

SEEBURGER



Brochure | SEEBURGER BIS API Capabilities

The **API Capability** of the SEEBURGER BIS Platform

Not just a matter of integration, but also management

With an “integrate everything, everywhere” approach to digital transformation, SEEBURGER customers implement innovative business models and initiatives. API integration and management is an integral capability of the BIS Platform – a secure and scalable integration platform that supports real-time integration between applications, people and processes in any cloud.

Data and the applications that hold data are critical to today’s organizations. All applications must be integrated in order for APIs to access data, and once an API is created, it must be controlled, monitored and managed for the entirety of its lifecycle. The API Capability of BIS delivers against every aspect of an API’s lifecycle, from inception by the provider, to utilization by the consumer and everything inbetween. BIS addresses a range of API requirements, including:



Integration
mediate APIs for
x-platform compatibility



Security
protect APIs at all levels:
interface, access and data



Full lifecycle management
manage APIs from creation
to end-of-life



Control and governance
monitor and enforce SLAs
and QoS



Administration
utilize self-service API consump-
tion with easy API administration



Monitoring and reporting
monitor API operations and
analyze API usage

We provide API integration and management capabilities on one platform. It can be used as a façade for legacy data silos, in order to utilize valuable data with modern API access methods. The solution interfaces with data-holding applications by leveraging off-the-shelf communication adapters, thus reducing effort. These adapters have multiple uses, such as managing the integration of EDI data with ERP systems or for B2B integration with external partners. Additionally, SEEBURGER has many functionality-rich connectors to help you easily integrate and securely connect any endpoint.



“As the basis of modern business integration, we provide information via APIs in real-time and thus support our business processes in meeting new challenges. By using APIs, we can ensure that this information is always up to date, no matter how and by whom it is accessed.”

Oliver Rupprecht, OSRAM, IT

The API Capability consists of three key components



BIS API Portal –

based upon the standard BIS application framework, this provides general portal functions such as user management, rights and role administration, and more. User Management Services (UMS) within the API Portal provide integrated identity management services. Customers who already have their own Identity Management (IDM) solution can use UMS to ensure integration with a third-party IDM through LDAP, SAML, oAuth2.0 or other standard protocols. BIS Navigator is a part of the BIS API Portal for making master data management easier.



