

System Management Hub

Introduction

Version 9.5 SP1

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This document applies to System Management Hub Version 9.5 SP1.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Preface

System Management Hub (the SMH framework) is Software AG's cross-product and cross-platform product management framework. It is not limited to Software AG products only, but can also be used for other systems and products.

System Management Hub consists of the following components:

- Generic, product-independent components that provide the same functionality on all supported platforms
- Product-specific and platform-specific components (the Agents)

The individual Software AG products install only their own product-specific agents, while the System Management Hub installation routine installs the generic SMH framework. It provides user interfaces for the administration of run-time components and tools for database administration, performance tuning, and error analysis.

This guide, in conjunction with Software AG Installation Guide, explains how to install, upgrade, and uninstall System Management Hub. It also describes how to configure and use System Management Hub.

The introduction is organized under the following overview sections:

Configuration

Features

Architecture

Components

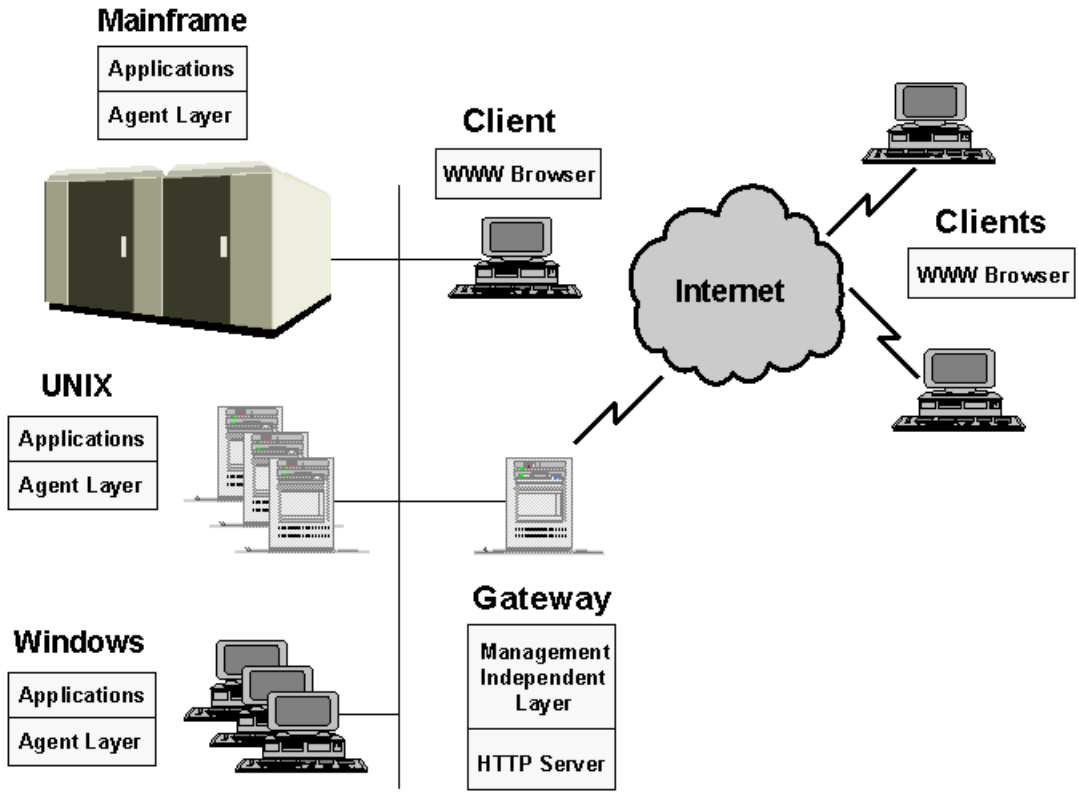
1 Configuration

A typical installation of System Management Hub consists of:

- One Software AG Runtime instance including the Management Independent Layer
- One or more managed hosts

System Management Hub server package is installed on each managed host.

Refer to the following image to see an overview of System Management Hub configuration.



2 Features

Distributed XML-based System

- XML Client/ Server protocol
- XML GUI description

Generic Presentation Layer Rendering

- Generic rendering engines for HTML, batch, etc.

Standard Interfaces for Application Development

- HTML, native C/C++, native Java, etc.

