

Board Cloud Overview

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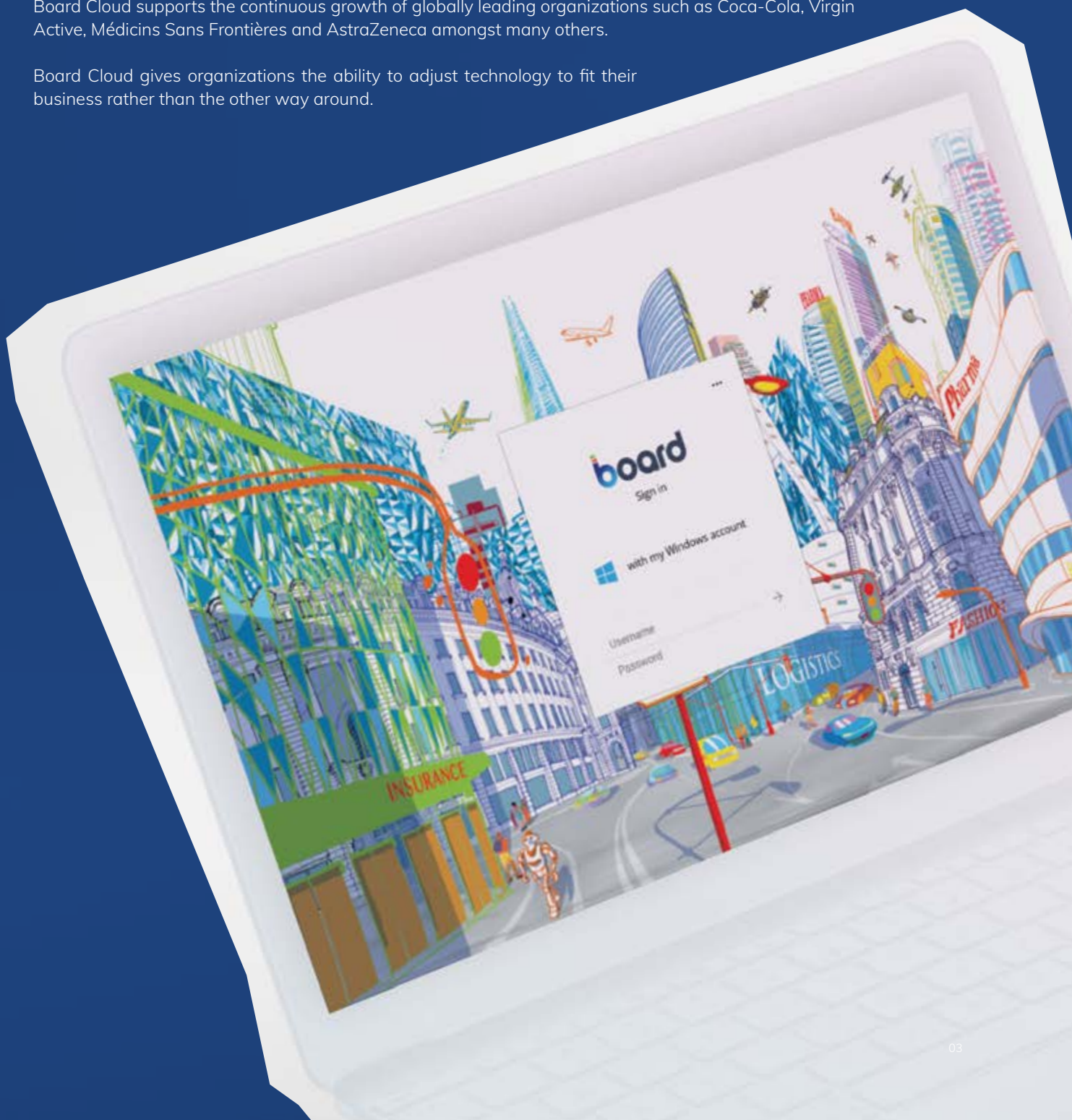
1. Introduction

Board Cloud is a SaaS version of the Board all-in-one platform, the #1 Decision Making platform.

Powered by Microsoft Azure, Board Cloud reduces both setup time and maintenance overheads of your BI, EPM and Predictive Analytics applications by offering world-class security, reliability, scalability and performance.

Board Cloud supports the continuous growth of globally leading organizations such as Coca-Cola, Virgin Active, Médecins Sans Frontières and AstraZeneca amongst many others.

Board Cloud gives organizations the ability to adjust technology to fit their business rather than the other way around.



