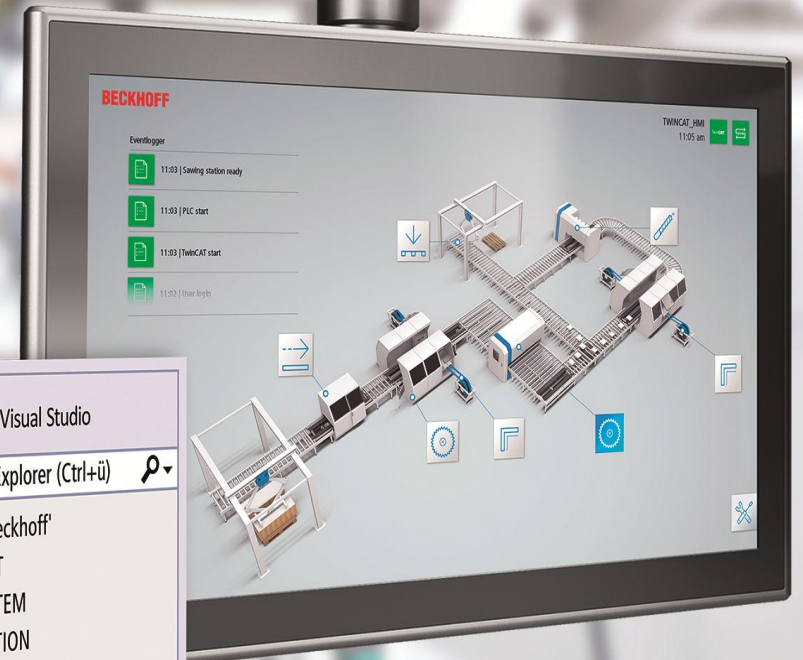


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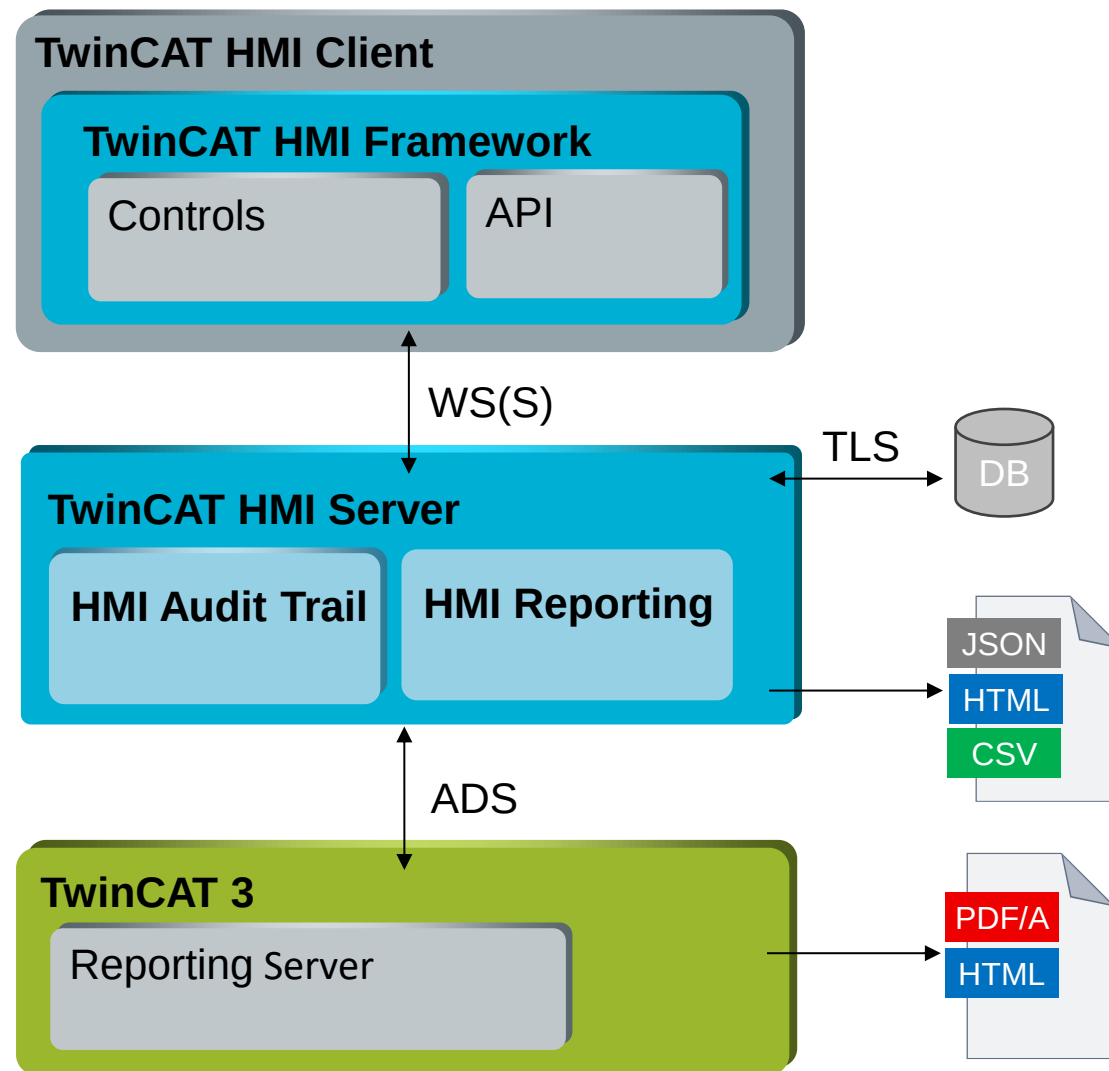
TF2400 TwinCAT 3 HMI Audit Trail



