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1. Benvenuti nell'help di COPA-DATA

ESERCITAZIONI (TUTORIAL) VIDEO DI ZENON

Nel nostro canaleYouTube (https://www.copadata.com/tutorial_menu) si trovano esempi pratici di progettazione eseguita con zenon. I tutorial sono raggruppati per tema e forniscono una panoramica di come si lavora con i diversi moduli di zenon. Tutti i tutorial sono disponibili in lingua inglese.

GUIDA GENERALE

Se non avete trovato le informazioni che cercavate o se avete dei consigli relativi al completamento di questo capitolo dell'help, potete scrivere una E-Mail all'indirizzo documentation@copadata.com.

SUPPORTO TECNICO ALLA PROGETTAZIONE

Per domande relative a progetti concreti ci si può rivolgere via E-Mail all'indirizzo support@copadata.com.

LICENZE E MODULI

Se si ha bisogno di nuovi moduli o licenze, rivolgersi ai dipendenti di COPA-DATA all'indirizzo sales@copadata.com.

2. Installazione e update

La prima volta che si installa zenon, la routine di installazione si avvia automaticamente e vi guida attraverso l'intero processo di installazione. Se è stata disabilitata l'opzione "Autostart da media", avviare l'installazione eseguendo il file **START.exe** nella directory principale del supporto di installazione zenon.

Note sull'installazione:

▶ Prima dell'installazione di zenon:



- Si dovrebbero installare tutti gli aggiornamenti correnti del sistema operativo.
 Nota: se si utilizza sempre la versione più recente (service pack) del sistema operativo corrispondente, si evitano problemi di compatibilità e vulnerabilità di sicurezza.
- Non ci deve essere nessun riavvio in sospeso.
- ► In Windows 7 Embedded Standard, zenon viene installato utilizzando la normale routine di installazione. Per i requisiti hardware, vedere il capitolo Runtime sotto Windows Embedded Standard (A pagina: 40).
- L'installazione di zenon per Windows CE avviene tramite la normale routine di installazione. Vengono installati i file per Windows CE nella versione 7.20. I dettagli sono riportati nel capitolo Runtime per Windows CE (A pagina: 46).
- Durante l'installazione di zenon, viene installato il COPA-DATA Multiple Network Protocol Driver (cdprotdrv.sys). Per avviare il driver, si deve riavviare il sistema operativo dopo la fine del processo di installazione.



A partire dalla versione 7.10, zenon non può essere installato su sistemi su quali è già installato **Microsoft SQL Server Data Engine** (**MSDE**). Questo vale per tutti i sistemi su cui è installata la versione zenon 6.01 o 6.20.

Info

Se durante l'installazione viene visualizzato un messaggio di errore che indica che non è stato possibile avviare un servizio:

- ▶ Riavviare prima il computer.
- Quindi riavviare il setup zenon

3. zenon: installazione standard

zenon avvia automaticamente la sua routine di installazione non appena si collega il supporto di installazione di zenon; il sistema guida l'utente attraverso l'intero processo di installazione. In alternativa, avviare l'installazione eseguendo il file **START.exe** nella directory principale del supporto di installazione di zenon.

I diritti di amministratore sono necessari per il processo di installazione sul computer!



Attenzione

Durante l'installazione, il computer viene riavviato automaticamente se necessario. Chiudere tutti gli altri programmi prima dell'installazione.

3.1 Schermata Start

Nella schermata iniziale viene visualizzata la versione da installare, incluso il numero di build.



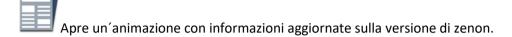
1. Nel menù a tendina in alto a sinistra dello schermo, selezionare la lingua desiderata per l'installazione.

Sono disponibili le seguenti lingue:

- Tedesco
- Inglese
- Francese
- Italiano



- Spagnolo
- 2. Per informazioni su zenon, cliccare sul pulsante desiderato:



Apre la guida di zenon che potrà essere installata come PDF.

Apre la guida Quick-Start in formato PDF con suggerimenti per i primi passi di configurazione in zenon.

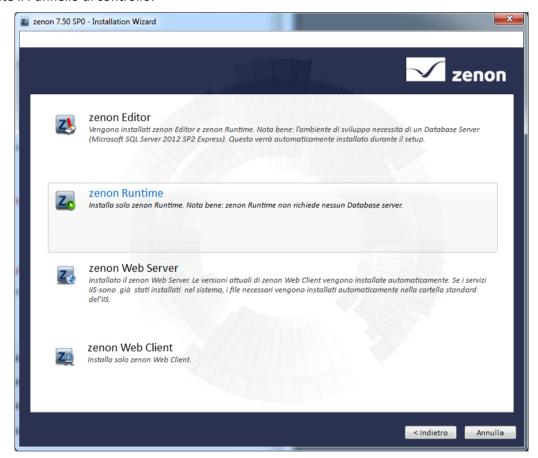
Attenzione: questa pagina non può più essere visualizzata in un secondo momento. Per informazioni sulla versione corrente o sulla guida all'installazione, aprirle adesso.

- 3. Cliccando sul pulsante **Avanti** si apre la finestra che contiene i termini di licenza. Condizioni di licenza
- 4. Confermare le condizioni di licenza attivando la casella di controllo corrispondente.
 È anche possibile stampare le condizioni di licenza cliccando sul pulsante Stampa.
- 5. Cliccando sul pulsante **Avanti**, si apre la finestra per selezionare il prodotto desiderato. Nota: il pulsante "Avanti" è disponibile solamente se avete accettato le condizioni del contratto di licenza cliccando sul campo opzione.



3.2 zenon: installazione standard

Selezionare il prodotto desiderato. Si possono selezionare solamente i prodotti che non sono ancora installati. Se si desidera reinstallare qualcosa, è necessario prima disinstallare il prodotto già installato tramite il Pannello di controllo.



zenon Editor:

Installa l'Editor di zenon e il Runtime di zenon. I componenti aggiuntivi necessari per l'Editor vengono installati automaticamente.

• zenon Runtime:

Installa solamente il Runtime di zenon.

• zenon Web Server:

Installa zenon Web Server e i corrispondenti zenon Web Client attuali.

• zenon Web Client

Installa solamente zenon Web Client.





L'installazione inizia immediatamente se si seleziona zenon Web Server, oppure zenon Web Client.

Se si seleziona **zenon Editor**, o **zenon Runtime**, si apre la finestra di dialogo per la selezione dell' edizione.

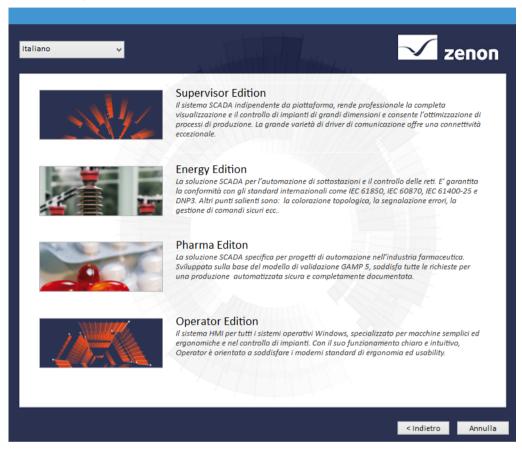
3.3 Selezione dell'edizione - Tipo di installazione (installazione definita dall'utente)

Cliccando sul prodotto desiderato, si apre la finestra che consente di selezionare l'edizione.

- 1. Selezionare la versione con licenza:
 - zenon Supervisor Edition
 - zenon Energy Edition
 - zenon Pharma Edition

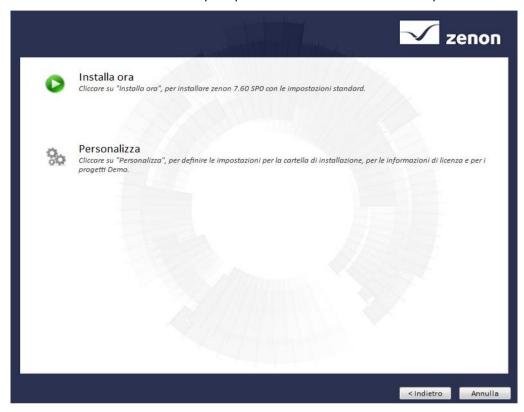


• zenon Operator Edition





2. Cliccare sull'edizione desiderata per aprire la finestra di selezione del tipo di installazione:



Installa ora:

Avvia l'installazione dell'edizione selezionata.

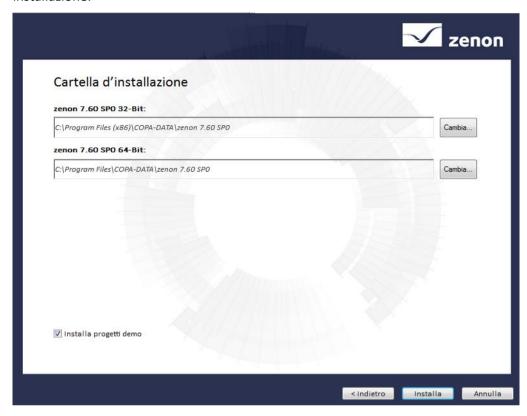
È possibile che il computer venga riavviato dal sistema durante il processo di installazione. Seguire le istruzioni del Wizard.

• Personalizza:

Apre altre finestre che consentono di eseguire un'installazione individuale. Qui è possibile modificare il percorso di installazione e decidere se installare progetti demo.



3. Cliccare sul pulsante **Avanti** per aprire la finestra di personalizzazione della cartella di installazione:



- Se necessario, definire le cartelle individuali per la versione a 32 bit e la versione a 64 bit del programma.
 - Per farlo, cliccare sul pulsante Cambia...
- Specificare la cartella di destinazione per i database di progetto.
 Attenzione: il luogo di salvataggio selezionato qui deve avere spazio di archiviazione sufficiente. Tutti gli utenti hanno bisogno di diritti di scrittura.
- Se si desidera installare anche il progetto demo, attivare la casella di controllo corrispondente.
 - Il progetto demo fornisce possibili scenari applicativi in diversi settori industriali.
- 4. Cliccare sul pulsante **Installa**.
 - Viene avviato il processo di installazione dell'edizione selezionata.
 - È possibile che il computer venga riavviato dal sistema durante il processo di installazione. Seguire le istruzioni del Wizard.

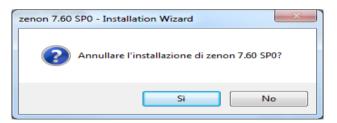


3.4 Installazione e completamento

Durante l'installazione, una barra informa sullo stato di avanzamento dell'installazione e sulla fase di installazione eseguita al momento.



È possibile interrompere l'installazione cliccando sul pulsante Annulla.
 Viene visualizzata una richiesta di conferma prima che l'installazione venga annullata.

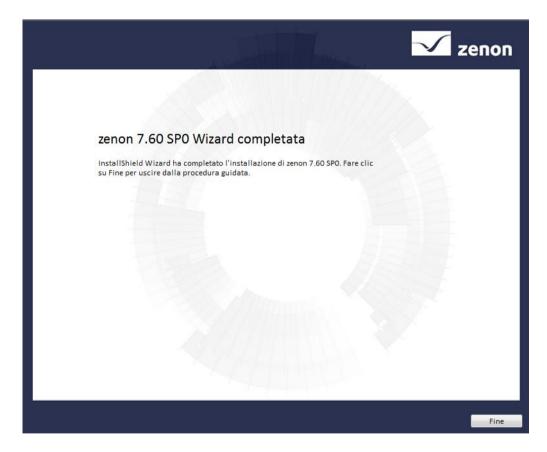




Opzione	Descrizione			
Sì	L'installazione viene interrotta. Viene visualizzata una finestra di dialogo in cui si informa che l'installazione non è stata portata a termine con successo.			
No	Il processo di installazione prosegue.			

Il processo di installazione può richiedere del tempo. Non spegnere il computer durante questo periodo di tempo. Assicurarsi inoltre che il computer non venga automaticamente messo in modalità di ibernazione.

COMPLETAMENTO

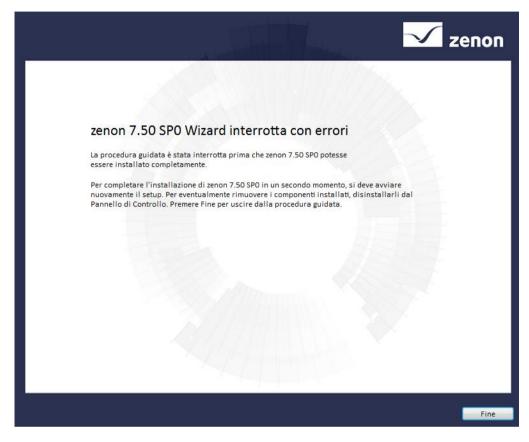


Una volta completata con successo l'installazione, verrà visualizzata una finestra di dialogo.

