G-Cloud 11 – Cloud Software

1Spatial Data Integration Cloud Service
Service Definition Document

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1. 1Spatial Company Profile

Who we are

1Spatial is a software solutions provider and global leader in managing geospatial data. We work with our clients to deliver real value by making data current, complete and consistent through the use of automated processes, ensuring that decisions are always based on the highest quality information available.

Our unique, rules-based approach delivers enterprise-scale, cross-platform, automation to all stages of the data lifecycle. It builds confidence in the data while reducing the time and cost of stewardship.

We build long term partnerships with our clients and deliver real value to them through solutions that are grounded in a deep understanding of their needs and challenges.

What we do

Cleansing, enhancing and successfully extracting strategic value from spatial data is the focus of our entire group. Our goal is to drive major improvements in clients' operational efficiencies, customer satisfaction and enable them to realise significant new business opportunities.

Our people have extensive industry knowledge and work in close collaboration with global clients to achieve their goals across key sectors including government, land management, utilities and transportation.

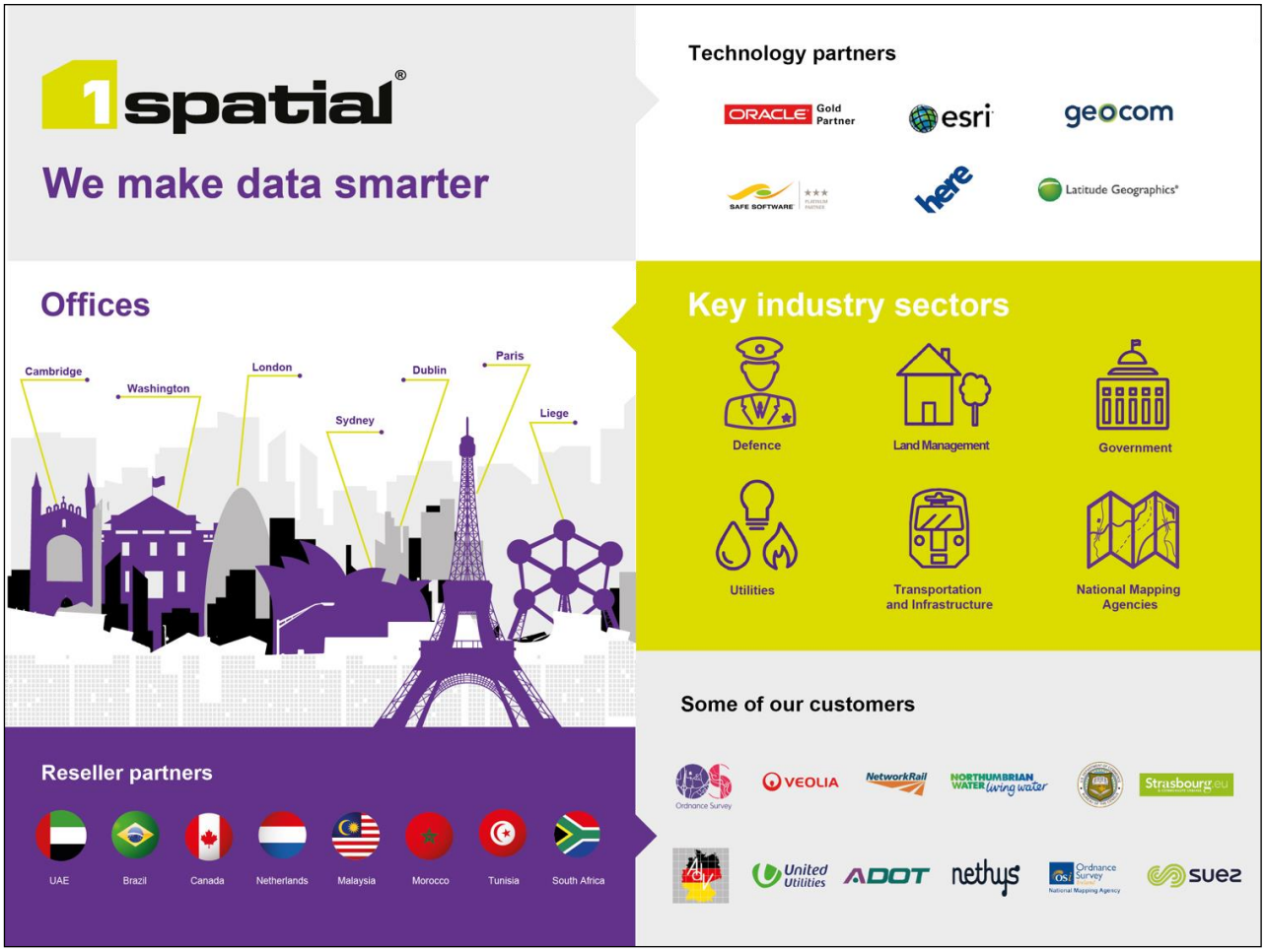
Why we are different

Our approach is to ensure that our clients have the best solution to support their business needs and aspirations. We create these solutions through a number of different approaches:

- Our Team – with 1000's of man years of deep industry expertise and insight into the geospatial sector, we work closely with our clients' teams to assess, identify and provide solutions.
- Our Technology – unique patented software products and tools provide an automated approach to cleansing, enhancing and using spatial data which we deploy as part of client solutions. A key product in our solutions portfolio is 1Integrate, which provides automated data validation, cleaning, transformation and enhancement for your data.
- Our Partners – from our extensive network of long-term partners, we provide overall solutions for our clients. Our partners include: Esri, Oracle, Safe Software and VertiGIS (formally known as Latitude Geographics).

Key competences

- Data Management
- Data Quality
- Data Integration
- Data Transformation
- Automated Data Fixup
- Automated Generalisation
- Schematics
- Mobile Data Capture
- Asset Management
- Analyse and visualise spatial data
- Data Enhancement



2. Service Description

This document is a Service Definition for FME Cloud, offered as a value-added solution by 1Spatial Group Ltd in the UK, but created by Safe Software Inc, Vancouver, Canada.

1Spatial is a 'Premier' Managed Service Provider (MSP) for FME Cloud, one of only three such vendors globally.

