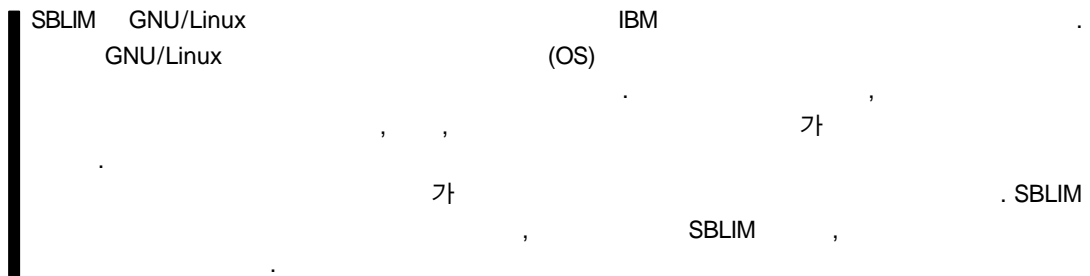


# (SBLIM)

## Provisioning of the Standards Based Linux Instrumentation Based Standards

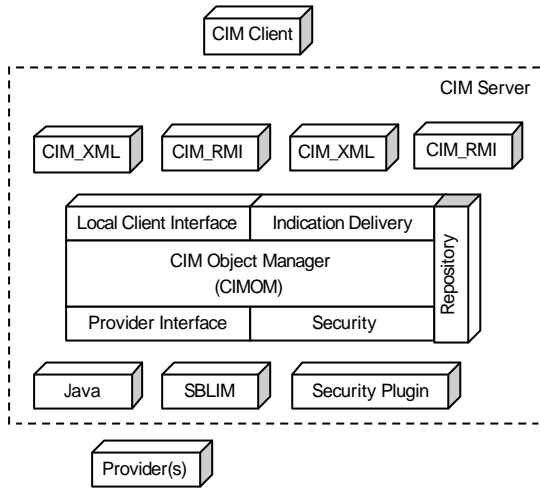
(H.N. Cho)  
 (C.W. Ahn)  
 (Y.H. Kim)  
 (J.Y. Kim)  
 (S.I. Jung)



I. Linux Instrumentation for Manageability) IBM  
 , DMTF  
 GNU/Linux  
 SBLIM  
 IT  
 가

## II. SBLIM

가 . DMTF(Distributed Management Task Force) IT  
 SBLIM ( 1) CIMOM(CIM Object Manager)  
 , WBEM(Web-Based Enterprise Management) (provider)  
 [1]. SBLIM  
 CIM WBEM , SBLIM  
 SBLIM(Standards Based



( 1) WBEM

### 1. CIM

(CIM) DMTF 1997  
 . DMTF가 CIM ,  
 /  
 ,  
 가 .  
 CIM  
 [2]. CIM OMG  
 (Object Management Group) UML,  
 CIM (specification) MOF(Man-  
 aged Object Format), XML  
 가  
 CIM  
 "CIM Schema Ver. 2.8"  
 CIM core, application, device,  
 events, network, metrics, physical, policy, sup-  
 port, system, user [3],[4].  
 CIM  
 (core) ( )  
 )  
 (common)

가 ,

가 ,  
(OS) 가

### 2. WBEM

WBEM Microsoft, Compaq Computer, BMC  
 Software, Cisco Systems, Intel  
 1996 [5].

가 [5].

가 WWW(World Wide  
Web) 가 .

가  
 (WBEM)  
 DMTF  
 SNMP, DMI  
 (Desktop Management Interface)[6]

CIM  
 DMTF  
 HyperMedia Management Schema  
 (HMMS) CIM  
 (naming),  
 (寫像, mapping)  
 CIM

가 , CIM operation  
 . WBEM 가  
 1998 6 , DMTF WBEM  
 WBEM initiative .  
 DMTF WBEM initiative  
 , WBEM  
 .  
 , WBEM (CIM)  
 initiative [7]. CIM  
 ,  
 ,  
 . WBEM  
 , HTTP  
 XML  
 .  
 WBEM 4가  
 가 (< 1> ).  
 SNIA CIMOM release version  
 [8]. OpenPegasus IBM, HP, EMC  
 WBEM ,  
 가  
 [9],[10]. WBEM  
 (repository)가 XML  
 . XML  
 가 , OpenPegasus CIM  
 operation  
 [11],[12]. OpenWBEM center7  
 WBEM implementation ,  
 OpenPegasus 가

