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CrossTalk DataSheet 3.4

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1 Architecture Overview

1.1 Base architecture

CrossTalk is a pure Java implementation. It is designed to run on any platform with Java VM support.
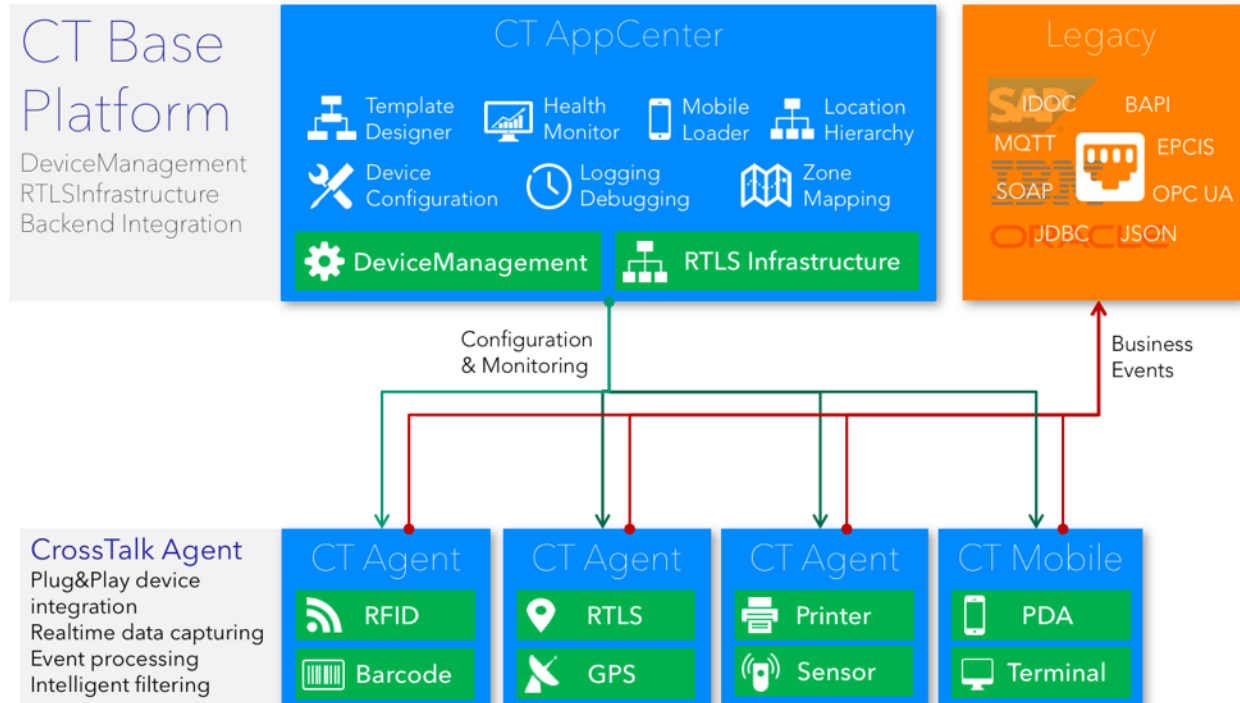
1.2 CrossTalk components

1.2.1 *CrossTalk AppCenter*

The main component of CrossTalk is the Java server applications „CrossTalk AppCenter", which needs to be deployed on a Java application server.
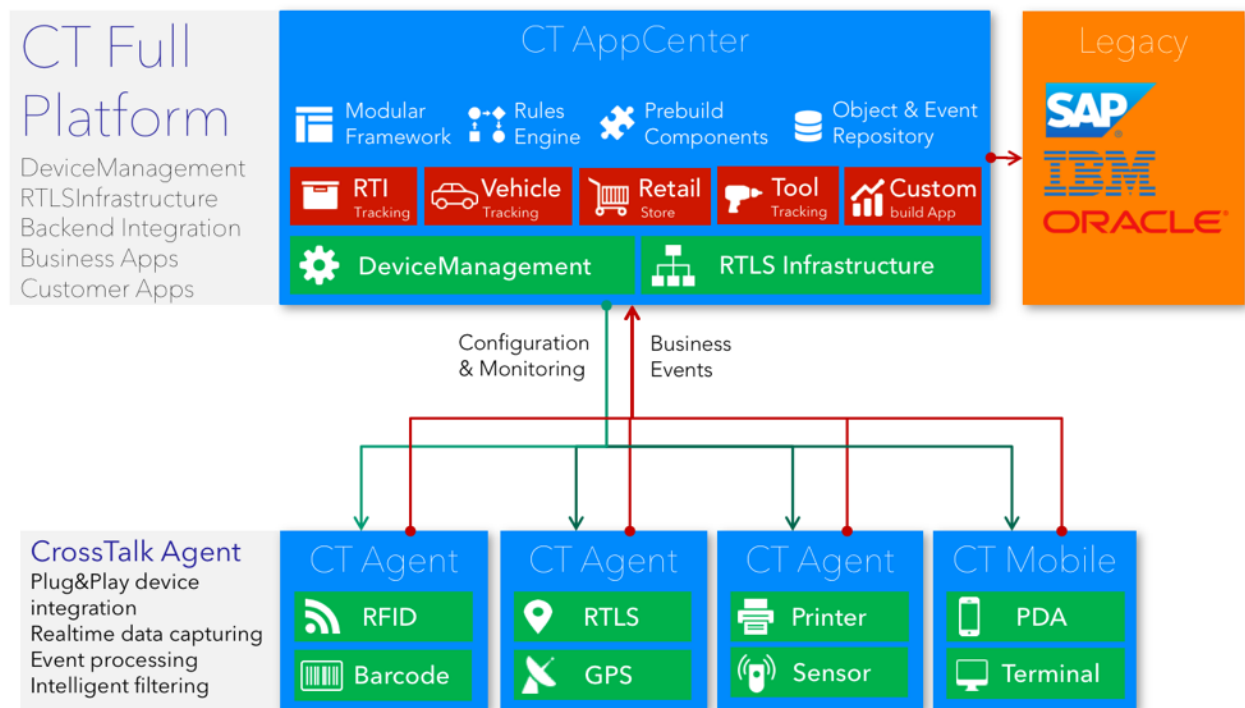
The CrossTalk AppCenter is a framework for running multiple real time tracking applications based on sensor event data.

