



IBM Systems and Technology Group

_OCTOBRE/NOVEMBRE/DÉCEMBRE

_Je me demande ce qu'IBM me réserve
pour cette fin d'année...

_Des thèmes inédits pour les Journées
Techniques et des cadeaux à gagner !!!

_C'est sûr, je m'inscris !



Journées Techniques 2006



IBM Systems and Technology Group



IBM Director 5.10 : l'outil de System Management commun pour toutes les plateformes IBM

Patrick De Oliveira

FTSS IBM System x™ & BladeCenter

Journée technique du 14 Novembre 2006

Agenda

- **9h00 Accueil café**
- **9h30 Début de la présentation**
- **10h45 Pause**
- **11h Reprise de la présentation**
- **12h Fin de présentation**

Agenda

- **IBM Director 5.10 : Outil de supervision cross plateforme (System x™, System i™, System p™ et System z™)**
- IBM Universal Systems Management Infrastructure
- IBM Director 5.10.3 : what's new ?
- IBM Director 5.20 ... GA 27 Décembre 2006
- IBM Director 6.10 / Simulateur
- Présentation IBM PowerExecutive™

Journée Technique xSeries : IBM Directeur 5.1 : l'outil de System Management cross plateforme IBM

- **L'offre produits**
- **Principales nouveautés**
- **Prise en main :**
 - nouvelle console IBM Director
 - System Software updates
 - Configuration Manager
 - EAP Wizard
 - Inventaire et collectes personnalisées
 - IBM Director Information Center
- **IBM Director 5.10 Guide de référence par plateforme matérielle**

Journée Technique System x™ : IBM Directeur 5.1 : l'outil de System Management cross plateforme IBM

- **L'installation d'IBM Director 5.10**
- **Perfectionnement et simplification de l'interface utilisateur**
 - Perfectionnement de la console
 - Perfectionnement de l'accessibilité
 - Publications
 - Software Distribution & Software Health Check
 - Common Command Line Interface (CLI)
- **Core Framework Services**
 - SNMP Enhancements
 - IBM Director SDK
- **MPCLI Integration**

Vue d'ensemble et stratégie

La problématique des Services Informatiques

■ Fournir

- Une meilleure qualité de service
- Une plus grande capacité de stockage
- De nouvelles solutions plus rapides

■ Mais

- Plus rapidement
- Avec moins de moyens financiers
- Avec moins de ressources expérimentées
- Sans locaux supplémentaires

■ Mieux gérer les systèmes


- Plus nombreux
- Plus diversifiés
- Plus complexes



Pour toutes ces raisons et bien d'autres La gestion des systèmes

Scheduler 

BladeCenter Management 

 Gestion depuis une console unique

Conserver les systèmes en ligne

Real Time Diagnostics

Détermination rapide de problèmes éventuels

IBM Director


Software Distribution 

RDM 

Conserver les logiciels systèmes à jour


Déployer des Systèmes d'exploitation et des applications à de multiples systèmes

Hardware Status **Monitoring** 

VMM 

Alerter si la "santé" d'un système est défaillante

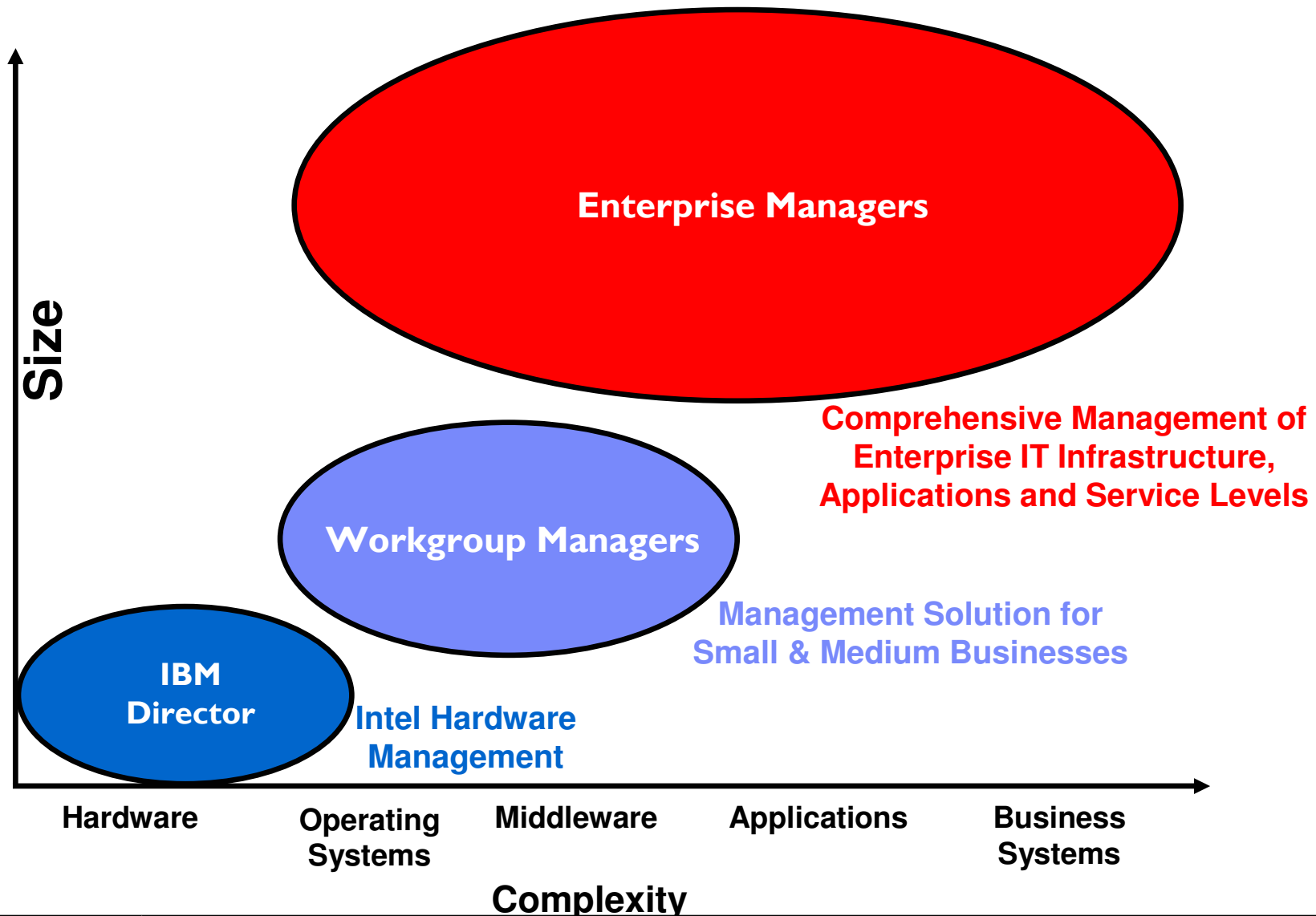
Maximiser l'utilisation de mes serveurs

System Availability 

Capacity Manager 

Surveillance de la performance de mes systèmes

Positionnement d'IBM Director

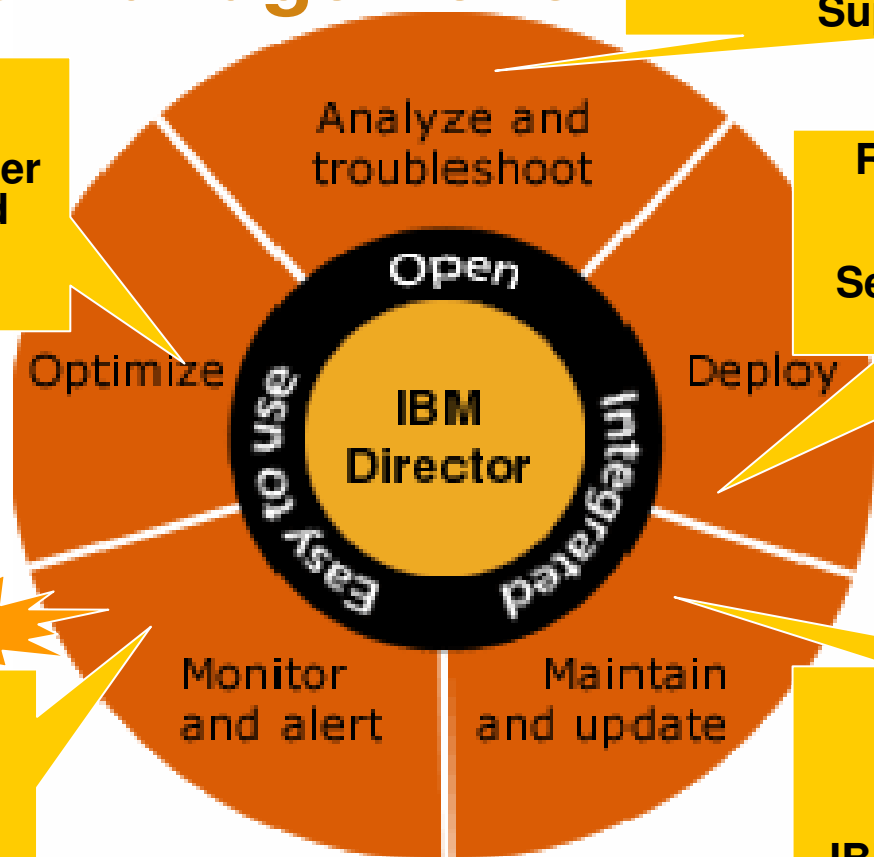


La refonte du Site Web IBM Systems Management

Remote management adapters
Dynamic System Analysis
Real Time Diagnostics
Support utilities

Capacity Manager
System Availability
Virtual Machine Manager
Application Workload
Manager
Power Executive

Remote Deployment
Manager
ServerGuide
ServerGuide Scripting
Toolkit



Remote Deployment
Manager
UpdateXpress
Software Distribution
IBM Systems Update Tool
for Microsoft SMS

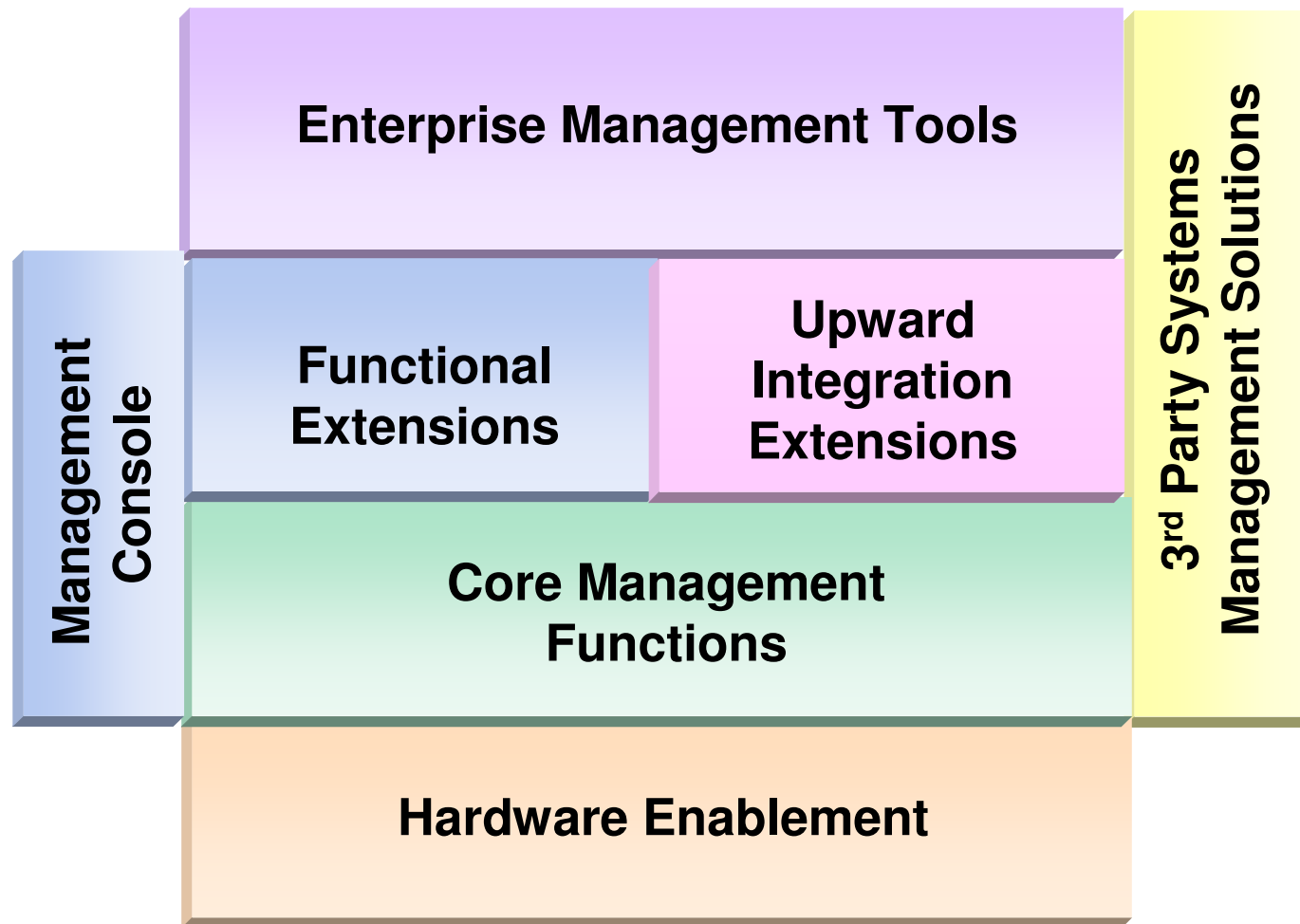


5.10

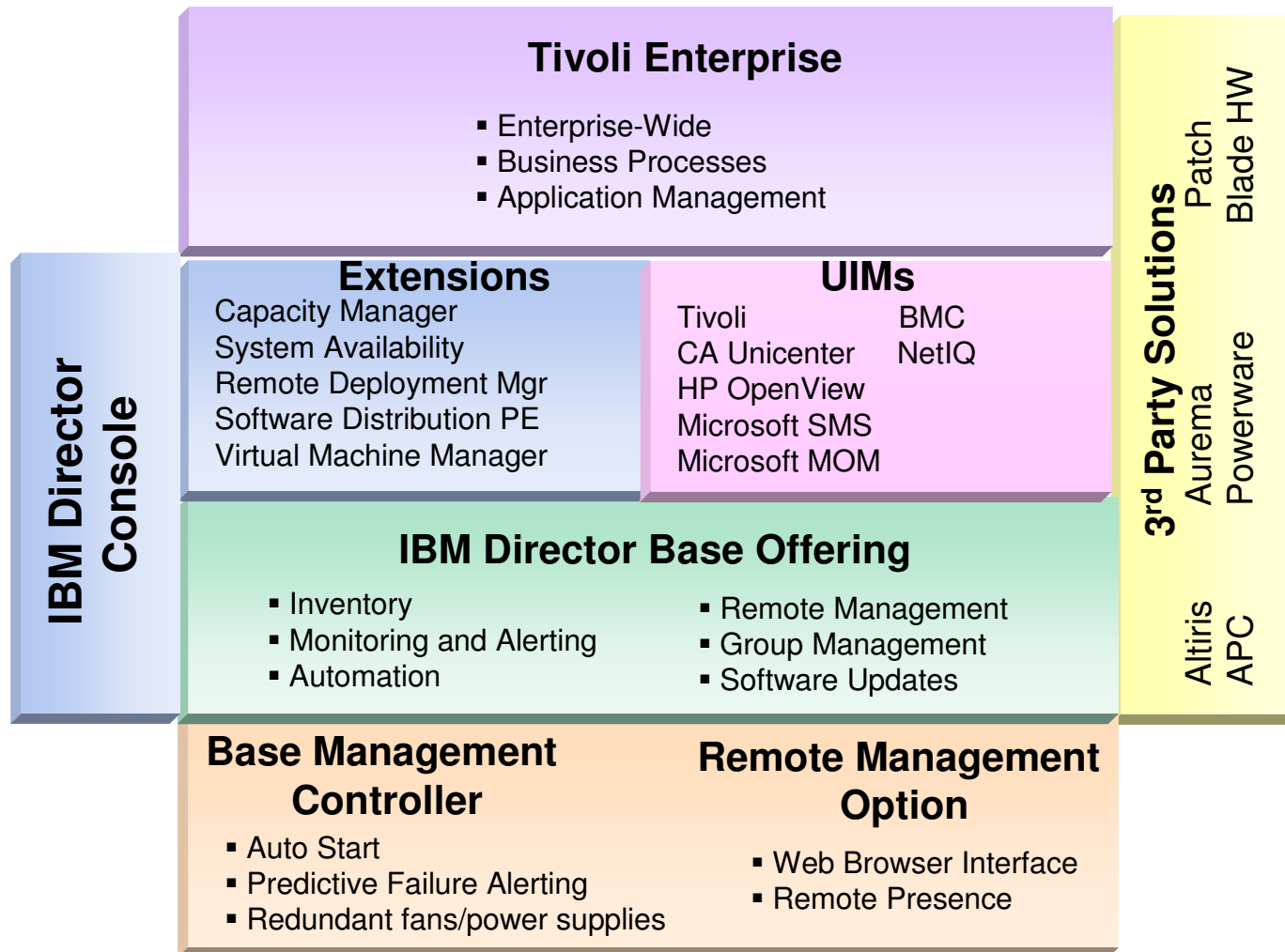
IBM Director
IBM Director Agent
Capacity Manager
System Availability

Console centrale d'administration des serveurs IBM @server

La gestion complète des systèmes



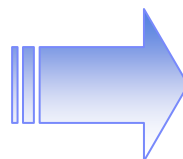
L'Offre IBM Systems Management



Nos clients souhaitent ...

Configurer, déployer, surveiller et gérer tous leurs systèmes de façon cohérente afin de maîtriser les coûts de temps (TCO) et de formation

- **Integrated IBM Director toolset**
 - **Common look & feel**
 - **Drag-and-drop interface**
- **Common IBM Director infrastructure**
 - **Scheduler**
 - **Group Management**
 - **Alerting, Event Actions**
- **Extensible, open IBM Director architecture**
 - **Can plug-in third party tools**



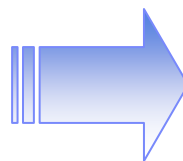
- **One point to perform all tasks – convenient and saves time**
- **Consistency across multiple tools**
- **Minimizes training time for new tools**
- **More choice of tools and additional management capabilities**
- **Broader platform support**

Nos clients souhaitent ...



S'assurer que tous leurs serveurs sont en "bonne santé" et notifier les opérateurs / administrateurs s'il se produit un problème : augmenter le temps de disponibilité des systèmes

- **IBM Director** color-coded health status
- Easy drill-down to view detailed management information
- Remotely troubleshoot and restart or turn servers on or off
- Flexible automation using **Event Action Plans** enable response to alerts



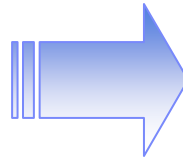
- x86 servers average **26 hours** of downtime/year, resulting in average revenue **loss of \$650,000**¹
- Convenient 'at-a-glance' health check
- Rapid response to hardware issues minimizes downtime
- Be proactive to avoid problems
- Management and control from anywhere minimizes outages

Nos clients souhaitent ...



Création de machines virtuelles afin d'optimiser l'utilisation des serveurs physiques et aussi permettre la gestion centralisée des machines physiques et virtuelles

- IBM has partnered with **VMware** to provide partitioning and partition management
- **Virtual Machine Manager (VMM)** provides 'single glass management' of virtual /physical machines
- **IBM Director** hardware health events can drive provisioning of virtual machines

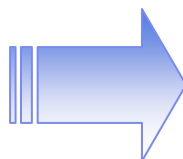


- Virtualization results in overall **cost reduction between 29 and 64 percent³**
- 'Single glass', consistent management of physical and virtual machines
- Integration point for VMware VirtualCenter and IBM Director
- Easy administration and self-healing of ESX Server environments

Nos clients souhaitent ...

Savoir si leurs les drivers et firmware des systèmes sont à jour et le cas échéant déployer facilement le dernier niveau de driver ou firmware si tel n'est pas le cas

- **UpdateXpress** automatically detects current device driver and firmware levels and enables manual or automatic updating
- **Update Assistant** imports the latest updates from UpdateXpress
- Distribute updates from **IBM Director**



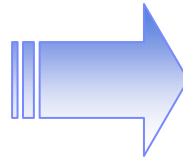
- Software maintenance and deployment account for **34% of IT staff time!**¹
- Helps optimize performance and reliability of systems you manage
- Convenient, single point of software distribution saves time
- IBM Director's group management and scheduler facilitates update process



Nos clients souhaitent ...

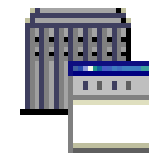
Savoir s'il existe des problèmes de performance ou de dimensionnement de leurs serveurs

- **Capacity Manager** monitors server resource utilization and identifies bottlenecks
- Predicts future bottlenecks and recommends how to avoid them
- Generates performance analysis reports



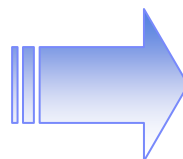
- Companies average **4.4 server performance incidents per month**. Each incident requires 3.5 hrs of IT staff time to fix! ¹
- Help optimize system performance and availability
- Get advance warning and avoid costly unplanned outages
- Help justify system upgrades

Nos clients souhaitent ...