Using a public or private cloud, FME Cloud offers the ultimate platform for connecting the web, combining the automation power of FME Server with the flexibility of the cloud. No other tool is able to handle the complexity of spatial data in apps like Google Maps, ArcGIS Online, CARTO, and hundreds more.

Start by building integration workflows in FME Desktop's drag-and-drop interface. Then use FME Cloud to run them constantly in real time, in response to events, or on a time interval. Scale up or down as needed.

Deploying your ETL processes in the cloud can lower the cost of ownership through pay-as-you-go payment profiles or through the ability to schedule machine on time only when you need it. Whilst traditional on-premise ETL still holds true for data that is also within your firewall, for short transactions or for manipulating data to or from the cloud, FME Cloud provides a more flexible and cost effective approach to managing your data.

3. Service Features and Benefits

Safe Software's product, FME, is the global leader in extract, transform and load (ETL) technology solutions that help spatial data professionals and organisations solve their data interoperability challenges. The FME software platform makes it easy for users to efficiently use and leverage their data in any format, structure or application - while improving efficiency, reducing costs and managing risk to the business.

FME is the de facto standard and is used by GIS, CAD, ETL and database vendors as well as thousands of customers in over 116 countries in a wide variety of industries and vertical markets. It has the ability to interact with all the key vendors product suites including Oracle, IBM, ESRI, Intergraph, Autodesk, Pitney Bowes, Microsoft, Google, Bentley and many more. Core to the product is its ability read and write 500+ data formats and then transform that data such that it is in the right structure, for the right person to gain value from it at the right time.

What truly distinguishes FME is not only its ability to provide this unparalleled format support and the most powerful set of data model transformations, but also its ability to address arguably the complete spectrum of spatial ETL tasks:

3.1. Translate

With readers and writers for hundreds of GIS, CAD, raster and database formats, FME enables quick translation of data to/from hundreds of formats, while providing the ability to view and inspect these translations at any step in the process.

Format to format data translation doesn't need to be time-consuming. A smart alternative to writing code, FME makes translating data between multiple formats quick and simple. Just point and click to create graphical data flows which move your data. Then either run the process right there and then in FME Desktop or publish it to FME Server or FME Cloud and schedule it to run or run it in response to a trigger. FME offers the ability to run sophisticated and reusable data translations.

