



StatMap

Advanced. Reliable. Simple.
Choose any three.

eVO™

Earthlight

Service Definition Document



Earthlight - part of StatMap's eVO™ technology platform - is a complete out-of-the-box enterprise web-based GIS application server solution, providing desktop replacement capabilities to unlimited users, via internet browser clients. Enabling users to build and deploy location-aware applications to solve common business problems with no programming required.

1. Introduction

This document provides details of the Service Definition for the SaaS which is provided by StatMap Ltd and made available for procurement by for public and private sector organisations through the Government Procurement Service's G-Cloud 15 Framework.

1.1 Earthlight Enterprise GIS

Shining a new light on your data, operations, strategy and business

Using Corporate and Enterprise GIS services in the Cloud has never been so easy, straightforward and powerful.

Because our intranet Enterprise GIS product is designed from the ground up to be run as http-based services, using a JavaScript client via a standard internet browser (so plug-in free), migrating to the Cloud is seamless, without pain and reduces your costs and overheads.

1.2 Service Overview

Earthlight is the Enterprise intranet GIS application forming part of the eVO technology platform.

Earthlight is massively scalable and its services can be componentised to provide you with precisely the functionality and capabilities which you require to achieve your business objectives – so removing the requirement to utilise desktop applications, delivering everything via a browser client.

Earthlight is intended as a product for users of all levels throughout an entire organisation: from full GIS administrators, editors and analysts who wish to make use of the cutting-edge browser-based spatial tools and functionality, to the way to users who simply want to basic query and extract information.

StatMap is an official Ordnance Survey Business Partner and provides fully hosted and maintained OS base mapping (including OS MasterMap) and national OS AddressBase Premium service included within the standard enterprise licencing and maintenance contract for SaaS cloud-hosted Earthlight.

Total control via the Internet Browser Client

There is no need to have clunky administrator consoles installed on servers and devices – as administrators and those with higher permissions can configure everything via the powerful administration tools integrated into the internet browser client interface.

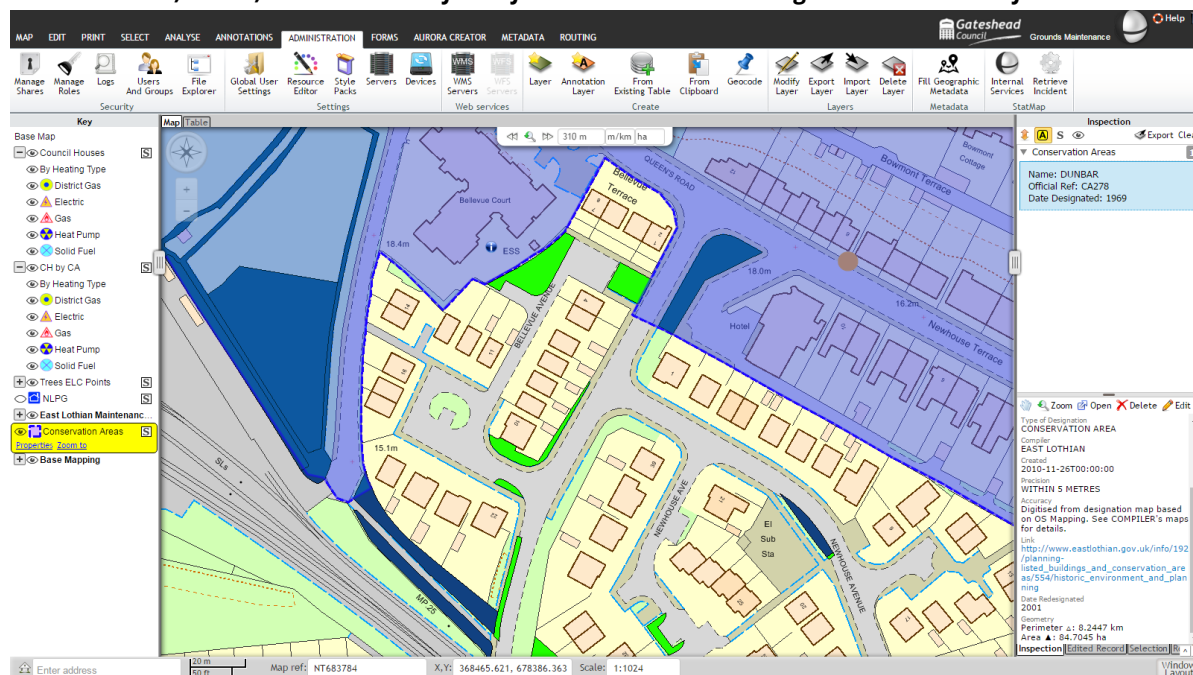
Unlimited Roles and Functionality

Earthlight provides you with the ability to deploy unlimited functionality commensurate with that normally experienced with a full desktop GIS application – via the definition of user 'Roles' for that user – to any user at any location to any device, instantly.