Rapidement configurer leurs serveurs lames afin de commencer à bénéficier dans l'immédiat de leurs investissements

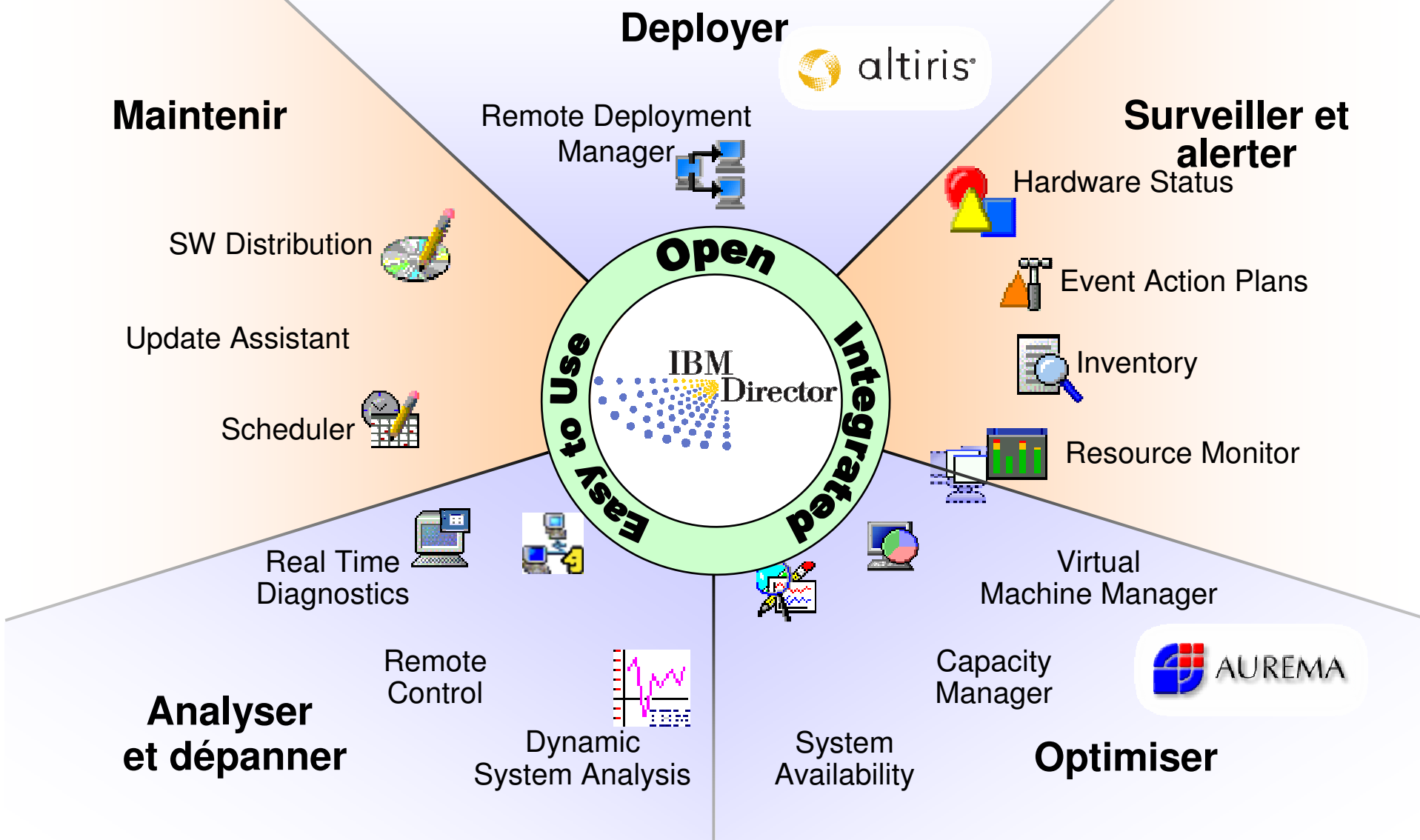
- **IBM Director**
automatically discovers the BladeCenter management module
 - **Creates chassis managed object**
- **BladeCenter Chassis Config Manager**
 - **Set-up security profiles**
 - **Configure network and switch settings**
 - **Configure MM properties**
- Policy-based 'detect and deploy' profiles



- Streamlined, fast setup gets you up and running fast
- Minimizes downtime
- Add capacity quickly
- Save time by reusing profiles

L'Offre produits

La gestion complète complète du matériel



IBM Director, qu'est-ce que c'est?

- Outil global de gestion de système pour les serveurs IBM (x,i,p,z)
- Serveur central pour toutes les questions de management
 - Alertes hardware ou opérationnelles
 - Inventaire matériel et logiciel
 - Configuration, contrôle, prise de main, intervention à distance
 - Mises à niveau (BIOS, firmwares, drivers..)
 - Tableaux de bord
 - Support de fonctions additionnelles (PlugIns)
- Gestion de tous types de serveurs
 - Intel & AMD, 32 & 64 bits
 - xSeries, iSeries, pSeries, partitions zLinux
 - Linux, Windows 2000/2003/XP, AIX, i5/OS, zLinux, VMWare
 - Tous périphériques SNMP
 - Processeurs de management

IBM Director et IBM eServer BladeCenter



- **Fonctions autonomes**
 - Découverte des châssis
 - Données hardware et software collectées automatiquement
 - Plan d'actions
- **Assistant de configuration**
 - Automatise la configuration de tous les paramètres de base d'un BladeCenter
 - Autorise la configuration en masse des châssis et des blades
 - Détecte une insertion dans un slot et déploie automatiquement
- **Prise de main à distance**
- **Remote Deployment Manager (RDM)**
 - Déploiement rapide d'OS, d'image, de firmwares, de BIOS...

*"IBM wins our
Clear Choice*

Award for

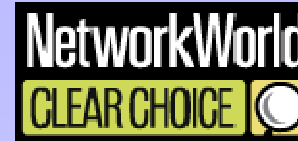
*providing management and
administration that was a cut above the
competition...*

*Director is the greatest strength of the
IBM BladeCenter and was a pleasure to
use. ...*

*IBM's BladeCenter has the most useful
and flexible management application,
IBM Director, for blade system
deployment in areas from large data
centers through to remote branches...*

*Pros: Outstanding management; tightly
integrated at all levels."*

Network World, 8/16/2004



Solutions IBM d'accompagnement logicielles pour IBM BladeCenter & System x™

Management natif via un navigateur Web

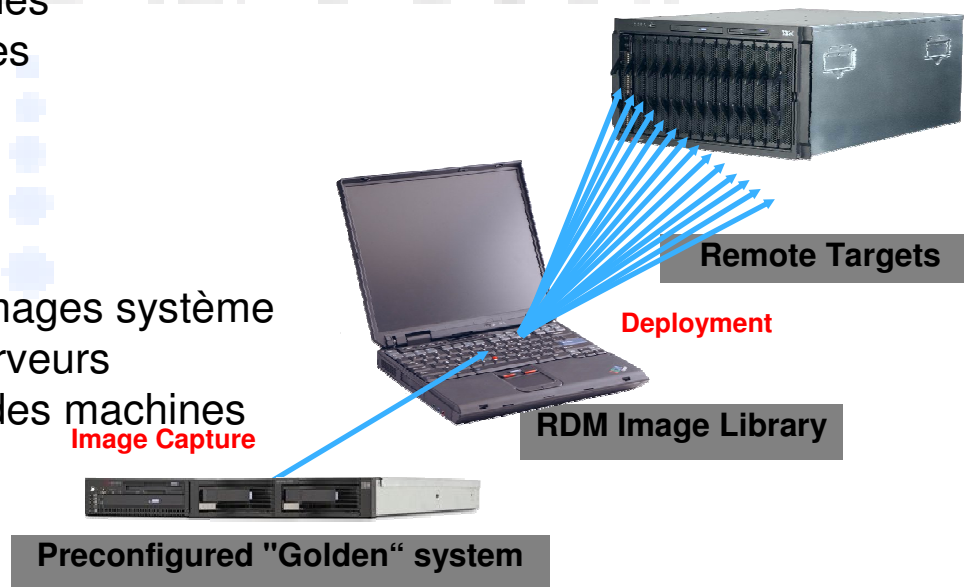
- Contrôle complet via le module de management
- Management du switch Ethernet via le module de management
- Mise à jour de firmware à distance

IBM Director 5.10.3

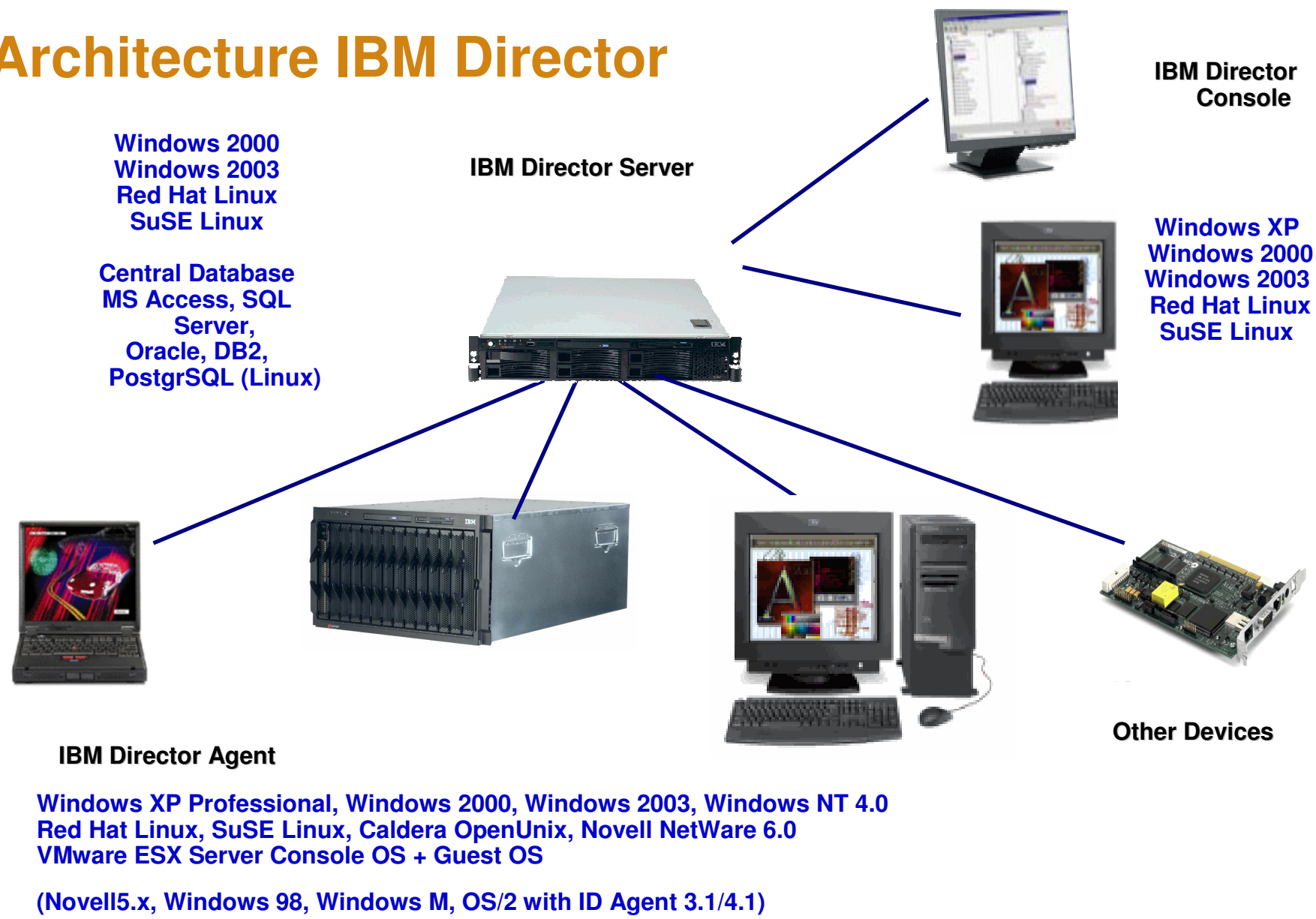
- Fonctionnement autonome, planification
- Management complet via le réseau
- Module d'aide au déploiement des Blades
- Outils de déploiement massif des Blades
- Gestion des plan d'actions

Remote Deployment Manager 4.30

- Outils de déploiement universel
- Installation ou réinitialisation rapide d'images système
- Installation simultanée sur plusieurs serveurs
- Mise à jour automatique des firmware des machines



Architecture IBM Director



Topologie IBM Director

Interface utilisateur

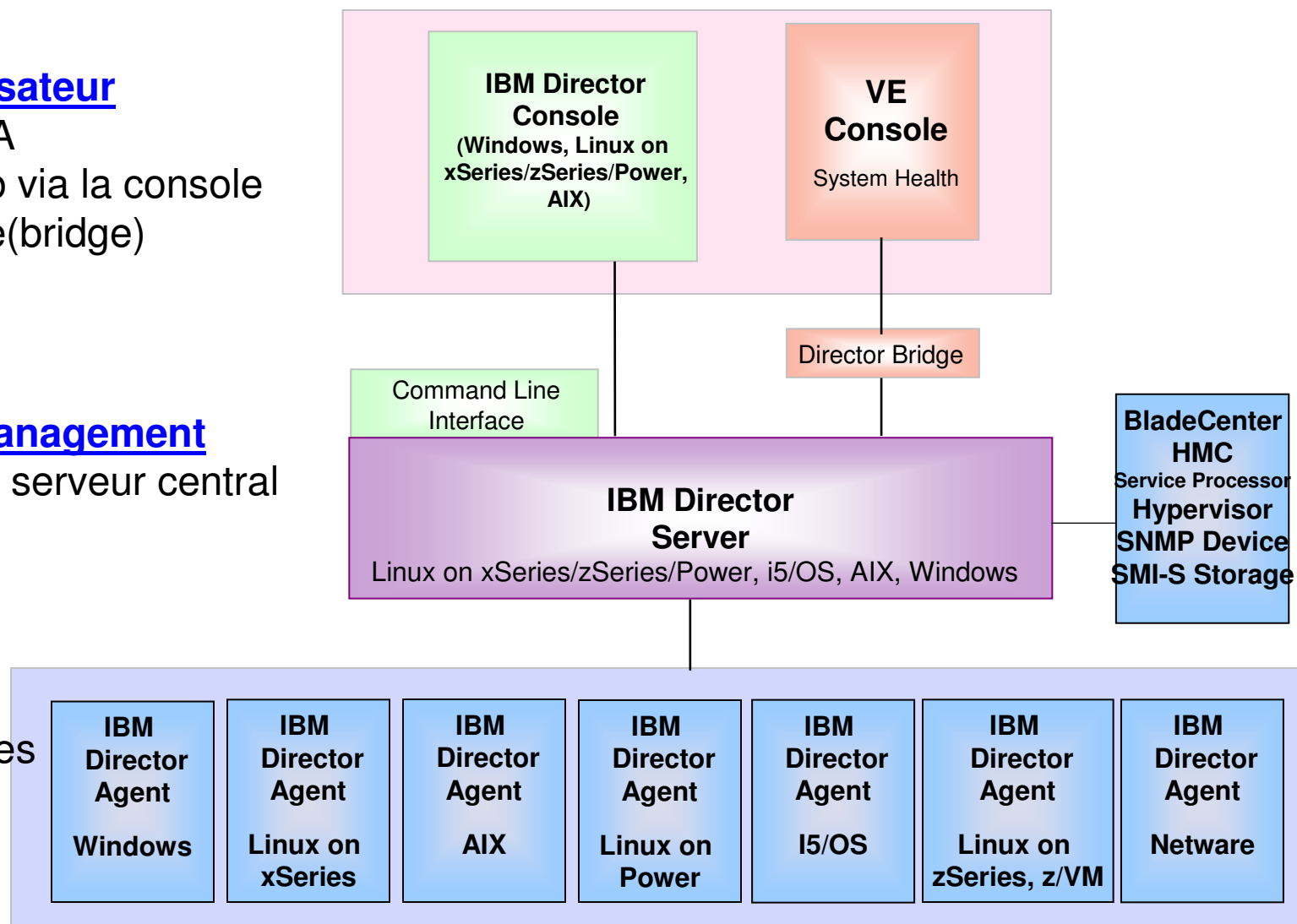
- Console JAVA
- Interface Web via la console Virtual Engine(bridge)

Serveur de management

- Installé sur un serveur central

Agents

- Installés sur les serveurs à gérer



Principales nouveautés

Interface utilisateur 5.1

Usable via single-click

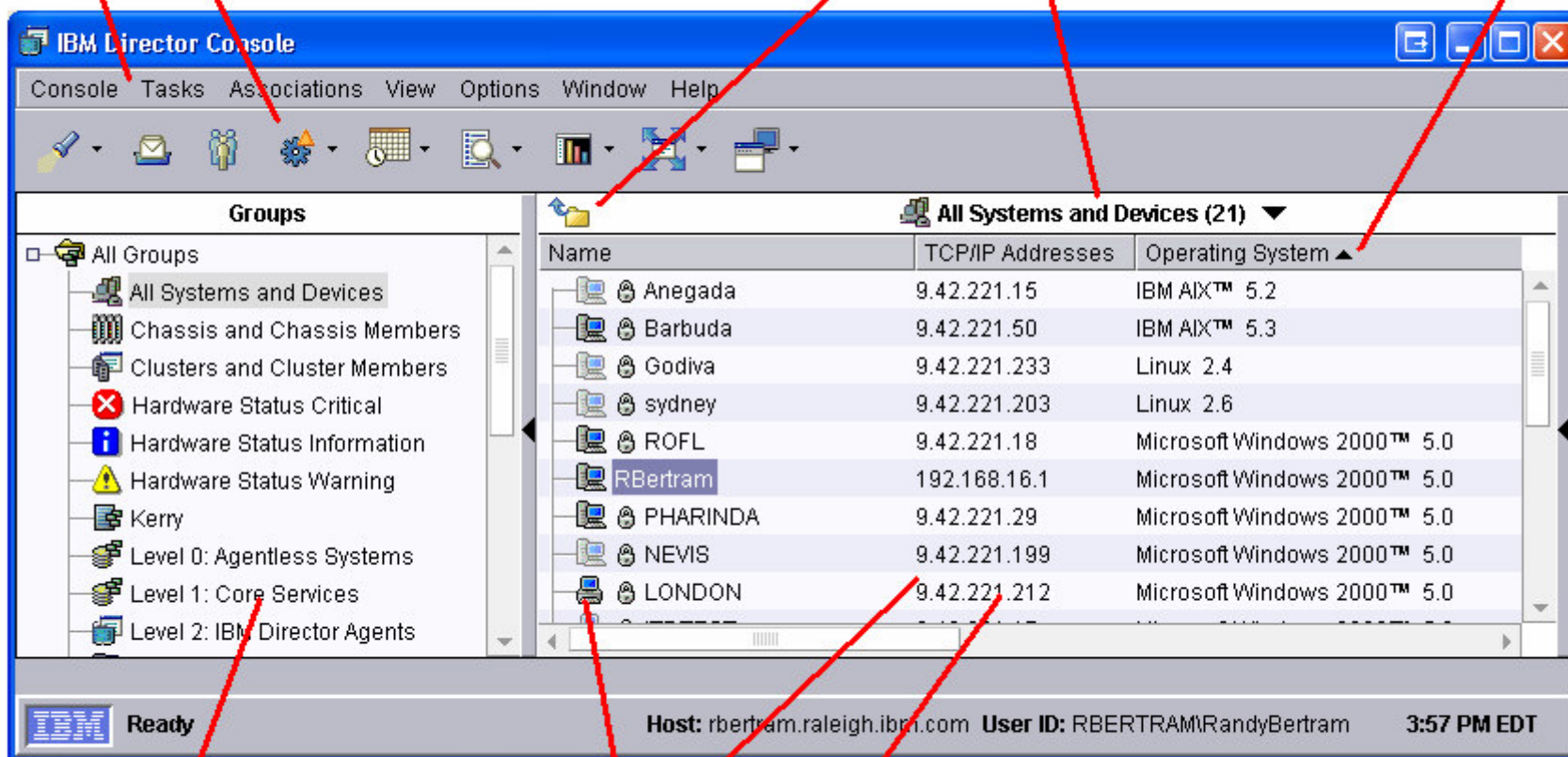
Standard menus include all tasks

Customizable toolbar for common tasks

Up button

Columns can be sorted and reordered

Current location indicator/selector



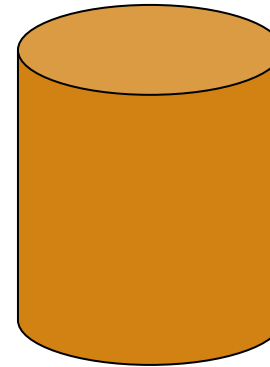
Navigation pane, can be hidden

Customizable columns show details about each object

Right-click menus for objects and container

Choix pour la Database IBM Director 5.1

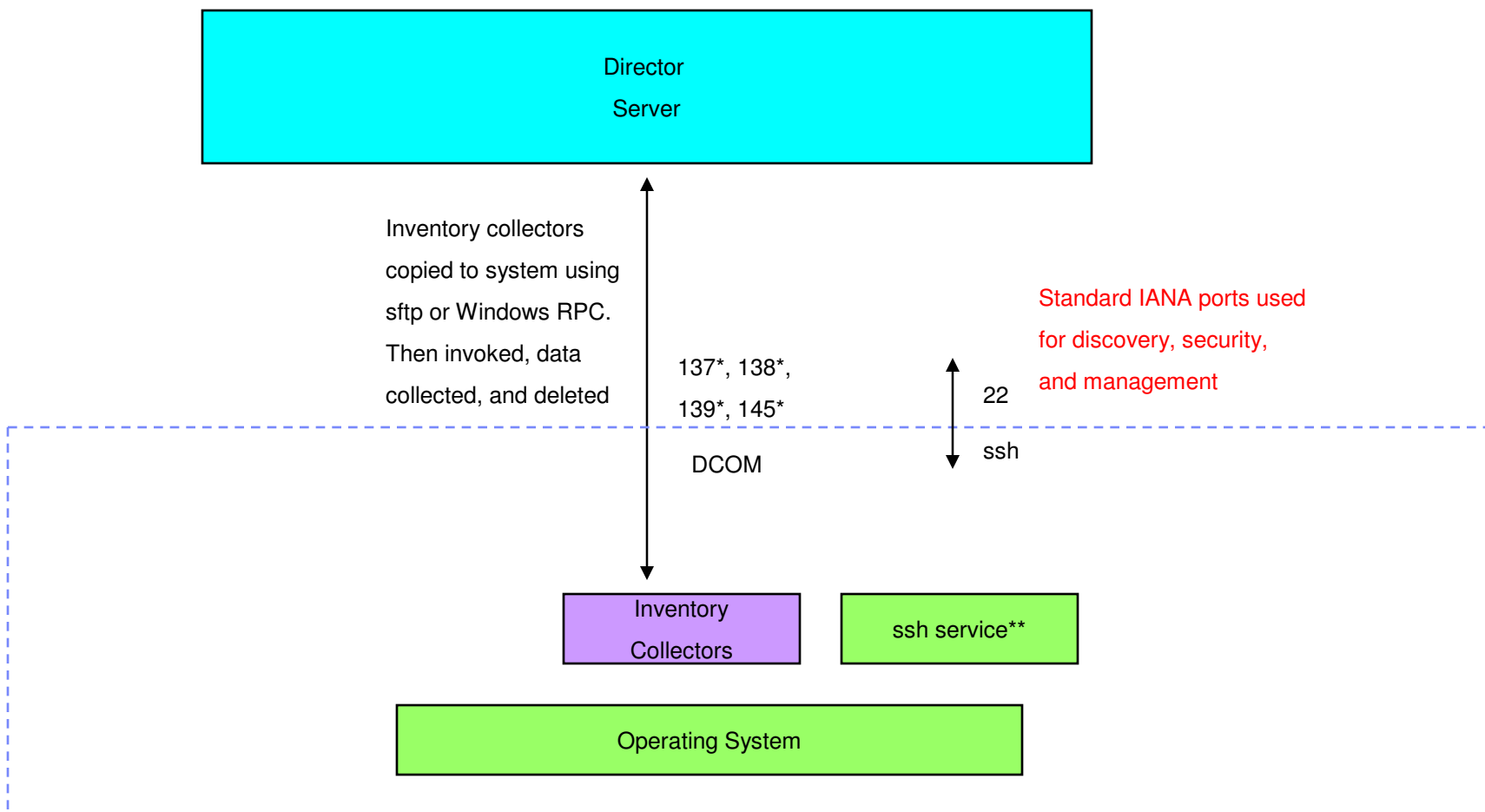
- Apache Derby (database par défaut)
- MS Jet DB (upgrade seulement)
- IBM DB2
- MS SQL Server
- Oracle
- PostgreSQL (linux only)



Trois niveaux d'Agent IBM Director 5.10

IBM Director Feature	Agentless <i>Level 0</i>	Core Services <i>Level 1</i>	IBM Director Agent <i>Level 2</i>
Discovery	↓		
System Attributes			
Power Control			
Remote Session on Linux			
Basic Inventory			
Platform Specific Inventory		↓	
Hardware Status			
Event Action Plans			
Event Log			
Update Assistant			
Upward Integration			
Process Management			↓
Remote Session on Windows			
File Transfer			
ServeRaid Manager			
Software Distribution			
CIM Browser			
SNMP Browser			
Scheduler			

