

SAP HANA Operation Expert Summit BUILD – User Management & Security

Overview

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Customer

The SAP logo is located in the bottom left corner of the slide. It consists of the letters 'SAP' in a bold, white, sans-serif font, set against a dark blue rectangular background. The background of the entire slide is a blue-toned image of a person's silhouette holding a magnifying glass over a globe, with a circuit board pattern overlaid on the scene.

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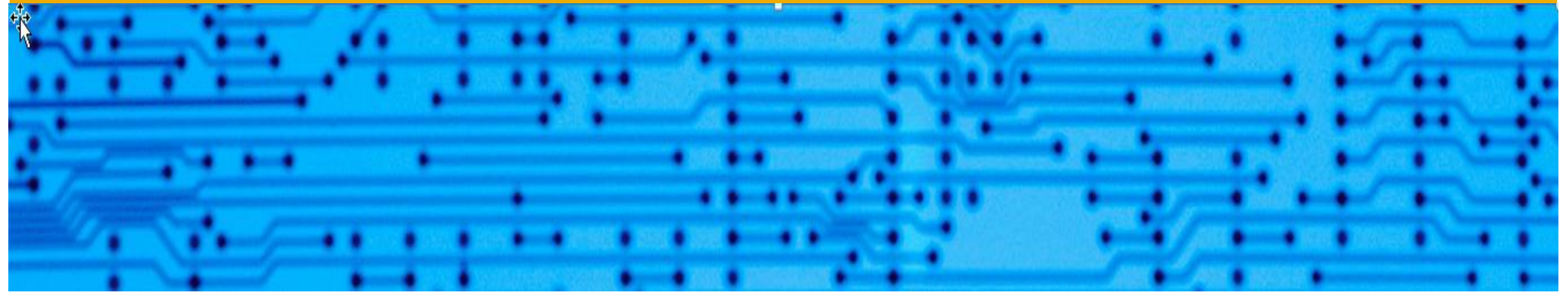
Agenda

SAP HANA scenarios

SAP HANA security functions

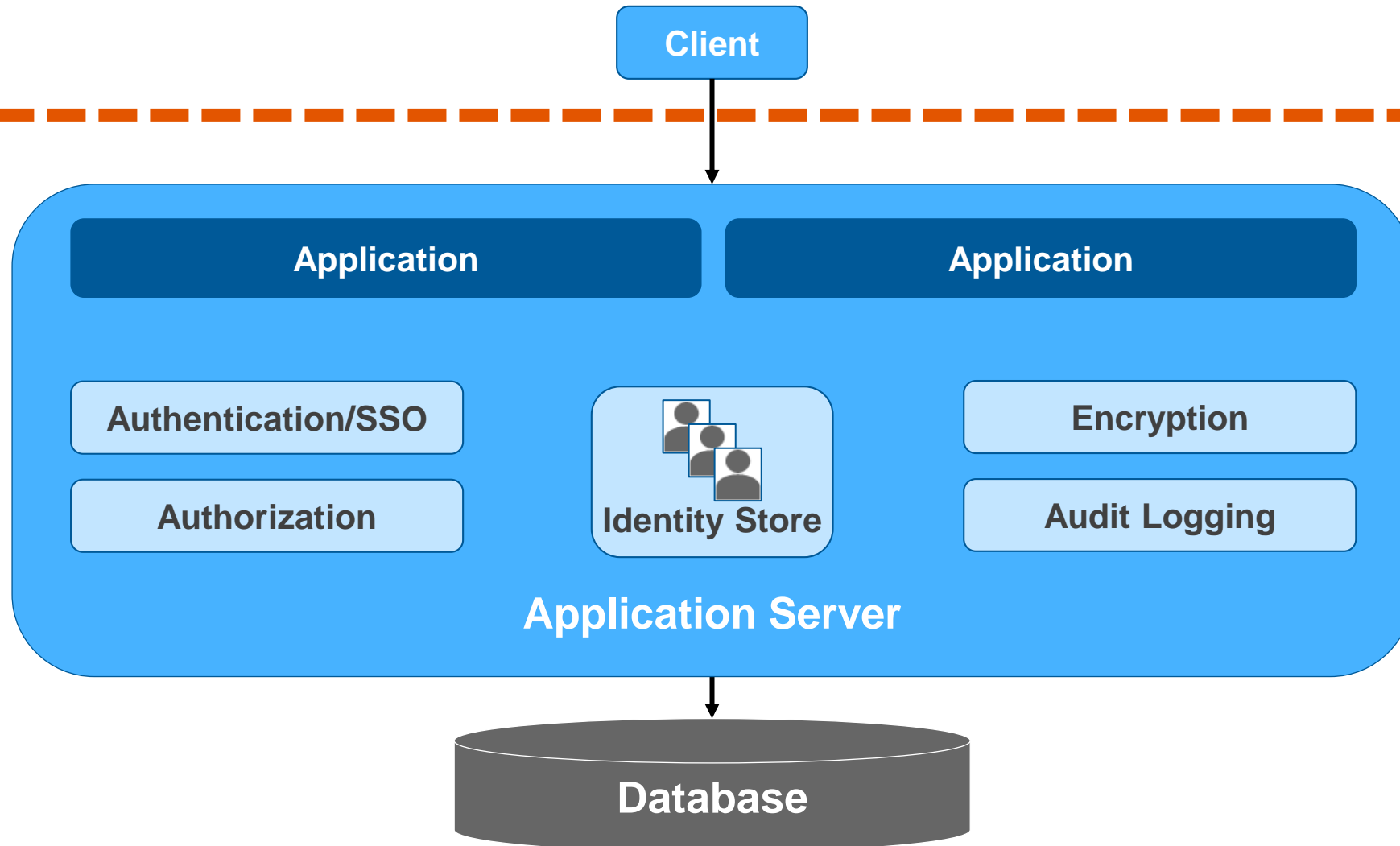
Security in different SAP HANA scenarios