3.2. Transform

FME's gallery of hundreds of Transformers (individual processing tools, each uniquely configurable) offers unlimited ways to transform the row, cell or geometry of your data, as it moves from the source data repository or system to a destination system.

Often having an FME transformation script can mean that your process can be automated or even run out of hours as a scheduled task, taking the hard work out of running a processing task.

3.3. Conflate

FME makes it easy and efficient for organisations to create a unified view of their data from many different sources. Data can be combined or re-modelled on the fly, making it immediately useable to a diverse community of users.

3.4. Distribute and Disseminate

Should it be required FME can reach beyond the desktop with flexible web services and powerful batch processing capabilities that can enable large amounts of data to be efficiently distributed over the web. End users can easily access the most current data in the format and coordinate system of their choice – without increasing the burden on IT or GIS teams, whilst always ensuring the data you are looking at is current and valid.

FME offers a flexible and powerful ETL toolset for:

- Quick data TRANSLATION for hundreds of formats
- Flexible data model TRANSFORMATION
- Powerful INTEGRATION between multiple data types
- CONNECT disparate applications and systems

3.5. Secure

When dealing with ETL in the cloud the safety and security of your data is top priority. FME Cloud's architecture is built using the physical infrastructure of Amazon Web Services, providing many benefits, like the ability to choose where your data is stored as well as industry-recognized certifications and audits including ISO 27001, PCI Level 1, and SOC 1/2.

All connections are made over SSL using high-grade encryption, and two-step authentication is available for added security. FME Cloud offers role-based permissions and provides regular backups. Plus, unlike other providers, we follow a single-tenancy model which means nothing of yours is shared with other customers.

4. Service Scope

FME comprises three main products. FME Desktop is the authoring environment from which your ETL workflows are constructed, FME Server is the on-premise or private cloud solution for organisations that wish to move their ETL processes to the enterprise. Whilst FME Cloud is FME hosted on Amazon Web Services in the cloud and offers ETL in a fully hosted environment.

4.1. FME Cloud

Constraints

FME Cloud is effectively a different way for you to deploy FME Server. The FME Server you launch on FME Cloud is exactly the same as the one you would launch on-premise. There are, however, some subtle differences in what is available:

- Some advanced configurations are not available on FME Cloud, such as distributed install and job routing.

- FME Cloud runs on Linux, so not all readers and writer formats are available. For a full list of supported formats, please look at the Linux 64-bit column in this table.
- Many formats require installing third-party software or a license to work. Any format that has 3rd Party Plugin or Extra Cost Plugin in the notes on the formats page will not work on FME Cloud, with the exception of Oracle formats.

Sizing

There are five instance sizes to choose from. Server instances should be selected based on your application's specific needs. For questions, please contact fme@1spatial.com.

1. Starter - 2 core with 4GB RAM
2. Standard - 2 cores with 8GB RAM and SSD disk
3. Professional - 4 cores with 16GB RAM and SSD disk
4. Premium - 16 cores with 64GB RAM and SSD disk
5. Enterprise - 48 cores with 192GB RAM and SSD disk

Unlimited Engines

Additional engines allow you to process jobs in parallel, ideal for web data from many sources. You can add as many engines as you want within the constraints of your virtual hardware.

Agility and Flexibility

You're in control of the costs and hardware. Change the instance or disk size within one minute. Schedule your instance to run at specific times. Take backups with the click of a button. Changes are easy to make in FME Cloud.

Configurable REST API

The REST API puts you in control. Requests are made through clear URLs and responses are formatted in clear, readable JSON. FME Cloud also works nicely with other APIs, making customised integrations easy.

Highly Scalable

Even if your web service becomes extremely popular, FME Cloud can handle it. During peak demand, scale up to take advantage of the limitless computing capacity of the cloud. During periods of inactivity, scale down to save money.

Notifications and Mobile Support

As we're not at our desks 24/7/365. FME Cloud supports mobile devices, allowing you to manage your instance on the go. You can also set up customizable alerts to notify you of possible issues.

