



The SEEBURGER BIS API Solution

With a 'start anywhere, use anything' approach to digital transformation, SEEBURGER customers accelerate business with best-of-breed integration services. SEEBURGER's API Solution is an integral part of Business Integration Suite (BIS) – a single integration platform that connects clouds, applications and people.

The SEEBURGER BIS API Solution

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.

SEEBURGER's API solution delivers against every aspect of an API's lifecycle, from inception by the provider, to utilization by the consumer and everything in between. Our single platform (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 consumption with easy API administration

Monitoring and Reporting – monitor API operations and analyze API usage

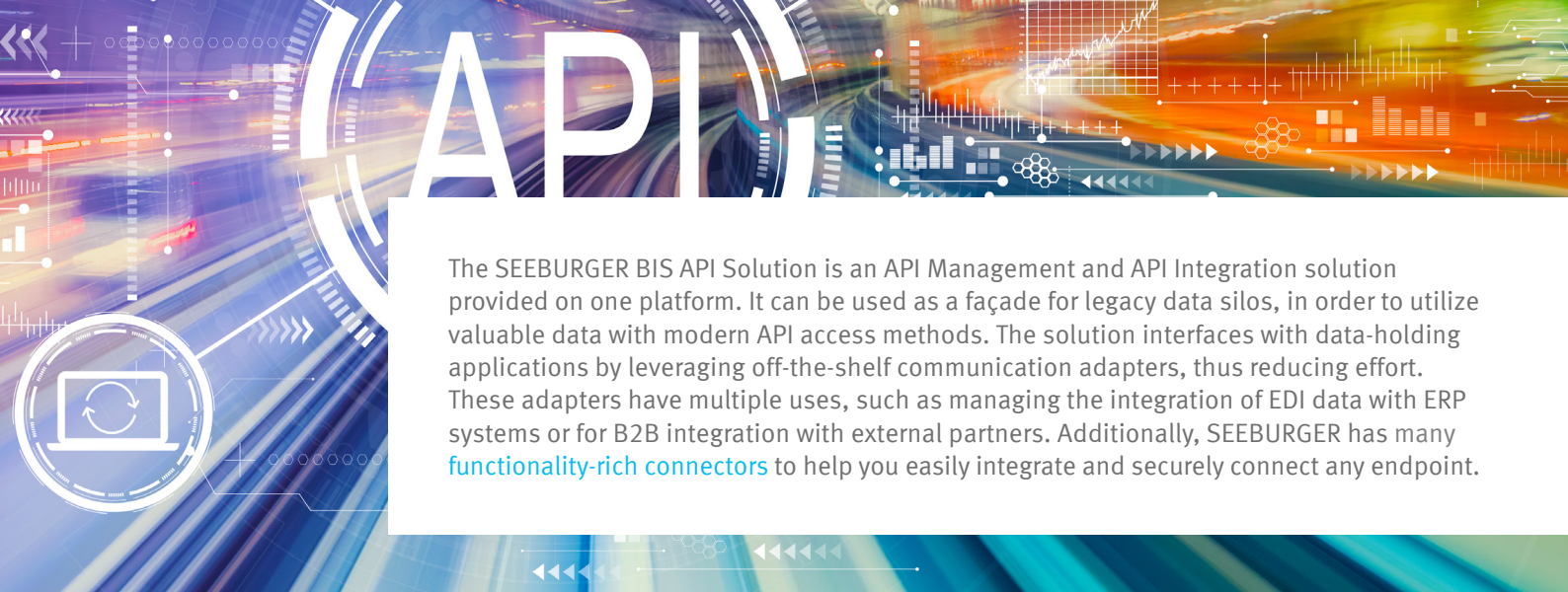
OSRAM – SEEBURGER API Customer

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“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

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The SEEBURGER BIS API Solution is an API Management and API Integration solution provided 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.

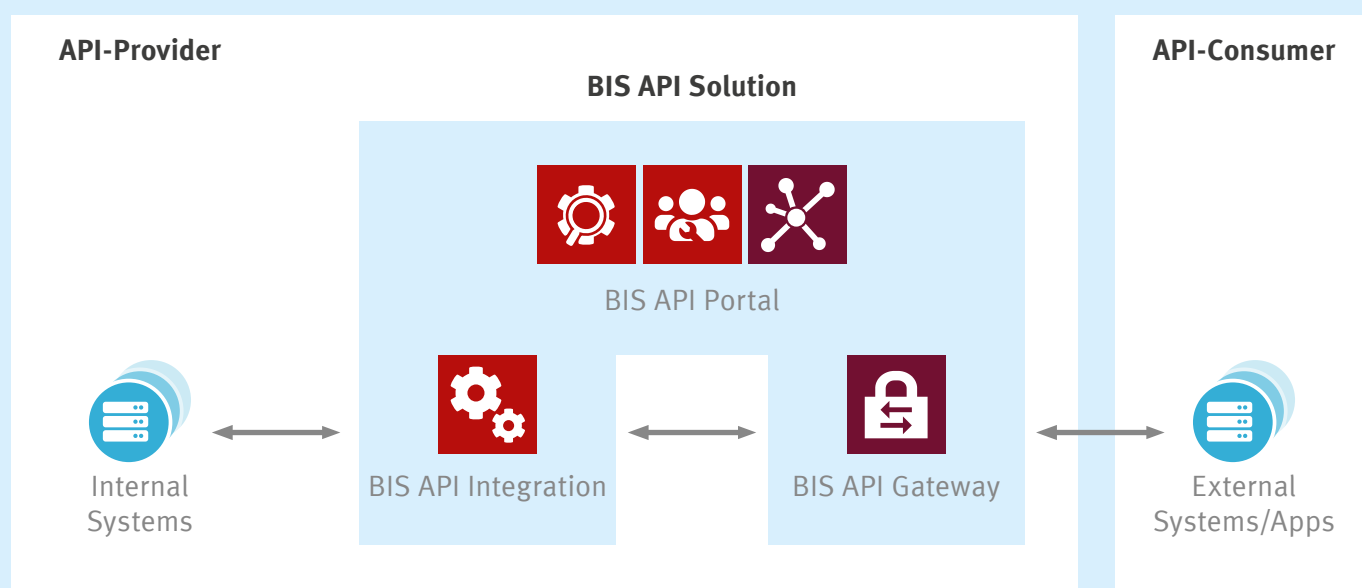
The SEEBURGER BIS API Solution consists of three key components (see Figure 1):

