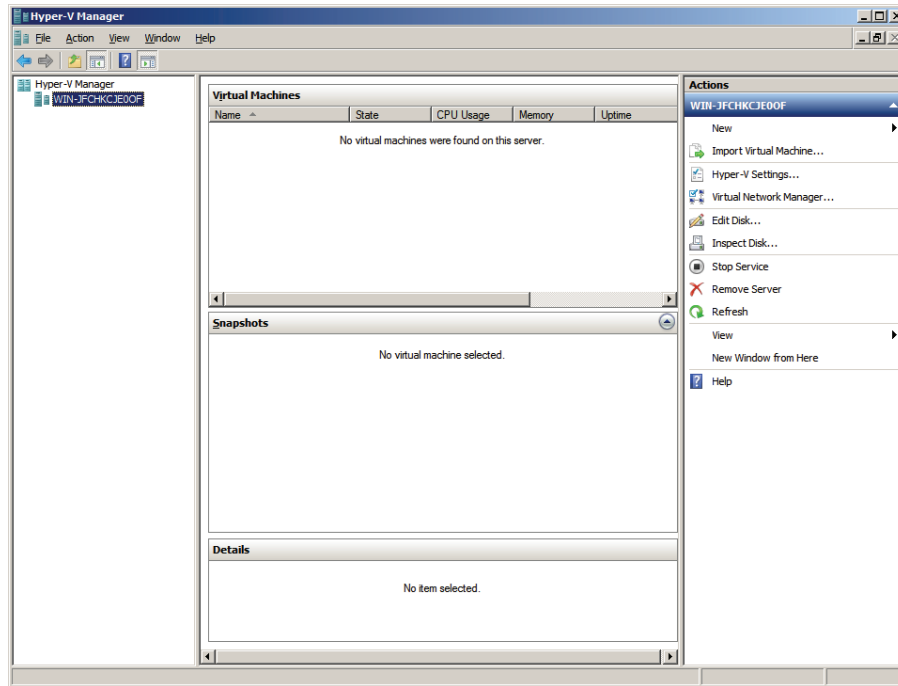


Overview of Hypervisor Technology - Microsoft® Hyper-V™ Hypervisor



Virtualization in the I/A Series® system allows operators to use thin clients to connect to a virtual machine running on a I/A Series Model V90 Server Virtualization Host, reducing the hardware footprint required for workstation/server operations and simplifying maintenance. The V90 server virtualization host uses the Microsoft® Hyper-V™ Hypervisor to create and manage multiple virtual machines.

FEATURES

The Microsoft® Hyper-V™ Hypervisor provides the following:

- ▶ Creation of I/A Series, FCS, and off-Mesh virtual machines.
- ▶ Virtual machine resource management regarding amount of RAM, hard drive space, and quantity of CPUs.
- ▶ Set-up and management of virtual networks that enable virtual machines to communicate on The Mesh control network, DCS Auxiliary Communications Network (ACN), and/or other physical networks.
- ▶ Ability to revert the virtual machine to a previous state with the use of temporary instant backups called "snapshots" which capture the state, data, and hardware configuration of a running virtual machine.
- ▶ Virtual machine behavior management regarding the shut-down and start-up of a V90 server virtualization host.

OVERVIEW

Virtualization of the I/A Series software and Foxboro Control Software (FCS) is accomplished by the Microsoft Hyper-V Hypervisor, which provides the ability to create and manage a virtualized environment, reducing the number of physical servers and workstations required. Hyper-V virtualization enables you to consolidate multiple I/A Series servers or workstations on one physical V90. Consolidation typically:

- ▶ reduces the physical area required for server and workstations stations,
- ▶ reduces the power required for server and workstations stations,
- ▶ reduces the overall server or workstation cost (depending on the specific configuration).

Virtualization also increases the flexibility for changing computer resources by enabling virtual machines resource specifications, such as RAM, hard drive space, and CPU usage, to be faster and more convenient to modify than physical servers or workstations.

Microsoft Hyper-V Hypervisor is provided with the purchase of a I/A Series Model V90 server virtualization host based on the Windows Server 2008 R2 Enterprise operating system. Please refer to the V90 Server Virtualization Server PSS 21H-4U14 B4 for more detail regarding supported virtual machines.

An example of multiple virtual machines running via the Hyper-V Manager is shown in Figure 1.

