

# Introduction to the Newton Project Distributed OSGi & SCA

Robert Dunne  
Paremus

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## Newton Overview

- Distributed Application runtime
- OSGi from the ground up
- SCA to describe the distributed apps
- Started early 2005 by Paremus.
  - ◆ <http://www.paremus.com>
- Open sourced mid 2006
  - ◆ <http://newton.codecauldron.org>

## Deploy, Maintain, Remove

- Full Application Lifecycle
- Software not people

# Deploy, Maintain, Remove

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- What?
  - ◆ Distributed Applications
  - ◆ Topologies vary
  - ◆ SLAs vary
  - ◆ Building blocks?

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  - ◆ Distributed Applications
  - ◆ Topologies vary
  - ◆ SLAs vary
  - ◆ Building blocks?
- Where?
  - ◆ To appropriate compute resource
- When?
  - ◆ Interleaved with other deployments

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  - ◆ Topology
  - ◆ SLA

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  - ◆ Compute resource

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  - ◆ Topology
  - ◆ SLA
- As the environment changes
  - ◆ Connectivity
  - ◆ Compute resource
- Including its own
  - ◆ Self healing

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  - ◆ Just say go away

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- Simple
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- Safe
  - ◆ Dependency management
  - ◆ Garbage Collection

# Building blocks - OSGi

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- Full lifecycle
  - ◆ Code & Services
- Popular programming models
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- Distributed OSGi
  - ◆ remoting

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- Topological View
  - ◆ Simple high level structure
  - ◆ configuration
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- Topological View
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  - ◆ configuration
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- Target State
  - ◆ Topology + SLA
  - ◆ SCA system as goal

# Target State

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  - ◆ Only addresses the delta

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- Newton provisioning system
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- Target state - work needed for
  - ◆ New systems
  - ◆ Environment changes
  - ◆ Modified systems
  - ◆ Retired systems

# Newton Project

- Website
  - ◆ <http://newton.codecauldron.org>
- Commercial version
  - ◆ Infiniflow
  - ◆ <http://www.paremus.com>