINSTALLED
1615	0x0000064F	SQL query syntax invalid or unsupported.	ERROR_BAD_QUERY_SYNTAX
1616	0x00000650	Record field does not exist.	ERROR_INVALID_FIELD
1617	0x00000651	The device has been removed.	ERROR_DEVICE_REMOVED
1618	0x00000652	Another installation is already in progress. Complete that installation before proceeding with this install.	ERROR_INSTALL_ALREADY_RUNNING
1619	0x00000653	This installation package could not be opened. Verify that the package exists and that you can access it, or contact the application vendor to verify that this is a valid Windows Installer package.	ERROR_INSTALL_PACKAGE_OPEN_FAILED
1620	0x00000654	This installation package could not be opened. Contact the application vendor to verify that this is a valid Windows Installer package.	ERROR_INSTALL_PACKAGE_INVALID
1621	0x00000655	There was an error starting the Windows Installer service user interface. Contact your support personnel.	ERROR_INSTALL_UI_FAILURE
1622	0x00000656	Error opening installation log file. Verify that the specified log file location exists and that you can write to it.	ERROR_INSTALL_LOG_FAILURE
1623	0x00000657	The language of this installation package is not supported by your system.	ERROR_INSTALL_LANGUAGE_UNSUPPORTED
1624	0x00000658	Error applying transforms. Verify that the specified transform paths are valid.	ERROR_INSTALL_TRANSFORM_FAILURE
1625	0x00000659	This installation is forbidden by system policy. Contact your system administrator.	ERROR_INSTALL_PACKAGE_REJECTED
1626	0x0000065A	Function could not be executed.	ERROR_FUNCTION_NOT_CALLED
1627	0x0000065B	Function failed during execution.	ERROR_FUNCTION_FAILED
1628	0x0000065C	Invalid or unknown table specified.	ERROR_INVALID_TABLE

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Code (dec)	Code (hex)	Description	Name
1629	0x0000065D	Data supplied is of wrong type.	ERROR_DATATYPE_MISMATCH
1630	0x0000065E	Data of this type is not supported.	ERROR_UNSUPPORTED_TYPE
1631	0x0000065F	The Windows Installer service failed to start. Contact your support personnel.	ERROR_CREATE_FAILED
1632	0x00000660	The temp folder is either full or inaccessible. Verify that the temp folder exists and that you can write to it.	ERROR_INSTALL_TEMP_UNWRITABLE
1633	0x00000661	This installation package is not supported by this processor type. Contact your product vendor.	ERROR_INSTALL_PLATFORM_UNSUPPORTED
1634	0x00000662	Component not used on this computer.	ERROR_INSTALL_NOTUSED
1635	0x00000663	This patch package could not be opened. Verify that the patch package exists and that you can access it, or contact the application vendor to verify that this is a valid Windows Installer patch package.	ERROR_PATCH_PACKAGE_OPEN_FAILED
1636	0x00000664	This patch package could not be opened. Contact the application vendor to verify that this is a valid Windows Installer patch package.	ERROR_PATCH_PACKAGE_INVALID
1637	0x00000665	This patch package cannot be processed by the Windows Installer service. You must install a Windows service pack that contains a newer version of the Windows Installer service.	ERROR_PATCH_PACKAGE_UNSUPPORTED.
1638	0x00000666	Another version of this product is already installed. Installation of this version cannot continue. To configure or remove the existing version of this product, use Add/Remove Programs on the Control Panel.	ERROR_PRODUCT_VERSION
1639	0x00000667	Invalid command line argument. Consult the Windows Installer SDK for detailed command line help.	ERROR_INVALID_COMMAND_LINE
1640	0x00000668	Only administrators have permission to add, remove, or configure server software during a Terminal Services remote session. If you want to install or configure software on the server, contact your network administrator.	ERROR_INSTALL_REMOTE_DISALLOWED
1641	0x00000669	The requested operation completed successfully. The system will be restarted so the changes can take effect.	ERROR_SUCCESS_REBOOT_INITIATED
1642	0x0000066A	The upgrade patch cannot be installed by the Windows Installer service because the program to be upgraded may be missing, or the upgrade patch may update a different version of the program. Verify that the program to be upgraded exists on your computer and that you have the correct upgrade patch.	ERROR_PATCH_TARGET_NOT_FOUND
1643	0x0000066B	The patch package is not permitted by system policy. It is not signed with an appropriate certificate.	ERROR_PATCH_PACKAGE_REJECTED

Code (dec)	Code (hex)	Description	Name
1644	0x0000066C	One or more customizations are not permitted by system policy. They are not signed with an appropriate certificate.	ERROR_INSTALL_TRANSFORM_REJECTED
1700	0x000006A4	The string binding is invalid.	RPC_S_INVALID_STRING_BINDING
1701	0x000006A5	The binding handle is not the correct type.	RPC_S_WRONG_KIND_OF_BINDING
1702	0x000006A6	The binding handle is invalid.	RPC_S_INVALID_BINDING
1703	0x000006A7	The RPC protocol sequence is not supported.	RPC_S_PROTSEQ_NOT_SUPPORTED
1704	0x000006A8	The RPC protocol sequence is invalid.	RPC_S_INVALID_RPC_PROTSEQ
1705	0x000006A9	The string universal unique identifier (UUID) is invalid.	RPC_S_INVALID_STRING_UUID
1706	0x000006AA	The endpoint format is invalid.	RPC_S_INVALID_ENDPOINT_FORMAT
1707	0x000006AB	The network address is invalid.	RPC_S_INVALID_NET_ADDR
1708	0x000006AC	No endpoint was found.	RPC_S_NO_ENDPOINT_FOUND
1709	0x000006AD	The timeout value is invalid.	RPC_S_INVALID_TIMEOUT
1710	0x000006AE	The object universal unique identifier (UUID) was not found.	RPC_S_OBJECT_NOT_FOUND
1711	0x000006AF	The object universal unique identifier (UUID) has already been registered.	RPC_S_ALREADY_REGISTERED
1712	0x000006B0	The type universal unique identifier (UUID) has already been registered.	RPC_S_TYPE_ALREADY_REGISTERED
1713	0x000006B1	The RPC server is already listening.	RPC_S_ALREADY_LISTENING
1714	0x000006B2	No protocol sequences have been registered.	RPC_S_NO_PROTSEQS_REGISTERED
1715	0x000006B3	The RPC server is not listening.	RPC_S_NOT_LISTENING
1716	0x000006B4	The manager type is unknown.	RPC_S_UNKNOWN_MGR_TYPE
1717	0x000006B5	The interface is unknown.	RPC_S_UNKNOWN_IF
1718	0x000006B6	There are no bindings.	RPC_S_NO_BINDINGS
1719	0x000006B7	There are no protocol sequences.	RPC_S_NO_PROTSEQS
1720	0x000006B8	The endpoint cannot be created.	RPC_S_CANT_CREATE_ENDPOINT
1721	0x000006B9	Not enough resources are available to complete this operation.	RPC_S_OUT_OF_RESOURCES
1722	0x000006BA	The RPC server is unavailable.	RPC_S_SERVER_UNAVAILABLE
1723	0x000006BB	The RPC server is too busy to complete this operation.	RPC_S_SERVER_TOO_BUSY
1724	0x000006BC	The network options are invalid.	RPC_S_INVALID_NETWORK_OPTIONS
1725	0x000006BD	There are no remote procedure calls active on this thread.	RPC_S_NO_CALL_ACTIVE
1726	0x000006BE	The remote procedure call failed.	RPC_S_CALL_FAILED
1727	0x000006BF	The remote procedure call failed and did not execute.	RPC_S_CALL_FAILED_DNE

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Code (dec)	Code (hex)	Description	Name
1728	0x000006C0	A remote procedure call (RPC) protocol error occurred.	RPC_S_PROTOCOL_ERROR
1730	0x000006C2	The transfer syntax is not supported by the RPC server.	RPC_S_UNSUPPORTED_TRANS_SYN
1732	0x000006C4	The universal unique identifier (UUID) type is not supported.	RPC_S_UNSUPPORTED_TYPE
1733	0x000006C5	The tag is invalid.	RPC_S_INVALID_TAG
1734	0x000006C6	The array bounds are invalid.	RPC_S_INVALID_BOUND
1735	0x000006C7	The binding does not contain an entry name.	RPC_S_NO_ENTRY_NAME
1736	0x000006C8	The name syntax is invalid.	RPC_S_INVALID_NAME_SYNTAX
1737	0x000006C9	The name syntax is not supported.	RPC_S_UNSUPPORTED_NAME_SYNTAX
1739	0x000006CB	No network address is available to use to construct a universal unique identifier (UUID).	RPC_S_UUID_NO_ADDRESS
1740	0x000006CC	The endpoint is a duplicate.	RPC_S_DUPLICATE_ENDPOINT
1741	0x000006CD	The authentication type is unknown.	RPC_S_UNKNOWN_AUTHN_TYPE
1742	0x000006CE	The maximum number of calls is too small.	RPC_S_MAX_CALLS_TOO_SMALL
1743	0x000006CF	The string is too long.	RPC_S_STRING_TOO_LONG
1744	0x000006D0	The RPC protocol sequence was not found.	RPC_S_PROTSEQ_NOT_FOUND
1745	0x000006D1	The procedure number is out of range.	RPC_S_PROCNUM_OUT_OF_RANGE
1746	0x000006D2	The binding does not contain any authentication information.	RPC_S_BINDING_HAS_NO_AUTH
1747	0x000006D3	The authentication service is unknown.	RPC_S_UNKNOWN_AUTHN_SERVICE
1748	0x000006D4	The authentication level is unknown.	RPC_S_UNKNOWN_AUTHN_LEVEL
1749	0x000006D5	The security context is invalid.	RPC_S_INVALID_AUTH_IDENTITY
1750	0x000006D6	The authorization service is unknown.	RPC_S_UNKNOWN_AUTHZ_SERVICE
1751	0x000006D7	The entry is invalid.	EPT_S_INVALID_ENTRY
1752	0x000006D8	The server endpoint cannot perform the operation.	EPT_S_CANT_PERFORM_OP
1753	0x000006D9	There are no more endpoints available from the endpoint mapper.	EPT_S_NOT_REGISTERED
1754	0x000006DA	No interfaces have been exported.	RPC_S_NOTHING_TO_EXPORT
1755	0x000006DB	The entry name is incomplete.	RPC_S_INCOMPLETE_NAME
1756	0x000006DC	The version option is invalid.	RPC_S_INVALID_VERS_OPTION
1757	0x000006DD	There are no more members.	RPC_S_NO_MORE_MEMBERS
1758	0x000006DE	There is nothing to unexport.	RPC_S_NOT_ALL_OBJS_UNEXPORTED

Code (dec)	Code (hex)	Description	Name
1759	0x000006DF	The interface was not found.	RPC_S_INTERFACE_NOT_FOUND
1760	0x000006E0	The entry already exists.	RPC_S_ENTRY_ALREADY_EXISTS
1761	0x000006E1	The entry is not found.	RPC_S_ENTRY_NOT_FOUND
1762	0x000006E2	The name service is unavailable.	RPC_S_NAME_SERVICE_UNAVAILABLE
1763	0x000006E3	The network address family is invalid.	RPC_S_INVALID_NAF_ID
1764	0x000006E4	The requested operation is not supported.	RPC_S_CANNOT_SUPPORT
1765	0x000006E5	No security context is available to allow impersonation.	RPC_S_NO_CONTEXT_AVAILABLE
1766	0x000006E6	An internal error occurred in a remote procedure call (RPC).	RPC_S_INTERNAL_ERROR
1767	0x000006E7	The RPC server attempted an integer division by zero.	RPC_S_ZERO_DIVIDE
1768	0x000006E8	An addressing error occurred in the RPC server.	RPC_S_ADDRESS_ERROR
1769	0x000006E9	A floating-point operation at the RPC server caused a division by zero.	RPC_S_FP_DIV_ZERO
1770	0x000006EA	A floating-point underflow occurred at the RPC server.	RPC_S_FP_UNDERFLOW
1771	0x000006EB	A floating-point overflow occurred at the RPC server.	RPC_S_FP_OVERFLOW
1772	0x000006EC	The list of RPC servers available for the binding of auto handles has been exhausted.	RPC_X_NO_MORE_ENTRIES
1773	0x000006ED	Unable to open the character translation table file.	RPC_X_SS_CHAR_TRANS_OPEN_FAIL
1774	0x000006EE	The file containing the character translation table has fewer than 512 bytes.	RPC_X_SS_CHAR_TRANS_SHORT_FILE
1775	0x000006EF	A null context handle was passed from the client to the host during a remote procedure call.	RPC_X_SS_IN_NULL_CONTEXT
1777	0x000006F1	The context handle changed during a remote procedure call.	RPC_X_SS_CONTEXT_DAMAGED
1778	0x000006F2	The binding handles passed to a remote procedure call do not match.	RPC_X_SS_HANDLES_MISMATCH
1779	0x000006F3	The stub is unable to get the remote procedure call handle.	RPC_X_SS_CANNOT_GET_CALL_HANDLE
1780	0x000006F4	A null reference pointer was passed to the stub.	RPC_X_NULL_REF_POINTER
1781	0x000006F5	The enumeration value is out of range.	RPC_X_ENUM_VALUE_OUT_OF_RANGE
1782	0x000006F6	The byte count is too small.	RPC_X_BYTE_COUNT_TOO_SMALL
1783	0x000006F7	The stub received bad data.	RPC_X_BAD_STUB_DATA
1784	0x000006F8	The supplied user buffer is not valid for the requested operation.	ERROR_INVALID_USER_BUFFER
1785	0x000006F9	The disk media is not recognized. It may not be formatted.	ERROR_UNRECOGNIZED_MEDIA
1786	0x000006FA	The workstation does not have a trust secret.	ERROR_NO_TRUST_LSA_SECRET

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Code (dec)	Code (hex)	Description	Name
1787	0x000006FB	The security database on the server does not have a computer account for this workstation trust relationship.	ERROR_NO_TRUST_SAM_ACCOUNT
1788	0x000006FC	The trust relationship between the primary domain and the trusted domain failed.	ERROR_TRUSTED_DOMAIN_FAILURE
1789	0x000006FD	The trust relationship between this workstation and the primary domain failed.	ERROR_TRUSTED_RELATIONSHIP_FAILURE
1790	0x000006FE	The network logon failed.	ERROR_TRUST_FAILURE
1791	0x000006FF	A remote procedure call is already in progress for this thread.	RPC_S_CALL_IN_PROGRESS
1792	0x00000700	An attempt was made to logon, but the network logon service was not started.	ERROR_NETLOGON_NOT_STARTED
1793	0x00000701	The user's account has expired.	ERROR_ACCOUNT_EXPIRED
1794	0x00000702	The redirector is in use and cannot be unloaded.	ERROR_REDIRECTOR_HAS_OPEN_HANDLES
1795	0x00000703	The specified printer driver is already installed.	ERROR_PRINTER_DRIVER_ALREADY_INSTALLED
1796	0x00000704	The specified port is unknown.	ERROR_UNKNOWN_PORT
1797	0x00000705	The printer driver is unknown.	ERROR_UNKNOWN_PRINTER_DRIVER
1798	0x00000706	The print processor is unknown.	ERROR_UNKNOWN_PRINTPROCESSOR
1799	0x00000707	The specified separator file is invalid.	ERROR_INVALID_SEPARATOR_FILE
1800	0x00000708	The specified priority is invalid.	ERROR_INVALID_PRIORITY
1801	0x00000709	The printer name is invalid.	ERROR_INVALID_PRINTER_NAME
1802	0x0000070A	The printer already exists.	ERROR_PRINTER_ALREADY_EXISTS
1803	0x0000070B	The printer command is invalid.	ERROR_INVALID_PRINTER_COMMAND
1804	0x0000070C	The specified datatype is invalid.	ERROR_INVALID_DATATYPE
1805	0x0000070D	The environment specified is invalid.	ERROR_INVALID_ENVIRONMENT
1806	0x0000070E	There are no more bindings.	RPC_S_NO_MORE_BINDINGS
1807	0x0000070F	The account used is an interdomain trust account. Use your global user account or local user account to access this server.	ERROR_NOLOGON_INTERDOMAIN_TRUST_ACCOUNT
1808	0x00000710	The account used is a computer account. Use your global user account or local user account to access this server.	ERROR_NOLOGON_WORKSTATION_TRUST_ACCOUNT
1809	0x00000711	The account used is a server trust account. Use your global user account or local user account to access this server.	ERROR_NOLOGON_SERVER_TRUST_ACCOUNT
1810	0x00000712	The name or security ID (SID) of the domain specified is inconsistent with the trust information for that domain.	ERROR_DOMAIN_TRUST_INCONSISTENT
1811	0x00000713	The server is in use and cannot be unloaded.	ERROR_SERVER_HAS_OPEN_HANDLES

Code (dec)	Code (hex)	Description	Name
1812	0x00000714	The specified image file did not contain a resource section.	ERROR_RESOURCE_DATA_NOT_FOUND
1813	0x00000715	The specified resource type cannot be found in the image file.	ERROR_RESOURCE_TYPE_NOT_FOUND
1814	0x00000716	The specified resource name cannot be found in the image file.	ERROR_RESOURCE_NAME_NOT_FOUND
1815	0x00000717	The specified resource language ID cannot be found in the image file.	ERROR_RESOURCE_LANG_NOT_FOUND
1816	0x00000718	Not enough quota is available to process this command.	ERROR_NOT_ENOUGH_QUOTA
1817	0x00000719	No interfaces have been registered.	RPC_S_NO_INTERFACES
1818	0x0000071A	The remote procedure call was cancelled.	RPC_S_CALL_CANCELLED
1819	0x0000071B	The binding handle does not contain all required information.	RPC_S_BINDING_INCOMPLETE
1820	0x0000071C	A communications failure occurred during a remote procedure call.	RPC_S_COMM_FAILURE
1821	0x0000071D	The requested authentication level is not supported.	RPC_S_UNSUPPORTED_AUTHN_LEVEL
1822	0x0000071E	No principal name registered.	RPC_S_NO_PRINC_NAME
1823	0x0000071F	The error specified is not a valid Windows RPC error code.	RPC_S_NOT_RPC_ERROR
1824	0x00000720	A UUID that is valid only on this computer has been allocated.	RPC_S_UUID_LOCAL_ONLY
1825	0x00000721	A security package specific error occurred.	RPC_S_SEC_PKG_ERROR
1826	0x00000722	Thread is not canceled.	RPC_S_NOT_CANCELLED
1827	0x00000723	Invalid operation on the encoding/ decoding handle.	RPC_X_INVALID_ES_ACTION
1828	0x00000724	Incompatible version of the serializing package.	RPC_X_WRONG_ES_VERSION
1829	0x00000725	Incompatible version of the RPC stub.	RPC_X_WRONG_STUB_VERSION
1830	0x00000726	The RPC pipe object is invalid or corrupted.	RPC_X_INVALID_PIPE_OBJECT
1831	0x00000727	An invalid operation was attempted on an RPC pipe object.	RPC_X_WRONG_PIPE_ORDER
1832	0x00000728	Unsupported RPC pipe version.	RPC_X_WRONG_PIPE_VERSION
1898	0x0000076A	The group member was not found.	RPC_S_GROUP_MEMBER_NOT_FOUND
1899	0x0000076B	The endpoint mapper database entry could not be created.	EPT_S_CANT_CREATE
1900	0x0000076C	The object universal unique identifier (UUID) is the nil UUID.	RPC_S_INVALID_OBJECT
1901	0x0000076D	The specified time is invalid.	ERROR_INVALID_TIME
1902	0x0000076E	The specified form name is invalid.	ERROR_INVALID_FORM_NAME
1903	0x0000076F	The specified form size is invalid.	ERROR_INVALID_FORM_SIZE
1904	0x00000770	The specified printer handle is already being waited on	ERROR_ALREADY_WAITING
1905	0x00000771	The specified printer has been deleted.	ERROR_PRINTER_DELETED