Platform Independence

- Multiple WINDOWS systems
- Multiple UNIX systems
- Multiple mainframe systems

Managed Host Independence

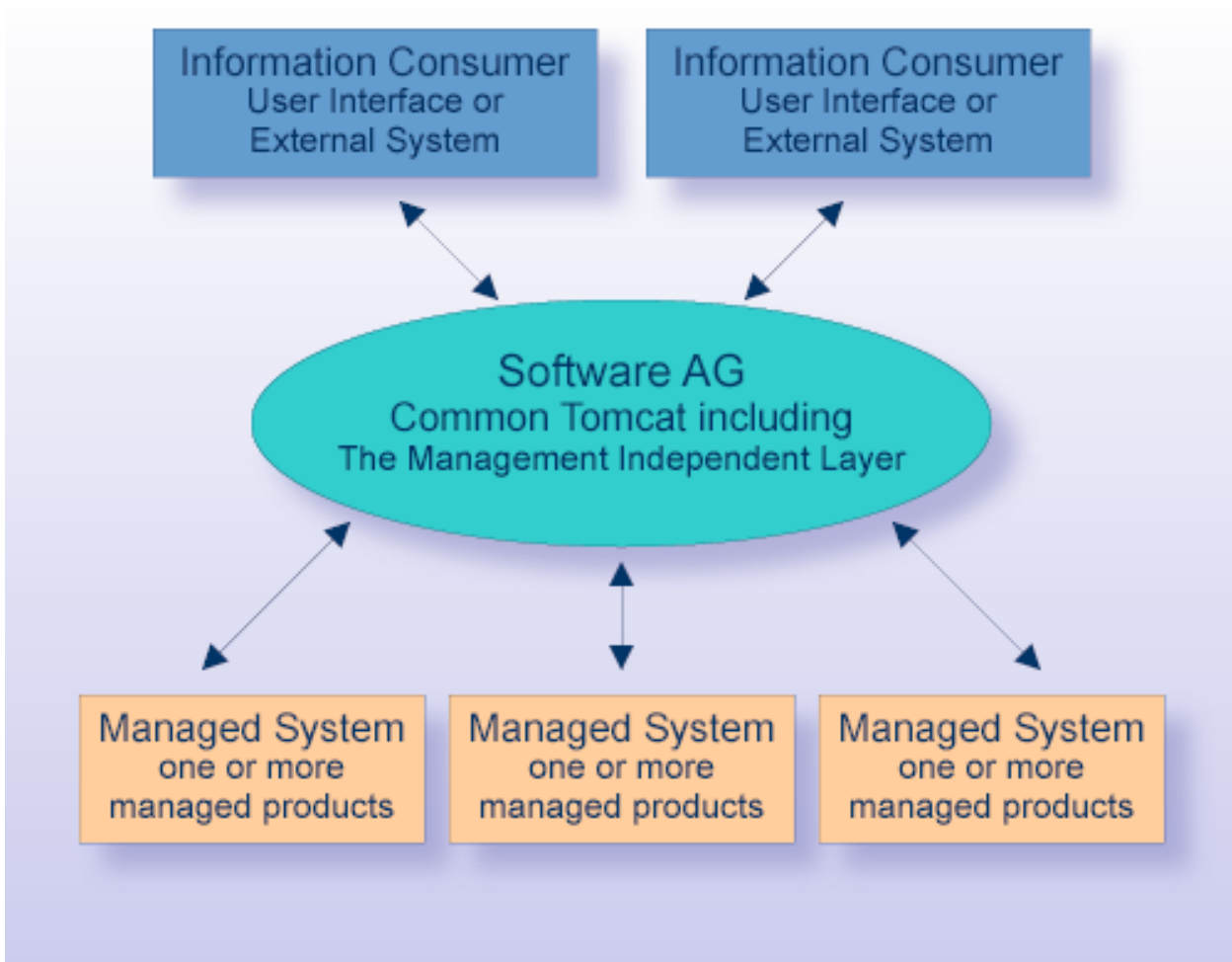
- Plug-and-play concept
- Simple interfaces
- Agent layer SDK

