Release Notes
SmartSystems Server v4.91

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1. Version Information

Release notes describe the updates available in SmartSystems Server 4.91.

Prior to Installing, review section 2.2.

Please reference the online help for complete user information. The online help is accessible from the SmartSystems Server by selecting Help from the menu.

	Release Version	Version Date
SmartSystems Server	4.91.02.2670	5/15/2017

Release	Date Available
4.90.00.121	9/8/2014
4.80.01.76	12/12/2013
4.60.00.0202	1/11/2013
4.50.00.0193	5/18/2012
4.02.06.0646	9/13/2011
4.01.05.0406	1/17/2011
3.51.04.1225	1/18/2010
3.50.04.1120	9/17/2009
3.42.03.0667	4/14/2009
3.41.03.0659	10/29/2008
3.22.02.0403	3/27/2008
3.21.02.0394	1/22/2008
3.20.00.0341	11/19/2007
3.11.01.0094	6/15/2007
3.10.00.0076	12/21/2006
3.00.00.0051	10/26/2006

2. Installation

2.1. System Requirements for installing the SmartSystems Server

Processor:	●2 GHz is recommended for optimum performance
Memory / RAM:	●4 GB is required
Disk Space:	● 300 MB is required for SmartSystems Server ● Additional space required for pre-requisite software.

Operating System:	● Windows 7 Professional, Enterprise, or Ultimate (32 or 64-bit) ● Windows 8.1 Pro and Enterprise(32 or 64-bit) ● Windows 10 (32 or 64-bit) ● Windows Server 2008 Enterprise ● Windows Server 2008 R2 with SP1 ● Windows Server 2012 ● Windows Server 2016 o 64-bit OS will not support Cisco AP discovery.
SQL Servers:	● Microsoft SQL Server 2008 R2 with latest SP ● Microsoft SQL Server 2012 SP1 ● Microsoft SQL Server 2014 SP2 ● Microsoft SQL Server 2016 SP1 o SQL Server 2008 R2 (full version or Express) is the minimum supported SQL Server version. o Remote database is only supported in a domain environment (not supported in workgroup environment) * SQL Server must be installed prior to installing SmartSystems Server. The SmartSystems Server installer provides a Help link to obtain an installation guide
Other Requirements:	● Microsoft Internet Explorer 6.0 SP1 or later ● Microsoft Windows Mobile Device Center ● .NET Framework v3.5 SP1 and v4 Full install are both required ** If not detected, automatically installed from internet. If installing on a PC that does not have internet access, download and install prior to installing SmartSystems Server. ● Microsoft Windows Installer 4.5 * Microsoft Windows Installer must be installed prior to installing SmartSystems Server. The SmartSystems Server installer provides a Help link to obtain an installation guide

2.2. Before Installing Version 4.91

- If an earlier version of SmartSystems is installed, the recommendation is to perform an upgrade rather than uninstalling and reinstalling. Uninstalling a previous version of SmartSystems and then reinstalling:
    - Will purge any Asset History collected by the current SmartSystems.
    - Will remove custom console settings like Broadcast Interval (automatic discovery)
    - Will preserve Software Bundles and Backup Settings.
- If you are currently using SQL 2005, you can perform a SQL upgrade and then upgrade SmartSystems server
- Migrating SmartSystems data (bundles, rules, etc.) from one machine to another is not fully supported.
    - Licenses can be migrated by "Returning" them using the Intermec License Utility on the old machine and then "Adding" them using the Intermec License Utility on the new machine
    - Software bundles can be migrated by copying the bundle installers from the old machine to the new machine and installing them
- Only these upgrade paths are supported:
    - v4.02 and above to v4.91
    - In other cases, you will need to do an intermediate upgrade or uninstall
- Recommendation is to uninstall Reporting Services prior to installing SmartSystems Foundation 4.91.
- Review SmartSystems Foundation Installation Guide from https://hsmftp.honeywell.com/ Navigate to the following folder to find the binaries and supporting documents.
  Software >> Software and Tools >> Device Management>> SmartSystems Foundation >> Console-Server Software>>

- For occasional use, SmartSystems Server may be installed on an administrator's desktop/laptop alongside other applications. For optimal operation in a production environment, install SmartSystems Server on a dedicated machine connected to a DHCP network.
- Do not install SmartSystems Server on a machine that is used as a Domain Controller.
- Do not install SmartSystems Server on a compressed drive.
- When initially installing SmartSystems Server, you must connect to an existing SQL Server database. It is highly recommended that you configure and connect to a named instance rather than connecting to the default instance of SQL Server.
    - NOTE: When upgrading from a prior version, the data from the existing database will be migrated automatically.