Code (dec)	Code (hex)	Description	Name
1906	0x00000772	The state of the printer is invalid.	ERROR_INVALID_PRINTER_STATE
1907	0x00000773	The user's password must be changed before logging on the first time.	ERROR_PASSWORD_MUST_CHANGE
1908	0x00000774	Could not find the domain controller for this domain.	ERROR_DOMAIN_CONTROLLER_NOT_FOUND
1909	0x00000775	The referenced account is currently locked out and may not be logged on to.	ERROR_ACCOUNT_LOCKED_OUT
1910	0x00000776	The object exporter specified was not found.	OR_INVALID_OXID
1911	0x00000777	The object specified was not found.	OR_INVALID_OID
1912	0x00000778	The object resolver set specified was not found.	OR_INVALID_SET
1913	0x00000779	Some data remains to be sent in the request buffer.	RPC_S_SEND_INCOMPLETE
1914	0x0000077A	Invalid asynchronous remote procedure call handle.	RPC_S_INVALID_ASYNC_HANDLE
1915	0x0000077B	Invalid asynchronous RPC call handle for this operation.	RPC_S_INVALID_ASYNC_CALL
1916	0x0000077C	The RPC pipe object has already been closed.	RPC_X_PIPE_CLOSED
1917	0x0000077D	The RPC call completed before all pipes were processed.	RPC_X_PIPE_DISCIPLINE_ERROR
1918	0x0000077E	No more data is available from the RPC pipe.	RPC_X_PIPE_EMPTY
1919	0x0000077F	No site name is available for this machine.	ERROR_NO_SITENAME
1920	0x00000780	The file can not be accessed by the system.	ERROR_CANT_ACCESS_FILE
1921	0x00000781	The name of the file cannot be resolved by the system.	ERROR_CANT_RESOLVE_FILENAME
1922	0x00000782	The entry is not of the expected type.	RPC_S_ENTRY_TYPE_MISMATCH
1923	0x00000783	Not all object UUIDs could be exported to the specified entry.	RPC_S_NOT_ALL_OBJS_EXPORTED
1924	0x00000784	Interface could not be exported to the specified entry.	RPC_S_INTERFACE_NOT_EXPORTED
1925	0x00000785	The specified profile entry could not be added.	RPC_S_PROFILE_NOT_ADDED
1926	0x00000786	The specified profile element could not be added.	RPC_S_PRF_ELT_NOT_ADDED
1927	0x00000787	The specified profile element could not be removed.	RPC_S_PRF_ELT_NOT_REMOVED
1928	0x00000788	The group element could not be added.	RPC_S_GRP_ELT_NOT_ADDED
1929	0x00000789	The group element could not be removed.	RPC_S_GRP_ELT_NOT_REMOVED
1930	0x0000078A	The printer driver is not compatible with a policy enabled on your computer that blocks NT 4.0 drivers.	ERROR_KM_DRIVER_BLOCKED
2000	0x000007D0	The pixel format is invalid.	ERROR_INVALID_PIXEL_FORMAT
2001	0x000007D1	The specified driver is invalid.	ERROR_BAD_DRIVER

Code (dec)	Code (hex)	Description	Name
2002	0x000007D2	The window style or class attribute is invalid for this operation.	ERROR_INVALID_WINDOW_STYLE
2003	0x000007D3	The requested metafile operation is not supported.	ERROR_METAFILE_NOT_SUPPORTED
2004	0x000007D4	The requested transformation operation is not supported.	ERROR_TRANSFORM_NOT_SUPPORTED
2005	0x000007D5	The requested clipping operation is not supported.	ERROR_CLIPPING_NOT_SUPPORTED
2010	0x000007DA	The specified color management module is invalid.	ERROR_INVALID_CMM
2011	0x000007DB	The specified color profile is invalid.	ERROR_INVALID_PROFILE
2012	0x000007DC	The specified tag was not found.	ERROR_TAG_NOT_FOUND
2013	0x000007DD	A required tag is not present.	ERROR_TAG_NOT_PRESENT
2014	0x000007DE	The specified tag is already present.	ERROR_DUPLICATE_TAG
2015	0x000007DF	The specified color profile is not associated with any device.	ERROR_PROFILE_NOT_ASSOCIATED_WITH_DEVICE
2016	0x000007E0	The specified color profile was not found.	ERROR_PROFILE_NOT_FOUND
2017	0x000007E1	The specified color space is invalid.	ERROR_INVALID_COLORSPACE
2018	0x000007E2	Image Color Management is not enabled.	ERROR_ICM_NOT_ENABLED
2019	0x000007E3	There was an error while deleting the color transform.	ERROR_DELETING_ICM_XFORM
2020	0x000007E4	The specified color transform is invalid.	ERROR_INVALID_TRANSFORM
2021	0x000007E5	The specified transform does not match the bitmap's color space.	ERROR_COLORSPACE_MISMATCH
2022	0x000007E6	The specified named color index is not present in the profile.	ERROR_INVALID_COLORINDEX
2108	0x0000083C	The network connection was made successfully, but the user had to be prompted for a password other than the one originally specified.	ERROR_CONNECTED_OTHER_PASSWORD
2202	0x0000089A	The specified username is invalid.	ERROR_BAD_USERNAME
2250	0x000008CA	This network connection does not exist.	ERROR_NOT_CONNECTED
2401	0x00000961	This network connection has files open or requests pending.	ERROR_OPEN_FILES
2402	0x00000962	Active connections still exist.	ERROR_ACTIVE_CONNECTIONS
2404	0x00000964	The device is in use by an active process and cannot be disconnected.	ERROR_DEVICE_IN_USE
2500	0x000009C4	The kerberos protocol encountered an error while validating the KDC certificate during smartcard logon.	ERROR_PKINIT_FAILURE
2501	0x000009C5	The kerberos protocol encountered an error while attempting to utilize the smartcard subsystem.	ERROR_SMARTCARD_SUBSYSTEM_FAILURE
3000	0x00000BB8	The specified print monitor is unknown.	ERROR_UNKNOWN_PRINT_MONITOR
3001	0x00000BB9	The specified printer driver is currently in use.	ERROR_PRINTER_DRIVER_IN_USE

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Code (dec)	Code (hex)	Description	Name
3002	0x00000BBA	The spool file was not found.	ERROR_SPOOL_FILE_NOT_FOUND
3003	0x00000BBB	A StartDocPrinter call was not issued.	ERROR_SPL_NO_STARTDOC
3004	0x00000BBC	An AddJob call was not issued.	ERROR_SPL_NO_ADDJOB
3005	0x00000BBD	The specified print processor has already been installed.	ERROR_PRINT_PROCESSOR_ALREADY_INSTALLED
3006	0x00000BBE	The specified print monitor has already been installed.	ERROR_PRINT_MONITOR_ALREADY_INSTALLED
3007	0x00000BBF	The specified print monitor does not have the required functions.	ERROR_INVALID_PRINT_MONITOR
3008	0x00000BC0	The specified print monitor is currently in use.	ERROR_PRINT_MONITOR_IN_USE
3009	0x00000BC1	The requested operation is not allowed when there are jobs queued to the printer.	ERROR_PRINTER_HAS_JOBS_QUEUED
3010	0x00000BC2	The requested operation is successful. Changes will not be effective until the system is rebooted.	ERROR_SUCCESS_REBOOT_REQUIRED
3011	0x00000BC3	The requested operation is successful. Changes will not be effective until the service is restarted.	ERROR_SUCCESS_RESTART_REQUIRED
3012	0x00000BC4	No printers were found.	ERROR_PRINTER_NOT_FOUND
4000	0x00000FA0	WINS encountered an error while processing the command.	ERROR_WINS_INTERNAL
4001	0x00000FA1	The local WINS can not be deleted.	ERROR_CAN_NOT_DEL_LOCAL_WINS
4002	0x00000FA2	The importation from the file failed.	ERROR_STATIC_INIT
4003	0x00000FA3	The backup failed. Was a full backup done before?	ERROR_INC_BACKUP
4004	0x00000FA4	The backup failed. Check the directory to which you are backing the database.	ERROR_FULL_BACKUP
4005	0x00000FA5	The name does not exist in the WINS database.	ERROR_REC_NON_EXISTENT
4006	0x00000FA6	Replication with a nonconfigured partner is not allowed.	ERROR_RPL_NOT_ALLOWED
4100	0x00001004	The DHCP client has obtained an IP address that is already in use on the network. The local interface will be disabled until the DHCP client can obtain a new address.	ERROR_DHCP_ADDRESS_CONFLICT
4200	0x00001068	The GUID passed was not recognized as valid by a WMI data provider.	ERROR_WMI_GUID_NOT_FOUND
4201	0x00001069	The instance name passed was not recognized as valid by a WMI data provider.	ERROR_WMI_INSTANCE_NOT_FOUND
4202	0x0000106A	The data item ID passed was not recognized as valid by a WMI data provider.	ERROR_WMI_ITEMID_NOT_FOUND
4203	0x0000106B	The WMI request could not be completed and should be retried.	ERROR_WMI_TRY_AGAIN
4204	0x0000106C	The WMI data provider could not be located.	ERROR_WMI_DP_NOT_FOUND

Code (dec)	Code (hex)	Description	Name
4205	0x0000106D	The WMI data provider references an instance set that has not been registered.	ERROR_WMI_UNRESOLVED_INSTANCE_REF
4206	0x0000106E	The WMI data block or event notification has already been enabled.	ERROR_WMI_ALREADY_ENABLED
4207	0x0000106F	The WMI data block is no longer available.	ERROR_WMI_GUID_DISCONNECTED
4208	0x00001070	The WMI data service is not available.	ERROR_WMI_SERVER_UNAVAILABLE
4209	0x00001071	The WMI data provider failed to carry out the request.	ERROR_WMI_DP_FAILED
4210	0x00001072	The WMI MOF information is not valid.	ERROR_WMI_INVALID_MOF
4211	0x00001073	The WMI registration information is not valid.	ERROR_WMI_INVALID_REGINFO
4212	0x00001074	The WMI data block or event notification has already been disabled.	ERROR_WMI_ALREADY_DISABLED
4213	0x00001075	The WMI data item or data block is read only.	ERROR_WMI_READ_ONLY
4214	0x00001076	The WMI data item or data block could not be changed.	ERROR_WMI_SET_FAILURE
4300	0x000010CC	The media identifier does not represent a valid medium.	ERROR_INVALID_MEDIA
4301	0x000010CD	The library identifier does not represent a valid library.	ERROR_INVALID_LIBRARY
4302	0x000010CE	The media pool identifier does not represent a valid media pool.	ERROR_INVALID_MEDIA_POOL
4303	0x000010CF	The drive and medium are not compatible or exist in different libraries.	ERROR_DRIVE_MEDIA_MISMATCH
4304	0x000010D0	The medium currently exists in an offline library and must be online to perform this operation.	ERROR_MEDIA_OFFLINE
4305	0x000010D1	The operation cannot be performed on an offline library.	ERROR_LIBRARY_OFFLINE
4306	0x000010D2	The library, drive, or media pool is empty.	ERROR_EMPTY
4307	0x000010D3	The library, drive, or media pool must be empty to perform this operation.	ERROR_NOT_EMPTY
4308	0x000010D4	No media is currently available in this media pool or library.	ERROR_MEDIA_UNAVAILABLE
4309	0x000010D5	A resource required for this operation is disabled.	ERROR_RESOURCE_DISABLED
4310	0x000010D6	The media identifier does not represent a valid cleaner.	ERROR_INVALID_CLEANER
4311	0x000010D7	The drive cannot be cleaned or does not support cleaning.	ERROR_UNABLE_TO_CLEAN
4312	0x000010D8	The object identifier does not represent a valid object.	ERROR_OBJECT_NOT_FOUND
4313	0x000010D9	Unable to read from or write to the database.	ERROR_DATABASE_FAILURE
4314	0x000010DA	The database is full.	ERROR_DATABASE_FULL
4315	0x000010DB	The medium is not compatible with the device or media pool.	ERROR_MEDIA_INCOMPATIBLE
4316	0x000010DC	The resource required for this operation does not exist.	ERROR_RESOURCE_NOT_PRESENT

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Code (dec)	Code (hex)	Description	Name
4317	0x000010DD	The operation identifier is not valid.	ERROR_INVALID_OPERATION
4318	0x000010DE	The media is not mounted or ready for use.	ERROR_MEDIA_NOT_AVAILABLE
4319	0x000010DF	The device is not ready for use.	ERROR_DEVICE_NOT_AVAILABLE
4320	0x000010E0	The operator or administrator has refused the request.	ERROR_REQUEST_REFUSED
4321	0x000010E1	The drive identifier does not represent a valid drive.	ERROR_INVALID_DRIVE_OBJECT
4322	0x000010E2	Library is full. No slot is available for use.	ERROR_LIBRARY_FULL
4323	0x000010E3	The transport cannot access the medium.	ERROR_MEDIUM_NOT_ACCESSIBLE
4324	0x000010E4	Unable to load the medium into the drive.	ERROR_UNABLE_TO_LOAD_MEDIUM
4325	0x000010E5	Unable to retrieve status about the drive.	ERROR_UNABLE_TO_INVENTORY_DRIVE
4326	0x000010E6	Unable to retrieve status about the slot.	ERROR_UNABLE_TO_INVENTORY_SLOT
4327	0x000010E7	Unable to retrieve status about the transport.	ERROR_UNABLE_TO_INVENTORY_TRANSPORT
4328	0x000010E8	Cannot use the transport because it is already in use.	ERROR_TRANSPORT_FULL
4329	0x000010E9	Unable to open or close the inject/eject port.	ERROR_CONTROLLING_IEPORT
4330	0x000010EA	Unable to eject the media because it is in a drive.	ERROR_UNABLE_TO_EJECT_MOUNTED_MEDIA
4331	0x000010EB	A cleaner slot is already reserved.	ERROR_CLEANER_SLOT_SET
4332	0x000010EC	A cleaner slot is not reserved.	ERROR_CLEANER_SLOT_NOT_SET
4333	0x000010ED	The cleaner cartridge has performed the maximum number of drive cleanings.	ERROR_CLEANER_CARTRIDGE_SPENT
4334	0x000010EE	Unexpected on-medium identifier.	ERROR_UNEXPECTED_OMID
4335	0x000010EF	The last remaining item in this group or resource cannot be deleted.	ERROR_CANT_DELETE_LAST_ITEM
4336	0x000010F0	The message provided exceeds the maximum size allowed for this parameter.	ERROR_MESSAGE_EXCEEDS_MAX_SIZE
4337	0x000010F1	The volume contains system or paging files.	ERROR_VOLUME_CONTAINS_SYS_FILES
4338	0x000010F2	The media type cannot be removed from this library since at least one drive in the library reports it can support this media type.	ERROR_INDIGENOUS_TYPE
4339	0x000010F3	This offline media cannot be mounted on this system since no enabled drives are present which can be used.	ERROR_NO_SUPPORTING_DRIVES
4340	0x000010F4	A cleaner cartridge is present in the tape library.	ERROR_CLEANER_CARTRIDGE_INSTALLED
4350	0x000010FE	The remote storage service was not able to recall the file.	ERROR_FILE_OFFLINE

Code (dec)	Code (hex)	Description	Name
4351	0x000010FF	The remote storage service is not operational at this time.	ERROR_REMOTE_STORAGE_NOT_ACTIVE
4352	0x00001100	The remote storage service encountered a media error.	ERROR_REMOTE_STORAGE_MEDIA_ERROR
4390	0x00001126	The file or directory is not a reparse point.	ERROR_NOT_A_REPARSE_POINT
4391	0x00001127	The reparse point attribute cannot be set because it conflicts with an existing attribute.	ERROR_REPARSE_ATTRIBUTE_CONFLICT
4392	0x00001128	The data present in the reparse point buffer is invalid.	ERROR_INVALID_REPARSE_DATA
4393	0x00001129	The tag present in the reparse point buffer is invalid.	ERROR_REPARSE_TAG_INVALID
4394	0x0000112A	There is a mismatch between the tag specified in the request and the tag present in the reparse point.	ERROR_REPARSE_TAG_MISMATCH
4500	0x00001194	Single Instance Storage is not available on this volume.	ERROR_VOLUME_NOT_SIS_ENABLED
5001	0x00001389	The cluster resource cannot be moved to another group because other resources are dependent on it.	ERROR_DEPENDENT_RESOURCE_EXISTS
5002	0x0000138A	The cluster resource dependency cannot be found.	ERROR_DEPENDENCY_NOT_FOUND
5003	0x0000138B	The cluster resource cannot be made dependent on the specified resource because it is already dependent.	ERROR_DEPENDENCY_ALREADY_EXISTS
5004	0x0000138C	The cluster resource is not online.	ERROR_RESOURCE_NOT_ONLINE
5005	0x0000138D	A cluster node is not available for this operation.	ERROR_HOST_NODE_NOT_AVAILABLE
5006	0x0000138E	The cluster resource is not available.	ERROR_RESOURCE_NOT_AVAILABLE
5007	0x0000138F	The cluster resource could not be found.	ERROR_RESOURCE_NOT_FOUND
5008	0x00001390	The cluster is being shut down.	ERROR_SHUTDOWN_CLUSTER
5009	0x00001391	A cluster node cannot be evicted from the cluster unless the node is down.	ERROR_CANT_EVICT_ACTIVE_NODE
5010	0x00001392	The object already exists.	ERROR_OBJECT_ALREADY_EXISTS
5011	0x00001393	The object is already in the list.	ERROR_OBJECT_IN_LIST
5012	0x00001394	The cluster group is not available for any new requests.	ERROR_GROUP_NOT_AVAILABLE
5013	0x00001395	The cluster group could not be found.	ERROR_GROUP_NOT_FOUND
5014	0x00001396	The operation could not be completed because the cluster group is not online.	ERROR_GROUP_NOT_ONLINE
5015	0x00001397	The cluster node is not the owner of the resource.	ERROR_HOST_NODE_NOT_RESOURCE_OWNER
5016	0x00001398	The cluster node is not the owner of the group.	ERROR_HOST_NODE_NOT_GROUP_OWNER
5017	0x00001399	The cluster resource could not be created in the specified resource monitor.	ERROR_RESMON_CREATE_FAILED

