

# **PLANTSCAPE SERVER**

## **INTRODUCTION and ARCHITECTURE OVERVIEW**

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## SESSION OBJECTIVES

At the completion of this section of the course the student will be able to:

- List the functions of the PlantScape Server and their relevance to the PlantScape system
- Identify the major hardware components of a PlantScape Server and its clients
- Describe the communications topologies available to connect the PlantScape Server to Stations, Hybrid Controllers and non-Hybrid Controllers
- Define the terms Static Station, Rotary Station, Channel, Controller, Connection

## REFERENCES

*Knowledge Builder:* Control Specifications Reference

*Knowledge Builder:* Server and Client Installation Guide.

# Introduction to PlantScape Server

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## Product Overview

The PlantScape Server and Stations(s) provide an operator's window to the plant or process.

There are three different types of PlantScape system available:

PlantScape Vista	For use on small systems using Honeywell UDC controller and similar
PlantScape SCADA	For use with SCADA systems using a wide variety of Honeywell and 3 <sup>rd</sup> party controllers and PLCs
PlantScape Process	Same as PlantScape SCADA but also fully integrated with the PlantScape Hybrid Controller

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## Major Functions

The major functions provided by the PlantScape Server are:

- Fully integrated with the PlantScape Hybrid Controller
  - Interfaces to other Honeywell and 3<sup>rd</sup> Party Controllers
  - Distributed Server Architecture enabling data sharing with other PlantScape, or Enterprise Buildings Integrator, Servers with minimal engineering effort
  - Acquisition and Control Algorithms
  - Data exporting to external database(s)
  - Historical Data Collection and Display
  - Reports
  - PC based Operator Stations
  - Alarm and Event Management
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## Operating System

The PlantScape Server runs under the Microsoft Windows NT 4.0 (SP5) operating system configured for NTFS (NT File System).

All the associated client applications will run under Microsoft Windows NT or Windows '95/'98.

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## Hardware Requirements

The hardware requirements for the PlantScape Server and Client PCs have not been included here since they are constantly under review.

Additional information can be obtained from *Knowledge Builder: Control Reference Specifications*.

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# Introduction to PlantScape Server.....continued

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## Installation

Installation procedures are documented in *Knowledge Builder: Server and Client Installation Guide*.

Because of the wide range of possible equipment combinations, installation is not covered explicitly in this course.

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## System Sizings

*Knowledge Builder: Control Specifications Reference* provides sizing information for each system entity, for example the maximum number of points, controllers, history file sizes, event file size, and so on.

Note that some of these entities are dependent on database size (defined by the system licence) whilst others are not.

This information should be consulted during the planning stage of your installation.

If the sizings are unsatisfactory then they may be changed using the **sysbld** utility which is documented in

