

PC/Operating System Requirements:

- System Galaxy (SG), database and services are supported on Win-7 Pro SP1+, Win 8.1 Pro, Win-10 Pro.
- SG database and services can run on Windows Server® 2008 R2/2012/2016 (32/64 bit).
Server 2003 & Win XP not supported – the software installer will prompt user and abort the install.
- SG is supported on MS Server OS for diagnostics use, not as a *standalone install* or *workstation* for monitoring, badging, biometric enroll, etc. because 3rd party technologies are not supported on a Server OS.
- **Minimum PC Requirements SG 10:** Pentium dual core 3.2 GHz. Pentium-4 equivalent (or higher); 2 GB RAM (Server & client); 40GB Hard Drive, 4GB Free Space dedicated to System Galaxy; Std. 24bit color graphics card.
- System Galaxy (10.0 or later) & GCS Services are compatible with VMware® vSphere or vCenter.
- System Galaxy (10.0 or later) & GCS services are compatible with Microsoft Server® 2008 R2 and Hyper-V.
- System Galaxy (10.5.1 or later) & GCS services are compatible with Microsoft Server® 2012
- System Galaxy (10.5.6 or later) & GCS services are compatible with Microsoft Server® 2012/2014/2016

Installation Requirements:

- SG 10.5.1 or later, the 64-bit Install now comes on a single DVD (DVD+R) drive required); and can also be ordered on a *USB drive*, or as a downloadable install package. SG 32-bit Installer available on request from Galaxy Customer Service.
- Installing System Galaxy software requires **full administrator rights**.
- **Windows-7:** Microsoft requires an internet connection to install Part-1 for the .NET v3.5; Win-8.1/10 must install v3.5 manually.
- **Using/Operating Galaxy software requires Power User rights at the PC including the ability to read/write to the registry.** (DB Engines & Badging software also requires this level of privileges).
- **Core Documentation** (PDFs) is available in **Installation Help** on **DVD-1**. CD-2 contains the full set of manuals in PDF format.

NOTE: The SG Install Suite DVD splash screen, provides links for **Part-1 & Part-2 Readme's** (html format) for related installation information and **SG System Specs Guide** (PDF) for a full list of system specifications and install requirements.

Database Management Requirements:

- System Galaxy installs SQL Server 2014 Express (64-bit) during Part-2 of Galaxy Install DVD. An instance named 'GCSSQLEXPRESS' is created during the install process. Default database logins are also created during the install process.
- **Note:** Native SQL Components are automatically installed on the DB Server when you install the databases. Additionally, the Native SQL ODBC must also be installed on every Galaxy client that are not hosting the databases (Part-2 Client Components).
- The ODBC connection uses **SQL Server Authentication** with a strong password. Users should define their own database password during the installation process (Part-2 Database Installation).
- Two databases (SysGal & SysGalArc) attach to the SQL database engine during a normal installation process.
- **SG Database Backups** can be created using SQL Management Studio or with GCS Service Manager.
- SG Databases cannot be re-indexed or compressed while software and services are in operation. All SG clients and GCS Services must be shut down before performing database maintenance.
- **SG is also compatible with Enterprise versions of SQL 2008/2012/2014/2016.** SQL 2005 Enterprise & Express no longer supported.

Network Requirements:

- **Network Security Scanning Software:** System Galaxy, and/or its components, must be properly bypassed.
- **Virus Scanning Software:** System Galaxy databases should be bypassed
- **All access control panels should be placed on a V-LAN (Virtual LAN).**
- An internet connection is required for installing MS .NET Framework 3.5 for Win-7 OS; Win-8.1/10 OS must install v3.5 manually.
- 635-series controllers are 10/100 MB, Full Duplex, AUTO SENSING
- **508i/600-series controllers require 10MB/Full Duplex at the port/switch/router for TCP/IP connection.**
- **All 635/600 CPUs & all 508i 'primary' CPUs require a unique IP address & Subnet Mask.**
- **A Static IP Address is required for the 508i "Primary Panel" on each 422 Loop** (DHCP not supported in 508i)
- **A Static IP Address is recommended for 600/635 controllers.** If static IP Address is not available, use non-routable addressing with permanent lease.