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Code (dec)	Code (hex)	Description	Name
5018	0x0000139A	The cluster resource could not be brought online by the resource monitor.	ERROR_RESMON_ONLINE_FAILED
5019	0x0000139B	The operation could not be completed because the cluster resource is online.	ERROR_RESOURCE_ONLINE
5020	0x0000139C	The cluster resource could not be deleted or brought offline because it is the quorum resource.	ERROR_QUORUM_RESOURCE
5021	0x0000139D	The cluster could not make the specified resource a quorum resource because it is not capable of being a quorum resource.	ERROR_NOT_QUORUM_CAPABLE
5022	0x0000139E	The cluster software is shutting down.	ERROR_CLUSTER_SHUTTING_DOWN
5023	0x0000139F	The group or resource is not in the correct state to perform the requested operation.	ERROR_INVALID_STATE
5024	0x000013A0	The properties were stored but not all changes will take effect until the next time the resource is brought online.	ERROR_RESOURCE_PROPERTIES_STORED
5025	0x000013A1	The cluster could not make the specified resource a quorum resource because it does not belong to a shared storage class.	ERROR_NOT_QUORUM_CLASS
5026	0x000013A2	The cluster resource could not be deleted since it is a core resource.	ERROR_CORE_RESOURCE
5027	0x000013A3	The quorum resource failed to come online.	ERROR_QUORUM_RESOURCE_ONLINE_FAILED
5028	0x000013A4	The quorum log could not be created or mounted successfully.	ERROR_QUORUMLOG_OPEN_FAILED
5029	0x000013A5	The cluster log is corrupt.	ERROR_CLUSTERLOG_CORRUPT
5030	0x000013A6	The record could not be written to the cluster log since it exceeds the maximum size.	ERROR_CLUSTERLOG_RECORD_EXCEEDS_MAXSIZE
5031	0x000013A7	The cluster log exceeds its maximum size.	ERROR_CLUSTERLOG_EXCEEDS_MAXSIZE
5032	0x000013A8	No checkpoint record was found in the cluster log.	ERROR_CLUSTERLOG_CHKPOINT_NOT_FOUND
5033	0x000013A9	The minimum required disk space needed for logging is not available.	ERROR_CLUSTERLOG_NOT_ENOUGH_SPACE
5034	0x000013AA	The cluster node failed to take control of the quorum resource because the resource is owned by another active node.	ERROR_QUORUM_OWNER_ALIVE
5035	0x000013AB	A cluster network is not available for this operation.	ERROR_NETWORK_NOT_AVAILABLE
5036	0x000013AC	A cluster node is not available for this operation.	ERROR_NODE_NOT_AVAILABLE
5037	0x000013AD	All cluster nodes must be running to perform this operation.	ERROR_ALL_NODES_NOT_AVAILABLE
5038	0x000013AE	A cluster resource failed.	ERROR_RESOURCE_FAILED
5039	0x000013AF	The cluster node is not valid.	ERROR_CLUSTER_INVALID_NODE
5040	0x000013B0	The cluster node already exists.	ERROR_CLUSTER_NODE_EXISTS
5041	0x000013B1	A node is in the process of joining the cluster.	ERROR_CLUSTER_JOIN_IN_PROGRESS

Code (dec)	Code (hex)	Description	Name
5042	0x000013B2	The cluster node was not found.	ERROR_CLUSTER_NODE_NOT_FOUND
5043	0x000013B3	The cluster local node information was not found.	ERROR_CLUSTER_LOCAL_NODE_NOT_FOUND
5044	0x000013B4	The cluster network already exists.	ERROR_CLUSTER_NETWORK_EXISTS
5045	0x000013B5	The cluster network was not found.	ERROR_CLUSTER_NETWORK_NOT_FOUND
5046	0x000013B6	The cluster network interface already exists.	ERROR_CLUSTER_NETINTERFACE_EXISTS
5047	0x000013B7	The cluster network interface was not found.	ERROR_CLUSTER_NETINTERFACE_NOT_FOUND
5048	0x000013B8	The cluster request is not valid for this object.	ERROR_CLUSTER_INVALID_REQUEST
5049	0x000013B9	The cluster network provider is not valid.	ERROR_CLUSTER_INVALID_NETWORK_PROVIDER
5050	0x000013BA	The cluster node is down.	ERROR_CLUSTER_NODE_DOWN
5051	0x000013BB	The cluster node is not reachable.	ERROR_CLUSTER_NODE_UNREACHABLE
5052	0x000013BC	The cluster node is not a member of the cluster.	ERROR_CLUSTER_NODE_NOT_MEMBER
5053	0x000013BD	A cluster join operation is not in progress.	ERROR_CLUSTER_JOIN_NOT_IN_PROGRESS
5054	0x000013BE	The cluster network is not valid.	ERROR_CLUSTER_INVALID_NETWORK
5056	0x000013C0	The cluster node is up.	ERROR_CLUSTER_NODE_UP
5057	0x000013C1	The cluster IP address is already in use.	ERROR_CLUSTER_IPADDR_IN_USE
5058	0x000013C2	The cluster node is not paused.	ERROR_CLUSTER_NODE_NOT_PAUSED
5059	0x000013C3	No cluster security context is available.	ERROR_CLUSTER_NO_SECURITY_CONTEXT
5060	0x000013C4	The cluster network is not configured for internal cluster communication.	ERROR_CLUSTER_NETWORK_NOT_INTERNAL
5061	0x000013C5	The cluster node is already up.	ERROR_CLUSTER_NODE_ALREADY_UP
5062	0x000013C6	The cluster node is already down.	ERROR_CLUSTER_NODE_ALREADY_DOWN
5063	0x000013C7	The cluster network is already online.	ERROR_CLUSTER_NETWORK_ALREADY_ONLINE
5064	0x000013C8	The cluster network is already offline.	ERROR_CLUSTER_NETWORK_ALREADY_OFFLINE
5065	0x000013C9	The cluster node is already a member of the cluster.	ERROR_CLUSTER_NODE_ALREADY_MEMBER
5066	0x000013CA	The cluster network is the only one configured for internal cluster communication between two or more active cluster nodes. The internal communication capability cannot be removed from the network.	ERROR_CLUSTER_LAST_INTERNAL_NETWORK

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Code (dec)	Code (hex)	Description	Name
5067	0x000013CB	One or more cluster resources depend on the network to provide service to clients. The client access capability cannot be removed from the network.	ERROR_CLUSTER_NETWORK_HAS_DEPENDENTS
5068	0x000013CC	This operation cannot be performed on the cluster resource as it the quorum resource. You may not bring the quorum resource offline or modify its possible owners list.	ERROR_INVALID_OPERATION_ON_QUORUM
5069	0x000013CD	The cluster quorum resource is not allowed to have any dependencies.	ERROR_DEPENDENCY_NOT_ALLOWED
5070	0x000013CE	The cluster node is paused.	ERROR_CLUSTER_NODE_PAUSED
5071	0x000013CF	The cluster resource cannot be brought online. The owner node cannot run this resource.	ERROR_NODE_CANT_HOST_RESOURCE
5072	0x000013D0	The cluster node is not ready to perform the requested operation.	ERROR_CLUSTER_NODE_NOT_READY
5073	0x000013D1	The cluster node is shutting down.	ERROR_CLUSTER_NODE_SHUTTING_DOWN
5074	0x000013D2	The cluster join operation was aborted.	ERROR_CLUSTER_JOIN_ABORTED
5075	0x000013D3	The cluster join operation failed due to incompatible software versions between the joining node and its sponsor.	ERROR_CLUSTER_INCOMPATIBLE_VERSIONS
5076	0x000013D4	This resource cannot be created because the cluster has reached the limit on the number of resources it can monitor.	ERROR_CLUSTER_MAXNUM_OF_RESOURCES_EXCEEDED
5077	0x000013D5	The system configuration changed during the cluster join or form operation. The join or form operation was aborted.	ERROR_CLUSTER_SYSTEM_CONFIG_CHANGED
5078	0x000013D6	The specified resource type was not found.	ERROR_CLUSTER_RESOURCE_TYPE_NOT_FOUND
5079	0x000013D7	The specified node does not support a resource of this type. This may be due to version inconsistencies or due to the absence of the resource DLL on this node.	ERROR_CLUSTER_RESTYPE_NOT_SUPPORTED
5080	0x000013D8	The specified resource name is supported by this resource DLL. This may be due to a bad (or changed) name supplied to the resource DLL.	ERROR_CLUSTER_RESNAME_NOT_FOUND
5081	0x000013D9	No authentication package could be registered with the RPC server.	ERROR_CLUSTER_NO_RPC_PACKAGES_REGISTERED
5082	0x000013DA	You cannot bring the group online because the owner of the group is not in the preferred list for the group. To change the owner node for the group, move the group.	ERROR_CLUSTER_OWNER_NOT_IN_PREFLIST
5083	0x000013DB	The join operation failed because the cluster database sequence number has changed or is incompatible with the locker node. This may happen during a join operation if the cluster database was changing during the join.	ERROR_CLUSTER_DATABASE_SEQMISMATCH

Code (dec)	Code (hex)	Description	Name
5084	0x000013DC	The resource monitor will not allow the fail operation to be performed while the resource is in its current state. This may happen if the resource is in a pending state.	ERROR_RESMON_INVALID_STATE
5085	0x000013DD	A non locker code got a request to reserve the lock for making global updates.	ERROR_CLUSTER_GUM_NOT_LOCKER
5086	0x000013DE	The quorum disk could not be located by the cluster service.	ERROR_QUORUM_DISK_NOT_FOUND
5087	0x000013DF	The backup up cluster database is possibly corrupt.	ERROR_DATABASE_BACKUP_CORRUPT
5088	0x000013E0	A DFS root already exists in this cluster node.	ERROR_CLUSTER_NODE_ALREADY_HAS_DFS_ROOT
5089	0x000013E1	An attempt to modify a resource property failed because it conflicts with another existing property.	ERROR_RESOURCE_PROPERTY_UNCHANGEABLE
5890	0x00001702	An operation was attempted that is incompatible with the current membership state of the node.	ERROR_CLUSTER_MEMBERSHIP_INVALID_STATE
5891	0x00001703	The quorum resource does not contain the quorum log.	ERROR_CLUSTER_QUORUMLOG_NOT_FOUND
5892	0x00001704	The membership engine requested shutdown of the cluster service on this node.	ERROR_CLUSTER_MEMBERSHIP_HALT
5893	0x00001705	The join operation failed because the cluster instance ID of the joining node does not match the cluster instance ID of the sponsor node.	ERROR_CLUSTER_INSTANCE_ID_MISMATCH
5894	0x00001706	A matching network for the specified IP address could not be found. Please also specify a subnet mask and a cluster network.	ERROR_CLUSTER_NETWORK_NOT_FOUND_FOR_IP
5895	0x00001707	The actual data type of the property did not match the expected data type of the property.	ERROR_CLUSTER_PROPERTY_DATA_TYPE_MISMATCH
5896	0x00001708	The cluster node was evicted from the cluster successfully. The node was not cleaned up because it does not support the evict cleanup functionality.	ERROR_CLUSTER_EVICT_WITHOUT_CLEANUP
6000	0x00001770	The specified file could not be encrypted.	ERROR_ENCRYPTION_FAILED
6001	0x00001771	The specified file could not be decrypted.	ERROR_DECRYPTION_FAILED
6002	0x00001772	The specified file is encrypted and the user does not have the ability to decrypt it.	ERROR_FILE_ENCRYPTED
6003	0x00001773	There is no valid encryption recovery policy configured for this system.	ERROR_NO_RECOVERY_POLICY
6004	0x00001774	The required encryption driver is not loaded for this system.	ERROR_NO_EFS
6005	0x00001775	The file was encrypted with a different encryption driver than is currently loaded.	ERROR_WRONG_EFS
6006	0x00001776	There are no EFS keys defined for the user.	ERROR_NO_USER_KEYS
6007	0x00001777	The specified file is not encrypted.	ERROR_FILE_NOT_ENCRYPTED

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Code (dec)	Code (hex)	Description	Name
6008	0x00001778	The specified file is not in the defined EFS export format.	ERROR_NOT_EXPORT_FORMAT
6009	0x00001779	The specified file is read only.	ERROR_FILE_READ_ONLY
6010	0x0000177A	The directory has been disabled for encryption.	ERROR_DIR_EFS_DISALLOWED
6011	0x0000177B	The server is not trusted for remote encryption operation.	ERROR_EFS_SERVER_NOT_TRUSTED
6012	0x0000177C	Recovery policy configured for this system contains invalid recovery certificate.	ERROR_BAD_RECOVERY_POLICY
6013	0x0000177D	The encryption algorithm used on the source file needs a bigger key buffer than the one on the destination file.	ERROR_EFS_ALG_BLOB_TOO_BIG
6014	0x0000177E	The disk partition does not support file encryption.	ERROR_VOLUME_NOT_SUPPORT_EFS
6118	0x000017E6	The list of servers for this workgroup is not currently available.	ERROR_NO_BROWSER_SERVERS_FOUND
6200	0x00001838	The Task Scheduler service must be configured to run in the System account to function properly. Individual tasks may be configured to run in other accounts.	SCHED_E_SERVICE_NOT_LOCALSYSTEM
7001	0x00001B59	The specified session name is invalid.	ERROR_CTX_WINSTATION_NAME_INVALID
7002	0x00001B5A	The specified protocol driver is invalid.	ERROR_CTX_INVALID_PD
7003	0x00001B5B	The specified protocol driver was not found in the system path.	ERROR_CTX_PD_NOT_FOUND
7004	0x00001B5C	The specified terminal connection driver was not found in the system path.	ERROR_CTX_WD_NOT_FOUND
7005	0x00001B5D	A registry key for event logging could not be created for this session.	ERROR_CTX_CANNOT_MAKE_EVENTLOG_ENTRY
7006	0x00001B5E	A service with the same name already exists on the system.	ERROR_CTX_SERVICE_NAME_COLLISION
7007	0x00001B5F	A close operation is pending on the session.	ERROR_CTX_CLOSE_PENDING
7008	0x00001B60	There are no free output buffers available.	ERROR_CTX_NO_OUTBUF
7009	0x00001B61	The MODEM.INF file was not found.	ERROR_CTX_MODEM_INF_NOT_FOUND
7010	0x00001B62	The modem name was not found in MODEM.INF.	ERROR_CTX_INVALID_MODEMNAME
7011	0x00001B63	The modem did not accept the command sent to it. Verify that the configured modem name matches the attached modem.	ERROR_CTX_MODEM_RESPONSE_ERROR
7012	0x00001B64	The modem did not respond to the command sent to it. Verify that the modem is properly cabled and powered on.	ERROR_CTX_MODEM_RESPONSE_TIMEOUT
7013	0x00001B65	Carrier detect has failed or carrier has been dropped due to disconnect.	ERROR_CTX_MODEM_RESPONSE_NO_CARRIER
7014	0x00001B66	Dial tone not detected within the required time. Verify that the phone cable is properly attached and functional.	ERROR_CTX_MODEM_RESPONSE_NO_DIALTONE
7015	0x00001B67	Busy signal detected at remote site on callback.	ERROR_CTX_MODEM_RESPONSE_BUSY
7016	0x00001B68	Voice detected at remote site on callback.	ERROR_CTX_MODEM_RESPONSE_VOICE

Code (dec)	Code (hex)	Description	Name
7017	0x00001B69	Transport driver error	ERROR_CTX_TD_ERROR
7022	0x00001B6E	The specified session cannot be found.	ERROR_CTX_WINSTATION_NOT_FOUND
7023	0x00001B6F	The specified session name is already in use.	ERROR_CTX_WINSTATION_ALREADY_EXISTS
7024	0x00001B70	The requested operation cannot be completed because the terminal connection is currently busy processing a connect, disconnect, reset, or delete operation.	ERROR_CTX_WINSTATION_BUSY
7025	0x00001B71	An attempt has been made to connect to a session whose video mode is not supported by the current client.	ERROR_CTX_BAD_VIDEO_MODE
7035	0x00001B7B	The application attempted to enable DOS graphics mode. DOS graphics mode is not supported.	ERROR_CTX_GRAPHICS_INVALID
7037	0x00001B7D	Your interactive logon privilege has been disabled. Please contact your administrator.	ERROR_CTX_LOGON_DISABLED
7038	0x00001B7E	The requested operation can be performed only on the system console. This is most often the result of a driver or system DLL requiring direct console access.	ERROR_CTX_NOT_CONSOLE
7040	0x00001B80	The client failed to respond to the server connect message.	ERROR_CTX_CLIENT_QUERY_TIMEOUT
7041	0x00001B81	Disconnecting the console session is not supported.	ERROR_CTX_CONSOLE_DISCONNECT
7042	0x00001B82	Reconnecting a disconnected session to the console is not supported.	ERROR_CTX_CONSOLE_CONNECT
7044	0x00001B84	The request to control another session remotely was denied.	ERROR_CTX_SHADOW_DENIED
7045	0x00001B85	The requested session access is denied.	ERROR_CTX_WINSTATION_ACCESS_DENIED
7049	0x00001B89	The specified terminal connection driver is invalid.	ERROR_CTX_INVALID_WD
7050	0x00001B8A	The requested session cannot be controlled remotely. This may be because the session is disconnected or does not currently have a user logged on.	ERROR_CTX_SHADOW_INVALID
7051	0x00001B8B	The requested session is not configured to allow remote control.	ERROR_CTX_SHADOW_DISABLED
7052	0x00001B8C	Your request to connect to this Terminal Server has been rejected. Your Terminal Server client license number is currently being used by another user. Please call your system administrator to obtain a unique license number.	ERROR_CTX_CLIENT_LICENSE_IN_USE
7053	0x00001B8D	Your request to connect to this Terminal Server has been rejected. Your Terminal Server client license number has not been entered for this copy of the Terminal Server client. Please contact your system administrator.	ERROR_CTX_CLIENT_LICENSE_NOT_SET

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Code (dec)	Code (hex)	Description	Name
7054	0x00001B8E	The system has reached its licensed logon limit. Please try again later.	ERROR_CTX_LICENSE_NOT_AVAILABLE
7055	0x00001B8F	The client you are using is not licensed to use this system. Your logon request is denied.	ERROR_CTX_LICENSE_CLIENT_INVALID
7056	0x00001B90	The system license has expired. Your logon request is denied.	ERROR_CTX_LICENSE_EXPIRED
7057	0x00001B91	Remote control could not be terminated because the specified session is not currently being remotely controlled.	ERROR_CTX_SHADOW_NOT_RUNNING
8001	0x00001F41	The file replication service API was called incorrectly.	FRS_ERR_INVALID_API_SEQUENCE
8002	0x00001F42	The file replication service cannot be started.	FRS_ERR_STARTING_SERVICE
8003	0x00001F43	The file replication service cannot be stopped.	FRS_ERR_STOPPING_SERVICE
8004	0x00001F44	The file replication service API terminated the request. The event log may have more information.	FRS_ERR_INTERNAL_API
8005	0x00001F45	The file replication service terminated the request. The event log may have more information.	FRS_ERR_INTERNAL
8006	0x00001F46	The file replication service cannot be contacted. The event log may have more information.	FRS_ERR_SERVICE_COMM
8007	0x00001F47	The file replication service cannot satisfy the request because the user has insufficient privileges. The event log may have more information.	FRS_ERR_INSUFFICIENT_PRIV
8008	0x00001F48	The file replication service cannot satisfy the request because authenticated RPC is not available. The event log may have more information.	FRS_ERR_AUTHENTICATION
8009	0x00001F49	The file replication service cannot satisfy the request because the user has insufficient privileges on the domain controller. The event log may have more information.	FRS_ERR_PARENT_INSUFFICIENT_PRIV
8010	0x00001F4A	The file replication service cannot satisfy the request because authenticated RPC is not available on the domain controller. The event log may have more information.	FRS_ERR_PARENT_AUTHENTICATION
8011	0x00001F4B	The file replication service cannot communicate with the file replication service on the domain controller. The event log may have more information.	FRS_ERR_CHILD_TO_PARENT_COMM
8012	0x00001F4C	The file replication service on the domain controller cannot communicate with the file replication service on this computer. The event log may have more information.	FRS_ERR_PARENT_TO_CHILD_COMM
8013	0x00001F4D	The file replication service cannot populate the system volume because of an internal error. The event log may have more information.	FRS_ERR_SYSVOL_POPULATE

