



Planet eStream Hosted Infrastructure and Security Statement

Introduction

Planet eStream cloud-based services are available as either multi-tenanted or single tenant platforms and both options are managed by the Planet eStream cloud hosted infrastructure.

This document will cover the technical infrastructure for multi-tenanted and single-tenant cloud deployments.

Planet eStream Components

The Planet eStream cloud platforms are deployed on Microsoft Azure Cloud services located in the North Europe (Ireland) and West Europe (Netherlands) Data Centres.

1. Multi-Tenant Platform

The Planet eStream multi-tenant platform offers an infrastructure upon which each customer has their own specific website, database and storage whilst computing power and resources are a shared resource.

1.1 Software and Cloud Hosted Components

The core Planet eStream web servers are implemented on the Microsoft Windows Server 2022 operating system using Internet Information Services (IIS) 10 for serving website requests. Microsoft .NET Framework 3.5 and 4.8 are used for development and background services.

Planet eStream databases are provided by the Microsoft Azure SQL Databases in an Elastic Pool configuration. Elastic Pools allow for resources to be scaled as required.

Planet eStream media storage is zone-redundant in Azure Blob Storage allowing for data resilience.

Planet eStream implements several services using in-house proprietary software for both media transcoding and live streaming.

1.2 Backup Procedures & Resiliency

The Planet eStream platform provides various forms of data resiliency and backup procedures which are detailed as follows:

1.2.1 Planet eStream Core Web Servers

The core web servers are backed up using two methods to allow for multiple restore scenarios and resiliency:

- 1.2.1.1 The first method is that the server storage is synced to a geo-redundant secondary datacentre West Europe (Netherlands) every 15 minutes. In the event of failure, a server can be brought online quickly to prevent disruption.
- 1.2.1.2 For the second method, the web servers are backed up daily and these backups are retained for 30 days in geo-redundant storage located in the West Europe (Netherlands) datacentre. Individual files can be restored at the request of the Planet eStream customer.

1.2.2 Planet eStream Media Items

The Planet eStream media items such as video content, images and documents are stored on the Microsoft Azure Blob storage. This is a web-based storage location and is zone-redundant within multiple physical locations all within the North Europe datacentre region (Republic of Ireland). In the event of a storage issue, the service thereby automatically fails over to one of the other storage locations seamlessly.

When media is uploaded to the Planet eStream platform, extensive checks are performed at each stage using hash checks. This includes transfers from the client device onto the Planet eStream platform and then into the media storage.

In the event of accidental deletion of media from the platform by the customer, these items are retained in a recycled state and can be restored by the customer's authorised Planet eStream Administrator. This option also allows permanent deletion of the media from the Planet eStream platform.

In the event of media being permanently deleted, the content is moved into archive storage located in Europe and is retained for 30 days.

1.2.3 Associated Media Items

Associated media items such as digital signage assets are stored on the Planet eStream web server. In the event of deletion these items are moved into a recycled state, from which they can be restored by the customer's authorised Planet eStream Administrator as with media items in the section above.

In the event of permanent deletion, these items are backed up daily in the core web server backups and are retained for 30 days as per the detail in section 1.2.1.2

1.2.4 Databases

The Planet eStream platform uses the Microsoft Azure SQL Server as a database backend for storing data. The primary databases for the platform are located within an Elastic Database pool hosted within North Europe (Ireland).

The databases are replicated between the primary and secondary databases on an active basis, secondary databases are located in a secondary datacentre hosted within West Europe (Netherlands). In the event of an issue with the primary database or SQL Server the databases will failover and switch to the secondary database.

Elastic Pools allow resources to be scaled to meet Planet eStream customer demand. Each Planet eStream customer is allocated a separate database and for clarity, no data is shared between customer databases.

Databases are backed up to points in time based on database activity, allowing restoration to a specific point in time as required. These backups are stored in geo-replicated storage in North Europe (Ireland) and West Europe (Netherlands).

