



barium

whitepaper

OPERATIONAL PROCEDURES
INFORMATION IS SAFE ON BARIUM LIVE



"BARIUM LIVE IS CERTIFIED ACCORDING TO THE
INTERNATIONALLY RECOGNIZED ISO-27001
INFORMATION SECURITY STANDARD."

CONTENTS

Introduction	3
Information security and availability	3
Help center and support	7
Development and quality assurance of Barium Live	8
The Barium Live upgrade process	9

INTRODUCTION

INFORMATION IS SAFE ON BARIUM LIVE

This document aims to provide the reader with an understanding of how Barium works with information security and how the service Barium Live is being developed, managed and supported.

INFORMATION SECURITY AND AVAILABILITY

For clients using Barium Live in their day-to-day business it is of the highest priority to know that their information is handled securely and that it is available to the right person at the right time while unavailable to anyone unauthorized.

Barium aims for the highest possible security in all aspects of Barium Live and to provide its users with service availability round-the-clock, every day of the year.

To ensure this, Barium seeks to continuously question, examine and improve our way of working as well as the technology used in providing the service. We follow established standards and best practices in key-areas connected to security and accessibility.

ISO-27001 CERTIFICATION

Barium Live is certified according to the internationally recognized ISO-27001 information security standard. The certification encompasses development, delivery and support of Barium Live as well as the handling of client data related to providing the service.

The standard demands far-reaching business management practices as means to ensure the confidentiality, accuracy and availability of the information handled. Adequate risk management and continuity planning are key-activities in this work.

The systematic work with information security conducted by Barium is an integrated part of the overall business and management structure of the company. Information security is also a top priority when designing all business processes, information systems and security measures.

DNV Business Assurance conducts recurring revisions of Barium's information security practices, auditing it according to the ISO-27001 standard.

INFORMATION SECURITY

To ensure the confidentiality of the information processed and stored on Barium Live, a wide array of security routines are applied in everyday work and the technology behind the service has been developed with highest possible security considered.

INFORMATION ACCESSIBILITY

- » All access to Barium Live demands logging in with correct credentials at a minimum.
- » All client information is logically separated in several levels from other clients information.
- » All access to client information is controlled by the client.
- » All communication and data transfer to the service is encrypted by Secure Sockets Layer (SSL).
- » Client data is never shared with a third party.
- » Only selected individuals at Barium can be granted access to the client information in the production environment of the Barium Live service.
 - › Such access has a time limit and requires approval and handling according to documented security routines.
 - › Access requests are only granted under special circumstances in order to carry out contractual agreement duties towards our clients.
 - › When accessing the production environment, a personal user account and smartID-card is used in order to log each access.
- » Barium anlitar kontinuerligt specialiserade säkerhetsföretag som analyserar och säkerhetstestar tjänsten i syfte att belysa samt motverka nya säkerhetshot som över tid uppstår mot webbtjänster.

Data storage and backup

All data handled on Barium Live is stored and processed in Sweden. Data is backed-up incrementally once per hour and kept in a "rolling" 48 hour window. At the end of every day, all data on Barium Live is encrypted, backed-up and sent by fibre cable to a secondary data centre. Three of these daily full backups are always stored. Clients also have the option to keep their own back-ups of their Barium Live data by using the service's data API.

DATA CENTER

Barium employs a professional service provider supplying data center and infrastructure for Barium Live. The service provider is an integrated part of Barium's ISO-27001 certification.

Our infrastructure is spread over several data centers in geographically separated locations within Sweden and is built with a N+1 redundancy, meaning that one unit in each critical component can cease to function without it affecting the service.

Data center features

- » Shell protection with intrusion detection.
- » Access control system and security company connected video surveillance.
- » Active fire prevention analysis system.
- » Backup power generators with double UPS-system.
- » Double air condition systems.
- » BGP4 and MPLS based communication towards multiple network operators.