Code (dec)	Code (hex)	Description	Name
8014	0x00001F4E	The file replication service cannot populate the system volume because of an internal timeout. The event log may have more information.	FRS_ERR_SYSVOL_POPULATE_TIMEOUT
8015	0x00001F4F	The file replication service cannot process the request. The system volume is busy with a previous request.	FRS_ERR_SYSVOL_IS_BUSY
8016	0x00001F50	The file replication service cannot stop replicating the system volume because of an internal error. The event log may have more information.	FRS_ERR_SYSVOL_DEMOTE
8017	0x00001F51	The file replication service detected an invalid parameter.	FRS_ERR_INVALID_SERVICE_PARAMETER
8200	0x00002008	An error occurred while installing the directory service. For more information, see the event log.	ERROR_DS_NOT_INSTALLED
8201	0x00002009	The directory service evaluated group memberships locally.	ERROR_DS_MEMBERSHIP_EVALUATED_LOCALLY
8202	0x0000200A	The specified directory service attribute or value does not exist.	ERROR_DS_NO_ATTRIBUTE_OR_VALUE
8203	0x0000200B	The attribute syntax specified to the directory service is invalid.	ERROR_DS_INVALID_ATTRIBUTE_SYNTAX
8204	0x0000200C	The attribute type specified to the directory service is not defined.	ERROR_DS_ATTRIBUTE_TYPE_UNDEFINED
8205	0x0000200D	The specified directory service attribute or value already exists.	ERROR_DS_ATTRIBUTE_OR_VALUE_EXISTS
8206	0x0000200E	The directory service is busy.	ERROR_DS_BUSY
8207	0x0000200F	The directory service is unavailable.	ERROR_DS_UNAVAILABLE
8208	0x00002010	The directory service was unable to allocate a relative identifier.	ERROR_DS_NO_RIDS_ALLOCATED
8209	0x00002011	The directory service has exhausted the pool of relative identifiers.	ERROR_DS_NO_MORE_RIDS
8210	0x00002012	The requested operation could not be performed because the directory service is not the master for that type of operation.	ERROR_DS_INCORRECT_ROLE_OWNER
8211	0x00002013	The directory service was unable to initialize the subsystem that allocates relative identifiers.	ERROR_DS_RIDMGR_INIT_ERROR
8212	0x00002014	The requested operation did not satisfy one or more constraints associated with the class of the object.	ERROR_DS_OBJ_CLASS_VIOLATION
8213	0x00002015	The directory service can perform the requested operation only on a leaf object.	ERROR_DS_CANT_ON_NON_LEAF
8214	0x00002016	The directory service cannot perform the requested operation on the RDN attribute of an object.	ERROR_DS_CANT_ON_RDN
8215	0x00002017	The directory service detected an attempt to modify the object class of an object.	ERROR_DS_CANT_MOD_OBJ_CLASS
8216	0x00002018	The requested cross-domain move operation could not be performed.	ERROR_DS_CROSS_DOM_MOVE_ERROR
8217	0x00002019	Unable to contact the global catalog server.	ERROR_DS_GC_NOT_AVAILABLE
8218	0x0000201A	The policy object is shared and can only be modified at the root.	ERROR_SHARED_POLICY

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Code (dec)	Code (hex)	Description	Name
8219	0x0000201B	The policy object does not exist.	ERROR_POLICY_OBJECT_NOT_FOUND
8220	0x0000201C	The requested policy information is only in the directory service.	ERROR_POLICY_ONLY_IN_DS
8221	0x0000201D	A domain controller promotion is currently active.	ERROR_PROMOTION_ACTIVE
8222	0x0000201E	A domain controller promotion is not currently active	ERROR_NO_PROMOTION_ACTIVE
8224	0x00002020	An operations error occurred.	ERROR_DS_OPERATIONS_ERROR
8225	0x00002021	A protocol error occurred.	ERROR_DS_PROTOCOL_ERROR
8226	0x00002022	The time limit for this request was exceeded.	ERROR_DS_TIMELIMIT_EXCEEDED
8227	0x00002023	The size limit for this request was exceeded.	ERROR_DS_SIZELIMIT_EXCEEDED
8228	0x00002024	The administrative limit for this request was exceeded.	ERROR_DS_ADMIN_LIMIT_EXCEEDED
8229	0x00002025	The compare response was false.	ERROR_DS_COMPARE_FALSE
8230	0x00002026	The compare response was true.	ERROR_DS_COMPARE_TRUE
8231	0x00002027	The requested authentication method is not supported by the server.	ERROR_DS_AUTH_METHOD_NOT_SUPPORTED
8232	0x00002028	A more secure authentication method is required for this server.	ERROR_DS_STRONG_AUTH_REQUIRED
8233	0x00002029	Inappropriate authentication.	ERROR_DS_INAPPROPRIATE_AUTH
8234	0x0000202A	The authentication mechanism is unknown.	ERROR_DS_AUTH_UNKNOWN
8235	0x0000202B	A referral was returned from the server.	ERROR_DS_REFERRAL
8236	0x0000202C	The server does not support the requested critical extension.	ERROR_DS_UNAVAILABLE_CRIT_EXTENSION
8237	0x0000202D	This request requires a secure connection.	ERROR_DS_CONFIDENTIALITY_REQUIRED
8238	0x0000202E	Inappropriate matching.	ERROR_DS_INAPPROPRIATE_MATCHING
8239	0x0000202F	A constraint violation occurred.	ERROR_DS_CONSTRAINT_VIOLATION
8240	0x00002030	There is no such object on the server.	ERROR_DS_NO_SUCH_OBJECT
8241	0x00002031	There is an alias problem.	ERROR_DS_ALIAS_PROBLEM
8242	0x00002032	An invalid dn syntax has been specified.	ERROR_DS_INVALID_DN_SYNTAX
8243	0x00002033	The object is a leaf object.	ERROR_DS_IS_LEAF
8244	0x00002034	There is an alias dereferencing problem.	ERROR_DS_ALIAS_DEREF_PROBLEM
8245	0x00002035	The server is unwilling to process the request.	ERROR_DS_UNWILLING_TO_PERFORM
8246	0x00002036	A loop has been detected.	ERROR_DS_LOOP_DETECT
8247	0x00002037	There is a naming violation.	ERROR_DS_NAMING_VIOLATION

Code (dec)	Code (hex)	Description	Name
8248	0x00002038	The result set is too large.	ERROR_DS_OBJECT_RESULTS_TOO_LARGE
8249	0x00002039	The operation affects multiple DSAs	ERROR_DS_AFFECTS_MULTIPLE_DSAS
8250	0x0000203A	The server is not operational.	ERROR_DS_SERVER_DOWN
8251	0x0000203B	A local error has occurred.	ERROR_DS_LOCAL_ERROR
8252	0x0000203C	An encoding error has occurred.	ERROR_DS_ENCODING_ERROR
8253	0x0000203D	A decoding error has occurred.	ERROR_DS_DECODING_ERROR
8254	0x0000203E	The search filter cannot be recognized.	ERROR_DS_FILTER_UNKNOWN
8255	0x0000203F	One or more parameters are illegal.	ERROR_DS_PARAM_ERROR
8256	0x00002040	The specified method is not supported.	ERROR_DS_NOT_SUPPORTED
8257	0x00002041	No results were returned.	ERROR_DS_NO_RESULTS_RETURNED
8258	0x00002042	The specified control is not supported by the server.	ERROR_DS_CONTROL_NOT_FOUND
8259	0x00002043	A referral loop was detected by the client.	ERROR_DS_CLIENT_LOOP
8260	0x00002044	The preset referral limit was exceeded.	ERROR_DS_REFERRAL_LIMIT_EXCEEDED
8261	0x00002045	The search requires a SORT control.	ERROR_DS_SORT_CONTROL_MISSING
8262	0x00002046	The search results exceed the offset range specified.	ERROR_DS_OFFSET_RANGE_ERROR
8301	0x0000206D	The root object must be the head of a naming context. The root object cannot have an instantiated parent.	ERROR_DS_ROOT_MUST_BE_NC
8302	0x0000206E	The add replica operation cannot be performed. The naming context must be writable in order to create the replica.	ERROR_DS_ADD_REPLICA_INHIBITED
8303	0x0000206F	A reference to an attribute that is not defined in the schema occurred.	ERROR_DS_ATT_NOT_DEF_IN_SCHEMA
8304	0x00002070	The maximum size of an object has been exceeded.	ERROR_DS_MAX_OBJ_SIZE_EXCEEDED
8305	0x00002071	An attempt was made to add an object to the directory with a name that is already in use.	ERROR_DS_OBJ_STRING_NAME_EXISTS
8306	0x00002072	An attempt was made to add an object of a class that does not have an RDN defined in the schema.	ERROR_DS_NO_RDN_DEFINED_IN_SCHEMA
8307	0x00002073	An attempt was made to add an object using an RDN that is not the RDN defined in the schema.	ERROR_DS_RDN_DOESNT_MATCH_SCHEMA
8308	0x00002074	None of the requested attributes were found on the objects.	ERROR_DS_NO_REQUESTED_ATTS_FOUND
8309	0x00002075	The user buffer is too small.	ERROR_DS_USER_BUFFER_TO_SMALL
8310	0x00002076	The attribute specified in the operation is not present on the object.	ERROR_DS_ATT_IS_NOT_ON_OBJ

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Code (dec)	Code (hex)	Description	Name
8311	0x00002077	Illegal modify operation. Some aspect of the modification is not permitted.	ERROR_DS_ILLEGAL_MOD_OPERATION
8312	0x00002078	The specified object is too large.	ERROR_DS_OBJ_TOO_LARGE
8313	0x00002079	The specified instance type is not valid.	ERROR_DS_BAD_INSTANCE_TYPE
8314	0x0000207A	The operation must be performed at a master DSA.	ERROR_DS_MASTERDSA_REQUIRED
8315	0x0000207B	The object class attribute must be specified.	ERROR_DS_OBJECT_CLASS_REQUIRED
8316	0x0000207C	A required attribute is missing.	ERROR_DS_MISSING_REQUIRED_ATT
8317	0x0000207D	An attempt was made to modify an object to include an attribute that is not legal for its class	ERROR_DS_ATT_NOT_DEF_FOR_CLASS
8318	0x0000207E	The specified attribute is already present on the object.	ERROR_DS_ATT_ALREADY_EXISTS
8320	0x00002080	The specified attribute is not present, or has no values.	ERROR_DS_CANT_ADD_ATT_VALUES
8321	0x00002081	Multiple values were specified for an attribute that can have only one value.	ERROR_DS_SINGLE_VALUE_CONSTRAINT
8322	0x00002082	A value for the attribute was not in the acceptable range of values.	ERROR_DS_RANGE_CONSTRAINT
8323	0x00002083	The specified value already exists.	ERROR_DS_ATT_VAL_ALREADY_EXISTS
8324	0x00002084	The attribute cannot be removed because it is not present on the object.	ERROR_DS_CANT_REM_MISSING_ATT
8325	0x00002085	The attribute value cannot be removed because it is not present on the object.	ERROR_DS_CANT_REM_MISSING_ATT_VAL
8326	0x00002086	The specified root object cannot be a subref.	ERROR_DS_ROOT_CANT_BE_SUBREF
8327	0x00002087	Chaining is not permitted.	ERROR_DS_NO_CHAINING
8328	0x00002088	Chained evaluation is not permitted.	ERROR_DS_NO_CHAINED_EVAL
8329	0x00002089	The operation could not be performed because the object's parent is either uninstantiated or deleted.	ERROR_DS_NO_PARENT_OBJECT
8330	0x0000208A	Having a parent that is an alias is not permitted. Aliases are leaf objects.	ERROR_DS_PARENT_IS_AN_ALIAS
8331	0x0000208B	The object and parent must be of the same type, either both masters or both replicas.	ERROR_DS_CANT_MIX_MASTER_AND_REPS
8332	0x0000208C	The operation cannot be performed because child objects exist. This operation can only be performed on a leaf object.	ERROR_DS_CHILDREN_EXIST
8333	0x0000208D	Directory object not found.	ERROR_DS_OBJ_NOT_FOUND
8334	0x0000208E	The aliased object is missing.	ERROR_DS_ALIASED_OBJ_MISSING
8335	0x0000208F	The object name has bad syntax.	ERROR_DS_BAD_NAME_SYNTAX
8336	0x00002090	It is not permitted for an alias to refer to another alias.	ERROR_DS_ALIAS_POINTS_TO_ALIAS

Code (dec)	Code (hex)	Description	Name
8337	0x00002091	The alias cannot be dereferenced.	ERROR_DS_CANT_DEREF_ALIAS
8338	0x00002092	The operation is out of scope.	ERROR_DS_OUT_OF_SCOPE
8339	0x00002093	The operation cannot continue because the object is in the process of being removed.	ERROR_DS_OBJECT_BEING_REMOVED
8340	0x00002094	The DSA object cannot be deleted.	ERROR_DS_CANT_DELETE_DSA_OBJ
8341	0x00002095	A directory service error has occurred.	ERROR_DS_GENERIC_ERROR
8342	0x00002096	The operation can only be performed on an internal master DSA object.	ERROR_DS_DSA_MUST_BE_INT_MASTER
8343	0x00002097	The object must be of class DSA.	ERROR_DS_CLASS_NOT_DSA
8344	0x00002098	Insufficient access rights to perform the operation.	ERROR_DS_INSUFF_ACCESS_RIGHTS
8345	0x00002099	The object cannot be added because the parent is not on the list of possible superiors.	ERROR_DS_ILLEGAL_SUPERIOR
8346	0x0000209A	Access to the attribute is not permitted because the attribute is owned by the Security Accounts Manager (SAM).	ERROR_DS_ATTRIBUTE_OWNED_BY_SAM
8347	0x0000209B	The name has too many parts.	ERROR_DS_NAME_TOO_MANY_PARTS
8348	0x0000209C	The name is too long.	ERROR_DS_NAME_TOO_LONG
8349	0x0000209D	The name value is too long.	ERROR_DS_NAME_VALUE_TOO_LONG
8350	0x0000209E	The directory service encountered an error parsing a name.	ERROR_DS_NAME_UNPARSEABLE
8351	0x0000209F	The directory service cannot get the attribute type for a name.	ERROR_DS_NAME_TYPE_UNKNOWN
8352	0x000020A0	The name does not identify an object; the name identifies a phantom.	ERROR_DS_NOT_AN_OBJECT
8353	0x000020A1	The security descriptor is too short.	ERROR_DS_SEC_DESC_TOO_SHORT
8354	0x000020A2	The security descriptor is invalid.	ERROR_DS_SEC_DESC_INVALID
8355	0x000020A3	Failed to create name for deleted object.	ERROR_DS_NO_DELETED_NAME
8356	0x000020A4	The parent of a new subref must exist.	ERROR_DS_SUBREF_MUST_HAVE_PARENT
8357	0x000020A5	The object must be a naming context.	ERROR_DS_NCNAME_MUST_BE_NC
8358	0x000020A6	It is not permitted to add an attribute which is owned by the system.	ERROR_DS_CANT_ADD_SYSTEM_ONLY
8359	0x000020A7	The class of the object must be structural; you cannot instantiate an abstract class.	ERROR_DS_CLASS_MUST_BE_CONCRETE
8360	0x000020A8	The schema object could not be found.	ERROR_DS_INVALID_DMD
8361	0x000020A9	A local object with this GUID (dead or alive) already exists.	ERROR_DS_OBJ_GUID_EXISTS

Code (dec)	Code (hex)	Description	Name
8362	0x000020AA	The operation cannot be performed on a back link.	ERROR_DS_NOT_ON_BACK LINK
8363	0x000020AB	The cross reference for the specified naming context could not be found.	ERROR_DS_NO_CROSSREF _FOR_NC
8364	0x000020AC	The operation could not be performed because the directory service is shutting down.	ERROR_DS_SHUTTING_DO WN
8365	0x000020AD	The directory service request is invalid.	ERROR_DS_UNKNOWN_OP ERATION
8366	0x000020AE	The role owner attribute could not be read.	ERROR_DS_INVALID_ROLE _OWNER
8367	0x000020AF	The requested FSMO operation failed. The current FSMO holder could not be reached.	ERROR_DS_COULDNT_CON TACT_FSMO
8368	0x000020B0	Modification of a DN across a naming context is not permitted.	ERROR_DS_CROSS_NC_DN _RENAME
8369	0x000020B1	The attribute cannot be modified because it is owned by the system.	ERROR_DS_CANT_MOD_SY STEM_ONLY
8370	0x000020B2	Only the replicator can perform this function.	ERROR_DS_REPLICATOR_ ONLY
8371	0x000020B3	The specified class is not defined.	ERROR_DS_OBJ_CLASS_N OT_DEFINED
8372	0x000020B4	The specified class is not a subclass.	ERROR_DS_OBJ_CLASS_N OT_SUBCLASS
8373	0x000020B5	The name reference is invalid.	ERROR_DS_NAME_REFERE NCE_INVALID
8374	0x000020B6	A cross reference already exists.	ERROR_DS_CROSS_REF_E XISTS
8375	0x000020B7	It is not permitted to delete a master cross reference.	ERROR_DS_CANT_DEL_MA STER_CROSSREF
8376	0x000020B8	Subtree notifications are only supported on NC heads.	ERROR_DS_SUBTREE_NOTI FY_NOT_NC_HEAD
8377	0x000020B9	Notification filter is too complex.	ERROR_DS_NOTIFY_FILTER _TOO_COMPLEX
8378	0x000020BA	Schema update failed: duplicate RDN.	ERROR_DS_DUP_RDN
8379	0x000020BB	Schema update failed: duplicate OID	ERROR_DS_DUP_OID
8380	0x000020BC	Schema update failed: duplicate MAPI identifier.	ERROR_DS_DUP_MAPI_ID
8381	0x000020BD	Schema update failed: duplicate schema-id GUID.	ERROR_DS_DUP_SCHEMA_ ID_GUID
8382	0x000020BE	Schema update failed: duplicate LDAP display name.	ERROR_DS_DUP_LDAP_DIS PLAY_NAME
8383	0x000020BF	Schema update failed: range-lower less than range upper	ERROR_DS_SEMANTIC_ATT _TEST
8384	0x000020C0	Schema update failed: syntax mismatch	ERROR_DS_SYNTAX_MISM ATCH
8385	0x000020C1	Schema deletion failed: attribute is used in must-contain	ERROR_DS_EXISTS_IN_MU ST_HAVE
8386	0x000020C2	Schema deletion failed: attribute is used in may-contain	ERROR_DS_EXISTS_IN_MA Y_HAVE
8387	0x000020C3	Schema update failed: attribute in may-contain does not exist	ERROR_DS_NONEXISTENT_ MAY_HAVE