There are two different types of licensing and deployment models for CrossTalk AppCenter:

1. CrossTalk AppCenter Base Platform, which includes the base infrastructure applications "Device Management" and "RTLS Infrastructure". Business events are forwarded and processed typically in a separate backend system.
2. CrossTalk AppCenter Full Platform, which also runs the end user tracking applications inside AppCenter.

CrossTalk Device Management is an administrative tool for device configuration, data capturing and infrastructure monitoring and is mainly running in the background.

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1.2.2 *CrossTalk autonomous Agent*

To support remote installed stationary devices like RFID portal gates or RTLS systems, a CrossTalk autonomous Agent can be deployed directly in the same LAN environment or on the device itself. This allows real time device control, data capturing and filtering.

1.2.3 *CrossTalk mobile Agent*

The CrossTalk mobile Agent is a runtime platform for mobile devices like a RFID PDA with integrated user interface. Mobile processes and workflows with individual UIs can be built easily with this framework.

1.2.4 *CrossTalk Performance*

Since CrossTalk is based on a distributed architecture, performance can be well balanced using one agent per data capturing device or managing multiple devices on an Agent. Multiple instances of an Agent can be deployed on a computing resource as well, to achieve a fault tolerant configuration.

In recommended system configuration AppCenter applications are able to process several thousand events per second.

2 Requirements

2.1 Introduction

CrossTalk AppCenter is designed to run on many combinations of Operating Systems (*MS Windows*, *Linux*), Databases (*Oracle*, *MS SQL Server*, *DB2*, *MySQL*), and *Java* Application Server (Tomcat, *JBoss*, *WebSphere*).

2.2 System requirements server components

2.2.1 Hardware

The following hardware resources are required to run CrossTalk *Server* as a standalone application:

Component	Minimum	Recommended
CPU	2 x 2GHz	2 x Quad core
Memory	4 GB	8 GB
Disc space	10 GB	100 GB
Network	10 Mbit	100 Mbit
TCP connection	A direct TCP connection with fixed IP address is necessary to connect devices (RFID readers, I/O controller, etc.). The assigning of ports depends on the devices and is indicated in the device manufacturer's documentation or description.	

2.2.2 Software

To install CrossTalk *Server* the following software components are required:

Component	Product version	Resources
JavaVM	Operating system independent *Java* runtime environment: Version 6 or higher	The Sun *JavaVM* 6 needs at least 120MB disk space.
Java Application Server	- *Tomcat* : 7 or higher - *JBoss*: 6 or higher - *IBM WebSphere*. 6 or higher - SAP NetWeaver 7.3 or higher - Please ask Kathrein for other	*Tomcat 7* needs at least 200 MB disk space.
Relational SQL database with JDBC driver	- *Oracle*: Version 9 or higher - *Microsoft SQL Server*: Version 2008 or higher. - *MySQL*: 5.5 or higher - *IBM DB2*: 9.7 or higher - PostgreSQL Version 10 or higher	*AppCenter* needs at least 10 MB disk space for installation of the database. The required disk space for operations depends on the amount of objects and events. Ask the supplier for disk space requirements for the specific database systems.

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2.3   System requirements CrossTalk autonomous agent

2.3.1   *Hardware*

The following hardware resources are required to run CrossTalk Autonomous Agent:

Component	Minimum	Recommended
CPU	Intel PXA 800 Mhz, Intel Atom 1.0 Mhz, any Intel or AMD X86 processor	Intel PXA 800 Mhz, Intel Atom 1.0 Mhz, any Intel or AMD X86 processor
Memory	256 MB	512 MB
Disk	256 MB	1 GB
Network	10 Mbit	100 Mbit

2.3.2   *Software*

To install CrossTalk Autonomous Agent the following software components are required:

Component	Product version	Resources
JavaVM	Operating system independent *Java* runtime environment Version 6 or higher	The Sun *JavaVM* 6 needs at least 120MB disk space.

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2.4 System requirements CrossTalk mobile agent

2.4.1 *Hardware*

The following hardware resources are required to run CrossTalk mobile Agent:

Component	Minimum	Recommended
CPU	1 x 500 Mhz, PXA, Atom, X86	Intel PXA 800 Mhz, Intel Atom 1.0 Mhz, any Intel or AMD X86 processor
Memory	64 MB	128 MB
Disk	64 MB	128 MB
Network	10 Mbit	10 Mbit

2.4.2 *Software*

To install CrossTalk mobile Agent the following software components are required:

Component	Product version	Resources
OS	WindowsCE 5/6 WindowsMobile 5/6 Android	