There are unlimited numbers of users and unlimited numbers of those users can be granted permissions to use desktop-type functionality – saving I.T. administrative overheads for maintaining desktop products on individual machines and having to have PCs at desktops in order to host desktop applications.

Earthlight allows you to break free of the desktop. However, if you wish to retain some desktop licences – e.g. QGIS – for performing particular tasks, you can do, including: interacting with, editing and analysing data in the hosted eVO Spatial Data Repository.

The screenshot, below, shows the interface of the Cloud-based Earthlight eVO client interface:



Single Sign-On (SSO)

There are several options for achieving Single Sign On:

- (i) StatMap's eVO Token Issuing Service;
- (ii) Federated Services for Azure Active Directory Synchronisation, utilised by eVO technology platform applications, which includes Earthlight;
- (iii) Integration with the Google OAuth 2.0 Identity Provider.

StatMap's eVO technology platform enables you to integrate your Active Directory credentials management system into all eVO applications by using Microsoft Federated Services. This is all provided natively and securely between the OVHcloud or Azure server environment and your internal network Microsoft Server ADS.

1.3 Complementary / Additional Services

Along with our Earthlight GIS SaaS, StatMap also offer complementary SaaS products – and all of which are offered as individual services which can be procured via the G-Cloud 15 Framework:

- **Earthlight Public:** fully configurable and embeddable GIS for external public and internal task orientated spatial applications.
- **Cluster – Spatial Data / CMS integration:** delivers spatially-enabled business data straight to your website, removing lengthy publishing processes or manual synchronisation between spatial resources and your website CMS.

These can be used and utilised in addition to or independently of Earthlight SaaS. If any of these services are used in conjunction with Earthlight SaaS, the Earthlight browser interface provides a convenient way to centrally integrate control of any of the other SaaS applications which make up part of the StatMap eVO Platform: Earthlight Public and Cluster.

1.4 Earthlight feature list

Earthlight is available at two levels of subscription and are differentiated in terms of their functionality and capability. A comparison table, below, details the differences between the Enterprise and Portal subscription levels of the Earthlight product:

