System Platform Glossary of Terms

Application Engine (AppEngine)

A scan-based engine that hosts and executes AutomationObjects.

ApplicationObject

An AutomationObject that represents some element of your application. This may include things such as (but not limited to) an automation process component (for instance, a thermocouple, pump, motor, valve, reactor, or tank) or associated application component (for instance, function block, PID loop, Sequential Function Chart, Ladder Logic program, batch phase, or SPC data sheet).

Application Views

The Applications Views pane displays the object-related contents of the Galaxy in three different ways: Model, Deployment, and Derivation Views. The Model View is the default display when the IDE is first opened.

ArchestrA

The distributed architecture for supervisory control and manufacturing information systems. It is an open and extensible system of components based on a distributed, object-based design.

ArchestrA Object Toolkit

A programmer’s tool used to create new ApplicationObjects and Device Integration Object Templates, including their configuration and run-time implementations. Includes a developer tool used to build DI Objects and create unique Domain Objects that interact with DI Objects in the ArchestrA environment.

Area Object

The System Object that represents an Area of your plant within a Galaxy. The Area Object acts as an alarm.
concentrator, and is used to place other Automation Objects into proper context with respect to the actual physical automation layout.

**Assignment**

Assignment is the method by which you define an object's host or container.

**Attribute**

The data element of an AutomationObject.

**Attribute Reference String**

A text string that references an attribute of an AutomationObject.

**AutomationObject**

A type of object that represents permanent things in your plant (such as Application Objects or Device Integration Objects) as objects with user-defined, unique names within the Galaxy. It provides a standard way to create, name, download, execute, and monitor the represented component.

**Automation Object Server (AOS)**

A computer that hosts one or more application engines and associated automation objects. An Industrial Application Server Galaxy Namespace can contain several Automation Object Servers, each which requires a Platform.

**Base Template**

A root template at the top of a derived hierarchy. Unlike other templates, a base template is not derived from another template but developed with the Application Object Toolkit and imported into a Galaxy. Base templates and derived templates always have a $ before their name in the IDE.

**Block Read Group**
A DAGroup that is triggered by the user or another object. It reads a block of data from the external data source and indicates the completion status.

**Block Write Group**

A DAGroup that is triggered by the user or another object after all the required data items have been set. The block of data is then sent to the external data device. When the block write is complete, it indicates the completion status.

**Bootstrap**

The base ArchestrA service which is required on all ArchestrA computers. It provides the base software environment to enable a platform and allows a computer to be included in the Galaxy Namespace.

**Change Log**

The revision history that tracks the life cycle activities of ArchestrA Objects, such as object creation, check-in/check-out, deployment, and import/export.

**Check-In**

IDE operation for making a configured object available for other users to Check-Out and use.

**Check-Out**

IDE operation for the purpose of editing an object. It makes the item unavailable for other users to Check-Out.

**Checkpoint**

The act of persisting to disk the configuration, state, and all associated data necessary to support automatic restart of a running AutomationObject. The restarted object has the same configuration, state, and associated data as the last checkpoint image on disk.

**Compound Object.**
An Application Object that contains at least one other Application Object.

**Contained Name**

An alternate naming convention that when combined with the tag name of the root container object, results in the Hierarchical Name. For instance, for a given object, it’s Hierarchical Name = Line1.Tank1.InletValve and its Contained Name = InletValve

**Containment**

The notion of hierarchical grouping that allows one or more AutomationObjects to exist within the name space of a parent AutomationObject and be treated like parts of the parent AutomationObject. This functionality allows for relative referencing to be defined at the template and instance level.

**DAGroup**

A data access group associated with Device Integration Objects. It defines how communications is achieved with external data sources. It can be a ScanGroup, Block Read or Block Write groups.

**DAServer Manager (DAS Manager)**

The System Management Console (SMC) snap-in supplied by the DAServer that provides the required user interface for activation, configuration, and diagnosis of the DAServer.

**Data Access Server (DAServer)**

The server executable that handles all communications between field devices and client applications. Similar in function to I/O Servers but with more advanced capabilities.