- Cliccare sul pulsante Fine per completare l'installazione.
- ▶ Riavviare il setup per installare altri prodotti, come, ad esempio, zenon Web Server.



Installazione annullata o errata



Se si verifica un errore durante l'installazione o se l'installazione è stata interrotta, viene visualizzata una finestra di dialogo che ne informa l'utente.

Cliccare sul pulsante Fine per chiudere il setup.

4. Installazione e disinstallazione invisibile all'utente

Si può installare e disinstallare zenon anche in modalità non visibile all'utente (si parla rispettivamente di Silent Installation e di Silent Remove).





INSTALLAZIONE INVISIBILE ALL'UTENTE A PARTIRE DA ZENON 7.20

Sintassi: scada.exe /silent /language:[Numero] CDPROP_EDITION=[Edizione] CDPROP_TYPE=[Tipo] ISFeatureInstall=[Funzionalità]

Parametro	Argomenti	Descrizione	
scada.exe		Inizializzazione dell'installazione.	
/silent		Installazione invisibile all'utente.	
/language:	▶ 1031 : Tedesco	Selezione della lingua.	
	▶ 1033 : Inglese	Esempio inglese:	
	▶ 1034 : Spagnolo	language:1033	
	▶ 1036 : Francese		
	• 1040 : Italiano		
CDPROP_EDITION=	▶ ENERGY	Selezione della Edition.	
	SUPERVISOR	Esempio Energy Edition:	
	▶ OPERATOR	CDPROP_EDITION=ENERGY	
	► PHARMA	Non necessario per zenon Web Server e zenon Web Client.	
	SCIENCE		
CDPROP_TYPE=	▶ ED : Editor e Runtime	Selezione di Editor o Runtime.	
	▶ RT : Runtime	Esempio Runtime:	
		CDPROP_TYPE=RT	
		Non necessario per zenon Web Server e zenon Web Client.	
ISFeatureInstall=	PREREQUISITES_EDITOR,SCADA: Editor	Selezione della funzionalità da installare.	
	PREREQUISITES_RUNTIME,SCAD A: Runtime	Esempio zenon Editor: ISFeatureInstall=PREREQUISI	
	PREREQUISITES_WEBSERVER,W EBSERVER: Web Server	TES_EDITOR,SCADA	
	PREREQUISITES_WEBCLIENT,WE BCLIENT: Web Client		

Esempi:

► Installazione Editor, tedesco, Energy Edition:
scada.exe /silent /language:1031 CDPROP_EDITION=ENERGY CDPROP_TYPE=ED
ISFeatureInstall=PREREQUISITES_EDITOR,SCADA



- ► Installazione Runtime, inglese, Supervisor Edition:
 scada.exe /silent /language:1033 CDPROP_EDITION=SUPERVISOR CDPROP_TYPE=RT
 ISFeatureInstall=PREREQUISITES_RUNTIME,SCADA
- ► Installazione zenon Web Server, tedesco: scada.exe /silent /language:1031 ISFeatureInstall=PREREQUISITES_WEBSERVER,WEBSERVER
- ► Installazione zenon Web Server, tedesco:
 scada.exe /silent /language:1031 ISFeatureInstall=PREREQUISITES_WEBCLIENT,WEBCLIENT

DISINSTALLAZIONE INVISIBILE ALL'UTENTE A PARTIRE DA ZENON 7.20.

SENZA FILE LOG

Percorso: C:\Program Files (x86)\InstallShield Installation Information\{9BE6EDFE-3465-486F-87EE-1C439DE5EA9A}

Sintassi: SCADA.exe /remove /silent

CON FILE LOG

Percorso: C:\Program Files (x86)\InstallShield Installation Information\{9BE6EDFE-3465-486F-87EE-1C439DE5EA9A}

Sintassi: SCADA.exe /remove /silent /log"%TEMP%"

DISINSTALLAZIONE INVISIBILE ALL'UTENTE ZENON 7.10 E 7.11

Sintassi: scada.exe /silent /language:[Numero] CDPROP_EDITION=[Edizione] CDPROP_TYPE=[Tipo] ISFeatureInstall=[Funzionalità]

Parametro	Argomenti	Descrizione
scada.exe		Inizializzazione dell'installazione.
/silent		Installazione invisibile all'utente.
/language:	▶ 1031 : Tedesco	Selezione della lingua.
	▶ 1033 : Inglese	Esempio inglese:
	▶ 1034 : Spagnolo	language:1033
	▶ 1036 : Francese	
	▶ 1040 : Italiano	
CDPROP_EDITION=	► ENERGY	Selezione della Edition.
		Esempio Energy Edition:



	•	SUPERVISOR	CDPROP_EDITION=ENERGY
	•	OPERATOR	Non necessario per zenon Web
	•	PHARMA	Server.
CDPROP_TYPE=	•	ED: Editor e Runtime	Selezione di Editor o Runtime.
	•	RT: Runtime	Esempio Runtime: CDPROP_TYPE=RT
			Non necessario per zenon Web Server.
ISFeatureInstall=	•	WIBU,SCADA,MS,MSALL,SQL,CO MMON: Editor	Selezione della funzionalità da installare.
	•	WIBU,SCADA,MS,MSALL,COMMO N: Runtime	Esempio zenon Editor: ISFeatureInstall=WIBU,SCADA ,MS,MSALL,SQL,COMMON
	•	WIBU,WS,MSALL,COMMON : Web Server	

Esempi:

- ► Installazione Editor, tedesco, Energy Edition: scada.exe /silent /language:1031 CDPROP_EDITION=ENERGY CDPROP_TYPE=ED ISFeatureInstall=WIBU,SCADA,MS,MSALL,SQL,COMMON
- ► Installazione Runtime, inglese, Supervisor Edition:
 scada.exe /silent /language:1033 CDPROP_EDITION=SUPERVISOR CDPROP_TYPE=RT
 ISFeatureInstall=WIBU,SCADA,MS,MSALL,COMMON
- ► Installazione zenon Web Server, tedesco.
 scada.exe /silent /language:1031 ISFeatureInstall=WIBU,WS,MSALL,COMMON

DISINSTALLAZIONE SILENZIOSA VERSIONE 7.10 E ZENON 07:11

ZENON 7.10

Percorso: C:\Program Files (x86)\InstallShield Installation Information\{860C41F0-6034-4822-BCF1-88D4849AE897}

Sintassi: SCADA.exe /remove /silent

ZENON 07:11

Percorso: C:\Program Files (x86)\InstallShield Installation Information\{ED00D319-77B8-4C58-8D67-2DA2D48E90DB}

Sintassi: SCADA.exe /remove /silent



5. Gestione degli errori

CONTROLLO PRIMA DELL'INSTALLAZIONE

Prima dell'installazione, viene eseguito un controllo volto a verificare l'esistenza dei requisiti necessari sul sistema. Se i requisiti non sono soddisfatti, saranno visualizzati in una pagina separata con istruzioni su come correggere i problemi.

ERRORI DURANTE L'INSTALLAZIONE

Se si verificano errori durante l'installazione, viene visualizzato un messaggio di errore corrispondente.

Se si ha bisogno dell'aiuto del supporto tecnico di COPA-DATA per la soluzione di eventuali problemi:

- 1. Se possibile, creare uno screenshot del messaggio di errore.
- 2. Passare alla cartella %Temp%/SCADALOG.
- 3. Qui è possibile trovare i file di LOG dell'installazione.
- 4. Creare un file ZIP con il contenuto della cartella.
- 5. Inviare file e screenshot a support@copadata.com.

Se avete già chiuso la finestra dei messaggi, troverete i file di Log con le informazioni di installazione di SQL Server nella cartella:

C:\Program Files\Microsoft SQL Server\110\Setup Bootstrap\LOG

Suggerimento: il file Summary.txt fornisce un indizio su dove potrebbe trovarsi il problema.



Firewall: Durante l'installazione, zenon configura automaticamente il firewall installato con Windows. I firewall di altri produttori, invece, devono essere configurati correttamente dall'utente.

FREQUENTI FONTI DI ERRORE DURANTE L'INSTALLAZIONE:

- ▶ Il programma antivirus è attivo e blocca l'installazione per l'erronea individuazione di virus. Soluzione: scollegare il computer dalla rete, disattivare il programma antivirus, eseguire nuovamente l'installazione.
- ▶ Il firewall non è stato configurato correttamente. Soluzione: scollegare il computer dalla rete, disattivare il firewall, eseguire nuovamente l'installazione.
- ▶ Nel sistema esiste già un'installazione SQL errata. Soluzione: creare un backup di progetto; se ancora possibile, disinstallare il server SQL; rinominare la cartella SQL; riavviare l'installazione.



6. Update di Windows

Attenzione: gli update Windows automatici influenzano il processo d'installazione!

Se viene eseguito un aggiornamento del sistema operativo Windows durante il setup di zenon, potrebbero verificarsi problemi durante l'installazione di zenon.

Per evitarlo:

- ▶ Disattivate gli update automatici di Windows per il periodo dell'installazione.
- ► Eseguire gli aggiornamenti di Windows prima di installare zenon.

7. Virus scanner

I software antivirus possono rallentare o addirittura impedire l'installazione di zenon.

Nota: se il software antivirus utilizzato causa problemi di installazione, disattivarlo per la durata dell'installazione. Durante questo periodo i computer interessati possono essere esposti a rischi più elevati. Riattivare il programma antivirus subito dopo aver installato zenon.

8. Struttura file

La struttura file viene creata o estesa durante l'installazione.

I file di programma di zenon sono memorizzati in una cartella specificata durante l'installazione.

Inoltre, durante l'installazione viene richiesta una cartella per i database SQL dei progetti. Sul supporto di memorizzazione dei progetti (SQL, immagini ecc) ci deve essere abbastanza spazio di memoria visto che qui verranno salvati tutti i dati di progetto correnti e futuri.



Cartella	Percorso
Cartella programma	Sistema a 32-Bit: %Program Files%\COPA-DATA\zenon7xxx
	Sistema a 64-Bit:
	%Program Files%\COPA-DATA\zenon7xxx
	%Program Files (x86)%\COPA-DATA\zenon7xxx
Cartella dei dati programma, per es. simboli globali, modelli di stampa, file di Log, ecc.,	%ProgramData%\COPA-DATA\zenon7xxx
Cartella database (SQL)	%ProgramData%\COPA-DATA\SQL
Cartella di sistema	%ProgramData%\COPA-DATA\System
Impostazioni Editor e profili	%Users%\UserName\AppData\Local\COPA-DATA\ze non\Editor
Impostazioni Diagnosis Viewer	%Users%\UserName\AppData\Local\COPA-DATA\ze non\DiagView

DEFINIZIONE DELLA CARTELLA RUNTIME E DELLA CARTELLA DATI

CARTELLA RUNTIME

L'Editor crea i file Runtime nella cartella Runtime, oppure questi vengono trasferiti a questa cartella tramite trasporto remoto. La cartella Runtime viene creata o aggiornata durante la compilazione di un progetto nell'Editor. Questa cartella può essere parametrizzata nell'Editor di zenon con la proprietà del progetto Cartella Runtime. Nel trasferimento remoto, la cartella Runtime viene definita nelle impostazioni del Trasporto Remoto.

CARTELLA DATI

Il Runtime salva tutti i file di dati generati a Runtime (come, per esempio, file di allarme, file di archivi ecc) nella cartella dati. Per impostazione predefinita, la cartella dati viene creata come sottocartella della cartella Runtime. Riceve automaticamente il nome del computer su cui è in esecuzione il Runtime. Si può modificare questo percorso di salvataggio nelle proprietà di progetto (Generale/Cartella dati).

Suggerimento: non salvare mai la cartella dati su un'unità rimovibile, come una chiavetta USB o una periferica di rete. Si consiglia di salvare i dati localmente e di eseguirne un backup esternamente.



Attenzione

Se il percorso specificato non esiste o non è disponibile, il Runtime non scriverà più nessun dato. Questo comporta una perdita completa (100%) dei dati. Il Runtime rimane operativo, ma dovrà essere riavviato non appena il percorso sarà di nuovo disponibile. La disponibilità della cartella può essere verificata con la variabile driver di sistema **Cartella Runtime non disponibile (SYSDRV.chm::/25965.htm)**.

9. Porte libere

zenon e zenon Logic utilizzano determinate porte per comunicare in rete. Se altri programmi, come un server SQL già installato, occupano queste porte, questo può interferire con la comunicazione di zenon. Molte porte in zenon possono essere modificate utilizzando lo **Startup Tool**, o le proprietà nell'Editor.