3 Architecture

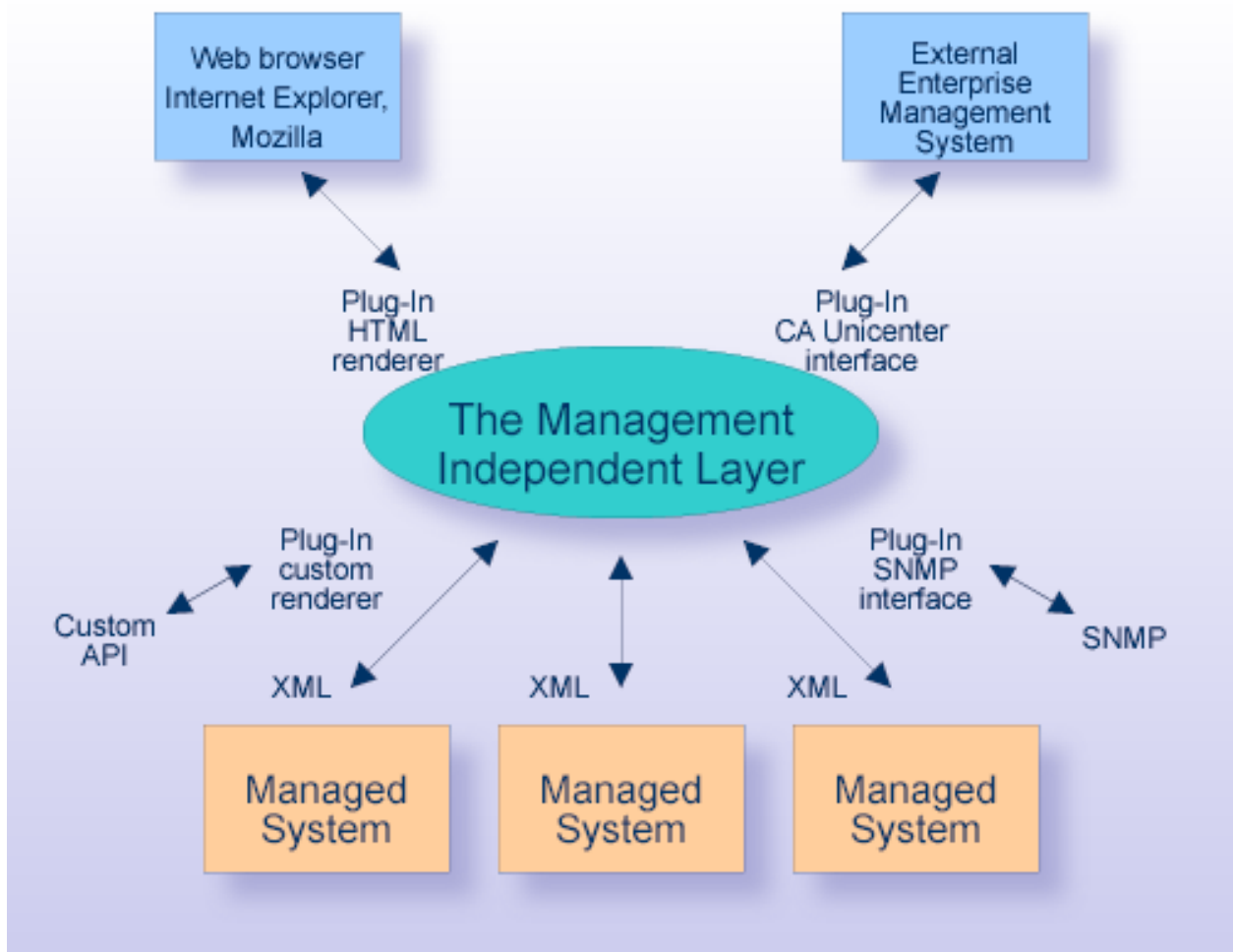
System Management Hub is a distributed application that is configurable to support 1-tier or n-tier architectures. It runs on all Software AG-supported platforms (such as Windows, Solaris, HP UX, AIX, Linux, Linux S/390, and mainframe platforms), and provides the following assets:

- Cross-platform availability (Windows, UNIX, mainframe)
- Remote administration and Internet support
- Separation of management interfaces and presentation layers from actual product agents
- Concentration of all product-relevant management data in one product-independent "Common MIL Layer"
- Generic plug-ins for the MIL Layer that run on every supported interface or external system such as Tivoli, CA Unicenter, SNMP etc.
- Generic batch console based on the MIL Layer interface
- Open architecture that is extensible with plug-ins at every level

System Management Hub has a modular architecture that supports a variety of installation scenarios - from the simplest "everything on one machine" to the very complex distributed model with dedicated proxy machines and redundant backup resources for enhanced performance. It permits plug-in integration of existing products and separation of implementation-specific management technologies.



The data interfaces use XML technology to achieve a higher degree of flexibility and extensibility. Each of the management tasks is standardized and described in XML. This provides the user with generic rendering that generates at run time an HTML-based interface.



This XML-based architecture guarantees the availability of the new feature for each of the products and across all platforms.

4 Components

- Client/Server Layer 10
- Agents 10
- Management Independent Layer Package 11
- Default User Interfaces and Add-ons 12

For a complete description of all System Management Hub registry settings, see *Registry Settings*.

Client/Server Layer

The Client/ Server Layer consists of generic components that are installed on the managed host.