2. Board Cloud Description

Board Cloud is deployed on Microsoft Azure data centers around the globe. All data centers are classified as ANSI/TIA-942 Tier 4 the most stringent level, designed from the ground up to host mission critical computer systems, with fully redundant subsystems and compartmentalized security.

The partnership with Microsoft enables Board to deploy Cloud solutions On Servers strategically located to eliminate and reduce the potential of latency issues seen in some globally scaled cloud-based solutions. Such vast geographical coverage enables Board to comply with the various policies and regulatory requirements relating to handling and storing personal or financial data.

Board Cloud helps companies deploy global rollouts by assisting organizations in the following areas:



Simplifying business models



Standardizing global processes



Deploying across an industry standardized platform and interfacing technologies

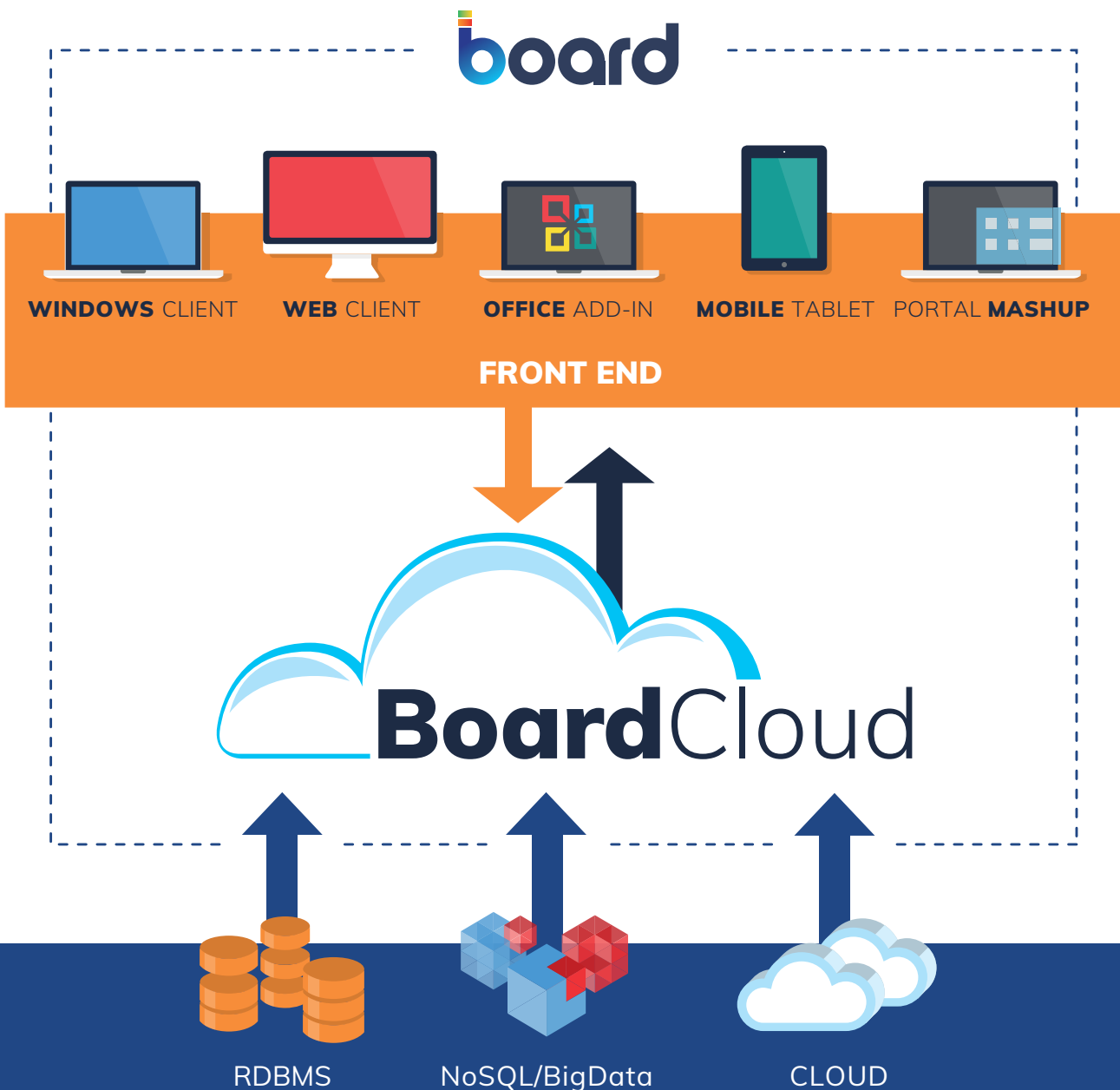
With **zero infrastructure investment** required, organizations only pay for what they use, making BI and CPM more cost-effective and less risky than ever before.