Per verificare l'assegnazione delle porte, procedere come segue:

- 1. Inserire nella riga di comando netstat -a -n -o.
 - Per aprire la riga di comando in Windows:
 - Premere i tasti Windows+R.
 - Digitare cmd e confermare con OK.
 - Si aprirà una finestra di inserimento DOS.
 - In questa finestra, inserire il comando netstat.
- 2. Verrà visualizzata una lista di tutte le porte TCP/IP e UDP attive.
- 3. Controllare le porte di ascolto (stato: ASCOLTO) e verificare se per le porte necessarie per la comunicazione di zenon e zenon Logic l'ID processo (PID) corrisponde ai processi di zenon e zenon Logic.
 - Questi PID possono essere letti nel **Task Manager di Windows**. Per farlo, aprire il **Task Manager di Windows** e passare alla scheda **Servizi**.
- 4. Se un altro software utilizza queste porte, riconfigurarlo. È possibile vedere quali porte siano utilizzate da zenon e zenon Logic nella tabella Allocazione delle porte da parte di zenon e zenon Logic. In questa tabella si può anche verificare se le porte di questi programmi sono personalizzabili.



ALLOCAZIONE DELLE PORTE DA PARTE DI ZENON E ZENON LOGIC

Applicazione	Descrizione	Numeri di porta	Protocollo di trasporto
stratonrt[k].exe	zenon Logic Runtime - comunicazione polling e workbench di zenon Logic .	▶ 1200-1210	ТСР
stratonrt[k].exe		▶ 4500-4510	ТСР
stratonrt[k].exe	zenon Logic Ridondanza.	> 7000-7010	ТСР
stratonrt[k].exe	zenon Logic Runtime - comunicazione spontanea.	9000-9010	ТСР
zennetsrv.exe	zenon Servizio di rete.	1100-1100	ТСР
zensyssrv.exe	zenon Servizio di trasporto.	▶ 1101	TCP
zendbsrv.exe	zenon Servizio di database.	▶ 1103	TCP
zenAdminsrv.exe	zenon Servizio di amministrazione.	▶ 50777	TCP
zenLogSrv.exe	zenon Servizio di loggin	▶ 50780	ТСР
zenvnc.exe	zenon Remote Desktop service	► 5600 (fisso) ► 5610 (fisso)	ТСР
CodeMeter.exe	Code Meter Servizio Dongle.	22350 (modificabile, ma deve rimanere invariato)	ТСР
WkSvW32.exe	WibuKey Servizio di rete.	▶ 22347 (fisso)	ТСР
Zenrt32.exe	Message Control con Voice	▶ 5060: SIP	UDP
	over IP.	▶ 4000: RTP	
		▶ 4001: RTCP (fisso)	
		SIP e RTP possono essere configurati usando l'Editor.	



	RTCP viene impostato	
	automaticamente dal sistema.	

10. Installazione di una versione precedente dopo aver installato zenon 8.00 (sistema operativo a 64-Bit)

Se una versione di zenon inferiore a 7.10 è installata su un sistema operativo a 64 bit dopo aver installato zenon 8.00, i servizi a 64 bit devono essere nuovamente registrati tramite la riga di comando dopo la loro installazione. La registrazione può essere effettuata usando un file batch, oppure manualmente.

Registrazione con file batch:

- 1. Copiare il file **Register.bat** dal supporto di installazione di zenon.
- 2. Questo file si trova nella cartella: ... \AdditionalSoftware \Register Admin Service and Log Service (x64) \
- 3. Eseguire il file sul computer corrispondente come amministratore.

Registrazione manuale:

- 1. Avviare la riga di comando con i diritti di amministratore.
- 2. Passare alla cartella Program Files%\Common Files\COPA-DATA\zenAdminSrv
- 3. Avviare il servizio zenAdminSrv.exe con il parametro -service
- 4. Passare alla cartella %Program Files%Common Files\COPA-DATA\zenLogSrv
- 5. Avviare il servizio zenLogSrv.exe con il parametro -service



zenAdminSrv:

- ▶ Cartella: C:\Program Files\Common Files\COPA-DATA\zenAdminSrv
- Comando: zenAdminSrv.exe -service

zenLogSrv:

- ▶ Cartella: C:\Program Files\Common Files\COPA-DATA\zenLogSrv
- Comando: zenLogSrv.exe -service



11. Installazione in parallelo della versione 7.x e della versione 6.51

Se si installa una versione 7.x su un sistema che ha già installato zenon 6.51, dopo l'installazione il **Multiple Network Protocol Driver** deve essere reinstallato dopo un riavvio.

PER SISTEMI X64

Per reinstallare:

- 1. Riavviare il sistema.
- 2. Aprire sul supporto di installazione il percorso AdditionalSoftware\COPA-DATA Multiple Network Protocol Driver.
- 3. Eseguire il file MNDPx64Setup.bat

In questo modo il driver verrà reinstallato e collegato correttamente alla scheda di rete.

PER I SISTEMI X86:

Per reinstallare:

- 1. Riavviare il sistema.
- 2. Aprire sul supporto di installazione il percorso AdditionalSoftware\COPA-DATA Multiple Network Protocol Driver
- 3. Eseguire il file MNDPx86Setup.bat

In questo modo il driver verrà reinstallato e collegato correttamente alla scheda di rete.

12. Requisiti di sistema

zenon 8.00 può essere utilizzato su tutti gli attuali sistemi operativi Microsoft. zenon viene testato costantemente per verificare la compatibilità con le versioni più recenti dei sistemi operativi, con i più recenti service pack e hotfix disponibili.

Le modifiche apportate da Service Packs, Hotfixes oppure Patches di Microsoft possono causare problemi di incompatibilità e pregiudicare la funzionalità del software. In questo caso, COPA-DATA fornirà al più presto una versione aggiornata di zenon. Per ulteriori informazioni contattare il supporto di COPA-DATA: support@copadata.com.



Attenzione

Osservare quanto segue durante la progettazione:

- ► Per garantire una visualizzazione ottimale di zenon a Runtime, si consiglia di adottare l'impostazione standard per la **visualizzazione** Windows (corrisponde al 100%). Valori più elevati possono causare la visualizzazione errata di elementi grafici, simboli, testi, ecc.
- ▶ I temi di Windows possono coprire elementi a Runtime. Quando si configura un progetto, assicurarsi che ci sia una distanza adeguata tra gli elementi e il bordo dello schermo.

▶



12.1 Desktop Betriebssysteme

Sistemi operativi desktop supportati e service pack richiesti:

Sistema operativo	zenon Editor	zenon Runtime	zenon Web Server	zenon Web Client	zenon HTML Web Engine	zenon Logic Runtime	zenon Analyzer Server
Windows 7 (versioni Professional, Enterprise e Ultimate, in tutti i casi le versioni x86 e x64).	SP 1	SP 1	SP 1	SP 1	SP 1	SP 1	Impossibile eseguire
Windows Embedded Standard 7 (a condizione che esistano tutte le componenti necessarie del sistema operativo)	Impossibile eseguire	SP 1	SP 1	SP 1	SP 1	SP 1	Impossibile eseguire
Windows 8 e 8.1 (versioni Standard, Professional e Enterprise, in tutti i casi le versioni x86 e x64).	SP 0	SP 0	SP 0	SP 0	SP 0	SP 0	Solo x64 con SP 0
Windows Embedded 8 Standard (a condizione che esistano tutte le componenti necessarie del sistema operativo)	Impossibile eseguire	SP 0	SP 0	SP 0	SP 0	SP 0	Impossibile eseguire
Windows 10 (Home, Pro, Enterprise, Education, Pro Education, Enterprise LTSB, IoT Enterprise, Pro for Workstations)	SP 0	SP 0	SP 0	SP 0	SP 0	SP 0	Solo Home, Pro e Enterprise (sempre x64) con SP 0



12.2 Sistema operativo server

Sistemi operativi server supportati e service pack necessari:

Sistema operativo server	zenon Editor	zenon Runtime	zenon Web Server	zenon Web Client	zenon HTML Web Engine	zenon Logic Runtime	zenon Analyzer Server
Windows Server 2008 R2 (tutte le edizioni, eccetto Core.)	SP 1	SP 1	SP 1	SP 1	SP 1	SP 1	Impossibile eseguire
Windows Server 2012 e 2012 R2 (tutte le edizioni, eccetto Core.)	SP 0	SP 0	SP 0	SP 0	SP 0	SP 0	Solo x64 con SP 0
Windows Server 2016 (tutte le edizioni, eccetto Core.)	SP 0	SP 0	SP 0	SP 0	SP 0	SP 0	Solo x64 con SP 0



12.3 Sistemi operativi server e desktop fino a Windows 8.1

Panoramica dei sistemi operativi server e desktop supportati fino a Windows 8.1

	Windows Embedded 7/8 Standard	Windows Embedded 8.1 Pro/Industry	Windows 7 SP1/Windows 8 e 8.1/ Server 2008 (R2) SP1, 2012 e 2012 R2	Windows CE
Editor		x	x	
Runtime	x	x	x	
Runtime per Windows CE				x
Web Server	x	x	x	X (Solo Web Server Pro Light)
Web Client	x	x	x	
HTML Web Engine	x	x	x	

Legenda:

► **X**: supportato

► -: non supportato

Attenzione: a partire dalla versione 7.50, Windows CE non è più supportato.

Viene installato zenon CE Versione 7.20. Per utilizzare questa versione, è necessario creare i file Runtime per la versione 7.20.



12.4 Windows CE e Windows Embedded

Sistemi operativi supportati EE

Sistema operativo	zenon Editor	zenon Runtime	zenon Web Server	zenon Web Client	zenon HTML Web Engine	zenon Logic Runtime	zenon Analyzer Server
Windows CE 6.0 (ARM e x86) Attenzione: supportato solo fino alla versione 7.20. A partire dalla versione 7.50, devono essere creati file Runtime per Runtime per 7.20.	Impossibil e eseguire	Solo zenon Operator	Solo Pro Light	Impossibile eseguire	Impossibile eseguire	eseguibile	Impossibile eseguire
Windows Embedded Compact 7 (ARM e x86) Attenzione: supportato solo fino alla versione 7.20. A partire dalla versione 7.50, devono essere creati file Runtime per Runtime per 7.20.	Impossibil e eseguire	Solo zenon Operator	Solo Pro Light	Impossibile eseguire	Impossibile eseguire	eseguibile	Impossibile eseguire



12.5 Windows 10

Panoramica dei sistemi operativi desktop supportati per Windows 10

Versione Windows	zenon Supervisor/Operato r	Everywhere by zenon	zenon Logic Runtime
Windows 10 Home	x	X (PC)	x
Windows 10 Mobile		X (Mobile)	
Windows 10 Pro	x	X (PC)	x
Windows 10 Enterprise	x	X (PC)	x
Windows 10 Education	x	X (PC)	x
Windows 10 Mobile Enterprise		X (Mobile)	-
Windows 10 IoT Core	-		x
Windows 10 IoT Enterprise (Windows 10 Enterprise LTSB)	x	X (PC)	x

Legenda:

▶ **x**: disponibile

► --: non funzionante

12.6 Requisiti di sistema quando si utilizza DirectX

Quando si usano le DirectX Hardware oppure le DirectX Software, devono essere soddisfatti i seguenti requisiti minimi:

Nota: La gestione di progetti di grandi dimensioni o di più progetti caricati in contemporanea, presuppone l'uso di un hardware dalle elevate performance. In questo caso, i requisiti minimi possono essere maggiori di quelli elencati nella tabella successiva.

Parametro	Requisito minimo	Raccomandato		
CPU:	Single Core con supporto SSE2.	Quad Core o più core		
Scheda grafica: (solo DirectX Hardware)	Scheda grafica DirectX 11 Mainstream. Nota: soprattutto quando si utilizza un chip grafico integrato, a seconda del driver utilizzato, la qualità della visualizzazione potrebbe risultare	Scheda grafica dedicata DirectX 11 AMD o nVidia high-end.		
Memoria grafica: (solo DirectX Hardware)	1 GB VRAM Nota: la quantità di memoria richiesta dipende dal numero di immagini aperte e dagli elementi visualizzati.	2 GB VRAM		
Driver della scheda grafica: (solo DirectX Hardware)	Il driver più recente del produttore della scheda grafica.			
Sistema operativo:	DirectX Hardware e DirectX Software funzionano solamente sui sistemi operativi che supportano DirectX11.1. Se il sistema non supporta DirectX 11.1, si passa automaticamente a Windows standard. Deve essere installato sul PC il Runtime DirectX corrente. Quest'ultimo viene installato per zenon automaticamente con il setup. Per zenon Web Client, invece, deve essere installato manualmente.			

