

# Web Service Management

Systemübergreifendes Systems Management

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# Überblick

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- " Distributed Management Task Force
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- " Software

# Motivation

## Systems Management

### Systeme

- Hardware
- Betriebssystem
- Netzwerke
- Services
- Applikationen

### Aufgaben

- Installation
- Konfiguration
- Überwachung
- Steuerung
- Planung



Kostensenkung im IT Management



# Standardisierung - DMTF

- Founded in 1992, the **Distributed Management Task Force, Inc.** (DMTF) is the industry organization leading the development of management standards and integration technology for enterprise and Internet environments.
- <http://www.dmtf.org>



# WS-Management

## Web Services for Management

Bietet einen **einheitlichen Weg** für den **Zugriff** auf und den **Austausch** von **Management Informationen** in der gesamten IT Infrastruktur.

- Verwaltet (abstrakte) Ressourcen
- Nutzt HTTP, XML, SOAP
- Sammlung von Standards
  - WS-Addressing, WS-Transfer, WS-Eventing, WS-Catalog
- Alternativen
  - OASIS Web Services Distributed Management (WSDM)

# Ressourcen

## Resource

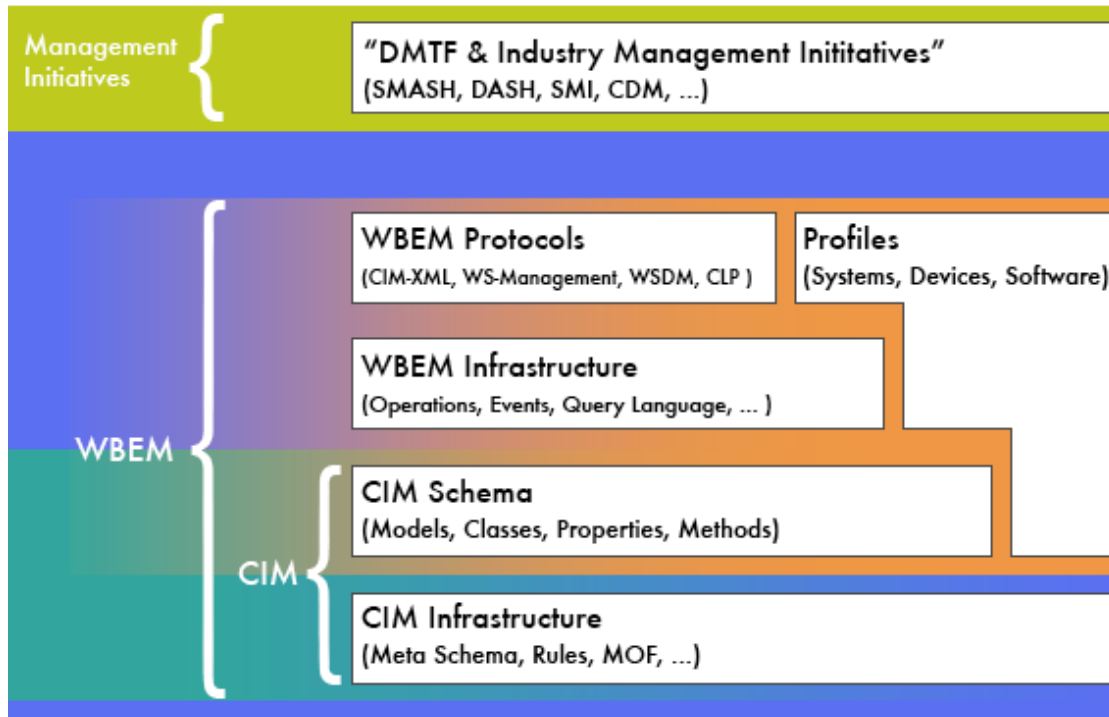
Physische oder logische **Entität** innerhalb der IT Infrastruktur die (Management) **Informationen** bereithält oder empfängt.

- WS Management trifft keine Festlegung
- Objektorientiert (Klassen, Merkmale, Methoden)
- Adressierung über *uniform resource identifier* (URI)  
Namensraum + Klasse + Instanz