Board Cloud is available in **different languages**, such as English, French, German, Spanish, Italian, Chinese, Japanese.

Terminology to your specific Organization can be translated through your Board applications to any language using Board's translation mechanism enabling users from different countries to see the same application dimensions and measures in a language familiar to themselves.

User access to Board Cloud is easily achieved through all common Web Browsers from different kinds of devices (tablets, notepad, smartphones etc.), using a secure, encrypted HTTPS connection.

Board Cloud enables seamless **connections to On-premise, Hybrid and Cloud data sources** through its industry leading connectivity technology without the need for complex configuration on Customer source systems.



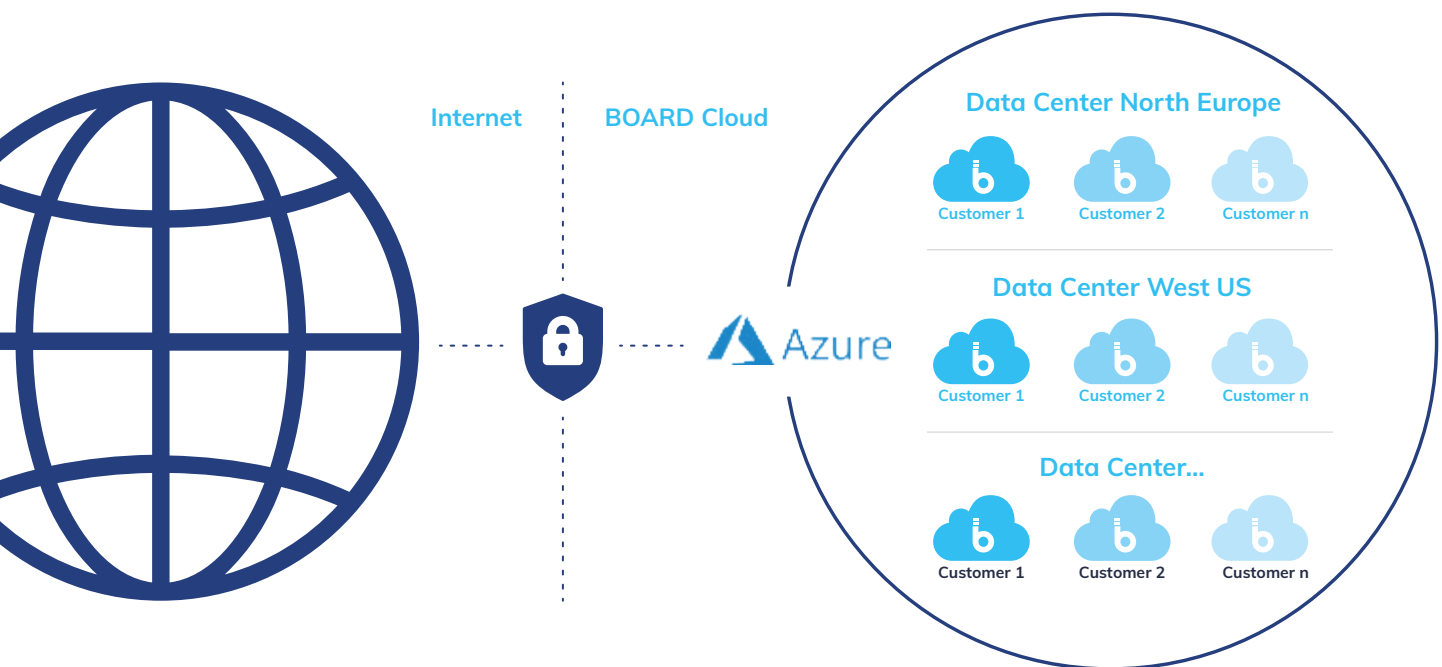
3. Cloud Architecture

Board Cloud's globally spanning infrastructure supports enterprise level rollouts by providing robust levels of integration with various systems such as ERP, CRM, Cloud applications, Data Warehouse and many more.

Board Cloud provides one (or more) production environment(s) with the possibility to activate one or more Sandbox environments for use as Development, User Acceptable Test, Pre-production instances depending on Customer's project requirements and policies.

Access to a Cloud Administration portal is also given to each Board Cloud customer enabling them to be fully self-sufficient with regards to administering and managing their Board Cloud environment.