Tier 0 high-level architecture

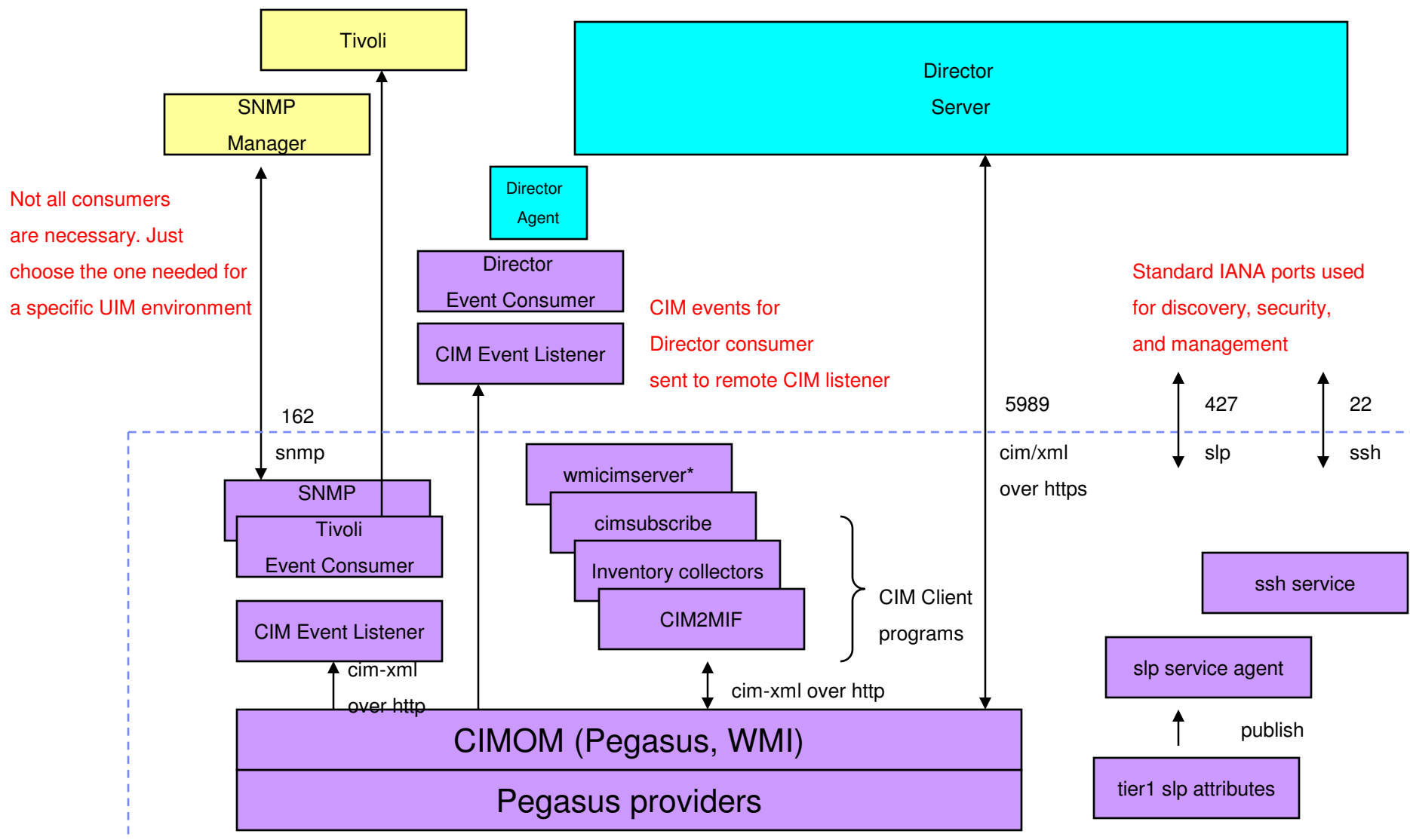


Tier 0 function

- **Discovery**
- **Request Access**
- **Inventory***
- **Remote Session (requires ssh on the target system)**
- **Power Control**
- **Promotion to Tier 1 or 2 through Update Assistant**
- **Event Log**
 - Online/Offline only

*Windows and Linux only

Tier 1 high-level architecture

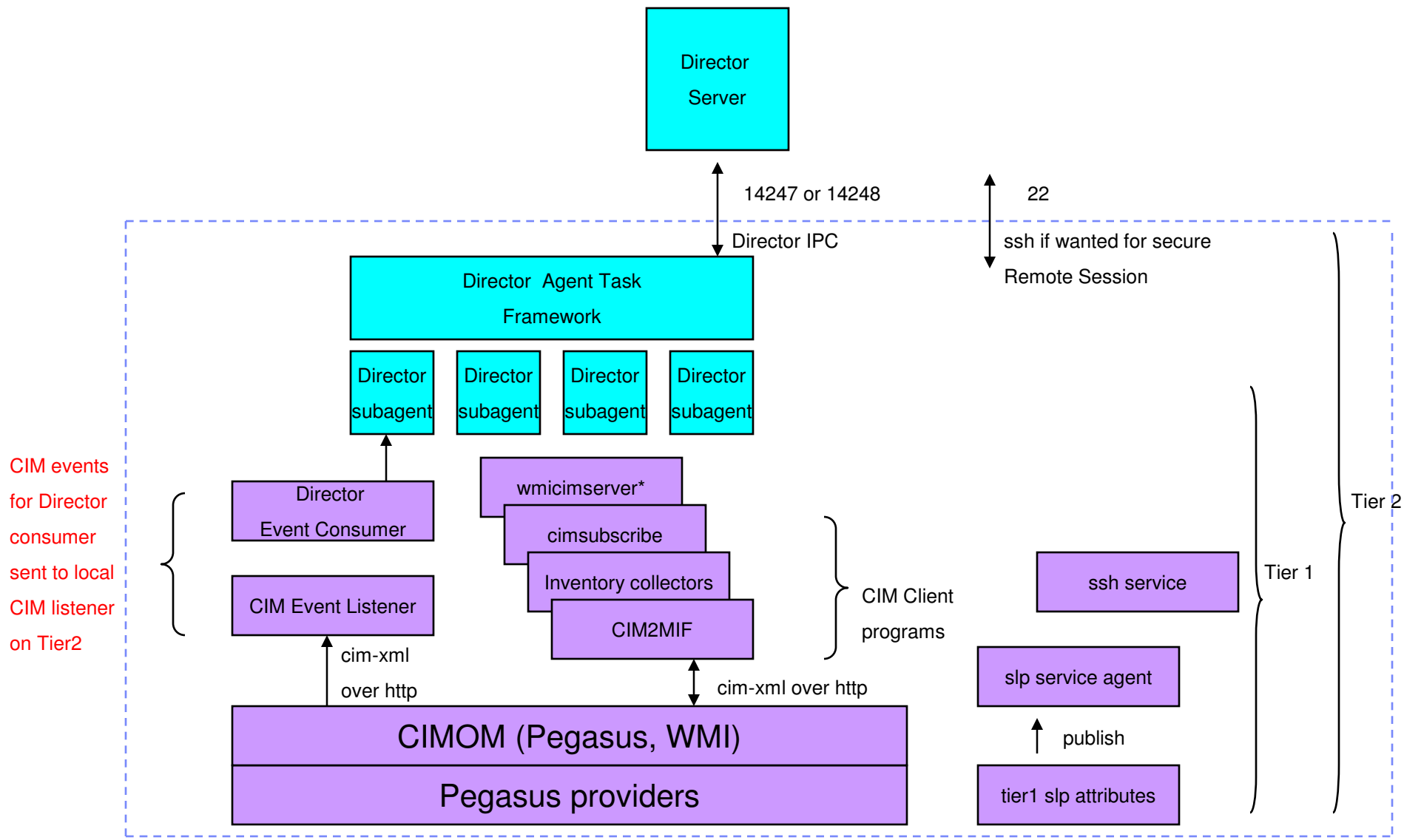


Tier 1 function*

- **All Tier 0 function**
- **Additional inventory data**
- **Promotion to Tier 2 through Update Assistant**
- **Alerts**
- **Hardware Status**
- **Power Control across Windows and Linux**
- **Upward integration support programs**
- **Event subscription CLI (See Jake Kitchener's presentation)**
- **Optional OpenSSH package for Windows**

*Windows and Linux only

Tier 2 high-level architecture



Windows Tier 1 Packages for IA32, x86-64

The screenshot shows the IBM Director Console interface. On the left, a table lists managed objects under 'All Managed Objects : Chassis Membership':

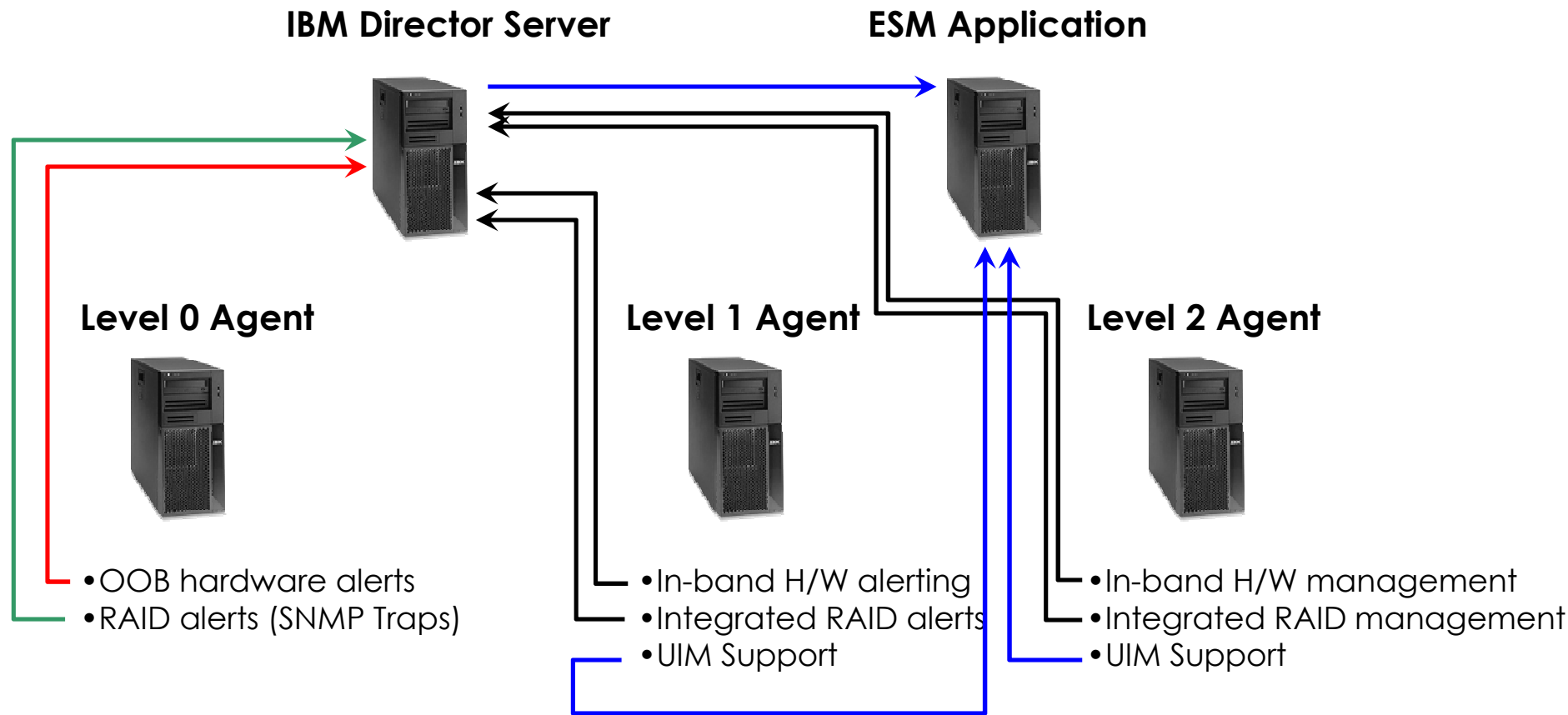
Name	TCP/IP Addresses	TCP/IP
xperts-BC	{ '9.44.146.144' '9.4... }	xperl
directorvmware	9.42.221.203	Direct
maxwell	9.44.143.76	maxw

The main pane displays a tree view of tasks. The 'Software Distribution' folder is expanded, showing the following packages:

- All Software Distribution Packages
 - IBM Director Core Services Install - Windows - IBM Director Core Services for Windows - 5.10
 - IBM Director Core Services 5.10 (Windows / IA32, x86-64)
 - OpenSSH for Windows Install - Windows - IBM Director Core Services for Windows - 5.10
 - OpenSSH for Windows 3.8.1p1-1 (Windows / IA32, x86-64)

The status bar at the bottom indicates 'Ready', 'Host: maxwell User ID: MAXWELL\julie', and '13 objects'.

Alertes matérielles par niveau d'agent IBM Director



Trois niveaux d'agent IBM Director v5.1

– Niveau 0

New!

- « Zero footprint » agent, agentless
- Basé uniquement sur les interfaces standards des OS (SSH,DCOM)
- Fonctionnalités limitées (discovery, system attributes, power control, basic inventory and remote session on Linux)

– Niveau 1

New!

- Agent de base IBM Director « core » (Level 0 plus Event Log, Event Action Plans, hardware status, platform specific inventory, Update Assistant, and Upward Integration)
- Push possible sur niveau 0 !

– Niveau 2

- Agent complet IBM Director
- Similaire aux versions précédentes
- Empreinte mémoire réduite

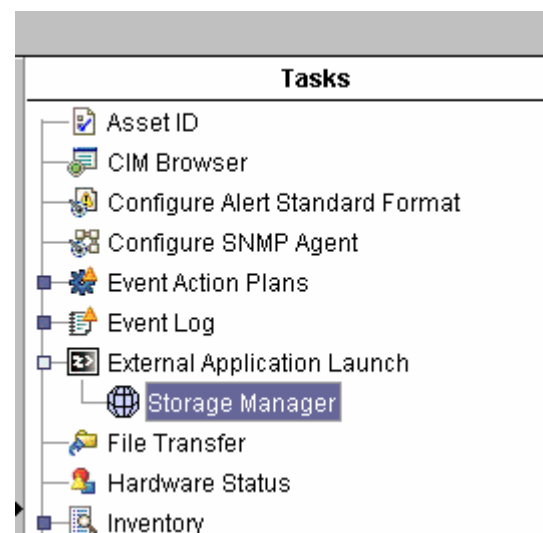
Autres nouveautés de Director 5.1

New!

- Support des « Storage Managed Object » (SMO)
 - Objets stockage répondant à la Storage Management Initiative Specification (SMI-S)
 - DS300 et DS400 en direct
 - DS4000 (FASTt) par l'intermédiaire d'un PC « proxy » avec *Engenio Proxy provider*
 - Add and Discovery
 - Security
 - View attributes
 - Collect and view inventory
 - View events
 - View hardware status
 - FAST Storage Manager Launch

New!

- External Application Launch
 - Ex: DS4000 Storage Manager



Autres nouveautés de Director 5.1

- Vérification de l'état de santé du logiciel
 - Détermine automatiquement les serveurs « out-of-date »
 - Crée un groupe dynamique correspondant
 - Mise à jour du groupe en une seule opération

- Kit de Développement (SDK)
 - Permet de créer des nouvelles tâches ou categories de tâches dans Director

- Wizard du gestionnaire d'alertes
 - Création guidée de plans de gestion d'alertes

- BladeCenter Configuration Manager
 - Création et déploiement de configurations chassis

New!

Autres nouveautés de Director 5.1

- zLinux Virtual Server Deployment
 - Création et déploiement automatisé de zLinux Virtual servers

- Intégration avec Microsoft Operation Manager (MOM)
 - Module gratuit pour l'intégration des informations de management hardware issues de IBM Director

- New!* – Alertes sur changement dans l'inventaire
 - Emission d'alerte si des éléments disparaissent de l'inventaire matériel (vol, pannes etc..)

- Refonte de la partie SNMP
 - Compilateur de MIB simplifié, un fichier par MIB compilée

Changements importants 5.10

- Suppression de l'interface graphique MPA
 - Remplacée par un lancement depuis Director de l'interface Web MPA
 - RSA et Bladecenter MM

- Suppression du Serveraid Manager de Director Base
 - Le plugin Serveraid à désormais sa propre installation
 - Disponible gratuitement sur le web

- Suppression du ServerPlus Pack
 - Capacity Manager reste un plugin payant

IBM Director Server Plus Pack Transition

Server Plus Pack Tool	Changes for IBM Director 5.10
Capacity Manager	Sold separately for \$99US per server
System Availability	No charge download from Web
Rack Manager	Included in base IBM Director 5.10 CD
Software Rejuvenation	No longer available
Active PCI Manager	No longer available

IBM Director 5.10 : les extensions

1. Remote deployment Manager (payant)
2. Software Distribution Premium Edition (payant)
3. Application Workload Manager (payant)
4. Virtual Machine Manager
5. Serveraid Manager
6. Cluster System Manager
7. Realtime diagnostics
8. Dynamic System Analysis
9. Tape drive management assistant
10. Electronic Service Agent



Les Upward Integration Modules

IBM Director 5.10 Upward Integration

■ Tivoli Enterprise

- Framework 3.7.1 and 4.1.1
- TEC 3.8 and 3.9
- Distributed Monitoring 5.1.1
- Configuration Manager 4.2.x
- Software Distribution 4.0
- Inventory 4.0



**Developés par IBM
Téléchargement gratuit
sur le Web IBM**

■ Tivoli NetView for Windows 7.1.x, for Linux 7.1.x

■ CA Unicenter TNG 2.4, NSM 3.0, 3.1

■ HP OpenView 6.4 (Windows only)


■ HP OpenView 7.01 (Windows and Linux)

■ Microsoft SMS 2.0, SP4 and SP5 and SMS 2003

■ Microsoft MOM 2005

IBM Director 5.10 Upward Integration

- **NetIQ**
 - NetIQ AppManager
 - XMP for Server Hardware for MOM
- **Sentry Software**
 - BMC Patrol
- **No longer supported in 5.10**
 - Tivoli Enterprise
 - TEC 3.7.1
 - Distributed Monitoring 3.7
 - Tivoli NetView 6.0.2
 - HP OpenView 6.3



**Developpés par des tiers
Fee based**

Les interfaces

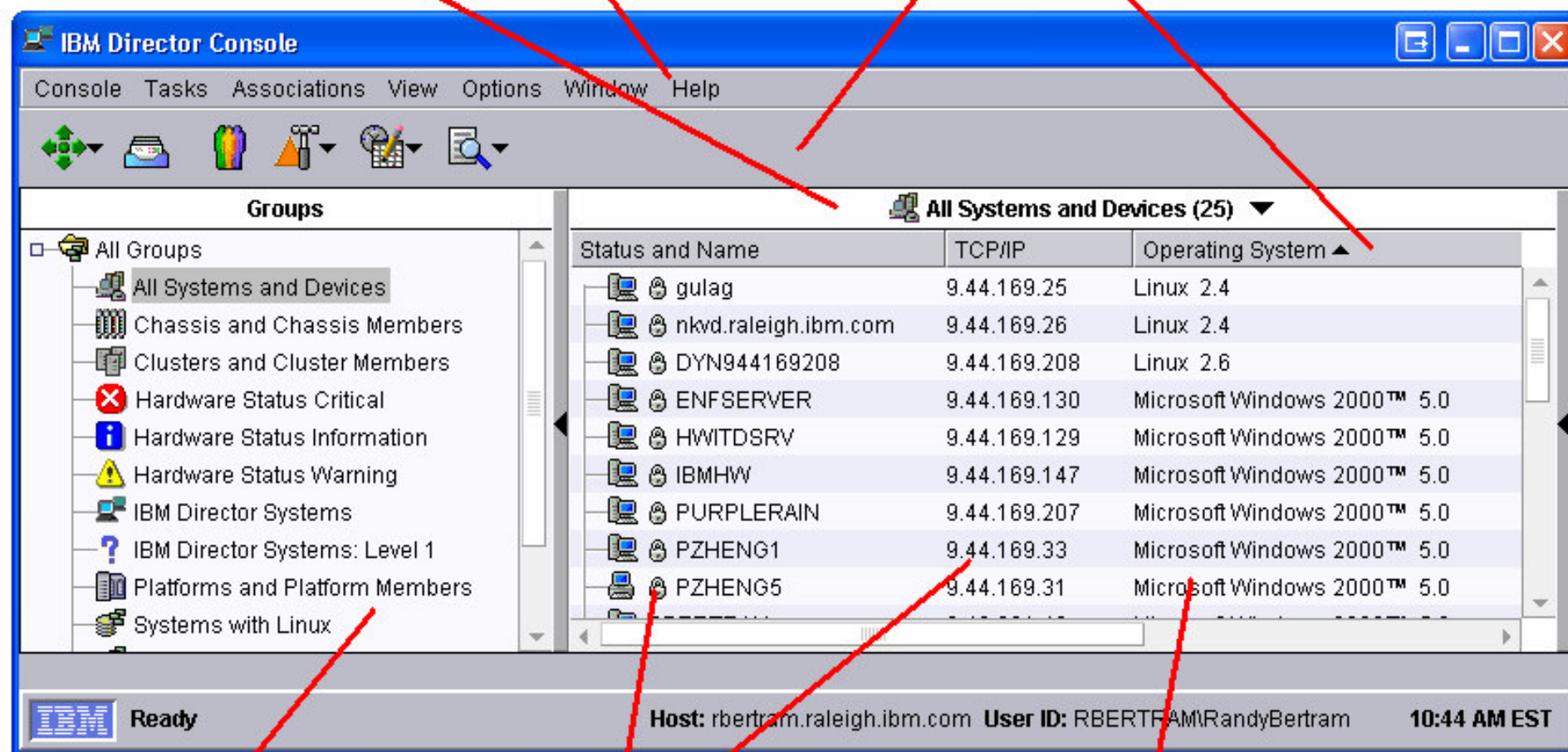
Nouvelle interface utilisateur Director 5.10

Standard menus include all tasks

Customizable toolbar for common tasks

Current location indicator/selector

Columns can be sorted and reordered



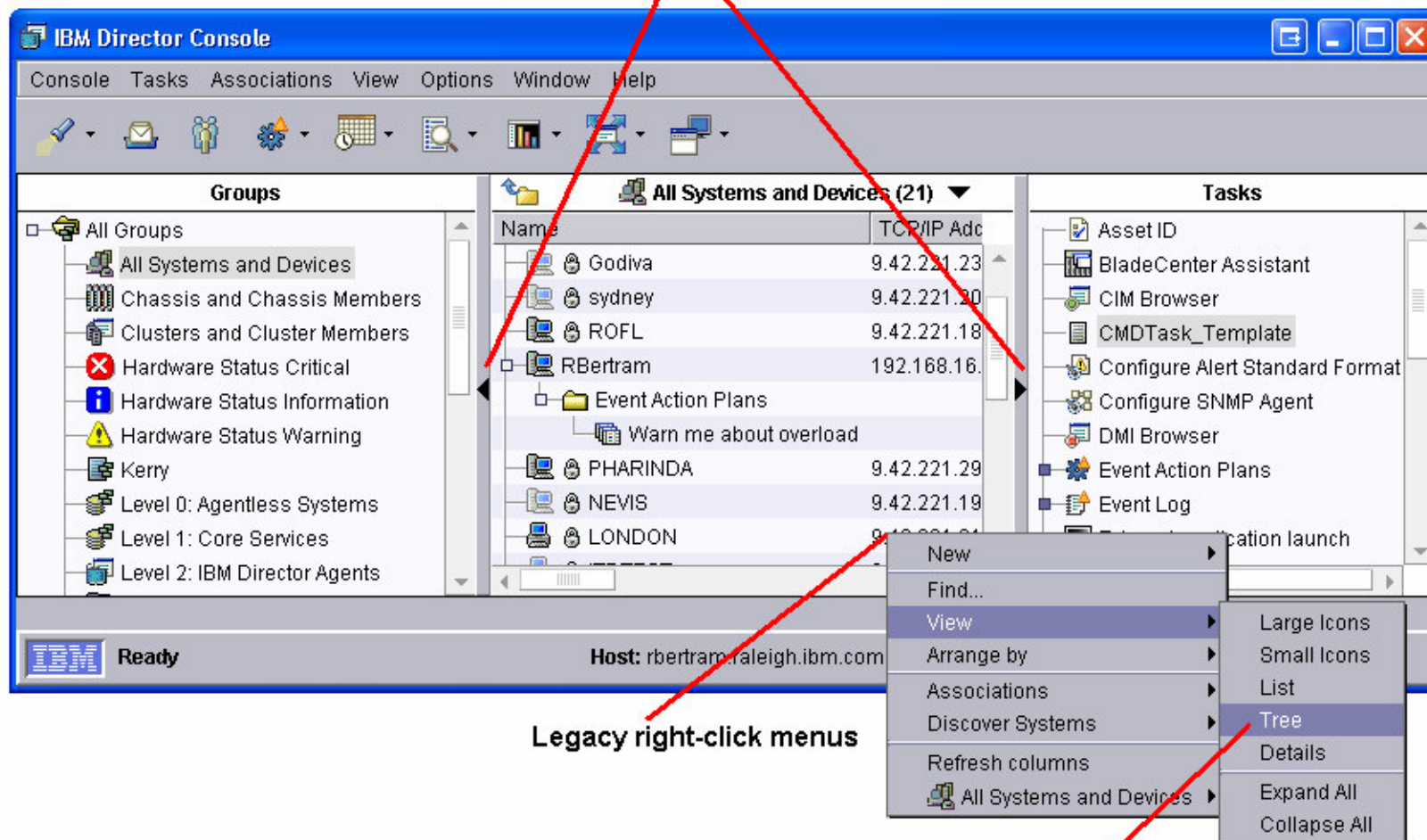
Navigation pane, can be hidden

Customizable columns show details about each object

Right-click menus for objects and container

Choix de la vue classique

One-touch access to legacy panes
(Drag-and-drop still available)



Legacy right-click menus

Legacy views

Vérification de la santé logicielle du système

- Import de package de MAJ (Agents for VE, xSeries/BladeCenter Firmware & Device Driver)
- Click droit sur le package pour la création des groupes dynamiques de tous les systèmes nécessitant la mise à jour
- Pousser la mise à jour à un nouveau groupe ou à des systèmes individuels en utilisant Software Distribution

The screenshot shows the IBM Director interface. A table lists software distribution packages. A context menu is open over the package 'IBM Director Agent 5.10 (Windows / IA32, x86-64)'. The menu options include 'Distribute package to ...', 'Edit', 'View Package Summary', 'Rename', 'Delete', 'Create Package for Delayed Delivery', 'View Distribution History', 'Secure Package', 'Perform Health Check', and 'View Health Check Report'. The 'Perform Health Check' option is highlighted. A blue arrow points from this menu to a 'Software Health Check Log' window.

