The RADRunner Guide

1. What Is RADRunner?

RADRunner is software that allows people to communicate, co-operate and collaborate with each other.

RADRunner derives from 20 years of research into a better way of using computers - a way that corresponds more closely to how we work in real life. It is based on the definition of *interactive Roles played by humans, organisations, and machines*.

2. Why Use RADRunner?

The fundamental challenge for information technology is to help people reach common goals - whether or not they use the same computer systems, speak the same language, or even work for the same organisation. The business process management and enterprise application integration standards and solutions currently in vogue are too low-level - they have been inspired by technology trends. You need more than functionality; you need a framework in which its use is driven by organisational needs, and it must be made available via simple interfaces that anyone can understand.

RADRunner offers a unique approach to business process management - and to computing per se. The focus on interactive Roles played by humans, organisations, and machines derives from *Role Activity Theory*, the subject of 20 years of worldwide research into how people *actually work together*. The Role paradigm offers a very powerful way to use computers - a Role knows what you want to do, supports it, and does all the mundane activities and communications for you. Role Activity Theory originated back in 1983, but its ideals are more relevant than ever - and the new Internet technologies have finally made it possible to implement them for day-to-day use.

The key insight that has driven the research all along is that an effective computer system must be capable of supporting change without going back to the drawing board - and this means basing it on the way people work in real life. People think of themselves as having varied responsibilities and goals, and this is captured by the *Role* concept.

It is simple to define Roles that not only support the way you work now, but which permit their users to make controlled changes to other Roles - even if those to be changed are

already running live in the organisation. Hence, organisations looking to streamline, automate and web-enable their operations - including their dealings with partner organisations and individuals, such as customers and suppliers - can use RADRunner to build systems that change themselves continuously.

RADRunner delivers the promise of the Internet. It supplies a new layer of computation, which allows people and organisations world-wide to co-operate in a secure manner, no matter where they are, how they access the Internet, or what their level of technical skill:

- Roles can be defined which include activities carried out by trading partners, and RADRunner will support these activities even if the partners are not using the system themselves.
- Users of RADRunner can access the system directly from any Web-enabled device, including mobile phones and PDAs, and it provides access to documents, databases, and web applications of any kind.
- Although RADRunner is powered by an underlying formal XML language, it is used entirely from simple web screens - there is no need for programming at any time, whether during configuration, process definition, or process maintenance.

As well as these key *business* benefits, RADRunner offers a wide range of *technical* features, many of which no other enterprise software can provide. Full details are given in this guide, but as an illustration:

- *Runtime* web service orchestration (with no need for stub classes) and simple heterogenous distributed transaction management (with no need for complex error handling)
- *Runtime* screen definition, association with data, and generation (via XSL transformation of Role resources in XML form)
- Web-based document management, viewing and editing
- Multi-party structured interactions
- Automation that can be toggled at any level of a hierarchy, via preset conditions and/or dynamically at runtime
- Flexible and customisable process audit facilities
- Vanilla HTML user interface that can be used from any web-enabled device, and customised for branding
- and many more.

RADRunner has been constructed according to J2EE best practices, and the IBM Solution Partnership Centre in Hursley has shown it to be robust and scalable. It will sustain throughput of 250,000 transactions per hour on modest hardware, and throughput scales linearly with additional hardware resources.

We believe that RADRunner is the future of enterprise software.

3. How does RADRunner work?

To set up a RADRunner system, you use simple web pages to define *Roles* to be played by humans and machines. A Role includes the information and activities necessary to satisfy a particular set of responsibilities and goals.

The *information* in a Role can be:

- Taken from, and sent to, documents and databases anywhere on the web
- Communicated to other Roles
- Used in many different ways to carry out the user's work.

The *activities* in a Role are carried out via built-in task types, for example:

- Send emails
- View and edit documents
- Upload and download files
- Access web pages
- Call web services
- View and enter data
- Do calculations
- Query and update databases
- and more.

Some of these activities can be fully automated, while others require user interaction. You use the interactive parts of your Roles via a web browser, running on any device from a PC to a PDA.

A Role can include *logical conditions* to:

- Control when activities become available
- Validate their outcome
- Terminate the Role when all its work is done.

Roles can be *changed as necessary and as permitted*, either by their own user or by other users. Hence a RADRunner system evolves naturally to meet changing organisational practices.

These pages present a hands-on guide to:

- Using RADRunner
- Setting up a RADRunner system
- The formal language *Playwright*, an XML dialect which underpins the software.

4. Background

To find out more about the 20 years of research by industry and academia worldwide that underpins RADRunner, see our white paper From Requirements To Roll-out Immediately.

5. Release Notes

Release notes for RADRunner are distributed with the application as *radrunner_readme.htm*. They are also available online.

6. Acknowledgements

This product includes software (Log4j, SOAP, Struts and WSIF) developed by the Apache Software Foundation (http://www.apache.org/).
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