PCM SECURITY & RELIABILITY

Multi-tiered, banking-level protection for your operational data

PRESENTATION TIER

Secure Socket Layer (SSL)

Traffic is forced through a 256-bit encrypted key security protocol to prevent unauthorized users from intercepting information in transit.

SQL Injection

Program logic (i.e., maximum length strings, keyword capture, parameterized queries) prevents unscrupulous end users from performing actions that corrupt or delete user data.

САРТСНА

To verify a user is human, public forms utilize a computerized challenge-response test called CAPTCHA (Completely Automated Public Turing Test to tell Computers and Humans Apart).

User Profile Passwords

Every authorized user must provide their username and password to gain entry. Passwords are stored in encrypted form so malicious users cannot impersonate a valid user by leveraging their credentials.

APPLICATION TIER

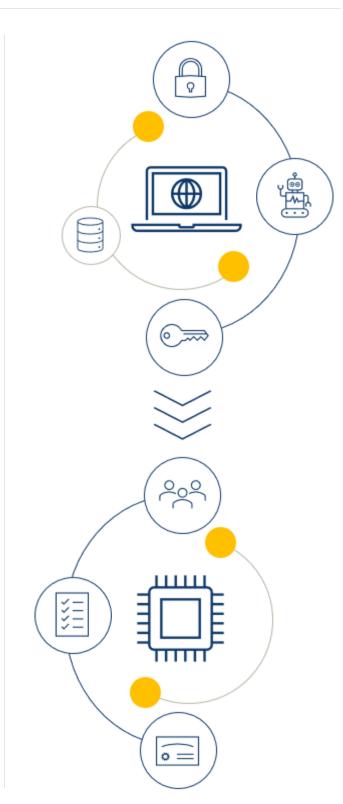
User Groups

Each user profile is associated with a user group that controls access to individual system functions. This includes file uploads and read-only or write-data access.

Independent Assessments

PCM has attained high scores from independent security assessments that collectively evaluate a site's configuration against various hacking attacks.

- Mozilla observatory (A-)
- Qualys SSL labs (A)
- htbridge.com (A+)
- TLS observatory (I)





NETWORK LAYER

Physical access

The one-foot-thick concrete reinforced primary data center located in Phoenix is continually staffed by network and security personnel. The NEBS Level 3compliant building is protected by alarm and camera surveillance systems that cover the perimeter and every entrance. Entrances are secured with mantraps, biometrics, keycard access and multi-factor authentication.

Remote access

Administrative remote internet access is only granted to a handful of individual computers through IP and MAC blocking and a secure virtual private network (VPN).

Firewall

Network switches and firewalls block traffic by source, protocol and port. This minimizes the system's security footprint and significantly limits the type of digital communication that is passed to the server host(s).

SSAE NO. 16 SOC 1 certification

Since February 2010, the data center has continually maintained Statement on Standards for Attestation Engagements (SSAE) No. 16 SOC 1 and SAS 70 Type II certifications. These independent audits assess a service organization's internal controls and operations, which impact the customer's control environment.

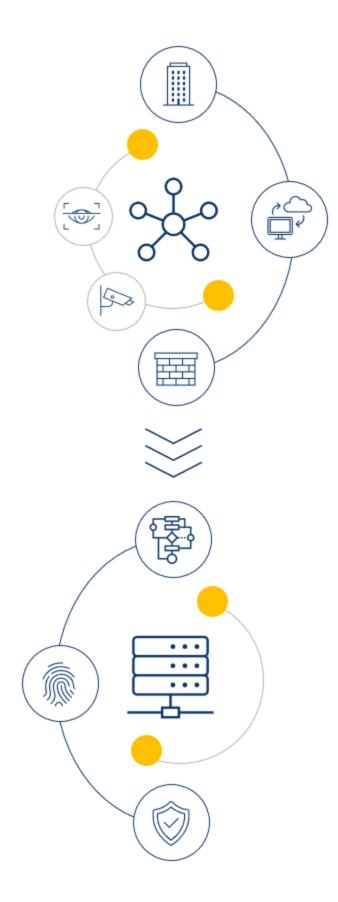
DATA TIER

Data accounts

Database storage is only accessible through authorized data accounts. PCM accounts are protected with strong system generated passwords and are assigned by responsibility and location, thereby insulating them from a single breach.

Granular roles

Each authorized data account is only granted access to the required individual database objects rather than full access to every object.





CONTINUITY & RECOVERY

Redundant storage

The fully dedicated servers employ an array of redundant hot swappable system drives and separate database block storage for quick hardware failure recovery without data loss.

Failover servers

Servers at the secondary New York data center are maintained with the current data and application code base for efficient upgrade staging and quick failover recovery.

Rapid deployment

In the unlikely event of a catastrophic failure, a new server can be deployed within four hours.

Offsite backups and logs

Full data backups are created nightly from two different backup mechanisms, which are offloaded to two locations at opposite ends of the country. Transaction logs are captured at four-hour intervals and system drives are backed up monthly or when changes are implemented.

Redundant systems

The primary data center is located outside any flood plains and seismic zones. Single points of failure are eliminated with redundancies for fire detection and suppression, power, network and cooling. Multiple network fiber entrances and banks of generators (supported by multiple refueling vendors) provide connectivity and off-grid power for two days.





Contact Ken Jones for a live demo: 610-334-0930 | <u>kjones@uswatercorp.net</u>