The 'Software Health Check Log' window displays the following information:

```

Current Health Report - IBM Director Agent 5.10 (Windows / IA32, x86-64)

IBM Director Agent 5.10 (Windows / IA32, x86-64)
Health Check last run at Saturday, July 30, 2005 3:39:42 PM EDT.

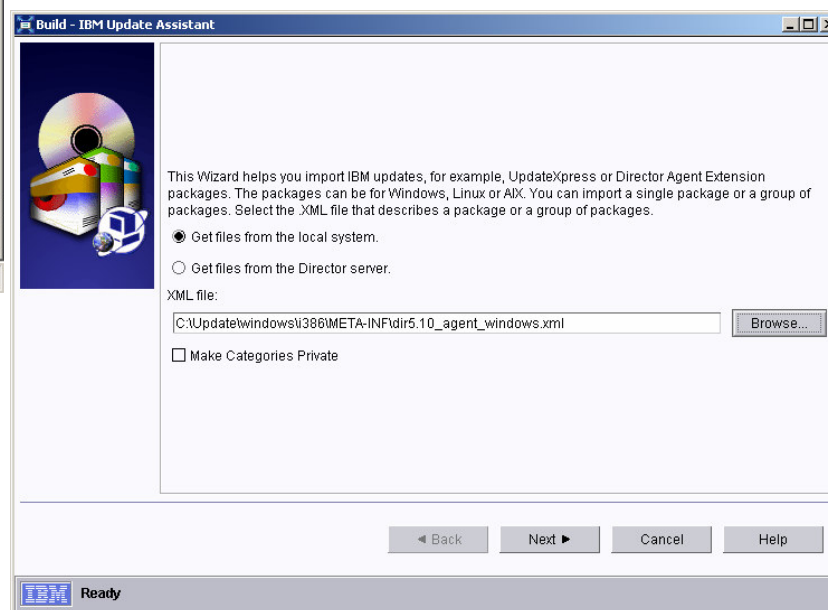
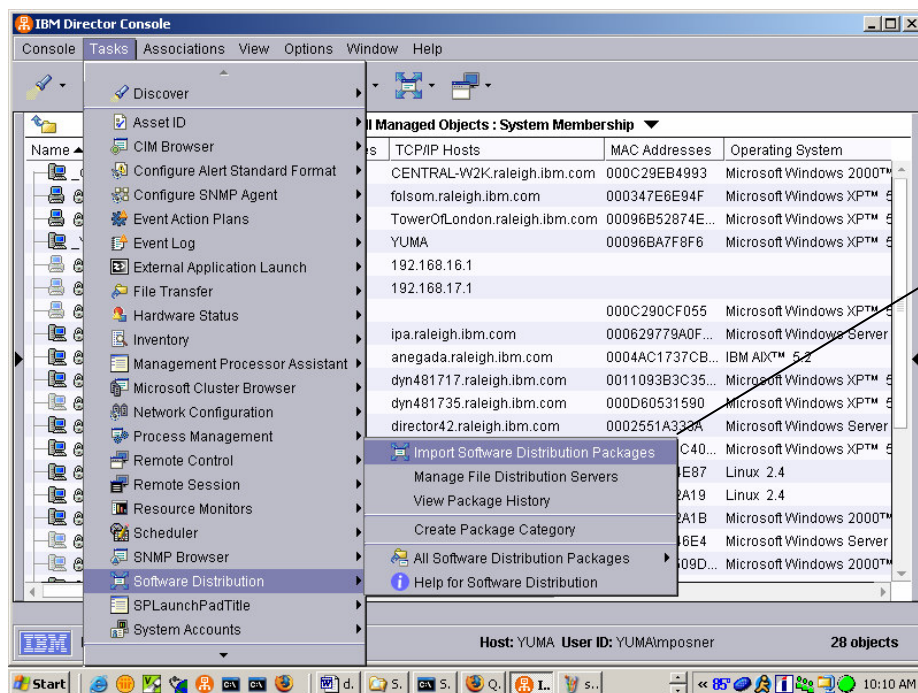
IBM Director Agent (Windows)
Version = 5.10

No endpoints are out-of-date for this package.
  
```

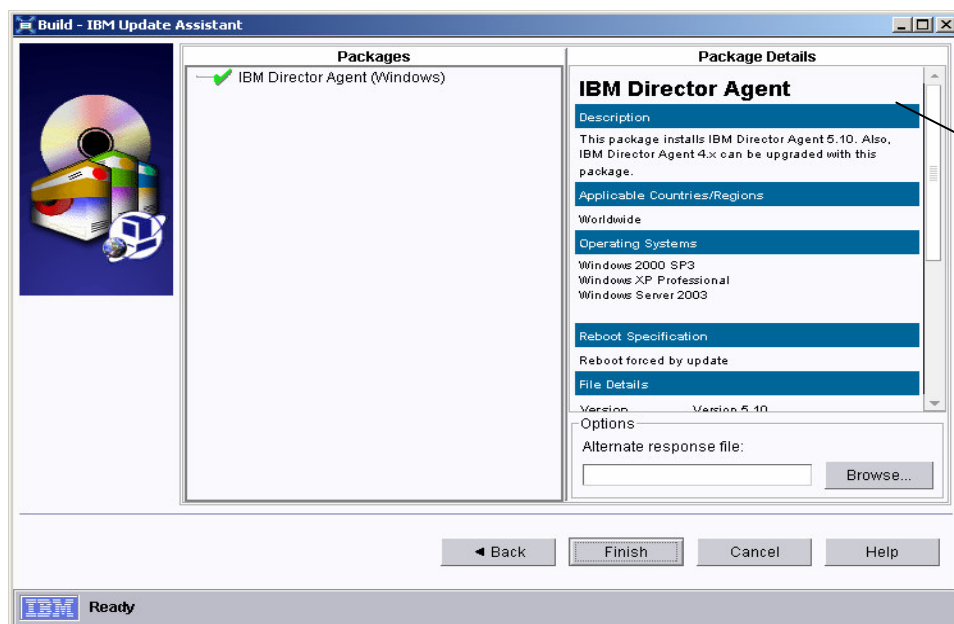
La gestion de la mise à jour des systèmes : System Software Updates

1

Import updates from UpdateXpress CD or Content Server

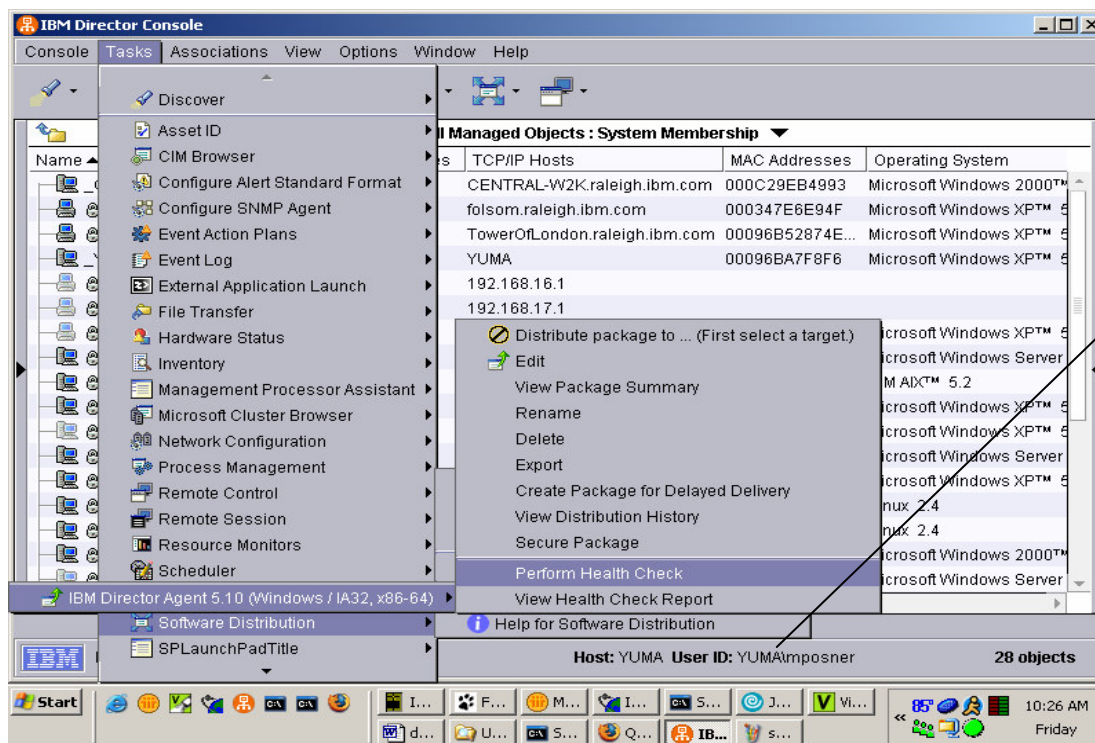


La gestion de la mise à jour des systèmes : System Software Updates

**2**

View detailed information and severity level of the selected update package

La gestion de la mise à jour des systèmes : System Software Updates



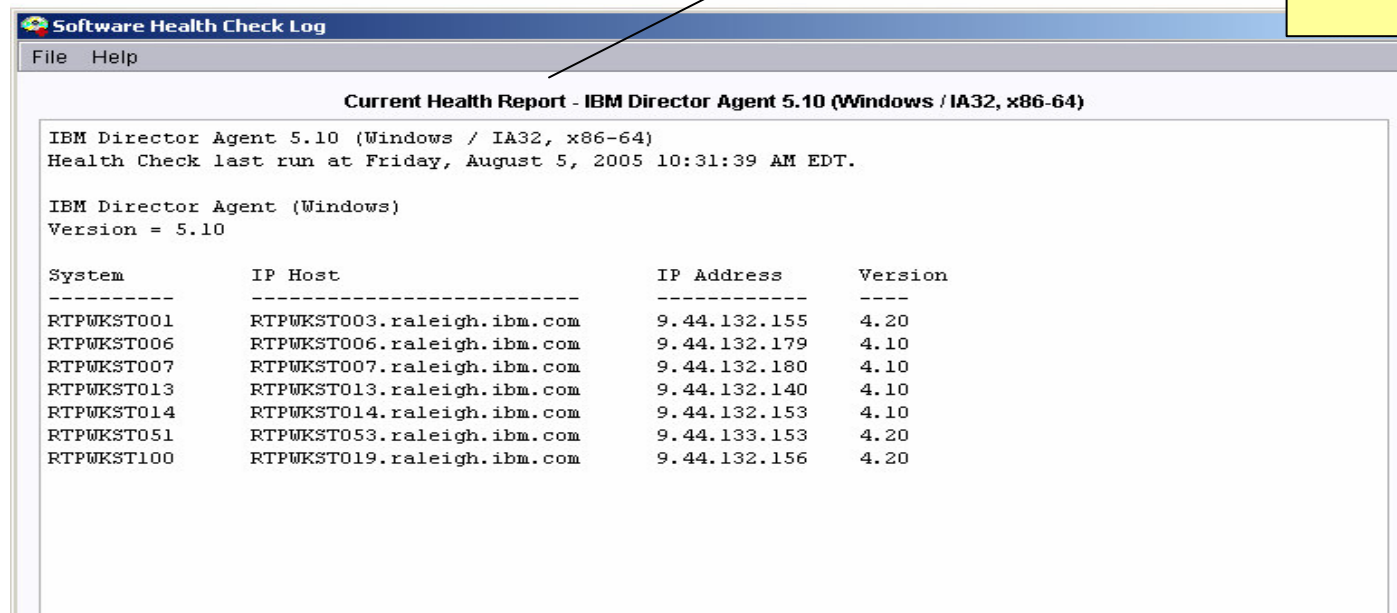
3

Right click on update to perform software health check

La gestion de la mise à jour des systèmes : System Software Updates

4

IBM Director automatically creates 'Health Report' listing systems in need of the selected update



```
Software Health Check Log
File Help

Current Health Report - IBM Director Agent 5.10 (Windows / IA32, x86-64)

IBM Director Agent 5.10 (Windows / IA32, x86-64)
Health Check last run at Friday, August 5, 2005 10:31:39 AM EDT.

IBM Director Agent (Windows)
Version = 5.10

System          IP Host          IP Address      Version
-----
RTPWKST001     RTPWKST003.raleigh.ibm.com  9.44.132.155   4.20
RTPWKST006     RTPWKST006.raleigh.ibm.com  9.44.132.179   4.10
RTPWKST007     RTPWKST007.raleigh.ibm.com  9.44.132.180   4.10
RTPWKST013     RTPWKST013.raleigh.ibm.com  9.44.132.140   4.10
RTPWKST014     RTPWKST014.raleigh.ibm.com  9.44.132.153   4.10
RTPWKST051     RTPWKST053.raleigh.ibm.com  9.44.133.153   4.20
RTPWKST100     RTPWKST019.raleigh.ibm.com  9.44.132.156   4.20
```

La gestion de la mise à jour des systèmes : System Software Updates

IBM Director automatically creates a dynamic group of all systems in need of the selected update

5

The screenshot shows the IBM Director Console interface. On the left, a tree view shows various system groups. The main pane displays 'Health: IBM Director Agent 5.10 (Windows / IA32, x86-64)'. A table lists the following systems:

Name	TCP/IP Addresses	TCP/IP Hosts	MAC Address
RTPWK:ST001	9.44.132.155	RTPWK:ST003.raleigh.ibm.com	00609489F4C
RTPWK:ST006	9.44.132.179	RTPWK:ST006.raleigh.ibm.com	00096BE467B
RTPWK:ST007	9.44.132.180	RTPWK:ST007.raleigh.ibm.com	00096BB6AA0
RTPWK:ST013	9.44.132.140	RTPWK:ST013.raleigh.ibm.com	00096BB666C
RTPWK:ST014	9.44.132.153	RTPWK:ST014.raleigh.ibm.com	0002B3AC3AE
RTPWK:ST051	9.44.133.153	RTPWK:ST053.raleigh.ibm.com	000D60EDEC
RTPWK:ST100	9.44.132.156	RTPWK:ST020.raleigh.ibm.com	00025557F9B

La gestion de la mise à jour des systèmes : System Software Updates

The screenshot shows the IBM Director Console interface. On the left is a navigation tree with categories like Discover, Asset ID, CIM Browser, etc. The main pane displays a table of agents under the heading 'IBM Director Agent 5.10 (Windows / IA32, x86-64)'. A context menu is open over the table, with 'Distribute package to RTPWKST001' selected.

Name	TCP/IP Addresses	TCP/IP Hosts	MAC Address
	9.44.132.155	RTPWKST003.raleigh.ibm.com	00609489F4C
	9.44.132.179	RTPWKST006.raleigh.ibm.com	00096BE467B
	9.44.132.180	RTPWKST007.raleigh.ibm.com	00096BB6AA0
	9.44.132.140	RTPWKST013.raleigh.ibm.com	00096BB666C
	9.44.132.153	RTPWKST014.raleigh.ibm.com	0002B3AC3AE
	9.44.133.153	RTPWKST053.raleigh.ibm.com	000D60EDEC
		20.raleigh.ibm.com	00025557F9B

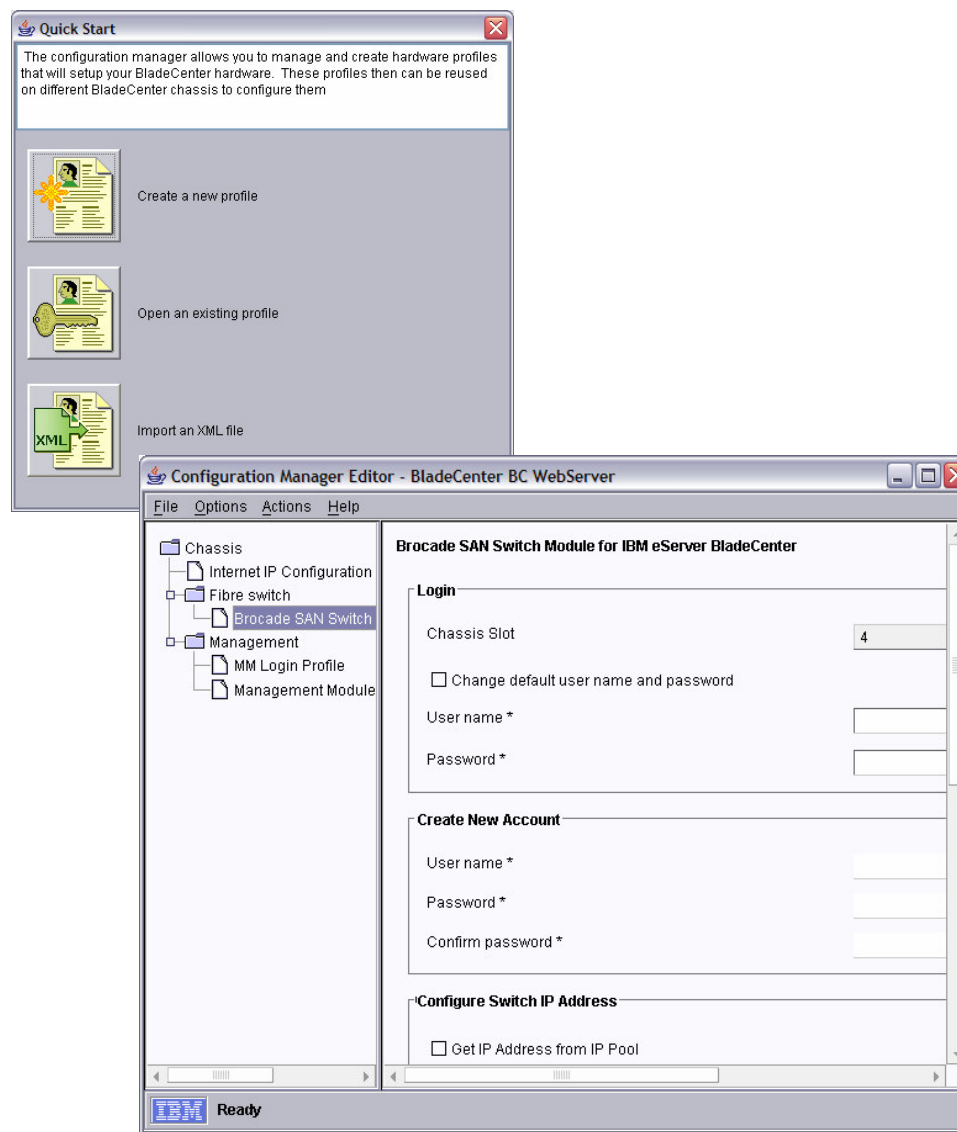
Distribute update immediately or schedule for a later time

6

The 'New Scheduled Job' dialog box is shown. It prompts the user to enter a name for the job and select a date and time for execution. The 'Scheduled Job' field contains 'Upgrade Director Agents'. The 'Date' is set to 8/7/2005 and the 'Time' is 10:57 AM. Below these fields, it shows the 'Server Date' as Friday, August 5, 2005 10:52 AM, with a note that the server date is already converted to console time zone. Buttons for 'OK', 'Advanced', 'Cancel', and 'Help' are at the bottom.