가 , CIM operation  
 . WBEM 가  
 OpenPegasus  
 ,  
 . SBLIM OpenPegasus, OpenWBEM,  
 SNIA's CIMOM SBLIM  
 SRI SNIA's CIMOM  
 . SNIA's CIMOM 2002  
 .  
 WBEM Services SUN WBEM  
 , SUN WBEM SDK  
 (management application)  
 .  
 [13]. 가  
 WBEM , WBEM  
 가 .

3. SBLIM

SBLIM "sublime" , "Standards  
 Based Linux Instrumentation for Manageability"  
 . SBLIM IBM  
 GNU/Linux  
 [14].  
 GNU/Linux

가 . ,  
 가  
 가  
 가 . 가  
 SBLIM .

< 1> WBEM Implementations

Name	Developer	Language	Target OS
Open WBEM	Caldera International	C++	Linux, FreeBSD, Sun Solaris
Pegasus	The Open Group	C++	Linux, Windows NT/2000
SNIA CIMOM	SNIA	Java	All
WBEM Services	Sun Microsystems	Java	All

SBLIM 가 CMPI . , SBLIM CIM (CIM instrumentation) 가 . SBLIM CIM SBLIM CIM 2.8 . SBLIM CIM core, application, device, events, network, metrics, physical, policy, support, system, user (provider) . SBLIM CIM GNU/Linux GUI SRI CUI WBEMCLI (WBEM Command Line Interface)가 . SBLIM / . / WBEM SBLIM (skeleton) , CIM National Rose™ CRM(Common Resource Modeling) 가 . SBLIM SBLIM data gatherer가 SBLIM data gatherer 3 CIMOM < 2> SBLIM 5가 CMPI(Common Manageability Programming Interface) NPI(Native Provider Interface)가 WBEM implementations 4 가 API 가

< 2> SBLIM Packages

SBLIM Programming Interface	sblim-npi	(NPI).
	PerlProvider	
CIM Instrumentation	sblim-cim4linux	
	sblim-base	
	sblim-fsvol	LVM
	sblim-params	
	sblim-rpm	RPM(ReadHat Package Manager).
	sblim-service	
CIM	sblim-wbemcli	SBLIM SRI , GUI CUI
	sblim-sri	GUI SRI . SBLIM
	evsub	WBEM
SBLIM	sblim-psg	

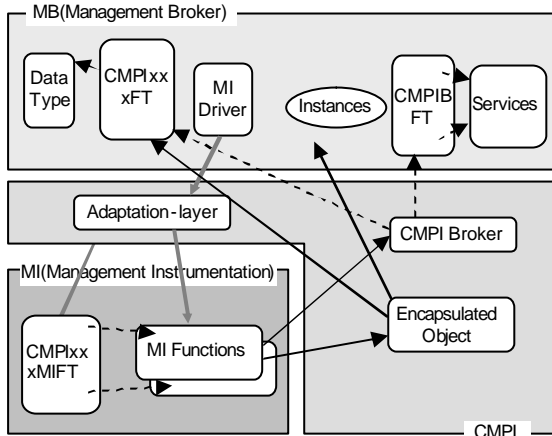
, SBLIM CIMOM 가 , CMPI가  
 . CMPI  
 WBEM 가 WBEM initiative 가  
 . CMPI  
 SBLIM CIMOM  
 • CIM :  
 - &  
 - (ex. CPU, )  
 -  
 - API  
 - C++ wrapper  
 - , management  
 - ( , )  
 • SBLIM  
 - SBLIM /  
 •  
 - SBLIM /  
 •  
 “CIMOM” “provider”  
 “management broker” “management instrumen-  
 tation” CMPI CIMOM  
 가  
 ( 2) management  
 broker management instrumentation  
 management  
 broker  
 , management instrumentation  
 management instrumentation  
 • Management broker  
 ,  
 management broker  
 Native Provider Interface(NPI)  
 C Common Manageability Pro-  
 gramming Interface(CMPI) 가 가 , management instrumentation manage-

ment broker가

. Management broker  
management instrumentation

management instrumentation  
Management instrumentation management  
instrumentation

management instrumentation  
API 가



( 2) Common Manageability Programming Interface(CMPI)