Board Cloud Infrastructure



Each customer has one (or more) dedicated Virtual Machine ensuring complete isolation of the Virtual Machines and associated storage units and Networking used within the Board Cloud. This architecture approach provides the following benefits:

- **Security:** Complete separation ensuring isolation of all customers' data.
- **Reliability:** The performance of one customers' instance will never be impacted by activity on another Board Cloud Customers.
- **Geographic redundancy:** All customer data is replicated across a Primary and Secondary Azure data center offering failover in the event of a major outage at the primary DC.
- **Version Isolation:** Customers can upgrade their Cloud instance when they need it independent of all other customer upgrade activity.

4. Authentication / Identity Federation

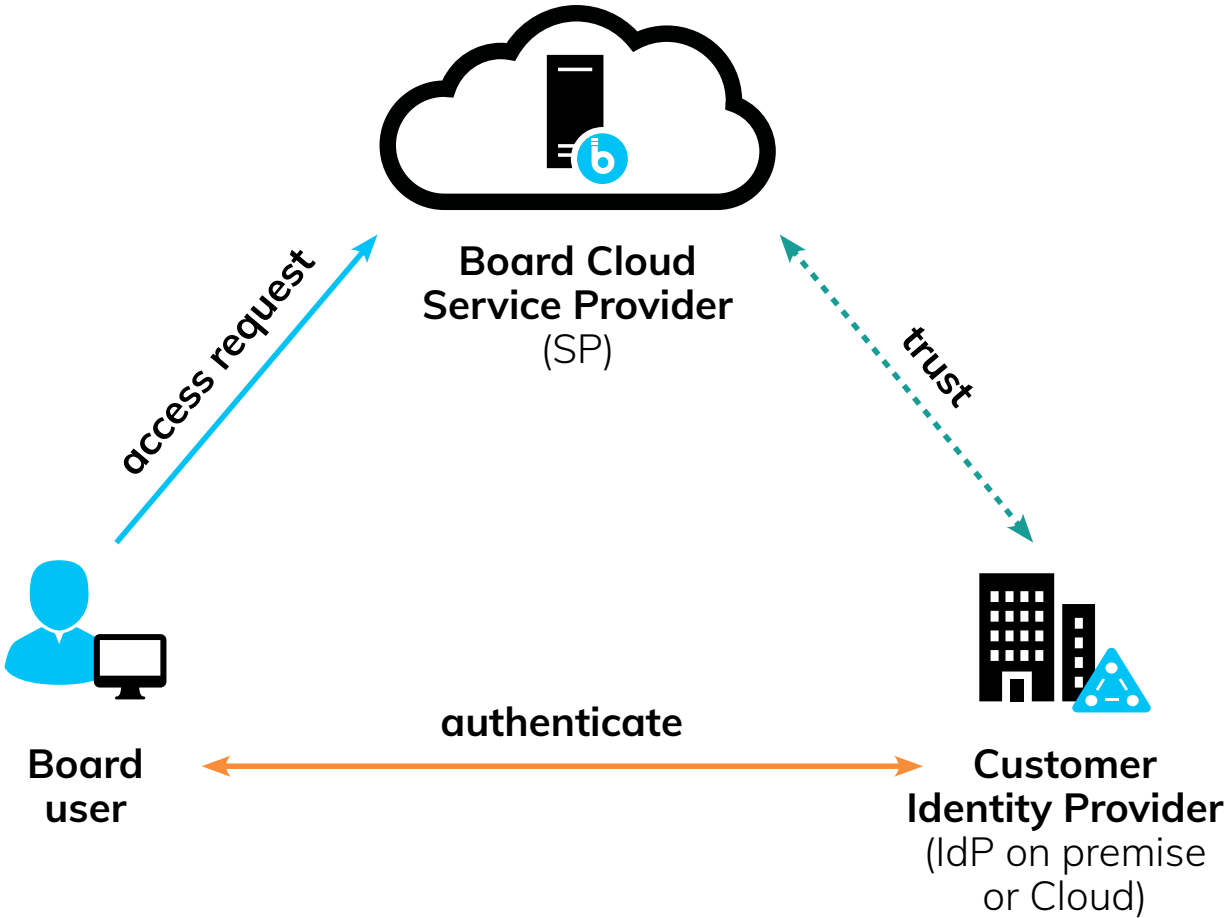
Board Cloud supports various authentication methods. Authentication can be configured to use Board level user accounts or alternatively, authentication can be handed off to an external Identity Provider (IDP) using industry standard protocols such as SAML 2.0 for example.

Utilizing an external IDP can simplify deployment, minimize for user administration and improve the user experience of Board applications with **SSO capabilities** thanks to the possibility to directly integrate with centralized company authentication systems.