BladeCenter Chassis Configuration Manager

- Provides integration point for BladeCenter subsystem configurations
- Create configurations for chassis component devices
- Read configurations for chassis component devices
- Broadcast configurations to multiple chassis
- Modify single configuration without affecting others
- Detect and apply configurations to chassis and chassis components



La gestion des châssis IBM eServer BladeCenter

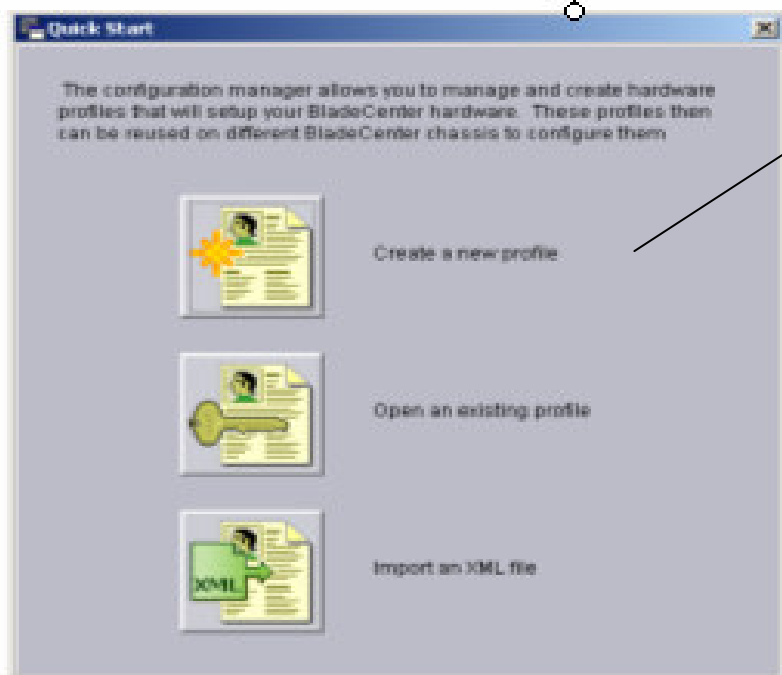
The screenshot displays the IBM Director Console interface. The main window is titled "All Managed Objects : Chassis Membership" and contains a table with the following data:

Name	TCP/IP Addresses	TCP/IP Hosts
J8X	{ '172.16.13.80' '17...	{ 'nfdj80.netfinity.com' 'nfdj99.n
FCSM4Gb	172.16.13.97	nfdj97.netfinity.com
IBM 883931Z %SERVE...		
IBM 885001Z %SERVE...		
IBM BladeCenter	172.16.13.98	nfdj98.netfinity.com
nfdj95.netfinity.com	172.16.13.95	nfdj95.netfinity.com
nfdj96.netfinity.com	172.16.13.96	nfdj96.netfinity.com
Chassis Rack 1		
J30	172.16.13.30	nfdj30.netfinity.com

The "Tasks" pane on the right lists various management tasks. The "BladeCenter Management" task is highlighted with a red box. A yellow callout box with the number "1" points to this task, with the text "BladeCenter Management Task".

At the bottom of the console, the status bar shows "Ready", "Host: nfdj30", "User ID: NFDJ30\Generic", and "9 objects".

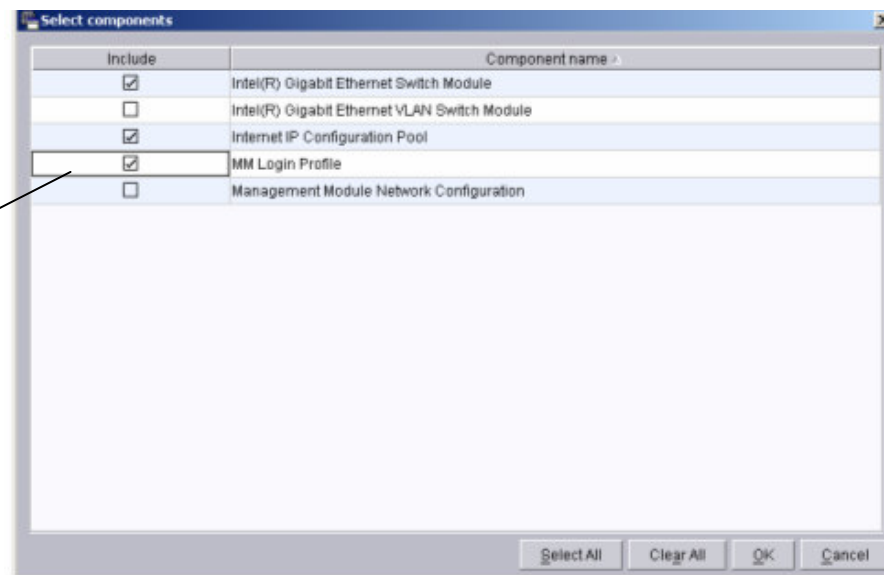
La gestion des châssis IBM eServer BladeCenter



2
Create new profile for your BladeCenter hardware

3

Select the components to add to the BladeCenter profile



La gestion des châssis IBM eServer BladeCenter

4

Enter the configuration for the selected component

The screenshot shows the Configuration Manager Editor window for an Intel(R) Gigabit Ethernet Switch Module. The left pane displays a tree view with the following structure:

- Chassis
 - Internet IP Configuration
 - Ethernet switch
 - Intel(R) Gigabit Ethernet (selected)
 - Management

The main pane displays the configuration options for the selected component:

Intel(R) Gigabit Ethernet Switch Module for IBM eServer(R) BladeCenter™ T

Login

Chassis Slot: 2

Change default user name and password

User name *
Password *

Create New Account

User name * ibm_user
Password * ****
Confirm password * ****

Configure Switch IP Address

Get IP Address from IP Pool

IBM Ready

La gestion des châssis IBM eServer BladeCenter

5

The new profile is listed in the task list under BladeCenter Management and can be automatically applied to a new BladeCenter system

The screenshot shows the IBM Director Console interface. The main window displays a table of managed objects under the heading 'All Managed Objects : Chassis Membership'. The table has columns for Name, TCP/IP Addresses, TCP/IP Hosts, and MAC Address. Below the table, a tree view shows the hierarchy of objects, including 'Chassis Rack 1' and several server blades. On the right side, a 'Tasks' panel is visible, listing various management tasks. A task named 'Test Lab 1' is highlighted in blue, and an arrow points from this task to the yellow text box on the right.

Name	TCP/IP Addresses	TCP/IP Hosts	MAC Address
J8X	{ '172.16.13.80' '17...	{ 'nfdj80.netfinity.com' 'nfdj99.net...	
FCSM4Gb	172.16.13.97	nfdj97.netfinity.com	00C0DD
IBM 883931Z %SERVE...			000347:
IBM 885001Z %SERVE...			001125:
IBM BladeCenter	172.16.13.98	nfdj98.netfinity.com	
nfdj95.netfinity.com	172.16.13.95	nfdj95.netfinity.com	000E0C
nfdj96.netfinity.com	172.16.13.96	nfdj96.netfinity.com	000E0C
Chassis Rack 1			
J30	172.16.13.30	nfdj30.netfinity.com	000629:
NFDJ26	172.16.13.26	nfdj26.netfinity.com	0004AC

The 'Tasks' list includes the following items:

- Asset ID
- BladeCenter Management
 - BladeCenter Configuration
 - GIURE
 - hgj
 - Test Lab 1**
 - Network Device Manager
 - SANsurfer Switch Manager
 - Topspin Element Manager
- CIM Browser
- Configure Alert Standard Forma
- Configure SNMP Agent
- Event Action Plans
- Event Log
- External Application Launch
- File Transfer
- Hardware Status
- Inventory
- Management Processor Assista

Event Action Plan Wizard

- Simplification de la procédure de création d'un plan d'action sur événement et application à un groupe de systèmes ou à un système
- Intégration de la surveillance des seuils (exemple utilisation CPU)
- Utilisé pour la création et la modification ultérieure des plans d'action sur événements

Event Action Plan Wizard

Name
 Systems
Event Filters
Actions
Time Range
Summary

Event Filters

An event is a message from a process or device that something has changed. An event filter is a set of possible changes that identify the event. Choose the event filters that you would like to add to your event-action plan.

- Hardware Predictive Failure Analysis events
- Environmental sensor events
- Storage events
- Security events
- IBM Director Agent offline
- CPU Utilization

CPU utilization events are sent when a user-defined threshold has been met or exceeded. For example, a group of processes that were not stopped by a parent process correctly, either in error or because of a virus, might cause long-term, increased CPU utilization. When you choose this event filter, the wizard creates a resource monitor to track CPU utilization in one or more selected systems.

Note: The wizard cannot apply a resource monitor to groups or locked systems. The CPU utilization event filter will not filter events on these systems. You can create and apply a resource monitor using the Resource Monitor task in IBM Director Console. You must request access to the locked systems before you apply the resource monitor. After you apply the resource monitor to these groups or

CPU utilization threshold %

Ready

Event Action Plan Wizard

Event Action Plan Wizard

Name

IBM Director receives events from your network of servers, computers, and devices. Then, IBM Director performs actions in response to received events. Using this wizard, you can combine event filters and event actions to create an event-action plan. A filter identifies the event and actions determine the response to that event.
Note: You also can create and edit event-action plans with the Event Action Plan Builder.

Type a name for the event-action plan:

1

Enter a name for the action plan you would like to create

Event Action Plan Wizard

2

Choose the systems you want to apply the event action plan to

Event Action Plan Wizard

Name

Systems

Event Filters

Actions

Time Range

Summary

Systems

Choose the systems that you want to apply the event-action plan. You do not have to apply the event-action plan to any system now. You can apply the event-action plan to systems later in IBM Director Console.

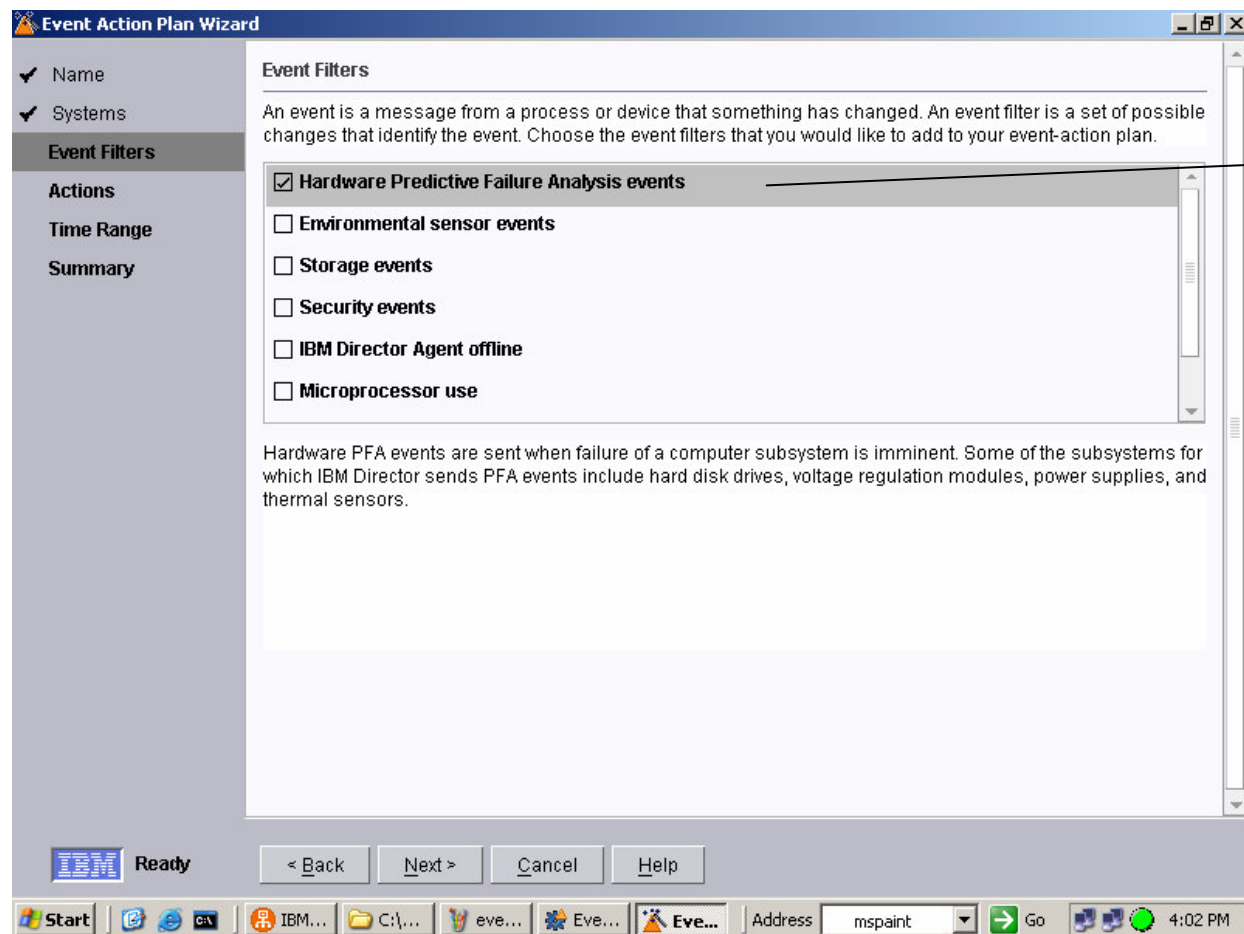
All Managed Objects	Selected
192.168.70.128	DIR4202
192.168.70.129	
AS - BIT 1 - VMM	
DIR4202	
DIRECTOR	
DNS & DHCP	
eServer	
IBM 86771XX 78C7872	
IBM 867821X %SERVER_SERIAL_NUMBER	
IBM 867821X %SERVER_SERIAL_NUMBER	
IBM 867821X %SERVER_SERIAL_NUMBER	
IBM 867821X %SERVER_SERIAL_NUMBER	
IBM 867821X %SERVER_SERIAL_NUMBER	
IBM 867821X %SERVER_SERIAL_NUMBER	
IBM 867841X %SERVER_SERIAL_NUMBER	
IBM 867841X %SERVER_SERIAL_NUMBER	

Add Remove

Ready < Back Next > Cancel Help

Start IBM... C:\... eve... Eve... Eve... Address mspaint Go 4:01 PM

Event Action Plan Wizard



3

Choose the events that you wish to take automated action on

Event Action Plan Wizard

4

Choose the actions you want to take in response to the event

Event Action Plan Wizard

Event Action Plan Wizard

✓ Name
✓ Systems
✓ Event Filters
✓ Actions
Time Range
Summary

Time Range

Choose the time range in which to collect the events.

All day
 Custom

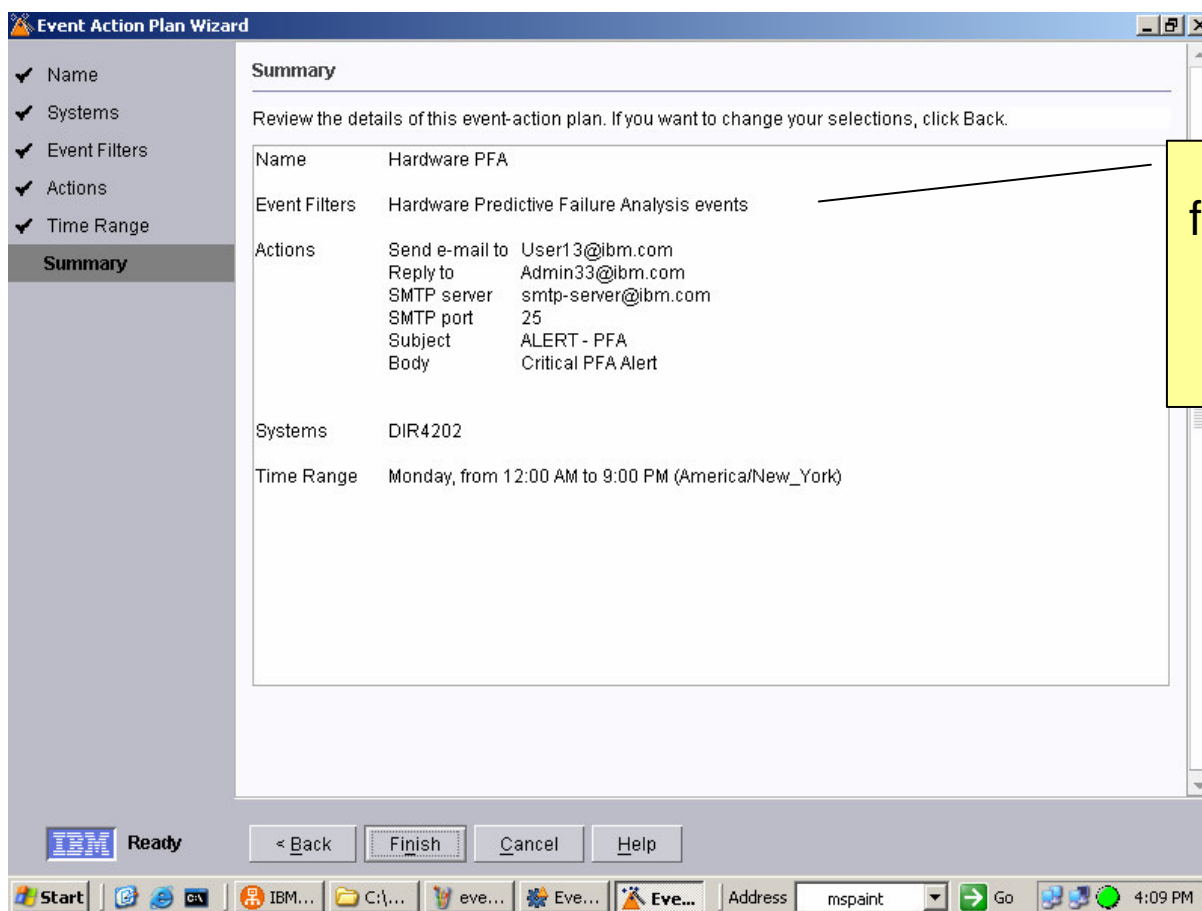
Day	Start time	End time
<input checked="" type="checkbox"/> Monday	12:00 AM	12:00 AM
<input type="checkbox"/> Tuesday	12:00 AM	8:00 PM
<input type="checkbox"/> Wednesday	12:00 AM	8:15 PM
<input type="checkbox"/> Thursday	12:00 AM	8:30 PM
<input type="checkbox"/> Friday	12:00 AM	8:45 PM
<input type="checkbox"/> Saturday	12:00 AM	9:00 PM
<input type="checkbox"/> Sunday	12:00 AM	9:15 PM
		9:30 PM
		9:45 PM
		12:00 AM

< Back Next > Cancel Help

5

Choose the days and times you want to collect the events

Event Action Plan Wizard

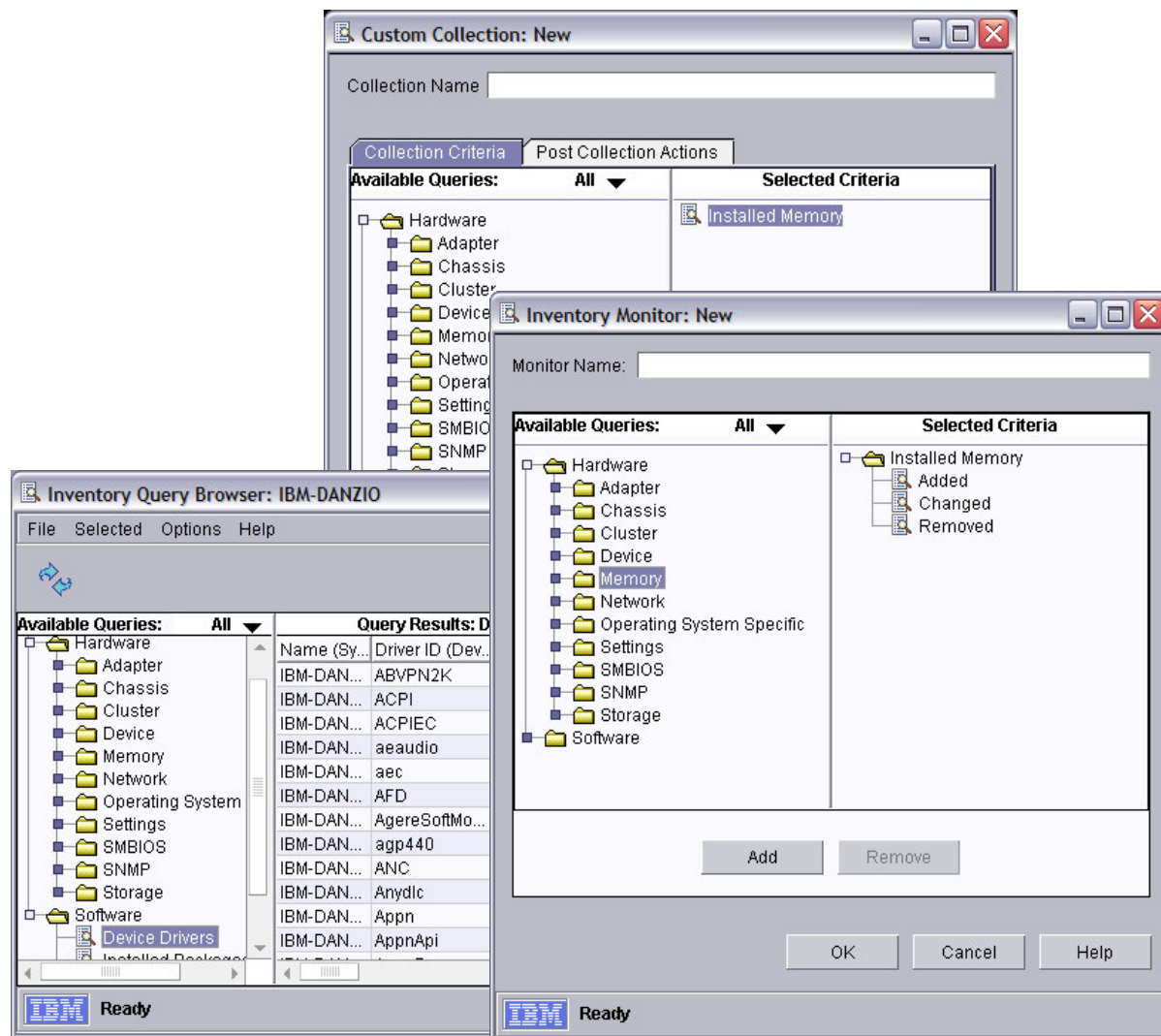


6

You are now finished creating the Event Action Plan and are presented with a summary

Inventaire – Collecte et surveillances personnalisées

- Organisation des requêtes par matériel, et données logicielles
- Dépister et notifier auprès des opérateurs / administrateurs lorsque l'inventaire système a été modifié (ajout, suppression)
- Capacité à créer des collectes d'inventaires personnalisés et granulaires



IBM Director 5.10 Information Center

The screenshot shows a Microsoft Internet Explorer browser window displaying the IBM Director 5.10 Information Center help page. The browser's address bar shows the URL: <http://infocenterdev2.raleigh.ibm.com:8090/help/index.jsp>. The page features a navigation pane on the left with a 'Contents' section containing links for 'IBM Director V5.1' and 'Director Build Logs'. The main content area is titled 'Welcome to the IBM Director information center' and provides an overview of the information center's purpose. It lists several sections: 'Getting started' with a link to 'SAN File System Overview'; 'Service and support' with a sub-section 'Education' containing links for 'Datasheet', 'Protocol', and 'White papers and analyst reports'; and 'Redbooks' with links to 'IBM TotalStorage: Introducing SAN File System', 'IBM TotalStorage: Integration of the SAN Volume Controller, SAN Integration Server and the SAN File System', and 'The IBM TotalStorage: Solutions Handbook'. A 'Navigating and searching information' section explains how to use the navigation frame and search features. The browser's status bar at the bottom indicates 'Internet'.

Help - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail Stop

Address <http://infocenterdev2.raleigh.ibm.com:8090/help/index.jsp> Go Links

IBM TotalStorage software Information center

Search: GO [Advanced Search](#)

Contents

- IBM Director V5.1
- Director Build Logs

Welcome to the IBM Director information center

The IBM(R) Director information center contains all the information that you need to plan, install, configure, manage, and troubleshoot IBM Director.