 Present in product

 Not available

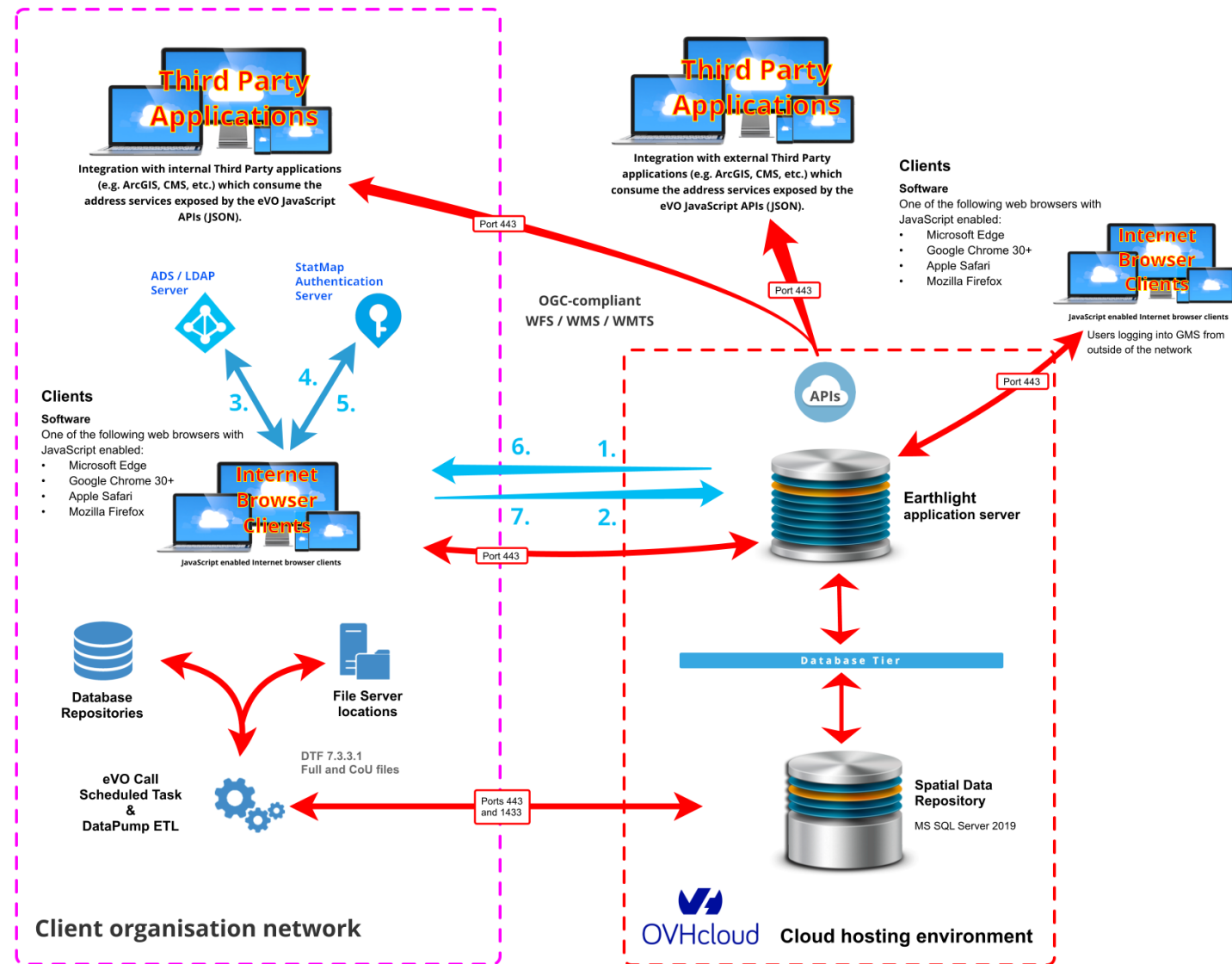
Features / Toolsets	Enterprise	Portal
Map Viewing		
Workspace Session		
Single Sign On (AD Federated Services)		
Print and Save as PDF and Image		
Search records (Find in Layer, Find Nearest, Go To Coords)		
Full data access control, styling and configuration via browser client		
Desktop GIS Client Connections (e.g. ArcGIS, QGIS, MapInfo)		
Record Inspection		
Measurement (length, area)		
Custom Print Template Creation		
Annotation		
Spatial Selection		
Exporting (.shp, .tab, .dxf, .kml, .csv, Excel)		
Importing (.shp, .tab, .dxf, .kml, .csv, Excel)		
Metadata schema creation and maintenance (including INSPIRE)		
Create new datasets		
Basic Feature / Geometry Editing		
Node Editing		
Create New Datasets		

Edit Attribute Data	●	●
Annotation Save as Layers	●	●
Geo-referencing Rasters	●	●
WMS Publishing Service	●	●
WFS Publishing Service	●	●
Intermediate Feature / Geometry Editing	●	●
Advanced Feature / Geometry Editing	●	●
Batch Editing		
Geocoding	●	●
Field Calculator	●	●
Spatial Merge	●	●
Routing		
Basic Routing	●	●
Premium Routing	●	●
Height and Viewshed Analysis	●	●
Workflow Builder™	●	●
Advanced Spatial Analysis	●	●
Georeferencing (Raster)	●	●

A high level view of the architecture of Earthlight Public on the OVHcloud and Microsoft Azure hosting platforms is shown to the right.

Further details of the overall architecture of the eVO Platform can be gained by observing the diagrams provided for our other services also offered via the G-Cloud 15 Framework.

Note: eVO Spatial Data Repository is the central spatial database for all eVO Platform applications.



2. Hosting assurance



OVHcloud UK Data Centre (located in Erith, Kent) is the default physical hosting data centre for all of StatMap's Cloud SaaS applications.

Both offer a fully comprehensive and award-winning regime of protection for critical infrastructure, ensuring that all of our SaaS offerings offer high availability and high resilience.

The performance metrics of both OVHcloud are widely published, including 99.95 percent availability and 24/7 tech support and health monitoring.

