



**JavaOne<sup>SM</sup>**  
Sun's 2000 Worldwide Java Developer Conference\*



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# Jiro<sup>TM</sup> Technology Overview

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# Outline

- Management Problem
- Jiro™ Technology Solution
- Java™ Language Extension

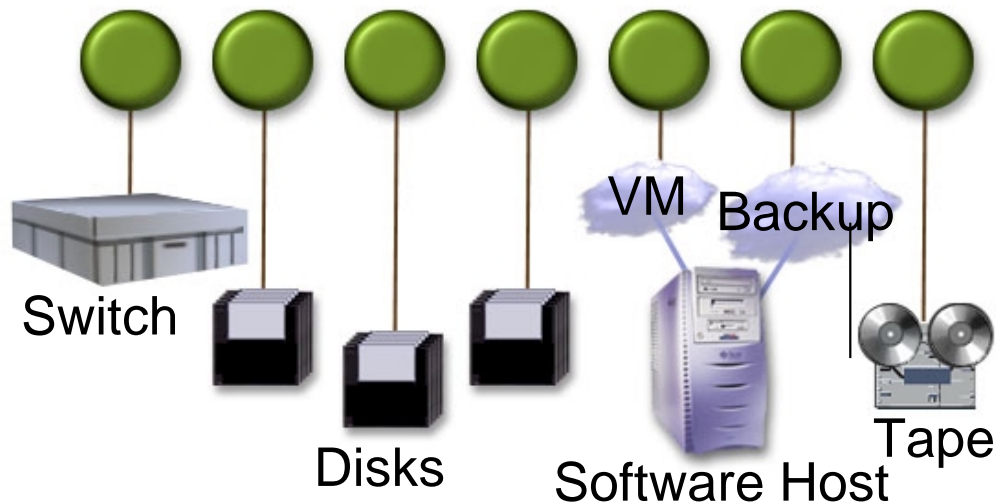


# Management Problem

- First there was information...



Admin

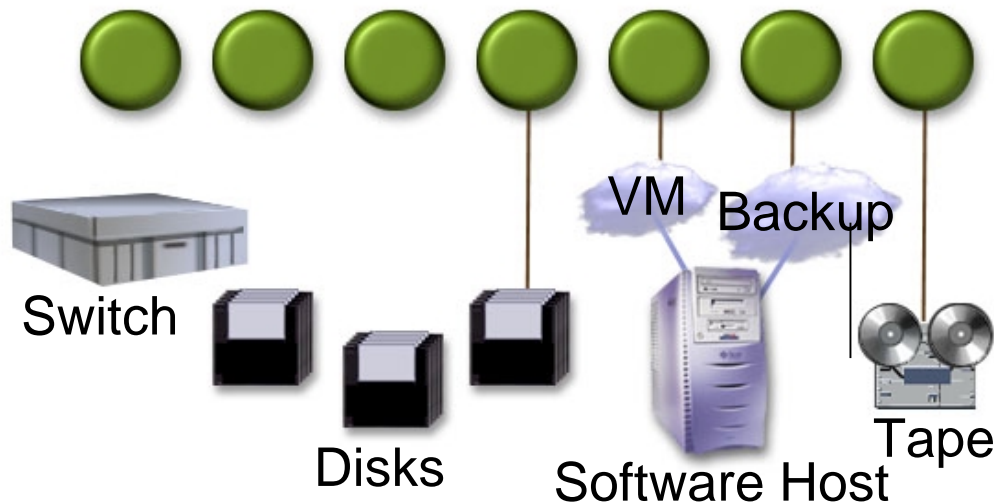


# Management Problem

- Then remote common information...



