Architecture Overview

Introduction

American Well™ facilitates real-time communication and care delivery between physicians and consumers, using a media-rich Web enterprise application and interactive telephone interface. Consumers and physicians can communicate using:

- **PC Audio and Videoconferencing**
- **Real-time chat and Web collaboration tools**
- **Telephone, including Interactive Voice Response (IVR) and cost-effective VoIP**
- **Secure Messaging**

Additionally, American Well provides automated health assessment tools to better manage consumers' care.

Distributed Enterprise Architecture

American Well is designed with a focus on scalability, performance, supportability, and effective cost of ownership for enterprise clients. Major components, features, and technologies used in the American Well Distributed Architecture include:

Components

Web Servers/Application Servers - Distributed servers allow American Well's infrastructure to dynamically scale with a growing user base, minimizing time-to-market and expansion costs by using standard retail hardware.

Business Rules Management System (Rules Engine) - American Well supports customization of application behavior through the use of externalized, configurable business rules. American Well leverages BRMS to provide a robust and open system for developing and administering automated health assessments, processing member data, and dynamically extending the behavior of the American Well application.

Reports Server - American Well leverages Business Intelligence tools to provide out-of-the-box and custom reporting against an extensive and extensible set of data marts.

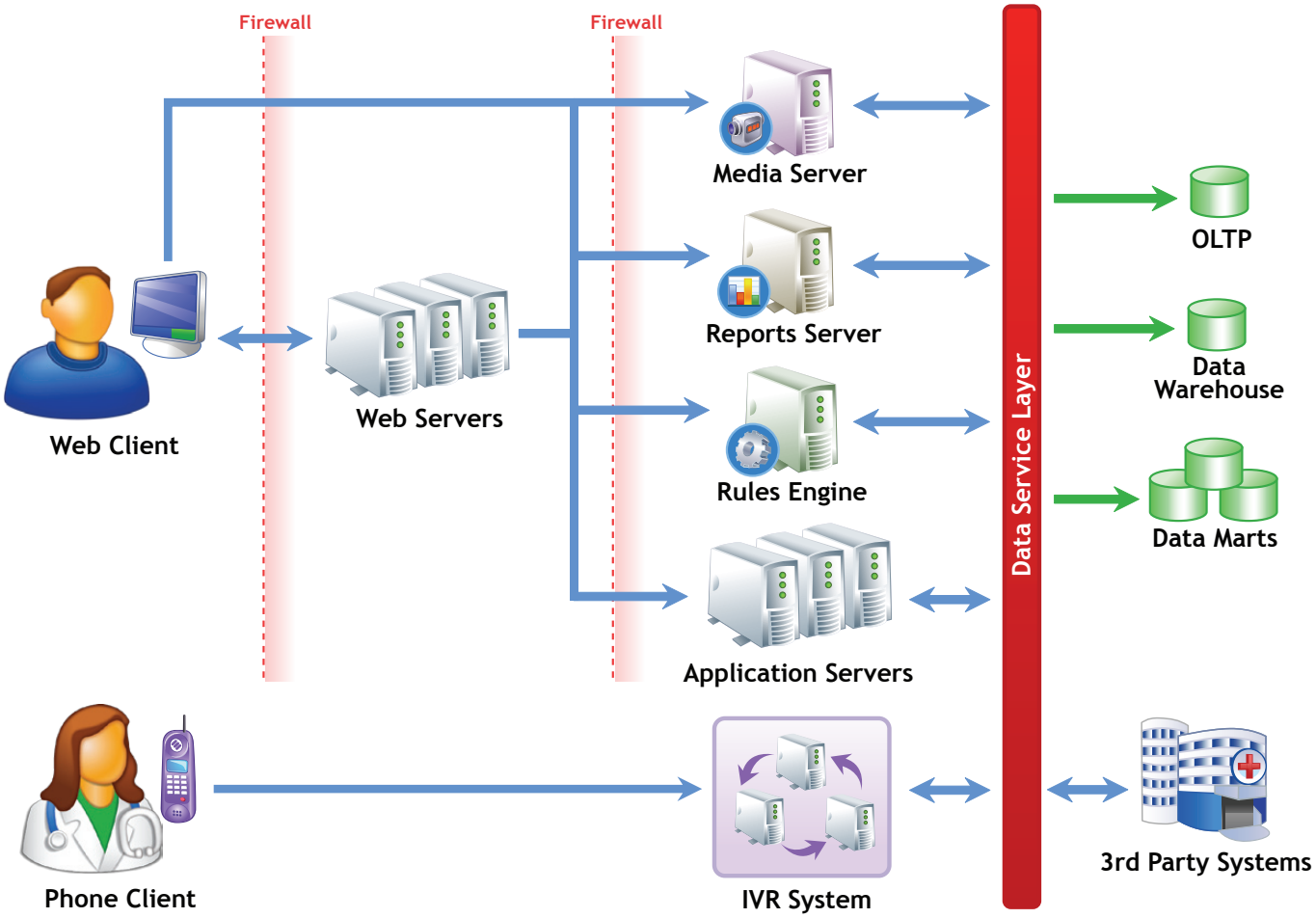
Media Server - A dedicated media server allows consistent and high throughput of audio and video streams (call recording, and audio and video playback/conferencing).

IVR System - American Well features a state-of-the-art interactive telephony system, providing carrier-class reliability and unlimited scalability. American Well uses Session Initiation Protocol (SIP), the industry-leading signaling protocol for VoIP.

Data Service Layer/Data Integration - American Well seamlessly integrates with third-party systems of record over a persistent message bus. American Well integrates data from a variety of sources — including national provider databases, health plan data warehouses, and historical user data — to create a comprehensive resource for care management. American Well leverages high-performance scalable ETL and an internal data warehouse to permanently record and process terabytes of feeds daily.

Enterprise Data Warehouse/Data Marts/OLTP Databases - Strongly purposed databases are optimized for horizontal and vertical scalability, performance, and mass storage requirements.

Distributed Enterprise Architecture



Features

Redundancy - American Well is designed for redundancy, allowing for "hot" failover of Web, application, telephony, and database servers.

Configurability - User interfaces, business logic, and content are all highly configurable, allowing customers to rebrand the application, compose rules, and configure system behaviors.

Scalability - American Well is implemented on a massively scalable platform to accommodate the increasing and changing needs of the largest companies in the world.

Technologies

- J2EE/Spring Framework
- Web 2.0: JavaScript, AJAX
- Oracle WebLogic 11g
- IBM iLog BRMS
- SAP Crystal Reports Server
- Adobe Flash Media Server
- Avaya MPS 1000
- Oracle 10g RAC