Code (dec)	Code (hex)	Description	Name
8388	0x000020C4	Schema update failed: attribute in must-contain does not exist	ERROR_DS_NONEXISTENT_MUST_HAVE
8389	0x000020C5	Schema update failed: class in aux-class list does not exist or is not an auxiliary class	ERROR_DS_AUX_CLS_TEST_FAIL
8390	0x000020C6	Schema update failed: class in poss-superiors does not exist	ERROR_DS_NONEXISTENT_POSS_SUP
8391	0x000020C7	Schema update failed: class in subclassof list does not exist or does not satisfy hierarchy rules	ERROR_DS_SUB_CLS_TEST_FAIL
8392	0x000020C8	Schema update failed: Rdn-Att-Id has wrong syntax	ERROR_DS_BAD_RDN_ATT_ID_SYNTAX
8393	0x000020C9	Schema deletion failed: class is used as auxiliary class	ERROR_DS_EXISTS_IN_AUX_CLS
8394	0x000020CA	Schema deletion failed: class is used as sub class	ERROR_DS_EXISTS_IN_SUB_CLS
8395	0x000020CB	Schema deletion failed: class is used as poss superior	ERROR_DS_EXISTS_IN_POSS_SUP
8396	0x000020CC	Schema update failed in recalculating validation cache.	ERROR_DS_RECALCSCHEMA_FAILED
8397	0x000020CD	The tree deletion is not finished.	ERROR_DS_TREE_DELETE_NOT_FINISHED
8398	0x000020CE	The requested delete operation could not be performed.	ERROR_DS_CANT_DELETE
8399	0x000020CF	Cannot read the governs class identifier for the schema record.	ERROR_DS_ATT_SCHEMA_REQ_ID
8400	0x000020D0	The attribute schema has bad syntax.	ERROR_DS_BAD_ATT_SCHEMA_SYNTAX
8401	0x000020D1	The attribute could not be cached.	ERROR_DS_CANT_CACHE_ATT
8402	0x000020D2	The class could not be cached.	ERROR_DS_CANT_CACHE_CLASS
8403	0x000020D3	The attribute could not be removed from the cache.	ERROR_DS_CANT_REMOVE_ATT_CACHE
8404	0x000020D4	The class could not be removed from the cache.	ERROR_DS_CANT_REMOVE_CLASS_CACHE
8405	0x000020D5	The distinguished name attribute could not be read.	ERROR_DS_CANT_RETRIEVE_DN
8406	0x000020D6	A required subref is missing.	ERROR_DS_MISSING_SUPREF
8407	0x000020D7	The instance type attribute could not be retrieved.	ERROR_DS_CANT_RETRIEVE_INSTANCE
8408	0x000020D8	An internal error has occurred.	ERROR_DS_CODE_INCONSISTENCY
8409	0x000020D9	A database error has occurred.	ERROR_DS_DATABASE_ERROR
8410	0x000020DA	The attribute GOVERNSID is missing.	ERROR_DS_GOVERNSID_MISSING
8411	0x000020DB	An expected attribute is missing.	ERROR_DS_MISSING_EXPECTED_ATT
8412	0x000020DC	The specified naming context is missing a cross reference.	ERROR_DS_NCNAME_MISSING_CR_REF

Code (dec)	Code (hex)	Description	Name
8413	0x000020DD	A security checking error has occurred.	ERROR_DS_SECURITY_CHECKING_ERROR
8414	0x000020DE	The schema is not loaded.	ERROR_DS_SCHEMA_NOT_LOADED
8415	0x000020DF	Schema allocation failed. Please check if the machine is running low on memory.	ERROR_DS_SCHEMA_ALLOC_FAILED
8416	0x000020E0	Failed to obtain the required syntax for the attribute schema.	ERROR_DS_ATT_SCHEMA_REQ_SYNTAX
8417	0x000020E1	The global catalog verification failed. The global catalog is not available or does not support the operation. Some part of the directory is currently not available.	ERROR_DS_GCVERIFY_ERROR
8418	0x000020E2	The replication operation failed because of a schema mismatch between the servers involved.	ERROR_DS_DRA_SCHEMA_MISMATCH
8419	0x000020E3	The DSA object could not be found.	ERROR_DS_CANT_FIND_DSA_OBJ
8420	0x000020E4	The naming context could not be found.	ERROR_DS_CANT_FIND_EXPECTED_NC
8421	0x000020E5	The naming context could not be found in the cache.	ERROR_DS_CANT_FIND_NC_IN_CACHE
8422	0x000020E6	The child object could not be retrieved.	ERROR_DS_CANT_RETRIEVE_CHILD
8423	0x000020E7	The modification was not permitted for security reasons.	ERROR_DS_SECURITY_ILLEGAL_MODIFY
8424	0x000020E8	The operation cannot replace the hidden record.	ERROR_DS_CANT_REPLACE_HIDDEN_REC
8425	0x000020E9	The hierarchy file is invalid.	ERROR_DS_BAD_HIERARCHY_FILE
8426	0x000020EA	The attempt to build the hierarchy table failed.	ERROR_DS_BUILD_HIERARCHY_TABLE_FAILED
8427	0x000020EB	The directory configuration parameter is missing from the registry.	ERROR_DS_CONFIG_PARAM_MISSING
8428	0x000020EC	The attempt to count the address book indices failed.	ERROR_DS_COUNTING_AB_INDICES_FAILED
8429	0x000020ED	The allocation of the hierarchy table failed.	ERROR_DS_HIERARCHY_TABLE_MALLOC_FAILED
8430	0x000020EE	The directory service encountered an internal failure.	ERROR_DS_INTERNAL_FAILURE
8431	0x000020EF	The directory service encountered an unknown failure.	ERROR_DS_UNKNOWN_ERROR
8432	0x000020F0	A root object requires a class of 'top'.	ERROR_DS_ROOT_REQUIRES_CLASS_TOP
8433	0x000020F1	This directory server is shutting down, and cannot take ownership of new floating single-master operation roles.	ERROR_DS_REFUSING_FSMO_ROLES
8434	0x000020F2	The directory service is missing mandatory configuration information, and is unable to determine the ownership of floating single-master operation roles.	ERROR_DS_MISSING_FSMO_SETTINGS
8435	0x000020F3	The directory service was unable to transfer ownership of one or more floating single-master operation roles to other servers.	ERROR_DS_UNABLE_TO_SURRENDER_ROLES

Code (dec)	Code (hex)	Description	Name
8436	0x000020F4	The replication operation failed.	ERROR_DS_DRA_GENERIC
8437	0x000020F5	An invalid parameter was specified for this replication operation.	ERROR_DS_DRA_INVALID_PARAMETER
8438	0x000020F6	The directory service is too busy to complete the replication operation at this time.	ERROR_DS_DRA_BUSY
8439	0x000020F7	The distinguished name specified for this replication operation is invalid.	ERROR_DS_DRA_BAD_DN
8440	0x000020F8	The naming context specified for this replication operation is invalid.	ERROR_DS_DRA_BAD_NC
8441	0x000020F9	The distinguished name specified for this replication operation already exists.	ERROR_DS_DRA_DN_EXISTS
8442	0x000020FA	The replication system encountered an internal error.	ERROR_DS_DRA_INTERNAL_ERROR
8443	0x000020FB	The replication operation encountered a database inconsistency.	ERROR_DS_DRA_INCONSISTENT_DIT
8444	0x000020FC	The server specified for this replication operation could not be contacted.	ERROR_DS_DRA_CONNECTION_FAILED
8445	0x000020FD	The replication operation encountered an object with an invalid instance type.	ERROR_DS_DRA_BAD_INSTANCE_TYPE
8446	0x000020FE	The replication operation failed to allocate memory.	ERROR_DS_DRA_OUT_OF_MEM
8447	0x000020FF	The replication operation encountered an error with the mail system.	ERROR_DS_DRA_MAIL_PROBLEM
8448	0x00002100	The replication reference information for the target server already exists.	ERROR_DS_DRA_REF_ALREADY_EXISTS
8449	0x00002101	The replication reference information for the target server does not exist.	ERROR_DS_DRA_REF_NOT_FOUND
8450	0x00002102	The naming context cannot be removed because it is replicated to another server.	ERROR_DS_DRA_OBJ_IS_REP_SOURCE
8451	0x00002103	The replication operation encountered a database error.	ERROR_DS_DRA_DB_ERROR
8452	0x00002104	The naming context is in the process of being removed or is not replicated from the specified server.	ERROR_DS_DRA_NO_REPLICA
8453	0x00002105	Replication access was denied.	ERROR_DS_DRA_ACCESS_DENIED
8454	0x00002106	The requested operation is not supported by this version of the directory service.	ERROR_DS_DRA_NOT_SUPPORTED
8455	0x00002107	The replication remote procedure call was cancelled.	ERROR_DS_DRA_RPC_CANCELLED
8456	0x00002108	The source server is currently rejecting replication requests.	ERROR_DS_DRA_SOURCE_DISABLED
8457	0x00002109	The destination server is currently rejecting replication requests.	ERROR_DS_DRA_SINK_DISABLED
8458	0x0000210A	The replication operation failed due to a collision of object names.	ERROR_DS_DRA_NAME_COLLISION
8459	0x0000210B	The replication source has been reinstalled.	ERROR_DS_DRA_SOURCE_REINSTALLED
8460	0x0000210C	The replication operation failed because a required parent object is missing.	ERROR_DS_DRA_MISSING_PARENT
8461	0x0000210D	The replication operation was preempted.	ERROR_DS_DRA_PREEMPTED

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Code (dec)	Code (hex)	Description	Name
8462	0x0000210E	The replication synchronization attempt was abandoned because of a lack of updates.	ERROR_DS_DRA_ABANDON_SYNC
8463	0x0000210F	The replication operation was terminated because the system is shutting down.	ERROR_DS_DRA_SHUTDOWN
8464	0x00002110	The replication synchronization attempt failed as the destination partial attribute set is not a subset of source partial attribute set.	ERROR_DS_DRA_INCOMPATIBLE_PARTIAL_SET
8465	0x00002111	The replication synchronization attempt failed because a master replica attempted to sync from a partial replica.	ERROR_DS_DRA_SOURCE_IS_PARTIAL_REPLICA
8466	0x00002112	The server specified for this replication operation was contacted, but that server was unable to contact an additional server needed to complete the operation.	ERROR_DS_DRA_EXTN_CONNECTION_FAILED
8467	0x00002113	The version of the Active Directory schema of the source forest is not compatible with the version of Active Directory on this computer. You must upgrade the operating system on a domain controller in the source forest before this computer can be added as a domain controller to that forest.	ERROR_DS_INSTALL_SCHEMA_MISMATCH
8468	0x00002114	Schema update failed: An attribute with the same link identifier already exists.	ERROR_DS_DUP_LINK_ID
8469	0x00002115	Name translation: Generic processing error.	ERROR_DS_NAME_ERROR_RESOLVING
8470	0x00002116	Name translation: Could not find the name or insufficient right to see name.	ERROR_DS_NAME_ERROR_NOT_FOUND
8471	0x00002117	Name translation: Input name mapped to more than one output name.	ERROR_DS_NAME_ERROR_NOT_UNIQUE
8472	0x00002118	Name translation: Input name found, but not the associated output format.	ERROR_DS_NAME_ERROR_NO_MAPPING
8473	0x00002119	Name translation: Unable to resolve completely, only the domain was found.	ERROR_DS_NAME_ERROR_DOMAIN_ONLY
8474	0x0000211A	Name translation: Unable to perform purely syntactical mapping at the client without going out to the wire.	ERROR_DS_NAME_ERROR_NO_SYNTACTICAL_MAPPING
8475	0x0000211B	Modification of a constructed att is not allowed.	ERROR_DS_CONSTRUCTED_ATT_MOD
8476	0x0000211C	The OM-Object-Class specified is incorrect for an attribute with the specified syntax.	ERROR_DS_WRONG_OM_OBJ_CLASS
8477	0x0000211D	The replication request has been posted; waiting for reply.	ERROR_DS_DRA_REPL_PENDING
8478	0x0000211E	The requested operation requires a directory service, and none was available.	ERROR_DS_DS_REQUIRED
8479	0x0000211F	The LDAP display name of the class or attribute contains non-ASCII characters.	ERROR_DS_INVALID_LDAP_DISPLAY_NAME
8480	0x00002120	The requested search operation is only supported for base searches.	ERROR_DS_NON_BASE_SEARCH
8481	0x00002121	The search failed to retrieve attributes from the database.	ERROR_DS_CANT_RETRIEVE_ATTS

Code (dec)	Code (hex)	Description	Name
8482	0x00002122	The schema update operation tried to add a backward link attribute that has no corresponding forward link.	ERROR_DS_BACKLINK_WITHOUT_LINK
8483	0x00002123	Source and destination of a cross domain move do not agree on the object's epoch number. Either source or destination does not have the latest version of the object.	ERROR_DS_EPOCH_MISMATCH
8484	0x00002124	Source and destination of a cross domain move do not agree on the object's current name. Either source or destination does not have the latest version of the object.	ERROR_DS_SRC_NAME_MISMATCH
8485	0x00002125	Source and destination of a cross domain move operation are identical. Caller should use local move operation instead of cross domain move operation.	ERROR_DS_SRC_AND_DST_NC_IDENTICAL
8486	0x00002126	Source and destination for a cross domain move are not in agreement on the naming contexts in the forest. Either source or destination does not have the latest version of the Partitions container.	ERROR_DS_DST_NC_MISMATCH
8487	0x00002127	Destination of a cross domain move is not authoritative for the destination naming context.	ERROR_DS_NOT_AUTHORITIVE_FOR_DST_NC
8488	0x00002128	Source and destination of a cross domain move do not agree on the identity of the source object. Either source or destination does not have the latest version of the source object.	ERROR_DS_SRC_GUID_MISMATCH
8489	0x00002129	Object being moved across domains is already known to be deleted by the destination server. The source server does not have the latest version of the source object.	ERROR_DS_CANT_MOVE_DELETED_OBJECT
8490	0x0000212A	Another operation which requires exclusive access to the PDC PSMO is already in progress.	ERROR_DS_PDC_OPERATION_IN_PROGRESS
8491	0x0000212B	A cross domain move operation failed such that the two versions of the moved object exist - one each in the source and destination domains. The destination object needs to be removed to restore the system to a consistent state.	ERROR_DS_CROSS_DOMAIN_CLEANUP_REQD
8492	0x0000212C	This object may not be moved across domain boundaries either because cross domain moves for this class are disallowed, or the object has some special characteristics, eg: trust account or restricted RID, which prevent its move.	ERROR_DS_ILLEGAL_XDOM_MOVE_OPERATION
8493	0x0000212D	Can't move objects with memberships across domain boundaries as once moved, this would violate the membership conditions of the account group. Remove the object from any account group memberships and retry.	ERROR_DS_CANT_WITH_ACCT_GROUP_MEMBERSHPS
8494	0x0000212E	A naming context head must be the immediate child of another naming context head, not of an interior node.	ERROR_DS_NC_MUST_HAVE_NC_PARENT

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Code (dec)	Code (hex)	Description	Name
8495	0x0000212F	The directory cannot validate the proposed naming context name because it does not hold a replica of the naming context above the proposed naming context. Please ensure that the domain naming master role is held by a server that is configured as a global catalog server, and that the server is up to date with its replication partners. (Applies only to Windows 2000 Domain Naming masters)	ERROR_DS_CR_IMPOSSIBLE_TO_VALIDATE
8496	0x00002130	Destination domain must be in native mode.	ERROR_DS_DST_DOMAIN_NOT_NATIVE
8497	0x00002131	The operation can not be performed because the server does not have an infrastructure container in the domain of interest.	ERROR_DS_MISSING_INFRASTRUCTURE_CONTAINER
8498	0x00002132	Cross-domain move of non-empty account groups is not allowed.	ERROR_DS_CANT_MOVE_ACCOUNT_GROUP
8499	0x00002133	Cross-domain move of non-empty resource groups is not allowed.	ERROR_DS_CANT_MOVE_RESOURCE_GROUP
8500	0x00002134	The search flags for the attribute are invalid. The ANR bit is valid only on attributes of Unicode or Teletex strings.	ERROR_DS_INVALID_SEARCH_FLAG
8501	0x00002135	Tree deletions starting at an object which has an NC head as a descendant are not allowed.	ERROR_DS_NO_TREE_DELETE_ABOVE_NC
8502	0x00002136	The directory service failed to lock a tree in preparation for a tree deletion because the tree was in use.	ERROR_DS_COULDNT_LOCK_TREE_FOR_DELETE
8503	0x00002137	The directory service failed to identify the list of objects to delete while attempting a tree deletion.	ERROR_DS_COULDNT_IDENTIFY_OBJECTS_FOR_TREE_DELETE
8504	0x00002138	Security Accounts Manager initialization failed because of the following error: %1. Error Status: 0x%2. Click OK to shut down the system and reboot into Directory Services Restore Mode. Check the event log for detailed information.	ERROR_DS_SAM_INIT_FAILURE
8505	0x00002139	Only an administrator can modify the membership list of an administrative group.	ERROR_DS_SENSITIVE_GROUP_VIOLATION
8506	0x0000213A	Cannot change the primary group ID of a domain controller account.	ERROR_DS_CANT_MOD_PRIMARYGROUPID
8507	0x0000213B	An attempt is made to modify the base schema.	ERROR_DS_ILLEGAL_BASE_SCHEMA_MOD
8508	0x0000213C	Adding a new mandatory attribute to an existing class, deleting a mandatory attribute from an existing class, or adding an optional attribute to the special class Top that is not a backlink attribute (directly or through inheritance, for example, by adding or deleting an auxiliary class) is not allowed.	ERROR_DS_NONSAFE_SCHEMA_CHANGE

Code (dec)	Code (hex)	Description	Name
8509	0x0000213D	Schema update is not allowed on this DC because the DC is not the schema FSMO Role Owner.	ERROR_DS_SCHEMA_UPDATE_DISALLOWED
8510	0x0000213E	An object of this class cannot be created under the schema container. You can only create attribute-schema and class-schema objects under the schema container.	ERROR_DS_CANT_CREATE_UNDER_SCHEMA
8511	0x0000213F	The replica/child install failed to get the objectVersion attribute on the schema container on the source DC. Either the attribute is missing on the schema container or the credentials supplied do not have permission to read it.	ERROR_DS_INSTALL_NO_SRC_SCH_VERSION
8512	0x00002140	The replica/child install failed to read the objectVersion attribute in the SCHEMA section of the file schema.ini in the system32 directory.	ERROR_DS_INSTALL_NO_SCH_VERSION_IN_INIFILE
8513	0x00002141	The specified group type is invalid.	ERROR_DS_INVALID_GROUP_TYPE
8514	0x00002142	Cannot nest global groups in a mixed domain if the group is security-enabled.	ERROR_DS_NO_NEST_GLOBALGROUP_IN_MIXEDDOMAIN
8515	0x00002143	Cannot nest local groups in a mixed domain if the group is security-enabled.	ERROR_DS_NO_NEST_LOCALGROUP_IN_MIXEDDOMAIN
8516	0x00002144	A global group cannot have a local group as a member.	ERROR_DS_GLOBAL_CANT_HAVE_LOCAL_MEMBER
8517	0x00002145	A global group cannot have a universal group as a member.	ERROR_DS_GLOBAL_CANT_HAVE_UNIVERSAL_MEMBER
8518	0x00002146	A universal group cannot have a local group as a member.	ERROR_DS_UNIVERSAL_CANT_HAVE_LOCAL_MEMBER
8519	0x00002147	A global group cannot have a cross-domain member.	ERROR_DS_GLOBAL_CANT_HAVE_CROSSDOMAIN_MEMBER
8520	0x00002148	A local group cannot have another cross-domain local group as a member.	ERROR_DS_LOCAL_CANT_HAVE_CROSSDOMAIN_LOCAL_MEMBER
8521	0x00002149	A group with primary members cannot change to a security-disabled group.	ERROR_DS_HAVE_PRIMARY_MEMBERS
8522	0x0000214A	The schema cache load failed to convert the string default SD on a class-schema object.	ERROR_DS_STRING_SD_CONVERSION_FAILED
8523	0x0000214B	Only DSAs configured to be Global Catalog servers should be allowed to hold the Domain Naming Master FSMO role. (Applies only to Windows 2000 servers)	ERROR_DS_NAMING_MASTER_GC
8524	0x0000214C	The DSA operation is unable to proceed because of a DNS lookup failure.	ERROR_DS_LOOKUP_FAILURE
8525	0x0000214D	While processing a change to the DNS Host Name for an object, the Service Principal Name values could not be kept in sync.	ERROR_DS_COULDNT_UPDATE_SPNS
8526	0x0000214E	The Security Descriptor attribute could not be read.	ERROR_DS_CANT_RETRIEVE_SD

