

## timeware® Cloud security/infrastructure

At timeware®, we understand the importance of security, compliance, and seamless integration when it comes to HR, time and attendance solutions. That's why **timeware® Cloud** is built on a **Microsoft Azure** infrastructure, ensuring enterprise-grade reliability and performance.

Ensures robust data handling compliance aligned with GDPR and other relevant regulations.

### 1. UK-Based Hosting:

- **Primary Server Location:** UK South (London).
- **Backup Server Location:** UK West (Cardiff).

### 2. Enhanced Security Features:

- **Single Sign-On (SSO):** Simplified access management for seamless user authentication.
- **Multi-Factor Authentication (MFA):** Extra layers of security to protect user data and encrypted data transfers.

### 3. Integration & Connectivity:

- **API Available:** Easily integrate with third-party software, including leading HR and payroll solutions.

### 4. Data Handling Compliance:

- Compliance with frameworks including UK GDPR, Data Protection Act 2018, **ISO 27001** and Cyber Essentials Plus.
- All data is encrypted both in transit and at rest, and access is strictly limited to authorised **timeware UK Ltd** personnel only.
- Comprehensive auditing and logging features enable transparency and accountability. Regular security assessments and compliance checks are conducted to maintain high standards, ensuring peace of mind for clients.
- Data Retention & Deletion Policies – Rules on how long data is stored, how it is archived, and how it is securely deleted when no longer needed.
- Third-Party Data Handlers – **None!**

### 5. Architecture Pattern:

- The application follows a layered architecture with clear separation of concerns
- Uses a monolith gateway pattern with some microservices components
- Has both frontend and backend components



## 6. Key Components:

### a. Core Business Modules:

- HR Management (Reach.Application.HR)
- Leave Management (Reach.Application.Leave)
- Attendance Management (Reach.Application.Attendance)
- Tenant Management (Reach.TenantManagement.\*)
- Reporting (Reach.Application.Reporting.\*)
- Dashboard Widgets (Reach.Application.Dashboard.Widgets)

### b. Infrastructure:

- Message Bus (Reach.MessageBus.Contracts)
- Event Processing (Reach.EventProcessor.Host, Reach.Application.EventProcessor)
- Email Dispatch (Reach.Application.EmailDispatcher)
- Persistence Layer (Reach.Persistence.\*)

### c. Client/Frontend:

- Monolith Client (Reach.Monolith.Client.\*)
- Frontend Resources (Reach.FrontendResources)

### d. Core Architecture Components:

- Domain Layer (Reach.Domain)
- Application Layer (Reach.Application.\*)
- Infrastructure Layer (Reach.Infrastructure.\*)
- Kernel (Core) Components (Reach.Kernel.\*)

## 7. Technical Architecture:

- Uses a multi-tenant architecture
- Implements event-driven architecture (evidenced by EventProcessor and MessageBus)
- Has separate resource management for frontend and backend
- Includes reporting and dashboard capabilities
- Uses contract-first approach (many .Contracts projects)

## 8. Technology Stack:

- **.NET 10.0** - Latest version of .NET
- **Blazor Server** - For server-side web UI
- **Azure Service Bus** - For message queuing and event-driven architecture
- **Entity Framework Core** - For data access
- **Serilog** - For structured logging
- **Azure Application Insights** - For monitoring and telemetry

- **TailwindCSS** - For styling
- **MassTransit** - For message bus abstraction
- **SQL Server** - For data storage
- **Azure App Service** - For hosting

## 9. Cloud Infrastructure:

- Hosted on Azure (UK South region)
- Uses Azure App Service Plan (Standard S1 tier)
- Implements Azure Service Bus for messaging
- Uses Azure Application Insights for monitoring
- Multi-tenant architecture with sharding support

## 10. Security Features:

- HTTPS enforcement with HSTS
- Anti-forgery protection (CSRF)
- Authentication and authorisation support
- Rate limiting implementation
- Secure configuration management

## 11. Development Features:

- Development/Production environment configurations
- Health check endpoints
- Comprehensive logging
- Local storage support
- Hot reload support
- Development debugging tools

## 12. UI/UX Features:

- Responsive design
- Modern UI with TailwindCSS
- Custom fonts (Open Sans)
- Client-side routing
- Error handling pages
- Localisation support

## 13. Architecture Highlights:

- Clean architecture pattern
- Domain-driven design elements
- Event-driven architecture

- Microservices capabilities
- Tenant isolation
- Message-based communication
- Modular design

#### **14. Key Business Modules:**

- HR Management
- Leave Management
- Attendance Tracking
- Tenant Management
- Reporting System
- Dashboard Widgets
- Email Notifications

#### **15. Performance Features:**

- Rate limiting
- Caching capabilities
- Message queuing
- Database sharding
- Resource optimisation

#### **16. Monitoring & Maintenance:**

- Health checks
- Application insights integration
- Structured logging
- Error tracking
- Performance monitoring