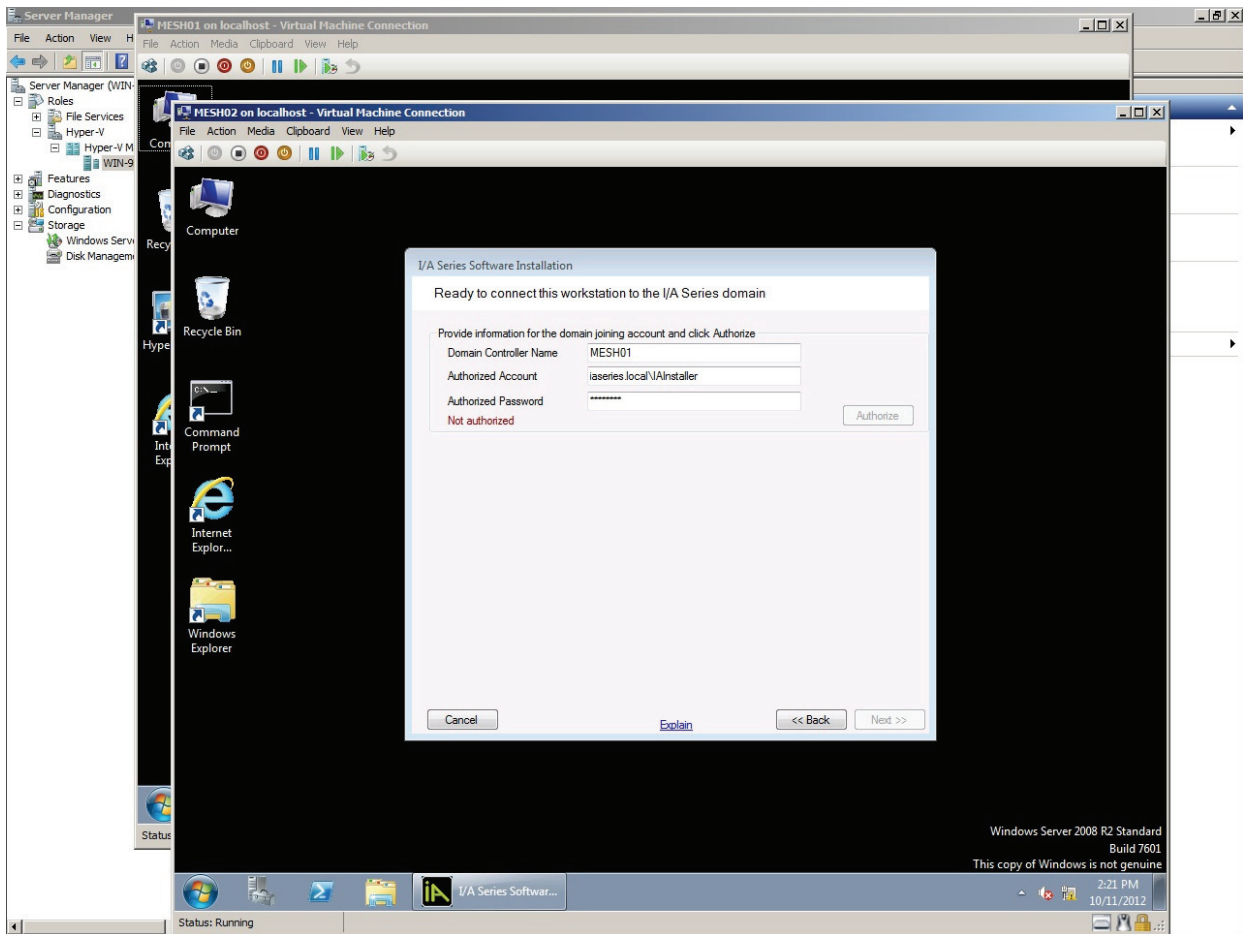


Figure 1. Multiple Virtual Machine Instances Run on Model V90 Server Virtualization Host via Microsoft Hyper-V Manager

REFERENCE DOCUMENTS

For more information regarding the virtualization product offering, please refer to the following documents. The latest revisions are available through the Invensys Operations Management Global Customer Support Center at <http://support.ips.invensys.com>.

Topic	Document Part No.	Document Title
V90 Server Virtualization Host	PSS 21H-4U14 B4	<i>I/A Series Model V90 Server Virtualization Host Hardware</i>
	B0700VA	<i>Hardware and Software Specific Instructions for I/A Series Model V90 Server Virtualization Host (DL380) (Windows Server 2008 R2 Enterprise Operating System)</i> Row 7: Supported Monitors
Virtualization	PSS 21S-8A9 B3	<i>Overview of Hypervisor Technology – Microsoft Hyper-V Hypervisor</i>
	B0700VM	<i>Virtualization User's Guide</i>
DCS Auxiliary Communications Network (ACN) Configuration	B0700CA Rev P or Later	<i>The MESH Control Network Operation, and Switch Installation and Configuration Guide</i>
Thin Client Hardware and Configuration	PSS 21H-4U13 B4	<i>Thin Clients</i>
	B0700VN	<i>Thin Client User's Guide</i>
Remote Server Connections and Required Microsoft Licenses	B0700VM	<i>Virtualization User's Guide, see "Site Planning"</i>
Virtual Machine Antivirus Security	B0700EV	<i>McAfee MOVE Antivirus Product Installation and Configuration Guide</i>

Invensys Operations Management
5601 Granite Parkway Suite 1000
Plano, TX 75024
United States of America
<http://iom.invensys.com>

Global Customer Support
Inside U.S.: 1-866-746-6477
Outside U.S.: 1-508-549-2424 or contact
your local Invensys representative.
Website: <http://support.ips.invensys.com>

Invensys, Foxboro, I/A Series, InFusion, and the Invensys logo are trademarks of Invensys plc, its subsidiaries, and affiliates.
All other brands and product names may be the trademarks of their respective owners.

Copyright 2013 Invensys Systems, Inc. All rights reserved. Unauthorized duplication or distribution is strictly prohibited.