



# STAGES™ HARDWARE

## Recommended Hardware Specifications

Official Release

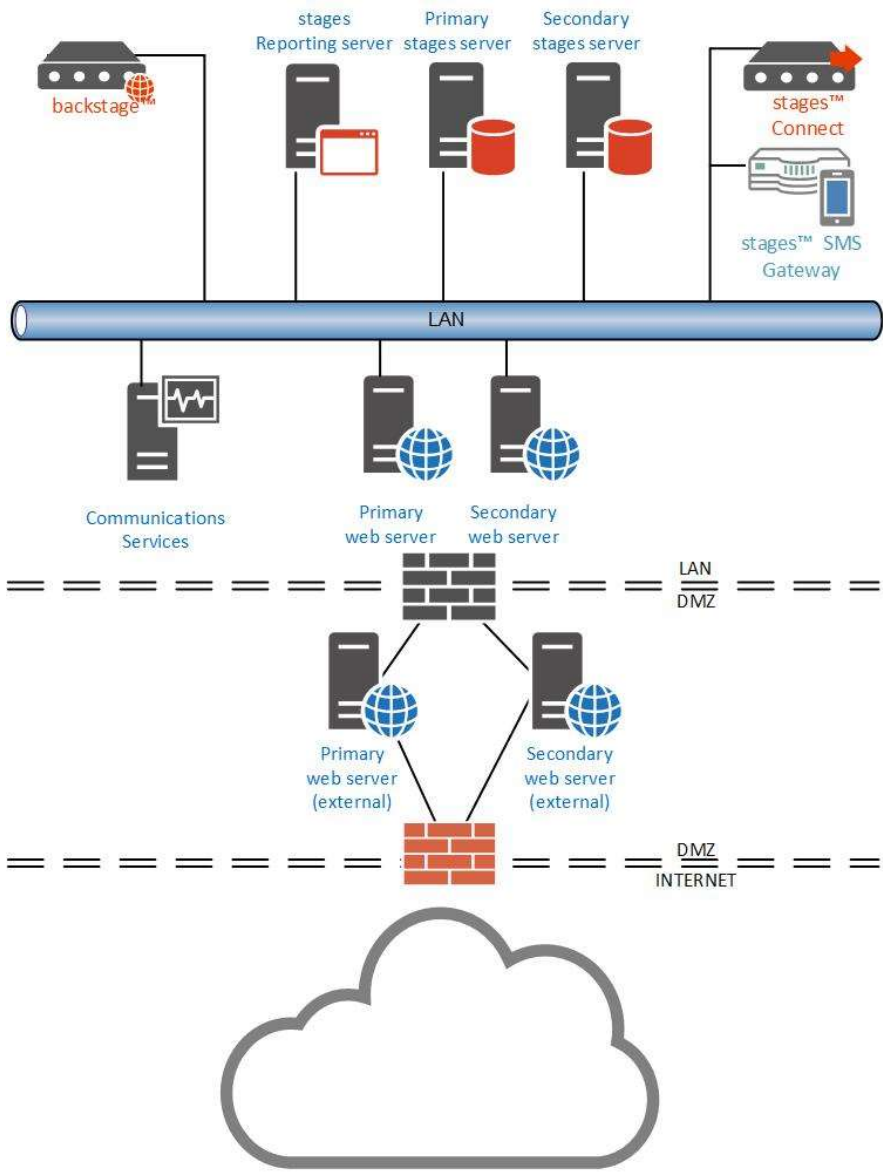
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# Standard stages™ Design Architecture

The following diagram outlines a sample stages™ design architecture and represents the various components needed for stages™ to run properly. Your actual design may vary based on your individual business requirements or objectives.



## stages Server Specifications

The following specifications outline the minimum and recommended hardware which should be purchased for a standard stages™ installation.

### SQL Server Deployment

- 3 production servers: 2 for processing transactions, 1 for reporting

### SQL Server Requirements (each)

	Minimum	Recommended
<b>Processor</b>	Dual Quad Core	Dual Quad Core
<b>Memory</b>	32GB	64GB
<b>Storage</b>	500GB	1TB
<b>Failover Req.</b>	Mirroring	RAID5
<b>Operating System</b>	MS Windows	MS Windows
<b>Database System</b>	MS SQL Server 2012 <sup>1</sup>	MS SQL Server 2012 <sup>1</sup>
<b>SQL License</b>	Included	Included
<b>Power Supply</b>	No Less than Two Installed <sup>1</sup>	No Less than Two Installed <sup>2</sup>

### SQL Server Notes:

- Disk storage is primarily for text based event history (100million events = 100GB) and excludes audio/video data.
- Each server should have at least 2 power supplies to be UL compliant. Please consult the UL1981 section within this document for more information.