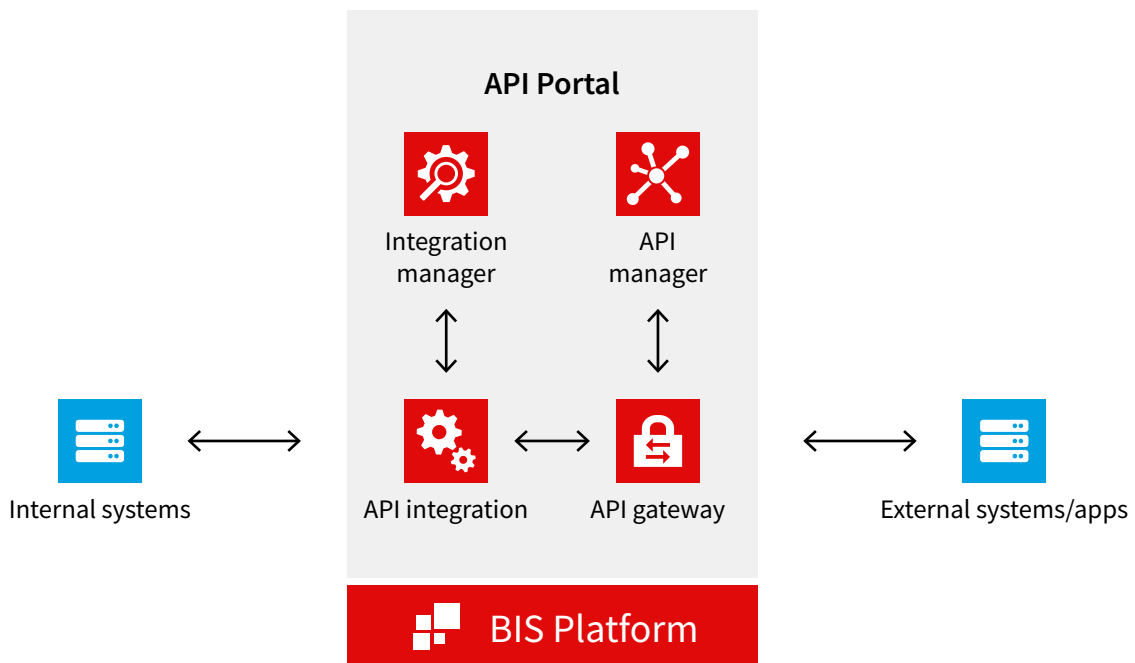
BIS API Integration –

acts as an interface to applications with the help of several adapters. Use adapters to manage integration with ERP systems and more, and add APIs with the Web Service and REST adapters. BIS API Integration includes BIS Developer Studio – an Eclipse-based development environment to help configure the API Integration component. BIS Developer Studio offers specialized integration tools for API design, API integration and mediation of APIs. The BIS API Integration component is built for the creation of API interfaces and API enablement.



BIS API Gateway –

secures the back-end infrastructure, such as data-holding systems and API integration services. Handles access control, API data quality and API security, and records API traffic. With a small footprint and lightweight approach, you can easily extend Gateway Groups with additional instances on demand.



API Requirements



SEEBURGER API Portal



SEEBURGER API Integration

Full lifecycle management

API Catalog:

- Adding new APIs (from scratch, import from file system or API dev. platform)

API Detail Screen:

- API Configuration: name, visibility, global desc., icon
- WYSIWYG Editor for global API documentation
- Endpoint configuration:
 - Endpoint testing, master data editor for technical endpoint
- API Exposure settings:
 - Version, state, schemes, host settings, base path, authentication settings
 - API description (showing the WSDL)
 - Web service security policies
 - Settings for exposure of a SOAP API inc. (version, state)

API Products:

- Combine back-end APIs down to the methods to create exposable API Products

Quota:

- Put limits on API Product usage based on business agreements with your consumers

Audiencing:

- Define which consumer sees which API Product

Developer Studio:

- Creation of API structures:
 - Open API 2.0 & 3.x
 - SOAP 1.1 & 1.2
- Easy deployment models

Mocking capabilities

Auto mock creation

App developers

can start implementing right away without waiting for developers/IT

API Requirements



SEEBURGER API Portal



SEEBURGER API Integration

Administration

API Configuration:

- Catalog overview with:
 - Tag based editing and filtering
 - Searching and sorting of APIs
- Integration into notification framework (new requests, state changes, etc.)
- Endpoint configuration

Gateway configuration:

- Gateway topology
- Active APIs per Gateway:
 - Application Management
 - Management of consumer application master data
 - Request management for API usage
 - Management of API keys

BIS Navigator:

- Master data configuration

BIS Process Monitor:

- Google-like search in monitoring data
- Easy scrolling on the timeline via the Time Slider
- Links to master data

Configurable flow visualization

Monitoring/reporting

API Monitor:

- Dashboard for KPIs that provide a complete overview of the current state of the system
- Graphical visualization of process sequences
- Linked with BIS Process Monitor to provide end-to-end-monitoring

Alerting framework:

- Get notified of possible configurations to fix potential problems. Define criteria to describe unwanted traffic patterns and become alerted in a configurable way

Metrics:

- Total number of API calls on all Gateway groups, grouped by status

External reporting:

- Provide export capabilities of consumption information for external use

External monitoring

- (including the option of data lake ingestion to assure serving a platform such as HADOOP that is designed to cope with mass data)
- Integration to widely used monitoring solutions, e.g. Graphana, Prometheus, Kibana
 - See all KPIs at a glance plus the ability to derive value from unlimited types of data
 - Service Level Agreement (SLA) monitoring and enforcement

BIS Process Monitor

- Dashboard for KPIs that provide a complete overview of the current state of the system
- Graphical visualization of process sequences
- Direct access to master data to support faster error resolution
- Log inspector to get direct access to log files

API Requirements



SEEBURGER API Portal



SEEBURGER API Integration



SEEBURGER API Gateway

Integration

Identity Management Integration:

- OAuth 2.0
- Lightweight Directory Access Protocol (LDAP)
- Active Directory Federation Service (ADFS)
- Distributed fast response processing (caching)
- SwaggerHub integration