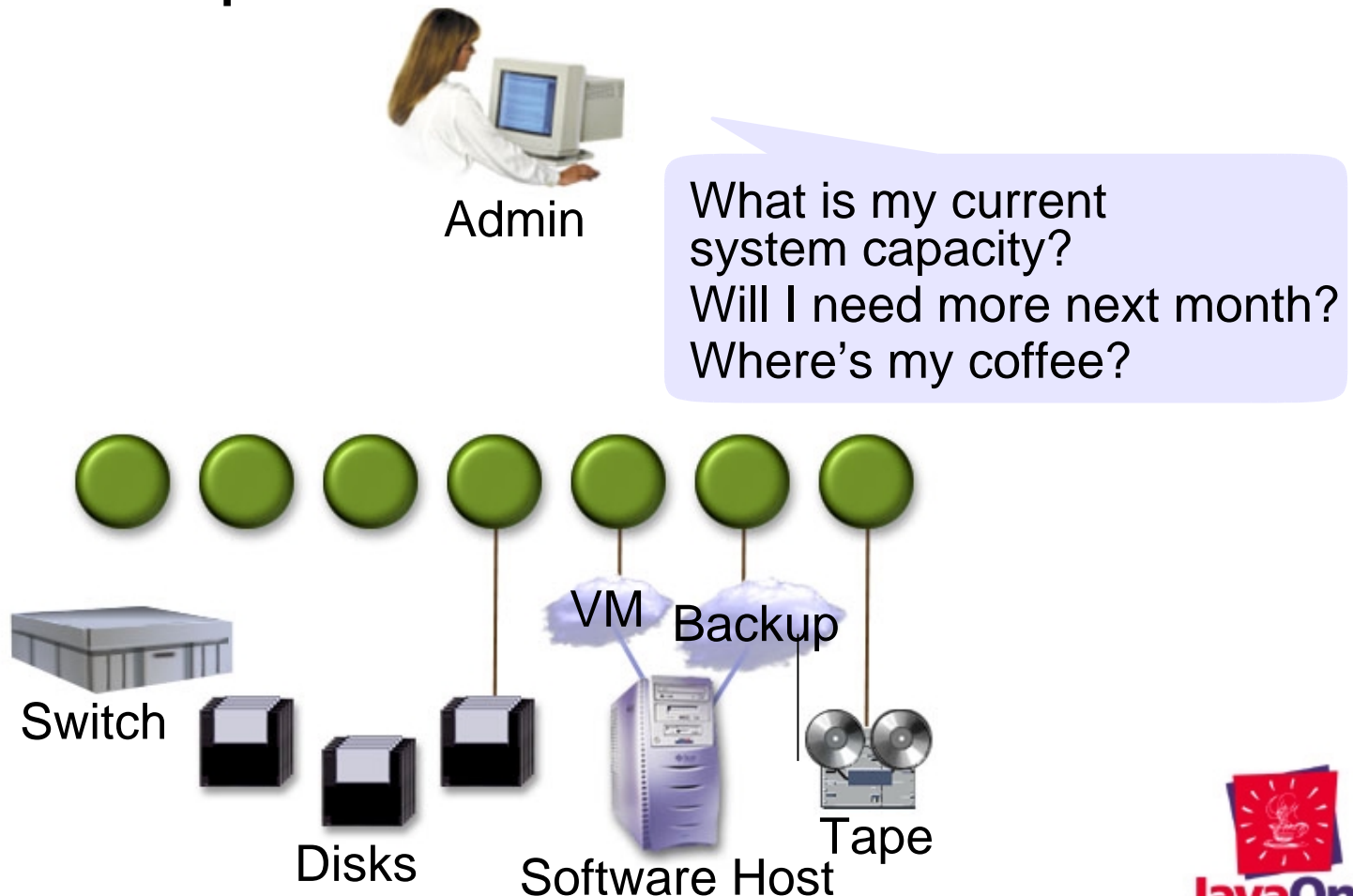
Admin



- SNMP
- WBEM
- Proprietary

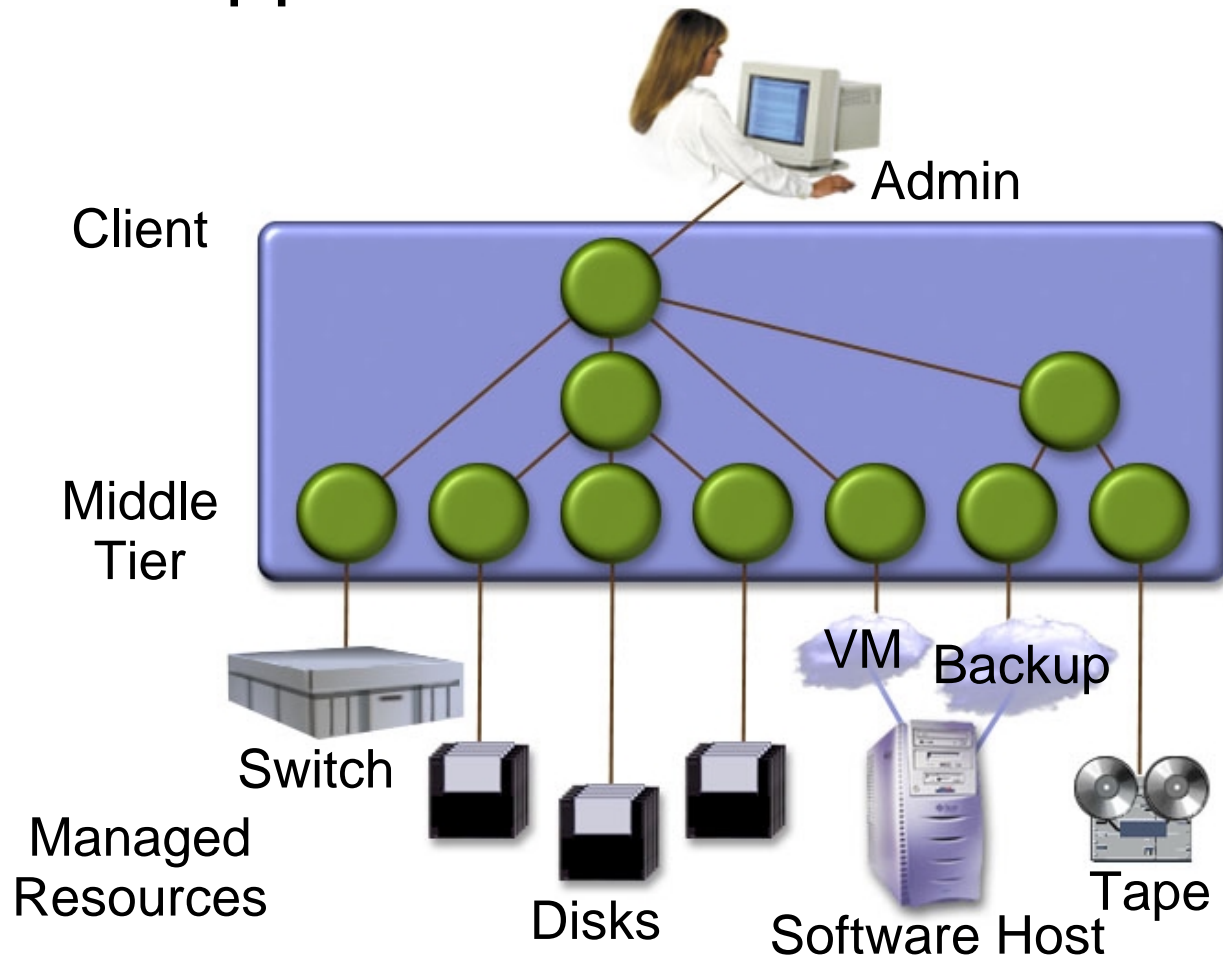
# Management Problem

- But still questions unanswered...



# Management Problem

- Support for a *middle tier*



- Span Devices
- Span Time
- Encapsulate expertise
- Reusable
-

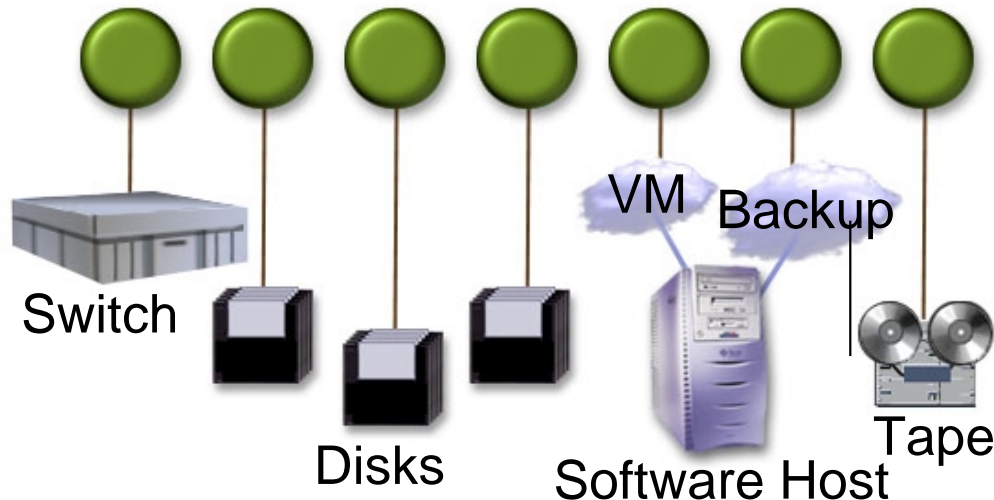
# Management Problem

- Have information, want control...