- Microsoft Windows Installer 4.5 and SQL Server must be installed prior to installing SmartSystems Server. You may obtain a download containing all prerequisites using the Help link when you run the installer.
- The SQL Server installation process authenticates your user account. If your user account is a network account, you must be logged into the network in order for authentication to occur. If the user account cannot be authenticated because you are not connected (or on a VPN connection), the database will not be created.
- SmartSystems Server uses the following ports. SmartSystems attempts to open these ports in Windows Firewall automatically during an install. If you are using another firewall, you will need to configure the firewall manually for the ports:

Port	Protocol	Description
UDP	161	Required for SNMP.
UDP	162	Required for the Trap port.
UDP	197	Required for the Upgrade Server.
UDP	1434	Required for SQL Database Discovery.
UDP	1758-1768	Required for Multicast File Transfer
UDP	8791	Required for the Upgrade Process.
UDP	8792	Required for the Upgrade Monitor Online Status.
UDP	49111	Required for IQueue Discovery.
UDP	52316	Required for the Remote Viewer.
TCP	1901	Required for the Remote Viewer.
TCP	49152-65535	Required for Remote Viewer.
TCP	8789	Required for HTTP.
TCP	27000-27009	Required for the License Server.
TCP	62241	Required for IQueue Messaging.

Note: If using Windows Firewall, SmartSystems attempts to close the ports automatically during uninstall. If using another firewall, you will need to configure the firewall manually after uninstall.

2.3. To Install:

Download and run the installation file (SmartSystemsFoundationInstall.exe).
Follow the on-screen instructions to verify requirements and complete the installation.

3. SmartSystems Management License

- For devices with a v4.0 or above client, a management license allows:
  - Drag-N-Drop to a folder of devices
    - Deploy or upgrade a group of Intermec by Honeywell devices all at once or in batches of 50 to save significant time. This procedure is error-proof, scalable and saves significant effort over manual procedures which utilize SD cards.
  - Activate Provisioning Bundles on a Folder
    - Automatically deploy a provisioning bundle to a device upon connection to the SmartSystems Server **(3.46 SmartSystems client required, works best with 3.48 SmartSystems client and above)**
  - Folder Right Click Tools
  - Device Health
  - Data from the device is available to Reporting Services
- No per-device license is needed for device with pre-4.0 client
- A 60 day demo of the Management license is provided on all 4.0 or higher clients and is enabled at the time the device is powered on.
- Perpetual license, no software maintenance agreement required

SmartSystems management license (454-048-001) is available for purchase through your Honeywell representative. For additional assistance, contact Intermec by Honeywell Support. (Online self-help options:
www.hsmsupportportal.com
www.hsmknowledgebase.com
To contact us:
www.hsmcontactsupport.com
www.honeywellaidc.com/locations)

4. Supported Hardware

SmartSystems Foundation 4.91 supports devices and software configurations listed in the SmartSystems compatibility matrix.
Visit the following site for SmartSystems compatibility matrix document.
https://hsmftp.honeywell.com/
Navigate to the following folder to find the binaries and supporting documents.
Software >> Software and Tools >> Device Management>> SmartSystems Foundation >> Console-Server Software>>

5. New Functionality Available in SmartSystems Server Version 4.91

Certain new features are only available on devices using the SmartSystems v4.0 or higher SmartSystems Client. To determine which SmartSystems Client you are using, open Intermec Settings and navigate to Device Settings -> System Component Versions -> SSRef Client. (If the entry does not exist, then your device does not include the SmartSystems client.)

5.1. Support for Cx75 handheld devices

- SmartSystems Foundation 4.91 supports a full range of device management features for CN75, CK75 handheld computers, including: OS, application, settings update; licensing; ScanNGo; the ability to manage SmartSystems server association; right-click power tools [Clean/Warm boots, Remote viewer]; device health; and Reporting services. This SmartSystems version supports only Windows devices, there is no support for Android devices.

Section 3 lists the features that require a SmartSystems Management License.