This functionality also enables customers to directly manage password policies, complexity policy, password expiration and other specific controls.

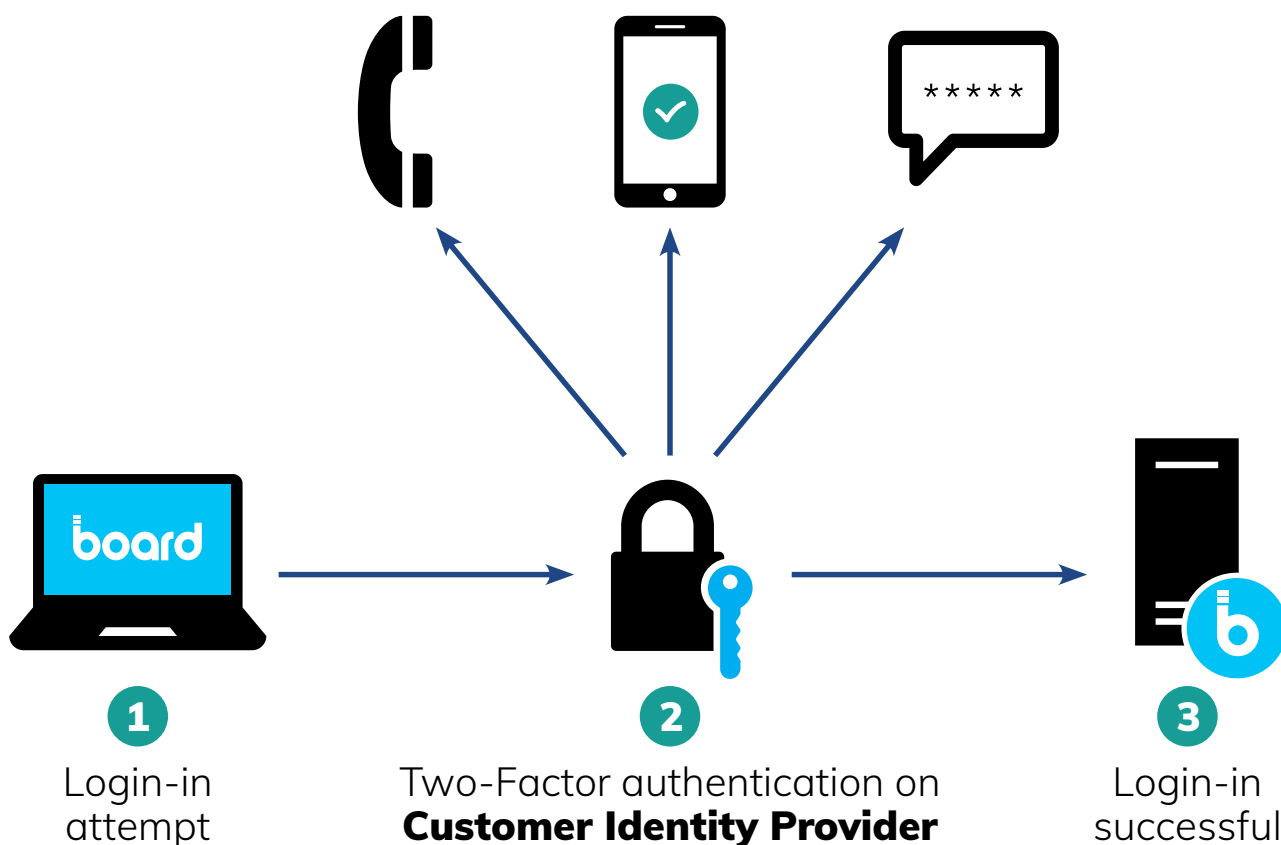
Board Cloud implements Federated Authentication using Security Assertion Markup Language, SAML 2.0 as illustrated below.