Data center integration



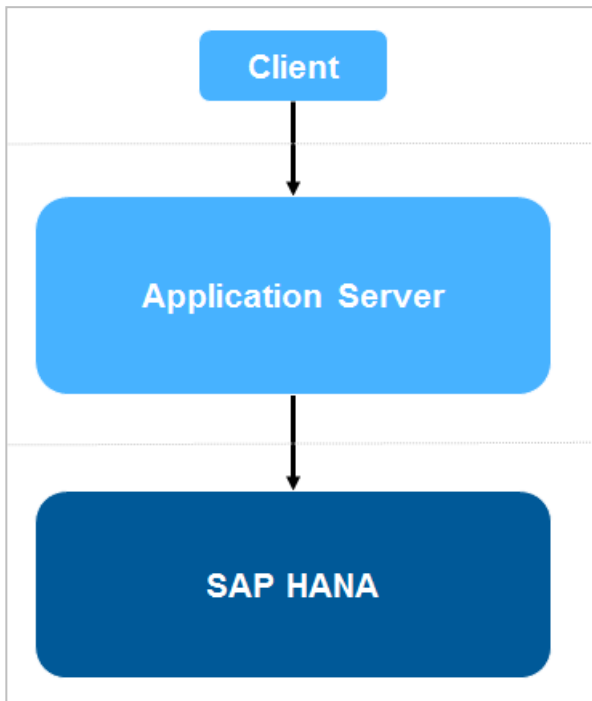
SAP HANA scenarios

Traditional security architecture

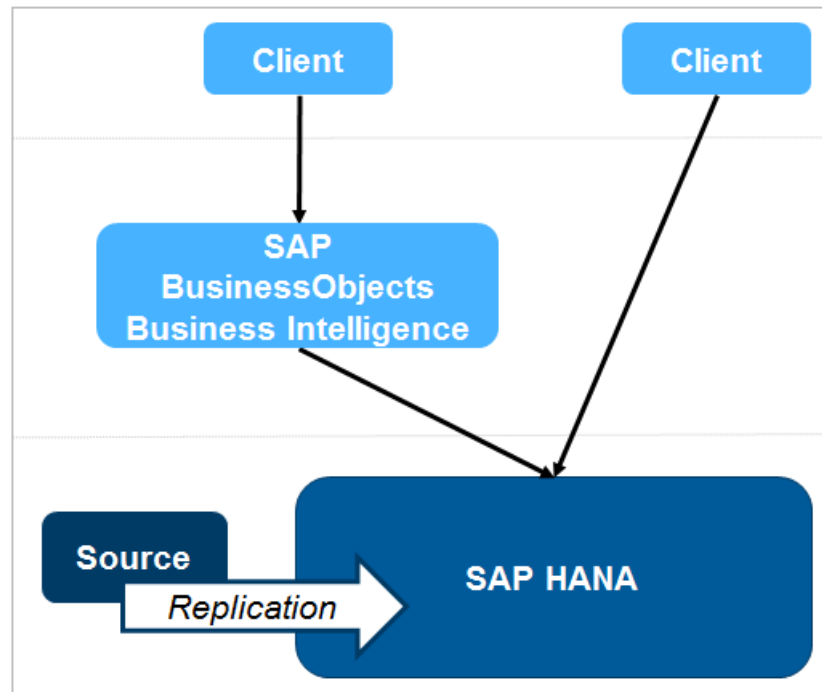


SAP HANA scenarios – overview of different scenario types

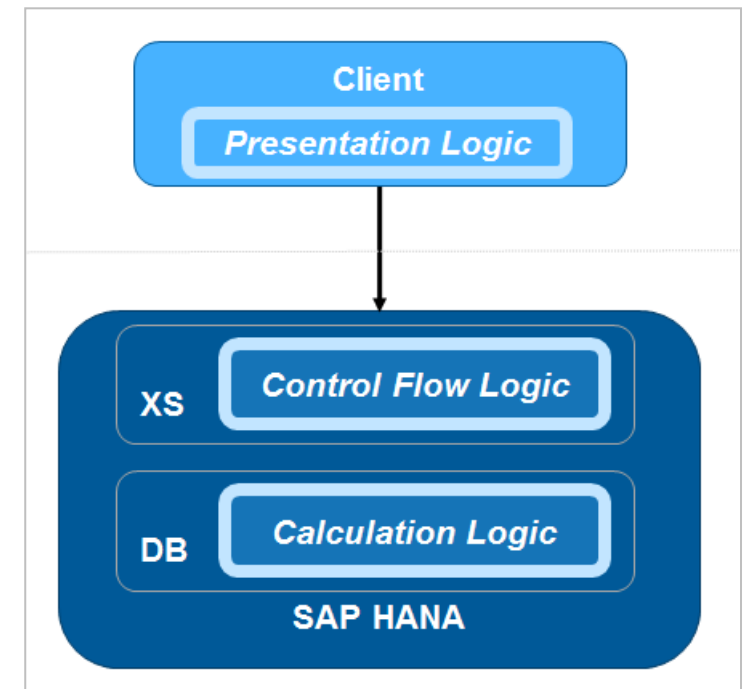
Traditional 3-tier application

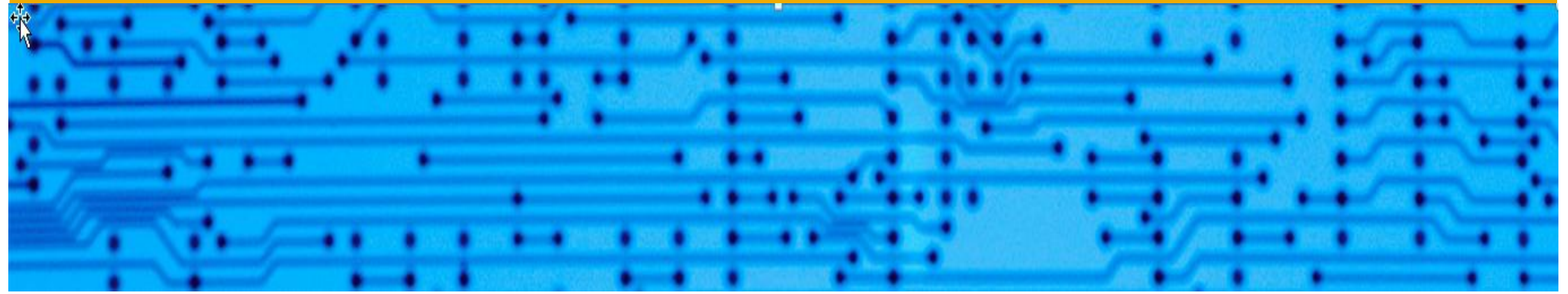


Data mart (3-tier or 2-tier)



