

ILLUMINATOR

Technical Brief

This document is provided in support of the general introduction data sheets which outline the ILLUMINATOR products core capability and off the shelf modules and functions

It is designed to provide a general technical guide to answer the most common questions and enquiries. If you do not find the answer to your enquiry here, please don't hesitate to contact the Graphical Data team via your customer contact point, or directly to the support desk – email support@graphicaldata.co.uk

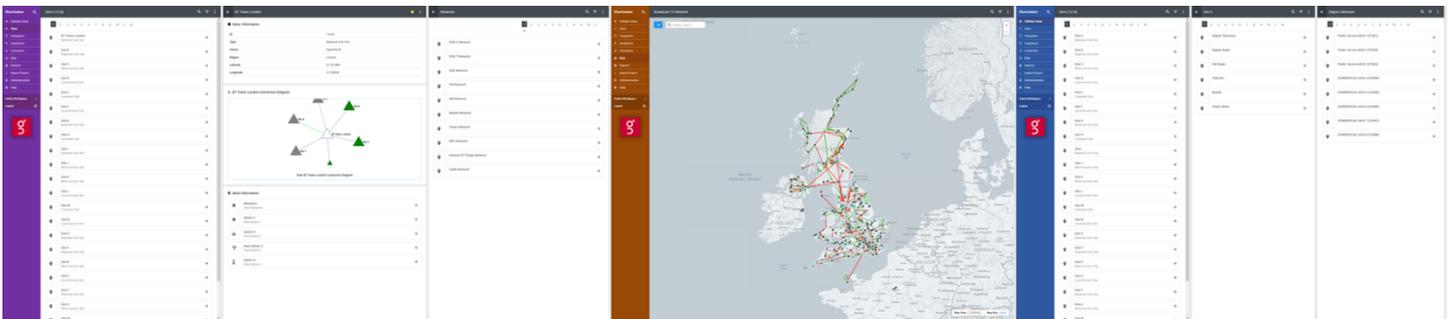
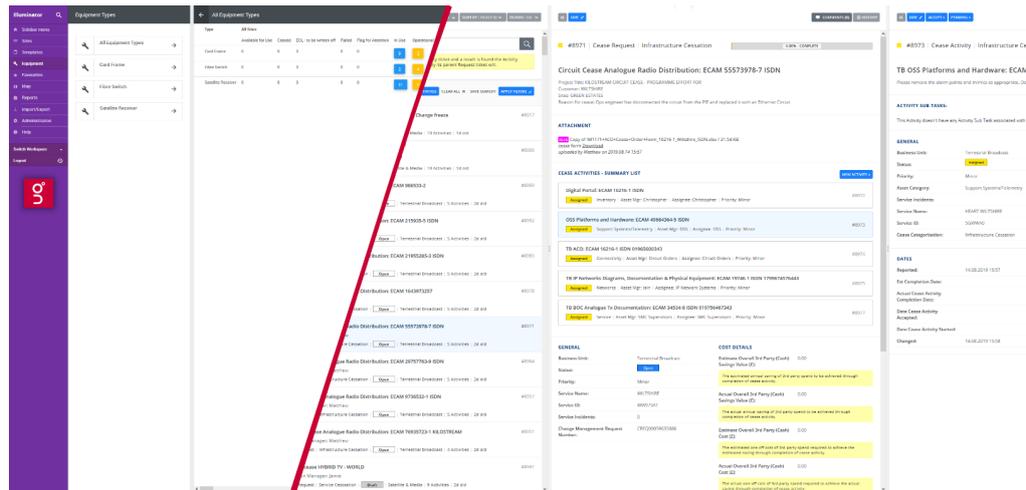


Image shows multiple workspaces with different views into data and its relationships

Introduction

ILLUMINATOR is part of Graphical Data family of products. It has a focus in enterprise data management, fact discovery of information, process mapping and project governance.



ILLUMINATOR is a web application with its main user interface built using technology standards from HTML / CSS / JavaScript which makes it compatible with most devices and platforms.

Architecture

ILLUMINATOR allows you to store and operate on one comprehensive data set which can be built and maintained, from many disparate sources that may only be available in many different formats. Thanks to the core data engine built by Graphical Data to handle abstract data and driven by relationships and properties which have been identified and developed over many years of testing and delivery, it can offer almost unlimited views into the dataset.

Integrations

- ILLUMINATOR interactive exports can be embedded on most web-based portals and applications. These take forms of single HTML files that are self-contained rich and interactive exports
- A rich set of supported data exchange formats (XML, Ms Excel/Word/Powerpoint/Access, text CSV, PDF, SVG, PNG/JPEG)
- Example integrations include Salesforce, Oracle Primavera P6 but the platform is versatile enough to communicate with an extensive range of enterprise grade applications.
- ILLUMINATOR can provide data feeds in iCal/RSS/XML for calendaring and project management applications (Google Calendar, Outlook Calendar, Microsoft Project)