- Getting started**
Tutorials and demos
[SAN File System Overview](#)
- Service and support**
Education
 - [Datasheet](#)
 - [Protocol](#)
 - [White papers and analyst reports](#)
- Redbooks**
 - [IBM TotalStorage: Introducing SAN File System](#)
 - [IBM TotalStorage: Integration of the SAN Volume Controller, SAN Integration Server and the SAN File System](#)
 - [The IBM TotalStorage: Solutions Handbook](#)
- Navigating and searching information**

Browse topics in the **Contents** frame () on the left. Click topics to display them. Use the **Back** and **Forward** buttons to navigate within the history of viewed objects.

To synchronize the navigation frame with the current topic, click the **Synchronize** button (). The synchronize feature is helpful if you have followed several links to related topics in several files, and you want to see where the current topic fits into the navigation path.

To search the entire documentation set, enter a query in the **Search** field. To narrow down the sections that are searched, click **Advanced Search**. To return to the search results view, click the **Search Results** button () at the bottom of the frame.

IBM Director 5.10 Information Center

The screenshot shows a Microsoft Internet Explorer browser window displaying the IBM Director 5.10 Information Center. The browser's address bar shows the URL `http://infocenterdev2.raleigh.ibm.com:8090/help/index.jsp`. The page header includes the IBM logo and the text "IBM TotalStorage software Information center". A search bar is located below the header. The main content area is titled "IBM Director V5.1" and features a "Summary of changes" section. This section describes enhancements made to IBM Director since version 4.20 and lists three specific release summaries: 4.21, 4.22, and 5.10. A left-hand navigation pane titled "Contents" lists various topics such as "Summary of changes", "Getting started", "Installing", and "Managing IBM Director".

Help - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Mail Print Print Preview

Address `http://infocenterdev2.raleigh.ibm.com:8090/help/index.jsp` Go Links

IBM TotalStorage software Information center

Search: GO [Advanced Search](#)

Contents

- IBM Director V5.1
 - Summary of changes
 - Printable PDF files
 - Getting started
 - Planning
 - Installing
 - Modifying an IBM Director installation
 - Uninstalling
 - Upgrading IBM Director
 - Material that needs a home
 - Managing IBM Director
 - Managing systems
 - Solving problems
 - Reference
 - Related information
- Director Build Logs

IBM Director V5.1

Summary of changes

This section describes the enhancements made to IBM Director since version 4.20.

[Summary of changes in release 4.21](#)
This topic provides information about new features and enhancements in IBM Director 4.21.

[Summary of changes in release 4.22](#)
This topic provides information about new features and enhancements in IBM Director 4.22.

[Summary of changes in release 5.10](#)
This topic provides information about new features and enhancements in IBM Director 5.10.

Internet

IBM Director 5.10 Information Center

Help - Microsoft Internet Explorer

Address: <http://infocenterdev2.raleigh.ibm.com:8090/help/index.jsp>

IBM TotalStorage software Information center

Search: [GO](#) [Advanced Search](#)

Contents

- IBM Director V5.1
 - Summary of changes
 - Printable PDF files**
 - Getting started
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 - Installing
 - Modifying an IBM Director installation
 - Uninstalling
 - Upgrading IBM Director
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 - Managing IBM Director
 - Managing systems
 - Solving problems
 - Reference
 - Related information
- Director Build Logs

IBM Director V5.1

Printable PDF files

This topic provides information about the IBM Director documentation that is available in Portable Document Format (PDF).

Downloading Adobe Acrobat Reader

You need Adobe Acrobat Reader to view or print these PDF files. You can download a copy from the Adobe Web site at <http://www.adobe.com/products/acrobat/readstep.html>.

Viewing and printing PDF files

You can view or print any of the following PDF files:

- [IBM Director 5.10 Installation and Configuration Guide](#)
- [IBM Director 5.10 Systems Management Guide](#)
- [IBM Director 5.10 Events Reference](#)
- [IBM Director 5.10 Upward Integration Modules Installation and User's Guide](#)
- [Capacity Manager 5.10 Installation and User's Guide](#)
- [Web-based Access 5.10 Installation and User's Guide](#)

Saving PDF files

To save a PDF file, complete the following steps:

- Right-click the link to the PDF in the above section.
- Perform one of following tasks:

For Internet Explorer	Click Save Target As .
For Netscape Navigator	Click Save Link As .
- Navigate to the directory in which you want to save the PDF file.
- Click **Save**.

Printable PDF files

**IBM Director 5.10 Guide de référence par
plateforme matérielle System x™, System
p™, System i™ et System z™ sous
zLinux
que je vous laisserai découvrir par vous
même**

HMC Director Integration

- Discovery via industry standard SLP
- Management via CIM (SMWG Model)
- Relationships between HMC, pSeries Server, LPAR and installed operating system
- Power Control of all related managed entities
- Inventory of HMC
- Hardware Alerts and Status Integrated into main console
- Launch in context to WebSM task on HMC for more advanced tasks

Available
1Q06

The screenshot shows the IBM Director Console interface. The main window displays a tree view under the heading "All Systems and Devices : HMC Membership (8)". The tree structure is as follows:

- hmctest
 - p5-Julie
 - biztech_aix
 - agent_on_aix (9.3.6.126, jc936126.austin.ibm.com)
 - biztech_linux
 - epp154
 - HostPart
 - pkw

The table below summarizes the data shown in the screenshot:

Name	TCP/IP Addresses	TCP/IP Hosts
hmctest	{ "10.0.0.1" "9.3.6.125" }	
p5-Julie	{ '9.3.6.125' }	
biztech_aix	{ '9.3.6.125' }	
agent_on_aix	9.3.6.126	jc936126.austin.ibm.com
biztech_linux	{ '9.3.6.125' }	
epp154	{ '9.3.6.125' }	
HostPart	{ '9.3.6.125' }	
pkw	{ '9.3.6.125' }	

The status bar at the bottom indicates "Ready" and "Host: TRAILHEAD User ID: TRAILHEAD\wanca 7:".

Vue d'ensemble des collectes d'inventaire par plateforme

Director Inventory Query	Linux/Windows xSeries	Power Linux iSeries	Power Linux pSeries	Linux on zSeries	AIX, I5/OS
Base Inventory via operating system: <ul style="list-style-type: none"> •Disk and Logical Drive •Installed Memory, Processor •Installed Patches and Packages •Network Adapter & IP Address •Operating System/System Information •Physical Enclosure 	Yes	Yes	Yes	Yes	Yes
SNMP Agent Configuration	Yes	Yes	No	Yes	No
Serial Number Information	Yes	Yes	Yes	Yes	Yes
Asset ID/Personalized Data	Yes	Yes	Yes	Yes	Yes (no AssetID)
Lease/Warranty Information	Yes	N/A	N/A	N/A	N/A
FRU Service Numbers	Yes	Yes	Yes	Yes	Yes
Memory Modules	Yes	No	No	No	No
Firmware	Yes	Yes	Yes	Yes	No
BIOS Details	Yes	N/A	N/A	N/A	N/A
Processor Details	Yes	Yes	Yes	Yes	No
System Board Configuration	Yes	Yes	Yes	Yes	Yes
Cache	Yes	No	No	No	No
Port Connectors	Yes	Yes	Yes	Yes	No
Partition, Geographic Information	Yes	Yes	Yes	Yes	Yes

Niveau 0 : Inventaire supporté par plateforme

<i>Table</i>	<i>Supporting Platforms</i>
BaseBoard	Windows, xSeries Linux
ComponentID (SMBIOS info)	Windows, xSeries Linux
Disk	Windows, xSeries Linux, Power Linux, zSeries Linux
Installed Memory	Windows, xSeries Linux, Power Linux, zSeries Linux
Installed Packages	Windows, xSeries Linux, Power Linux, zSeries Linux
IP Address	Windows, xSeries Linux, Power Linux, zSeries Linux
Logical Drive	Windows, xSeries Linux, Power Linux, zSeries Linux
Memory Modules	Windows, xSeries Linux
Network Adapter	Windows, xSeries Linux, Power Linux, zSeries Linux
OnBoard Device	Windows, xSeries Linux
Operating System	Windows, xSeries Linux, Power Linux, zSeries Linux
Partition	Windows, xSeries Linux, Power Linux, zSeries Linux
Physical Enclosure	Windows, xSeries Linux
Processor	Windows, xSeries Linux
System BIOS	Windows, xSeries Linux
System Board Configuration	Windows, xSeries Linux
Video	Windows

Niveau 1 : inventaire supporté par plateforme (part 1)

<i>Table</i>	<i>Supporting Platforms</i>
Alert Standard Format Settings	Windows, xSeries Linux,
Asset ID	Windows, xSeries Linux, Power Linux, zSeries Linux
BaseBoard	Windows, xSeries Linux,
BootConfiguration	Windows, xSeries Linux,
Cache	Windows, xSeries Linux,
CIMOM	Windows, xSeries Linux,
ComponentID	Windows, xSeries Linux,
Director Agent	Windows, xSeries Linux, Power Linux, zSeries Linux, AIX, i5OS
Disk	Windows, xSeries Linux, Power Linux, zSeries Linux
Firmware	Windows, xSeries Linux, Power Linux, zSeries Linux
FRU	Windows, xSeries Linux, Power Linux, zSeries Linux, AIX, i5OS
Geographic	Windows, xSeries Linux, Power Linux, zSeries Linux, AIX, i5OS
Installed Memory	Windows, xSeries Linux,
Installed Packages	Windows, xSeries Linux, Power Linux, zSeries Linux
IP Address	Windows, xSeries Linux, Power Linux, zSeries Linux
Lease	Windows, xSeries Linux,

Niveau 1 : inventaire supporté par plateforme (part 2)

<i>Table</i>	<i>Supporting Platforms</i>
Logical Drive	Windows, xSeries Linux, Power Linux, zSeries Linux
ManagementProcessor	Windows, xSeries Linux
Memory Modules	Windows, xSeries Linux
Network Adapter	Windows, xSeries Linux, Power Linux, zSeries Linux
On Board Device	Windows, xSeries Linux
Operating System	Windows, xSeries Linux, Power Linux, zSeries Linux, AIX, i5OS
Partition	Windows, xSeries Linux, Power Linux, zSeries Linux, AIX, i5OS
Physical Enclosure	Windows, xSeries Linux
PersonalizedData	Windows, xSeries Linux, Power Linux, zSeries Linux, AIX, i5OS
Port Connectors	Windows, xSeries Linux, Power Linux, zSeries Linux
Processor	Windows, xSeries Linux, Power Linux, zSeries Linux
RAID Controllers	Windows, xSeries Linux
RAID Disk Drives	Windows, xSeries Linux
RAID Enclosures	Windows, xSeries Linux
RAID Logical Drives	Windows, xSeries Linux
Serial Number	Windows, xSeries Linux, Power Linux, zSeries Linux
SNMP Agent Configuration	Windows, xSeries Linux, Power Linux, zSeries Linux

Niveau 1 : inventaire supporté par plateforme (part 3)

<i>Table</i>	<i>Supporting Platforms</i>
System BIOS	Windows, xSeries Linux,
System Board Configuration	Windows, xSeries Linux, Power Linux, zSeries Linux, AIX, i5OS
System Slots	Windows, xSeries Linux,
User Details	Windows, xSeries Linux, Power Linux, zSeries Linux, AIX, i5OS
Warranty	Windows, xSeries Linux,
Video	Windows

Fonctionnalités IBM Director par OS

IBM Director Server Task	Windows	AIX	i5/OS	Linux on Power	Linux on xSeries	Linux on zSeries
Base Director Tasks						
Discovery, Associations, Group Management, System Status	Yes	Yes	Yes	Yes	Yes	Yes
Inventory	Yes	Yes	Yes	Yes	Yes	Yes
Event Log Viewer	Yes	Yes	Yes	Yes	Yes	Yes
Event Action Plan/Wizard	Yes	Yes	Yes	Yes	Yes	Yes
Resource Monitor	Yes	Yes	Yes	Yes	Yes	Yes
Process Management	Yes	Yes	Yes	Yes	Yes	Yes
Remote Control	Yes	Yes	Yes	Yes	Yes	Yes
Remote Session	Yes	Yes	Yes	Yes	Yes	Yes
File Transfer	Yes	Yes	Yes	Yes	Yes	Yes
CIM Browser	Yes	Yes	Yes	Yes	Yes	Yes
SNMP Browser	Yes	Yes	Yes	Yes	Yes	Yes
Scheduler	Yes	Yes	Yes	Yes	Yes	Yes
Update Assistant	Yes	Yes	Yes	Yes	Yes	Yes
Microsoft Cluster Browser	Yes	Yes	Yes	Yes	Yes	Yes
Discovery, Console, Server Preferences	Yes	Yes	Yes	Yes	Yes	Yes
User Administration	Yes	Yes	Yes	Yes	Yes	Yes
Encryption Administration	Yes	Yes	Yes	Yes	Yes	Yes
Message Browser	Yes	Yes	Yes	Yes	Yes	Yes

Fonctionnalités IBM Director par OS

IBM Director Server Task	Windows	AIX	i5/OS	Linux on Power	Linux on xSeries	Linux on zSeries
Platform Tasks						
Hardware/System Status	Yes	Yes	Yes	Yes	Yes	Yes
Hardware Control – power on/off, system restart	Yes	Yes	Yes	Yes	Yes	Yes
Asset ID	Yes	Yes	Yes	Yes	Yes	Yes
Configure SNMP Agent	Yes	Yes	Yes	Yes	Yes	Yes
Network Configuration	Yes	Yes	Yes	Yes	Yes	Yes
System Accounts	Yes	Yes	Yes	Yes	Yes	Yes
xSeries Specific Function						
RSA Configuration Wizard						
Management Processor Assistant Launch	Yes	Yes	Yes	Yes	Yes	Yes
ServeRaid Manager	Yes	No	No	No	Yes	No
Configure Alert Standard Format	Yes	Yes	Yes	Yes	Yes	Yes
Real-Time Diagnostics	Yes	No	No	No	Yes	No
BladeCenter Tasks						
BladeCenter Configuration Wizard	Yes	Yes	Yes	Yes	Yes	Yes
BladeCenter Management Module Launch	Yes	Yes	Yes	Yes	Yes	Yes
Switch Management Launch	Yes	Yes	Yes	Yes	Yes	Yes
Server Storage Provisioning Tool (SSPT)	Yes	No	No	No	Yes	No

Fonctionnalités IBM Director par OS

IBM Director Server Task	Windows	AIX	i5/OS	Linux on Power	Linux on xSeries	Linux on zSeries
Other platform specific tasks						
HMC Support and Task	Yes	Yes	Yes	Yes	Yes	Yes
zSeries z/VM Center Management	Yes	Yes	Yes	Yes	Yes	Yes
Advanced Server Tasks						
Capacity Manager	Yes	No	No	No	Yes	No
Rack Manager	Yes	Yes	Yes	Yes	Yes	Yes
System Availability	Yes	No	No	No	Yes	No
Software Distribution	Yes	Yes	Yes	Yes	Yes	Yes
Remote Deployment Manager (RDM)	Yes	No	No	No	Yes	No
Linux Cluster Support Extension (for CSM)	Yes	No	No	Yes	Yes	Yes
Virtual Machine Manager (VMM)	Yes	No	No	No	Yes	No
Other Tasks						
Command Line Interface (for some functions)	Yes	Yes	Yes	Yes	Yes	Yes
Virtualization Engine Console bridge	Yes	No	Yes	Yes	Yes	No

Les fonctions de l'agent IBM Director sur xSeries

IBM Director Agent Task	Windows	Linux	Netware	VMWare
Base IBM Director Function				
Inventory Hardware	Yes(1)	Yes(1)	No	No
Inventory – Operating System/Software	Yes	Yes	Yes	Yes
Resource Monitor	Yes	Yes	Yes	Yes
Process Management	Yes	Yes	Yes	Yes
Remote Control	Yes	No	No	Yes(2)
Remote Session	Yes	Yes	Yes	Yes
File Transfer	Yes	Yes	Yes	Yes
CIM Browser	Yes(1)	Yes(1)	Yes	Yes
Update Assistant	Yes	Yes	Yes	Yes
Microsoft Cluster Browser	Yes	No	No	No
Platform Tasks				
Hardware/System Status	Yes(1)	Yes(1)	No	No
Asset ID	Yes(1)	Yes(1)	No	Yes
Configure SNMP Agent	Yes(1)	Yes(1)	No	Yes(2)
Network Configuration	Yes(1)	Yes(1)	No	Yes(1)
System Accounts	Yes(1)	Yes(1)	No	Yes(1)

- (1) Not supported on 64-bit systems
- (2) Windows Guests Only

Note: A “yes” indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur xSeries

IBM Director Management Server Task	Windows	Linux	Netware	VMWare
xSeries Specific Function				
ServeRaid Manager	Yes(1)	Yes(1)	No	No
Configure Alert Standard Format	Yes(1)	Yes(1)	No	No
Real-Time Diagnostics	Yes(1)	Yes(1)	No	No
Advanced Server Tasks				
Capacity Manager	Yes(1)	Yes(1)	No	Yes
System Availability	Yes(1)	Yes(1)	No	Yes
Software Distribution	Yes	Yes	Yes	Yes

- (1) Not supported on 64-bit systems
- (2) Windows Guests Only
- (3) Only Slot Manager on SUSE Linux Enterprise Server 8 for x86

Note: A "yes" indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur iSeries

IBM Director Management Server Task	i5/OS	Linux	AIX	Windows, Intel Linux
Base Director Function				
Inventory Hardware	Yes	Yes	Yes	Yes
Inventory – Operating System/Software	Yes	Yes	Yes	Yes
Resource Monitor	Yes	Yes	Yes	Yes
Process Management	Yes	Yes	Yes	Yes
Remote Control	No	No	No	Yes (not Linux)
Remote Session	Yes	Yes	Yes	Yes
File Transfer	Yes	Yes	Yes	Yes
CIM Browser	Yes	Yes	Yes	Yes
Update Assistant	Yes(1)	Yes(1)	Yes(1)	Yes
Microsoft Cluster Browser	No	No	No	Yes (not Linux)
Platform Tasks				
Hardware/System Status	Yes	Yes	Yes	Yes
Asset ID	Yes	Yes	Yes	Yes
Configure SNMP Agent	Yes	Yes	Yes	Yes
Network Configuration	Yes	No	No	Yes
System Accounts	Yes	No	No	Yes

(1) Used for IBM Director Agents only

Note: A “yes” indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur iSeries

IBM Director Management Server Task	i5/OS	Linux	AIX	Windows
xSeries Specific Function				
ServeRaid Manager	No	No	No	No
Advanced Server Tasks				
Capacity Manager	No	No	No	Yes
System Availability	No	No	No	Yes
Software Distribution	Yes	Yes	Yes	Yes

Note: A "yes" indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur pSeries

IBM Director Agent Task	AIX	Linux
Base IBM Director Function		
Inventory Hardware	Yes	Yes
Inventory – Operating System/Software	Yes	Yes
Resource Monitor	Yes	Yes
Process Management	Yes	Yes
Remote Control	No	No
Remote Session	Yes	Yes
File Transfer	Yes	Yes
CIM Browser	Yes	Yes
Update Assistant	Yes(1)	Yes(1)
Microsoft Cluster Browser	No	No
Platform Tasks		
Hardware/System Status	Yes	Yes
Asset ID	Yes	Yes
Configure SNMP Agent	Yes	Yes
Network Configuration	No	No
System Accounts	No	No

(1) Used for IBM Director Agents only

Note: A “yes” indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur pSeries

IBM Director Management Server Task	AIX	Linux
Advanced Server Tasks		
Capacity Manager	No	No
System Availability	No	No
Software Distribution	Yes	Yes

Note: A "yes" indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur zSeries

IBM Director Agent Task	Linux
Base IBM Director Function	
Inventory Hardware	Yes
Inventory – Operating System/Software	Yes
Resource Monitor	Yes
Process Management	Yes
Remote Control	No
Remote Session	Yes
File Transfer	Yes
CIM Browser	Yes
Update Assistant	Yes
Microsoft Cluster Browser	No
Platform Tasks	
Hardware/System Status	No
Asset ID	No
Configure SNMP Agent	No
Network Configuration	Yes
System Accounts	Yes

(1) Used for IBM Director Agents only

Note: A “yes” indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur zSeries

IBM Director Management Server Task	Linux
Advanced Server Tasks	
Capacity Manager	No
System Availability	No
Software Distribution	Yes

Note: A "yes" indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur IBM eServer BladeCenter

IBM Director Management Server Task	HS20 Blade		JS20 Blade	
	Windows	Linux	AIX	Linux
Base Director Function				
Inventory Hardware	Yes	Yes	Yes	Yes
Inventory – Operating System/Software	Yes	Yes	Yes	Yes
Resource Monitor	Yes	Yes	Yes	Yes
Process Management	Yes	Yes	Yes	Yes
Remote Control	Yes	No	No	No
Remote Session	Yes	Yes	Yes	Yes
File Transfer	Yes	Yes	Yes	Yes
CIM Browser	Yes	Yes	Yes	Yes
Update Assistant	Yes	Yes	Yes	Yes
Microsoft Cluster Browser	Yes	No	No	No

- (1) Support provided with new releases of Clustered Systems Management
- (2) Supported using an out-of-band communication path through the BladeCenter Management Module

Note: A “yes” indicates that one or more of the supported operating system type is supported per platform

Les fonctions de l'agent IBM Director sur IBM eServer BladeCenter

IBM Director Management Server Task	HS20 Blade		JS20 Blade	
	Windows	Linux	AIX	Linux
Platform Tasks				
Hardware/System Status	Yes	Yes	Yes	Yes
Asset ID	Yes	Yes	Yes	Yes
Configure SNMP Agent	Yes	Yes	Yes	Yes
Network Configuration	Yes	Yes	No	No
System Accounts	Yes	Yes	No	No
xSeries Specific Function				
ServeRaid Manager	Yes	Yes	No	No
Advanced Server Tasks				
Capacity Manager	Yes	Yes	No	No
System Availability	Yes	Yes	No	No
Software Distribution	Yes	Yes	Yes	Yes

- (1) Support provided with new releases of Clustered Systems Management
- (2) Supported using an out-of-band communication path through the BladeCenter Management Module

Note: A "yes" indicates that one or more of the supported operating system type is supported per platform

Support des systèmes d'exploitation - Windows pour xSeries

OS	Console	Server	Agent	Comments
Windows NT 4.0 Server, AS			5.1 Drop	
Windows 2000 Professional	x		x	Runs on IA32, EM64T, AMD64 HW
Windows 2000 Server, AS	x	x	x	Runs on IA32, EM64T, AMD64 HW
Windows 2000 Datacenter			x	
Windows XP Professional	x		x	Includes SP2, runs on IA32, EM64T, AMD64 HW
WS03 (ES, AS, WS) – IA32	x	x	x	Includes SP1, runs on AMD64 HW
WS03 (ES, AS, WS) – EM64T	5.1 Add	5.1 Add	x	Includes SP1, runs on AMD64 HW
WS03 ES – IA64			x	Runs on Itanium only
WS03 Datacenter - IA32			x	Includes SP1
WS03 Datacenter – EM64T			x	Requires EM64T or AMD64 HW
WS03 Datacenter – IA64			x	Runs on Itanium only

Notes: IBM Director 5.10 can manage HW running IBM Director 4.x Agent. IBM Director 4.x includes support for additional OSes
 For OS support on IXS and IXA, see <http://www-1.ibm.com/servers/eserver/series/integratedxseries/windows/>