## 2. CIM Instrumentation

CIM instrumentation

< 3>

## 3. CIM

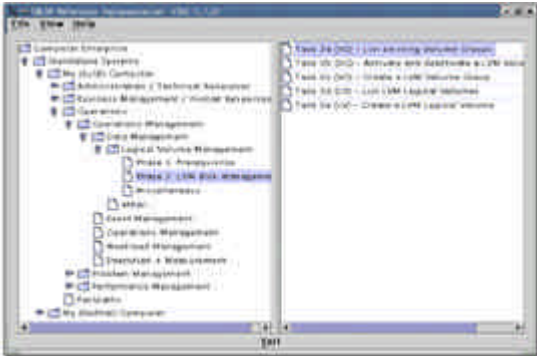
SRI(SBLIM Reference Implementation)

CIM/CIMOM

, CIM GNU/Linux

< 3> CIM Instrumentations

	CMPI/NPI	
cmpi -base	cmpi-adpater	가
cmpi -network	cmpi-adpater	, IP
cmpi -fsvol	cmpi-adpater	
cmpi -smbios	cmpi-adpater	CIM BIOS , ID, BIOS
cmpi -params	cmpi-adpater	CIM_Service
cmpi -syslog	cmpi-adpater	syslog
cmpi -openpbs	cmpi-adpater	OpenPBS
base	npi	NPI 가
fsvol	npi	
service	npi	GNU/Linux /etc/init.d 가
rpm	npi	GNU/Linux
params	npi	CIM_Service
mail	npi	



( 3) SRI

. SRI JAVA CIMOM  
 . SRI ( 3) , SRI

- (RPM )
- RedHat Package Manager
- 
- NFS
- 
- LVM (LVM , LVM , LVM )
- 
- 
- GUI
- ( )
- GNU/Linux
- 
- GNU/Linux

, CIM  
 National Rose™ CRM 가 .  
 CIM  
 가  
 SBLIM  
 가 가

CIM SBLIM  
 WBEMCLI

, , 3가  
 가  
 object, association, property, event

가

CMPI c, NPI c, NPI c++

4. SBLIM

SBLIM (test suite),

5.

SBLIM

SBLIM 가 (board member) ,

CMPI  
CIM

(total cost of ownership)

3가

#### IV.

DMTF

, CIM, WBEM, DEN(Directory Enabled Networking), SMBIOS(System Management BIOS), ASF(Alert Standard Management) DMI (Desktop Management Initiative) . (

DMTF

4)

SMBIOS가 DMI ASF WBEM SBLIM 가

ETRI 2004 4 DMTF

DMTF

DMI

가

, DMTF

WBEM CIM

[15].

SBLIM

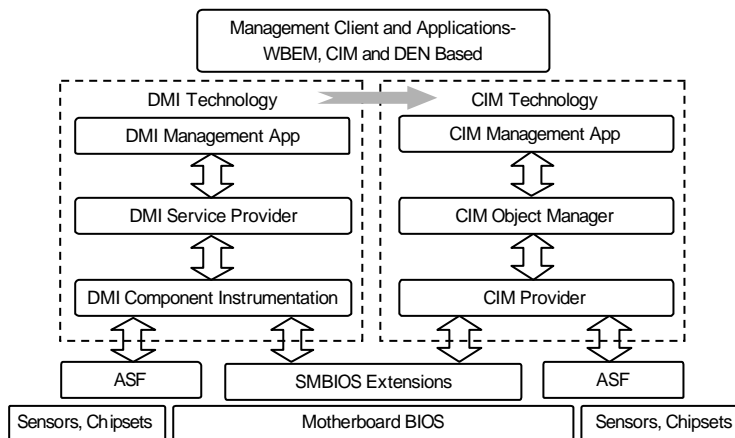
DMTF

가

, SBLIM

IBM

DMTF



( 4) DMTF



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