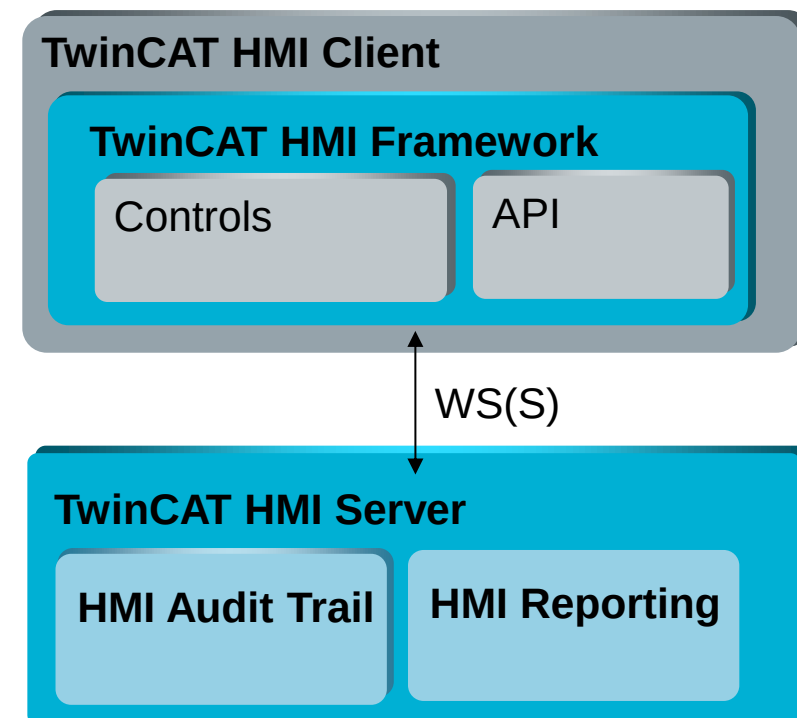
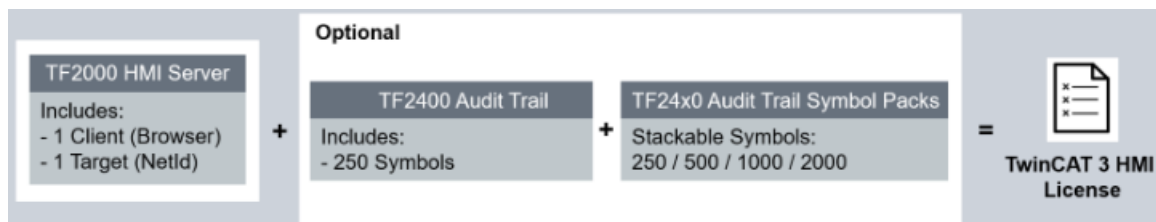
- 定义
 - 按时间顺序记录用户交互和系统事件,并保存至数据库
- 行业
 - 医药、包装等需要质量管理的行业
- 规章条例 / 指导方针
 - FDA 21 CFR Part 11
 - GAMP
 - GMP



