

RELEASE NOTES FOR SKYLINEGLOBE SERVER 7.3

About SkylineGlobe Server

SkylineGlobe Server is a private cloud solution that provides a comprehensive set of web services for publishing, storing, managing and streaming 3D spatial data. All your spatial data types can be streamed including imagery (MPT/TBP/WMS/WMTS), elevation (MPT/TBP/WMS/WMTS), feature (WFS/WFS-T), 3D Mesh (3DML, OGC 3D Tiles, Esri I3S/SLPK), point cloud (CPT, OGC 3D Tiles), and project files.

Individual geospatial layers and complete projects can be directly uploaded and published to the cloud server from TerraExplorer Pro or other Skyline client applications. Through a single publishing operation, data is made ready for consumption by all TerraExplorer clients: Desktop, Web and Mobile, as well as other geospatial applications. Server-side geospatial layers that are stored in files and databases on the server can also be published by scanning their data stores and publishing selected layers.

In addition to streaming layers to remote TerraExplorer clients, SkylineGlobe Server can also convert and expose data in other formats, while storing only the original data formats on the server. This enables access by other clients, including Esri, QGIS and Cesium-based viewers. All data on your server is cataloged and referenced so clients can easily find the specific published layer required.

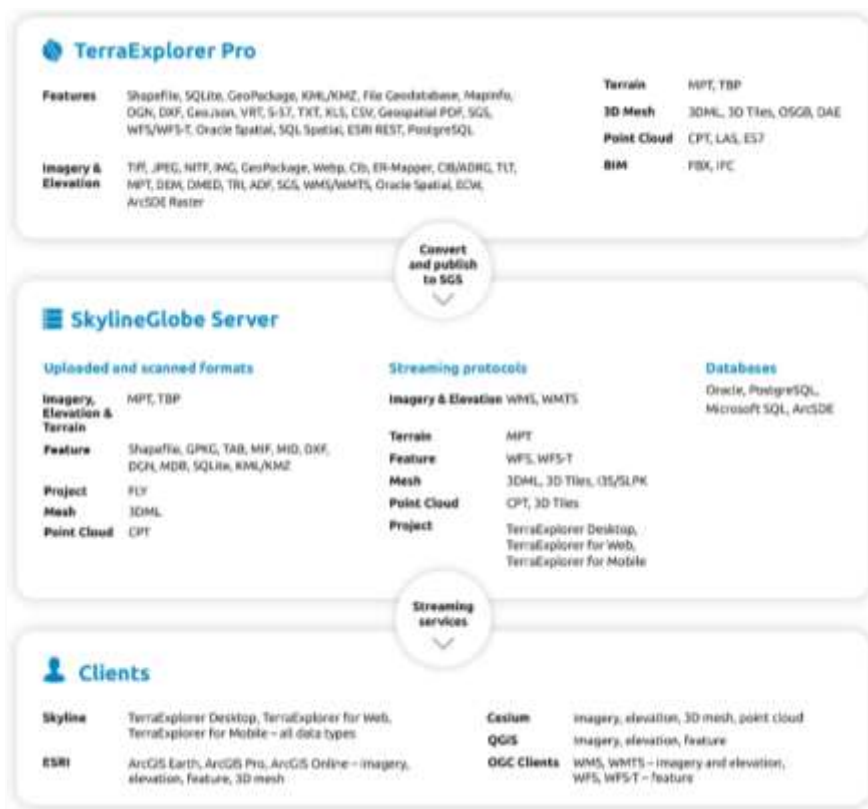
For enhanced scalability, SkylineGlobe Server can be configured as a single server or as part of a server cluster. A server cluster is a collection of servers, behind a load balancer, that communicate with each other in order to serve data to clients with higher availability.

Your data is kept safe by multiple security layers, including restriction of each user group to predefined data folders and a robust and customized user authentication mechanism. The server's built-in complete user access control system allows easy management of users, groups and virtual private servers (sites). Administrative roles can control the server side upload storage space per user/group/site, number of concurrent viewers, expiration dates and view/edit access permission.