SAML 2.0 Authentication schema



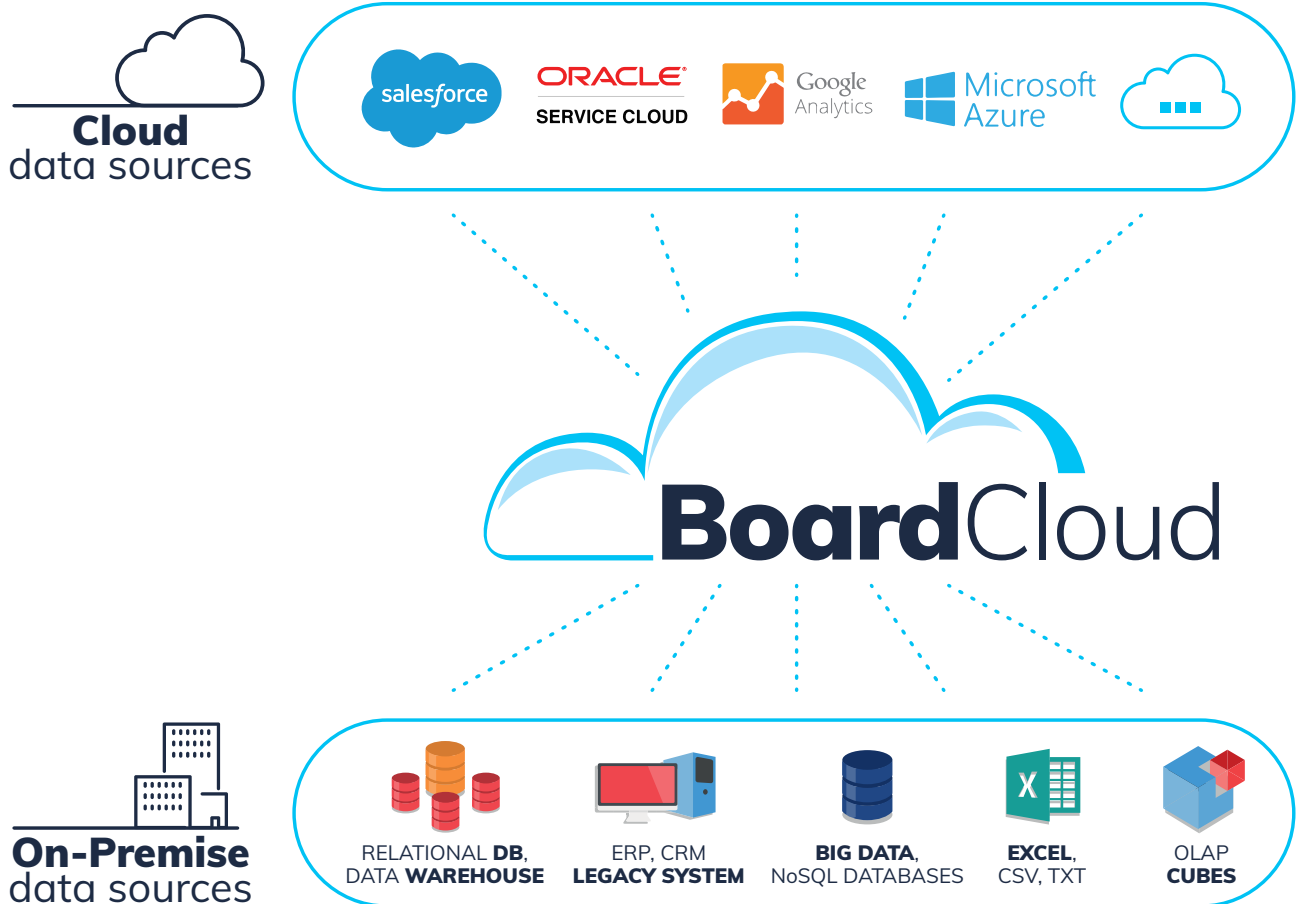
By enabling the authentication to be handled by an Identify Provider, the use of two-factor authentication is possible thanks to the SAML 2.0 configuration. This is illustrated in the diagram below.

Verify two factor authentication by phone call, text message or mobile application



5. Data Integration

Board Cloud is designed to offer a seamless connection to on-premises and cloud data systems in real time allowing you to deliver enterprise analytics, planning and forecasting that fully leverages your existing software investments.