Code (dec)	Code (hex)	Description	Name
8527	0x0000214F	The object requested was not found, but an object with that key was found.	ERROR_DS_KEY_NOT_UNIQUE.
8528	0x00002150	The syntax of the linked attributed being added is incorrect. Forward links can only have syntax 2.5.5.1, 2.5.5.7, and 2.5.5.14, and backlinks can only have syntax 2.5.5.1.	ERROR_DS_WRONG_LINKED_ATT_SYNTAX
8529	0x00002151	Security Account Manager needs to get the boot password.	ERROR_DS_SAM_NEED_BOOTKEY_PASSWORD
8530	0x00002152	Security Account Manager needs to get the boot key from floppy disk.	ERROR_DS_SAM_NEED_BOOTKEY_FLOPPY
8531	0x00002153	Directory Service cannot start.	ERROR_DS_CANT_START
8532	0x00002154	Directory Services could not start.	ERROR_DS_INIT_FAILURE
8533	0x00002155	The connection between client and server requires packet privacy or better.	ERROR_DS_NO_PKT_PRIVACY_ON_CONNECTION
8534	0x00002156	The source domain may not be in the same forest as destination.	ERROR_DS_SOURCE_DOMAIN_IN_FOREST
8535	0x00002157	The destination domain must be in the forest.	ERROR_DS_DESTINATION_DOMAIN_NOT_IN_FOREST
8536	0x00002158	The operation requires that destination domain auditing be enabled.	ERROR_DS_DESTINATION_AUDITING_NOT_ENABLED
8537	0x00002159	The operation couldn't locate a DC for the source domain.	ERROR_DS_CANT_FIND_DC_FOR_SRC_DOMAIN
8538	0x0000215A	The source object must be a group or user.	ERROR_DS_SRC_OBJ_NOT_GROUP_OR_USER
8539	0x0000215B	The source object's SID already exists in destination forest.	ERROR_DS_SRC_SID_EXISTS_IN_FOREST
8540	0x0000215C	The source and destination object must be of the same type.	ERROR_DS_SRC_AND_DST_OBJECT_CLASS_MISMATCH
8541	0x0000215D	Security Accounts Manager initialization failed because of the following error: %1. Error Status: 0x%2. Click OK to shut down the system and reboot into Safe Mode. Check the event log for detailed information.	ERROR_SAM_INIT_FAILURE
8542	0x0000215E	Schema information could not be included in the replication request.	ERROR_DS_DRA_SCHEMA_INFO_SHIP
8543	0x0000215F	The replication operation could not be completed due to a schema incompatibility.	ERROR_DS_DRA_SCHEMA_CONFLICT
8544	0x00002160	The replication operation could not be completed due to a previous schema incompatibility.	ERROR_DS_DRA_EARLIER_SCHEMA_CONLICT
8545	0x00002161	The replication update could not be applied because either the source or the destination has not yet received information regarding a recent cross-domain move operation.	ERROR_DS_DRA_OBJ_NC_MISMATCH
8546	0x00002162	The requested domain could not be deleted because there exist domain controllers that still host this domain.	ERROR_DS_NC_STILL_HAS_DSAS
8547	0x00002163	The requested operation can be performed only on a global catalog server.	ERROR_DS_GC_REQUIRED

Code (dec)	Code (hex)	Description	Name
8548	0x00002164	A local group can only be a member of other local groups in the same domain.	ERROR_DS_LOCAL_MEMBER_OF_LOCAL_ONLY
8549	0x00002165	Foreign security principals cannot be members of universal groups.	ERROR_DS_NO_FPO_IN_UNIVERSAL_GROUPS
8550	0x00002166	The attribute is not allowed to be replicated to the GC because of security reasons.	ERROR_DS_CANT_ADD_TO_GC
8551	0x00002167	The checkpoint with the PDC could not be taken because there are too many modifications being processed currently.	ERROR_DS_NO_CHECKPOINT_WITH_PDC
8552	0x00002168	The operation requires that source domain auditing be enabled.	ERROR_DS_SOURCE_AUDITING_NOT_ENABLED
8553	0x00002169	Security principal objects can only be created inside domain naming contexts.	ERROR_DS_CANT_CREATE_IN_NONDOMAIN_NC
8554	0x0000216A	A Service Principal Name (SPN) could not be constructed because the provided hostname is not in the necessary format.	ERROR_DS_INVALID_NAME_FOR_SPN
8555	0x0000216B	A Filter was passed that uses constructed attributes.	ERROR_DS_FILTER_USES_CONTRUCTED_ATTRS
8556	0x0000216C	The unicodePwd attribute value must be enclosed in double quotes.	ERROR_DS_UNICODEPWD_NOT_IN_QUOTES
8557	0x0000216D	Your computer could not be joined to the domain. You have exceeded the maximum number of computer accounts you are allowed to create in this domain. Contact your system administrator to have this limit reset or increased.	ERROR_DS_MACHINE_ACCOUNT_QUOTA_EXCEEDED
8558	0x0000216E	For security reasons, the operation must be run on the destination DC.	ERROR_DS_MUST_BE_RUN_ON_DST_DC
8559	0x0000216F	For security reasons, the source DC must be NT4SP4 or greater.	ERROR_DS_SRC_DC_MUST_BE_SP4_OR_GREATER
8560	0x00002170	Critical Directory Service System objects cannot be deleted during tree delete operations. The tree delete may have been partially performed.	ERROR_DS_CANT_TREE_DELETE_CRITICAL_OBJ
8561	0x00002171	Directory Services could not start because of the following error: %1. Error Status: 0x%2. Please click OK to shutdown the system. You can use the recovery console to diagnose the system further.	ERROR_DS_INIT_FAILURE_CONSOLE
8562	0x00002172	Security Accounts Manager initialization failed because of the following error: %1. Error Status: 0x%2. Please click OK to shutdown the system. You can use the recovery console to diagnose the system further.	ERROR_DS_SAM_INIT_FAILURE_CONSOLE
8563	0x00002173	This version of Windows is too old to support the current directory forest behavior. You must upgrade the operating system on this server before it can become a domain controller in this forest.	ERROR_DS_FOREST_VERSION_TOO_HIGH

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Code (dec)	Code (hex)	Description	Name
8564	0x00002174	This version of Windows is too old to support the current domain behavior. You must upgrade the operating system on this server before it can become a domain controller in this domain.	ERROR_DS_DOMAIN_VERSION_TOO_HIGH
8565	0x00002175	This version of Windows no longer supports the behavior version in use in this directory forest. You must advance the forest behavior version before this server can become a domain controller in the forest.	ERROR_DS_FOREST_VERSION_TOO_LOW
8566	0x00002176	This version of Windows no longer supports the behavior version in use in this domain. You must advance the domain behavior version before this server can become a domain controller in the domain.	ERROR_DS_DOMAIN_VERSION_TOO_LOW
8567	0x00002177	The version of Windows is incompatible with the behavior version of the domain or forest.	ERROR_DS_INCOMPATIBLE_VERSION
8568	0x00002178	The behavior version cannot be increased to the requested value because Domain Controllers still exist with versions lower than the requested value.	ERROR_DS_LOW_DSA_VERSION
8569	0x00002179	The behavior version value cannot be increased while the domain is still in mixed domain mode. You must first change the domain to native mode before increasing the behavior version.	ERROR_DS_NO_BEHAVIOR_VERSION_IN_MIXEDDOMAIN
8570	0x0000217A	The sort order requested is not supported.	ERROR_DS_NOT_SUPPORTED_SORT_ORDER
8571	0x0000217B	Found an object with a non unique name.	ERROR_DS_NAME_NOT_UNIQUE
8572	0x0000217C	The machine account was created pre-NT4. The account needs to be recreated.	ERROR_DS_MACHINE_ACCOUNT_CREATED_PRENT4
8573	0x0000217D	The database is out of version store.	ERROR_DS_OUT_OF_VERSION_STORE
8574	0x0000217E	Unable to continue operation because multiple conflicting controls were used.	ERROR_DS_INCOMPATIBLE_CONTROLS_USED
8575	0x0000217F	Unable to find a valid security descriptor reference domain for this partition.	ERROR_DS_NO_REF_DOMAIN
8576	0x00002180	Schema update failed: The link identifier is reserved.	ERROR_DS_RESERVED_LINK_ID
8577	0x00002181	Schema update failed: There are no link identifiers available.	ERROR_DS_LINK_ID_NOT_AVAILABLE
8578	0x00002182	An account group can not have a universal group as a member.	ERROR_DS_AG_CANT_HAVE_UNIVERSAL_MEMBER
8579	0x00002183	Rename or move operations on naming context heads or read-only objects are not allowed.	ERROR_DS_MODIFYDN_DISALLOWED_BY_INSTANCE_TYPE
8580	0x00002184	Move operations on objects in the schema naming context are not allowed.	ERROR_DS_NO_OBJECT_MOVE_IN_SCHEMA_NC
8581	0x00002185	A system flag has been set on the object and does not allow the object to be moved or renamed.	ERROR_DS_MODIFYDN_DISALLOWED_BY_FLAG

Code (dec)	Code (hex)	Description	Name
8582	0x00002186	This object is not allowed to change its grandparent container. Moves are not forbidden on this object, but are restricted to sibling containers.	ERROR_DS_MODIFYDN_WRONG_GRANDPARENT
8583	0x00002187	Unable to resolve completely, a referral to another forest is generated.	ERROR_DS_NAME_ERROR_TRUST_REFERRAL
8584	0x00002188	The requested action is not supported on standard server.	ERROR_NOT_SUPPORTED_ON_STANDARD_SERVER
8585	0x00002189	Could not access a partition of the Active Directory located on a remote server. Make sure at least one server is running for the partition in question.	ERROR_DS_CANT_ACCESS_REMOTE_PART_OF_AD
8586	0x0000218A	The directory cannot validate the proposed naming context (or partition) name because it does not hold a replica nor can it contact a replica of the naming context above the proposed naming context. Please ensure that the parent naming context is properly registered in DNS, and at least one replica of this naming context is reachable by the Domain Naming master.	ERROR_DS_CR_IMPOSSIBLE_TO_VALIDATE
8587	0x0000218B	The thread limit for this request was exceeded.	ERROR_DS_THREAD_LIMIT_EXCEEDED
8588	0x0000218C	The Global catalog server is not in the closet site.	ERROR_DS_NOT_CLOSEST
9001	0x00002329	DNS server unable to interpret format.	DNS_ERROR_RCODE_FORMAT_ERROR
9002	0x0000232A	DNS server failure.	DNS_ERROR_RCODE_SERVER_FAILURE
9003	0x0000232B	DNS name does not exist.	DNS_ERROR_RCODE_NAME_ERROR
9004	0x0000232C	DNS request not supported by name server.	DNS_ERROR_RCODE_NOT_IMPLEMENTED
9005	0x0000232D	DNS operation refused.	DNS_ERROR_RCODE_REFUSED
9006	0x0000232E	DNS name that ought not exist, does exist.	DNS_ERROR_RCODE_YXDOMAIN
9007	0x0000232F	DNS RR set that ought not exist, does exist.	DNS_ERROR_RCODE_YXRRSET
9008	0x00002330	DNS RR set that ought to exist, does not exist.	DNS_ERROR_RCODE_NXRRSET
9009	0x00002331	DNS server not authoritative for zone.	DNS_ERROR_RCODE_NOTAUTH
9010	0x00002332	DNS name in update or prereq is not in zone.	DNS_ERROR_RCODE_NOTZONE
9016	0x00002338	DNS signature failed to verify.	DNS_ERROR_RCODE_BADSIG
9017	0x00002339	DNS bad key.	DNS_ERROR_RCODE_BADKEY
9018	0x0000233A	DNS signature validity expired.	DNS_ERROR_RCODE_BADTIME
9501	0x0000251D	No records found for given DNS query.	DNS_INFO_NO_RECORDS
9502	0x0000251E	Bad DNS packet.	DNS_ERROR_BAD_PACKET

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Code (dec)	Code (hex)	Description	Name
9503	0x0000251F	No DNS packet.	DNS_ERROR_NO_PACKET
9504	0x00002520	DNS error, check rcode.	DNS_ERROR_RCODE
9505	0x00002521	Unsecured DNS packet.	DNS_ERROR_UNSECURE_PACKET
9551	0x0000254F	Invalid DNS type.	DNS_ERROR_INVALID_TYPE
9552	0x00002550	Invalid IP address.	DNS_ERROR_INVALID_IP_ADDRESS
9553	0x00002551	Invalid property.	DNS_ERROR_INVALID_PROPERTY
9554	0x00002552	Try DNS operation again later.	DNS_ERROR_TRY_AGAIN_LATER
9555	0x00002553	Record for given name and type is not unique.	DNS_ERROR_NOT_UNIQUE
9556	0x00002554	DNS name does not comply with RFC specifications.	DNS_ERROR_NON_RFC_NAME
9557	0x00002555	DNS name is a fully-qualified DNS name.	DNS_STATUS_FQDN
9558	0x00002556	DNS name is dotted (multi-label).	DNS_STATUS_DOTTED_NAME
9559	0x00002557	DNS name is a single-part name.	DNS_STATUS_SINGLE_PART_NAME
9560	0x00002558	DSN name contains an invalid character.	DNS_ERROR_INVALID_NAME_CHAR
9561	0x00002559	DNS name is entirely numeric.	DNS_ERROR_NUMERIC_NAME
9601	0x00002581	DNS zone does not exist.	DNS_ERROR_ZONE_DOES_NOT_EXIST
9602	0x00002582	DNS zone information not available.	DNS_ERROR_NO_ZONE_INFO
9603	0x00002583	Invalid operation for DNS zone.	DNS_ERROR_INVALID_ZONE_OPERATION
9604	0x00002584	Invalid DNS zone configuration.	DNS_ERROR_ZONE_CONFIGURATION_ERROR
9605	0x00002585	DNS zone has no start of authority (SOA) record.	DNS_ERROR_ZONE_HAS_NO_SOA_RECORD
9606	0x00002586	DNS zone has no name server (NS) record.	DNS_ERROR_ZONE_HAS_NO_NS_RECORDS
9607	0x00002587	DNS zone is locked.	DNS_ERROR_ZONE_LOCKED
9608	0x00002588	DNS zone creation failed.	DNS_ERROR_ZONE_CREATION_FAILED
9609	0x00002589	DNS zone already exists.	DNS_ERROR_ZONE_ALREADY_EXISTS
9610	0x0000258A	DNS automatic zone already exists.	DNS_ERROR_AUTOZONE_ALREADY_EXISTS
9611	0x0000258B	Invalid DNS zone type.	DNS_ERROR_INVALID_ZONE_TYPE
9612	0x0000258C	Secondary DNS zone requires master IP address.	DNS_ERROR_SECONDARY_REQUIRES_MASTER_IP
9613	0x0000258D	DNS zone not secondary.	DNS_ERROR_ZONE_NOT_SECONDARY
9614	0x0000258E	Need secondary IP address.	DNS_ERROR_NEED_SECONDARY_ADDRESSES

Code (dec)	Code (hex)	Description	Name
9615	0x0000258F	WINS initialization failed.	DNS_ERROR_WINS_INIT_FAILED
9616	0x00002590	Need WINS servers.	DNS_ERROR_NEED_WINS_SERVERS
9617	0x00002591	NBTSTAT initialization call failed.	DNS_ERROR_NBSTAT_INIT_FAILED
9618	0x00002592	Invalid delete of start of authority (SOA)	DNS_ERROR_SOA_DELETE_INVALID
9619	0x00002593	A conditional forwarding zone already exists for that name.	DNS_ERROR_FORWARDER_ALREADY_EXISTS
9651	0x000025B3	Primary DNS zone requires datafile.	DNS_ERROR_PRIMARY_REQUIRES_DATAFILE
9652	0x000025B4	Invalid datafile name for DNS zone.	DNS_ERROR_INVALID_DATAFILE_NAME
9653	0x000025B5	Failed to open datafile for DNS zone.	DNS_ERROR_DATAFILE_OPEN_FAILURE
9654	0x000025B6	Failed to write datafile for DNS zone.	DNS_ERROR_FILE_WRITEBACK_FAILED
9655	0x000025B7	Failure while reading datafile for DNS zone.	DNS_ERROR_DATAFILE_PARSING
9701	0x000025E5	DNS record does not exist.	DNS_ERROR_RECORD_DOES_NOT_EXIST
9702	0x000025E6	DNS record format error.	DNS_ERROR_RECORD_FORMAT
9703	0x000025E7	Node creation failure in DNS.	DNS_ERROR_NODE_CREATION_FAILED
9704	0x000025E8	Unknown DNS record type.	DNS_ERROR_UNKNOWN_RECORD_TYPE
9705	0x000025E9	DNS record timed out.	DNS_ERROR_RECORD_TIMED_OUT
9706	0x000025EA	Name not in DNS zone.	DNS_ERROR_NAME_NOT_IN_ZONE
9707	0x000025EB	CNAME loop detected.	DNS_ERROR_CNAME_LOOP
9708	0x000025EC	Node is a CNAME DNS record.	DNS_ERROR_NODE_IS_CNAME
9709	0x000025ED	A CNAME record already exists for given name.	DNS_ERROR_CNAME_COLLISION
9710	0x000025EE	Record only at DNS zone root.	DNS_ERROR_RECORD_ONLY_AT_ZONE_ROOT
9711	0x000025EF	DNS record already exists.	DNS_ERROR_RECORD_ALREADY_EXISTS
9712	0x000025F0	Secondary DNS zone data error.	DNS_ERROR_SECONDARY_DATA
9713	0x000025F1	Could not create DNS cache data.	DNS_ERROR_NO_CREATE_CACHE_DATA
9714	0x000025F2	DNS name does not exist.	DNS_ERROR_NAME_DOES_NOT_EXIST
9715	0x000025F3	Could not create pointer (PTR) record.	DNS_WARNING_PTR_CREATE_FAILED
9716	0x000025F4	DNS domain was undeleted.	DNS_WARNING_DOMAIN_UNDELETED
9717	0x000025F5	The directory service is unavailable.	DNS_ERROR_DS_UNAVAILABLE