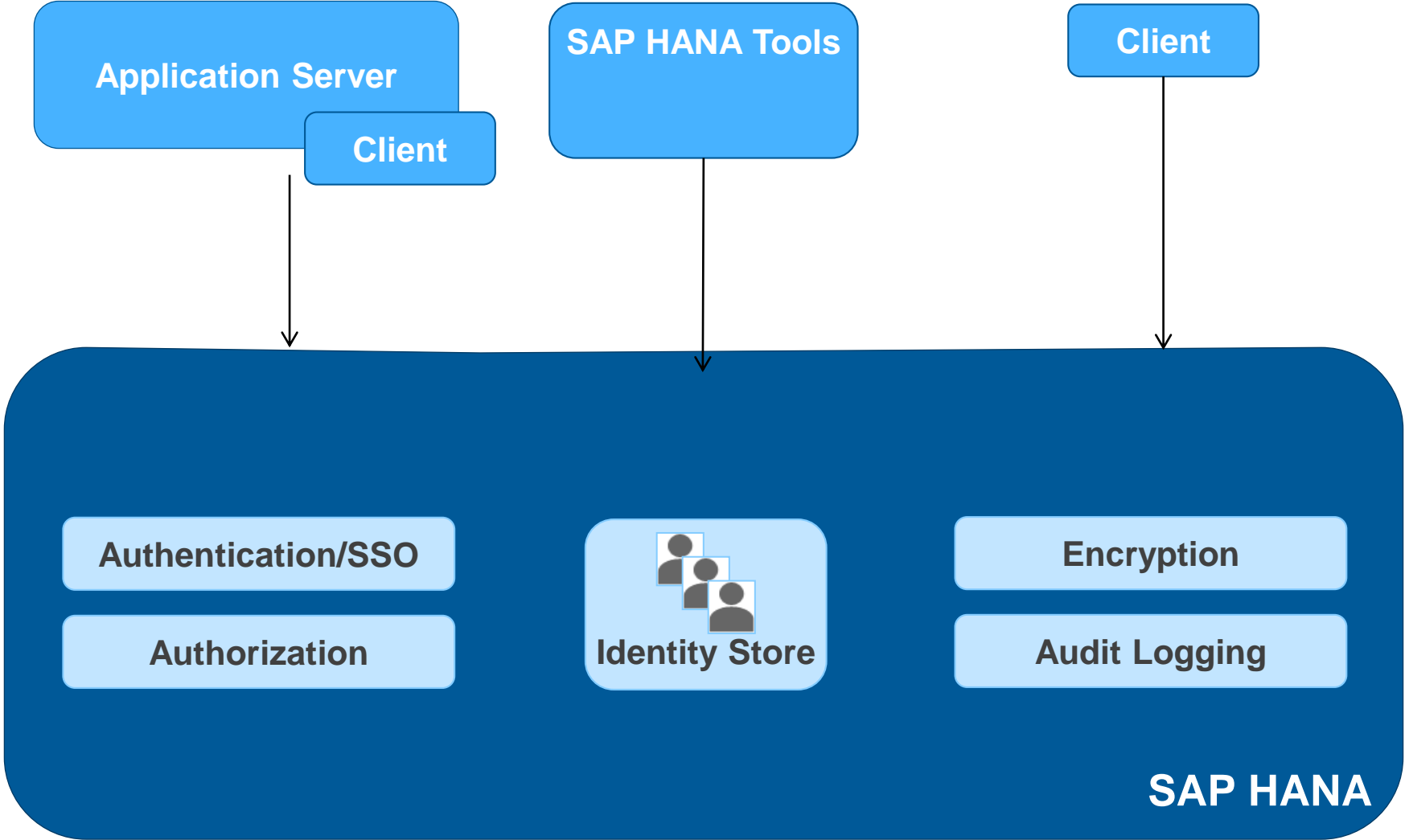
Native 2-tier application





SAP HANA security functions

SAP HANA – unified security architecture



SAP HANA – authentication and single sign-on

- **JDBC/ODBC access**

- User name and password (incl. password policy)
- Kerberos
- SAML (bearer token)
- SAP logon and assertion tickets

- **HTTP access (SAP HANA XS)**

- User name and password (basic authentication, form-based login; incl. password policy)
- SPNEGO
- SAML
- SAP logon and assertion tickets
- X.509