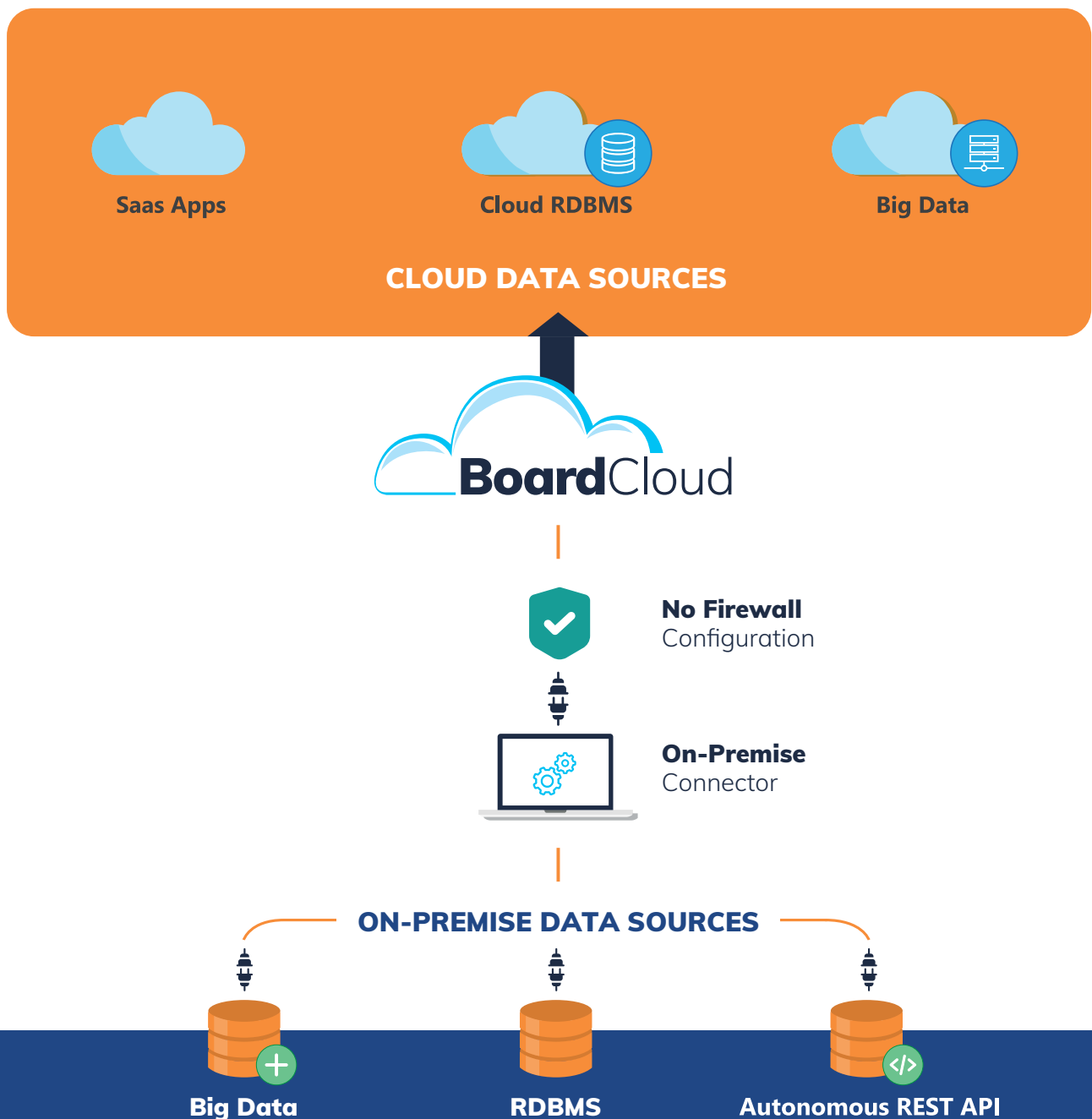
This is achieved through the Board Cloud Data Pipeline. The Data Pipeline is an extremely light weight, unobtrusive software service designed to allow Board applications to access customer data sources either on-premise or cloud-based solutions.

The solution is built of two components:

- **Hybrid Data Pipeline Cloud Service**
- **On-Premises Connector** (for those data sources configured within a customer's premise)

5.1 Data Pipeline Cloud Service

This component is installed in the cloud and is the principal component. It exposes a web portal where the user can define connections and rules.



5.2 On-Premises Connector

This is the component that is installed remotely to access those source systems that reside behind Customer firewalls. It provides the services to securely move data from on-premises data stores to the Board Cloud.

This component securely connects to the Hybrid Data Pipeline Server without requiring firewall configuration changes using HTTPs.

Unlike other solutions on the market, Board also supports **write-back** from cloud-to-on-premise, through a secure tunneling connection. By using this mechanism, data stored in Board can easily be integrated back to the underlying source systems residing within a customer's domain.