Always Up to Date

No waiting on fixed release dates. Product improvements are ongoing throughout the year, and you're in control of how they're applied.

Multiple Regions

Launch an FME Cloud instance in one of seven AWS regions around the world: US East (Northern Virginia), US West (Oregon), Sydney, EU Frankfurt, EU Ireland, UK London and Canada (Montreal). If an AWS region isn't supported that you'd like to utilise, just ask and we can help to make the case. Pricing is the same for all regions and all instances are in the GMT timezone.

4.2. Public Cloud deployment

FME Cloud is the solution for public cloud deployment as per 3.1.

4.3. Private Cloud deployment

FME Server is the solution for private cloud deployment and can be deployed on Windows 32, Windows 64bit and Linux 64bit operating systems. Containerization with Docker is also possible with FME Server.

FME Server should run on almost any virtualization provider's platform, on any supported operating system. FME Server can additionally be installed in a distributed way to remove single points of failure.

5. User Service Support

5.1. Standard Software Support

1. 1Spatial provides a centralised Support Desk Service for raising service requests for assistance with the licenced software. A 3-tier Support Desk Service exists for raising requests for FME assistance. A dedicated support team offers tier 1 support, FME Certified Professionals (UK) are available at tier 2 and as a Platinum Partner we have access to a priority queue with the vendor, Safe Software, where absolutely necessary.
2. The 1Spatial Support Desk will be operated between the hours of 09:00 to 17:30 (UK time), Monday-Friday, excluding local public holidays.
3. Service Requests include the following:
    - Suspected Software Issues: The customer suspects the Software is functioning incorrectly and requires a software fix
    - Application Support: The customer seeks advice or guidance in the use of the Software for its intended function
4. The customer can request assistance from the Support Desk via email, telephone or online through the 1Spatial Customer Portal.
5. Each new request to the Support Desk will be logged in a Support Desk call-handling system where a unique call reference number will be allocated. An initial response will be provided to each Support Desk request that will detail the unique reference number, a suggested priority and summary of action.
6. 1Spatial will provide email or telephone assistance to the Customer to enable communications with 1Spatial's software specialists during the core hours specified above.
7. Where a fault requires a software or documentation change, an issue will be logged in the 1Spatial internal issue tracking system. The support case status will be updated to 'Awaiting Fix' and the case will no longer be subject to the target resolution times specified in section 4.1.
8. Where a major fault cannot be resolved within the specified time a site visit may be carried out. Unless this agreement provides services days to be automatically drawn upon, arrangements

will be subject to negotiation between the Company and the Customer prior to the commencement of any such work.

9. 1Spatial will provide support to assist with the installation and operation of the products listed above. Assistance will be provided to identify and resolve technical issues.
10. In order to isolate the issue, 1Spatial reserves the right to request that replication details are provided for a non-customised, 'vanilla' environment.
11. If specialist help is required to debug issues encountered within a customised environment not reproducible in a standard or 'vanilla' environment, the support provided will not be subject to the targeted response and resolution times described in our service level agreement.
12. Where a fault requires a software or documentation change in Third Party licenced software, an issue will be logged with the vendor, such as Safe Software. 1Spatial is not responsible for the schedule of fixes for any Third Party software but will communicate priorities on behalf of the customer.

    Where the issues cannot be replicated or where further assistance is required to troubleshoot the problem, 1Spatial will engage with the vendor to obtain assistance.
13. 1Spatial will pass on suggestions for enhancements to the vendor for supported Third Party software. Although there is no guarantee any suggestion will be included in a future release, suggestions frequently influence product development decisions.

5.2. Advanced Support Package

1Spatial offers an Advanced Support Package which includes the following additional benefits:

1. Inclusive Service Days
    - 6 full service days each year to help you with your consultancy, training or onsite support needs.
2. Software Installation Consultant
    - 2 full days access to a dedicated software installation expert.
3. Quarterly Service Reviews
    - A service review each quarter attended by your assigned Support Lead and your Account Manager (or other suitable 1Spatial representative). Includes provision of a detailed service report covering the relevant period.
4. Software and Service Promotions
    - Benefit from User Group promotions, discounts and special offers on software and services.
5. 1Spatial Product Beta Program Membership
    - Be one of the first to hear about and trial the newest 1Spatial software releases*

*Access to Beta releases for software resold by 1Spatial will be determined by the software vendor, although when available, access to such releases can usually be agreed on request.