Per verificare la compatibilità della scheda grafica e del driver con DirectX Hardware, si può usare il tool dei sistemi operativi di Windows **dxdiag.exe**.

Fino a Windows 7: controllare il valore **DDI-Version** alla voce **Visualizzazione**. Ad esempio, il valore 11 sta per DirectX 11.

A partire da Windows 8: tutte le versioni di DirectX supportate sono elencate nella scheda **Display**, alla voce **Feature Levels**. DirectX 11, per esempio, viene visualizzato come 11.0.

12.7 Software aggiuntivo

SERVER SQL.

L'Editor di zenon funziona con un database SQL. Questo viene installato durante l'installazione dell'Editor di zenon:

► Fino alla versione 6.20 SP4: SQL-Server 2000 (MSDE)



- Dalla versione 6.21 SPO: SQL Server 2005 Express
- ▶ Dalla versione 07:00 SP0: SQL Server 2008R2 SP1 Express
- ▶ Dalla versione 07:10 SP0: SQL Server 2012 SP1 Express
- ▶ Dalla versione 07:20 SP0: SQL Server 2012 SP2 Express
- ▶ Dalla versione 07:50 SP0: SQL Server 2012 SP3 Express



Quando si cambia la versione o si aggiorna il service pack del SQL Server: i progetti devono essere salvati ed esportati nella versione originale e poi reimportati nella nuova versione.

Nota: se esiste già una versione di zenon con la stessa versione di SQL Server, ma con un Service Pack diverso, questo service pack non sarà aggiornato dalla nuova installazione di zenon. L'aggiornamento del service pack può essere effettuato manualmente o tramite Windows Update.

DONGLE

- ▶ Il software CodeMeter necessario per la protezione dongle è sempre installato automaticamente.
- ► Se WibuKey è necessario, può essere installato dal supporto di installazione..

 Percorso: \AdditionalSoftware\WIBU-SYSTEMS WibuKey

12.8 Autorizzazioni utente

Per l'installazione sono necessari i diritti di amministratore di Windows.

Per la gestione corrente del software, invece, sono necessari i diritti utente standard di Windows. Il controllo account utente (UAC) può essere attivato con il livello massimo di sicurezza.

12.9 Requisiti hardware

La versione PC e quella CE di zenon richiedono delle prestazioni diverse all'hardware. In questo capitolo sono riportati i requisiti hardware per le singole versioni di Editor e Runtime, nonché per zenon Webserver e zenon Web Client.

L'Editor utilizza come Server SQL un server Microsoft SQL e richiede all'hardware prestazioni più elevate rispetto al Runtime. Se l'Editor e il Runtime devono funzionare contemporaneamente su un sistema, i requisiti si sommano.



Attenzione

Si consiglia l'uso di schede grafiche con memoria grafica propria e supporto di DirectX. Le schede grafiche a memoria condivisa possono richiedere troppa RAM e quindi causare perdite di prestazioni. A questo proposito, fare riferimento a quanto detto nel capitolo Requisiti di sistema quando si utilizza DirectX (A pagina: 34). Quando si utilizza Multi-Touch, è necessario attenersi alla configurazione consigliata in questo capitolo.

PERFORMANCE-OPTIMIERUNG

Beachten Sie, dass alle Angaben nur die minimalen Anforderungen an Ihr System darstellen. Eine höherwertige Ausstattung Ihrer Hardware verbessert die Leistung von zenon erheblich.

- ► Statten Sie Ihre Hardware sowohl Clients und vor allem Server mit genügend Arbeitsspeicher (RAM) aus.
- ► Optimieren Sie die Hardware für die Datensicherung, z.B. mit einem schnellen SSD-Datenspeicher.
- ► Stimmen Sie die Hardware der Clients und des Netzwerks aufeinander ab. Ein System ist immer so leistungsfähig wie seine schwächste Komponente.
- ▶ Optimieren Sie Ihre Netzwerkarchitektur, z.B. durch Einsatz einer Verkabelung mit einer hohen Datenübertragunsrate und entsprechenden Geräten (Switches und Router).
- ► Für den Einsatz in einer virtuellen Umgebung achten Sie auf eine entsprechende performance-optimierte Konfiguration des virtuellen Systems.

12.9.1 Editor

I requisiti minimi si riferiscono ad un'installazione completa dell'Editor. La gestione di progetti di grandi dimensioni o di più progetti caricati in contemporanea, presuppone l'uso di un hardware dalle elevate performance. In questo caso, i requisiti minimi possono essere maggiori di quelli elencati nella tabella successiva.



Hardware	Requisito minimo	Raccomandato
CPU	Single Core con supporto SSE2.	Quad Core
Memoria RAM	Da 4 GB	8 GB
	Nota: più progetti si tengono in memoria contemporaneamente, più memoria è necessaria.	
Disco fisso	Perlomeno 4 GB di spazio di memoria libero per l'installazione completa, più spazio di memoria per i progetti.	
Risoluzione dello schermo	Extended VGA con 1024 x 768.	Sistema doppio monitor: 2 volte 1920 × 1080
Scheda grafica	64 MB di memoria dedicata Le schede con memoria condivisa possono causare perdite di prestazioni. A questo proposito, fare riferimento a quanto detto nel capitolo Requisiti di sistema quando si utilizza DirectX (A pagina: 34).	
Periferiche di input	Tastiera standard e mouse standard	
Interfaccia USB o unità DVD	Per l'installazione, a seconda del supporto di installazione.	
	L'installazione è possibile anche attraverso la rete. I file di installazione possono essere anche scaricati dall'area clienti del sito di COPA-DATA.	
Interfaccia parallela o USB	Necessaria per dongle in caso di registrazione licenza via dongle. Per il dongle di rete, necessaria solo per il server dongle.	
Connessione di rete (opzionale)	10 MBit/s con protocollo TCP/IP per il Trasporto Remoto, dongle di rete, backup di progetti su server file centrale, Editor multi-utente ecc.	1000 MBit/s

Nota: quando si lavora con progetti multi-utente complessi, tenere presenti le informazioni del capitolo Requisiti hardware.

12.9.2 Runtime

I requisiti minimi si riferiscono ad un'installazione completa del Runtime. La gestione di progetti di grandi dimensioni o di più progetti caricati in contemporanea, presuppone l'uso di un hardware dalle elevate performance. In questo caso, i requisiti minimi possono essere maggiori di quelli elencati nella tabella successiva.



Hardware	Requisito minimo	Raccomandato
CPU	Single Core con supporto SSE2.	Quad Core
Memoria RAM	Da 512 MB.	4096 MB
	Nota: progetti con grandi quantità di dati, progetti di rete, più progetti eseguiti in parallelo e progetti con ridondanza richiedono più spazio di memoria.	
Disco fisso	2 GB di spazio di memoria libero per l'installazione del Runtime, più spazio di memoria per i progetti.	
	Attenzione: se si salvano dati storici (per esempio dati d'archivio oppure dai relativi ad allarmi e/o dati CEL), sul disco fisso ci deve essere uno spazio di memoria sufficiente; oppure si deve prevedere in fase di progettazione che i dati storici vengano esportati oppure cancellati.	
Risoluzione dello schermo	VGA con 640 x 480.	
Scheda grafica	64 MB di memoria dedicata. Le schede con memoria condivisa possono causare perdite di prestazioni. A questo proposito, tenere presente le informazioni del capitolo Requisiti di sistema quando si utilizza DirectX (A pagina: 34).	
Periferiche di input	Tastiera e/o mouse. È possibile anche il funzionamento tramite touch screen. Ci sono molti tipi di keyboard personalizzabili disponibili per il touch screen. È anche possibile il funzionamento multi-touch.	
Interfaccia USB (opzionale)	 Per l'installazione. Installazione possibile anche tramite rete o altri supporti dati. 	
	Per Dongle. Possibile anche dongle di rete.	
Connessione di rete	64 kBits/s per progetti Client/Server standard.	1000 Mbit/s full duplex
(opzionale)	100 Mbit/s full duplex per ridondanza	per progetti Client/Server standard.
Connessione remota (opzionale)	Requisito minimo: Modem dial-up con 9600 bit/s.	1 MBit/s full duplex.
Impiego WAN (opzionale):	Qualsiasi connessione tramite router, per esempio via ISDN oppure DSL. Per motivi tecnici, la trasmissione dei dati nella WAN è più lenta rispetto alla rete locale. Considerare le possibili velocità di trasferimento dati della tecnologia WAN che state	



	utilizzando già durante la creazione del progetto.	
Message Control (opzionale):	I requisiti richiesti sono illustrati nel capitolo Message Control.	
Interfacce (opzionale):	Le interfacce necessarie dipendono dai requisiti del PLC e/o della connessione bus, ad esempio: interfacce seriali RS232 oppure RS422/485, ISA/PCI, ecc.	

12.9.3 Runtime con Windows Embedded Standard

I requisiti minimi si riferiscono ad un'installazione del Runtime adattata al sistema operativo Windows Embedded Standard 7 SP1 con aggiornamento piattaforma. Per progetti estesi, l'hardware deve essere più potente.

Questa tabella mostra solo i valori che differiscono dall'installazione standard. I restanti parametri corrispondono ai valori descritti nel capitolo Requisiti hardware per il Runtime (A pagina: 38).

Hardware	Requisiti minimi	Raccoman dato
Memoria RAM	> 512 MB. Nota: progetti con grandi quantità di dati, progetti di rete, più progetti eseguiti in parallelo e progetti con ridondanza richiedono più spazio di memoria.	▶ 2048 MB
Supporto di memorizzazione dati	 2 GB liberi di spazio di memoria sull'unità C:\ prima dell'installazione di .NET Framework 3.5 e 4.5 800 MB di spazio libero su disco dopo l'installazione di .NET Framework. Più lo spazio di memoria per progetti, archivi, ecc. 	▶ 80 GB

Attenzione: se si salvano dati storici (per esempio dati d'archivio oppure dai relativi ad allarmi e/o dati CEL), sul disco fisso ci deve essere uno spazio di memoria sufficiente; oppure si deve prevedere in fase di progettazione che i dati storici vengano esportati oppure cancellati.

12.9.4 Runtime per Windows CE

I requisiti minimi si riferiscono all'installazione completa del Runtime per Windows CE. Per progetti estesi, l'hardware deve essere più potente.



Hardware	Requisiti minimi	Raccomandato
CPU	Perlomeno 400 MHz	1 GHz
Memoria RAM	64 MB	1024 MB per Windows CE 6.0.
Supporto di memorizzazione dati	64 MB spazio libero di memoria. Memoria ritentiva permanentemente accessibile a scrittura per i dati di progetto.	256 MB o più di spazio di memoria libera.
Connessione di rete	Per Progetti Client/Server standard: 10 Mbit/s full duplex.	

Attenzione

A partire dalla versione 7.50, Windows CE non è più supportato. Viene installata la versione 7.20 di zenon CE. Per usarla, i file Runtime devono essere creati per la versione 7.20.

12.9.5 Web Server

I requisiti minimi si riferiscono ad un'installazione completa del Webserver. La gestione di progetti di grandi dimensioni o di più progetti caricati in contemporanea, presuppone l'uso di un hardware dalle elevate performance. In questo caso, i requisiti minimi possono essere maggiori di quelli elencati nella tabella successiva.

Hardware	Requisiti minimi	Raccomandato
CPU	Single Core con supporto SSE2.	
Memoria RAM	Da 1024 MB	
Disco fisso	256 MB spazio libero di memoria.	1 GB spazio libero di memoria.
Accesso rete:	10 Mbit/s Fullduplex.	1000 Mbit/s Fullduplex.
Connessione remota (opzionale)	Requisiti minimi Modem dial-up con 9600 bit/s.	1 MBit/s full duplex.



12.9.6 Web Client

I requisiti minimi si riferiscono ad un'installazione completa del zenon Web Client. La gestione di progetti di grandi dimensioni o di più progetti caricati in contemporanea, presuppone l'uso di un hardware dalle elevate performance. In questo caso, i requisiti minimi possono essere maggiori di quelli elencati nella tabella successiva.

Hardware	Requisito minimo	Raccomandato
CPU	Single Core con supporto SSE2.	Quad Core
Memoria RAM	Da 1024 MB	
Disco fisso	64 MB di spazio di memoria libero per zenon Web Client, più spazio di memoria per i progetti.	80 GB spazio libero di memoria.
Accesso rete:	10 Mbit/s full duplex.	1000 Mbit/s full duplex.
Connessione remota (opzionale)	Requisiti minimi Modem dial-up con 9600 bit/s.	1 MBit/s full duplex.
Scheda grafica	64 MB di memoria dedicata Le schede con memoria condivisa possono causare perdite di prestazioni. A questo proposito, tenere presente le informazioni del capitolo Requisiti di sistema quando si utilizza DirectX (A pagina: 34).	