5.2. Support for Windows 10,Windows Server 2016

- SmartSystems Foundation 4.91 supports Windows 10 and Windows Server 2016 Operating system along with the previously supported Operating Systems. Support for the following Operating systems was dropped from this build.

1.Windows XP

2.Windows Server 2003

5.3 Support for SQL servers 2014 and 2016

- SmartSystems Foundation 4.91 supports SQL server 2014 and SQL server 2016 along with previous SQL servers which are compatible with respective Operating Systems. Support for SQL server 2005 was dropped from this build.

6. Best Practices

6.1. Provisioning

Connectivity

Completing a provision depends on the device reporting its status to the console. Refrain from making changes which leave the device unreachable by the console. Wherever possible, use an Ethernet connection for provisioning. Any changes to network connectivity, such as an OS upgrade that resets network settings, may cause the device to disconnect from SS Console and stop provisioning.

Client Compatibility

SmartSystems Reference Client Version 3.46 is the minimum required version for provisioning, but version 3.48 or above is recommended. If the version in your device is less than the desired version, check the Downloads section of https://hsmftp.honeywell.com/ for an upgrade.

Navigate to the following folder to find the binaries and supporting documents.
Software >> Software and Tools >> Device Management>> SmartSystems Foundation >> OS-Firmware Drivers>>

- A quick way to check the version is to connect the device to the SmartSystems console and view the SSRef column in details layout. Alternately, open Intermec Settings and navigate to Device Settings -> System Component Versions -> SSRef Client.

Ordering

The type of file added to a provisioning bundle determines the order it will be installed. Many file types can be installed in a custom order. The provisioning bundle tool will place the added files in a preferred order. For stability, some bundle types, like OS, will cause an error message if they are attempted to be moved later in the installation order.

The SmartSystems Reference client affects the performance and features of provisioning. If your provisioning bundle includes the SmartSystems Reference Client, place it as early as possible in the provisioning bundle sequence.

Activating Auto-Deploy

For better control, avoid activating auto-deploy of a provisioning bundle to the Discovered Devices folder. Instead, create sub-folders with a name that describes the provisioning bundle. Then you can control which devices are provisioned automatically when they are first placed in that folder.

Manual Deployment

Manually dropping the provisioning bundle onto a device or a folder of devices is best done when the bundle is small and consists of mostly user settings.

Monitoring Progress

There are four areas which show the progress of the devices being provisioned.

1. The Status and Reason sections of the device icon give minimal information and are best viewed in the details layout.

2. The Upgrade Monitor, launched from the right click menu of the Universal Upgrade Server icon, lists devices as they get provisioned and provides more information than the main console GUI.

3. The Upgrade Server Event Viewer, accessed from the right click menu of the Universal Upgrade Server icon, needs to be refreshed to show progress and may become difficult to follow as the quantity of devices increases.

4. The status window on the device displays the upgrade status as it progresses through each stage of the provisioning bundle.

Population Sizes

The performance of the provisioning bundle is affected by server performance characteristics (processor speed and memory), network performance characteristics, size of the bundle, and quantity of devices being deployed. Smaller bundles, containing mostly configuration settings, are easily handled in batches of 50 devices at a time. Larger bundles, like OS upgrades, consume large amounts of bandwidth. The best practices support up to 12 simultaneous OS upgrades through a provisioning bundle. It is never recommended to attempt more than 24 simultaneous OS upgrades through a provisioning bundle.

6.2. Device Discovery

When the SmartSystems services start, they send out a signal to discover all the SmartSystems-enabled devices connected to your local subnet, and an icon representing each discovered device appears in the console. As the status of the device changes, it will send a message to the console to communicate its new status.

You can always trigger a broadcast manually by clicking the Discover button again, but there are several ways to configure your console or device through Intermec Settings to enhance the device discovery process:

- You can configure SmartSystems to broadcast across subnets or to specific IP addresses or IP address ranges.
    - Configuring IP Address Ranges works well for a small number of devices with known IP addresses. If you want to broadcast to a remote subnet, Subnet Broadcasts is preferable because the network traffic is reduced, but routers may have to be configured to forward SmartSystems broadcast packets. Configuring both subnet broadcasts and IP address ranges is not recommended. You do not need to specify the subnet broadcast interval of the SmartSystems server because SmartSystems automatically broadcasts to that subnet.
- You can configure SmartSystems to periodically initiate device discovery on its own using the Broadcast Interval timer.