Server specifications

Single tenancy instance (which hosts unlimited numbers of HorizoNext case management system applications and other eVO applications (e.g. Earthlight, Earthlight Public, GMS LLPG, etc):

- 16 GB memory
- 8 cores
- 300 GB of storage [C: 100GB (including 10GB of Spatial Data Repository storage and D: 100 GB) – the D:\ drive is a temporary drive].
- 64-bit platform
- I/O Performance: standard
- 1 TB monthly bandwidth usage.

We offer additional processing power, high-availability and resilience options. This allows deployment of multiple eVO application instances, accompanied by software load balancers and other services to ensure that the service can better withstand periods of high activity and/or the failure of one node. These are available by buying one or more units of Additional Cloud Compute Capacity, depending on the configuration you need.

Persistent storage can be expanded for customers by attaching additional drives at a price of £150 per annum for 50GB (equivalent to £3 per GB per annum, or £12.50 per 50GB per month).

Failover Security

There are standby and global fail-over options, hot and cold standby models as well as rolling reboot capabilities that work out of the box.

While this may not be something that is a daily issue to a business, it is definitely something that you can confidently know is happening in the background.

OVHcloud offers continuous security-health monitoring, a broad set of international and industry-specific compliance standards, such as ISO 27001, HIPAA, FedRAMP, SOC 1 and SOC 2.

3. Service Feature highlights

- **Pre-built GIS:** Earthlight is the most advanced ‘COTS’ server-based GIS platform available – capable of replacing desktop GIS. It is either Cloud-based or a locally hosted HTTP / HTTPS service software application, delivered via a client internet browser to a user in any location and on any machine.
- **Desktop GIS Replacement Capability:** Unlimited numbers of users able to be given full desktop GIS replacement capabilities instantly, all via an internet browser client.
- **JavaScript client:** plug-in free.
- **Faster than Desktop GIS:** eVO Platform applications – including Earthlight - are faster than desktop GIS.
- **Desktop GIS:** You can connect to and edit data using standard desktop GIS software clients - e.g. QGIS, MapInfo Professional, ArcGIS, etc. Connection to the eVO spatial data repository can be configured for desktop GIS applications to create and edit data as well as undertaking analysis.
- **Massively scalable and configurable:** GIS service and spatial analytical functionality – from full data creation, editing and management tools, to data selection query and extraction, through to simple point and query operations. You can supply the entire functionality for all users – both traditional desktop GIS users and those with simple needs – all via one browser client interface.

- **Single Sign On (SSO):** integration with your Active Directory credentials management system using Azure Active Directory Federated Services.
- **Publish data as Web Features Service (WFS) and Web Mapping Service (WMS):** simple and easy to publish all spatial data to external and third-party applications using the easy to manage in-built WFS and WMS publishing service tools.
- **Microsoft Office ‘feel’:** to encourage mass use of Earthlight spatial tools – and make them part of an employee’s day-to-day suite of business applications - Earthlight is styled to be like a Microsoft Office product: complete with easy to read and use tabbed ribbon – providing access to a highly configurable set of functionality and tools.
- **Continual Addition of New Features:** StatMap are adding new features and capabilities continually to all of our eVO Platform products.
- **Customised tabbed interfaces:** as well as using Roles to assign functionality to users to present tools in existing tabbed interface structure, you can also – via the Earthlight client interface – design and create new tabs for particular users, containing specific functionality for particular tasks.
- **Workflows:** create, configure and deploy – via the Earthlight browser client interface – complex workflows for analysis, data creation, batch geocoding, etc.
- **Dockable Interface:** users can change the configuration of their client user screens by docking elements in different locations.
- **Branding:** Simple to apply branding to the user interface at corporate, group or individual user levels.
- **Appearance:** change and style the visual appearance of controls to suit your enterprise users.

Editing

Earthlight editing is unique and cutting-edge in terms of the sophistication and power of its data creation and editing capabilities. Whilst you can use Earthlight with desktop GIS

applications (e.g. ESRI ArcGIS, MapInfo Professional, QGIS, etc), Earthlight provides you with the ability to dispense with desktop GIS for editing, analysis and enterprise data management – as its tools are the equivalent of, or more powerful than, desktop GIS applications.

Unlike other suppliers, Earthlight offers the ability to replace – and improve upon – advanced editing normally only associated with desktop GIS applications. It is the only software which does genuinely enable you to eliminate desktop GIS from your organisation, should you so wish.