Admin

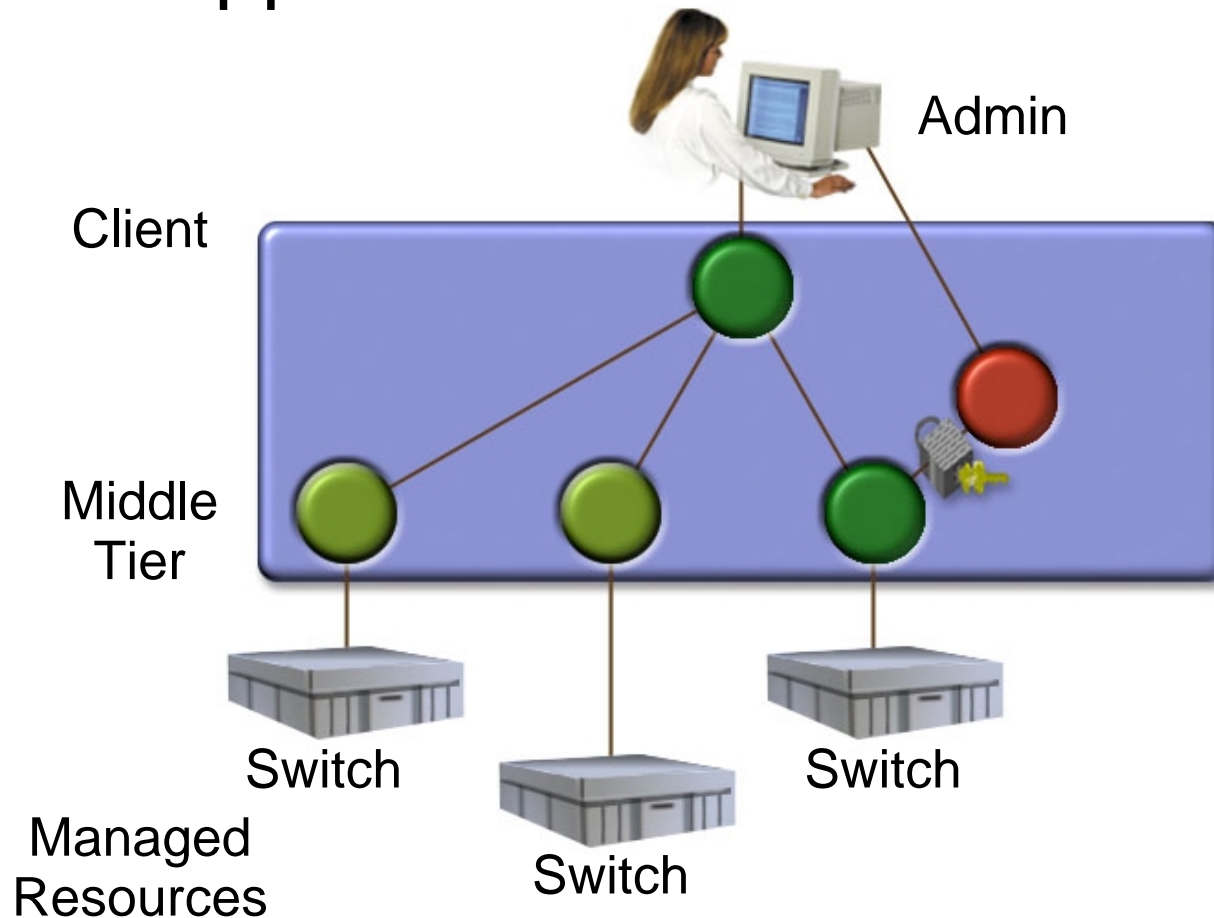
I'd really like to dynamically reconfigure these devices as a group  
I'd really like a raise





# Management Problem

- Support for *control*



- Consistency
- Not Security Issue
- Control Paths
- Arbitration

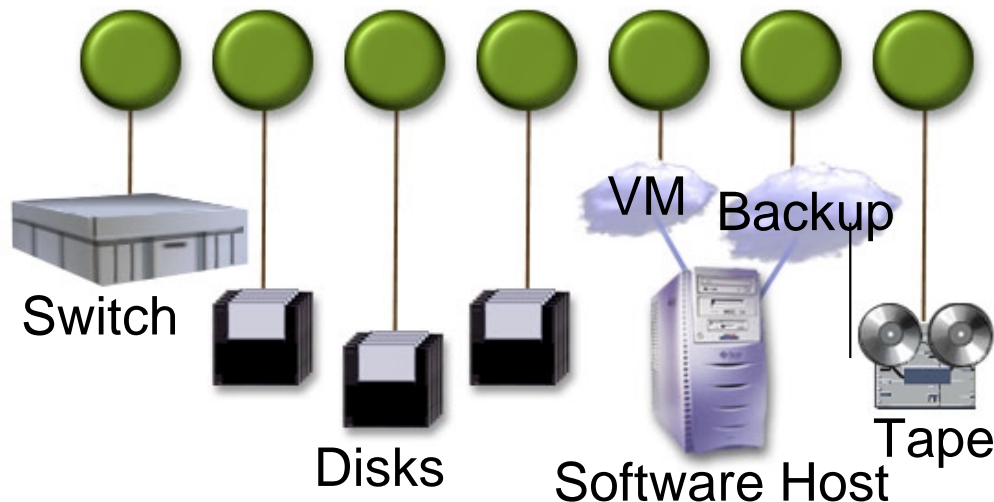
# Management Problem

- Resources no long owned by a host...