Server Architecture



Supported Sources and Formats



New Features in Release 7.3

Support for MySQL / PostgreSQL Management Database

SGS 7.3 supports MySQL / Postgres for your SGS Management database solution. These databases support a higher number of transactions than SQLite and provide greater reliability when working in a multi-server environment. SGS continues to also support the SQLite database.

3D Tiles Using glTF 2.0 with Draco Compression

For reduced size and better streaming, the 3D mesh service now serves 3D Tiles in glTF 2.0 format with Draco compression.

3D Tiles Mesh Styling for BIM/CAD Models

To support viewing in TerraExplorer for Web and other Cesium-based viewers, SGS 7.3's 3D mesh service exposes 3D mesh and their attribute information as OGC 3D Tiles (with Batch Table). The attribute information can be used to style and query sub-models based on attribute values, while storing only the original data format on the server.

3D Tiles Point Cloud Styling

To support viewing in TerraExplorer for Web and other Cesium viewers, SGS 7.3's point cloud service exposes point cloud layers and their attribute information as OGC 3D Tiles (with Batch Table). The attribute information can be used to style the point cloud (e.g., point size, color, or visibility) based on attribute (scalar) values, while storing only the original data format on the server.

Token Access Mechanism

A security token mechanism is now available in addition to the user/password authentication mechanism. The security token is per user and allows the same access level the user has. This security option is available only to "Viewer" level users and allows accessing (read/write) data, but no publishing or administration options.

Enhanced Support for Esri Clients

- SGS now supports on-the-fly conversion from 3DML to I3S/SLPK 1.7, in addition to the I3S/SLPK 1.5, to improve streaming performance to all Esri clients. SGS exposes a layer as I3S 1.7 if the 3DML was published to SGS by TerraExplorer 7.3 or higher.
- Non-public (secured) 3DML and WMTS/WMS raster layers can now be loaded in all Esri clients by

connecting with token and login authentication.

Load SGS Mesh Layers in Unreal Engine

Unreal Engine users can now combine the high-fidelity rendering power of Unreal Engine with high-quality 3D geospatial data from SkylineGlobe Servers. Building on Unreal Engine's new support for Cesium 3D Tiles, Skyline has implemented several customizations that allow Unreal Engine users to load mesh data exposed as 3D Tiles from SkylineGlobe Server. See our knowledge base article on the topic for the step-by-step process.

Sites Management Page

New Sites page added to SGS Manager allows easy access and management of all the virtual servers ("sites") hosted on your server. Super administrators can perform general site management, including addition, deletion and editing properties of a server's sites, from this page.

Compatibility with Browsers' Cross-Site Cookie Security Update

New SameSite Cookies options allowing 3D clients to load non-public layers from multiple SGS servers from different domains. SGS' new default options are compatible with Chrome and other popular browsers' recent SameSite Cookies updates that allow third-party cookies only if they follow the HTTPS protocol.

SGSProvider.js v2

New JavaScript for Cesium developers allows Cesium clients to search and load imagery, elevation, point cloud and 3D mesh model data from SGS directly in their Cesium application. This new API supports token and login authentication, searching using tags, alias and layer ID.

SOFTWARE AND HARDWARE REQUIREMENTS

Operating System	Windows® Server 2008 R2 / 2012 R2 / 2016 / 2019 – 64-bit.
System Memory	4 GB of RAM (8 GB or more recommended).
Processor	Dual-Core (4 or 8 cores recommended).
Browser	Microsoft Internet Explorer 8 or higher, Edge, Mozilla Firefox, and Google Chrome.
User Privileges	Administrator privileges required for installation and configuration.
Additional Software	<p>Microsoft Internet Information Services IIS7.5, IIS8.5, IIS10 with Net 4.8 and ASP.Net.</p> <p>Note: If .Net 4.8 is missing, you can manually download and install it from: https://dotnet.microsoft.com/download/dotnet-framework/net48.</p>