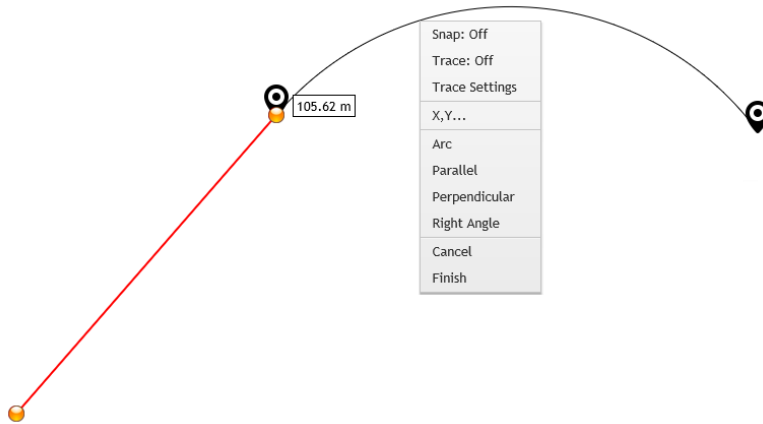
You can manage, create and maintain all of your data via the eVO Platform – without needing to manage different web and desktop products across your organisation. These capabilities can be deployed to unlimited numbers of users, instantly, in any location, via an internet browser. No plugins are required.

Capabilities include:

- Snapping (against all geometry parts – i.e. vertex, edge, midpoint, endpoint)
- Tracing (against all geometry parts - i.e. vertex, edge, midpoint, endpoint)
- Reshape
- Node Editing and mass delete nodes (set also snap nodes and set location by x,y coordinates)
- Shift
- Slice
- Merge
- Align [an amazing tool for increasing productivity and which is unique to the eVO Platform]
- Clone and AutoClone

And more.....

Advanced editing



Earthlight provides the most advanced editing capabilities available anywhere. Its power of editing outstrips that of nearly all desktop GIS products, and can only be matched by top-end dedicated desktop products.

One licenced installation of desktop GIS of such capability costs almost as much as an entire annual enterprise site licence of Earthlight – which in contrast delivers all this capability via a browser client to as many users as you wish.

- **Data Management:** huge and complete set of data management and vector data creation, editing, filtering and manipulation tools are available.
- **Raster Geo-referencing:** you can now import raster datasets and georeferenced them using Earthlight's in-built image geo-referencing capability – all via an internet browser client.
- **Service specific configuration:** as well as creating roles, users and groups, the service can be configured to provide tailored tools, data and templates.
- **Data access control:** access to data controlled by client administrator(s) based upon users or user groups.
- **Unlimited Users and Roles:** unrestricted user numbers - users, administrators and editors. Client administrators can grant data permissions and access to GIS functional capabilities based upon users, roles and group membership.

Data management and editing can be allocated and controlled centrally across the organisation.

- **Cloud services can replace fully existing GIS infrastructure:** web (intranet and internet) and desktop.

-
- **Monitoring and Logging:** full monitoring and logging tools for users, maps and data layers.
 - **Metadata & INSPIRE:** metadata schema creation, management and publishing tools, fully integrated into Earthlight. Managed by administrator, data owners or users on a layer-by-layer basis. Earthlight's powerful Metadata schema creation tool to enable organisations to create and use their own Metadata schemas aside from (or as well as) INSPIRE metadata, which are of more operational use to internal user communities.
 - **Batch Geocoding:** powerful and unrestricted Batch Geocoding capability for non-geocoded datasets. Can be uploaded as spreadsheet, database files, or .csv format to geo-code addresses.

4. Service Benefits highlights

- **Save money:** reduce or eliminate desktop and internet GIS licences and save on I.T. staff costs associated with installing, patching, upgrading and trouble-shooting desktop GIS.
- **Rationalise hardware:** because full and scalable desktop replacement capabilities can be delivered via a browser, you can rationalise your I.T. hardware and reduce full desktop PCs within the organisation as they are no longer needed for desktop GIS applications.
- **Efficiency:** share data and collaborate with colleagues across your organisations.
- **Integrate and Improve:** manage, develop, edit data across service areas.
- **Disperse:** data maintenance to unlimited users within different business areas – saving time and money on dedicated technicians by allowing operational personnel to use the software to manage their business data using spatial tools.
- **Centralise:** move all data to the central Spatial Data Repository (Spatial Data Warehouse) underpinning the Earthlight Cloud service.
- **Intuitive and Engaging:** software ideal even for 'non-technical' personnel.
- **Big Data:** integrates data from many different business systems.
- **High Productivity:** very quickly develop new business workflow applications.
- **Ease of Access:** securely manage corporate data from multiple devices.
- **Unlimited Users, Roles, and Groups:** enable GIS capability to be delivered to an unlimited number of users without affecting internal server / network speeds. It foregoes the need for users to be able to access the same local network in order to collaborate, share data, projects and analytical tools, meaning that individuals and teams can work together despite being in different geographical locations; including different parts of the world.