- You can configure an Intermec by Honeywell device to connect to a specific SmartSystems console using the Server Association property.

Using the Broadcast Interval feature is helpful when working with a large number of devices because it can reduce network traffic associated with device discovery. Pressing the “Discover” button causes all devices to identify themselves to the SmartSystems server. When using the Broadcast Interval to initiate periodic device discovery, only devices which aren’t registered with the server will identify themselves.

7. Issues Fixed In This Version

1.Supporting of SQL server 2014 and SQL server 2016
2.Supporting of Windows 10(32 bit and 64 bit) and Windows Server 2016

For more information about known limitations of the SmartSystems Foundation software, refer to the new Troubleshooting section in the online Help.

8. Known Issues in This Version

1. "Reporting services is not installed" warning is thrown while installing the Smart Systems in Remote DB cases:
ID : W10SS-13
Description:
Sometimes, while installing the SmartSystems "Reporting services is not installed" warning will be thrown. (Although Reporting services is installed) in Remote DB case.

Workaround:
This issue is due to blocking the WMI (Windows Management Instrumentation) app by the windows firewall.
In the remote Machine(where SQL server is installed)
Run >> Firewall.cpl >>>>”Allow an app or feature through Windows Firewall”>>Change Settings >>click on “Windows Management Instrumentation”>> Enable “Domain” or option which is relevant
>>OK>>Restart system and restart the SmartSystemsFoundation installation.

2. CallbackNotificationDeploymentScript.exe crash Issue
ID : W10SS-18

Description:
Very rarely in some of the Win 10 machines, while installing the SmartSystemfoundation "CallbackNotificationDeploymentScript" crash may appear.

Workaround:
1. Start Installation of Smart System foundation with admin rights
2.If "CallbackNotificationDeploymentScript" crash message appears then click "Close the program" and click "OK" for next message box.
3. Continue this procedure for all the errors
4. After completion of the installation >> open the registry >>
In 64 bit machine: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Intermec
Right click on folder “Intermec” >> click “Permissions”
5. Click “Reorder”
Give full permissions to the respective users.
6. Open the Command prompt in admin mode and run following commands one by one.
"C:\Program Files (x86)\Intermec\SmartSystem\Server\CallBackNotifcationDeploymentScript.exe" -addregistryaccess "HKLM\Software\Intermec\SmartSystem" "SmartSystems Administrators"

"C:\Program Files (x86)\Intermec\SmartSystem\Server\CallBackNotifcationDeploymentScript.exe" -addregistryaccess "HKLM\Software\Intermec\SS_UpgradeServer" "SmartSystems Administrators"

"C:\Program Files (x86)\Intermec\SmartSystem\Server\CallBackNotifcationDeploymentScript.exe" -addregistryaccess "HKLM\Software\Intermec\IQueue" "SmartSystems Administrators"

"C:\Program Files (x86)\Intermec\SmartSystem\Server\CallBackNotifcationDeploymentScript.exe" -addregistryaccess "HKLM\Software\Intermec\GPS" "SmartSystems Administrators"

"C:\Program Files (x86)\Intermec\SmartSystem\Server\CallBackNotifcationDeploymentScript.exe" -addregistryaccess "HKLM\Software\Intermec\SSClient" "SmartSystems Administrators"

"C:\Program Files (x86)\Intermec\SmartSystem\Server\CallBackNotifcationDeploymentScript.exe" -addregistryaccess "HKLM\Software\Intermec\SmartSystem\EventLogSubService" "SmartSystems Administrators"

"C:\Program Files (x86)\Intermec\SmartSystem\Server\CallBackNotifcationDeploymentScript.exe" -addregistryaccess "HKLM\Software\Intermec\SmartSystem\Server\New Installs" "BUILTIN\USERS"

"C:\Program Files (x86)\Intermec\SmartSystem\Server\CallBackNotifcationDeploymentScript.exe" -addregistryaccess "HKLM\Software\Microsoft\Windows CE Services" "BUILTIN\USERS"

7. Restart the system

3. Remote viewer and Reporting services ports open issues:
Description:
Sometimes, Remote viewer and Reporting services ports are not being opened by the SmartSystems installation.

Workaround:
Manually open those ports. Please refer Section 2.2 for ports details.