13. Percorsi per setup e per funzionamento

Percorsi per zenon:

- ▶ Installazione
- ▶ Editor
- Runtime





Info

Molti percorsi standard possono essere visualizzati usando il comando set:

- Avviare la riga di comando (cliccare sul menù di start di Windows e digitare **cmd**).
- Digitare il comando set.
- Cliccando sul pulsante Invio verranno visualizzate le cartelle standard di Windows e zenon

Nota: poiché i percorsi assoluti possono differire in diversi sistemi operativi, in questo capitolo i percorsi vengono sempre visualizzati come variabili di ambiente Windows. Per esempio %ProgramData%, invece di C:\ProgramData.

INSTALLAZIONE

Durante l'installazione vengono impostati i percorsi per:

- zenon Editor
- Cartella SOL di zenon

Solo i percorsi per l'Editor di zenon e la cartella SQL di zenon sono personalizzabili.

Il setup richiede i diritti di amministratore; questo vale anche vale anche per la modifica dei percorsi di installazione.

REQUISITI

I percorsi di installazione dei necessari componenti software di terzi, corrispondono ai percorsi standard del relativo produttore, e non sono modificabili durante il setup.

I pacchetti software aggiuntivi installati dipendono dal tipo di installazione:

- zenon Editor
- zenon Runtime
- zenon Web Client
- zenon Logic Runtime



Requisito	Editor	Runtime	Web Client	zenon Logic Runtime
Microsoft .NET Framework 3.5 SP1	+	+	-	-
Microsoft .NET Framework 4.0	+	+	-	-
Microsoft Visual C++ 2005 Redistributables	+	+	-	+
Microsoft Visual C++ 2010 Redistributables	+	+	+	+
Microsoft Visual C++ 2012 Redistributables	+	+	+	+
Microsoft Visual C++ 2015 Redistributables	+	+	+	-
Microsoft SQL-Server 2012 SP1 Express (a partire da 7.10)	+	-	-	-
VSTA	+	+	-	-
COPA-DATA Multiple Network Protocol Driver x86/x64	+	+	-	+
CodeMeter Dongle Software x86/x64	+	+	-	-
Report Viewer 10.0 (a partire da 7.00)	+	+	+	-
VBA 7.1	+	+	+	-

ZENON

L'installazione dell'Editor di zenon imposta due percorsi:

- zenon Editor:
 - Sistemi a 32-Bit: %ProgramFiles(x86)%\COPA-DATA\zenon [Version]
 - Sistemi a 64-Bit: %ProgramFiles%\COPA-DATA\zenon [Version]

Questi percorsi possono essere personalizzati durante l'installazione.

- ► Cartella SQL di zenon:
 - A partire dalla versione 7.10: %ProgramData%\COPA-DATA\SQL2012\

Questi percorsi possono essere individualizzati manualmente attraverso zenDB.ini.

ZENON EDITOR

I seguenti percorsi sono utilizzati per impostazione predefinita nell'Editor di zenon:



Oggetto	Percorso
Workspace	%CD USERDATA%
·	Per esempio: C:\Users\Public\Documents\zenon_Projects
Progetti	%CD_USERDATA%
	Per esempio: C:\Users\Public\Documents\zenon_Projects
	Suggerimento per combinazione di tasti: selezionare progetto -> Ctrl+Alt+D
Cartella SQL del progetto:	%ProgramData%\COPA-DATA\[SQL-Ordner]\[UID]\FILES
	Suggerimento per combinazione di tasti: selezionare progetto -> Ctrl+Alt+E
project.ini	%ProgramData%\COPA-DATA\[SQL-Ordner]\[UID]\FILES\zenon\s ystem
zenon6.ini	%ProgramData%\COPA-DATA\System
	Per esempio: C:\ProgramData\COPA-DATA\System
Backup	%ProgramData%\COPA-DATA\[SQL-Ordner]\UID]\BACKUP
	%ProgramData%\COPA-DATA\[SQL-Ordner\UID]\FILES\[Projekte]
File compilati	%CD_USERDATA%\[Arbeitsbereich]\[Projekt]\RT
File esterni	%CD_USERDATA%\[Arbeitsbereich]\[Projekt]\RT\FILES\
	Nota: impostabili nel progetto mediante la proprietà Archiviazione file.
File di sistema	Cartella di sistema di Windows.

ZENON RUNTIME

I seguenti percorsi sono utilizzati per impostazione predefinita nel Runtime di zenon:

Oggetto	Percorso
Progetti	%CD_USERDATA%\[Arbeitsbereich]\[Projekt]\RT
File esterni	%CD_USERDATA%\[Arbeitsbereich]\[Projekt]\RT\FILES\
Archivi esportati, Lista	%CD_USERDATA%\[Arbeitsbereich]\[Projekt]\Export
Eventi Cronologica e Lista di informazione allarmi	Nota: viene creato al momento della prima esportazione.
File di sistema	Cartella di sistema di Windows.

ZENON LOGIC

I percorsi per zenon Logic vengono creati in modo analogo a quelli per zenon.

14. zenon per Windows CE

COMPONENTI

La versione CE di zenon è composta dai seguenti componenti:

- ▶ zenon CE Runtime
- ▶ DLL di lingua
- ▶ DLL di rete
- ▶ DLL driver
- ▶ zenon6.ini
- Servizio di trasporto



Attenzione

A partire dalla versione 7.50, Windows CE non è più supportato. Viene installata la versione 7.20 di zenon CE. Per usarla, i file Runtime devono essere creati per la versione 7.20.

REQUISITI PER L'INSTALLAZIONE DEL RUNTIME SU SISTEMI REMOTI.

- ▶ Il servizio di trasporto (**SysSrvCE.exe**) di zenon deve essere installato e avviato sul terminale CE, oppure deve esistere una connessione ActiveSync. Per informazioni sull'installazione manuale mediante supporti dati, vedere il capitolo Installazione manuale e update del Runtime (A pagina: 57).
- ▶ Il terminale CE al quale i nuovi dati devono essere trasferiti, deve avere almeno 8 megabyte di memoria "Program Memory" libera per garantire il corretto trasporto. Questo parametro può essere adeguato usando **Proprietà del sistema** del pannello di controllo.

PROCEDURA

Per i dettagli su compatibilità, installazione e aggiornamento, vedere i capitoli:

- ▶ Versioni CE / Supporto processore (A pagina: 48)
- Aggiornare Windows CE Runtime (A pagina: 49)



Info

Se, all'avvio di **zenonrce.exe**, viene eseguito anche il file **syssrvce.exe**, è sempre possibile stabilire una connessione TCP. Pertanto è necessario solamente un file per la funzionalità Autostart. Tuttavia, deve essere configurato un ritardo fra i due start.

Causa: quando viene avviato **zenonRCE**, si avvia automaticamente anche **zenLogSrvCE**. Ma anche all'avvio di **syssrvce**, il sistema avvia automaticamente **zenLogSrvCE**.

Se, dunque, **zenonRCE** e **syssrvce** vengono avviati nel giro di poco tempo, entrambi cercheranno di avviare **zenLogSrvCE**. Questo porta ad un messaggio di errore.

Soluzione: per evitare il verificarsi di questo problema, configurare un ritardo fra lo start di **zenonRCE** e quello di **zenLogSrvCE**. Per farlo, è possibile impostare l'inserimento **STARTDELAY**= del file **zenon6.ini**. Così il Runtime (**zenLogSrvCE**) verrà avviato più tardi. Il sistema, poi, verifica se **zenLogSrvCE** è già in esecuzione, e non tenterà più di avviarlo.



14.1 Versioni CE / Supporto processore

Nella versione 7.20 di zenon vengono supportate le seguenti versioni di Windows CE ed i seguenti processori:

Processori:

- ▶ x86
- ► ARM V4/V5

Versioni CE:

- ► CE 6.00
- Windows Embedded Compact 7

Le informazioni relative alle versioni CE e ai processori supportati da precedenti versioni di zenon sono disponibili nella rispettiva documentazione; o contattare il supporto tecnico di COPA-DATA.



A partire dalla versione 7.50, Windows CE non è più supportato. Viene installata la versione 7.20 di zenon CE. Per usarla, i file Runtime devono essere creati per la versione 7.20.

14.2 File di sistema

Il Runtime per Windows CE richiede la presenza di vari file di sistema.. Se manca uno di questi file, il sistema operativo genera un messaggio di errore quando si avvia il Runtime, che avverte l'utente che non è stato possibile trovare uno o più componenti. I seguenti file di sistema sono obbligatori:



File:	Descrizione
mfc90u.dll	Necessario per il Runtime Se questo file non esiste, viene visualizzato un messaggio di errore al momento dell'avvio.
msvcr90.dll	Necessario per il Runtime Se questo file non esiste, viene visualizzato un messaggio di errore al momento dell'avvio.
atl90.dll	Non necessario per l'avvio del Runtime, ma per l'utilizzo di un driver con connessione di rete, o per usare zenon in rete. Se questo file non esiste, il dispositivo non potrà fungere da client, oppure non funzioneranno le connessioni driver TCP/IP.
IMGDECMP.dll	Non necessario per l'avvio del Runtime, ma per la visualizzazione della trasparenza, se alpha blending non è integrato nel sistema operativo. Un'animazione non è possibile con file GIF in Windows CE
VBSCRIPT.dll + JSCRIPT.dll	Non necessario per l'avvio del Runtime. Questo file è necessario per il PCE (Process Control Engine)

Alcuni di questi file di sistema vengono installati al momento dell'installazione di zenon per CE e possono essere trasferiti al dispositivo CE usando, per esempio, il tool **UpdateCE**. Tutti questi file di sistema dovrebbero essere integrati già dal produttore nell'immagine del sistema operativo del dispositivo CE.



Per i produttori di immagini del sistema operativo Windows CE:

le versioni CE precedenti alla 6.0 richiedono il file **toolhelp.dll**. Per assicurarsi che il file sia presente sul dispositivo CE e che il "Toolhelp" sia disponibile anche in SDK, attivare in **Platform Manager** il seguente inserimento:

Core OS -> Display Based Device -> Core OS Services -> Debugging Tools -> Toolhelp API. In questo modo, Toolhelp.dll sarà incluso nell'immagine.

Suggerimento: utilizzare sempre il service pack più recente del **Platform Builder**.

Nota: il file **toolhelp.dll** non è richiesto per Windows CE 6, e non deve essere utilizzato con CE 6.

14.3 Aggiornare Windows CE Runtime

Per aggiornare il Runtime di Windows CE:

- Assicurarsi che il servizio di trasporto di zenon (SysSrvCE.exe) sia in esecuzione sul dispositivo CF.
- Assicurarsi di non aver stabilito una connessione remota con il dispositivo tramite l'Editor di zenon
- ▶ Nel menù Extras di zenon selezionare il comando Aggiorna Runtime Windows CE.



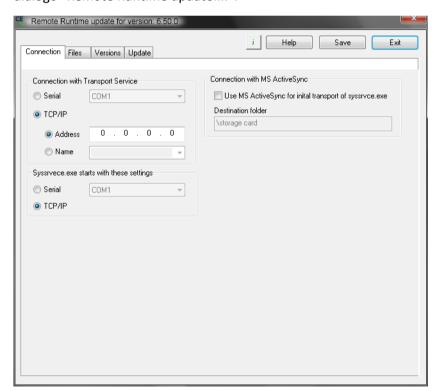
Si apre la finestra di dialogo che consente di trasferire i file Runtime.

- ► Configurare la connessione.
- ▶ Definire i file che si vuole trasferire.
- ▶ Selezionare la versione.
- Avviare l'update.

Nota: quando si trasferiscono i file Runtime/si installa il Runtime per la prima volta, osservare le informazioni contenute nel capitolo **Installazione manuale e update del Runtime**. (A pagina: 57)

CONFIGURARE LA CONNESSIONE.

La connessione con il dispositivo Windows CE si configura nella scheda **Connection** della finestra di dialogo "Remote Runtime update....".