- Users can easily **create and publish all mapping**, via web maps. Data from many sources can be combined, including geo-referenced business systems (e.g. revenues, benefits and health related address-based datasets).

4.1 Unlimited Access and Transactions

With our unlimited user business model, there are no restrictions upon numbers of users able to access the system and its full functionality. StatMap's powerful Earthlight Cloud web-based application server-based software is simple to implement and simple to use; rendering them suitable for use throughout an organisation, without the need for local installations of client software, and which can be simply scaled by an administrator – without I.T. involvement - to provide whichever level of functionality and geospatial analytical capability is needed by individual users and / or teams to analyse, manipulate and understand their business user data.

StatMap's eVO Technology Platform (of which Earthlight is part) does not increase in price with increased usage. Usage is unlimited for clients – as is the number of users. We won't penalise clients for making their service a success!

5. Product Upgrade Cycles

StatMap undertake a constantly eVolving software development programme – meaning that Earthlight (and all other StatMap products which are part of the eVO technology platform) is subject to upgrade at regular six-monthly cycles.

All existing clients are entitled to all upgrades in accordance with their subscriptions. This is a smooth and painless process, with simple 'stop and restart' of all services to allow the new service to be made 'LIVE' to all users within an organisation.

6. Base Mapping

StatMap provide all cloud-hosted SaaS services with a full OS PSGA hosted and maintained base mapping service. This includes national coverage of OS MasterMap. StatMap is an official Ordnance Survey Business Partner, and we are able to keep our clients up-to-date with the latest Ordnance Survey product releases.

Additionally, a national coverage is provided for OS AddressBase Premium which can be incorporated into Earthlight as one of the multiple gazetteers that can be used simultaneously by Earthlight.

6.1 National Addressing Infrastructure

Various gazetteers can be uploaded and used by the client, such as the NLPG or OSG gazetteer data. Essentially, any geo-referenced gazetteer (including free and open source products not listed above) can be used by subscribing organisations. Gazetteers can be configured by the client administrator for different users and groups, depending upon the elements of most relevance to that particular user or user group.

Clients who are members of the public service PSGA or OSGA agreements can utilise UK-wide AddressBase® address gazetteer.

6.2 Geo-Coding

With Earthlight's extremely powerful, unique and configurable geo-coding engine (which comes as part of Earthlight and is accessed through the standard Earthlight client interface), almost unlimited sizes of address and locational data can be geo-coded extremely rapidly, providing enormous savings in terms of time and improvements in accuracy of the resulting geo-coding outcomes. The sophisticated and extremely powerful geo-coding functionality enables global datasets to be incorporated into appropriate global reference system coordinates in a seamless and fault-free manner – enabling major data integration problems to be overcome with trivial ease, enabling you to focus on your primary business objective.

Powerful address geocoding capability as part of the StatMap Stellar software enables as much processing powers to be devoted to the user as is necessary to complete huge geo-processing tasks – all using light-weight internet-based clients.

This process is also available as part of the eVO Address services – via API for use in third party systems, as well as eVO enterprise products.

6. On-boarding and Off-boarding

6.1 On-boarding

StatMap will create a new service which is specific to the client organisation and isolated from services of other client organisations.

To commence the service, StatMap will need to be in receipt of a purchase order or direct payment from the client organisation. Normal payment terms apply, whereby payment should be made within 15 days of receipt of the invoice from StatMap.

6.1.1 Administration of the client services

In order to set up the operational environment in terms of defining roles, groups and users, StatMap can either:

- i) Provide a basic structure for a 'generic' organisation, which the user can further configure and develop as they see fit.
- ii) An administrator will be appointed by the client site, who will grant permissions and set up user groups, etc. Full support will be offered to any client wishing to set these up in terms of support services, documentation, and training videos (Note: more detailed training services are available from StatMap – whose prices are available in the pricing document).
- iii) Full styling and branding of the service user interface can be applied at will by the relevant system administrator(s).