## IIS Server Deployment

- 4 production servers: 2 for external facing services and 2 for internal facing.

## IIS Server Requirements (each)

	Recommended
<b>Processor</b>	Single Quad Core
<b>Memory</b>	16GB
<b>Storage</b>	250GB
<b>Load Balancing</b>	Optional
<b>Operating System</b>	MS Windows
<b>Application System</b>	MS Windows Server 2012
<b>Power Supply</b>	No Less than Two Installed <sup>1</sup>

## IIS Server Notes:

SGS also installs anti-virus and malware protection on all IIS servers. This is to ensure adequate protection during the operation of stages™.

Each server should have at least 2 power supplies to be UL compliant. Please consult the UL1981 section within this document for more information



## Additional Server Specifications

### Additional Communications Services

An additional computer should be used for ancillary outward-facing communications.

These services include:

- SGS Email Service
- SGS Reporting Service
- SGS Telephony Service
- SGS Outbound Command Processor
- SGS SMS Service

### App Servers (each)

	Recommended
<b>Processor</b>	Single Quad Core
<b>Memory</b>	16GB
<b>Storage</b>	250GB
<b>Load Balancing</b>	Optional
<b>Operating System</b>	MS Windows
<b>Application System</b>	MS Windows Server 2012
<b>Power Supply</b>	No Less than Two Installed 1

These services can be hosted by an existing IIS server or can be hosted on a dedicated OR virtual server. Please consult SGS if you have any design questions regarding these services.



## Additional Appliance Hardware

The following specifications apply to the various SGS service appliances available.

### BackStage™ Manager

This appliance is required for SGS VPN access & equipment monitoring.

### stages™ Connect

This appliance is required for signal processing installed as a redundant pair **with** terminal servers (not provided by SGS) for RS232 device connection.

Backstage™ Manager OR stages™ Connect	
Processor	2 Cores or Higher
Memory	4GB
Storage	250GB
Operating System	Linux

### stages™ IVR

If PRIs are being used for voice traffic, a standalone IVR appliance **must** be used.

If SIP trunks are being used, then a virtual IVR instance can be used. .

stages IVR	
Processor	4 Cores or Higher
Memory	8GB
Storage	250GB
Operating System	Linux

## Deprecated Hardware

Effective June 30, 2018: The Line Tester has reached End of Life and is no longer available for purchase by SGS. Support has also been discontinued.

Effective July 1, 2018: The SMS Gateway service appliance is no longer available for use in the STAGES ecosystem. Its functionality has been replaced by an application service within the STAGES application server.



See our Product Alerts on [www.secglobe.net](http://www.secglobe.net) for more information.



## Workstation Hardware

The following specifications outline the minimum and recommended hardware which should be purchased for a standard stages™ workstation.

### Workstation Requirements (each)

	Minimum	Recommended
<b>System Age</b>	No less than 3 years old	No less than 2 years old
<b>Processor</b>	I5 or higher	I7 or higher
<b>Memory</b>	4GB	8GB
<b>Storage</b>	250GB	500GB
<b>Video Card and Display</b>	Capable of Resolution: 1920 x 1080 or better	Capable of Resolution: 1920 x 1080 or better
<b>Required Accessories</b>	Keyboard, Mouse	Keyboard, Mouse
<b>Operating System (Windows)</b>	MS Windows 8	MS Windows 10





## UL 1981 Compliance

**NOTE:** This certification only applies to US based operations.

Underwriter Laboratories (UL) provides a certification for Central Station Automation platforms which is designated as UL 1981. Chapter 9 of the UL1981 specification specifically addresses hardware.

Should you want your central station to be UL 1981 compliant, you should comply with each of the following hardware criteria:

UL1981	Specification
<b>Hardware</b>	Designed for continuous use, 24 hours a day, 7 days a week <sup>3</sup>
<b>Manufacturer</b>	Specified as a "high-availability" system <sup>3</sup>
<b>Cooling Fans</b>	No less than 2
<b>Power Supplies</b>	No less than 2
<b>Network Connections</b>	No less than 2

Please consult the official UL 1981 specification for additional criteria needed for final certification.

You may obtain more information about the UL1981 standard at: <http://www.ul.com>

## Footnotes

- 1 – The software version indicated is the minimum version required for operation.  
More recent versions are acceptable for use.
- 2 – This is required for UL1981 compliance
- 3 – This is elapsed time from the date of original purchase.
- 4 – This is designated by the hardware manufacturer.