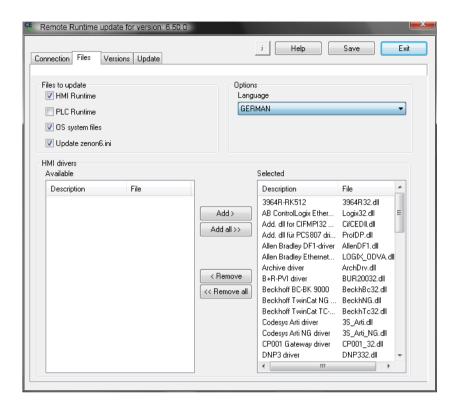




Parametro	Descrizione
Serial	Impostazione della connessione seriale con il dispositivo Windows CE; si deve selezionare il numero di porta.
TCP/IP	Impostazioni della connessione TCP/IP con il dispositivo Windows CE.
Adress	Indirizzo IP.
Name	Nome computer.
Syssrvce.exe starts with these settings	Impostazioni per lo start di syssrvce.exe.
Serial	Attivo: viene selezionata la connessione seriale; si deve selezionare il numero di porta.
TCP/IP	Attiva: viene selezionata la connessione TCP/IP.
Connection with MS ActiveSync	Impostazioni per la connessione via MS ActiveSync.
Use MS ActiveSync for initial transport of syssrvce.exe	Attivo: il file syssrvce.exe viene trasferito durante il primo trasporto via MS ActiveSync.
Destination folder	Cartella di destinazione.
Help	Apre la guida online.
Save	Salva tutte le modifiche.
Exit	Chiude il tool di update CE e offre prima la possibilità di salvare tutte le modifiche non ancora salvate.

DEFINIZIONE DEI FILE CHE DEVONO ESSERE TRASFERITI





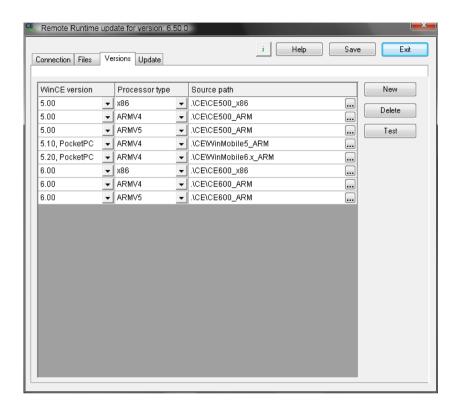


Parametro	Descrizione
Files to update	File che devono essere trasferiti.
HMI Runtime	Attiva: trasferisce i file di zenon al dispositivo di destinazione.
	Default: attiva
PLC Runtime	Attiva: trasferisce i file di zenon al dispositivo di destinazione.
	Default: inattivo
OS system files	Attiva: trasferisce i file necessari del sistema operativo.
	Default: attiva
Update zenon6.ini	Trasferisce il file zenon6.ini al dispositivo di destinazione. Questo modifica anche le informazioni sulla licenza sul dispositivo di destinazione.
Options	
Language	Lingua desiderata sul sistema di destinazione.
	Default: Inglese
HMI drivers	Selezione dei driver HMI da trasferire.
Available	Lista dei driver disponibili.
Selected	Lista dei driver selezionati.
Add	Aggiunge i driver selezionati alla lista dei driver scelti.
Add all	Aggiunge tutti i driver alla lista dei driver selezionati.
Remove	Cancella i driver selezionati dalla lista dei driver scelti e li sposta nella finestra di quelli disponibili.
Remove all	Cancella tutti i driver dalla lista dei driver scelti e li sposta nella finestra di quelli disponibili.
Help	Apre la guida online.
Save	Salva tutte le modifiche.
Exit	Chiude il tool di aggiornamento CE e offre prima la possibilità di salvare tutte le modifiche non ancora salvate.

SELEZIONE DELLA VERSIONE

Nella scheda **Versions**, selezionare la versione appropriata se non è stata rilevata automaticamente.







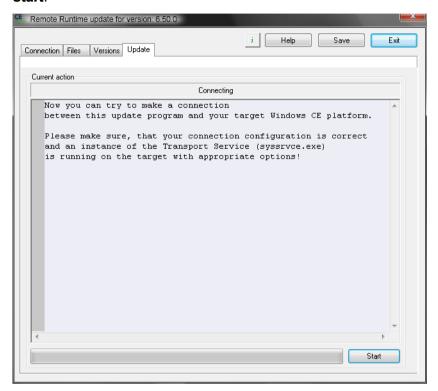
Parametro	Descrizione
WinCE version	Versione del sistema operativo Windows CE sul dispositivo di destinazione. Cliccando sul pulsante si apre il menù a tendina per selezionare.
Processor type	Tipo di processore del dispositivo.
Source path	Percorso della cartella che contiene i file. Cliccando sul pulsante si apre la finestra di dialogo che consente di selezionare una cartella.
New	Aggiunge un nuovo inserimento vuoto alla lista.
Delete	Cancella l'inserimento selezionato dalla lista dopo una richiesta di conferma.
Test	Verifica la correttezza delle impostazioni.
Help	Apre la guida online.
Save	Salva tutte le modifiche.
Exit	Chiude il tool di update CE e offre prima la possibilità di salvare tutte le modifiche non ancora salvate.

AVVIA UPDATE

Per stabilire una connessione:

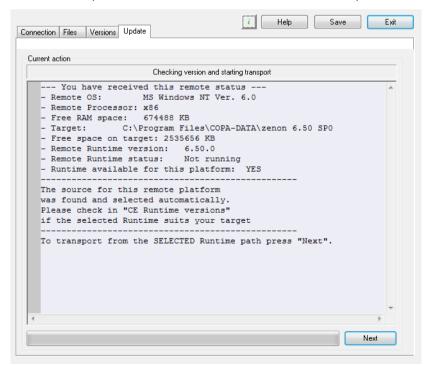


1. Nella scheda **Update** della finestra di dialogo "Remote Runtime update....", cliccare sul pulsante **Start**



Il sistema verifica i dati per il trasferimento che verranno poi visualizzati in in una finestra.

2. Cliccando sul pulsante **Next**, si avvia il trasferimento al dispositivo di destinazione.





Se il trasferimento non può essere avviato per la mancanza di file, sarà visualizzato un messaggio di errore contenente la lista dei file mancanti:



Se viene visualizzato il messaggio di errore **The current update was not completed**, l'update è stato interrotto, oppure eseguito non correttamente.



Se zenVNCServer.exe deve essere sostituito da un aggiornamento, verrà terminato e riavviato dopo l'aggiornamento. A questo scopo, il file **zenVNCSrvCE.exe** in UpdateCE.ini nella sezione [SOURCES_FILES_GENERAL] deve essere configurato con le seguenti voci (esistenti per impostazione predefinita):

- ▶ zenVNCSrvCE.exe
- zenVNCCfgCE.exe

14.4 Installazione manuale e update del Runtime.

L'installazione e l'aggiornamento sono possibili anche senza trasporto remoto e ActiveSync. Procedura: i file necessari vengono copiati manualmente su una scheda di memoria per il dispositivo CE. Per farlo, è necessario conoscere la versione CE e il tipo di processore del dispositivo CE.



I seguenti file devono essere copiati dalla cartella appropriata per la piattaforma corretta sulla scheda di memoria destinata al dispositivo CE:

- zenonRCE.exe (Runtime)
- ► LogCliLibCE.dll (diagnosi DLL)
- zenon6.ini (file di configurazione)
- ► Cd_tooCE.dll (Help DLL)
- ► ZenNetSrvCE.dll (Rete)
- ► CDHelper.dll (Help DLL)
- ► Una delle seguenti DDL lingua: RChineCE.dll, RCzechCE.dll, REngliCE.dll, RFrancCE.dll, RGermaCE.dll, RItaliCE.dll, RRussiCE.dll, RSpaniCE.dll (la lingua selezionata è definita nel file zenon6.ini.)
- **syssrvce.exe** (servizio di trasporto eDiagnosis Server)
- ▶ **ati90.dii** (file di sistema, possibilmente incluso nel sistema operativo)
- ▶ **mfc90u.dll** (file di sistema, possibilmente incluso nel sistema operativo)
- ▶ msvcr90.dll (file di sistema, possibilmente incluso nel sistema operativo)

Altri file, come ad esempio i driver, oppure il software desktop remoto (zenVNCCfgCE.exe e zenVNCSrvCE.exe), sono facoltativi.

14.5 Pocket PC (PDA - PC palmare)

I Pocket PC non sono più supportati a partire dalla versione 7.

14.6 Gestione degli errori

Possibili errori:

Errore	Possibile soluzione
Errore di connessione durante l'aggiornamento via COM.	Windows Explorer aperto ritarda il tempo di accesso. Chiudendo Explorer si risolve il problema.
Il servizio di trasporto non funziona.	Controllare la versione del servizio di trasporto. Almeno: versione 5.21 SP3 o successive; oppure versione 5.50 SP1 o successive.
Il programma di aggiornamento Runtime non può essere collegato.	Terminare le connessioni aperte dell'Editor al servizio di trasporto CE.



15. zenon Logic Runtime per Windows CE

L'installazione del Runtime di zenon Logic (PLC Runtime) su un sistema Windows CE è simile all'installazione del Runtime per Windows CE (A pagina: 46).

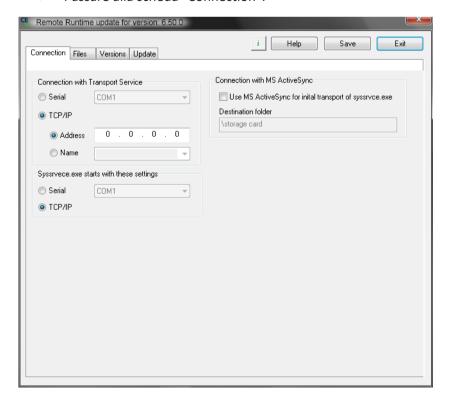
Requisito: Servizio di trasporto eseguibile con CE.

Il Runtime di zenon Logic per Windows CE è composto dai seguenti componenti:

- ▶ zenon Logic Runtime
- ▶ DLL di lingua
- zenon Logic IO driver
- ▶ zenon6.ini

INSTALLAZIONE

- Nel menù "Extras" di zenon selezionare Aggiorna Runtime Windows CE.
 Si apre la finestra di dialogo che consente di trasferire i file Runtime.
- ▶ Nella finestra "Files" attivare la casella di controllo "PLC Runtime", per copiare i file necessari per zenon Logic nel percorso di esecuzione CE.
- ▶ Passare alla scheda "Connection".





- ▶ Definire il collegamento al dispositivo Windows CE. Specificare l'indirizzo IP o la porta seriale.
- ▶ Se si desidera trasferire anche il file zenon6.ini, selezionare Update zenon6.ini. Questo modifica anche le informazioni sulla licenza sul dispositivo di destinazione.
- ► Nella finestra "CE Runtime Versions" selezionare la versione appropriata se non è stata rilevata automaticamente.

UPDATE

Funziona come descritto nel capitolo Aggiornare Windows CE Runtime (A pagina: 49).

Attenzione: l'opzione "PLC Runtime" deve essere attivata nella scheda "Files"!



Con Windows CE 6.0 vengono sempre trasferiti i file MFC.

16. zenon Web Server

Um den zenon Web Server oder zenon Web Server Pro zu installieren:

- 1. Aktivieren Sie die WWW-Dienste auf dem Rechner.
 - Der Ordner C:\inetpub\www.root muss existieren.
- 2. Starten Sie das zenon Installationsmedium. Der Startbildschirm wird angezeigt.
 - Falls Sie Autostart von Medien deaktiviert haben, führen Sie die Datei **start.exe** auf dem Installationsmedium aus.
- Wählen Sie zenon Web Server aus.
 Entsprechend der Version des Betriebssystems wird automatisch die 32-Bit oder 64-Bit Version des zenon Web Servers installiert.
- 4. Folgen Sie der Installationsroutine.
- 5. Starten Sie den Computer neu.

Die Setup-Dateien für den Web Client finden Sie nach der Installation in Unterverzeichnissen des zenon Web Server-Installationspfades (xxx steht für die jeweilige Version von zenon), z. B.: C:/Programme (x86)/COPA-DATA/zenonWebserver/zenon/controlversions/Versionxxx/zenon_Webclient_Setup_GERMAN.EXE oder

C:/Inetpub/wwwroot/zenon/controlversions/Versionxxx/zenon_Webclient_Se
tup GERMAN.EXE



Es werden auch die Beispiel-Webseiten (index*.html und init*.html) mitinstalliert. Diese sind im Unterverzeichnis zenon des zenon Web Server-Installationspfades zu finden, z. B.:

C:/Programme/zenonWebserver/zenon/index.htm
oder

C:/Inetpub/wwwroot/zenon/index.html



Der Dienst für den **zenon Web Server** wird nur in der lizenzierten Version automatisch gestartet. Im Demo-Modus muss der zenon Web Server manuell über die zenon Web Server-Konsole in den Systemeigenschaften gestartet werden.