Support des systèmes d'exploitation - Red Hat pour xSeries

OS	Console	Server	Agent	Comments
RH Linux 2.1 AS	5.1 Drop	5.1 Drop	5.1 Drop	
RH Ent. Linux 2.1 (AS, ES, WS)			5.1 Drop	
RH Ent. Linux 3.0 (AS, ES) – IA32	x	x	x	Through Update 5, runs on IA32, EM64T, AMD64 HW
RH Ent. Linux 3.0 (WS) – IA32			x	Through Update 5, runs on IA32, EM64T, AMD64 HW
RH Ent. Linux 3.0 (AS, ES) – EM64T	5.1 Add	5.1 Add	x	Through Update 5, requires EM64T or AMD64 HW
RH Ent. Linux 3.0 (WS) – EM64T			x	Through Update 5, requires EM64T or AMD64 HW
RH Ent. Linux 4.0 (AS, ES) – IA32	5.1 Add	5.1 Add	5.1 Add	Includes Update 1, runs on IA32, EM64T, AMD64 HW
RH Ent. Linux 4.0 (WS) – IA32			5.1 Add	Includes Update 1, runs on IA32, EM64T, AMD64 HW
RH Ent. Linux 4.0 (AS, ES) – EM64T	5.1 Add	5.1 Add	5.1 Add	Includes Update 1, requires EM64T or AMD64 HW
RH Ent. Linux 4.0 (WS) – EM64T			5.1 Add	Includes Update 1, requires EM64T or AMD64 HW
RH Ent. Linux 3.0 AS – IA64			x	Through Update 3, requires Itanium HW
RH Ent. Linux 4.0 AS – IA64			5.1 Add	Through Update 5, requires Itanium HW

Note: IBM Director 5.10 can manage HW running IBM Director 4.x Agent. IBM Director 4.x includes support for additional OSes

Support des systèmes d'exploitation - SUSE pour xSeries

OS	Console	Server	Agent	Comments
SUSE Linux Ent. Server 8.0 (IA32)	x	x	x	Runs on IA32, EM64T, AMD64 HW
SUSE Linux Ent. Server 8.0 for AMD64			x	Supported on e325, e326
SUSE Linux Ent. Server 8.0 for IA64			x	Requires Itanium HW
SUSE Linux Ent. Server 9.0 (IA32)	x	x	x	Includes SP1, runs on IA32, EM64T, AMD64 HW
SUSE Linux Ent. Server 9.0 for AMD64 / EM64T on EM64T HW	5.1 Add	5.1 Add	x	Includes SP1, requires EM64T or AMD64 HW
SUSE Linux Ent. Server 9.0 for IA64			x	Includes SP1, requires Itanium HW

Support des systèmes d'exploitation – autres sur xSeries

OS	Console	Server	Agent
Netware 6.0			5.1 Drop
Netware 6.5			x
VMware ESX 1.5.2 (Console & Guest)			5.1 Drop
VMware ESX 2.01 (Console & Guest)			5.1 Drop
VMware ESX 2.1 (Console & Guest)			x
VMware ESX 2.5 (Console & Guest)			x
VMware ESX 2.51 (Console & Guest)			x
MS Virtual Server 2005 SP1			5.1 Add

Note: IBM Director 5.10 can manage HW running IBM Director 4.x Agent. IBM Director 4.x includes support for additional OSes

Support des systèmes d'exploitation - iSeries, pSeries, JS20

OS	Console	Server	Agent
AIX V5.2	5.1 Add	5.1 Add	x
AIX V5.3	5.1 Add	5.1 Add	x
i5/OS V5R3		x	x
i5/OS V5R4			
SUSE Linux Ent. Server 8.0	5.1 Add	5.1 Add	x
SUSE Linux Ent. Server 9.0	5.1 Add	5.1 Add	x
Red Hat Ent. Linux 3.0 (AS)	5.1 Add	5.1 Add	x
Red Hat Ent. Linux 4.0 (AS)	5.1 Add	5.1 Add	5.1 Add

Support des systèmes d'exploitation - zSeries

OS	Console	Server	Agent
SUSE Linux Ent. Server 9.0	5.1 Add	5.1 Add	5.1 Add
Red Hat Ent. Linux 4.0 (AS)	5.1 Add	5.1 Add	5.1 Add

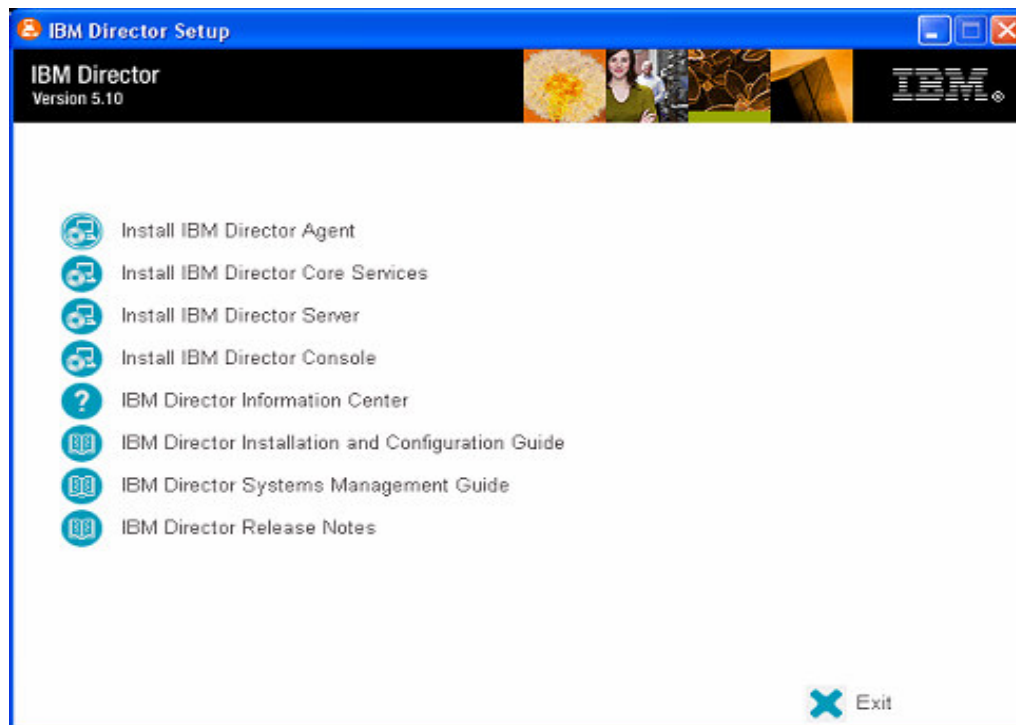
Agenda

- **IBM Director 5.10 : plateforme de supervision cross plateforme (System x™, System i™, System p™ et System z™)**
- IBM Universal Systems Management Infrastructure
- IBM Director 5.10.3 : what's new ?
- IBM Director 5.20 ... GA 27 Décembre 2006
- IBM Director 6.10 / Simulateur
- Présentation IBM PowerExecutive™

IBM Director 5.10 *Installation*

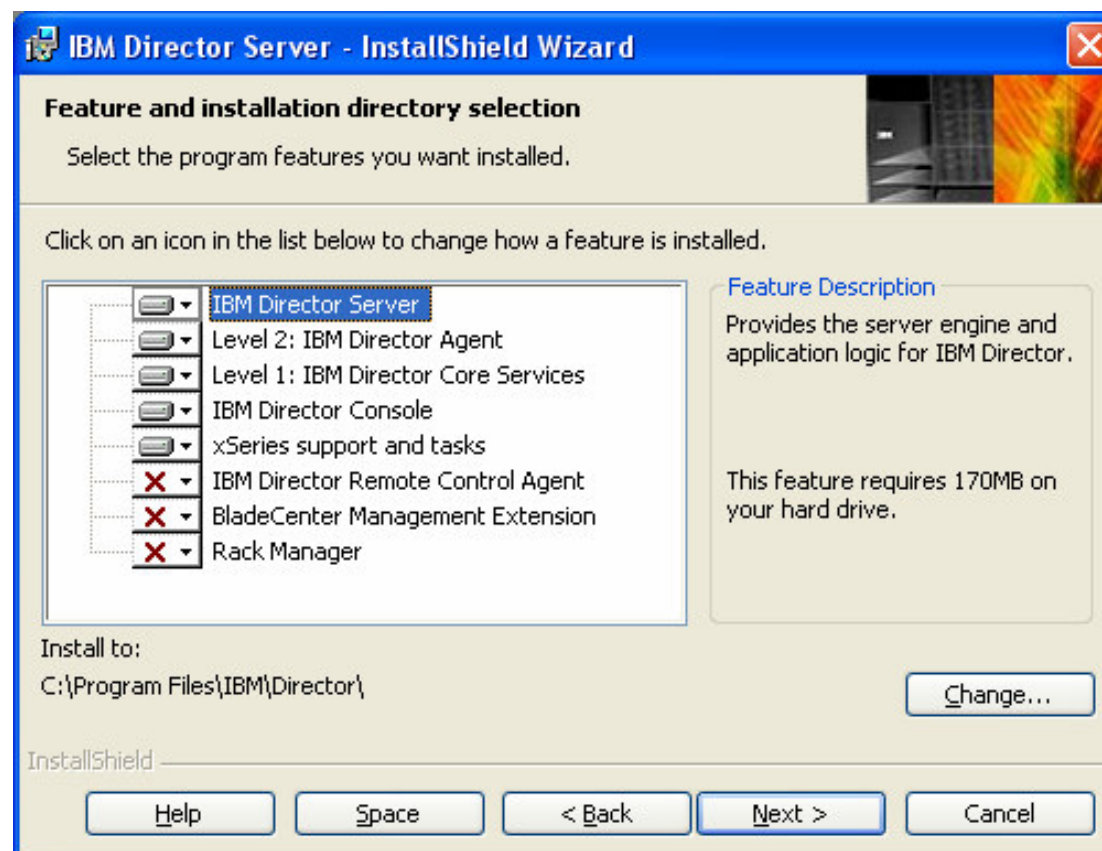


Amélioration de l'installation sous Microsoft Windows (Général)



New CD Launcher (Autorun)

Amélioration de l'installation sous Microsoft Windows (Général)



New Server Installation Features

Amélioration de l'installation sous Microsoft Windows (Serveur)

- **Unattended/Silent Server Installation**
 - New feature of 5.10
 - Requires a user id and password for an existing Windows administrator for the IBM Director service account – password will be in plain text in the response file
 - Can also configure database with the response file

Amélioration de l'installation sous Microsoft Windows (Agents)

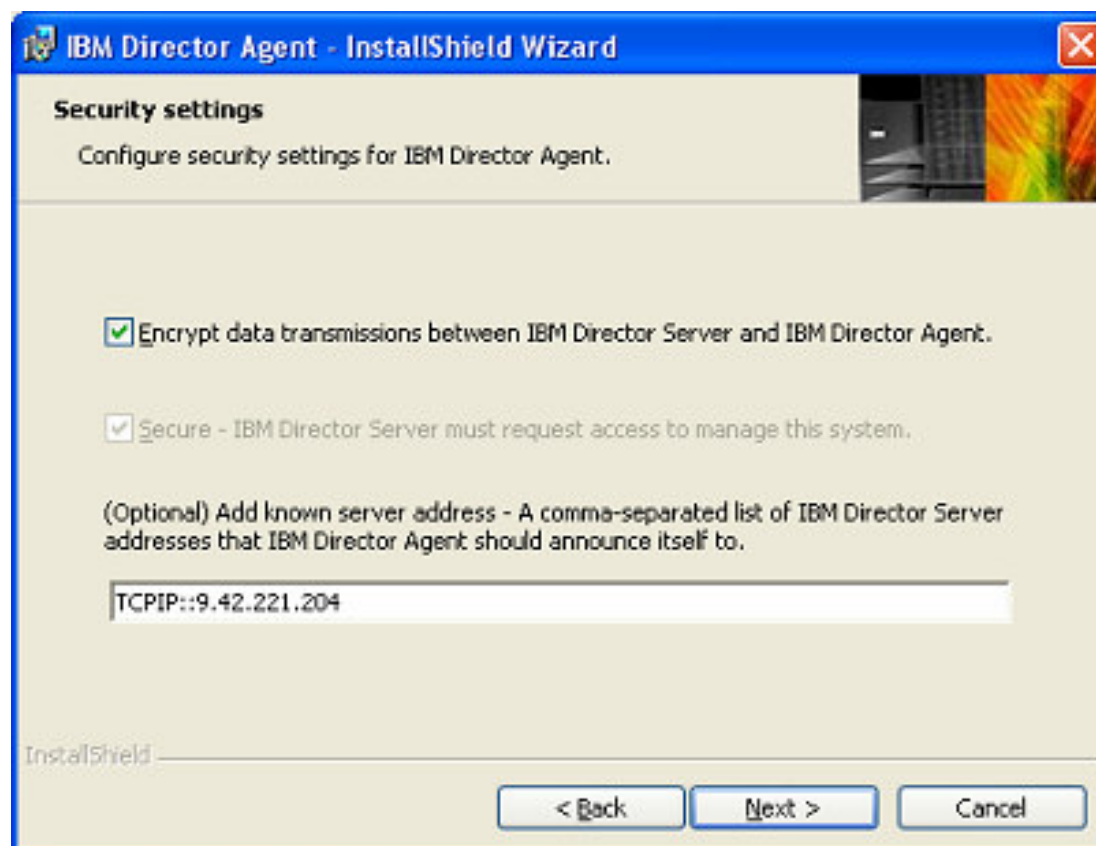
- **Solution Install Packages**
 - Can use Update Assistant to deploy IBM Director Agent and IBM Director Core Services to machines with no previous copy of IBM Director installed
 - Packages available on CD – used to be only available on the web

- **Tighter Security Defaults**
 - Encryption and Locked Agent Settings default to on
 - User must “request access” to the agent before being able to manage the agent. Gaining access requires a valid Windows user id and password for the agent system.

- **Elimination of Agent Reboot Requirement (most of the time)**
 - All of the causes for the mandatory reboot after installing IBM Director Agent have been removed.
 - Installation might request a reboot if a file is in use during the installation and needs to be replaced or if Windows Installer 3.0 is not present on the system. Windows Installer 3.1 has been released as via Windows Update so most users should already have it.

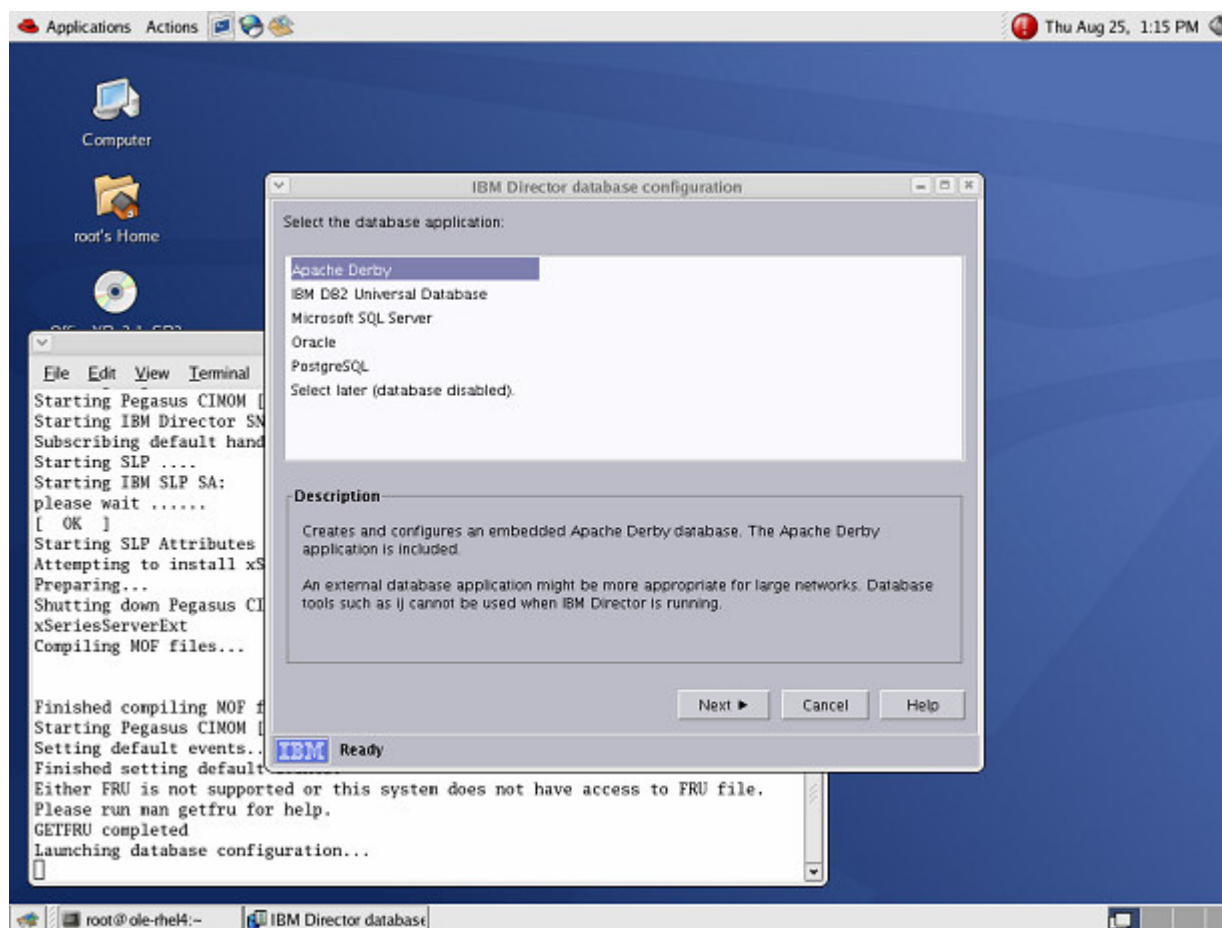
- **“Add Known Servers” Capability during GUI installation**
 - Adds ability to “register” agent with an IBM Director Server upon initial start of agent
 - Used to be only available from the response file

Amélioration de l'installation sous Microsoft Windows (Agents)



Updated Agent Security Panel

Amélioration de l'installation sous Linux



Director Database Configuration during Server Installation

Amélioration de l'installation sous Linux

```
root@ole-rhel4:~  
File Edit View Terminal Tabs Help  
  
# The following components are required. However, if the  
# current version is already installed, you may specify  
# 0 to not install them.  
#  
DirectorServer=1  
CoreServices=1  
xSeriesExtension=1  
  
# The following parameters are used to install optional  
# components. Specifying 1 will install additional  
# software on the target machine.  
#  
# BladeCenter = Provides single point of access for  
# deployment, management, and configuration of  
# BladeCenter systems.  
#  
# RackManager = Manages IBM servers, storage devices, and  
# other components located in an IBM enclosure.  
#  
BladeCenter=0  
RackManager=0  
  
# The following parameter is used to select the database  
# configuration method.  
#  
# DbmsConfigMethod = set to GUI to display the database  
# configuration wizard during an initial installation  
# (the GUI parameter requires a graphical environment);  
# set to Rspfile to use the values below to configure the  
# database; set to None to configure the database after  
# the installation is complete.  
#  
#
```

Linux Server Response File Section

Installation des services de base IBM Director (Core Services)

- **Core Services Linux and Windows Packages**
 - New packages for 5.10 release
 - Use same installation technology as other IBM Director packages
 - Only configurable installation option is installation directory

- **“Promotion” from Core Services to IBM Director Agent**
 - “Promotion” is equivalent to upgrading from Core Services to Agent
 - Preferred method using Update Assistant task via IBM Director Console
 - Result of promotion is IBM Director Agent product on machine and Core Services product removed
 - IBM Director Agent includes Core Services functionality

IBM Director 5.10

Perfectionnement et simplification de l'interface utilisateur



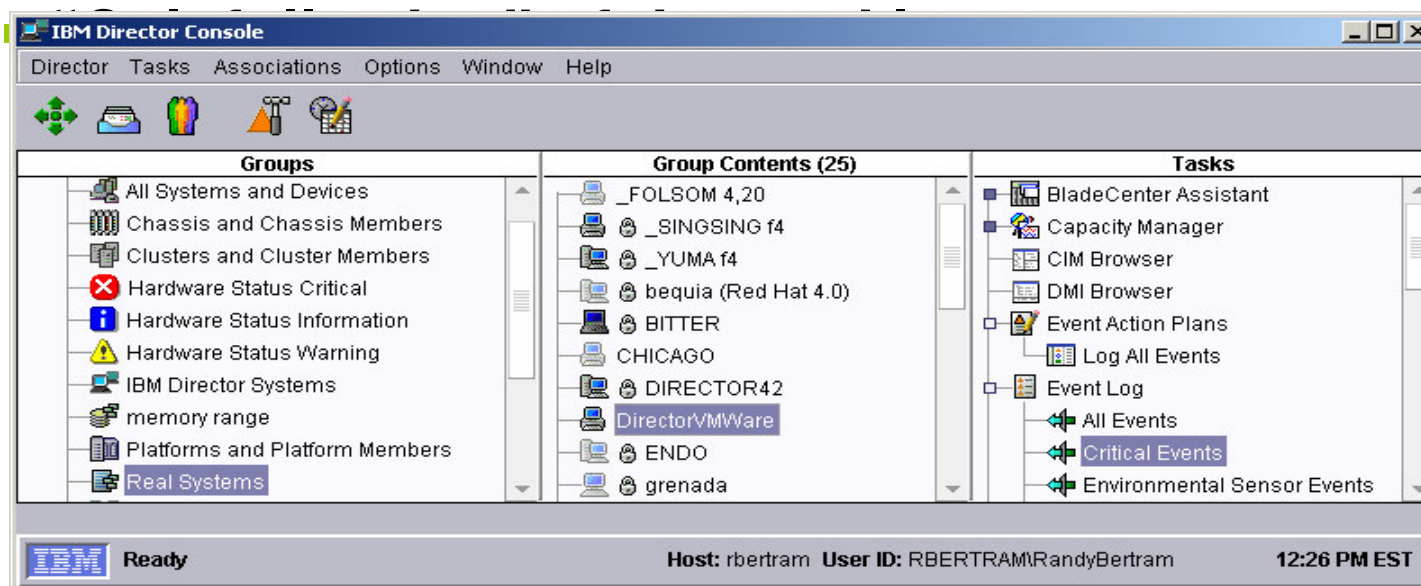
IBM Director 5.10

Perfectionnement de la console



Director 4.2

- **Unfamiliar paradigm = difficult for new users**



UI Goals for Director 5.1

1. Familiarity

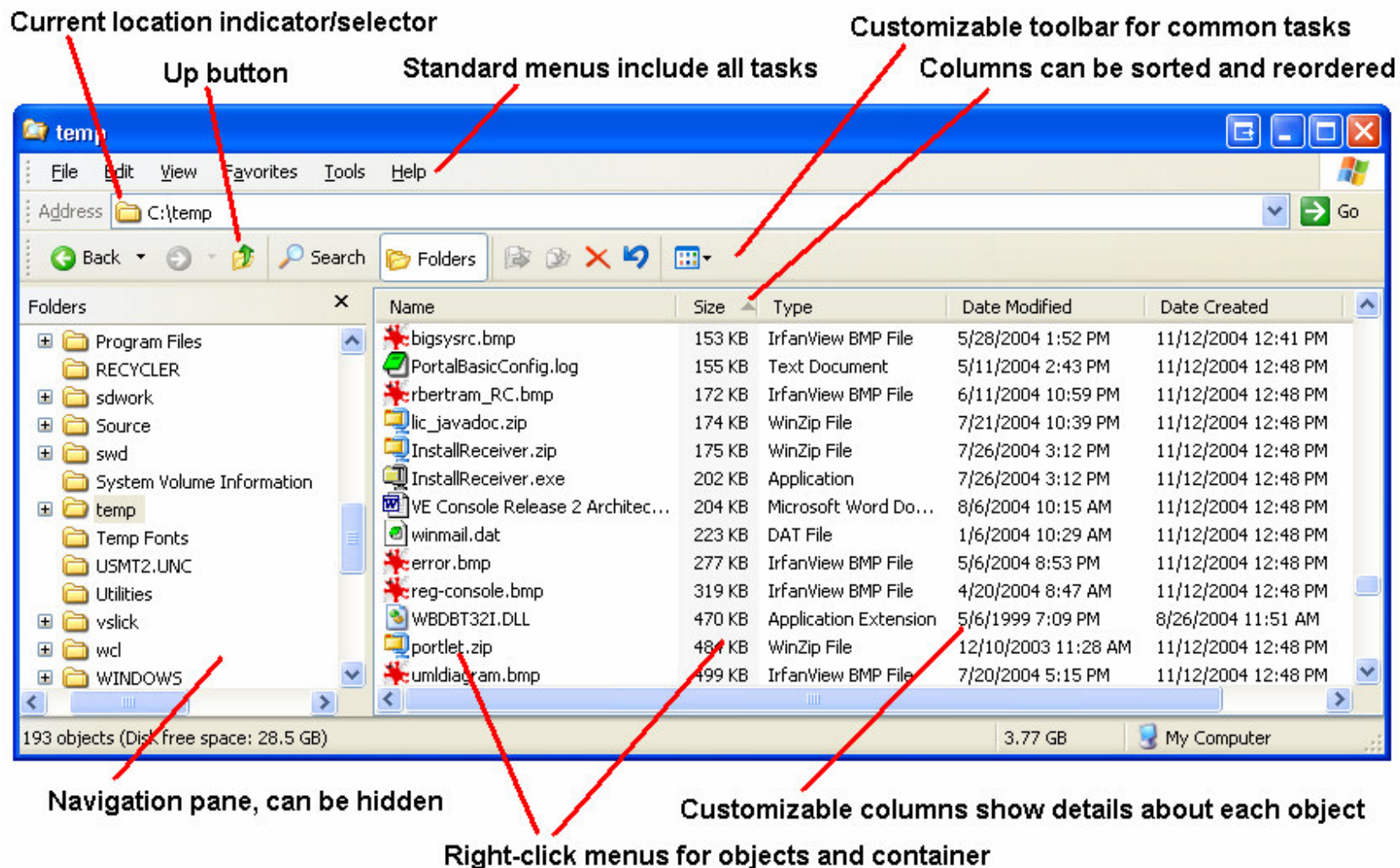
- Move to familiar paradigm (Explorer)
- Prepare transition to future web version