**Data Access Server Toolkit (DAS Toolkit)**

A developer tool used to build Data Access Servers (DAServers).
The operation which instantiates an automation object instance in the ArchestrA runtime. This action involves installing all the necessary software and instantiating the object on the target platform with the objects default attribute data from Galaxy Repository.

**Deployment View**

The part of the Applications View in the IDE that shows how objects are physically dispersed across Platforms, Areas and Engines. This is a view of how the application is spread across computing resources.

**Derivation**

The creation of a new Template based on an existing Template.

**Derivation View**

The part of the Applications View in the IDE that shows the parent-child relationship between base templates, derived templates and derived instances. A view into the genealogy of the application.

**Device Integration Object (DIObjects)**

An AutomationObject that represents the communication with external devices or software. DIObjects run on an Application Engine, and include DINetwork and DIDevice objects.

**DIDevice Object**

An object that represents the actual external device (for example, a PLC or RTU) that is associated with a DINetwork Object. It provides the ability to diagnose and browse data registers of the DAGroups for that device.

**DINetwork Object**

An object that represents the network interface port to the device via the Data Access Server or the object that represents the communications path to another software application. It provides diagnostics and configuration for that specific network card.
**Event Record**

The data that is transferred about the system and logged when a defined event changes state (for instance, an analog crosses its high level limit, an acknowledgement is made, or an operator logs in to the system).

**Export**

The act of generating a Package file (.aaPKG file extension) from persisted data in the Galaxy Database. The resulting .aaPKG file can be imported into another Galaxy through the IDE import mechanism.

**Galaxy**

The entire application. The complete ArchestrA system consisting of a single logical name space (defined by the Galaxy Database) and a collection of Platforms, Engines and objects. One or more networked PC's that constitute an automation system. This is referred to as the Galaxy Namespace.

**Galaxy Database**

The relational database containing all persistent configuration information like Templates, Instances, Security, etc. in a Galaxy Repository.

**Galaxy Database Manager**

The Galaxy Database Manager is a utility you can use to manage your Galaxies. It can back up and restore Galaxies should they become corrupted or to reproduce a Galaxy on another computer. The Galaxy Database Manager is part of the System Management Console (SMC).

**GalaxyObject**

The object that represents a Galaxy.

**Galaxy Repository**

Can contain one or more Galaxy Databases.
Hierarchical Name

The name of the object in the context of its container object. For instance, Tank1.OutletValve, where an object called Tank1 contains the OutletValve object.

Historical Storage System (Historian)

The time series data storage system, used to compress and store high volumes of time series data for latter retrieval. For the Industrial Application Server, the standard Historian is IndustrialSQL Server.

Host

The parent instance of a child instance in the deployment view. (Example: a Platform instance is a Host for an AppEngine instance).

Import

The act of reading a .aaPKG File and using it to create AutomationObject instances and Templates in the Galaxy Repository.

Industrial Application Server

Refers to the FactorySuite A² Supervisory Control Platform, commonly known as the Application Server. The Industrial Application Server is sized by (a) the number of Workstation / Server and Terminal Services Platforms and (b) by real I/O in the system. The Application Server license is per Galaxy. An Application Server can be distributed across multiple computers as part of a single Galaxy Namespace. The Industrial Application Server is designed to leverage existingWonderware products such as InTouch for visualization, Industrial SQL as its historian, and the device Integration product line (I/O Servers) for device communications. The Industrial Application Server uses InTouch v8.0 or InTouch View v8.0 for visualization with the addition of Platforms to the visualization node.

Instance

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An Object, which is a unique representation of a template that can exist in runtime.

**Instantiation**

The creation of a new object instance based on a corresponding Template.

**Integrated Development Environment (IDE)**

The Integrated Development Environment (IDE) is the user interface for the configuration side of Application Server. It is used to manage templates, create object instances, deploy and un-deploy objects and a host of other functions associated with the development and maintenance of the system. It is only available as part of the FactorySuite A2 Development License.

**InTouch View**

InTouch View Clients are InTouch Runtime Version 8.0 clients that solely use of the Industrial Application Server for its data source. In addition, standard InTouch v8.0 runtimes can leverage the Industrial Application Server with the addition of a Platform license.