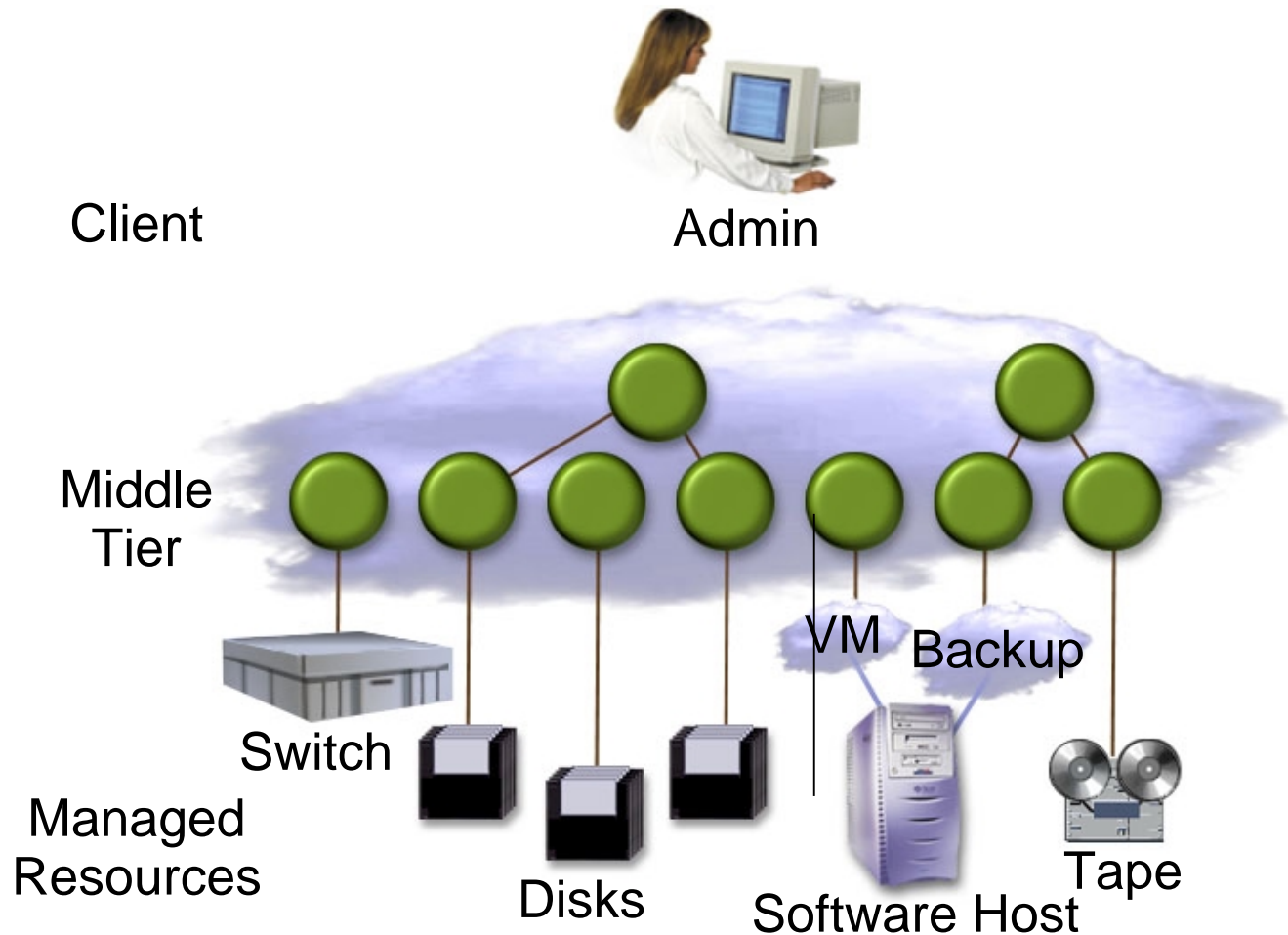
Admin

Okay, what I'd **really** like is a policy that adaptively reallocates my available storage for my mission critical applications.  
Am I asking too much?