6.1.2 Data sharing – view and edit permissions

It is up to the individual client organisation to determine which users and groups should have access to which data. This is easily achieved using Earthlight's integrated powerful, yet easy to use, finely grained data access and role setting tools.

6.1.3 Data Standards

For new clients, StatMap will provide means of importing data onto the hosted server via importation tools provided through the Earthlight client interface. This will enable data in the following formats to be uploaded to the database:

- i) ESRI Shapefile;
- ii) MapInfo mid/mif;
- iii) MapInfo tab;
- iv) Comma Separated Values (.csv).

If the client is an existing client of StatMap and wishes to migrate their self-hosted version of Earthlight to the Cloud, StatMap will manage this transition process as part of the contract.

6.1.4 Data Importation

A step-by-step process will be employed for all clients (which can be altered to provide a more tailored and customer-led approach, if desired):

- Step 1:** Review any existing data deployment and replicate an effective structure on the StatMap hosting environment;
- Step 2:** Client testing – the client will be able to test their in-place processes within the hosted Earthlight software;
- Step 3:** The client can then upload their data using the Earthlight upload tools;
- Step 4:** It is up to the client when they wish to go ‘Live’ with the software throughout their organisation. Constant support will be offered throughout the process.

6.1.5 Styling and layer configuration

StatMap will provide a full library of styles for users to use as a base, and will supply base styling schema for users of standard base vector data. Assistance with styling and configuration of layers and data will be provided as part of the service contract.

6.1.6 Training

System user / administration documentation and on-line support in the use of the software will be supplied. As StatMap understands that clients will require different types of training and instruction, based upon their individual circumstance, we will tailor any training to your individual requirements – based upon user scenarios and actual sample client data.

Training is charged on a day rate, will allow up to 4 participants to attend – and will be provided at the client's offices. Details of pricing for training and any associated consultancy are contained within our pricing documentation for this service.

6.1.7 Service development

StatMap base our service development entirely upon our clients' business needs and seek continual requests for development of features and functionality. We discuss the forthcoming development roadmap via our dedicated user forum and our annual national user conferences. We accept suggestions and requests via our technical Support Centre, where issues, requests and questions are submitted to the StatMap development teams.

6.2 Off-boarding

For the cancellation of a service, StatMap require a one month notice period (which will be chargeable to the client under the normal pricing and payment structure). The cancellation must take the form of a formal notification, delivered via e-mail to our main support e-mail address.

6.2.1 Steps for off-boarding client data

In the event of a contract simply expiring, unless otherwise renewed within 7 working days of the date of expiry (and outstanding fees due to StatMap for the service hosting of those 7 working days settled in full), StatMap undertake to:

- i) Withdraw all client access to StatMap's SaaS facility for all StatMap products.
- ii) Copy and place all client data onto a full database schema file (in the form of a SQL file), incorporating spatial data in Well Known Text (WKT) and Well Known

Binary (WKB) formats. That data can then be uploaded onto any separate database of the client's choice.

- iii) All data will be additionally copied to ESRI Shapefiles (where the file format restrictions permit).
- iv) If requested, StatMap will also supply data in the form of text files, using WKT format for representation of the geometry / geography field.
- v) All data will be sent to the client on encrypted media.

Once the client is satisfied that all data has been adequately returned and that it has been safely uploaded onto alternative storage locations, the client will inform StatMap that they are in agreement to have all data relating to their organisation removed in its entirety from the hosted server – thus protecting the business interests of the client.

Time limits will be in place, and if the former client does not communicate to StatMap within an agreed period, the data will be removed after copies have been taken and sent to the former client.

If notice of more than one month is provided in advance, an alternative process – and one more suited to the client's needs – can be negotiated and agreed with StatMap.

7. Technical Requirements

The only technical requirements that clients must adhere to is to connect to the service via a Broadband connection, and that the user must meet the minimum modern browser requirements:

- Microsoft Edge
- Mozilla Firefox
- Google Chrome 30+
- Apple Safari
- Opera

8. Trial Service

This option is not available.

9. Monitoring of Service use in real time

Client administrators can monitor to see who is using the service at any particular time. Full and live logging information is available through the Earthlight client interface controls to those with appropriate permissions (granted by the client administrator), providing data upon use of the service (and individual elements of functionality) by individual users, layer modification history and use of map projects. Information as to who is logged into the system is also available at the click of a button.