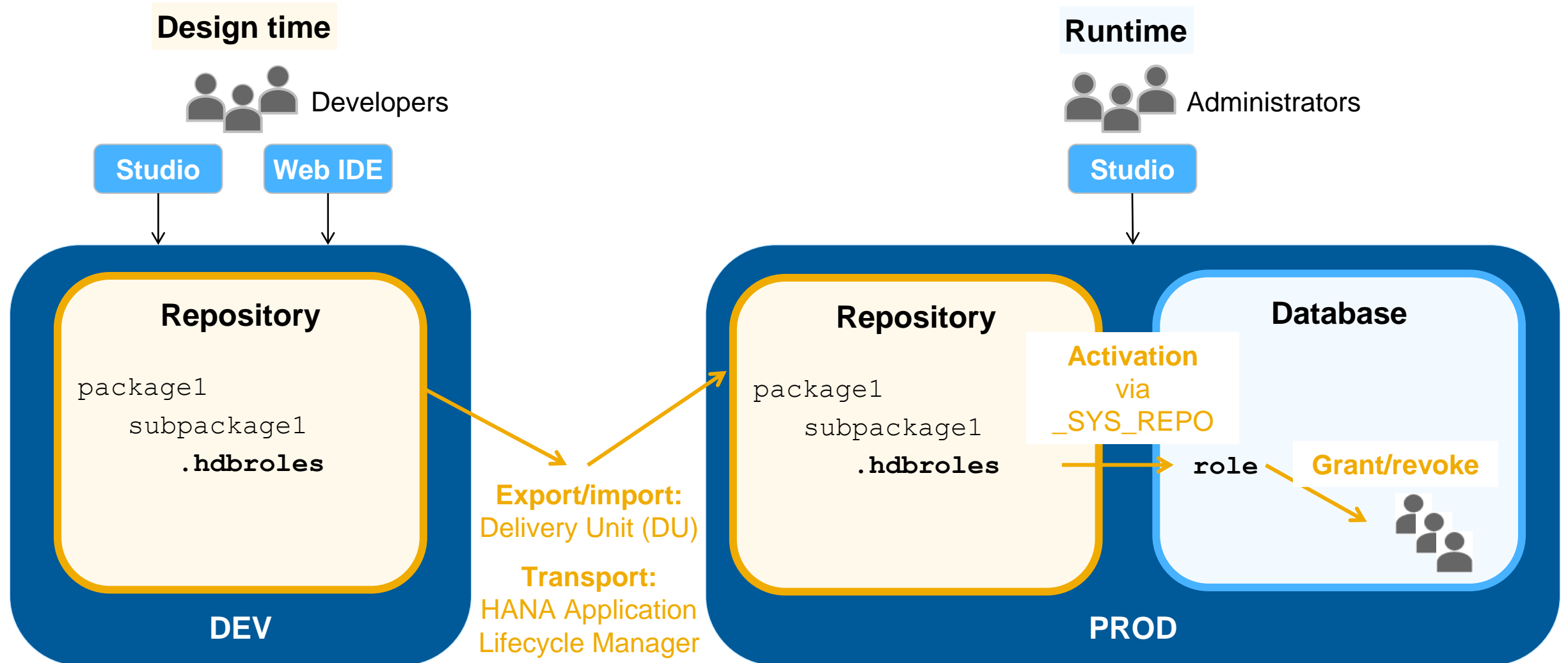


SAP HANA – user and role management

- For logon, users must exist in the identity store of the SAP HANA database
- Roles are used to bundle privileges → create roles for specific groups of users
- Role transport and integration with user provisioning tools available
- Catalog and repository roles