- Any-to-any content and protocol handling
- Access to Adapter Engine:
 - Use other integration styles like B2B/EDI, EAI/A2A, MFT
 - Easy and fast creation of interfaces without domain knowledge
- Ability to do heavy lifting

Mediation:

- Bi-directional conversion between XML and JSON
- Manipulation of operations, headers, parameters
- Mocking of responses
- String replacements
- Handling of SOAP and REST
- Execution layer for API Proxy Channels

Security

- Application management
- Management of both message and protocol certs
- API Keys management
- Multi-level policy management
- API Permissions – protect the API and back-end with user permissions

- ICAP Support (AV/Quarantine feature)
- All security aspects available in order to mediate between several internal resources

- Enforces security as defined in the API Portal
- Msg. based security settings (SOAP, XML, JSON)
- Communication protocolbased security settings (TLS, Header)
- Authorization (OAuth2.0, API Key, Basic Auth)

Control/governance

- Quality of service monitoring and adjustment
- SLA monitoring and enforcement

- Content-based routing, blocking and processing
- Automated API testing and auditing for quality

- Content-based routing, blocking and processing based on policy configuration



SEEBURGER API Capability

Deployment

PublicClouds

Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP)

Automation

BIS Landscape Manager (hotfix installation mechanism supports rolling and parallel installation mode CI/CD capabilities), Maven Plugins, Build Automation, Deployment API, Full Restification of the BIS Platform

Containers

Docker, Kubernetes

Standards Support

Message protocols

OpenAPI 2.0 & 3.x, SOAP 1.1 & 1.2, MTOM, Plain XML, REST, UDDI, WSDL, JSON

Transport protocols

TCP, HTTP 1.0 & 1.1, JMS, MQ, FTP, SFTP, SMTP, POP, MQTT, AMQP

Transport & message security

SSL, TLS, XML Encryption, XML Signature, WS-Security (SAML, Kerberos, Username, X.509 token profiles), WS-Policy, WSSecurityPolicy, WS-Addressing, PKCS#1/#7/#12, S/MIME

Authentication/authorization

Basic authentication, API Key, Oauth 2.0, SAML, Kerberos, Siteminder, LDAP, PKI-based authentication, database authentication, Adapter SDK integration, JSON Web Token (JWT) validation

Policy Model

- **Mediation:** XML2JSON, JSON2XML, manipulation of operation, headers, parameters, check message size, string replacement, trace
- **Traffic:** Throttling, Quota, IP Caller Restriction, Boolean Operations, Forwarding, Concurrency, Caching, URL Masking, URL Rewrite
- **Security:** JWT Validation, OAuth, basic authentication, LDAP Validation, API Key, ADFS claim validation

Add-ons

• Community Management Application:

Create campaigns for rapid onboarding and enable selfservices for data maintenance.

• BIS Landscape Manager:

Server-based management application for administration teams to manage multiple systems, including updating and installing various BIS Platform capabilities.

• BIS Secure Proxy:

BIS Proxy and reverse proxy to secure customers' EDI, B2B and MFT communication with a high level of data protection between external connections and internal networks.

• Developer Studio:

Integrated development environment (IDE) for the creation of processes and components for BIS.

• SEEBURGER Support Agent:

Collects support-relevant data such as: log file error messages, configurations, mappings, process data and installed modules, to evaluate and include in various reports for IT departments. Standards Support Deployment

About SEEBURGER

One central platform, one experience, all integrations, all deployment models. SEEBURGER is an integration service and software provider. Our BIS Platform enables seamless connectivity of applications, people and processes, whether in the cloud, a hybrid environment or on-premises. With the BIS Platform, anyone can design simple to complex integrations on their own, helping to strengthen their company's digital ecosystem.

Family owned since 1986, today over 1,200 employees worldwide make us strong. Over 14,000 customers rely on integration expertise from SEEBURGER every day. For more information, please visit www.seeburger.com.



Connect

Integrate apps and technologies for secure data exchange.



Automate

Hyperautomate and digitalize processes.



Innovate

Inspire innovation with agile integration and dynamic deployment models.



Would you like to learn more about API integration and management throughout the lifecycle?

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