ULTERIORI INFORMAZIONI

I dettagli su zenon Web Server si trovano nel manuale zenon Web Server e Web Server Pro; quelli sulla registrazione licenza nel manuale Registrazione licenza.

17. zenon Web Client

zenon Web Client consiste principalmente in un controllo ActiveX che visualizza le informazioni in un browser. La visualizzazione è 1:1 come in un **zenon Runtime Client**. La connessione al **Runtime Server** avviene tramite **zenon Web Server** via comunicazione TCP/IP.

I file di setup per zenon Web Client possono essere trovati dopo l'installazione nelle sottodirectory del percorso di installazione di zenon Web Server (xxx sta per la rispettiva versione di zenon), per esempio: %Programfiles%/COPA-DATA/zenon Web

Server/zenon/controlversions/Versionxxx/zenon_Webclient_Setup_GERMAN.E XE

oder

C:/Inetpub/wwwroot/zenon/controlversions/Versionxxx/zenon_Webclient_Se
tup ITALIAN.EXE

Tutti i setup di zenon Logic Web Client sono con firma digitale e possono essere facilmente scaricati da Internet.

Con COPA-DATA Web Client viene installato anche **zenon Web Client Starter**. Questo consente di aprire zenon Web Client da qualsiasi browser.



zenon Web Client invia file di errore e LOG. Il Diagnosis Server necessario per l'analisi di questi file è installato durante un'installazione di zenon Web Client.



18. Aggiornamenti (Build Setups)

AGGIORNAMENTI (BUILD SETUP)

Un aggiornamento viene installato mediante l'installazione esistente e sostituisce solo i file modificati con nuove versioni. Tutti i progetti e le impostazioni individuali vengono mantenuti. La qualità di build setup non è mai garantita al 100%. Vengono testate solamente le correzioni errori (bug fixes) contenute. Se durante la risoluzione dei problemi si verificano effetti collaterali indesiderati, questi potrebbero non essere rilevati durante i test. COPA-DATA raccomanda quindi sempre l'uso di service pack. Questi ultimi, infatti, sono sempre soggetti ad un approfondito test di qualità.

Note:

- Build Setup possono essere installati solo localmente. Un'installazione sui percorsi di rete (UNC) non è possibile.
- zenon Web Client: per poter installare un update di zenon Web Client, si deve prima disinstallare zenon Web Client.

PASSAGGIO AD UNA NUOVA VERSIONE

Se si desidera installare una nuova versione di zenon, avviare la routine di installazione. La nuova versione viene installata parallelamente alla versione già esistente. Tutti i progetti e le impostazioni individuali vengono mantenuti. I progetti non vengono convertiti nella nuova versione durante l'installazione. La prima volta che lo si apre nell'Editor, il progetto viene convertito nella nuova versione. Una finestra di dialogo informa l'utente che il processo di conversione è in corso. Viene eseguito un backup automatico della vecchia versione. Se si desidera utilizzare solo la versione più recente, disinstallare la versione precedente utilizzando la routine corrispondente del Pannello di controllo di Windows.



Se un'installazione comporta la modifica del server SQL (per es. update da zenon 7.00 a zenon 7.10 o superiore), prima della installazione si deve eseguire un backup di tutti i progetti o del workspace. Questo backup viene caricato dopo l'installazione. Per ulteriori dettagli sulla procedura, vedere anche la sezione **Progetti-Multiuser/Update con cambio del server SQL**.

Se si desidera eseguire più versioni di zenon in parallelo, è possibile gestirle utilizzando lo **Startup Tool**. È possibile avviare una sola versione alla volta. Si definisce quale versione viene avviata nello **Startup Tool**, che esegue automaticamente tutte le impostazioni necessarie all' avvio. Per i dettagli vedere il capitolo **Startup Tool**.



Info

Le nuove versioni portano sempre cambiamenti strutturali. Durante l' installazione, i progetti e le impostazioni vengono mantenuti. La prima volta che si apre l'Editor, i progetti vengono convertiti nella nuova versione e viene creata una copia di backup automatico della vecchia versione.

I progetti convertiti non possono più essere modificati nelle versioni precedenti. A partire dalla versione 6.2, l'Editor può creare dei progetti per diverse versioni del Runtime.

Note importanti sulla conversione dei progetti si trovano nel testo di revisione. Questo viene fornito sul supporto di installazione ed è disponibile anche online.

PROGETTI MULTI-USER

Per essere sicuri di poter passare a una nuova versione di zenon in progetti multi-utente senza perdere dati:

- 1. Eseguire su tutti i client il check-in di tutti gli elementi rilasciati -> Accetta modifiche. Non ci deve essere niente "checked out". Questo vale per tutti i progetti.
- 2. Installare la nuova versione di zenon sul computer server.
- 3. Convertire tutti i progetti server nella nuova versione: per farlo, caricare una volta tutti i progetti nell'Editor del computer server.
- 4. Installare la nuova versione di zenon sui computer client.
- 5. Caricare i progetti sui client ed eseguire di nuovo il check out.

AGGIORNAMENTO CON MODIFICA DI SQL SERVER

Se un'installazione comporta il cambio del server SQL (per es. da zenon 6.51 a zenon 9.2), sono necessari ulteriori passaggi. Questi passi vengono eseguiti:

- ▶ Dopo che si è eseguito il check in di tutti i progetti.
- ▶ Prima di installare la nuova versione.

Aggiornamento con modifica di SQL Server

- 1. Check in su tutti i client di tutti gli elementi che sono "checked out" -> Applica modifiche.
- 2. Aprire l'Editor nella versione originale sul server multi-utente.
- 3. Creare backup di tutti i progetti che si desidera modificare o aprire con la nuova versione.
 - O come backup di singoli progetti.
 - Oppure come backup di un intero workspace.
- 4. Installare la nuova versione sul server.



- 5. Convertire tutti i progetti server nella nuova versione caricando i backup del progetto creati in precedenza una volta nell'Editor.
- 6. Installare l'aggiornamento su ogni client.
- 7. Trasferire i progetti dal server multi-utente ai client (Tenere presente il nuovo nome dell'istanza SQL)
- 8. I progetti sono convertiti, sincronizzati e pronti all'uso.

Attenzione: assicuratevi che le impostazioni del firewall consentano il traffico dati dal server multi-utente ai client e viceversa.

19. FAQ

Gli errori durante l'installazione si verificano principalmente quando la sostituzione o la creazione di file viene impedita da antivirus o da installazioni esistenti. Qui trovate le cause più comuni degli errori di installazione e la loro soluzione.

ZENON

Problema	Soluzione
L'installazione viene interrotta. Tipico messaggio di errore: Error 1304. Error writing to file	Disattivare lo scanner antivirus, chiudere i programmi non necessari.
Progetti demo sono stati installati, ma non vengono visualizzati. Non è possibile creare nuovi progetti.	Controllate il nome computer. Questo: Può avere la lunghezza massima di 15 caratteri Deve rispettare le convenzioni del nome di computer NetBIOS.
Messaggio di errore che indica che non è stato possibile avviare un servizio.	Riavviare prima il computer.Quindi riavviare il setup zenon



SERVER SQL.

GENERALE

Problema	Soluzione
Il processo di installazione non può essere completato perché la password non soddisfa i requisiti.	Se, con l'opzione Local Security Policy di Windows, si imposta la lunghezza minima della password, che di default è 8, su un valore superiore a 10, l'installazione del server SQL non riesce perché la password di zenon SQL è composta da 10 caratteri.

20. Supporto tecnico

BASIC SUPPORT

Se avete bisogno di aiuto nella fase di installazione, il nostro staff di consulenza tecnica sarà lieto di aiutarvi.

Gli utenti con supporto di base possono contattare la hotline al seguente indirizzo E-Mail support@copadata.com.

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21.1 zenon Open Source licences for several features

- ► The SNMP driver (SNMPNG32.exe) uses OpenSSL and NetSNMP
- The LicenseManager uses the JSON and the Zlib
- ► The OPC UA Process Gateway (AccessOPCUA.dll) and the OPC UA driver (OPCUA32.exe) use OpenSSL
- ► The Message Control uses MIMEMail and OpenSSL (zenon32.dll)
- ► The HTML Web Engine –Web Application uses ANTLRv3, Bootstrap, jQuery UI, jQuery, Json.NET, NLog, Owin, jQuery.SVG, WebGrease
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21.1.3 Bootstrap, jQuery UI, jQuery, Newtonsoft.Json

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21.1.5 Castle.Core 4.2.1

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21.1.9 GSM Codec 06.10

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21.1.13 ini Parser

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21.1.14 jQuery.SVG

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21.1.19 Mono.AddIns 1.3

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Based on the Open Source API proposed by Ross Bencina

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21.1.32 Toggle Switch Control Library

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21.1.33 WebGrease, Owin

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21.1.35 zenon Logic driver for Ethernet POWERLINK based on stackfrom openPOWERLINK

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zlib.h -- interface of the 'zlib' general purpose compression library version 1.2.11, January 15th, 2017

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Jean-loup Gailly: jloup@gzip.org

Mark Adler: madler@alumni.caltech.edu

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files http://tools.ietf.org/html/rfc1950 (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

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The Original Code can be found here: https://github.com/errepi/ude.

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Version 3, 29 June 2007

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21.3 zenon Logic Workbench Open Source Licenses

- ► The zenon Logic Workbench uses the following libraries:
 - CxImage Library (A pagina: 141)
 - Gong-wpf-dragdrop Library (A pagina: 142)
 - Jasper Library (A pagina: 143)
 - JPEG Library (A pagina: 144)
 - Libpng Library (A pagina: 151)
 - Math.NET Numerics Library (A pagina: 153)
 - MNG Library (A pagina: 153)
 - PCap Library (A pagina: 154)
 - SQLite Library (A pagina: 155)
 - Tiff Library (A pagina: 155)
 - Tinyxml Library (A pagina: 156)
 - Zlib Library (A pagina: 156)

21.3.1 Cxlmage Library

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CxImage version 6.0.0 02/Feb/2008

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21.3.2 Gong-wpf-dragdrop Library

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21.3.3 Jasper Library

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21.3.4 JPEG Library

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This software is the work of Tom Lane, Philip Gladstone, Jim Boucher, Lee Crocker, Julian Minguillon, Luis Ortiz, George Phillips, Davide Rossi, Guido Vollbeding, Ge' Weijers, and other members of the Independent JPEG Group.

IJG is not affiliated with the official ISO JPEG standards committee.

DOCUMENTATION ROADMAP

This file contains the following sections:

Section	Description
OVERVIEW	General description of JPEG and the IJG software.
LEGAL ISSUES	Copyright, lack of warranty, terms of distribution.
REFERENCES	Where to learn more about JPEG.
ARCHIVE LOCATIONS	Where to find newer versions of this software.
RELATED SOFTWARE	Other stuff you should get.
FILE FORMAT WARS	Software *not* to get.
TO DO	Plans for future IJG releases.

Other documentation files in the distribution are:

User documentation:



Documentation	Description
install.doc	How to configure and install the IJG software.
usage.doc	Usage instructions for cjpeg, djpeg, jpegtran, rdjpgcom, and wrjpgcom.
*.1	Unix-style man pages for programs (same info as usage.doc).
wizard.doc	Advanced usage instructions for JPEG wizards only.
change.log	Version to version change highlights.

Programmer and internal documentation:

Documentation	Description
libjpeg.doc	How to use the JPEG library in your own programs.
example.c	Sample code for calling the JPEG library.
structure.doc	Overview of the JPEG library's internal structure.
filelist.doc	Road map of IJG files.
coderules.doc	Coding style rules - please read if you contribute code.

Please read at least the files install.doc and usage.doc. Useful information can also be found in the JPEG FAQ (Frequently Asked Questions) article. See ARCHIVE LOCATIONS below to find out where to obtain the FAQ article.

If you want to understand how the JPEG code works, we suggest reading one or more of the REFERENCES, then looking at the documentation files (in roughly the order listed) before diving into the code.

OVERVIEW

This package contains C software to implement JPEG image compression and decompression. JPEG (pronounced "jay-peg") is a standardized compression method for full-color and gray-scale images. JPEG is intended for compressing "real-world" scenes; line drawings, cartoons and other non-realistic images are not its strong suit. JPEG is lossy, meaning that the output image is not exactly identical to the input image. Hence you must not use JPEG if you have to have identical output bits. However, on typical photographic images, very good compression levels can be obtained with no visible change, and remarkably high compression levels are possible if you can tolerate a low-quality image. For more details, see the references, or just experiment with various compression settings.