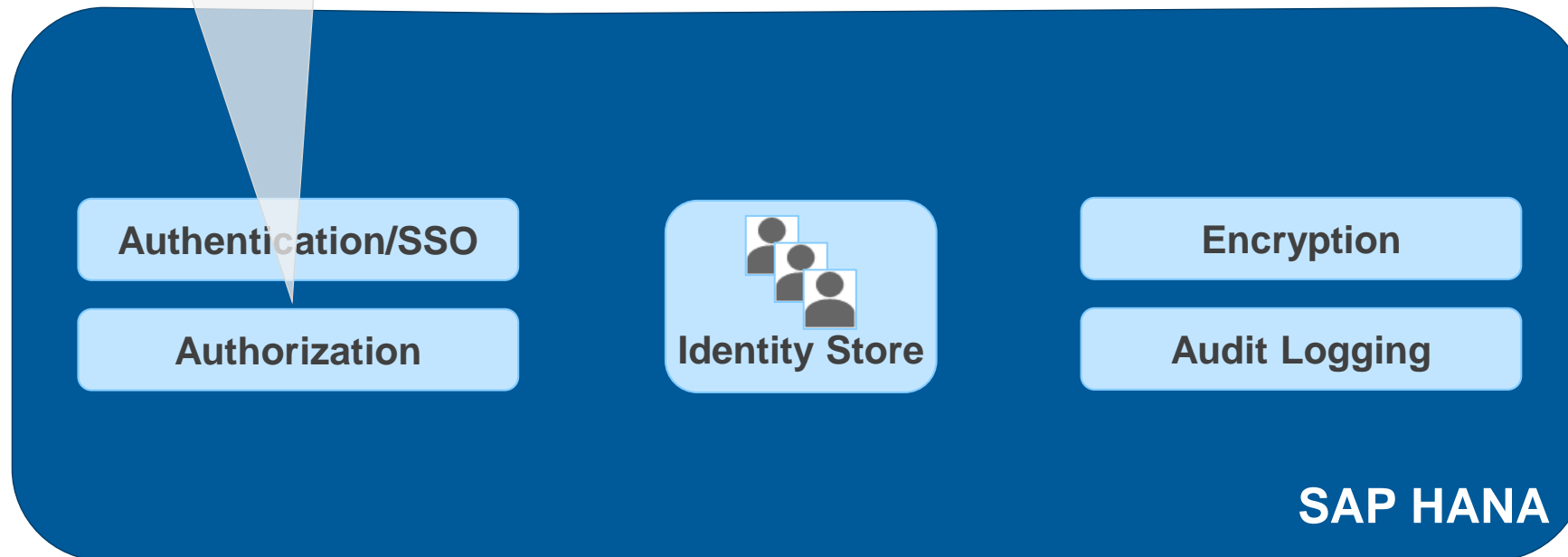
SAP HANA – repository role lifecycle



SAP HANA – authorization

Privilege types

- Database access privileges
- Application privileges
- Repository privileges



SAP HANA – communication and data encryption

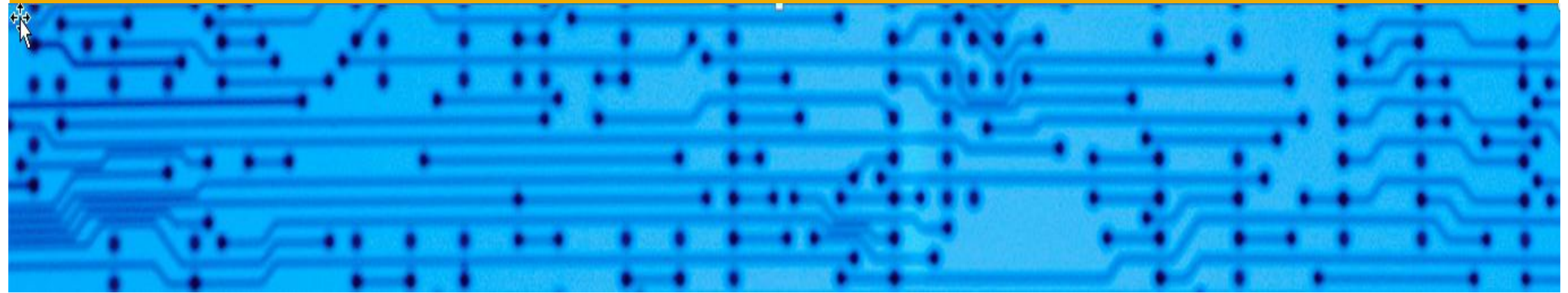
- Communication encryption: SSL (can be enforced for client connections)
- Data encryption: Data volumes on disk
- Backup encryption:
 - 3rd party backup tools (currently certified for SAP HANA: Symantec NetBackup, IBM TSM, Commvault Simpana, HP Data Protector, EMC Data Domain Boost, EMC Networker)
 - Data volume encryption + storage snapshot for backup



SAP HANA – audit logging

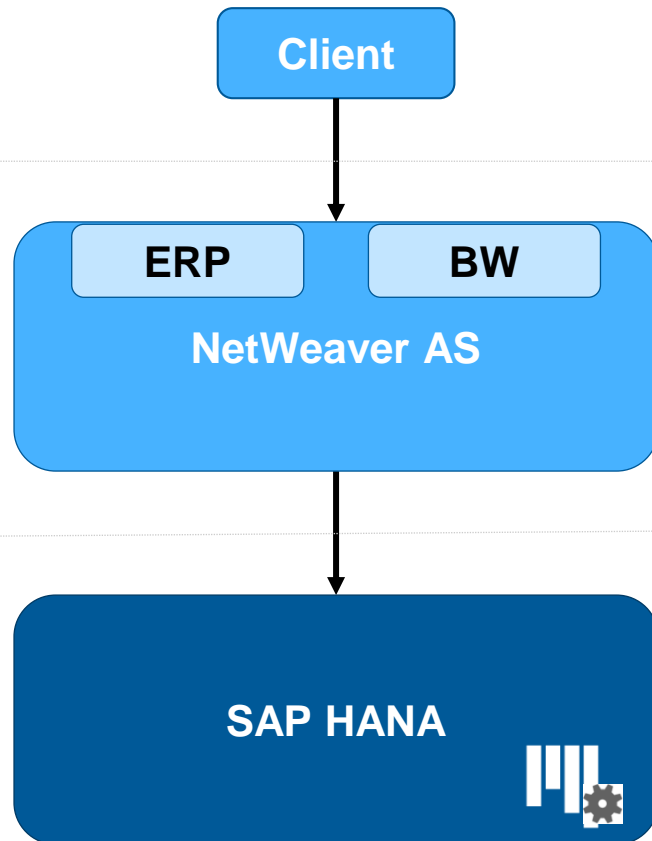
- Logging of critical events for security and compliance, e.g.
- Data access logging
- User-defined audit policies
- Audit trail written to Linux syslog or to database table within SAP HANA





Security in SAP HANA scenarios

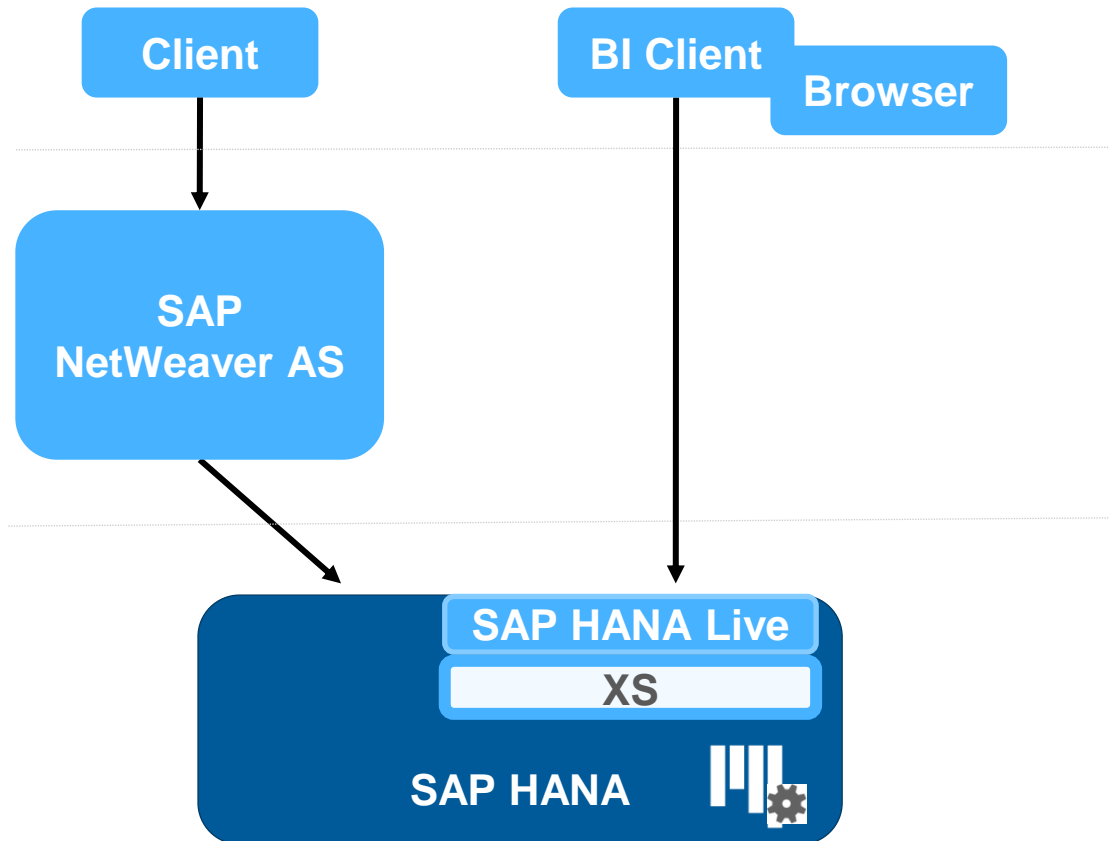
Traditional 3-tier application – Database migration to SAP HANA