The package performs the following functions:

- Client/ Server communication
- Agent control
- Agent calls
- Security

For more details, see *Client/ Server Layer Registry Settings* under *Section and Key Names*.

Agents

System Management Hub, as a management framework, works in conjunction with collections of distributed entities called "Agents". These entities are exclusively dedicated to access and perform management tasks in a particular managed element (host, router, etc.) located on the network.

System Management Hub performs some of its own functions by means of Agents. Among these are the following:

- Administration of System Management Hub as a product under the managed host tree
- Standard functions for the retrieval of basic information on infrastructure, versions, and machine configuration

Agents reside on the hosts in a distributed network environment, focused on the analysis of one or more software products. Each of the agent is written specifically for a product, platform or operating system function and concentrates strictly on the analysis of that product or function. One product can have one or more agents.

The Client/ Server Layer invokes the agents, executes them with different parameter strings depending on the request mode, and returns the results in an XML document. The XML is then sent to the standard output.

Management Independent Layer Package

The Management Independent Layer package installs generic components on a central proxy system.

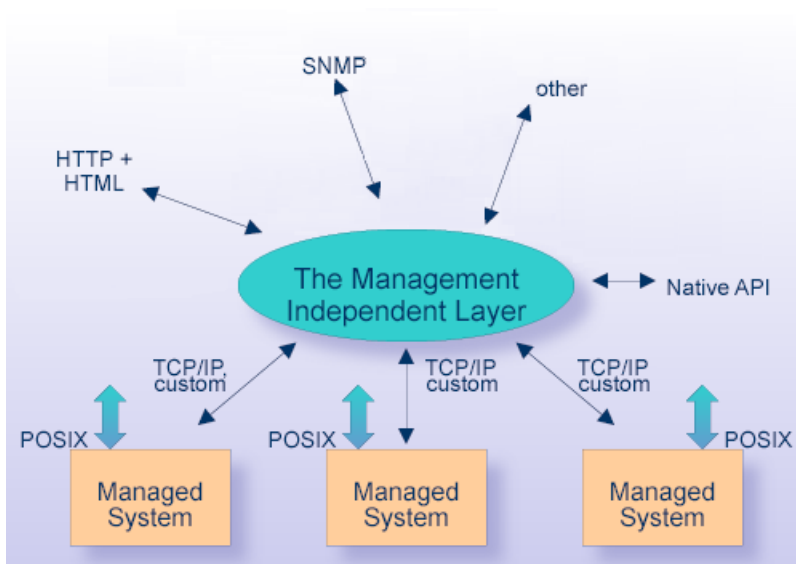
The Management Independent Layer uses the PluggableUI framework. The Pluggable UI is a proprietary framework that is based on Software AG's Composite Application Designer (CAD).

System Management Hub installs Software AG Runtime and the Management Independent Layer runs on it.

The package performs the following functions:

- Communication with one or more managed hosts
- Synchronization of managed hosts
- User session handling
- Interface conversion

The Management Independent Layer server exports a variety of interfaces for data consumers. You are not able to manage Software AG products through web interface without the Management Independent Layer.



For more details on the Management Independent Layer registry settings, see *Management Independent Layer*.

Default User Interfaces and Add-ons

For more information on available interfaces, see *Interfaces*.

- [Standard User Interfaces](#)
- [Add-on Interfaces](#)

Standard User Interfaces

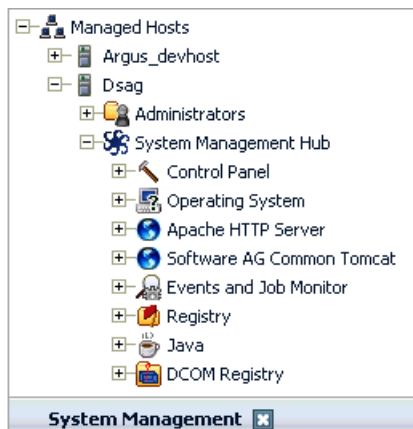
System Management Hub installs by default the following user interfaces:

Web Interface

System Management Hub uses for its web interface Software AG's Composite Application Designer (CAD), which is called the Pluggable UI.

The web interface consists of several expandable context menus for managing the products through different functional settings.

The menus are right below the **System Management Hub** node in the left context frame.



For details on the batch interface, see *Web Interface*.

Batch Interface

The batch interface is for local or remote console-based administration.

For details on the batch interface, see *Batch Interface*.

Add-on Interfaces

The installation routine installs the SNMP package as an optional add-on.

For details on the SNMP interface, see *SNMP Add-on Interface*.