Code (dec)	Code (hex)	Description	Name
9718	0x000025F6	DNS zone already exists in the directory service.	DNS_ERROR_DS_ZONE_ALREADY_EXISTS
9719	0x000025F7	DNS server not creating or reading the boot file for the directory service integrated DNS zone.	DNS_ERROR_NO_BOOTFILE_IF_DS_ZONE
9751	0x00002617	DNS AXFR (zone transfer) complete.	DNS_INFO_AXFR_COMPLETE
9752	0x00002618	DNS zone transfer failed.	DNS_ERROR_AXFR
9753	0x00002619	Added local WINS server.	DNS_INFO_ADDED_LOCAL_WINS
9801	0x00002649	Secure update call needs to continue update request.	DNS_STATUS_CONTINUE_NEEDED
9851	0x0000267B	TCP/IP network protocol not installed.	DNS_ERROR_NO_TCPIP
9852	0x0000267C	No DNS servers configured for local system.	DNS_ERROR_NO_DNS_SERVERS
9901	0x000026AD	The specified directory partition does not exist.	DNS_ERROR_DP_DOES_NOT_EXIST
9902	0x000026AE	The specified directory partition already exists.	DNS_ERROR_DP_ALREADY_EXISTS
9903	0x000026AF	The DS is not enlisted in the specified directory partition.	DNS_ERROR_DP_NOT_ENLISTED
9904	0x000026B0	The DS is already enlisted in the specified directory partition.	DNS_ERROR_DP_ALREADY_ENLISTED
10004	0x00002714	A blocking operation was interrupted by a call to WSACancelBlockingCall.	WSAEINTR
10009	0x00002719	The file handle supplied is not valid.	WSAEBADF
10013	0x0000271D	An attempt was made to access a socket in a way forbidden by its access permissions.	WSAEACCES
10014	0x0000271E	The system detected an invalid pointer address in attempting to use a pointer argument in a call.	WSAEFAULT
10022	0x00002726	An invalid argument was supplied.	WSAEINVAL
10024	0x00002728	Too many open sockets.	WSAEMFILE
10035	0x00002733	A non-blocking socket operation could not be completed immediately.	WSAEWOULDBLOCK
10036	0x00002734	A blocking operation is currently executing.	WSAEINPROGRESS
10037	0x00002735	An operation was attempted on a non-blocking socket that already had an operation in progress.	WSAEALREADY
10038	0x00002736	An operation was attempted on something that is not a socket.	WSAENOTSOCK
10039	0x00002737	A required address was omitted from an operation on a socket.	WSAEDESTADDRREQ
10040	0x00002738	A message sent on a datagram socket was larger than the internal message buffer or some other network limit, or the buffer used to receive a datagram into was smaller than the datagram itself.	WSAEMSGSIZE
10041	0x00002739	A protocol was specified in the socket function call that does not support the semantics of the socket type requested.	WSAEPROTOTYPE

Code (dec)	Code (hex)	Description	Name
10042	0x0000273A	An unknown, invalid, or unsupported option or level was specified in a getsockopt or setsockopt call.	WSAENOPROTOOPT
10043	0x0000273B	The requested protocol has not been configured into the system, or no implementation for it exists.	WSAEPROTONOSUPPORT
10044	0x0000273C	The support for the specified socket type does not exist in this address family.	WSAESOCKTNOSUPPORT
10045	0x0000273D	The attempted operation is not supported for the type of object referenced.	WSAEOPNOTSUPP
10046	0x0000273E	The protocol family has not been configured into the system or no implementation for it exists.	WSAEPFNOSUPPORT
10047	0x0000273F	An address incompatible with the requested protocol was used.	WSAEAFNOSUPPORT
10048	0x00002740	Only one usage of each socket address (protocol/network address/port) is normally permitted.	WSAEADDRINUSE
10049	0x00002741	The requested address is not valid in its context.	WSAEADDRNOTAVAIL
10050	0x00002742	A socket operation encountered a dead network.	WSAENETDOWN
10051	0x00002743	A socket operation was attempted to an unreachable network.	WSAENETUNREACH
10052	0x00002744	The connection has been broken due to keep-alive activity detecting a failure while the operation was in progress.	WSAENETRESET
10053	0x00002745	An established connection was aborted by the software in your host machine.	WSAECONNABORTED
10054	0x00002746	An existing connection was forcibly closed by the remote host.	WSAECONNRESET
10055	0x00002747	An operation on a socket could not be performed because the system lacked sufficient buffer space or because a queue was full.	WSAENOBUFS
10056	0x00002748	A connect request was made on an already connected socket.	WSAEISCONN
10057	0x00002749	A request to send or receive data was disallowed because the socket is not connected and (when sending on a datagram socket using a sendto call) no address was supplied.	WSAENOTCONN
10058	0x0000274A	A request to send or receive data was disallowed because the socket had already been shut down in that direction with a previous shutdown call.	WSAESHUTDOWN
10059	0x0000274B	Too many references to some kernel object.	WSAETOOMANYREFS
10060	0x0000274C	A connection attempt failed because the connected party did not properly respond after a period of time, or established connection failed because connected host has failed to respond.	WSAETIMEDOUT
10061	0x0000274D	No connection could be made because the target machine actively refused it.	WSAECONNREFUSED

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Code (dec)	Code (hex)	Description	Name
10062	0x0000274E	Cannot translate name.	WSAELOOP
10063	0x0000274F	Name component or name was too long.	WSAENAMETOOLONG
10064	0x00002750	A socket operation failed because the destination host was down.	WSAEHOSTDOWN
10065	0x00002751	A socket operation was attempted to an unreachable host.	WSAEHOSTUNREACH
10066	0x00002752	Cannot remove a directory that is not empty.	WSAENOTEMPTY
10067	0x00002753	A Windows Sockets implementation may have a limit on the number of applications that may use it simultaneously.	WSAEPROCLIM
10068	0x00002754	Ran out of quota.	WSAEUSERS
10069	0x00002755	Ran out of disk quota.	WSAEDQUOT
10070	0x00002756	File handle reference is no longer available.	WSAESTALE
10071	0x00002757	Item is not available locally.	WSAEREMOTE
10091	0x0000276B	WSAStartup cannot function at this time because the underlying system it uses to provide network services is currently unavailable.	WSASYSNOTREADY
10092	0x0000276C	The Windows Sockets version requested is not supported.	WSAVERNOTSUPPORTED
10093	0x0000276D	Either the application has not called WSAStartup, or WSAStartup failed.	WSANOTINITIALISED
10101	0x00002775	Returned by WSARecv or WSARecvFrom to indicate the remote party has initiated a graceful shutdown sequence.	WSAEDISCON
10102	0x00002776	No more results can be returned by WSALookupServiceNext.	WSAENOMORE
10103	0x00002777	A call to WSALookupServiceEnd was made while this call was still processing. The call has been canceled.	WSAECANCELLED
10104	0x00002778	The procedure call table is invalid.	WSAEINVALIDPROCTABLE
10105	0x00002779	The requested service provider is invalid.	WSAEINVALIDPROVIDER
10106	0x0000277A	The requested service provider could not be loaded or initialized.	WSAEPROVIDERFAILEDINIT
10107	0x0000277B	A system call that should never fail has failed.	WSASYSCALLFAILURE
10108	0x0000277C	No such service is known. The service cannot be found in the specified name space.	WSASERVICE_NOT_FOUND
10109	0x0000277D	The specified class was not found.	WSATYPE_NOT_FOUND
10110	0x0000277E	No more results can be returned by WSALookupServiceNext.	WSA_E_NO_MORE
10111	0x0000277F	A call to WSALookupServiceEnd was made while this call was still processing. The call has been canceled.	WSA_E_CANCELLED
10112	0x00002780	A database query failed because it was actively refused.	WSAEREFUSED
11001	0x00002AF9	No such host is known.	WSAHOST_NOT_FOUND

Code (dec)	Code (hex)	Description	Name
11002	0x00002AFA	This is usually a temporary error during hostname resolution and means that the local server did not receive a response from an authoritative server.	WSATRY_AGAIN
11003	0x00002AFB	A non-recoverable error occurred during a database lookup.	WSANO_RECOVERY
11004	0x00002AFC	The requested name is valid and was found in the database, but it does not have the correct associated data being resolved for.	WSANO_DATA
11005	0x00002AFD	At least one reserve has arrived.	WSA_QOS_RECEIVERS
11006	0x00002AFE	At least one path has arrived.	WSA_QOS_SENDERS
11007	0x00002AFF	There are no senders.	WSA_QOS_NO_SENDERS
11008	0x00002B00	There are no receivers.	WSA_QOS_NO_RECEIVERS
11009	0x00002B01	Reserve has been confirmed.	WSA_QOS_REQUEST_CONFIRMED
11010	0x00002B02	Error due to lack of resources.	WSA_QOS_ADMISSION_FAILURE
11011	0x00002B03	Rejected for administrative reasons - bad credentials.	WSA_QOS_POLICY_FAILURE
11012	0x00002B04	Unknown or conflicting style.	WSA_QOS_BAD_STYLE
11013	0x00002B05	Problem with some part of the filterspec or providerspecific buffer in general.	WSA_QOS_BAD_OBJECT
11014	0x00002B06	Problem with some part of the flowspec.	WSA_QOS_TRAFFIC_CTRL_ERROR
11015	0x00002B07	General QOS error.	WSA_QOS_GENERIC_ERROR
11016	0x00002B08	An invalid or unrecognized service type was found in the flowspec.	WSA_QOS_ESERVICETYPE
11017	0x00002B09	An invalid or inconsistent flowspec was found in the QOS structure.	WSA_QOS_EFLOWSPEC
11018	0x00002B0A	Invalid QOS provider-specific buffer.	WSA_QOS_EPROVSPECBUF
11019	0x00002B0B	An invalid QOS filter style was used.	WSA_QOS_EFILTERSTYLE
11020	0x00002B0C	An invalid QOS filter type was used.	WSA_QOS_EFILTERTYPE
11021	0x00002B0D	An incorrect number of QOS FILTERSPECs were specified in the FLOWDESCRIPTOR.	WSA_QOS_EFILTERCOUNT
11022	0x00002B0E	An object with an invalid ObjectLength field was specified in the QOS provider-specific buffer.	WSA_QOS_EOBJLENGTH
11023	0x00002B0F	An incorrect number of flow descriptors was specified in the QOS structure.	WSA_QOS_EFLOWCOUNT
11024	0x00002B10	An unrecognized object was found in the QOS provider-specific buffer.	WSA_QOS_EUNKNOWNPSOBJ
11025	0x00002B11	An invalid policy object was found in the QOS provider-specific buffer.	WSA_QOS_EPOLICYOBJ
11026	0x00002B12	An invalid QOS flow descriptor was found in the flow descriptor list.	WSA_QOS_EFLOWDESC
11027	0x00002B13	An invalid or inconsistent flowspec was found in the QOS provider-specific buffer.	WSA_QOS_EPSFLOWSPEC
11028	0x00002B14	An invalid FILTERSPEC was found in the QOS provider-specific buffer.	WSA_QOS_EPSFILTERSPEC

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Code (dec)	Code (hex)	Description	Name
11029	0x00002B15	An invalid shape discard mode object was found in the QOS provider-specific buffer.	WSA_QOS_ESDMODEOBJ
11030	0x00002B16	An invalid shaping rate object was found in the QOS provider-specific buffer.	WSA_QOS_ESHAPERATEOBJ
11031	0x00002B17	A reserved policy element was found in the QOS provider-specific buffer.	WSA_QOS_RESERVED_PETYPE
12000	0x00002EE0	The requested section was not present in the activation context.	ERROR_SXS_SECTION_NOT_FOUND
12001	0x00002EE1	This application has failed to start because the application configuration is incorrect. Reinstalling the application may fix this problem.	ERROR_SXS_CANT_GEN_ACTCTX
12002	0x00002EE2	The application binding data format is invalid.	ERROR_SXS_INVALID_ACTCTXDATA_FORMAT
12003	0x00002EE3	The referenced assembly is not installed on your system.	ERROR_SXS_ASSEMBLY_NOT_FOUND
12004	0x00002EE4	The manifest file does not begin with the required tag and format information.	ERROR_SXS_MANIFEST_FORMAT_ERROR
12005	0x00002EE5	The manifest file contains one or more syntax errors.	ERROR_SXS_MANIFEST_PARSE_ERROR
12006	0x00002EE6	The application attempted to activate a disabled activation context.	ERROR_SXS_ACTIVATION_CONTEXT_DISABLED
12007	0x00002EE7	The requested lookup key was not found in any active activation context.	ERROR_SXS_KEY_NOT_FOUND
12008	0x00002EE8	A component version required by the application conflicts with another component version already active.	ERROR_SXS_VERSION_CONFLICT
12009	0x00002EE9	The type requested activation context section does not match the query API used.	ERROR_SXS_WRONG_SECTION_TYPE
12010	0x00002EEA	Lack of system resources has required isolated activation to be disabled for the current thread of execution.	ERROR_SXS_THREAD_QUERIES_DISABLED
12011	0x00002EEB	An attempt to set the process default activation context failed because the process default activation context was already set.	ERROR_SXS_PROCESS_DEFAULT_ALREADY_SET
12012	0x00002EEC	The encoding group identifier specified is not recognized.	ERROR_SXS_UNKNOWN_ENCODING_GROUP
12013	0x00002EED	The encoding requested is not recognized.	ERROR_SXS_UNKNOWN_ENCODING
12014	0x00002EEE	The manifest contains a reference to an invalid URI.	ERROR_SXS_INVALID_XML_NAMESPACE_URI
12015	0x00002EEF	The application manifest contains a reference to a dependent assembly which is not installed.	ERROR_SXS_ROOT_MANIFEST_DEPENDENCY_NOT_INSTALLED
12016	0x00002EF0	The manifest for an assembly used by the application has a reference to a dependent assembly which is not installed.	ERROR_SXS_LEAF_MANIFEST_DEPENDENCY_NOT_INSTALLED
12017	0x00002EF1	The manifest contains an attribute for the assembly identity which is not valid.	ERROR_SXS_INVALID_ASSEMBLY_IDENTITY_ATTRIBUTE

Code (dec)	Code (hex)	Description	Name
12018	0x00002EF2	The manifest is missing the required default namespace specification on the assembly element.	ERROR_SXS_MANIFEST_MISSING_REQUIRED_DEFAULT_NAMESPACE
12019	0x00002EF3	The manifest has a default namespace specified on the assembly element but its value is not "urn:schemas-microsoft-com:asm.v1".	ERROR_SXS_MANIFEST_INVALID_REQUIRED_DEFAULT_NAMESPACE
12020	0x00002EF4	The private manifest probe has crossed the reparse-point-associated path.	ERROR_SXS_PRIVATE_MANIFEST_CROSS_PATH_WITH_REPARSE_POINT
12021	0x00002EF5	Two or more components referenced directly or indirectly by the application manifest have files by the same name.	ERROR_SXS_DUPLICATE_DLL_NAME
12022	0x00002EF6	Two or more components referenced directly or indirectly by the application manifest have window classes with the same name.	ERROR_SXS_DUPLICATE_WINDOWCLASS_NAME
12023	0x00002EF7	Two or more components referenced directly or indirectly by the application manifest have the same COM server CLSIDs.	ERROR_SXS_DUPLICATE_CLSID
12024	0x00002EF8	Two or more components referenced directly or indirectly by the application manifest have proxies for the same COM interface IIDs.	ERROR_SXS_DUPLICATE_IID
12025	0x00002EF9	Two or more components referenced directly or indirectly by the application manifest have the same COM type library TLBIDs.	ERROR_SXS_DUPLICATE_TLBID
12026	0x00002EFA	Two or more components referenced directly or indirectly by the application manifest have the same COM ProgIDs.	ERROR_SXS_DUPLICATE_PROGID
12027	0x00002EFB	Two or more components referenced directly or indirectly by the application manifest are different versions of the same component which is not permitted.	ERROR_SXS_DUPLICATE_ASSEMBLY_NAME
12028	0x00002EFC	A component's file does not match the verification information present in the component manifest.	ERROR_SXS_FILE_HASH_MISMATCH
12029	0x00002EFD	The policy manifest contains one or more syntax errors.	ERROR_SXS_POLICY_PARSE_ERROR
12030	0x00002EFE	Manifest Parse Error : A string literal was expected, but no opening quote character was found.	ERROR_SXS_XML_E_MISSINGQUOTE
12031	0x00002EFF	Manifest Parse Error : Incorrect syntax was used in a comment.	ERROR_SXS_XML_E_COMMENTSYNTAX
12032	0x00002F00	Manifest Parse Error : A name was started with an invalid character.	ERROR_SXS_XML_E_BADSTARTNAMECHAR
12033	0x00002F01	Manifest Parse Error : A name contained an invalid character.	ERROR_SXS_XML_E_BADNAMECHAR
12034	0x00002F02	Manifest Parse Error : A string literal contained an invalid character.	ERROR_SXS_XML_E_BADCHARINSTRING
12035	0x00002F03	Manifest Parse Error : Invalid syntax for an XML declaration.	ERROR_SXS_XML_E_XMLDECLSYNTAX

Code (dec)	Code (hex)	Description	Name
12036	0x00002F04	Manifest Parse Error : An invalid character was found in text content.	ERROR_SXS_XML_E_BADCHARDATA
12037	0x00002F05	Manifest Parse Error : Required white space was missing.	ERROR_SXS_XML_E_MISSINGWHITESPACE
12038	0x00002F06	Manifest Parse Error : The character '>' was expected.	ERROR_SXS_XML_E_EXPECTINGTAGEND
12039	0x00002F07	Manifest Parse Error : A semi colon character was expected.	ERROR_SXS_XML_E_MISSINGSEMICOLON
12040	0x00002F08	Manifest Parse Error : Unbalanced parentheses.	ERROR_SXS_XML_E_UNBALANCEDPAREN
12041	0x00002F09	Manifest Parse Error : Internal error.	ERROR_SXS_XML_E_INTERNALERROR
12042	0x00002F0A	Manifest Parse Error : White space is not allowed at this location.	ERROR_SXS_XML_E_UNEXPECTED_WHITESPACE
12043	0x00002F0B	Manifest Parse Error : End of file reached in invalid state for current encoding.	ERROR_SXS_XML_E_INCOMPLETE_ENCODING
12044	0x00002F0C	Manifest Parse Error : Missing parenthesis.	ERROR_SXS_XML_E_MISSING_PAREN
12045	0x00002F0D	Manifest Parse Error : A single or double closing quote character (\' or \") is missing.	ERROR_SXS_XML_E_EXPECTINGCLOSEQUOTE
12046	0x00002F0E	Manifest Parse Error : Multiple colons are not allowed in a name.	ERROR_SXS_XML_E_MULTIPLE_COLONS
12047	0x00002F0F	Manifest Parse Error : Invalid character for decimal digit.	ERROR_SXS_XML_E_INVALID_DECIMAL
12048	0x00002F10	Manifest Parse Error : Invalid character for hexadecimal digit.	ERROR_SXS_XML_E_INVALID_HEXIDECIMAL
12049	0x00002F11	Manifest Parse Error : Invalid Unicode character value for this platform.	ERROR_SXS_XML_E_INVALID_UNICODE
12050	0x00002F12	Manifest Parse Error : Expecting white space or '?'.	ERROR_SXS_XML_E_WHITESPACEORQUESTIONMARK
12051	0x00002F13	Manifest Parse Error : End tag was not expected at this location.	ERROR_SXS_XML_E_UNEXPECTEDENDTAG
12052	0x00002F14	Manifest Parse Error : The following tags were not closed: %1.	ERROR_SXS_XML_E_UNCLOSEDTAG
12053	0x00002F15	Manifest Parse Error : Duplicate attribute.	ERROR_SXS_XML_E_DUPLICATEATTRIBUTE
12054	0x00002F16	Manifest Parse Error : Only one top level element is allowed in an XML document.	ERROR_SXS_XML_E_MULTIPLEROOTS
12055	0x00002F17	Manifest Parse Error : Invalid at the top level of the document.	ERROR_SXS_XML_E_INVALIDATROOTLEVEL
12056	0x00002F18	Manifest Parse Error : Invalid XML declaration.	ERROR_SXS_XML_E_BADXMLDECL
12057	0x00002F19	Manifest Parse Error : XML document must have a top level element.	ERROR_SXS_XML_E_MISSINGROOT
12058	0x00002F1A	Manifest Parse Error : Unexpected end of file.	ERROR_SXS_XML_E_UNEXPECTEDEOF
12059	0x00002F1B	Manifest Parse Error : Parameter entities cannot be used inside markup declarations in an internal subset.	ERROR_SXS_XML_E_BADPEREFINSUBSET
12060	0x00002F1C	Manifest Parse Error : Element was not closed.	ERROR_SXS_XML_E_UNCLOSEDSTARTTAG
12061	0x00002F1D	Manifest Parse Error : End element was missing the character '>'.	ERROR_SXS_XML_E_UNCLOSEDENDTAG