# Management Problem

- Middle tier that is *network centric*

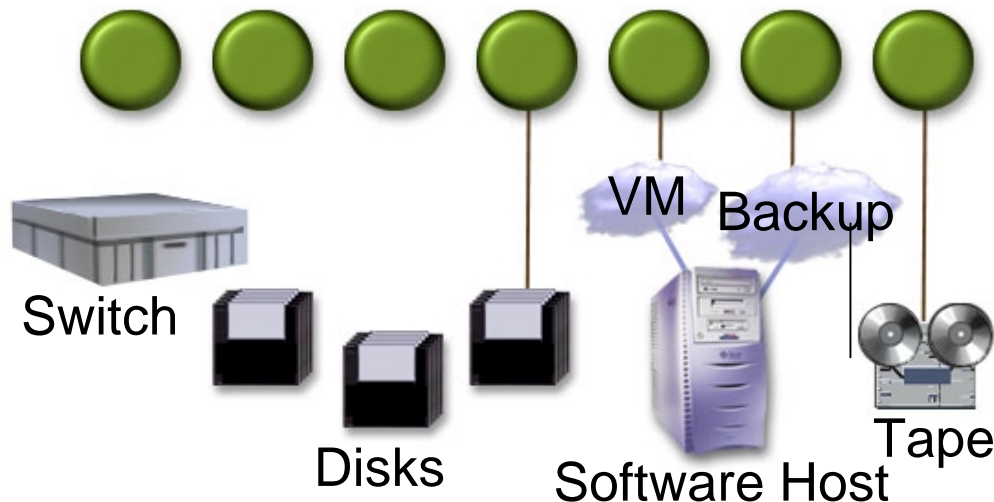


# Management Problem

- Interoperate with today's standards



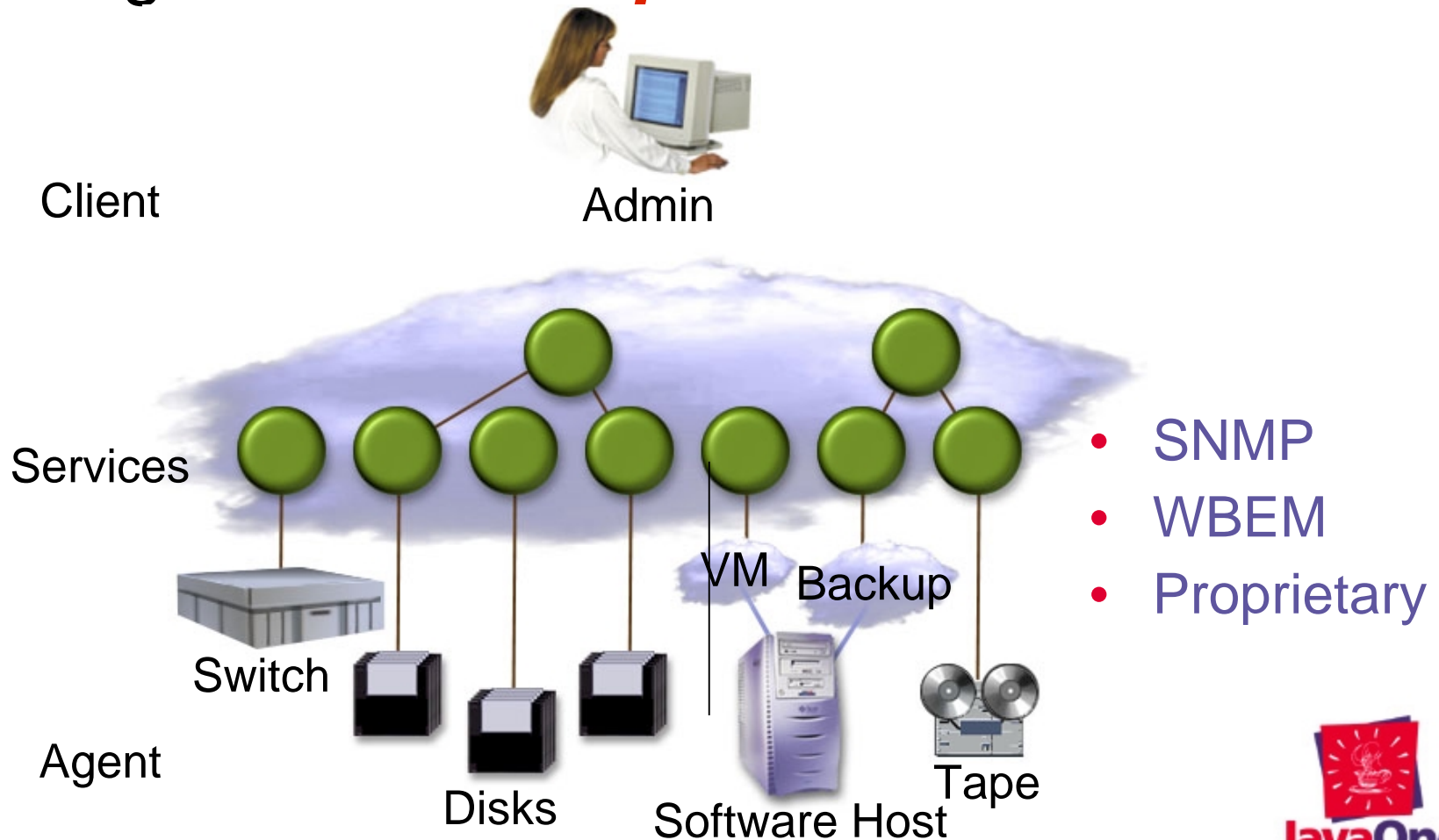
Admin



- SNMP
- WBEM
- Proprietary

# Management Problem

- Agent tier that is *protocol neutral*



# Management Problem


- Three tiered management
- Control based management
- Network centricity
- Protocol neutrality

# Outline



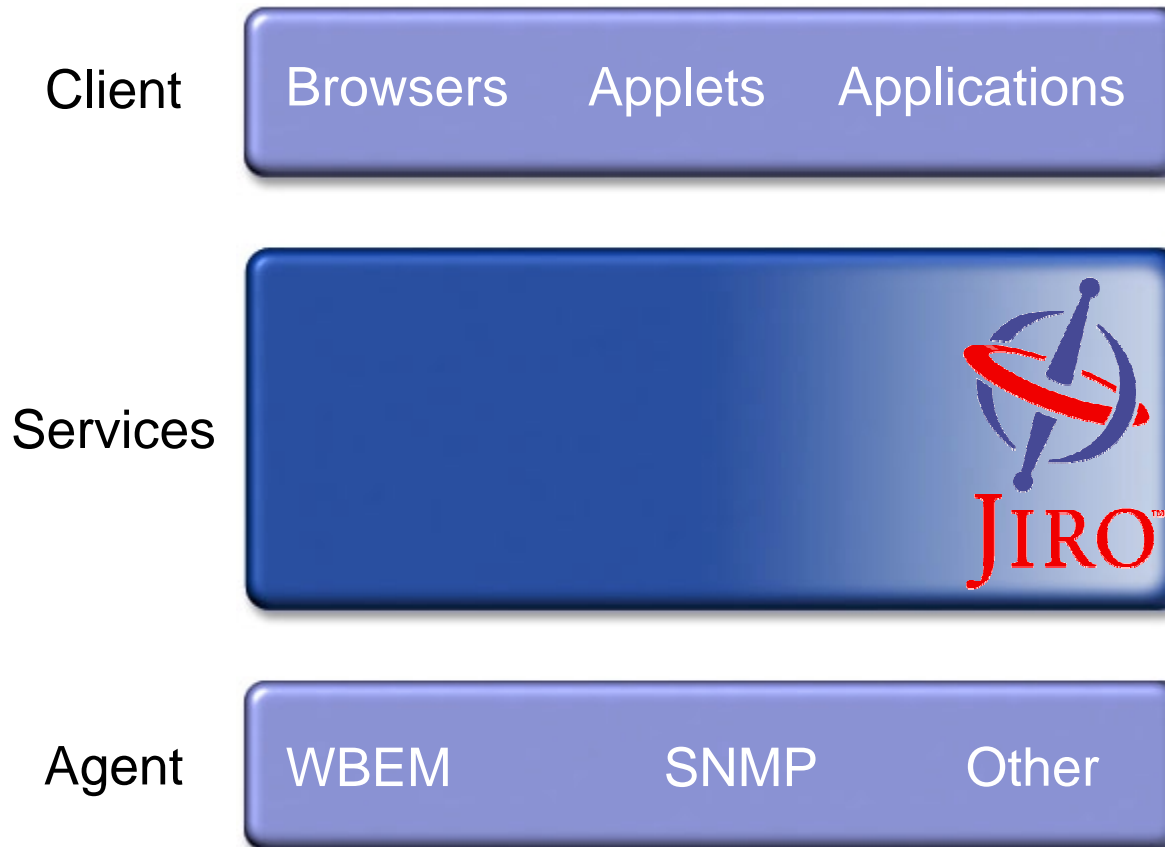
- Management Problem
- Jiro™ Technology Solution
- Java™ Language Extension