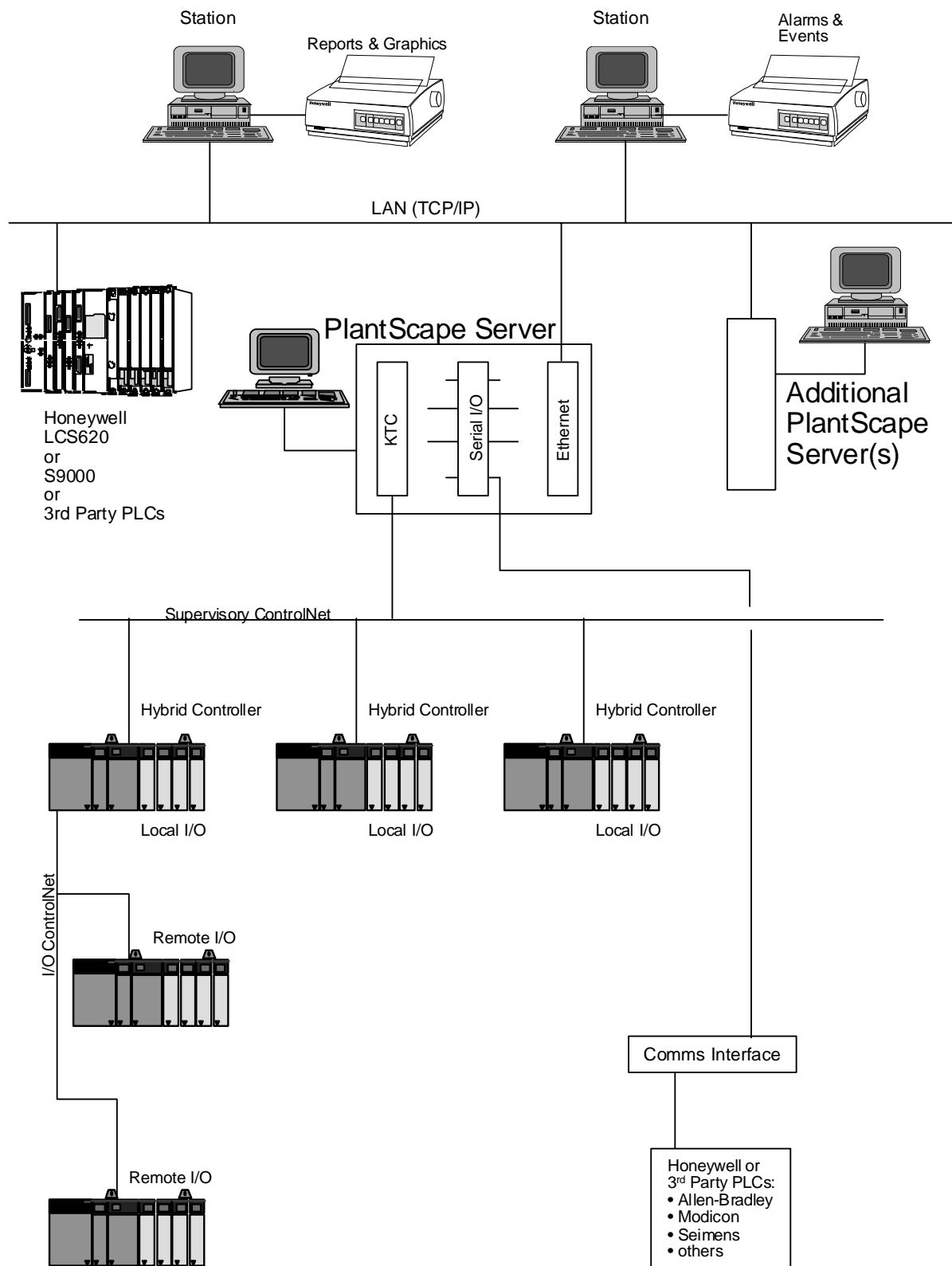
*Knowledge Builder: Server and Client Configuration Guide*

### Caution

Particular care should be taken when running **sysbld** not to inadvertently change system information.

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# PlantScape System Architecture



**PlantScape System - Basic Architecture**

PSc\_schem.ppt

## Some Important Terminology used by PlantScape Server

<b>Station</b>	<p>The software program that provides the human-machine interface for a PlantScape Server.</p> <p>The Station program can run on the same PC as the PlantScape Server or on a different PC.</p>
<b>Connect</b>	<p>When a station is communicating with a PlantScape Server it is said to be “connected”.</p>
<b>Static Station</b>	<p>Describes the type of station configuration used when the connection is to be permanent, for example, in a control room.</p>
<b>Rotary Station</b>	<p>Describes the type of station configuration used when the connection is to be non-permanent.</p> <p>There may be many users who each require a station connection for a short period of time. In order to decrease system loading, and software licence costs, a small number of Rotary Stations are configured in the PlantScape Server. When a remote station user attempts to connect their Rotary Station the server will connect them to the next available Rotary Connection.</p>
<b>Channel</b>	<p>A communications link between PlantScape server and one or more non-Hybrid controller, for example, an RS 232 port or Ethernet LAN. Multiple channels may be configured on the same communications hardware.</p>
<b>Controller</b>	<p>An external control or monitoring device that is connected to PlantScape server through a channel.</p> <p>Examples are a PLC or a TDC Hiway Box.</p> <div><p><b>Attention</b></p><p>The PlantScape Hybrid controller is fully integrated with the server and does not require a Channel or Controller to be configured.</p></div>
<b>Alarm and Event Printer</b>	<p>Configured to printout alarms and events as they are detected.</p> <p>Must be a dot matrix printer.</p> <p>There is usually only one of these printers in a system, although it is possible to configure a different one for each Station.</p>
<b>Report Printer</b>	<p>Configured to printout demanded and/or periodic reports when they run.</p> <p>There are frequently more than one of these printers in a system.</p>
<b>Station Print Page Printer</b>	<p>Used for printing Station pages - can be colour if required.</p> <p>Must be the Windows default printer for the Station requesting the screen print.</p>