



# PERCANA: ECLIPSE Systems Architecture

## ECLIPSE

ECLIPSE is a modern enterprise Life & Pension policy administration solution designed to manage the complete range of Life & Pension products. ECLIPSE enables an organisation to efficiently, securely and cost-effectively manage its policies throughout their life cycle.

## PROVEN SOLUTION

ECLIPSE is a proven system, and is the cornerstone of the success of the Percana Group Outsourcing service company, Percana International Managed Services Ltd. It enables Percana International Managed Services Ltd to cost effectively deliver and exceed high client expectations in a very demanding and constantly changing marketplace.

## OPERATING PLATFORMS

ECLIPSE has been designed for the Wintel platform. Application Server components may be deployed on Windows 2003, 2000 and NT Server 4.0. Client desktop interfaces may be deployed on Windows 2003, 2000, XP and NT 4.0 Workstation. The ECLIPSE WEB interface is platform independent.

## TECHNOLOGY

ECLIPSE is unique in the Life and Pension arena in that it has been designed and built with Internet connectivity as a core delivery mechanism.

ECLIPSE has been developed using the Microsoft® Component Object Model (COM) with Microsoft® Component Services (COM+) and Internet Information Server (IIS) deploying the application server and web server components of the system.

## N-TIER

ECLIPSE has been designed and developed to best practice industry standards. The ECLIPSE n-Tier architecture in which user interfaces, business components and data repositories have been entirely separated, provides high availability distributed processing and a proven scalable, flexible and efficiently maintained system.

Figure 1 provides a high-level technical diagram of the n-Tier architecture of ECLIPSE including multiple client types, and the very flexible and scalable database, application and web server configuration.

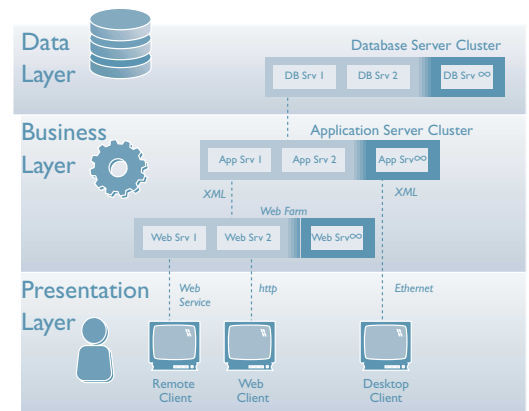


Figure 1: n-Tier Architecture

## SCALABILITY AND PERFORMANCE

Performance analysis tests, focusing on the performance and load balancing capability of ECLIPSE, were carried out for Percana International Managed Services Ltd in Q3 2003 to verify that the architectural objectives of the system have been achieved. In these tests, with a small cluster of 3 'off the shelf' application servers; over 27,400 complex New Business transactions were captured per hour. In the same tests, a throughput of over 210,000 from a standard set of business transactions was achieved per hour.

Percana are constantly monitoring and dedicated to improving the performance and delivery of functionality of the system to meet current and future requirements.

## XML

XML underpins the interaction between user interfaces, including ECLIPSE WEB, and the application server / business components of the system. As an industry standard, XML is also used to interface with external systems, including CRM, Accounting and Fund Management packages.



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## ECLIPSE WEB

The ECLIPSE WEB interface has been developed in ASP .NET.

The ECLIPSE distributed architecture; the use of modern technologies such as XML, .NET and a strong security implementation makes the provision of additional interfaces such as the web more straightforward and robust than older traditional systems.

## ECLIPSE WEB SERVICES

ECLIPSE uses Web Services technology to allow applications within the ECLIPSE product suite, including Life Administrator and Reports Manager, to operate securely over the Internet or VPN. This allows for all ECLIPSE transactions to be securely accessible from anywhere in the world and provides a cost-effective yet powerful solution for remote access requirements.

## DATABASE INDEPENDENCE

ECLIPSE has been designed and written to be database independent with ANSI SQL only used within the system. Stored procedures and triggers are not used. ECLIPSE database independence supports data stored in any database with an OLE DB provider; including SQL Server, Oracle and DB/2. SQL Server 2000 implementations are predominantly used within the Percana Outsourcing service company, Percana International Managed Services Ltd.

## SECURITY

ECLIPSE incorporates a strong centralised security implementation, which provides tailored access to individual users and groups across all client interfaces. The ECLIPSE extendible security design incorporates the use of an LDAP compliant repository with current implementations employing Netscape Directory Server (NDS) and Active Directory (ADSI) interfaces.

## LOCALISATION SUPPORT

ECLIPSE is language / locale independent with all available languages selectable at user logon. Individual user preferences are maintained for subsequent user sessions. This has been successfully deployed by Percana International Managed Services Ltd, which currently employs multi-lingual client administration staff and supports international call centres.


## RULE-BASED DESIGN

The ECLIPSE rule-based design caters for the complete range of Unit Linked & Traditional products. ECLIPSE incorporates a powerful product Rule Manager application and configuration database, which allows products to be easily and rapidly defined, tailored and maintained.

## INTEGRATED TASK MANAGEMENT AND DOCUMENT SYSTEMS

ECLIPSE incorporates a flexible and fully configurable Task Management System (TMS) that supports the operational management and scheduling of system activities.

The ECLIPSE Document System (EDS) automatically produces customised policy documentation for printing, automatic transmission by e-mail or fax. The EDS incorporates a proprietary XML based replication protocol which allows documents to be printed to remote printers with the minimum of footprint over a VPN / leased line. This unique feature has been widely used by Percana International Managed Services Ltd clients.



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