- 记录
 - HMI 变量
 - HMI 事件
- 电子签名
 - 双重认证
 - 用户签名
- 扩展用户管理
 - 密码规则
 - 密码期限
- 导出



- 产品功能包括:
 - 电子签名
 - HMI 事件记录
 - 250 个变量追踪
- 审计跟踪变量的数量可扩展
- 授权包可叠加



TC3 HMI Audit Trail Symbols Pack	TF2410	TF2420	TF2430	TF2440
Additional Audit Trail Symbols	250	500	1000	2000

■ TwinCAT 4026 Workloads:

^ TExxxx | Engineering

**TE2000 | TwinCAT 3 HMI Engineering**
The TE2000 workload provides the standard scope for developing platform-independent user interfaces.

Engineering - TE2000 | TwinCAT 3 HMI Engineering ✓ v14.5.2 ⋮

^ TF2xxx | HMI

**TF2000 | TwinCAT 3 HMI Server**
The TF2000 workload provides the TwinCAT HMI Server and Extension Container to host TwinCAT HMI applications.

Runtime - TF2000 | TwinCAT 3 HMI Server ✓ v14.5.2 ⋮

Nuget Packages:



Beckhoff.TwinCAT.HMI.AuditTrail 作者 Bec 22.0.6955
TwinCAT HMI is a development environment for web-based HMIs (Human Machine Interfaces). Th...



Beckhoff.TwinCAT.HMI.AuditTrailUtils 作者 14.3.154
TwinCAT HMI is a development environment for web-based HMIs (Human Machine Interfaces). This...

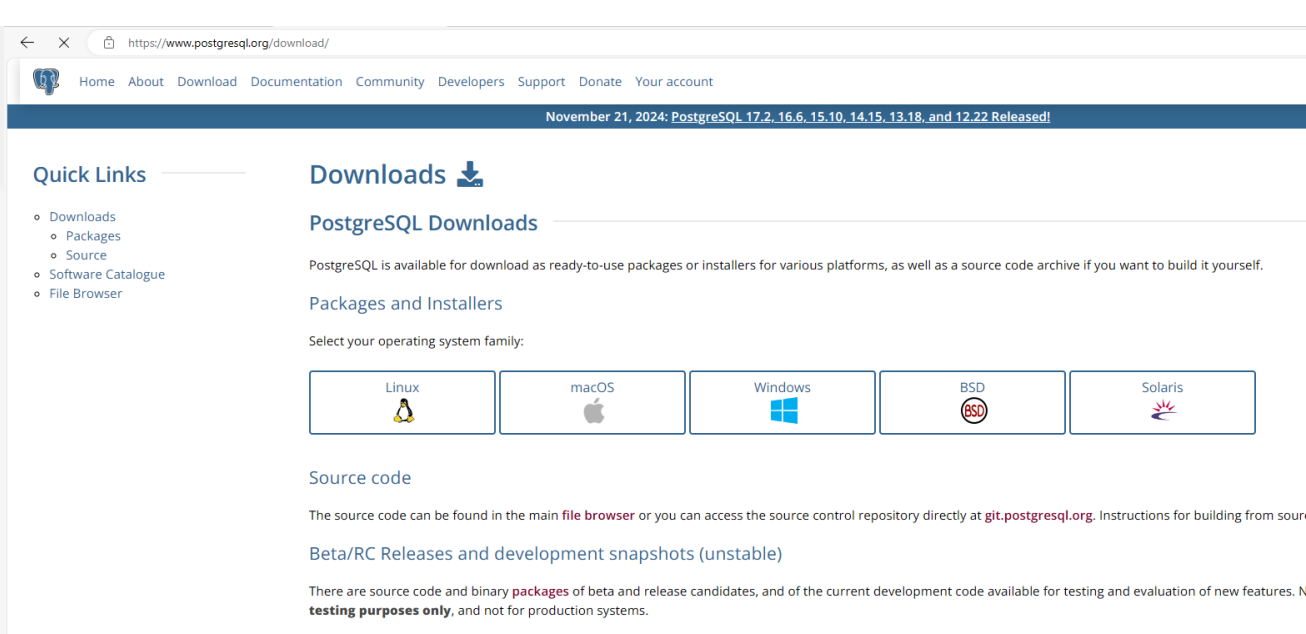
■ TwinCAT 4024 : 提供14版本的TF2000, 可安装到TwinCAT 4024 Runtime环境