Database migration to SAP HANA → no change to the security model

- Security functions of SAP NetWeaver ABAP/JAVA apply
 - Application server connects with technical user to SAP HANA
 - Authorization management as before with existing methods
 - User management in the application server
- SAP HANA security functions are used to manage administrative access to SAP HANA
- Example: SAP Business Warehouse powered by SAP HANA, SAP Business Suite powered by SAP HANA

Integrated scenario – Reporting on SAP ERP data in SAP HANA

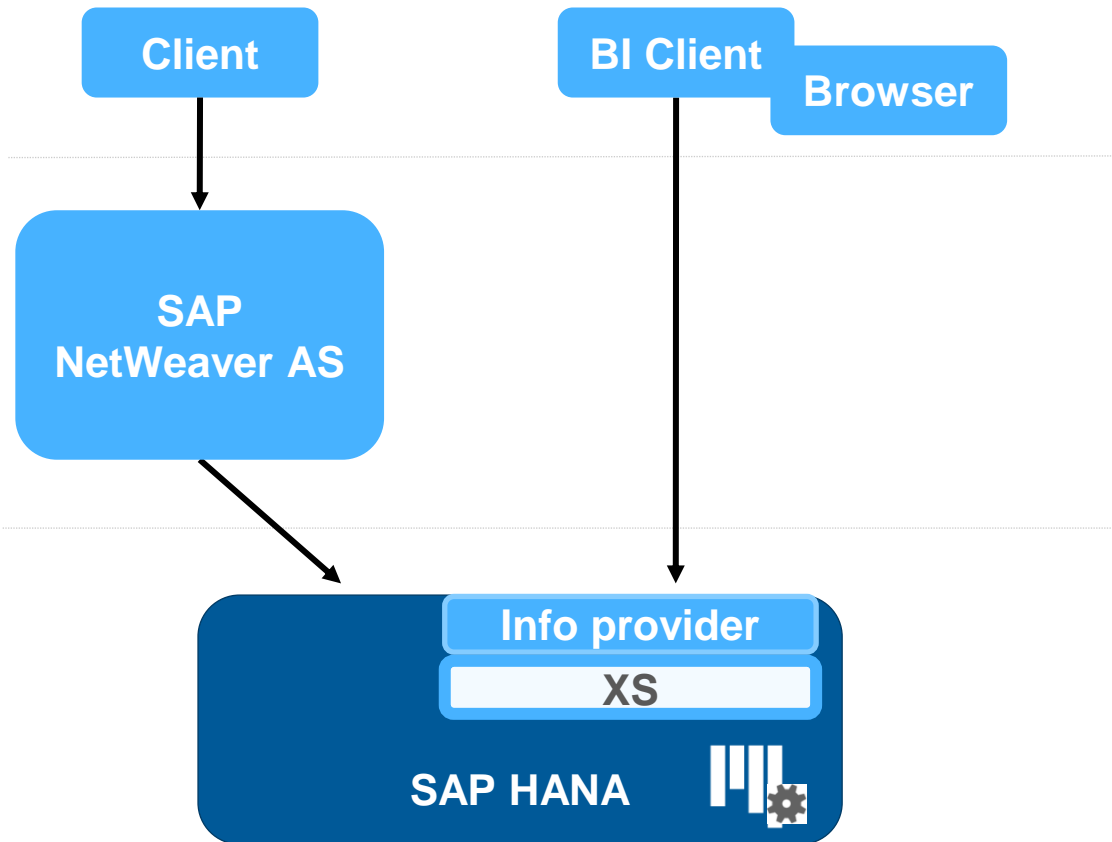


Direct user access to SAP HANA → modified security model

SAP HANA Live for SAP Business Suite supports direct access to SAP ERP data in SAP HANA

- SAP ERP data is exposed via virtual data models (analytic views in SAP HANA)
 - Read only
 - Can be adapted by customers
- Integrated approach, but can also be used in a sidecar scenario (replicated data)
- Authorization checks using SAP HANA privileges
- Tool support for generation of SAP HANA privileges from ABAP PFCG roles (SAP HANA studio plugin)
- Requires users to exist as SAP HANA users

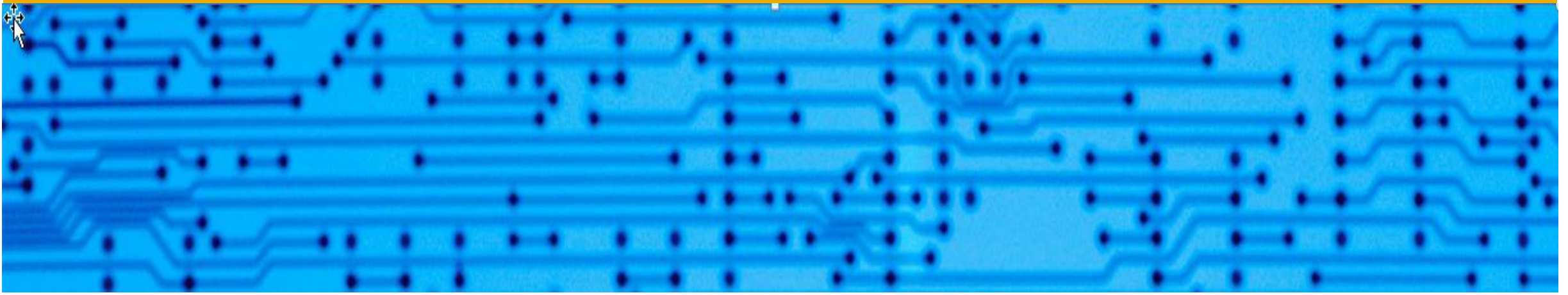
Integrated scenario – Reporting on SAP BW data in SAP HANA