Infrastructure features

- » Double routers for internet communication
- » Switched network with 1GB server capacity and 10GB root capacity
- » Redundant firewalls with intrusion blocking and log analysis
- » Encrypted traffic with VPN and SSLVPN
- » Traffic prioritization equipment
- » Fibre channel and iSCSI based storage network
- » Backup network with disc system and tape autoloader
- » Double surveillance system featuring alarm and trend analysis as well as SLA reporting
- » Inventory system for hardware, software and IP-numbers
- » System for updating firmware and software



ISO 27001

"An ISO 27001 Certificate demonstrates that you have taken necessary precautions to protect sensitive information against unauthorised access and changes. ISO 27001 Certificates are issued by a third party certification body, and proves that your information security management system has been certified against a best practice standard and found compliant."

– DNV GL Business Assurance



AVAILABILITY

Barium aims to provide 24/7-service availability for our clients. Historically, our track record is over 99.9 percent availability. Clients can monitor our response times and availability status through: www.barium.se/en.

Surveillance and alarm system

In order to maintain our 24/7-service availability goal, Barium Live is monitored by several services signalling any performance errors instantaneously.

Barium monitor both hardware and software, internally and externally, to ensure complete coverage and detection of all possible issues. Our alarm system signals specific on-call personnel via e-mail and SMS. We have routines and regulations in place to ensure that someone is always standing by to act on warnings from our alarm system enabling us to handle any new issues swiftly and according to protocol. All issues are followed through and analysed seeking to determine rootcause allowing us to mitigate similar or the same issues repeating again.

Disaster recovery

Barium has routines in place to ensure service continuity in extreme cases making us able to handle most disasters, disruptions and emergencies. These routines are regularly tested and practiced. These routines are activated when a serious disruption has occurred or is likely to occur and:

- » If full operations are unable to be restored to normal or:
- » If full operations can not be restored to normal within two hours

HELP CENTER & SUPPORT

Barium provides standard support and extended support. Standard support is included in the subscription license of Barium Live. Extended Support is offered as an addendum and can be tailored to client needs.

STANDARD SUPPORT

The content of Standard Support is governed by the subscription license agreement and comprises second line support available for solution owners in the client organisation. Standard Support includes the following:

- » Access to Barium Live Support
- » Access to Barium Live Knowledge Base

Barium Live Help Center gives clients the possibility to report incidents, ask questions, submit feature requests and order professional services. There are three ways to interact with the Barium Live Support:

- » Register and follow support tickets through the web 24/7
- » Mail to support@barium.se
- » Contact support personnel via telephone during Swedish office hours 0800-1700 CET weekdays

Ticket handling

All interactions with Barium Live Support result in a registered support ticket that the initiator can follow. Tickets are handled according to the following statuses:

Ticket received

When the ticket is received.

Being processed

During the time Barium is working with the ticket.

Ticket has been resolved

When the issue has been handled.

Ticket has been closed

When the issue has been handled and been approved by the initiator.

Awaiting your reply

If Barium Live support needs additional information from client.

Bug logged, awaiting resolution

If an issue is due to a bug which not have been fixed yet.

Severity levels

If client detects a fault on Barium Live this shall be reported to Barium Live support. Barium and the client shall together agree on the severity level in accordance with following:

Urgent

Critical faults preventing production on the service or impact the service in such way that it generates obvious incorrect results. There is no workaround.

High

Severe faults where there is a workaround and by that not preventing production on the service.

Medium

Faults of a less serious nature affecting parts of the service and are not significantly impeding effective use.

Low

Faults with little or no impact on the service and can be considered to be of a cosmetic nature.

Service Level Agreement (SLA)

Barium shall initiate mitigating actions after that a fault report is received and severity level decided in accordance with following:

Urgent

Immediately upon receipt of the fault report and a solution to the problem shall be provided as soon as possible.

High


As the latest two working days after the fault report is received.

Medium

Within a reasonable time depending on the fault's nature after that a fault report is received.

Low

At an appropriate time in the regular product planning.



Testing and quality assurance is a central part of the development process and is conducted in close collaboration with all divisions such as our delivery and support teams.

EXTENDED SUPPORT

In cases where there are needs beyond what is included in Standard Support, clients have the possibility to add extended support. The content of such agreement is possible to customize and is decided between Barium and the client from case to case.

Availability

Barium work for the service to be available for clients use 24/7/365. Historically, the average availability has been over 99.9 percent of the time. Clients can monitor availability status and response times in realtime at www.barium.se/en.