Board Cloud provides a set of **Connectors** to easily integrate different data sources of company systems. Below are some examples of the data sources supported by the Hybrid Data Pipeline Service:

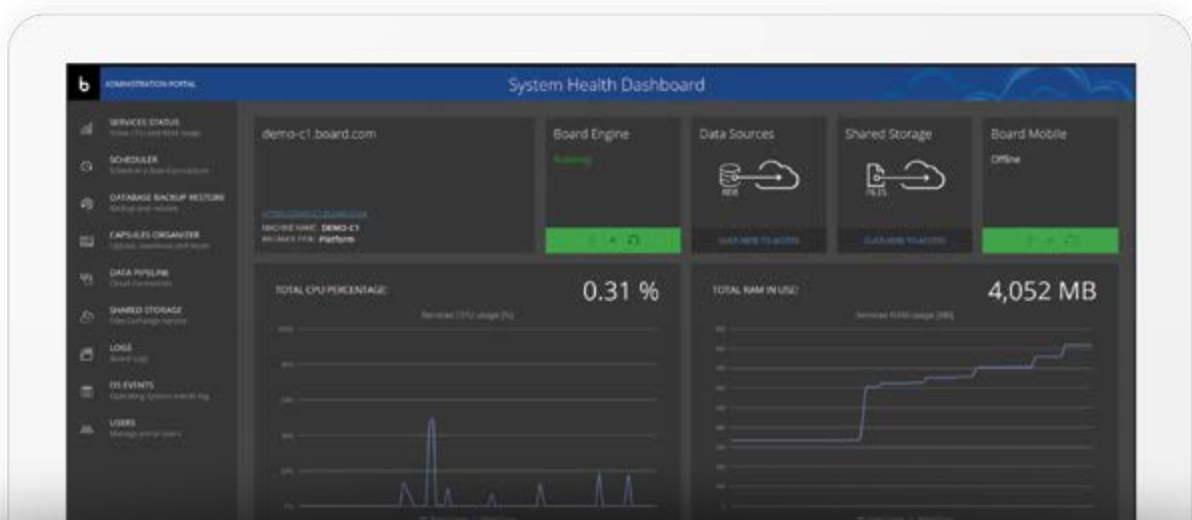


6. Cloud Administration Portal

At the core of Board Cloud SaaS there is the Cloud Administration Portal providing a full overview of each Board Cloud environment.

The Administration portal provides a range of services enabling customers to manage their Cloud environment in a fully self-sufficient manner.

Cloud Administration Dashboard



Below some of the main features provided by Cloud Admin Portal:

- **Monitor virtual machine resources consumption**
- **Schedule and manage administrative tasks, such as data import and Board procedures for example**
- **Preserve, archive and purge backups of your data**
- **Manage the connection to your data sources**
- **Access extensive Board log and view the VM level services event log**

Audit Logs

Board extensive logging capability enable customers a full 360-degree view point of the Board Cloud environment. This is achieved through log files showing all user activity, login/ logout/ failed login attempts, procedure execution, data entry (before and after values), screen creation/ modifications amongst many others.

All log records are time stamped and user ID's are captured as well other extensive details typically found in verbose level logging mechanisms.

All the Logs can be encrypted, and Customers have the ability to download them of all Board logs for ingestion to other systems or devices.

All the logs are kept in a secure area with the aim to prevent tampering.

7. Board Cloud Security

Board Cloud has been built from the ground up in adherence with industry best practice and current day regulatory requirements. Board Cloud provides the highest level of security ensuring the following:

- **Confidentiality**
- **Integrity**
- **Availability**

These three pillars are guaranteed by the security best practices adopted by Board extending to the following:

- **Compliance:** Due to the requirements ISO 27001 the Company must respect the requested confidentiality, availability and integrity of Customer data. Board Cloud is also SSAE 18/ ISAE 3402 SOC 1 Type II certified. (For additional details please see "Board Cloud Security Overview" Par. "Regulatory Compliance & Certification").
- **Business Continuity:** is guaranteed by Board through the Disaster Recovery, Backup Procedures and Geo Redundancy. (For additional details please see "Board Cloud Security Overview" Par. "Business Continuity Management")
- **Data Retention:** this is necessary for the performance of the services, securely delete all Customer Data and shall offer the needed support to customers in these activities. Board don't have access to Customer Data and, at the same time, track and log any system access.

8. About Board

Board is the #1 decision-making platform. Founded in 1994, Board International has enabled people from more than 3,000 companies worldwide to have a transformative impact on their business by rapidly deploying Business Intelligence, Corporate Performance Management, and Predictive Analytics applications on a single unified platform.

Board allows companies to intuitively play and create with data to produce a single, accurate, and complete view of business information, gain actionable insights, and achieve full control of performance across the entire organization.

Thanks to the Board platform, global enterprises such as Coca-Cola, DHL, KPMG, Puma, Siemens, and ZF Group have deployed end-to-end decision-making applications at a fraction of the time and cost associated with traditional solutions.

Board International has 26 offices around the world and a global reseller network. Board has been implemented in over 100 countries.

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