# Jiro™ Technology Solution

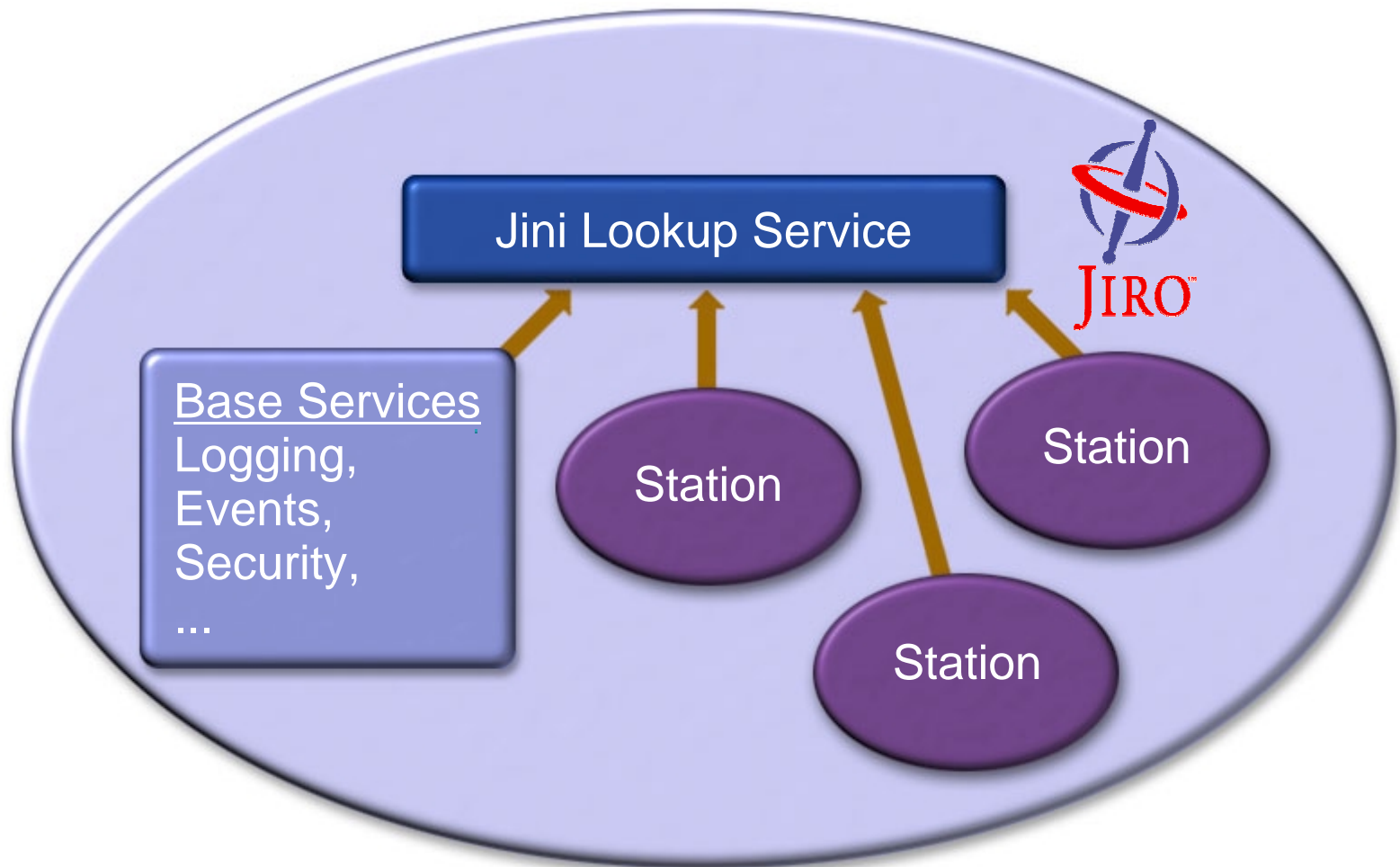
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- Three tiered management
  - Control based management
  - Network centrality
  - Protocol neutrality



# Logical Structure

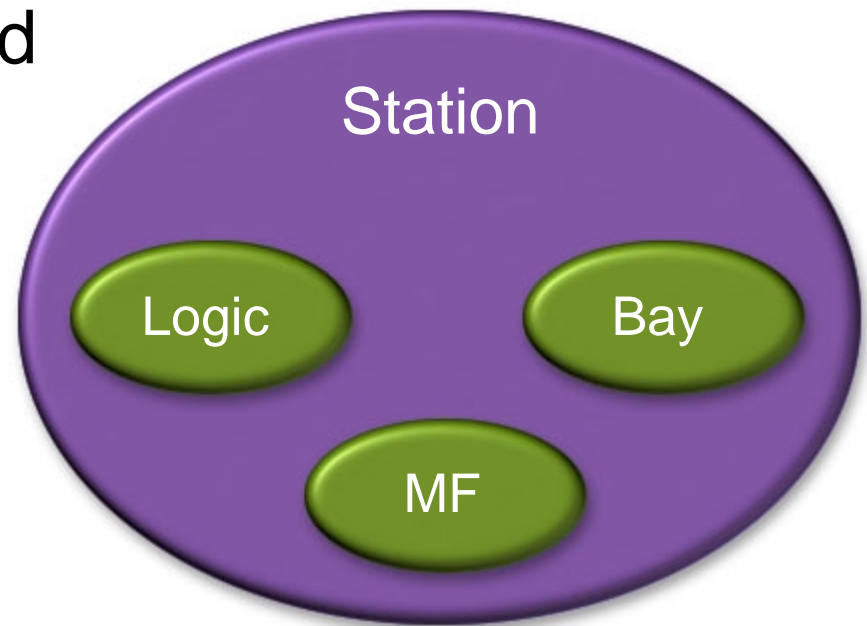


# Physical Structure



# Services Roles

- Management Facade (MF)
  - Represent managed resources to logic
- Logic
  - Communicates with client and MF
  - Active or Passive
- Bay
  - Discovery and Automatic Installation