All database backups are retained for 30 days.

Databases can be restored in two different methods as follows:

1.2.4.1 A total restore of the full database

1.2.4.2 A partial restore - under a different name and data is compared between the active and restored databases for a manual restore of specific items.

1.3 Platform Upgrades and Maintenance

The Planet eStream platform is under a continual development cycle and, as such, regular maintenance is performed on the Planet eStream platform.

Interim updates and maintenance tasks are performed every two weeks during defined periods, typically during the hours of 00:00 and 01:00 AM GMT+0 when possible. Planet eStream aims to update core web servers on a rolling basis to ensure minimal downtime to Planet eStream customers.

All major updates are communicated to Planet eStream customers via a notification system.

When a Planet eStream update is scheduled, an automated in place backup of the current live platform is also performed, this can be reverted to in event of an issue.

Planet eStream client software applications such as Digital Signage clients or the Planet eStream Live Encoder application will automatically update to the latest version or will check for updates when the applications are next started.

2. Single Tenant Hosted Platform

Planet eStream single tenant sites are hosted on an individual Microsoft Azure server which is located within a European Datacentre for all customers located in the UK and Europe and, for international customers outside of this region, we select a geographically appropriate datacentre to maximise performance to the Planet eStream customer.

Single Tenant servers share some resources with the Planet eStream multi-tenant platform, depending on customer requirements.

2.1 Backup Procedures

The single-tenant servers undergo several different backup and resiliency procedures as described below.

2.1.1 Planet eStream Server

Single Tenant sites have a single primary web server located as described in section 2 above, this is actively synced to a geo-redundant secondary datacentre within the same region as the primary datacentre as detailed in section 2 above every 15 minutes. A new server can be brought online within an hour.

2.1.2 Planet eStream Databases

The Planet eStream databases for single-tenant sites can be in one of two configurations:

2.1.2.1 Microsoft SQL Express 2019

The databases are stored on the Planet eStream server using Microsoft SQL Server Express edition. These databases are backed up daily to geo-redundant storage located for UK and European customers within North Europe (Ireland) and West Europe (Netherlands). For international customers, these will be as described in section 2 above.

Between daily backups, the databases produce full transaction logs to allow restore of databases to a specific point in time if necessary. These are stored in place and are retained for 24 hours.

2.1.2.2 Elastic Pool

The Planet eStream databases can be hosted on the Microsoft Azure SQL Server elastic pool, which provides regular ongoing backups to allow restoring to a specific date and time as described in section 1.2.4.

2.1.3 Media storage

The single tenant servers will use the zone redundant storage used by the multi-tenanted platform.

2.1.4 Associated Media Items

Associated media items such as digital signage assets are stored on the Planet eStream web server. In the event of deletion these items are moved into a recycled state, from which they can be restored by the customer's authorised Planet eStream Administrator as with media items as described in section 1.2.2.

In the event of permanent deletion, these items are backed up daily into geo-replicated storage within the North Europe (Ireland) and West Europe (Netherlands).

For international customers outside of Europe, geo-replicated storage is within the same primary region as the datacentre selected for hosting their platform.

2.1.5 Planet eStream Website

The Planet eStream website is available via a round robin DNS address. This means that in the event of an issue, the site will use the secondary server located within the appropriate datacentre as described in section 2.1.1 without disruption for the Planet eStream customer.

2.2 Single Tenant Upgrades and Maintenance

Single tenant platforms are updated regularly to the latest Planet eStream release version. These updates are planned ahead of time and scheduled in conjunction with the Planet eStream customer.

Updates are applied during maintenance periods scheduled between 23:00 and 00:00 GMT+0 to ensure minimal disruption to the Planet eStream customer. For international customers outside of Europe, updates are planned in accordance with their time zone.

All major updates are communicated to the Planet eStream customer directly during update scheduling. This allows the Planet eStream customer to communicate the availability of new updates directly to their Planet eStream end users and accommodate training as required.