DEVELOPMENT & QUALITY ASSURANCE OF BARIUM LIVE

PRODUCT DEVELOPMENT PROCESS

Barium Live is developed using an agile way of working in so-called sprints. The content of each sprint is put together by the Barium product management group and are based on backlog items that are currently of high priority. Before adding items to a sprint, any required pre-studies are conducted, specifications are formulated, user stories written and test cases designed. The planned content of each sprint is then developed and tested.

The results of one or more sprints are made into a new product version. All upgrades of the Barium Live service is preceded by a specific upgrade process described in the next section, "Upgrading Barium Live".


Product development plan and backlog handling

The product backlog consists of and is built upon input from multiple sources, there among Barium's strategic product development plan and client demands. All our clients have the ability to influence the development process by registering feature requests and improvement suggestions. This is either done by contacting the Barium Live Support team or by communicating the request to an appointed contact person at Barium.

TESTING AND QUALITY ASSURANCE

Testing and quality assurance is a central part of the development process and is conducted in close collaboration with all divisions such as our delivery and support teams. Bariums quality assurance system consists of processes, routines and tools used proactively to prevent and adjust any defects that may affect the Barium Live user experience.

Our development and test teams follow demand-driven development practice that focuses on end user needs. This means that requirement definition, development, testing and verifying is all done through 'User Stories' based on end user needs and objectives. All new features and functionality is continuously quality assured inside each sprint. Existing functionality, performance, security and user experience is always subject to extensive regression testing before any upgrades are made. Security analysis and intrusion tests are conducted routinely by a third party.



Our development and test teams follow demand-driven development practice that focuses on end user needs.

THE BARIUM LIVE UPGRADE PROCESS

Barium continuously strives to in a controlled manner upgrade Barium Live with new functionality, improvements and bug fixes. Barium follows an upgrading process in order to ensure that correct information is provided to all our users and clients before, during and after a planned upgrade.

THE UPGRADING PROCESS

The process is initiated when a new version of Barium Live is about to be released. The development team presents the new version and its content to the Barium Live product owner and informs of any issues regarding end user impact and if a service window is needed to upgrade the system. Based on this information, the product owner decides when to upgrade the system and what activities are required to support the process before, during and after the upgrade.

UPGRADING NOTIFICATIONS

Upgrades are publically announced in the following cases:

- » If an update demands Barium Live to be taken offline for a certain period of time
- » If an update includes new functionality, changes or improvements which impacts end user experience

The upgrade announcements are sent by email and sent to all Barium Live space administrators, space owners, contract administrators and contract owners.

It is up to them to inform their respective end users of the upcoming changes. Announcements are made as soon as possible, usually at least two weeks prior to the scheduled upgrade.

PUBLIC PREVIEW PERIOD

If an upgrade contains new functionality that affects the end user experience a decision can be made to allow a public preview period. This is done in order to inform our clients on the coming changes and give them an opportunity to better prepare their end users for any new functionality.

During the preview period clients can try out any new features in a separate testing environment containing the new version and all its features as well as the client data. Pre-upgrade notes are available containing detailed descriptions on any new changes introduced and how to best prepare end-users for them.

DOCUMENTATION

All new functions and improvements are documented in the Barium Live Help Center. A change log is filled with all the details concerning the upgrade and the information is simultaneously published as a blog post and broadcasted through a Web Cast available on the Barium Live Help Center at the same time the upgrade is conducted.



INFORMING OUR CLIENTS

Barium communicates with clients through e-mail and through our blog which is the official communication channel used for information regarding Barium Live and its upgrades. Upgrade notifications are also sent by email to key client personnel. Any advance information is documented in the Barium Live Help Center and a link to this information is also provided with the upgrade notification email.

The upgrade announcements are sent by email and sent to all Barium Live space administrators, space owners, contract administrators and contract owners. It is up to them to inform their respective end users of the upcoming changes they deem relevant.

MAINTENANCE AND SERVICE UPGRADES

Maintenance and service upgrades of Barium Live can be performed on demand to implement crucial improvements or bug fixes to the system. In such cases, the same process is followed as per normal upgrades. Depending on the urgency of the situation, a decision can be made to upgrade Barium Live instantly.

If an urgent upgrade demands a service window, this will be announced via email as soon as possible. In some cases, this may mean that the upgrade will be announced with a notice of less than two weeks.