
PC/Operating System Requirements:

- **System Galaxy (SG), database and services run on Windows 7 Pro / 8 Pro & 10 Pro (32/64bit).**
- **SG database and services can also run on Windows Server 2008 R2 & Server 2012.** The SG Client is supported on a Server OS for administrative or diagnostic use ONLY. Third-party devices/drivers may not be supported on a Server OS. A Server OS should not be used as a *standalone install* or *workstation* for monitoring, badging, biometric enrollment, etc.
- **Minimum PC Requirements SG 9:** 2.8GHz. 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 at 1280x1024 resolution.
- **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 (9.0.2/10 or later) & GCS Services are compatible with VMware vSphere or vCenter.
- System Galaxy (9.0.2/10 or later) & GCS services are compatible with Microsoft Server 2008 R2 / Hyper-V.

Installation Requirements:

- **Installing System Galaxy software REQUIRES full administrative rights.**
- **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 privilege).
- **SG 10 Install comes on DVD media (DVD+R) drive required);** is available for direct download, and can also be ordered on a *USB drive*. Documentation (PDF) is available from the ***Install DVD-1 Installation Help link***. CD-2 contains supplemental components and the documents in PDF form.

NOTE: See information on **Galaxy's Knowledgebase** regarding installations on 2008 Server & Windows 7 /8 /10.

Database Management Requirements:

- **Galaxy installs MS SQL Server 2014 Express in Step #2 of the install process.**
 - An instance named 'GCSSQLEXPRESS' is created during the install process.
 - Default database logins and Native SQL ODBC Data Sources are created during the install process.
- The ODBC connection uses SQL Server Authentication with a strong password. Users can define their own database password during the installation process (Step #2), as of SG 10.4
- **Two databases (SysGal & SysGalArc) attach to the database engine during a normal installation process.**
- **Database Backups** can be created using SQL Management Studio or with GCS Service Manager.
- **Databases cannot be re-indexed or compressed!**

Network Requirements:

- ♦ **All Galaxy hardware should be in a dedicated network segment or VLAN.**
- ♦ **Legacy hardware (508i/600) controllers REQUIRE 10MB/Full-Duplex to be hard-coded at the switch port.**
- ♦ **All 635/600 CPUs & all 508i 'primary' CPUs require a unique IP address & Subnet Mask.**
- ♦ **A Static IP Address is required for each 508i primary controller** (DHCP is not supported by the 508i).
- ♦ **A Static IP Address is *strongly* recommended for 600/635 controllers,** but DHCP is also supported.
- ♦ **NOTE:** If static IP Addresses are not available, DHCP with static allocation/reservation is recommended.
- ♦ **WARNING:** If DHCP is used for the panels and the DHCP server goes offline, connectivity can be affected.
- ♦ **IMPORTANT: A static IP Address is REQUIRED for any PC running the *Event Server* service.**
- ♦ **Network Security Scanning Software:** System Galaxy, and/or its components, must be properly bypassed.
- ♦ **Virus Scanning Software:** System Galaxy databases and log files should be bypassed/excluded.

System Galaxy Port Requirements:

The following ports must be opened to allow System Galaxy to function on a network. Galaxy Control Systems has no control over the port numbers used by 3rd party applications when used in tandem with System Galaxy.

- Windows Firewall is automatically configure during the installation of System Galaxy.
- For 3rd Party applications/devices, the user must open firewall ports manually.

IMPORTANT: Specific port numbers must be open / not blocked by firewalls, switches, or routers.

Port	Service/Device	Location and Details
3001	508i Controller	The 508i listens on TCP 3001. This port should be opened on the 508i controller side.
5010	Client Gateway	The PC hosting the Client Gateway service. Used to obtain registration information.
4000	Communication Service	Any computer designated as a <i>Communication Server</i> hosting the Communication Service (i.e. main or ancillary server). Any PC receiving events from 508i loops or from the Event Service if using 600 panels.
4001	DBWriter Service	The <i>Main Communication Server</i> . <u>Only one instance of this service can be running.</u> Writes events from the Comm. Service to the database.
4002	Client Gateway	The <i>Main Communication Server</i> . <u>Only one instance of this service can be running.</u> Receives events from the Comm. Service and sends to the SG Event Monitoring screens.
4003 4005 3001	Event Service	Any computer hosting an Event Service for 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.
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	Installed on the Galaxy/Sagem Enrollment PC. <i>Used with SAGEM biometrics to communicate with IP Readers.</i>
sqlservr.exe		must be added at the server for clients to connect
sqlbrowser.exe		must be added at the server for clients to connect
file & printer sharing		must be added at the server for clients to connect
Card Exchange Badging Software - Firewall exceptions		
4747, 4748, 4749		required for each badging client workstation
Time & Attendance Firewall exceptions must match on both linked servers.		
Also note: MSDT 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	Service/Device	PORT	
****	DVR listening port		- need to open the specified port(s) required by DVR/NVR/VMS Manufacturer
6808	Discovery	81	ONSSI / OCULARIS (default)
9871	Discovery 2	80	Salient
2000	Discovery 3	80	Milestone
2000	OpenEye		
2000	Toshiba Surveillix		
4000	Honeywell Fusion		
18772	Integral		
1024	Kalatel		
9002	Pelco / Endrua		