Direct user access to SAP HANA → modified security model

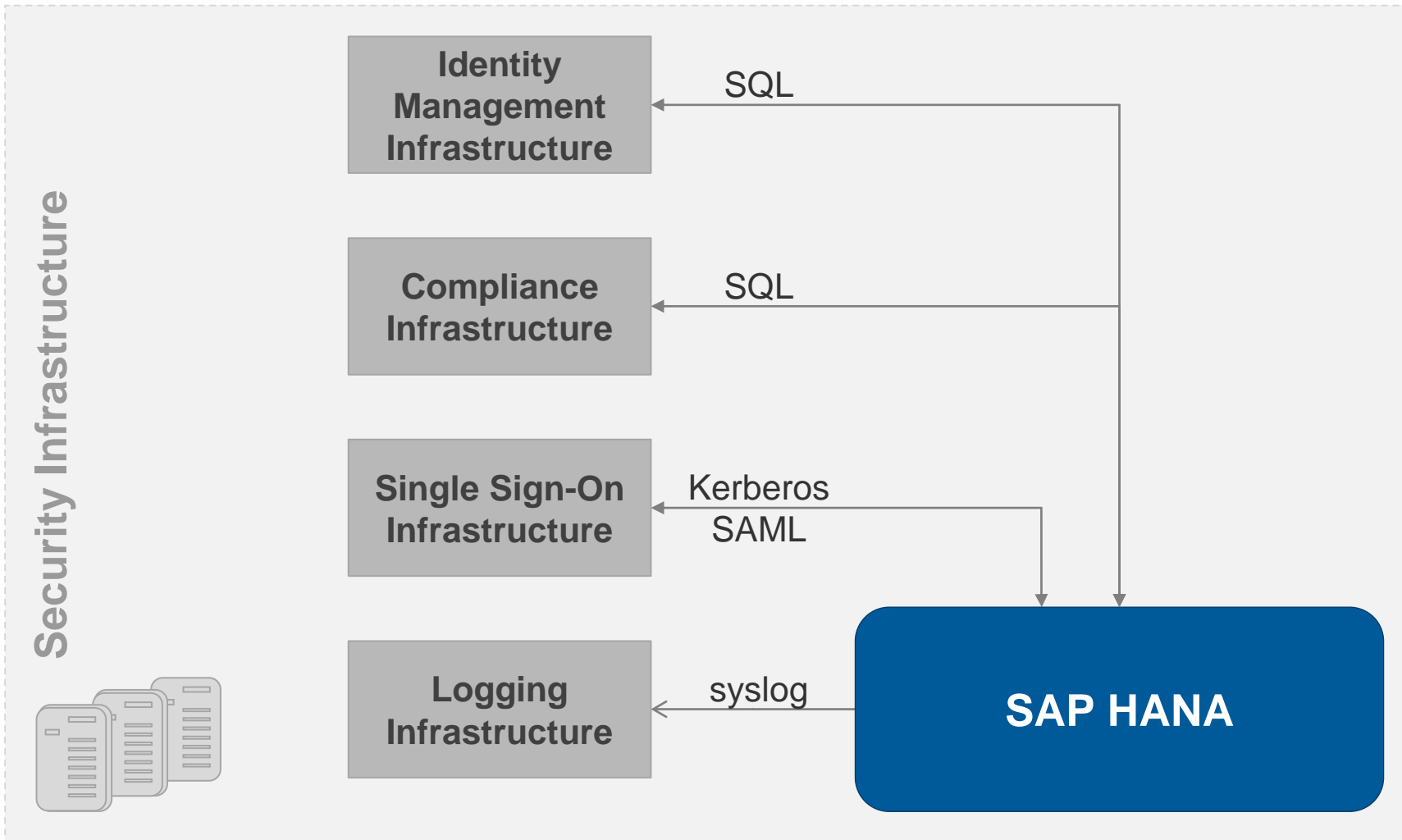
SAP Business Warehouse supports direct access to SAP BW data in SAP HANA

- SAP BW data is exposed via special info providers (analytic views in SAP HANA)
 - Read only
- Authorization checks using SAP HANA privileges
- Automatic generation of SAP HANA privileges and roles and automatic role assignment
- Requires users to exist as SAP HANA users

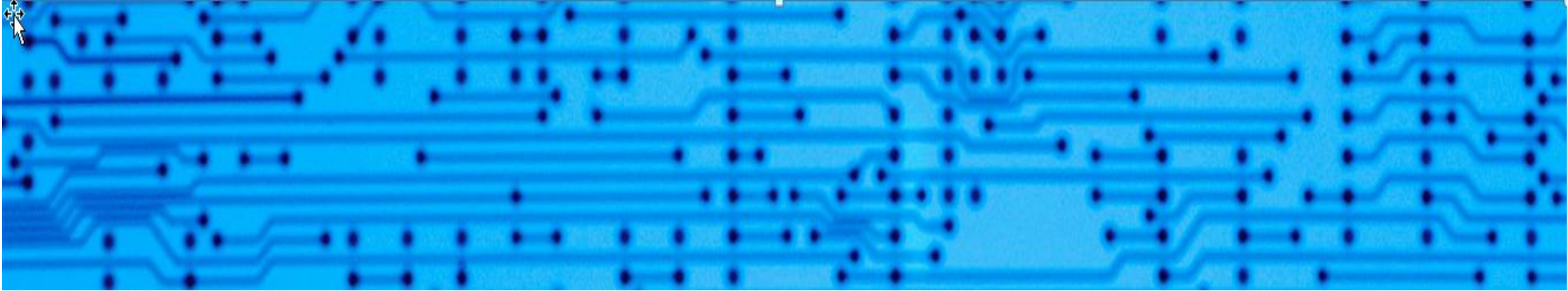


Data center integration

SAP HANA – data center integration



- User and role provisioning
 - Out-of-the-box connector for **SAP Identity Management**
 - **SQL interface** for integration with other identity management solutions)
- Compliance infrastructure
 - Out-of-the-box connector for **SAP Access Control 10.1**
- Standards-based single sign-on infrastructure
 - E.g. **Microsoft Active Directory**
- Logging infrastructure
 - Database audit trail written via **Linux syslog**