# CIM - Common Information Model

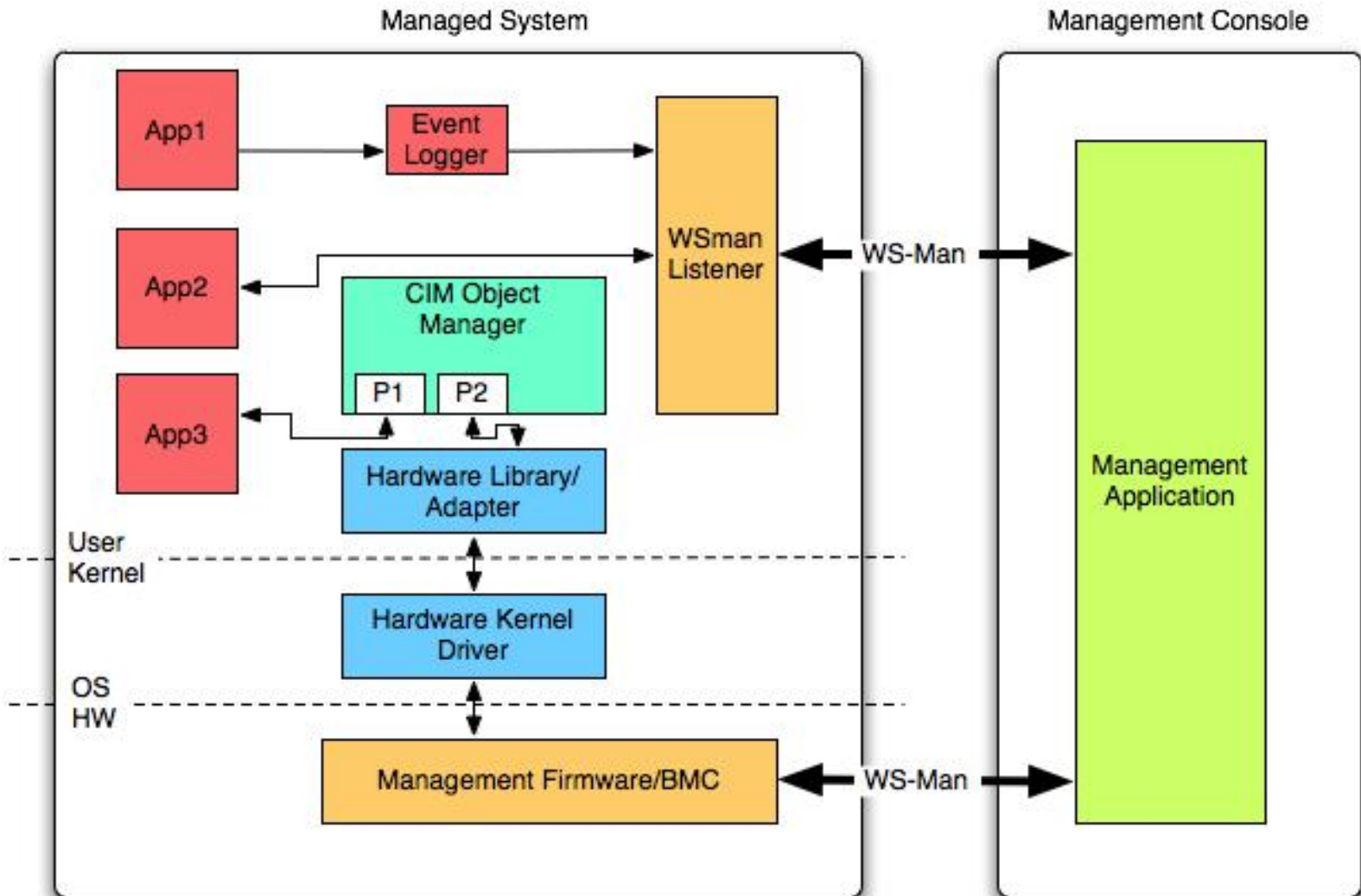
- Objektorientiertes Model der realen (IT-)Welt
- Technologieneutral, Semantikorientiert
- Fokus auf Konzepte, Model und Interoperabilität
- Klassen, Merkmale, Methoden, Verbindungen
  
- Implementierungen
  - Windows (seit Windows 98)
  - Linux: SLES, (RHEL?)
  - Unix (HP/UX, AIX, Solaris)
- WS-CIM (CIM über WS-Management)

# WBEM – Web Based Enterprise Management <sup>N</sup>





# Architektur



# Vorteile von WS-Management

- Herstellerunabhängig
- Offen, Portabel
- Verfügbarkeit
- Erweiterbar
- Sicher
- Web Technologie

# Nachteile von WS-Management

- Komplex, Aufwendig (SOAP)
- XML Firewall
- Standard nicht endgültig
- Unvollständig (WS-Catalog fehlt noch)

# Anbieter

## " Microsoft

- Windows Vista, Windows XP SP2, Windows Server 2003R2

## " HP

- Wiseman (Java)

## " Intel

- vPro / iAMT
- Openwsman

## " Novell

- *Technical Collaboration Agreement* mit Microsoft
- OpenSUSE 10.3 (tech. preview)

## " Embedded Devices

# Software

- " Windows Remote Management (WinRM)
  - Windows Vista
  - Windows XP SP2, Windows Server 2003
- " Openwsman
  - <http://www.openwsman.org>
- " Novell / SUSE
  - <http://www.opensuse.org>
- " OpenSUSE Build Service
  - <http://build.opensuse.org>

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