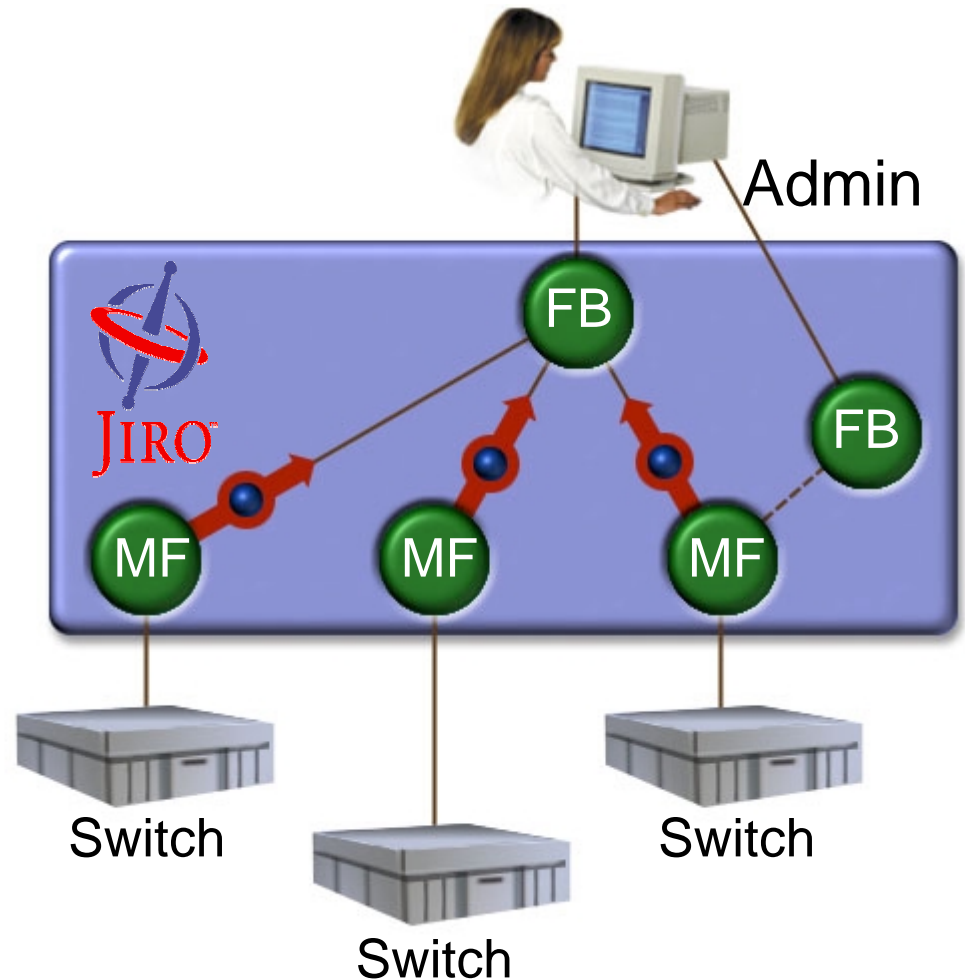


# Jiro™ Technology Solution

- Three tiered management
- • **Control based management**
- Network centrality
- Protocol neutrality

# Resource Locking

- Controllers
  - Clients, Services,...
- Controller locks
  - Exclusive control
  - Long Lived
- Resource Reservation



# Jiro™ Technology Solution

- Three tiered management
- Control based management
- • Network centrality
- Protocol neutrality



# Network Centricity

- Hosts and OSs are not visible
- Services and stations publish interfaces to the network
- A management domain is a collection of managed resources and services
- Each management domain has a Jini<sup>TM</sup> connection technology lookup service that is the center of the universe



# Jiro™ Technology Solution

- Three tiered management
- Control based management
- Network centrality
- • Protocol neutrality