1. Terms and conditions for the Inclusive Service and Software Installation Consultant Days:
2. Use of days is by mutual agreement on scope and scheduling
3. Any days must be used within the 12 month term, unused days cannot be rolled over
4. A normal working day consists of 7.5 hours, it is expected that these will normally be undertaken during normal office hours between 09.00 and 17.30
5. Excludes local public holidays, i.e. a 1Spatial Consultant based in England will not be available to work on English public holidays

6. Reasonable expenses for travel, accommodation, and subsistence will be charged at cost, and mileage at £0.45 per mile
7. Payment terms are 30 days and 1Spatial's Standard Terms & Conditions for the Supply of Goods and Services applies

5.3. Premium Support Package

The Premium Support Package delivers a tailored service to support and administer 1Spatial and supported Third Party Products across an organisation or within an enterprise solution. This could include elements from the Advanced Package, or as an example could include one or more of the following:

- Specific or non-standard service levels
- A greater number of inclusive service days
- Dedicated onsite support
- Specialist remote support services
- Product Roadmap Updates
- Software Patch Releases
- Access to a 1Spatial Technical Lead
- Extended Life Support
- Membership on the 1Spatial Client Advisory Board.

The description of the tailored services provided will be detailed either in a specific contract or in an annex to this agreement.

If you are interested in upgrading to this package, please contact your Account Manager.

5.4. Product Maintenance

1. During the term of this Agreement, 1Spatial shall provide maintenance services to the Customer, any new versions of the Software and/or Documentation issued during the period of this Agreement will be made available to the Customer.

2. The Maintenance policies of Third Party Software will apply in addition and are available on request.

3. Where a Support Case is confirmed as being a reproducible issue, then 1Spatial shall provide an initial response to the Customer, in accordance with response times in the service level agreement. The initial response will detail a unique issue reference number, a suggested priority and summary of action. Priorities will be agreed with the customer.

4. All Software releases will be published via FTP. The Customer can download and install the new software directly from the FTP site. Alternatively, the Customer may request a copy of any new 1Spatial software on CD by emailing 1Spatial Support (support@1spatial.com).

5. When vendors of supported Third Party Software issue maintenance or patch releases, 1Spatial will make these releases available for download via the FTP.

6. Any product upgrades during the period of this agreement that relate to the licenced software will be issued to the Customer. All such software releases are accompanied by detailed Release Notes. The Release Notes contain:

- Instructions on upgrading to the new release
- Details of all functionality changes

- Details of the issues fixed in that build relative to the previous build
- Details of any known issues in this release
- Details of changes to public APIs or data structures
- Versions of supported Third Party products

6. Working with the service

6.1. Installation

It takes less than 10 minutes to get FME Cloud up and running and there's no hardware to maintain. The infrastructure is handled for you. This quick setup makes FME Cloud ideal for rapid prototyping before moving to an on-premises FME Server or if your web service has to be provisioned at short notice.

FME Cloud makes it easy to scale up or down without sacrificing performance or worrying about excess capacity.

6.2. Browser support

The FME Server and FME Cloud interfaces are accessible via Google Chrome, Mozilla Firefox, Microsoft Internet Explorer 9 or higher and Microsoft Edge.

The application resizes to fit the browser on the device. Additionally any app or mobile system could interact with FME Cloud via the REST API.

6.3. FME Cloud API

The FME Cloud REST API puts you in control. Requests are made through clear URLs and responses are formatted in clear, readable JSON. FME Cloud also works nicely with other APIs, making customised integrations easy.

The FME Cloud API is organised around REST. The API is designed to have predictable, resource-oriented URLs and to use HTTP response codes to indicate API errors and accepts/returns JSON. Since the API is based on REST principles, you can use almost any HTTP client in any programming language to interact with the API.