Software and tools		
TF2000 TwinCAT 3 HMI Server (TwinCAT 3.1 Build 4024)		
TF2000有效		
Version		
14.4.124		🔒 EXE (142 MB)
1.12.762.54		🔒 EXE (178 MB)

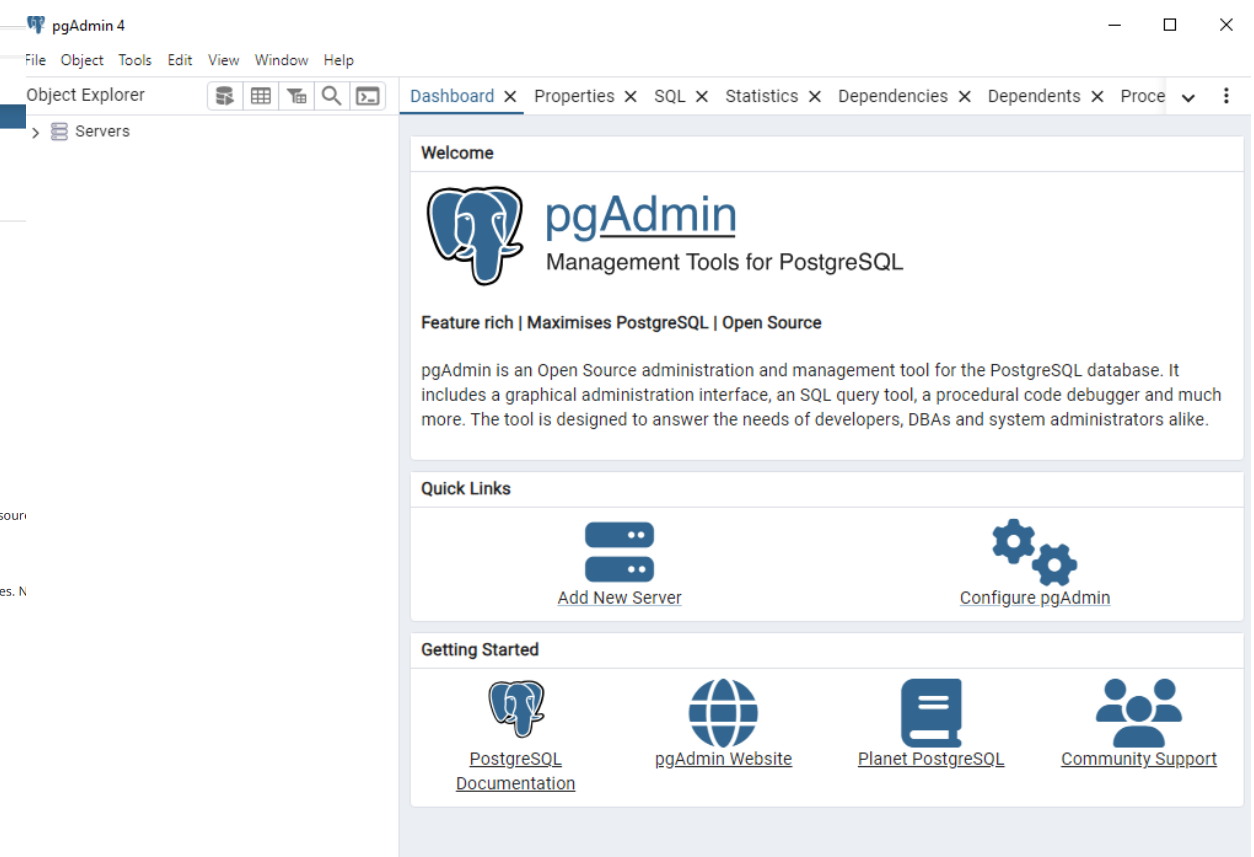


TF2000-HMI-Server-Setup.exe

■ 安装 PostgreSQL



■ pgAdmin 官方的图形界面管理工具



■ TcHmiAuditTrail 与PostgreSQL数据库配置连接

The image displays the configuration interface for the TcHmiAuditTrail component in the Beckhoff TwinCAT 3 HMI Audit Trail. On the left, a tree view shows the project structure under 'Servers (1)' > 'PostgreSQL 16' > 'Databases (2)', with 'AuditTrailDB' selected. A large double-headed arrow points from this tree view to the configuration window on the right. The configuration window has a left sidebar with a list of components: ADS, TcHmiAuditTrail (selected), TcHmiLua, TcHmiReporting, TcHmiSQLiteLogger, TcHmiSrv, TcHmiUserManagement, and Log. The main area shows the 'Database Settings' tab for the 'Current database connection'. The settings are as follows:

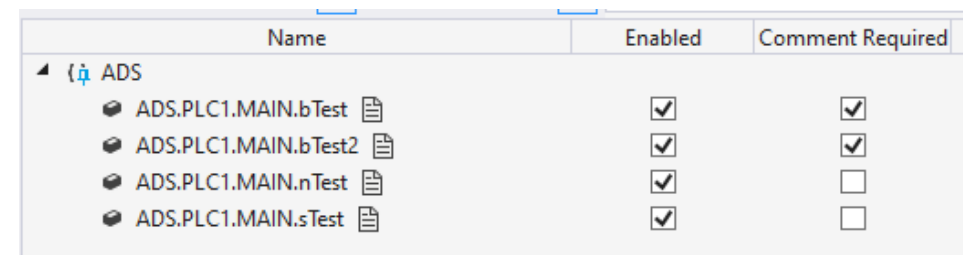
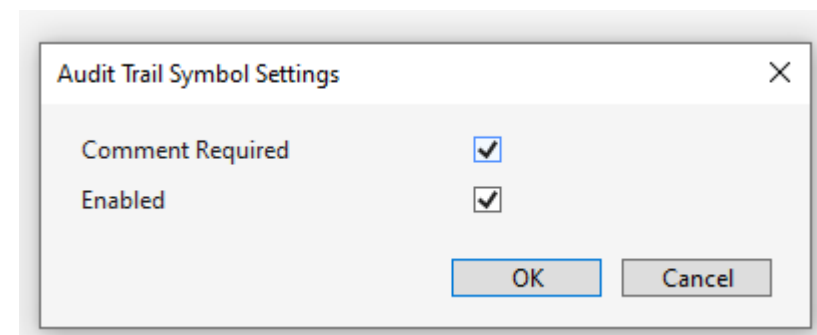
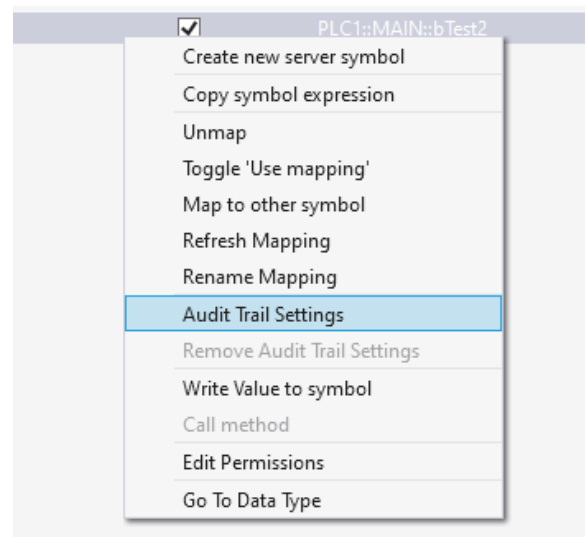
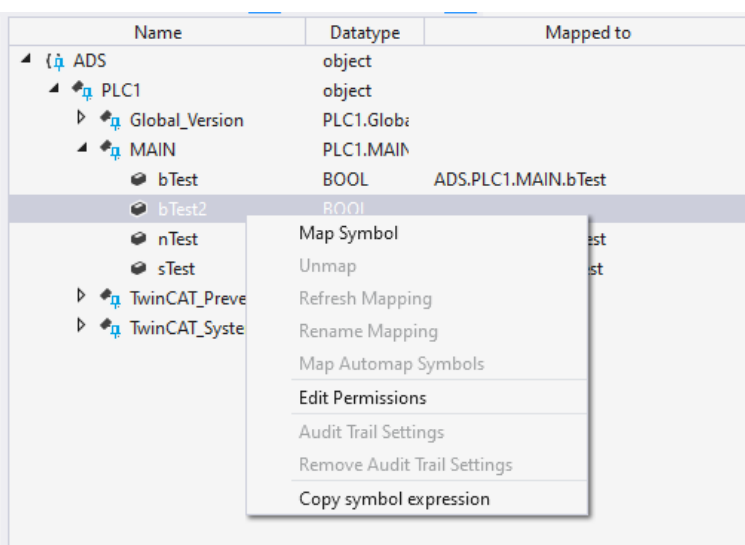
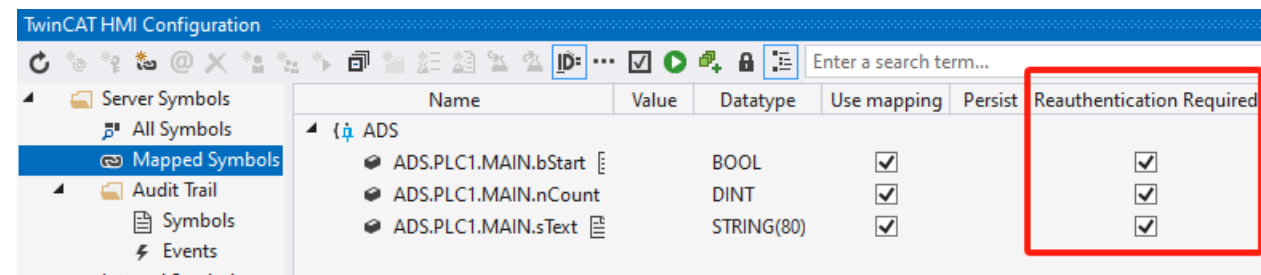
Setting	Value	Optional	Required
Host	localhost	If the project is shared use localhost.	
Port	5432		
Database name	AuditTrailDB		
Username	postgres	Optional	☒
Password		Optional	☒
Server connection timeout	10		
Maximum number of database entries	15000	Maximum number of entries to be saved in the database	
Limit for the hint of the remaining database entries	10	This value indicates the minimum number of available entries that should be left in the database before triggering a notification to show the remaining database entries.	

At the bottom of the configuration window, the version information is displayed: Package version: 22.0.6418, Product version: 14.2.102.0, Config version: 1.0.1.9.

1. 选择并映射变量

2. 对已映射的变量进行“ Audit Trail Settings”

3. Audit Trail 变量列表



■ 支持添加系统事件，符合筛选条件的事件将加入Audit Trail Events

Domian:

- ✓ ADS
- ✓ EventLogger
- ✓ UserManagement
- ...