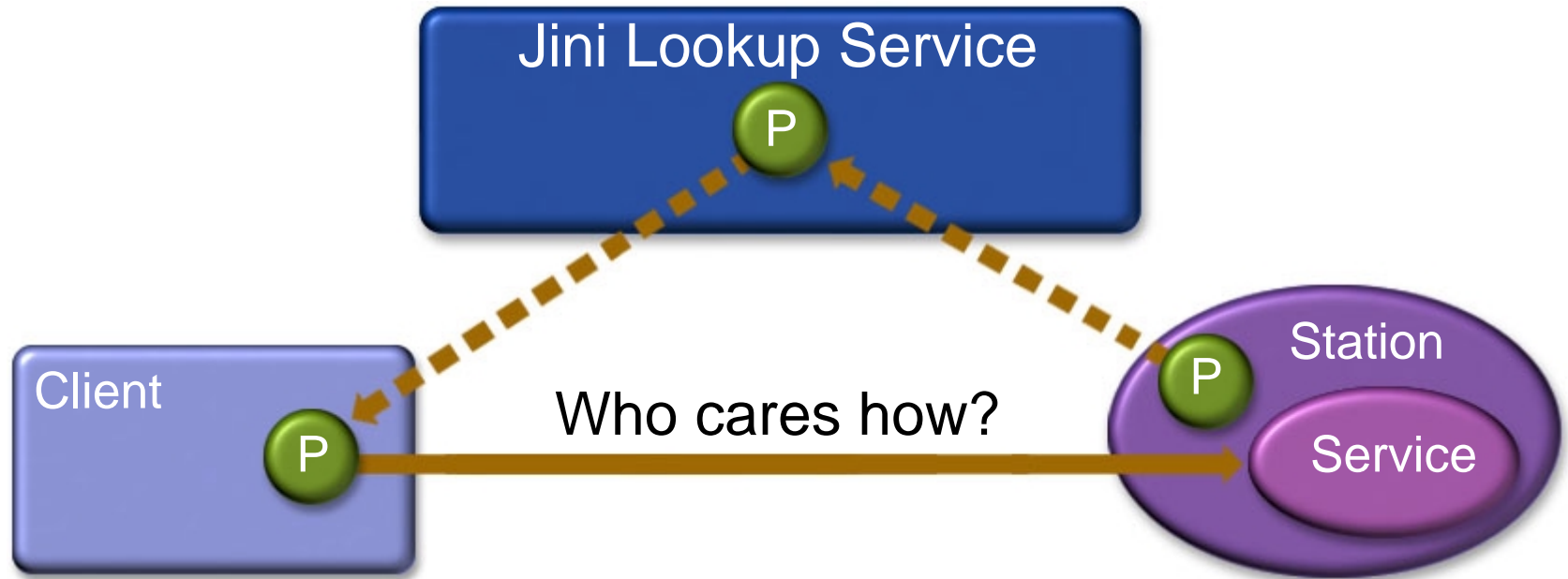


# Management Protocols

- Many, many management protocols
  - WBEM
  - SNMP
  - ...
- Leverage Jini™ technology to hide protocols behind Java™ platform interfaces



# Protocol Neutral



- Packaged with the service
- Passed by value around the network

# Outline

- Management Problem
- Jiro™ Technology Solution
- ➔ • Java™ Language Extension

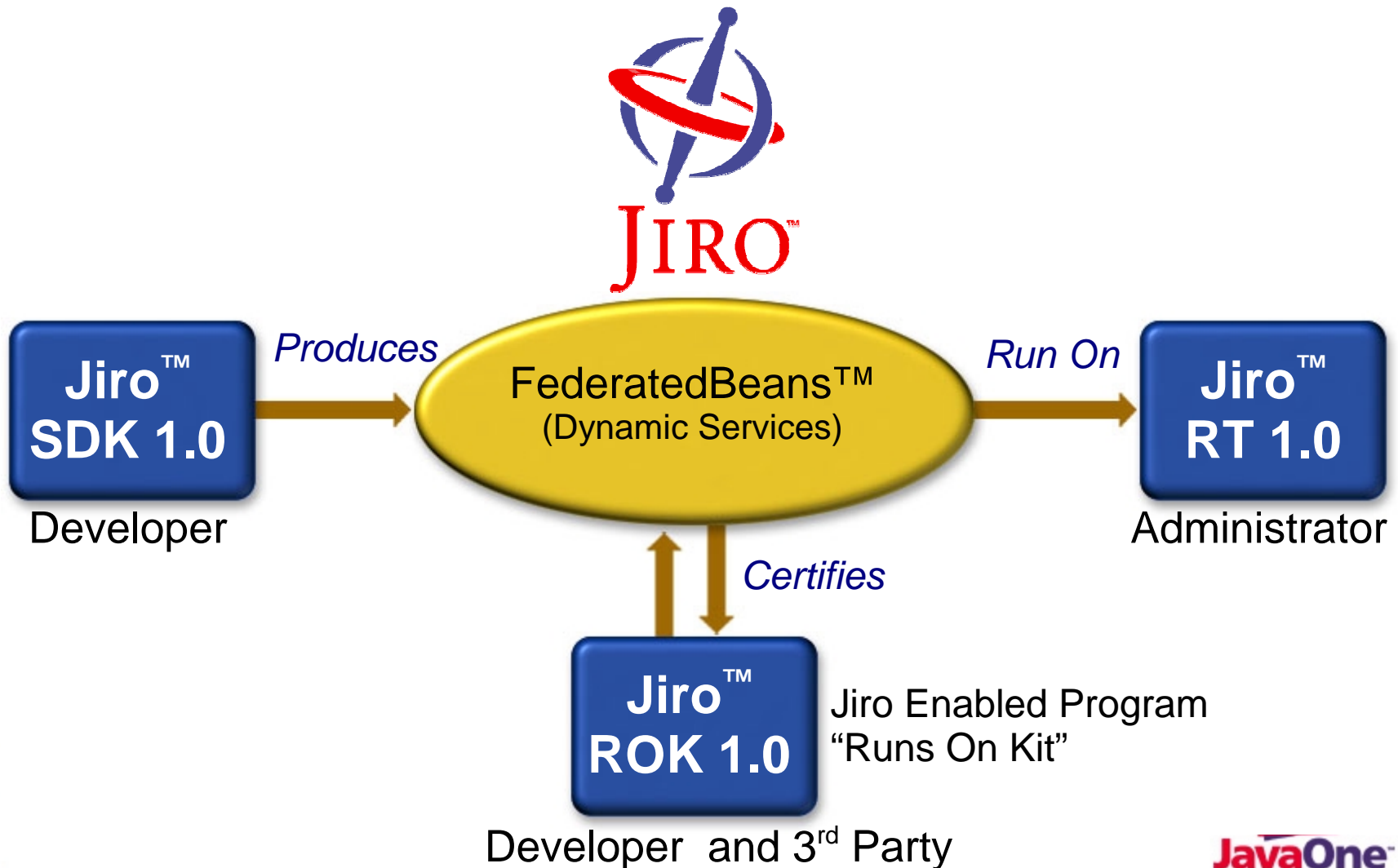
# Java<sup>TM</sup> Language Extension

- JCP Specification
- Federated Management Architecture(FMA)
- API Extension (javax.fma)
- Reference Implementation (RI)
- Compliance Test Suite (CTS)
- Sun Microsystems' implementation of FMA is Jiro<sup>TM</sup> technology

**Available  
Now!**



# Jiro™ Technology Products



# Resources

## Our Website

- <http://www.jiro.com>

*Live, Live, Live!!!*

**Jiro demos with 6+ companies  
interoperating!**

Check out the Jiro booths  
on the vendor floor

## Other Sessions @ the JavaOne<sup>SM</sup> conference

- Introduction to Jiro<sup>TM</sup> Technology (TS-1156)
- Development using Jiro<sup>TM</sup> Technology:  
Base Services (TS-1159)
- Development using Jiro<sup>TM</sup> Technology: Dynamic  
FederatedBeans<sup>TM</sup> Components (TS-1158)
- Jiro<sup>TM</sup> Technology-Based Management Logic  
Applications (TS-1165)





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