You can explore the API using this documentation, all you have to do is enter your API token in the input field. After that, the 'Try it out' button will generate and send a request to your account. More information is available here:

https://api.fmecloud.safe.com/api_documentation/v1

7. Onboarding and Offboarding

To be productive using FME Cloud or FME Server 1Spatial offers a 2 day FME Server Authoring course that covers everything that a user would need to create ETL processes and host them in the FME Server\Cloud environment. Individuals would be expected to already have demonstrable ability with FME Desktop prior to attending this course.

Where a client contracts 1Spatial to undertake all of its ETL process production and management, training courses that we'd typically offer to 'enable' the client would not be necessary as 1Spatial's Consultants already have the necessary certification levels. A client undertaking ETL process design, production and management directly can also be further supported by 1Spatial as required at whatever project stages and for whatever tasks it requires, whether it be ad-hoc advice, reviewing Workspaces, through to full solution design and project management. 1Spatial can provide training at its own training facility in Cambridge or on client sites.

When offboarding a client, as a client is most likely to have a specific set of ETL processes scheduled and\or triggered to run on FME Cloud, a transition plan will be constructed as required, specific to that client, for what needs to happen at the end of a contract. It is likely that this will involve the following:

- Data extract and provision back to the client
- End of service summary report and any other required documentation
- Completion Certificate provision.

7.1. FME Training

We offer three formal FME training courses as follows:

- FME Desktop Introductory (2 days)
- FME Desktop Advanced (2 days)
- FME Server Authoring (2 days)

Full details and a course agenda for each course can be found at:

https://1spatial.com/services/training/fme-training/

1Spatial can deliver Certified FME training at a client's office or in our dedicated training suite in Cambridge, United Kingdom. Each course is 2 days in duration running from 9am till 5pm typically, on both days, with appropriate breaks during the day. Every delegate receives comprehensive training materials and a set of training data that can be used after the course, for extra practice.

Our courses are fully accredited by Safe Software and use their certified materials to ensure that you receive the highest quality of training from one of our FME Certified staff.

If the structure of the 3 courses doesn't quite suit your requirements we can in most cases create our client a bespoke agenda that includes content from 2 or more of the courses, though this may alter the duration.

Training in the 1Spatial training facility includes:

- Certified FME training from a Safe Software Platinum Partner
- An FME Certified Trainer to deliver the course, with a minimum of 10 years training experience
- All relevant training materials
- Training data and FME workspaces supplied on a pen drive
- Dedicated training room with high specification training machines
- FME license provision
- Guest Wi-Fi access for multiple devices
- All refreshments and lunch (special dietary requirements can be catered for)
- Free on-site parking

Alternatively training at a customer's facility offers:

- An exclusive course with no delegates from other organisations on the course
- Flexibility to customise the course content with prior agreement (extra costs may apply)
- FME license provision
- Remote assistance to help the local IT department to configure the training machines

7.2. FME Mentoring

If classroom style training does not fit your needs, 1Spatial offers a range of FME consultancy and mentoring options available to be procured as one-off tasks or call-off days to be drawn down throughout the year. Contact fme@1spatial.com for further details.

7.3. Documentation and User Community

All of the formal documentation for any of the FME products can be found at https://knowledge.safe.com. Additionally this resource centre includes “how-to” style articles, an idea’s exchange for requesting new features, a Hub for sharing community derived tools and a Q&A forum for asking questions.

Further to these public resources, 1Spatial provides a centralised Support Desk Service for raising service requests for assistance with the licenced software. A 3-tier Support Desk Service exists for raising requests for FME assistance. A dedicated support team offers tier 1 support, FME Certified Professionals (UK) are available at tier 2 and as a Platinum Partner we have access to a priority queue with the vendor, Safe Software, where absolutely necessary.

8. FME Trial Service and Evaluation

FME Desktop and FME Server can be made available for a fixed trial period by 1Spatial to a client to assess the capabilities of the tool. FME Cloud can be made available also to trial, however, a $250 credit limit will be made available free of charge. Any additional usage beyond this cap will be chargeable.

As a value-added reseller of Safe Software’s FME technology, 1Spatial offers a service for facilitated product evaluation where we can assist in building your business case through to aiding the construction of your proof-of-concept (POC). Some of these consultancy activities may be chargeable.

Please contact fme@1spatial.com for further details.

YOUR WORLD SMARTER