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.

Figure 1 – SEEBURGER BIS API Solution Key Components



SEEBURGER API Portal		SEEBURGER API Integration
API Requirement	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

Audienicing:

- › 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

SEEBURGER API Portal		SEEBURGER API Integration
API Requirement	Administration	<p>API Configuration:</p> <ul style="list-style-type: none"> › Catalog overview with: <ul style="list-style-type: none"> • Tag based editing and filtering • Searching and sorting of APIs › Integration into notification framework (new requests, state changes, etc.) › Endpoint Configuration <p>Gateway configuration:</p> <ul style="list-style-type: none"> › Gateway topology › Active APIs per Gateway: <ul style="list-style-type: none"> • Application Management • Management of consumer application master data • Request Management for API usage • Management of API keys <p>BIS Navigator:</p> <ul style="list-style-type: none"> • Master data configuration <p>BIS Process Monitor:</p> <ul style="list-style-type: none"> › Google-like search in monitoring data › Easy scrolling on the timeline via the Time Slider › Links to master data <p>Configurable flow visualization</p>
	Monitoring / Reporting	<p>API Monitor:</p> <ul style="list-style-type: none"> › 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 <p>Alerting Framework:</p> <ul style="list-style-type: none"> › Get notified of possible configurations to fix potential problems Define criteria to describe unwanted traffic patterns and become alerted in a configurable way <p>Metrics:</p> <ul style="list-style-type: none"> › Total Number of API calls on all Gateway Groups, grouped by status <p>External Reporting:</p> <ul style="list-style-type: none"> › Provide export capabilities of consumption information for external use <p>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)</p> <ul style="list-style-type: none"> › 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 <p> <ul style="list-style-type: none"> › 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 </p>

		SEEBURGER API Portal	SEEBURGER API Integration	SEEBURGER API Gateway
API Requirement	Integration	Identity Management Integration: <ul style="list-style-type: none"> › OAuth 2.0 › Lightweight Directory Access Protocol (LDAP) › Active Directory Federation Service (ADFS) › Distributed fast response processing (caching) › SwaggerHub integration 	<ul style="list-style-type: none"> › Any-to-any content and protocol handling › Access to Adapter Engine: <ul style="list-style-type: none"> • Use other integration styles like B2B, A2A, MFT, EAI • Easy and fast creation of interfaces without domain knowledge › Ability to do heavy lifting 	Mediation: <ul style="list-style-type: none"> › 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	<ul style="list-style-type: none"> › 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 	<ul style="list-style-type: none"> › ICAP Support (AV / Quarantine feature) › All security aspects available in order to mediate between several internal resources 	<ul style="list-style-type: none"> › Enforces security as defined in the API Portal › Msg. based security settings (SOAP, XML, JSON) › Communication protocol-based security settings (TLS, Header) › Authorization (OAuth2.0, API Key, Basic Auth)
	Control / Governance	<ul style="list-style-type: none"> › Quality of service monitoring and adjustment › SLA monitoring and enforcement 	<ul style="list-style-type: none"> › Content-based routing, blocking and processing › Automated API testing and auditing for quality 	<ul style="list-style-type: none"> › Content-based routing, blocking and processing based on policy configuration



SEEBURGER BIS API Solution

Deployment	Public Clouds	Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform
	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	<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> Community Management Application: Create campaigns for rapid onboarding and enable self-services for data maintenance. BIS Landscape Manager: Server-based management application for administration teams to manage multiple systems, including updating and installing various SEEBURGER software products centrally. 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. Development 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.

About SEEBURGER

SEEBURGER is a global leader in business integration offering innovative business solutions in a unified, agile and scalable suite that is designed to meet the most common integration scenarios in a secure and reliable way, including B2B/EDI, MFT, EAI and API.

SEEBURGER's industry-leading solutions are available on any cloud, as hybrid or on-premises deployments. SEEBURGER enables more than 10,000 customers to combine business practices across diverse industries in 50+ countries. Our solutions and technology can accelerate your efforts to become future-ready, improve business connectivity and continuity, reduce costs, enable new digital products and services, and reduce barriers to profit.

For more information visit www.seeburger.com