**I/O Count**

Number of I/O points being accessed into the Galaxy. I/O points are real I/O and are not equivalent to InTouch tags. I/O count is based on the number of I/O points that are configured through an OPC Server, I/O Server, DA Server or InTouch Proxy Object, over the whole Application Server namespace, regardless of how many PCs are in the system.

**Message Exchange**

The object to object communications protocol used by ArchestrA and the Industrial Application Server.

**Model View**

The part of the Applications View in the IDE that shows how objects are arranged to describe the physical layout of the plant and supervisory process being controlled.
Object Extensions

The capability to add additional functions to an Automation Object while not altering the objects original behavior. Can be added to derived templates and object instances. They include Scripts, User Defined Attributes (UDAs) and Attribute Extensions.

Object Viewer

A utility in which you can view the attribute values of the selected object in run-time. This utility is only available when an object is deployed. Object Viewer provides the user with diagnostic information on Application Objects for the purpose of detecting performance parameters, resource consumption and reliability measurements. In addition to viewing an object’s data value, data quality and the communication status of the object, you can also modify some of it’s attributes for diagnostic testing. Modifications can include adjusting timing parameters and setting objects in an execution or idle mode.

OffScan

The state of an Object that indicates it is idle and not ready to execute its normal runtime processing.

OnScan

The state of an Object in which it is performing its normal runtime processing based on a configured schedule.

Package Definition File (.aaPDF)

The standard description file that contains the configuration data and implementation code for a base template. File extension is .aaPDF.

Package File (.aaPKG)

The standard description file that contains the configuration data and implementation code for one or more object instances or Templates. File extension is .aaPKG.

Platform Count

Number of PCs in the Galaxy. Each Workstation and/or Server communicating directly with the Application Server
requires a platform to be part of the Galaxy Namespace. This includes each InTouch 8.0 or higher and InTouch View 8.0 or higher client. Each InTouch Terminal Services Session needs a Terminal Services Platform License. A Platform License includes a per seat FSCAL2000 with Microsoft 2000 SQL Server CAL. Stand-alone computers that only host InSQL Servers or remote DA Servers do not need a platform license.

Platform Manager

The Platform Manager provides Galaxy application diagnostics by allowing you to view the run-time status of some system objects and to perform actions upon those objects. Actions include setting platforms and engines in an executable or idle mode and starting and stopping platforms and engines. This utility is an extension snap-in to the ArchestrA System Management Console (SMC).

Platform Object

An object that represents a single computer in a Galaxy, consisting of a system wide message exchange component and a set of basic services. This object hosts all Application Engines.

Properties

Data common to all attributes of objects, such as name, value, quality, and data type.

Relational Reference

A reference to an object's attributes that uses a keyword in place of an object's tagname. These keywords allow a reference to be made by an object's relationship to the target attribute. Examples of these keywords are "Me", "MyPlatform", and "MyContainer".

Scan Group

A DAGroup that requires only the update interval be defined and the data will be retrieved at the requested rate.

Scan State

The Scan State of an object in run-time. This can be either off-scan or on-scan.
Security

Industrial Application Server security is applied to IDE, SMC, and the runtime data level. At the runtime data level which centralizes the definition of all permissions to the ApplicationObjects. These ApplicationObjects can be accessed by a variety of clients but the security is centrally defined allowing ease of maintenance. The users that are allowed to modify these ApplicationObjects at runtime are mapped to the objects by user defined roles. These roles can be mapped directly to existing groups in a Microsoft Domain or workgroup.

System Management Console (SMC)

The central runtime system administration/management user interface in which all required runtime administration functions can be accomplished.

System Objects

Objects that represent an Area, Platform or Engine.

TagName

The unique name given to an object. For instance, for a given object, its TagName = V1101 and its HierarchicalName = Line1.Tank1.InletValve.

Template

An object containing configuration information and software templates used to create new Derived Templates and/or Instances.

Template Toolbox

The part of the IDE Main Window that hosts template toolsets, which contain object templates. The Template Toolbox
contains a tree view of template categories in the Galaxy.

**Toolset**

A named collection of Templates displayed together in the IDE Template ToolBox.

**User Defined Attributes (UDA)**

The purpose of a User Defined Attribute is to allow users to add new functionality to an object. An attribute which is added to an object at configuration time