Reporting & Analytics

- Built-in reports with graphically rich dashboards, user definable queries and configurable widgets that let users compose their dashboard to meet their needs
- ILLUMINATOR reporting engine offers users the ability to query metadata. Metadata is 'data about data', i.e. information which is stored against a particular piece of data. To illustrate, take a typical data entity, such as a project milestone. A useful query may be to examine how many times a user edited this entity, who that user was, what they changed, and when the last time it was changed. To do this the reporting engine must access the metadata tables which are stored against the entity where such information is stored.
- Email notifications about changes based on user subscription or as defined by their role in the system
- Built-in reports showing time based or data version-based deltas (delta reports)
- Automated conflict reports based on defined rules that can utilise data held in ILLUMINATOR cross-referenced with other sources

User Management

- ILLUMINATOR can integrate with Microsoft Active Directory/LDAP allowing for centralised management using existing infrastructure

- ILLUMINATOR implements role-based access control (RBAC) and permission engine with roles composed of customisable permissions. Unlimited number of user roles can be defined with any combination of permissions allowing for elaborate hierarchies to be mapped
- System administrators get access to user management area, among many others, to register or edit user profiles, change their role, force password resets and perform many other typical sys-admin tasks

Security

- Graphical Data adopted safe programming and project management practices and enforces rigorous control over access to information and its security. We are ISO/IEC 27001 certified
- Limits, and cool-down if a limit is reached, on any user action to avoid brute-force techniques
- ILLUMINATOR helps to protect from external as well as internal adversaries, users cannot impersonate others and data access can be aggregated and analysed over time to detect possible data leaks

Data Protection

- Support for data encryption at rest and in-transfer
- GD managed backup solution uses strong encryption and redundancy allowing for 99.999% 'no data loss' policy thanks to automated multi-region live synced copies
- ILLUMINATOR source code and customer customisations can be put in escrow upon request. If required, please advise at time of enquiry. In the past we successfully worked with Escrow London to provide necessary assurances our clients need
- Automatic auditing of data for consistency and integrity according to predefined rules and constraints
- Only trained and screened employees have access to your data under a watchful eye of our Data Protection Officer who is available to answer any queries you may have. Write your enquiries to support@graphicaldata.co.uk

Disaster Recovery

- When deploying on GD Cloud you are automatically protected by our trained staff and well rehearsed recovery processes
- From loss of service to full recovery from backup in less than 6 hours with negotiable response and monitoring times
- Support for external backup and recovery systems and a great number of scenarios that increase resiliency. Fully automated code and data deployments guarantee exact copy of previously running system can be available in relatively very short time
- GD offers staff who are available for support during recovery and post-recovery fact checking

Compliance & Auditing

- Onboarding / offboarding users follows GDPR rules and our data processing and operating practices fully comply with EU rules
- We store only minimal set of user data, sufficient only to support authentication and access control checks
- All our systems working for you are hosted within the political influence area required by you. We operate data centers in EU, USA and Asia
- You have full access to a log of actions/decisions taken by automation rules (with user visible artefacts like comments/notifications)
- Segregated testing, staging and production environments with a dedicated access for you to separate test/training platform
- ILLUMINATOR implements and follows best practices advised by American National Institute of Standards and Technology (NIST), RSA®, The Open Web Application Security Project (OWASP) and others

Deployment

Supported deployment scenarios include On-premises or your Private Cloud on Google Cloud Platform (GCP) or Amazon Web Services (AWS).

All above options are available on all support levels and can be GD managed, self-managed or combination of these.

Feature	Your Private Cloud	On-premises
Backup / Restore	Can use private infrastructure or GD backup service	Needs to use existing infrastructure
Uptime	IT support needed	IT support needed to support ops
Scalability	Provisioning new nodes or scaling existing ones in hands of IT dept	Provisioning new nodes or scaling existing ones in hands of IT dept

Server-side Requirements

Resource	Minimal requirement	Optimal
Memory	3 GB	4 GB+
CPU	1 CPU, 4 cores	1 CPU+, 4 cores+
Disk space	100 GiB	250 GiB+
Networking	1 Gbit/s	1 Gbit/s+

Client-side Requirements

Resource	Minimal requirement
OS	Microsoft Windows 7, 8.1, 10; GNU Linux, Mac OS 10.6
Browser	The most recent versions of these web browsers on PC/Mac: IE 11, Edge, Chrome, Firefox, Safari, Brave, Vivaldi Mobile web browsers: iPad Safari/Chrome, Android 7+ tablets
Connectivity	Internet access

Performance, Scalability & Reliability

- Scalable by design by utilising stateless node architecture for processing. Capacity can be increased by linear scale-out of nodes as well scaling particular nodes up
- Designed to handle extensive live datasets that have no negative impact on performance. In some typical instances we manage we have observed 500k+ entities, >1m metadata pieces + comments, and thousands of users with ILLUMINATOR continuing to offer response times of around 1s or less.

Customisation & Extensibility

- Fully configurable themes and interface with your choice of colour scheme to better fit-in with your existing tools
- Your logo to replace ILLUMINATOR
- Any aspect of the user interface can be 'translated' to use terminology used by you
- GD offers development capacity to build fully custom solutions inside the ILLUMINATOR or RESOLVE instance, example past projects included scheduled tasks that deployed exported data over wide distribution network that was used for data-mining that fed operations, marketing and sales teams
- API Access supports REST, XML-RPC and JSON-RPC calls over HTTPS