Filter

+

-

	And/Or	Path	Operator	Value
		contextDomain	==	

Load initial configuration

ADS

TcHmiAuditTrail

TcHmiEventLogger

TcHmiLua

TcHmiReporting

TcHmiSqliteLogger

TcHmiSrv

TcHmiUserManagement

Server Symbols

All Symbols

Mapped Symbols

Audit Trail

Symbols

Events

Internal Symbols

Localizations

Themed Resources

System Keyboard

Data types

Global Events

Functions

Users and Groups

Users

Groups

Client Certificates

Action Templates

Name	Enabled
< create new event filter >	
auditTrailDatabaseReset	☒
auditTrailErrorMessage	☒
authFailed	☒
customAuditTrailLogEntry	☒
login	☒
logout	☒

Add Event Filter

Name:

Add clause

Delete clause

Group clause

Ungroup clause

	And/Or	Path	Operator	
		domain	==	ADS

	Timestamp	ID	Name	Old Value	New Value	Username
1	2024-11-22T08:30:19.2983306Z	10	LOGIN_LOG			TcHmiUserManagement::__SystemAdministrator
2	2024-11-22T08:30:13.6536479Z	9	AUTH_FAILED			TcHmiUserManagement::__SystemGuest
3	2024-11-22T08:30:11.7516685Z	8	AUTH_FAILED			TcHmiUserManagement::__SystemGuest
4	2024-11-22T08:30:08.7364657Z	7	LOGOUT_LOG			TcHmiUserManagement::__SystemAdministrator
5	2024-11-22T08:29:59.4395686Z	6	LOGIN_LOG			TcHmiUserManagement::__SystemAdministrator

TF2400 TwinCAT 3 HMI Audit Trail

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10/9/2025, 9:24:38.310 AM | TcHmiEventLogger | Air pressure in station infeedContainer has 6.00bar and is under the limit of 7.50bar

>

TwinCAT

SubStation

1:25:49 PM
10/9/2025

Audit Trail

Trail

State

	Timestamp	ID	Name	Old Value	New Value
1	2025-10-03T15:57:21.3636838Z	5	LOGOUT_LOG		
2	2025-09-08T10:26:46.344744Z	19	LOGOUT_LOG		
3	2025-09-17T09:57:11.6337643Z	29	LOGOUT_LOG		
4	2025-09-23T09:49:36.4244145Z	47	LOGOUT_LOG		
5	2025-10-01T00:58:35.0538160Z	53	LOGOUT_LOG		

Export to PDF

Axis

Speed

-

400

+

mm/s

Weight

Gain

-

1.000

+

Machine

User Management

Pressure

Recipe

Audit Trail

Audits

Reports

Settings

Events

Diagnostics

Feature Demo

TwinCAT CMI - Application

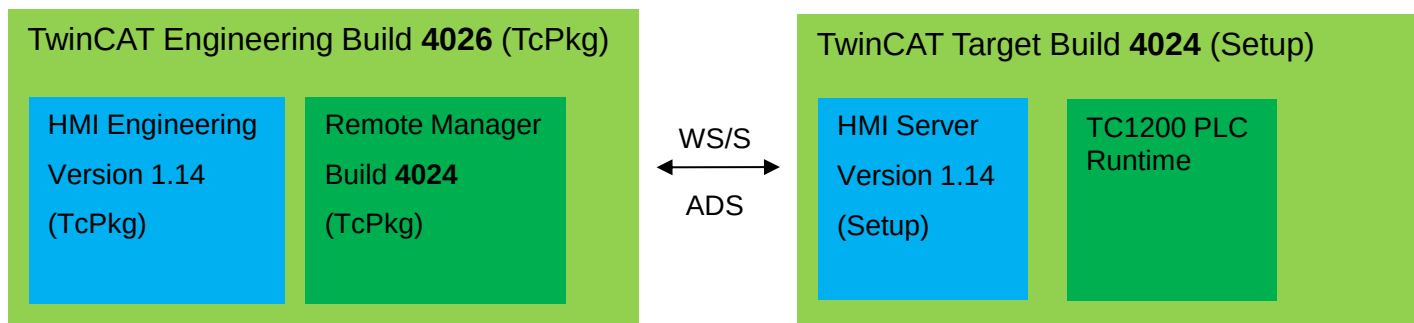


1. 如何使用审计追踪功能，需要安装哪个TwinCAT HMI版本？

开发电脑须使用TwinCAT3 4026 + TwinCAT HMI 1.14以上版本。

2. PLC Runtime必须是TwinCAT3 4026吗？

不是。有单独的TwinCAT HMI Server 1.14安装包，用于TwinCAT3 4024上安装使用。



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谢谢!