Summary

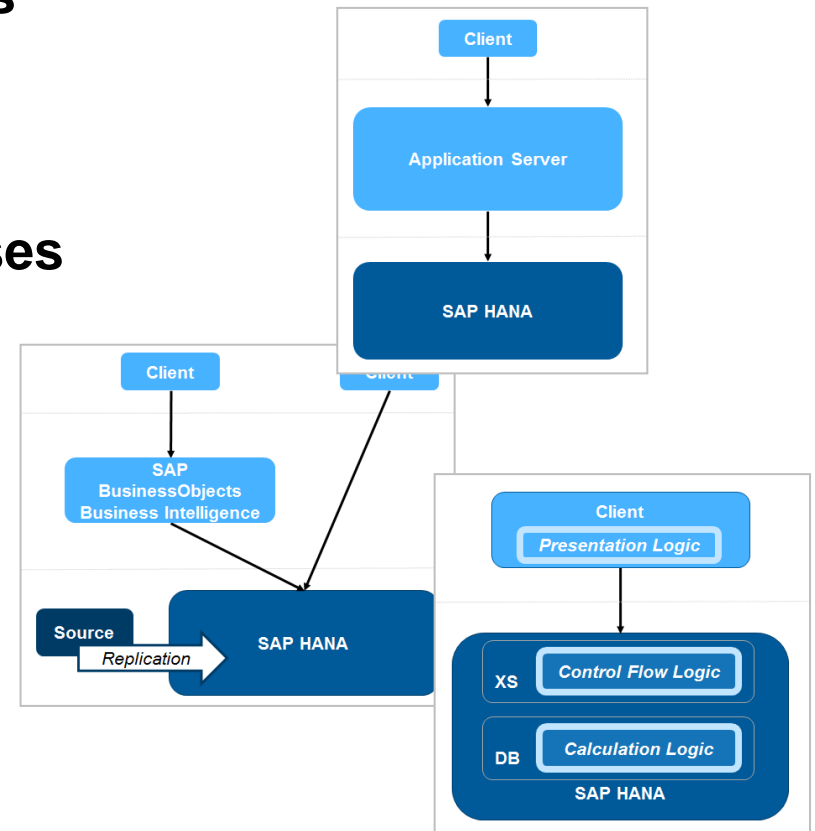
Summary

SAP HANA provides security functions, frameworks and interfaces that enable customers to

- ✓ meet security, legal, and regulatory compliance requirements
- ✓ implement different security policies
- ✓ integrate it into existing security infrastructures and processes

SAP HANA is used in different scenarios

➔ scenario architecture determines security approach



SAP HANA – more information

SAP HANA documentation on the SAP Help Portal

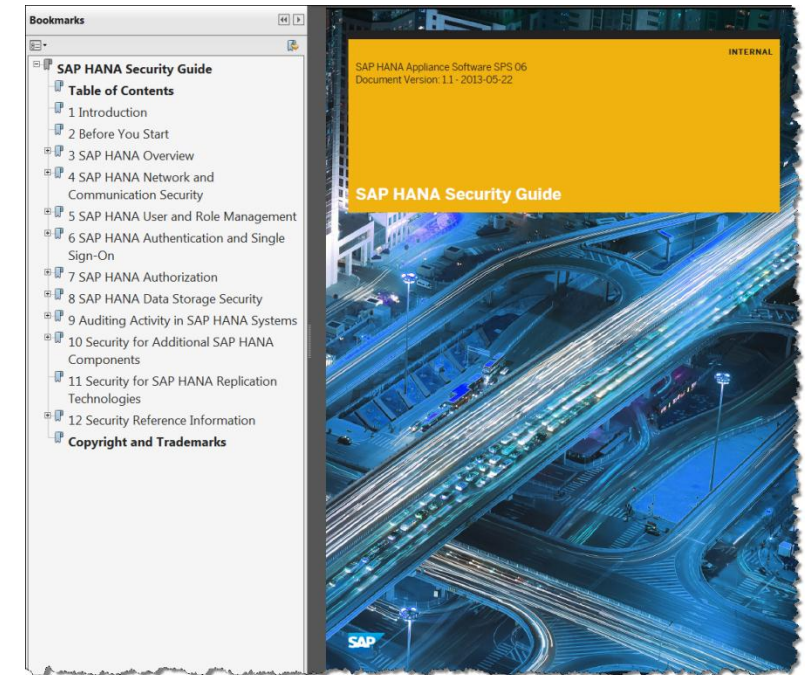
- Security Guide, Master Guide (incl. network setup), Developer Guide

SAP HANA on the web

- General information on SAP HANA: <http://www.saphana.com>
- Security whitepaper: <http://www.saphana.com/docs/DOC-3751>
- Best practice document on SAP HANA roles (incl. role templates):
<https://scn.sap.com/docs/DOC-53974>

Important SAP Notes

- [1598623](#): SAP HANA appliance: Security (Central Security Note)
- [1514967](#): SAP HANA appliance (Central Appliance Note)
- [1730929](#): Using external tools in an SAP HANA appliance
- [1730930](#): Using antivirus software in an SAP HANA appliance
- [1730999](#): Configuration changes in HANA appliance





Thank You!

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