Operating system level updates are applied regularly during this time.

3. Planet eStream Security

3.1 Infrastructure Security

The Planet eStream platform undergoes rigorous network penetration tests on a regular basis. This testing is undertaken by independent accredited security organisations and internal Planet eStream senior technical staff. The platform is also regularly tested by Planet eStream customers using their own third-party security companies.

The Planet eStream web interface is accessed over Secure HTTPS / TLS connections and any insecure HTTP requests are automatically redirected to HTTPS.

All Planet eStream web servers have best practice SSL ciphers enabled and any insecure encryption ciphers are disabled. Any applicable operating system level updates are also applied in regular maintenance periods as described in section 1.3.

3.2 Authentication Security

Planet eStream supports several authentication methods and Single Sign-On (SSO) providers.

When a Planet eStream customer implements SSO for authentication, their users will be taken to the organisation's SSO provider where they will authenticate. The SSO provider will then securely provide user attributes to their Planet eStream platform, these are used to identify the access rights of the logged in user.

For Secure LDAP connections, the user will enter their authentication credentials in the login screen on their Planet eStream platform, these are sent over a secure connection to the customer's Active Directory. Connections to the Active Directory are encrypted and the Planet eStream platform checks for a valid SSL certificate. The connection is also authenticated using customer provided credentials.

Planet eStream also has a built-in authentication option whereby user details are stored within the Planet eStream database with password hash checking and no password is stored in plaintext.

3.3 User Access Control

The Planet eStream platform enables granular control over user permissions and access to the platform. These permissions are controlled by individual Planet eStream client configuration via an administration console.

Planet eStream incorporates the principles of 'Privacy by Design' and 'Privacy by Default'. Successfully authenticated users will be permitted access to their Planet eStream platform but will not receive any rights to view content or information until permissions are actively granted by the customer organisation's designated administrators.

The Planet eStream platform implements authentication session timeouts managed by secure cookies, a session will stay logged in for 60 minutes. As the user navigates through the Planet eStream platform, the cookies will be renewed for a further 60 minutes.

4. Planet eStream Certificates & Credentials

Based on guidance issued by the UK National Cyber Security Centre (see <https://www.cyberessentials.ncsc.gov.uk/advice/>), Planet Enterprises Ltd has demonstrated compliance with these principles and is a Cyber Essentials Certified service provider.

5. Network Security

The Planet eStream cloud services are provisioned using the Microsoft Azure cloud computing and services infrastructure. This choice of cloud service provider is heavily influenced by the levels of commitment to security and privacy as demonstrated by Microsoft in their compliance to a wide range of international standards, certifications and regulations.

Extensive Azure Security documentation is available online at <https://docs.microsoft.com/en-us/azure/security/>

Azure Datacentre security is specifically documented at <https://docs.microsoft.com/en-us/azure/security/azure-physical-security>

Azure SQL database security documentation is available at: <https://docs.microsoft.com/en-us/azure/sql-database/sql-database-security-overview>

General compliance information resources are online at <https://azure.microsoft.com/en-us/overview/trusted-cloud/> and under their Trust Centre resources at <https://www.microsoft.com/en-us/TrustCenter/Compliance/default.aspx>

The Azure network provides protection against DDoS attacks, documented at <https://docs.microsoft.com/en-us/azure/security/azure-ddos-best-practices> .

An overview of all the Microsoft Azure compliance offerings is available for download at <https://gallery.technet.microsoft.com/Overview-of-Azure-c1be3942>

For all Planet eStream web servers, the Azure firewall is implemented to only allow traffic over the standard web ports for website access and port 1935 for live streaming.

6. Customers outside the EU

For customers in specific global regions the Planet eStream platform may be hosted within a locally available datacentre to maximise performance, if this is the case this will be clearly detailed in the quotation provided by the Planet eStream sales team during pre-sales consultation.