



Without a robust and secure data management system, organizations are exposed to financial, security, and regulatory risks.

The task of protecting corporate data and intellectual property often falls to data security and compliance officers, who must ensure that formal processes are in place to maintain the confidentiality of their organization’s data and the security of intellectual property.

What ZEMA Can Do for Data Security and Compliance

ZEMA is an enterprise data management platform that provides unmatched data collection, analysis, and integration capabilities. ZEMA also helps organizations maintain data security and compliance standards by managing employees’ access to data and keeping records of data usage in downstream trade and risk, business intelligence, and enterprise resource planning systems.

Assign Access Privileges

ZEMA manages data security to protect public, subscription, sensitive, and internal datasets, ensuring that every employee within an organization has permission to access only what is necessary to complete his or her particular job. Entitlements to data sources and software applications can be granted to individuals or groups.

Corporations which must remain compliant to contract terms established with external data suppliers can rest assured that ZEMA protects sensitive data. Further, corporations employing ZEMA’s entitlement tool can easily associate costs with their data usage.

Limit Access to Analysis

Access to pre-saved queries through ZEMA is permission-based. Users are able to save their queries with a status of “public” (full access), “private” (no public access), or “shared” (assigned permissions). Shared queries are assigned to users and groups with read/write permissions. Moreover, changes to business logic and user queries are tracked, and a full revision history is maintained.



Database Object	Columns	Exceptions	Report Properties
OPS_DATE	DATE(7,0)	Time	Date
OPS_HOUR	NUMBER(22,0) PK	Time	Hour
LEAF	NUMBER(22,9) nullable	Observation	Price
MARGINAL_COST_OF_CONGESTION	NUMBER(22,9) nullable	Observation	Price
MARGINAL_COST_OF_LOSSES	NUMBER(22,9) nullable	Observation	Price
INDEX	VARCHAR2(6,1) PK	Attribute	Attribute
DATE_INSERTED	TIMESTAMP(7,0)	Ignore	Other
DATE_UPDATED	DATE(7,0) nullable	Ignore	Other
DATE_UPDATED	TIMESTAMP(7,0) nullable	Ignore	Other
PTED	NUMBER(22,9) PK	Ignore	Other

ZEMA helps companies to:

- Assign data access rights.
- Support corporate security policies.
- Automate error-prone, manual business processes.
- Audit changes to corporate data and system configurations.
- Report on data usage across an organization.
- Create a system of record for internal and external data.



Monitor and Validate Data

Corporations can monitor derived data and assign validation rules for incoming data. These validation rules flag data when it does not meet a corporation's threshold requirements.

Organizations can allow users to edit data and track changes within the ZEMA system. As a result, corporations can determine what particular ZEMA applications users have accessed and what activities users are performing in ZEMA.

Report on Data Usage

ZEMA allows companies to easily report on which applications were accessed, by whom, and what data points were used within these applications. These reports can be shared with external vendors in order to ensure that corporations are managing their entitlements appropriately and are not at risk of breaching contract terms.

Streamline User Logins

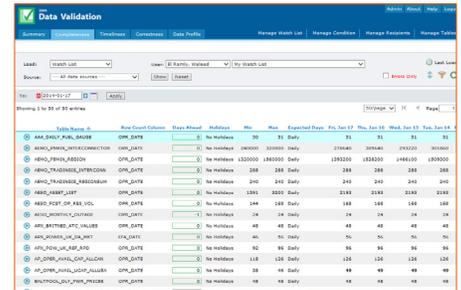
Access to ZEMA is secured via user name and password, and ZEMA has strong password requirements. Moreover, ZEMA supports lightweight active directory protocol (LADP), which allows all users within an organization to leverage their pre-existing Windows credentials to log into different ZEMA applications. Users who employ LADP in conjunction with ZEMA eliminate the need to memorize multiple usernames and passwords.

ZEMA also supports single-sign on (SSO), which automates user credential entry for authenticated users. SSO makes it easier and faster for authorized users to access several ZEMA applications simultaneously.

Perform Advanced Logging

ZEMA keeps track of all configuration changes and edits to data through standardized logging. Data edits are only allowed on derived datasets that are managed through ZEMA's curve management-defined workflow process. Editorial functionalities for derived data are assigned to particular users on a product-by-product basis.

To learn more about ZEMA, please visit <http://www.ze.com/the-zema-solutions/>.



Feed Downstream Systems Successfully

Data points created in ZEMA can be automatically transferred to downstream systems.

However, if data does not meet a corporation's assigned validation rules, it can be withheld from downstream systems. ZEMA can maintain a complete audit trail to prove regulatory or security compliance and can seamlessly transfer reports on a regular basis to senior management, and, if necessary, to external auditors.

To: Waleed El-Ramly
Cc: ComplianceGroup@ze.com
Subject: MA4 Beta User Logins (Previous Day)

Client	Userid	Application	Email	Firstname	Lastname	Event	Timestamp
ZE	1050	Market Analyzer	Linda.Chen@zpeg.com	Linda	Chen	login	2/12/2014 17:25
ZE	1049	Market Analyzer	Cathy.Watts@zpeg.com	Cathy	Watts	login	2/12/2014 17:23
ZE	1048	Market Analyzer	John.Romani@zpeg.com	John	Romani	login	2/12/2014 17:22
ZE	1047	Market Analyzer	Jose.Marconas@zpeg.com	Jose	Marconas	login	2/12/2014 17:20
ZE	1046	Market Analyzer	Bob.Haspers@zpeg.com	Bob	Haspers	login	2/12/2014 17:18
ZE	1045	Market Analyzer	Monica.Chan@zpeg.com	Monica	Chan	login	2/12/2014 17:17