Code (dec)	Code (hex)	Description	Name
12062	0x00002F1E	Manifest Parse Error : A string literal was not closed.	ERROR_SXS_XML_E_UNCLOSEDSTRING
12063	0x00002F1F	Manifest Parse Error : A comment was not closed.	ERROR_SXS_XML_E_UNCLOSEDCOMMENT
12064	0x00002F20	Manifest Parse Error : A declaration was not closed.	ERROR_SXS_XML_E_UNCLOSEDDECL
12065	0x00002F21	Manifest Parse Error : A CDATA section was not closed.	ERROR_SXS_XML_E_UNCLOSEDCDATA
12066	0x00002F22	Manifest Parse Error : The namespace prefix is not allowed to start with the reserved string "xml".	ERROR_SXS_XML_E_RESERVEDNAMESPACE
12067	0x00002F23	Manifest Parse Error : System does not support the specified encoding.	ERROR_SXS_XML_E_INVALIDENCODING
12068	0x00002F24	Manifest Parse Error : Switch from current encoding to specified encoding not supported.	ERROR_SXS_XML_E_INVALIDSWITCH
12069	0x00002F25	Manifest Parse Error : The name 'xml' is reserved and must be lower case.	ERROR_SXS_XML_E_BADXMLCASE
12070	0x00002F26	Manifest Parse Error : The standalone attribute must have the value 'yes' or 'no'.	ERROR_SXS_XML_E_INVALID_STANDALONE
12071	0x00002F27	Manifest Parse Error : The standalone attribute cannot be used in external entities.	ERROR_SXS_XML_E_UNEXPECTED_STANDALONE
12072	0x00002F28	Manifest Parse Error : Invalid version number.	ERROR_SXS_XML_E_INVALID_VERSION
12073	0x00002F29	Manifest Parse Error : Missing equals sign between attribute and attribute value.	ERROR_SXS_XML_E_MISSINGEQUALS
13000	0x000032C8	The specified quick mode policy already exists.	ERROR_IPSEC_QM_POLICY_EXISTS
13001	0x000032C9	The specified quick mode policy was not found.	ERROR_IPSEC_QM_POLICY_NOT_FOUND
13002	0x000032CA	The specified quick mode policy is being used.	ERROR_IPSEC_QM_POLICY_IN_USE
13003	0x000032CB	The specified main mode policy already exists.	ERROR_IPSEC_MM_POLICY_EXISTS
13004	0x000032CC	The specified main mode policy was not found.	ERROR_IPSEC_MM_POLICY_NOT_FOUND
13005	0x000032CD	The specified main mode policy is being used.	ERROR_IPSEC_MM_POLICY_IN_USE
13006	0x000032CE	The specified main mode filter already exists.	ERROR_IPSEC_MM_FILTER_EXISTS
13007	0x000032CF	The specified main mode filter was not found.	ERROR_IPSEC_MM_FILTER_NOT_FOUND
13008	0x000032D0	The specified transport mode filter already exists.	ERROR_IPSEC_TRANSPORT_FILTER_EXISTS
13009	0x000032D1	The specified transport mode filter does not exist.	ERROR_IPSEC_TRANSPORT_FILTER_NOT_FOUND
13010	0x000032D2	The specified main mode authentication list exists.	ERROR_IPSEC_MM_AUTH_EXISTS
13011	0x000032D3	The specified main mode authentication list was not found.	ERROR_IPSEC_MM_AUTH_NOT_FOUND
13012	0x000032D4	The specified quick mode policy is being used.	ERROR_IPSEC_MM_AUTH_IN_USE

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Code (dec)	Code (hex)	Description	Name
13013	0x000032D5	The specified main mode policy was not found.	ERROR_IPSEC_DEFAULT_MM_POLICY_NOT_FOUND
13014	0x000032D6	The specified quick mode policy was not found.	ERROR_IPSEC_DEFAULT_MM_AUTH_NOT_FOUND
13015	0x000032D7	The manifest file contains one or more syntax errors.	ERROR_IPSEC_DEFAULT_QM_POLICY_NOT_FOUND
13016	0x000032D8	The application attempted to activate a disabled activation context.	ERROR_IPSEC_TUNNEL_FILTER_EXISTS
13017	0x000032D9	The requested lookup key was not found in any active activation context.	ERROR_IPSEC_TUNNEL_FILTER_NOT_FOUND
13018	0x000032DA	The Main Mode filter is pending deletion.	ERROR_IPSEC_MM_FILTER_PENDING_DELETION
13019	0x000032DB	The transport filter is pending deletion.	ERROR_IPSEC_TRANSPORT_FILTER_PENDING_DELETION
13020	0x000032DC	The tunnel filter is pending deletion.	ERROR_IPSEC_TUNNEL_FILTER_PENDING_DELETION
13021	0x000032DD	The Main Mode policy is pending deletion.	ERROR_IPSEC_MM_POLICY_PENDING_DELETION
13022	0x000032DE	The Main Mode authentication bundle is pending deletion.	ERROR_IPSEC_MM_AUTH_PENDING_DELETION
13023	0x000032DF	The Quick Mode policy is pending deletion.	ERROR_IPSEC_QM_POLICY_PENDING_DELETION
13801	0x000035E9	IKE authentication credentials are unacceptable.	ERROR_IPSEC_IKE_AUTH_FAIL
13802	0x000035EA	IKE security attributes are unacceptable.	ERROR_IPSEC_IKE_ATTRIB_FAIL
13803	0x000035EB	IKE Negotiation in progress.	ERROR_IPSEC_IKE_NEGOTIATION_PENDING
13804	0x000035EC	General processing error.	ERROR_IPSEC_IKE_GENERAL_PROCESSING_ERROR
13805	0x000035ED	Negotiation timed out.	ERROR_IPSEC_IKE_TIMED_OUT
13806	0x000035EE	IKE failed to find valid machine certificate.	ERROR_IPSEC_IKE_NO_CERT
13807	0x000035EF	IKE SA deleted by peer before establishment completed.	ERROR_IPSEC_IKE_SA_DELETED
13808	0x000035F0	IKE SA deleted before establishment completed.	ERROR_IPSEC_IKE_SA_REAPED
13809	0x000035F1	Negotiation request sat in Queue too long.	ERROR_IPSEC_IKE_MM_ACQUIRE_DROP
13810	0x000035F2	Negotiation request sat in Queue too long.	ERROR_IPSEC_IKE_QM_ACQUIRE_DROP
13811	0x000035F3	Negotiation request sat in Queue too long.	ERROR_IPSEC_IKE_QUEUE_DROP_MM
13812	0x000035F4	Negotiation request sat in Queue too long.	ERROR_IPSEC_IKE_QUEUE_DROP_NO_MM
13813	0x000035F5	No response from peer.	ERROR_IPSEC_IKE_DROP_NO_RESPONSE
13814	0x000035F6	Negotiation took too long.	ERROR_IPSEC_IKE_MM_DELAY_DROP
13815	0x000035F7	Negotiation took too long.	ERROR_IPSEC_IKE_QM_DELAY_DROP

Code (dec)	Code (hex)	Description	Name
13816	0x000035F8	Unknown error occurred.	ERROR_IPSEC_IKE_ERROR
13817	0x000035F9	Certificate Revocation Check failed.	ERROR_IPSEC_IKE_CRL_FAILED
13818	0x000035FA	Invalid certificate key usage.	ERROR_IPSEC_IKE_INVALID_KEY_USAGE
13819	0x000035FB	Invalid certificate type.	ERROR_IPSEC_IKE_INVALID_CERT_TYPE
13820	0x000035FC	No private key associated with machine certificate.	ERROR_IPSEC_IKE_NO_PRIVATE_KEY
13822	0x000035FE	Failure in Diffie-Helman computation.	ERROR_IPSEC_IKE_DH_FAIL
13824	0x00003600	Invalid header.	ERROR_IPSEC_IKE_INVALID_HEADER
13825	0x00003601	No policy configured.	ERROR_IPSEC_IKE_NO_POLICY
13826	0x00003602	Failed to verify signature.	ERROR_IPSEC_IKE_INVALID_SIGNATURE
13827	0x00003603	Failed to authenticate using Kerberos.	ERROR_IPSEC_IKE_KERBEROS_ERROR
13828	0x00003604	Peer's certificate did not have a public key.	ERROR_IPSEC_IKE_NO_PUBLIC_KEY
13829	0x00003605	Error processing error payload.	ERROR_IPSEC_IKE_PROCESS_ERR
13830	0x00003606	Error processing SA payload.	ERROR_IPSEC_IKE_PROCESS_ERR_SA
13831	0x00003607	Error processing Proposal payload.	ERROR_IPSEC_IKE_PROCESS_ERR_PROP
13832	0x00003608	Error processing Transform payload.	ERROR_IPSEC_IKE_PROCESS_ERR_TRANS
13833	0x00003609	Error processing KE payload.	ERROR_IPSEC_IKE_PROCESS_ERR_KE
13834	0x0000360A	Error processing ID payload.	ERROR_IPSEC_IKE_PROCESS_ERR_ID
13835	0x0000360B	Error processing Cert payload.	ERROR_IPSEC_IKE_PROCESS_ERR_CERT
13836	0x0000360C	Error processing Certificate Request payload.	ERROR_IPSEC_IKE_PROCESS_ERR_CERT_REQ
13837	0x0000360D	Error processing Hash payload.	ERROR_IPSEC_IKE_PROCESS_ERR_HASH
13838	0x0000360E	Error processing Signature payload.	ERROR_IPSEC_IKE_PROCESS_ERR_SIG
13839	0x0000360F	Error processing Nonce payload.	ERROR_IPSEC_IKE_PROCESS_ERR_NONCE
13840	0x00003610	Error processing Notify payload.	ERROR_IPSEC_IKE_PROCESS_ERR_NOTIFY
13841	0x00003611	Error processing Delete Payload.	ERROR_IPSEC_IKE_PROCESS_ERR_DELETE
13842	0x00003612	Error processing VendorId payload.	ERROR_IPSEC_IKE_PROCESS_ERR_VENDOR
13843	0x00003613	Invalid payload received.	ERROR_IPSEC_IKE_INVALID_PAYLOAD
13844	0x00003614	Soft SA loaded.	ERROR_IPSEC_IKE_LOAD_SOFT_SA

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Code (dec)	Code (hex)	Description	Name
13845	0x00003615	Soft SA torn down.	ERROR_IPSEC_IKE_SOFT_SA_TORN_DOWN
13846	0x00003616	Invalid cookie received..	ERROR_IPSEC_IKE_INVALID_COOKIE
13847	0x00003617	Peer failed to send valid machine certificate.	ERROR_IPSEC_IKE_NO_PEER_CERT
13848	0x00003618	Certification Revocation check of peer's certificate failed.	ERROR_IPSEC_IKE_PEER_CRL_FAILED
13849	0x00003619	New policy invalidated SAs formed with old policy.	ERROR_IPSEC_IKE_POLICY_CHANGE
13850	0x0000361A	There is no available Main Mode IKE policy.	ERROR_IPSEC_IKE_NO_MM_POLICY
13851	0x0000361B	Failed to enabled TCB privilege.	ERROR_IPSEC_IKE_NOTCBPRIV
13852	0x0000361C	Failed to load SECURITY.DLL.	ERROR_IPSEC_IKE_SECLOADFAIL
13853	0x0000361D	Failed to obtain security function table dispatch address from SSPI.	ERROR_IPSEC_IKE_FAILSSPINIT
13854	0x0000361E	Failed to query Kerberos package to obtain max token size.	ERROR_IPSEC_IKE_FAILQUERYSSP
13855	0x0000361F	Failed to obtain Kerberos server credentials for ISAKMP/ERROR_IPSEC_IKE service. Kerberos authentication will not function. The most likely reason for this is lack of domain membership. This is normal if your computer is a member of a workgroup.	ERROR_IPSEC_IKE_SRVACQFAIL
13856	0x00003620	Failed to determine SSPI principal name for ISAKMP/ERROR_IPSEC_IKE service (QueryCredentialsAttributes).	ERROR_IPSEC_IKE_SRVQUERYCRED
13857	0x00003621	Failed to obtain new SPI for the inbound SA from Ipsec driver. The most common cause for this is that the driver does not have the correct filter. Check your policy to verify the filters.	ERROR_IPSEC_IKE_GETSPIFAIL
13858	0x00003622	Given filter is invalid.	ERROR_IPSEC_IKE_INVALID_FILTER
13859	0x00003623	Memory allocation failed.	ERROR_IPSEC_IKE_OUT_OF_MEMORY
13860	0x00003624	Failed to add Security Association to IPSec Driver. The most common cause for this is if the IKE negotiation took too long to complete. If the problem persists, reduce the load on the faulting machine.	ERROR_IPSEC_IKE_ADD_UPDATE_KEY_FAILED
13861	0x00003625	Invalid policy.	ERROR_IPSEC_IKE_INVALID_POLICY
13862	0x00003626	Invalid DOI.	ERROR_IPSEC_IKE_UNKNOWN_DOI
13863	0x00003627	Invalid situation.	ERROR_IPSEC_IKE_INVALID_SITUATION
13864	0x00003628	Diffie-Hellman failure.	ERROR_IPSEC_IKE_DH_FAILURE
13865	0x00003629	Invalid Diffie-Hellman group.	ERROR_IPSEC_IKE_INVALID_GROUP

Code (dec)	Code (hex)	Description	Name
13866	0x0000362A	Error encrypting payload.	ERROR_IPSEC_IKE_ENCRYPT
13867	0x0000362B	Error decrypting payload.	ERROR_IPSEC_IKE_DECRYPT
13868	0x0000362C	Policy match error.	ERROR_IPSEC_IKE_POLICY_MATCH
13869	0x0000362D	Unsupported ID.	ERROR_IPSEC_IKE_UNSUPPORTED_ID
13870	0x0000362E	Hash verification failed.	ERROR_IPSEC_IKE_INVALID_HASH
13871	0x0000362F	Invalid hash algorithm.	ERROR_IPSEC_IKE_INVALID_HASH_ALG
13872	0x00003630	Invalid hash size.	ERROR_IPSEC_IKE_INVALID_HASH_SIZE
13873	0x00003631	Invalid encryption algorithm.	ERROR_IPSEC_IKE_INVALID_ENCRYPT_ALG
13874	0x00003632	Invalid authentication algorithm.	ERROR_IPSEC_IKE_INVALID_AUTH_ALG
13875	0x00003633	Invalid certificate signature.	ERROR_IPSEC_IKE_INVALID_SIG
13876	0x00003634	Load failed.	ERROR_IPSEC_IKE_LOAD_FAILED
13877	0x00003635	Deleted via RPC call.	ERROR_IPSEC_IKE_RPC_DELETE
13878	0x00003636	Temporary state created to perform reinit. This is not a real failure.	ERROR_IPSEC_IKE_BENIGN_REINIT
13879	0x00003637	The lifetime value received in the Responder Lifetime Notify is below the Windows 2000 configured minimum value. Please fix the policy on the peer machine.	ERROR_IPSEC_IKE_INVALID_RESPONDER_LIFETIME_NOTIFY
13880	0x00003638	SA reaped because QM limit was reached.	ERROR_IPSEC_IKE_QM_LIMIT_REAP
13881	0x00003639	Key length in certificate is too small for configured security requirements.	ERROR_IPSEC_IKE_INVALID_CERT_KEYLEN
13882	0x0000363A	Max number of established MM SAs to peer exceeded.	ERROR_IPSEC_IKE_MM_LIMIT
13883	0x0000363B	IKE received a policy that disables negotiation.	ERROR_IPSEC_IKE_NEGOTIATION_DISABLED
13884	0x0000363C		ERROR_IPSEC_IKE_NEG_STATUS_END

6.2 Fragen zum Management Server

Sollten Sie Fragen zur Funktionalität des TwinCAT Management Servers haben, dürfen Sie uns gerne kontaktieren. Geben Sie dabei bitte immer die Versionsnummer Ihres aktuellen Management Servers an. Diese finden Sie im Management Server Konfigurator in der Menu-Bar unter *Help* und dessen Unterpunkt *About...*

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Abb. 3: About_Version

Des Weiteren erleichtern Sie uns Ihre Unterstützung durch einige allgemeine Angaben:

- Welche Zielplattformen (x86/ARM) haben Sie im Einsatz?
- Laufen Ihre Zielsysteme mit Windows XP, Windows XP Embedded oder Windows CE?
- Nutzen Sie Standard-Scripte oder haben Sie Ihre eigenen Scripte definiert?

In den hier aufgeführten TwinCAT Management Server FAQ's werden darüber hinaus häufig gestellte Fragen behandelt.

1. Kann ich Zielgeräte mit Windows XP oder XP Embedded durch den Management Server Updaten?
2. Kann ich meine eigenen Scripte erstellen und diese als Action ausführen?
3. Gibt es Standard-Scripte die mir meinen Embedded PC oder Industrie PC mit Windows CE vollständig updaten?

Kann ich Zielgeräte mit Windows XP oder XP Embedded durch den Management Server Updaten?

Aktuell ist dies noch nicht möglich. Diese Funktionalität befindet sich zurzeit in der Entwicklung.

Kann ich meine eigenen Scripte erstellen und diese als Action ausführen?

Ja Sie können sich eigene, komplexe Scripte selbst erstellen und diese natürlich auch ausführen. Nähere Informationen erhalten Sie dazu hier [▶ 30].

Gibt es Standard-Scripte die mir meinen Embedded PC oder Industrie PC mit Windows CE vollständig updaten?

Für Geräte mit x86 Plattform gibt es bereits ein Standard-Script, welches Ihnen ein vollständiges Update durchführt. Dieses Script ist hier [▶ 20] ausführlich dokumentiert. Für Geräte welche eine ARM Plattform besitzen gibt es zur Zeit noch kein vollständiges Update-Script. Allerdings ist es möglich mit dem so genannten CX90xxImageUpdatePrep.script [▶ 21] ein Update vorzubereiten und die Geräteeinstellungen in den ursprünglichen Zustand zu versetzen.

Mehr Informationen:
www.beckhoff.de/ts1140