MANDATORY: a Static IP Address is REQUIRED for any PC running the GCS Event Service. (The GCS Event Service supports connections from the 600/635 panels.) **Do not use DHCP addressing for the Event Server.**

TCP/IP Port Requirements:

The following ports must be open/unblocked on the PC and on network to allow System Galaxy to function on the network.

- **Windows® users:** must configure the PC firewall to accept the required port numbers.
- **Note - for 3rd Party applications/devices:** may need to open firewall ports manually.

TABLE OF DEFAULT EXCEPTIONS - for Galaxy and related applications & interfaces.

Port	Service/Device	Location and Details
3001	Control Panels	All 508i/600/635 panels use TCP Port 3001 (must be open on the controller side).
5010	Client Gateway Svc *	PC/Server hosting the Client Gateway Service uses this port obtain/verify registration information.
4002	Client Gateway Svc *	Installs on "Main Communication Server" PC/Server - only one instance of this service can be running. Receives events from the main Comm. Service.
4000	Communication * ** Service	Installs on "Main Communication Server" PC/Server - i.e. Comm. Server (or ancillary comm svr). Receives events from 508i loops or from the GCS Event Service for 600/635 panels.
4001	DBWriter Service *	Installs on "Main Communication Server" PC/Server - only one instance can be running. Writes events from panels, Comm. Service & Event Service to the database.
4003 4005 3001	GCS Event * ** Service	Installs on "Main Communication Server" PC/Server - i.e. Comm. Server (or ancillary event svr). Receives events from the 600/635-series hardware. Handles events between the 600/635 panels, the GCS Comm Service, as well as global events between panels on the same cluster.
8000 / 8443	Web API Service (8443/https) changing default port may be recommended.	Installs on "Main Communication Server" (change this to automatic ONLY IF using a feature that relies on the Web API Service). Default Port# can be set during SG Install Part-3A; OR it can be defined later in the XML config file, if needed. Do not use port 80/443 in live production. An SSL certificate is required (with private key intact) for Galaxy Mobile Apps if using on public WiFi. Note: the Web API Service also supports certain interfaces - i.e. ASSA-DSR app, KONE app, VMS Web-API Plugins, etc.
4004	Alarm Panel Service	The <i>Main Communication Server</i> . <u>Only one instance of this service can be running.</u> Sends events to the Comm. Service from the alarm panel.
11010	MA Loader	(Legacy Sagem only) Installed on client/server that is using the Traditional 'Sagem' Biometric Enrollment.
*	System Galaxy part-3 of the software install installs <i>core services</i> to start "automatic" and attempts to open the PC port.	
**	For Ancillary servers only: Additional instance of the service can be installed on an ancillary server to support remote panels. On the ancillary server, you must disable the additional instances of Client Gateway & DBWriter, and close their related ports.	

Microsoft SQL Database - Firewall exceptions

sqlservr.exe	required to support client connections to the host server
sqlbrowser.exe	
file & printer sharing	

Badging Software - Firewall exceptions

4747, 4748, 4749	Card Exchange 7: open on every client workstation that supports badge enrollment & printing.
81 (default)	idProducer Badging Solution (port changes may be recommended to avoid conflicts)

Time & Attendance Firewall exceptions must match on both linked servers.

Also note: MSDTC Config must match on both servers with linked SQL Connections. **A ".reg" file exists that sets these values (refer to the SG Time & Attendance manual for details); view in NOTEPAD; Review with IT Dept.**

135	MSDTC	TCP 135 on both Time & Attendance servers with linked SQL Connections
6000 - 6050	MSDTC	6000 thru 6050 on both Time & Attendance servers with linked SQL Connections

PORT	DVR + NVR + VMS	PORT	DVR + NVR + VMS
6808	Discovery	81	ONSSI / OCULARIS (default)
9871	Discovery 2	80	Salient
2000	Discovery 3	80	Milestone
2000	OpenEye	18772	Integral
2000	Toshiba Surveillix	1024	Kalatel
4000	Honeywell Fusion (4000 may be reserved for SG)	9002	Pelco / Endura
		NEW 8085	LENSEC Web-based VMS Solution ⁽¹⁾
🔥 Changing the default port may be recommended for security reasons and avoiding conflicts.			
(1) Relies on the GCS WebAPI Service and Video-API Plugins.			