This software implements JPEG baseline, extended-sequential, and progressive compression processes. Provision is made for supporting all variants of these processes, although some uncommon parameter settings aren't implemented yet. For legal reasons, we are not distributing code for the arithmetic-coding variants of JPEG; see LEGAL ISSUES. We have made no provision for supporting the hierarchical or lossless processes defined in the standard.



We provide a set of library routines for reading and writing JPEG image files, plus two sample applications "cjpeg" and "djpeg", which use the library to perform conversion between JPEG and some other popular image file formats. The library is intended to be reused in other applications.

In order to support file conversion and viewing software, we have included considerable functionality beyond the bare JPEG coding/decoding capability; for example, the color quantization modules are not strictly part of JPEG decoding, but they are essential for output to colormapped file formats or colormapped displays. These extra functions can be compiled out of the library if not required for a particular application. We have also included "jpegtran", a utility for lossless transcoding between different JPEG processes, and "rdjpgcom" and "wrjpgcom", two simple applications for inserting and extracting textual comments in JFIF files.

The emphasis in designing this software has been on achieving portability and flexibility, while also making it fast enough to be useful. In particular, the software is not intended to be read as a tutorial on JPEG. (See the REFERENCES section for introductory material.) Rather, it is intended to be reliable, portable, industrial-strength code. We do not claim to have achieved that goal in every aspect of the software, but we strive for it.

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The Unix configuration script "configure" was produced with GNU Autoconf. It is copyright by the Free Software Foundation but is freely distributable. The same holds for its supporting scripts (config.guess, config.sub, Itconfig, Itmain.sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.) So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

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REFERENCES

We highly recommend reading one or more of these references before trying to understand the innards of the JPEG software.

The best short technical introduction to the JPEG compression algorithm is:

Wallace, Gregory K. "The JPEG Still Picture Compression Standard",

Communications of the ACM, April 1991 (vol. 34 no. 4), pp. 30-44.



(Adjacent articles in that issue discuss MPEG motion picture compression, applications of JPEG, and related topics.) If you don't have the CACM issue handy, a PostScript file containing a revised version of Wallace's article is available at ftp://ftp.uu.net/graphics/jpeg/wallace.ps.gz. The file (actually a preprint for an article that appeared in IEEE Trans. Consumer Electronics) omits the sample images that appeared in CACM, but it includes corrections and some added material. Note: the Wallace article is copyright ACM and IEEE, and it may not be used for commercial purposes.

A somewhat less technical, more leisurely introduction to JPEG can be found in "The Data Compression Book" by Mark Nelson and Jean-loup Gailly, published by M&T Books (New York), 2nd ed. 1996, ISBN 1-55851-434-1. This book provides good explanations and example C code for a multitude of compression methods including JPEG. It is an excellent source if you are comfortable reading C code but don't know much about data compression in general. The book's JPEG sample code is far from industrial-strength, but when you are ready to look at a full implementation, you've got one here...

The best full description of JPEG is the textbook "JPEG Still Image Data Compression Standard" by William B. Pennebaker and Joan L. Mitchell, published by Van Nostrand Reinhold, 1993, ISBN 0-442-01272-1. Price US\$59.95, 638 pp. The book includes the complete text of the ISO JPEG standards (DIS 10918-1 and draft DIS 10918-2). This is by far the most complete exposition of JPEG in existence, and we highly recommend it.

The JPEG standard itself is not available electronically; you must order a paper copy through ISO or ITU. (Unless you feel a need to own a certified official copy, we recommend buying the Pennebaker and Mitchell book instead; it's much cheaper and includes a great deal of useful explanatory material.) In the USA, copies of the standard may be ordered from ANSI Sales at (212) 642-4900, or from Global Engineering Documents at (800) 854-7179. (ANSI doesn't take credit card orders, but Global does.) It's not cheap: as of 1992, ANSI was charging \$95 for Part 1 and \$47 for Part 2, plus 7% shipping/handling. The standard is divided into two parts, Part 1 being the actual specification, while Part 2 covers compliance testing methods. Part 1 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 1: Requirements and guidelines" and has document numbers ISO/IEC IS 10918-1, ITU-T T.81. Part 2 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 2: Compliance testing" and has document numbers ISO/IEC IS 10918-2, ITU-T T.83.

Some extensions to the original JPEG standard are defined in JPEG Part 3, a newer ISO standard numbered ISO/IEC IS 10918-3 and ITU-T T.84. IJG currently does not support any Part 3 extensions.

The JPEG standard does not specify all details of an interchangeable file format. For the omitted details we follow the "JFIF" conventions, revision 1.02. A copy of the JFIF spec is available from:

Literature Department

C-Cube Microsystems, Inc.

1778 McCarthy Blvd.

Milpitas, CA 95035

phone (408) 944-6300, fax (408) 944-6314



A PostScript version of this document is available by FTP at

ftp://ftp.uu.net/graphics/jpeg/jfif.ps.gz. There is also a plain text version at ftp://ftp.uu.net/graphics/jpeg/jfif.txt.gz, but it is missing the figures. The TIFF 6.0 file format specification can be obtained by FTP from ftp://ftp.sgi.com/graphics/tiff/TIFF6.ps.gz. The JPEG incorporation scheme found in the TIFF 6.0 spec of 3-June-92 has a number of serious problems. IJG does not recommend use of the TIFF 6.0 design (TIFF Compression tag 6). Instead, we recommend the JPEG design proposed by TIFF Technical Note #2

Straton3dPartySoftware-(Compression tag 7). Copies of this Note can be obtained from ftp.sgi.com or from ftp://ftp.uu.net/graphics/jpeg/. It is expected that the next revision of the TIFF spec will replace the 6.0 JPEG design with the Note's design. Although IJG's own code does not support TIFF/JPEG, the free libtiff library uses our library to implement TIFF/JPEG per the Note. libtiff is available from ftp://ftp.sgi.com/graphics/tiff/.

ARCHIVE LOCATIONS

The "official" archive site for this software is ftp.uu.net (Internet address 192.48.96.9). The most recent released version can always be found there in directory graphics/jpeg. This particular version will be archived as ftp://ftp.uu.net/graphics/jpeg/jpegsrc.v6b.tar.gz. If you don't have direct Internet access, UUNET's archives are also available via UUCP; contact help@uunet.uu.net for information on retrieving files that way.

Numerous Internet sites maintain copies of the UUNET files. However, only ftp.uu.net is guaranteed to have the latest official version.

You can also obtain this software in DOS-compatible "zip" archive format from the SimTel archives (ftp://ftp.simtel.net/pub/simtelnet/msdos/graphics/), or on CompuServe in the Graphics Support forum (GO CIS:GRAPHSUP), library 12 "JPEG Tools". Again, these versions may sometimes lag behind the ftp.uu.net release.

The JPEG FAQ (Frequently Asked Questions) article is a useful source of general information about JPEG. It is updated constantly and therefore is not included in this distribution. The FAQ is posted every two weeks to Usenet newsgroups comp.graphics.misc, news.answers, and other groups. It is available on the World Wide Web at http://www.faqs.org/faqs/jpeg-faq/ and other news.answers archive sites, including the official news.answersarchive at rtfm.mit.edu: ftp://rtfm.mit.edu/pub/usenet/news.answers/jpeg-faq/. If you don't have Web or FTP access, send e-mail to mail-server@rtfm.mit.edu with body

send usenet/news.answers/jpeg-faq/part1

send usenet/news.answers/jpeg-faq/part2

RELATED SOFTWARE

Numerous viewing and image manipulation programs now support JPEG. (Quite a few of them use this library to do so.) The JPEG FAQ described above lists some of the more popular free and shareware viewers, and tells where to obtain them on Internet.

If you are on a Unix machine, we highly recommend Jef Poskanzer's free PBMPLUS software, which provides many useful operations on PPM-format image files. In particular, it can convert PPM images to and from a wide range of other formats, thus making cjpeg/djpeg considerably



more useful. The latest version is distributed by the NetPBM group, and is available from numerous sites, notably ftp://wuarchive.wustl.edu/graphics/graphics/packages/NetPBM/.

Unfortunately PBMPLUS/NETPBM is not nearly as portable as the IJG software is; you are likely to have difficulty making it work on any non-Unix machine.

A different free JPEG implementation, written by the PVRG group at Stanford, is available from ftp://havefun.stanford.edu/pub/jpeg/. This program is designed for research and experimentation rather than production use; it is slower, harder to use, and less portable than the IJG code, but it is easier to read and modify. Also, the PVRG code supports lossless JPEG, which we do not. (On the other hand, it doesn't do progressive JPEG.)

FILE FORMAT WARS

Some JPEG programs produce files that are not compatible with our library. The root of the problem is that the ISO JPEG committee failed to specify a concrete file format. Some vendors "filled in the blanks" on their own, creating proprietary formats that no one else could read. (For example, none of the early commercial JPEG implementations for the Macintosh were able to exchange compressed files.)

The file format we have adopted is called JFIF (see REFERENCES). This format has been agreed to by a number of major commercial JPEG vendors, and it has become the de facto standard. JFIF is a minimal or "low end" representation. We recommend the use of TIFF/JPEG (TIFF revision 6.0 as modified by TIFF Technical Note #2) for "high end" applications that need to record a lot of additional data about an image. TIFF/JPEG is fairly new and not yet widely supported, unfortunately.

The upcoming JPEG Part 3 standard defines a file format called SPIFF. SPIFF is interoperable with JFIF, in the sense that most JFIF decoders should be able to read the most common variant of SPIFF. SPIFF has some technical advantages over JFIF, but its major claim to fame is simply that it is an official standard rather than an informal one. At this point it is unclear whether SPIFF will supersede JFIF or whether JFIF will remain the de-facto standard. IJG intends to support SPIFF once the standard is frozen, but we have not decided whether it should become our default output format or not. (In any case, our decoder will remain capable of reading JFIF indefinitely.)

Various proprietary file formats incorporating JPEG compression also exist. We have little or no sympathy for the existence of these formats. Indeed, one of the original reasons for developing this free software was to help force convergence on common, open format standards for JPEG files. Don't use a proprietary file format!

TO DO

The major thrust for v7 will probably be improvement of visual quality. The current method for scaling the quantization tables is known not to be very good at low Q values. We also intend to investigate block boundary smoothing, "poor man's variable quantization", and other means of improving quality-vs-file-size performance without sacrificing compatibility.

In future versions, we are considering supporting some of the upcoming JPEG Part 3 extensions --- principally, variable quantization and the SPIFF file format.

As always, speeding things up is of great interest.

Please send bug reports, offers of help, etc. to jpeg-info@uunet.uu.net.



21.3.5 Libpng Library

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A "png_get_copyright" function is available, for convenient use in "about" boxes and the like: printf("%s",png_get_copyright(NULL));

Also, the PNG logo (in PNG format, of course) is supplied in the files "pngbar.png" and "pngbar.jpg (88x31) and "pngnow.png" (98x31).

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Glenn Randers-Pehrson



glennrp at users.sourceforge.net

December 14, 2007

21.3.6 Math.NET Numerics Library

The Math.NET Numerics Library uses the License MIT/X11.

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21.3.7 MNG Library

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Parts of this software have been adapted from the libpng package. Although this library supports all features from the PNG specification (as MNG descends from it) it does not require the libpng package. It does require the zlib library and optionally the IJG jpeg library, and/or the "little-cms" library by Marti Maria (depending on the inclusion of support for JNG and Full-Color-Management respectively.

This library's function is primarily to read and display MNG animations. It is not meant as a full-featured image-editing component! It does however offer creation and editing functionality at the chunk level (future modifications may include some more support for creation and or editing).

21.3.8 PCap Library

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21.3.9 SQLite Library

2001 September 15

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This header file defines the interface that the SQLite library presents to client programs. If a C-function, structure, datatype, or constant definition does not appear in this file, then it is not a published API of SQLite, is subject to change without notice, and should not be referenced by programs that use SQLite.

Some of the definitions that are in this file are marked as "experimental". Experimental interfaces are normally new features recently added to SQLite. We do not anticipate changes to experimental interfaces but reserve the right to make minor changes if experience from use "in the wild" suggest such changes are prudent.

The official C-language API documentation for SQLite is derived from comments in this file. This file is the authoritative source on how SQLite interfaces are supposed to operate.

The name of this file under configuration management is "sqlite.h.in".

The makefile makes some minor changes to this file (such as inserting the version number) and changes its name to "sqlite3.h" as part of the build process.

21.3.10 Tiff Library

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21.3.11 Tinyxml Library

www.sourceforge.net/projects/tinyxml

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21.3.12 Zlib Library

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zlib.h -- interface of the 'zlib' general purpose compression library version 1.2.11, January 15th, 2017

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