2. Coexistence

- New features coexist with old
- No required task changes
- Legacy users can do things the old way

Explorer - Very Familiar Paradigm

Usable via single-click



Director 5.1 – Familiarity

Usable via single-click

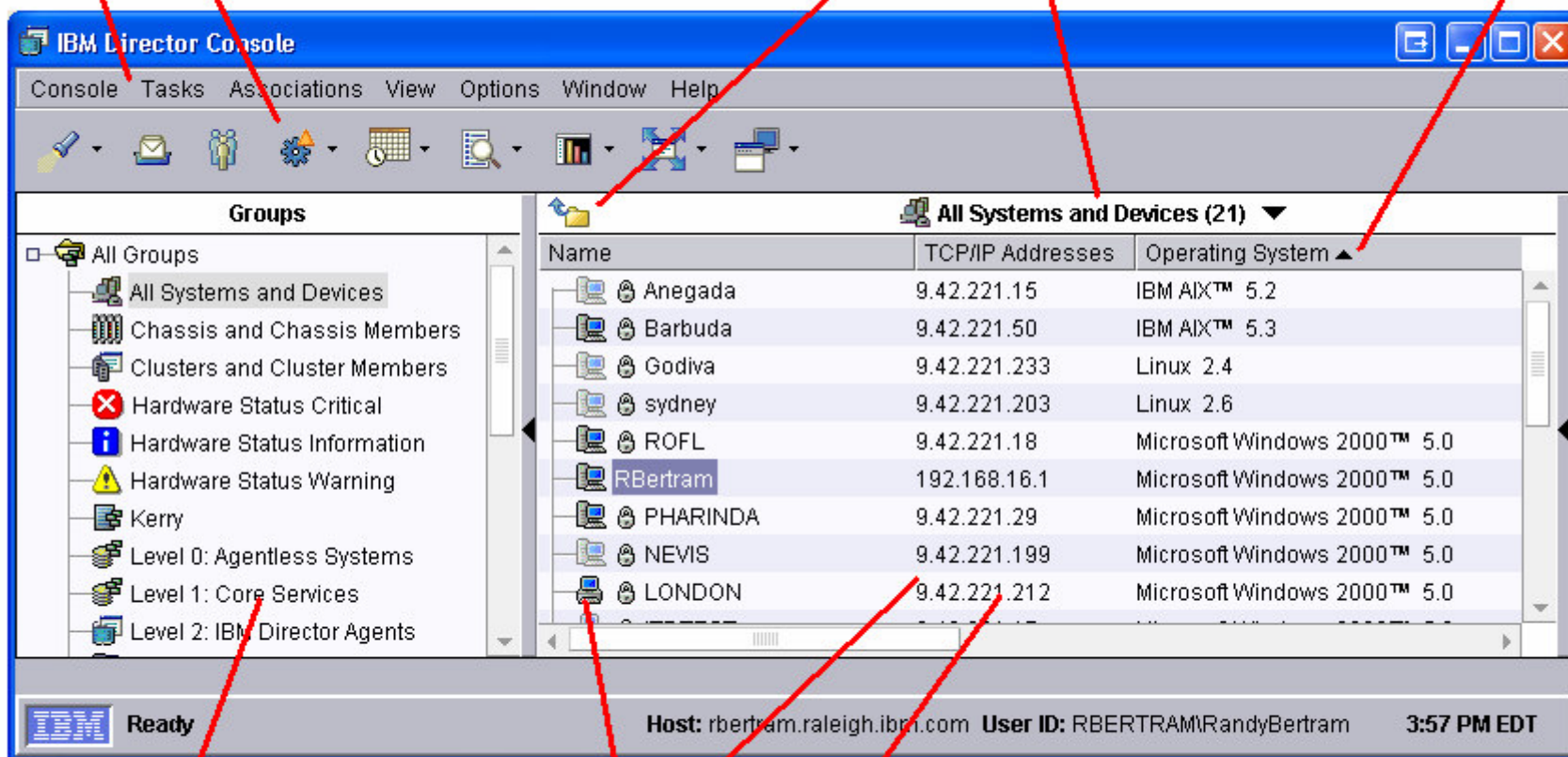
Standard menus include all tasks

Customizable toolbar for common tasks

Up button

Columns can be sorted and reordered

Current location indicator/selector



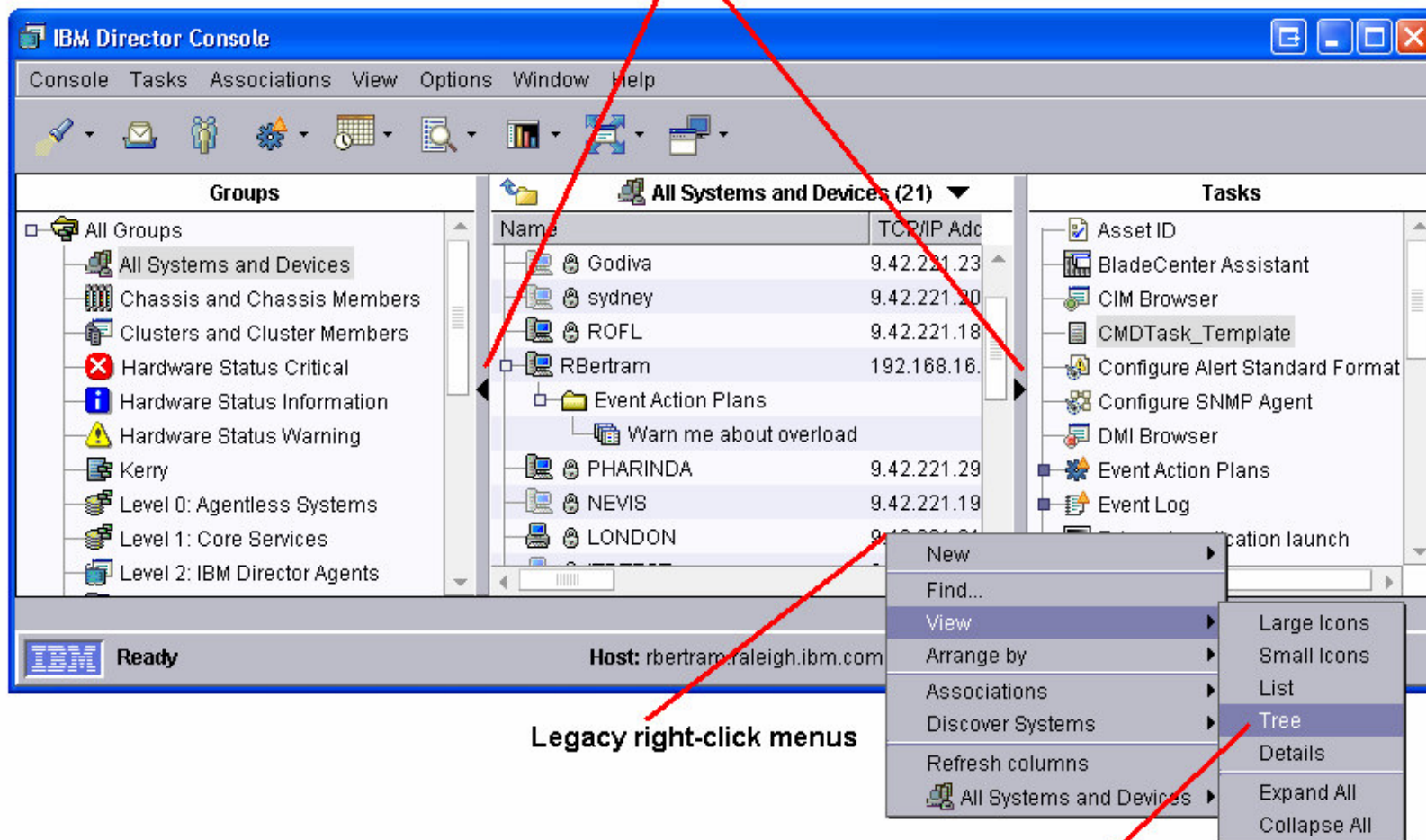
Navigation pane, can be hidden

Customizable columns show details about each object

Right-click menus for objects and container

Director 5.1 – Coexistence with Legacy UI

One-touch access to legacy panes
(Drag-and-drop still available)



Legacy right-click menus

Legacy views

IBM Director 5.10

Perfectionnement d'accessibilité



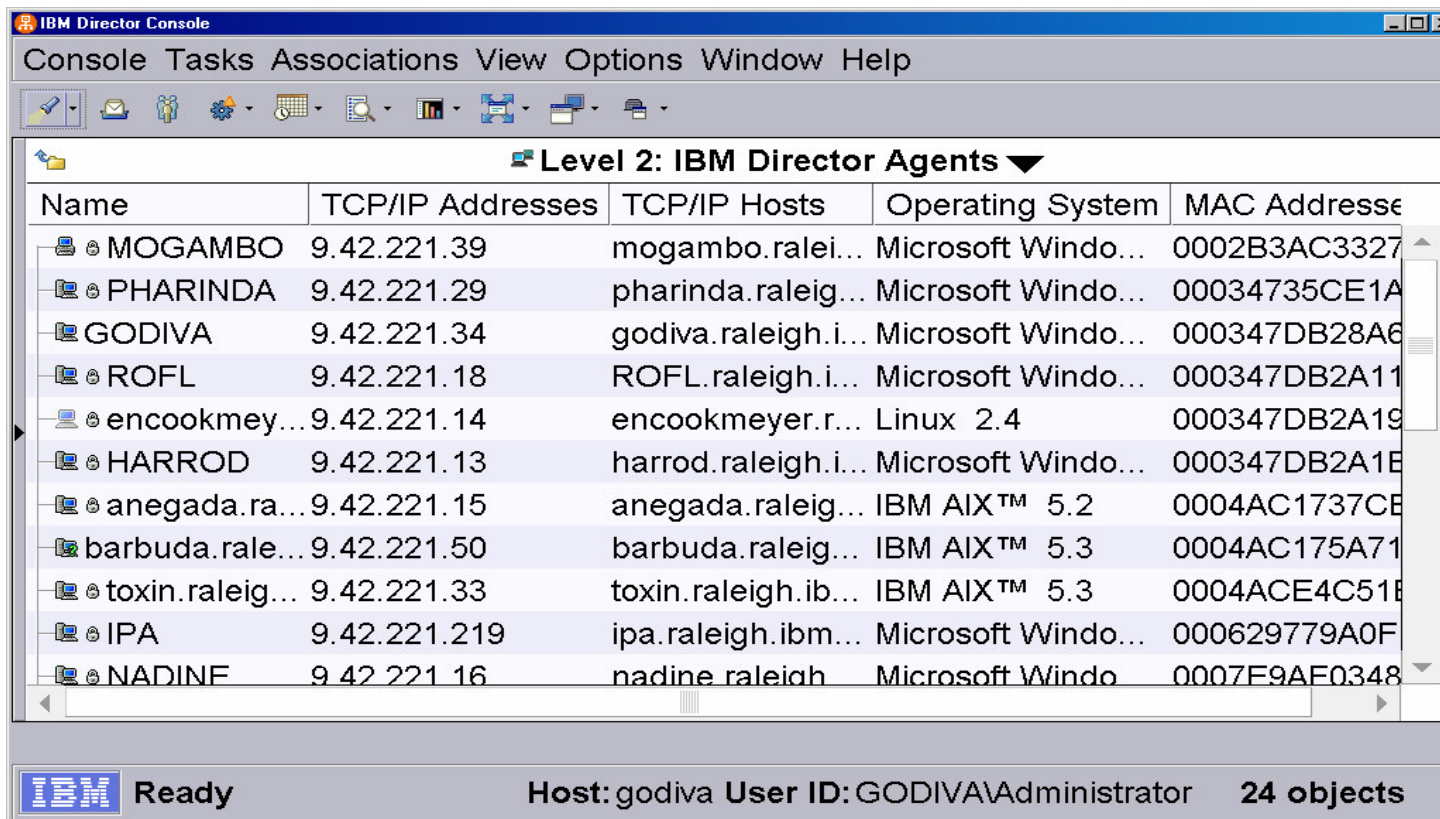
Support de contraste élevé

The screenshot displays the IBM Director Console interface. The main window shows a table of agents under the heading "Level 2: IBM Director Agents". The table has five columns: Name, TCP/IP Addresses, TCP/IP Hosts, Operating System, and MAC Address. The text is rendered in a high-contrast, yellow-on-black font. The status bar at the bottom indicates the system is "Ready", the host is "godiva", the user is "GODIVAAdministrator", and there are "24 objects".

Name	TCP/IP Addresses	TCP/IP Hosts	Operating System	MAC Address
_CENTRAL-W2K	9.42.221.237	CENTRAL-W2K.raleigh.ibm.com	Microsoft Windows 2000™ 5.0	000C29EB4993
_TOWEROFLONDON - 36-	9.42.221.229	TowerOfLondon.raleigh.ibm.com	Microsoft Windows XP™ 5.1	00096B52874E
_YUMA 36-	9.42.221.37	yuma.raleigh.ibm.com	Microsoft Windows XP™ 5.1	00096BA7F8F6
anegada.raleigh.ibm.com	9.42.221.15	anegada.raleigh.ibm.com	IBM AIX™ 5.2	0004AC1737CB
barbuda.raleigh.ibm.com	9.42.221.50	barbuda.raleigh.ibm.com	IBM AIX™ 5.3	0004AC175A71
CADBURY	9.42.221.31	cadbury.raleigh.ibm.com	Microsoft Windows XP™ 5.1	000D60EE7131
CREOSOTE32	9.42.221.223	dyn481735.raleigh.ibm.com	Microsoft Windows XP™ 5.1	000D60531590
DASTARDLY	9.42.221.26	dastardly.raleigh.ibm.com	Microsoft Windows XP™ 5.1	52290D41AD7D
dyn481751	9.42.221.239	dyn481751.raleigh.ibm.com	Linux 2.4	000C291E4E87
dyn481754.raleigh.ibm....	9.42.221.242	dyn481754.raleigh.ibm.com	Linux 2.4	000C29913215
encookmeyer.raleigh.ib...	9.42.221.14	encookmeyer.raleigh.ibm.com	Linux 2.4	000347DB2A19
GODIVA	9.42.221.34	godiva.raleigh.ibm.com	Microsoft Windows XP™ 5.1	000347DB28A6
HARROD	9.42.221.13	harrod.raleigh.ibm.com	Microsoft Windows 2000™ 5.0	000347DB2A1B
IPA	9.42.221.219	ipa.raleigh.ibm.com	Microsoft Windows Server 2003™ ...	000629779A0F
LOL	9.42.221.12	LOL.raleigh.ibm.com	Microsoft Windows XP™ 5.1	00096BA75974
MOGAMBO	9.42.221.39	mogambo.raleigh.ibm.com	Microsoft Windows 2000™ 5.0	0002B3AC3327
NADINE	9.42.221.16	nadine.raleigh.ibm.com	Microsoft Windows 2000™ 5.0	0007E9AF0348

Ready Host: godiva User ID: GODIVAAdministrator 24 objects

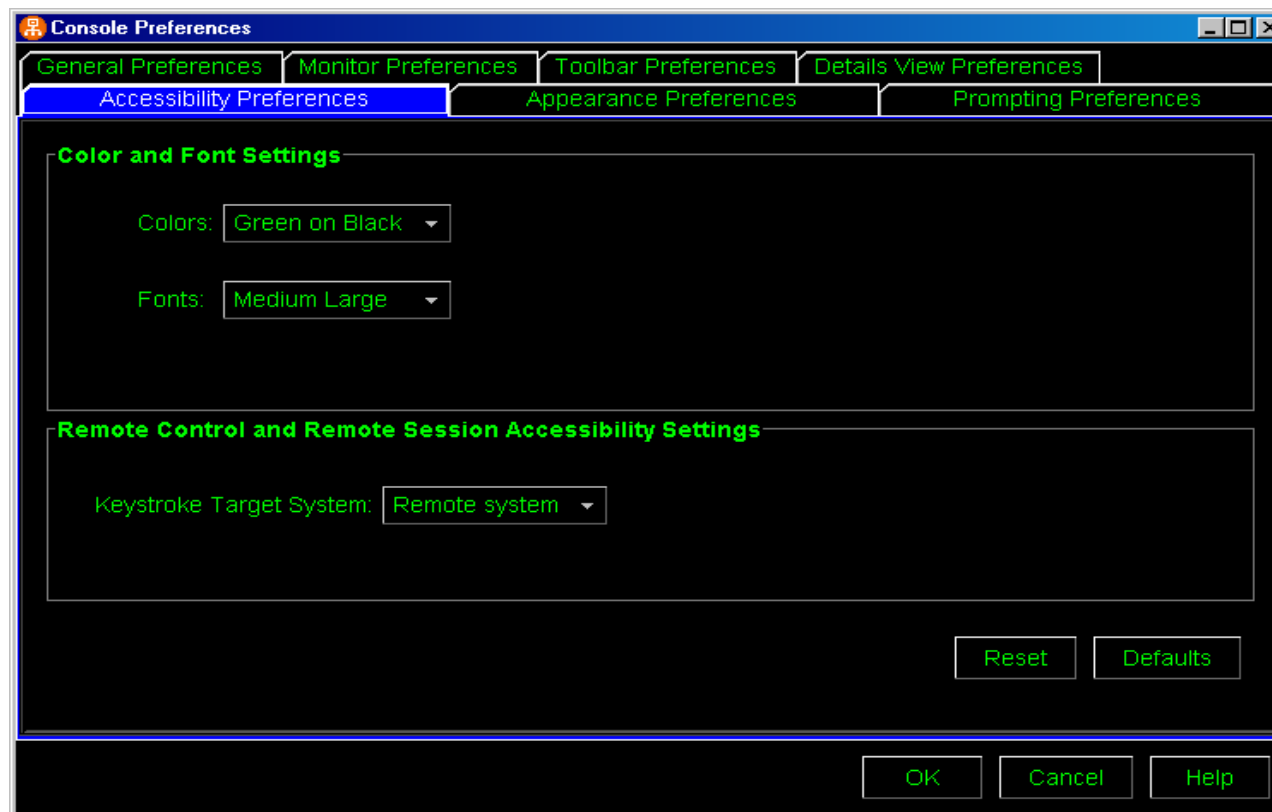
Personnalisation de la taille de la police



The screenshot shows the IBM Director Console interface. The main window displays a table titled "Level 2: IBM Director Agents" with the following columns: Name, TCP/IP Addresses, TCP/IP Hosts, Operating System, and MAC Address. The table lists several agents, including MOGAMBO, PHARINDA, GODIVA, ROFL, encookmey..., HARROD, anegada.ra..., barbuda.rale..., toxin.raleig..., IPA, and NADINE. The status bar at the bottom indicates "IBM Ready", "Host: godiva", "User ID: GODIVAAdministrator", and "24 objects".

Name	TCP/IP Addresses	TCP/IP Hosts	Operating System	MAC Address
MOGAMBO	9.42.221.39	mogambo.ralei...	Microsoft Windo...	0002B3AC3327
PHARINDA	9.42.221.29	pharinda.raleig...	Microsoft Windo...	00034735CE1A
GODIVA	9.42.221.34	godiva.raleigh.i...	Microsoft Windo...	000347DB28A6
ROFL	9.42.221.18	ROFL.raleigh.i...	Microsoft Windo...	000347DB2A11
encookmey...	9.42.221.14	encookmeyer.r...	Linux 2.4	000347DB2A19
HARROD	9.42.221.13	harrod.raleigh.i...	Microsoft Windo...	000347DB2A1E
anegada.ra...	9.42.221.15	anegada.raleig...	IBM AIX™ 5.2	0004AC1737CE
barbuda.rale...	9.42.221.50	barbuda.raleig...	IBM AIX™ 5.3	0004AC175A71
toxin.raleig...	9.42.221.33	toxin.raleigh.ib...	IBM AIX™ 5.3	0004ACE4C51E
IPA	9.42.221.219	ipa.raleigh.ibm...	Microsoft Windo...	000629779A0F
NADINE	9.42.221.16	nadine.raleigh	Microsoft Windo	0007E9AF0348

Panneau de configuration des préférences d'accessibilité



IBM Director 5.10 *Publications*



Publications (PDFs)

- **IBM Director**

- *Events Reference*
- *Installation and Configuration Guide*
- *Systems Management Guide*
- *Upward Integration Modules Installation Guide*
- *Web-based Access Installation and User's Guide*

- **IBM Director extensions**

- *Capacity Manager Installation and User's Guide*
- *ServeRAID Manager Installation and User's Guide*
- *System Availability Installation and User's Guide*

IBM Director 5.10

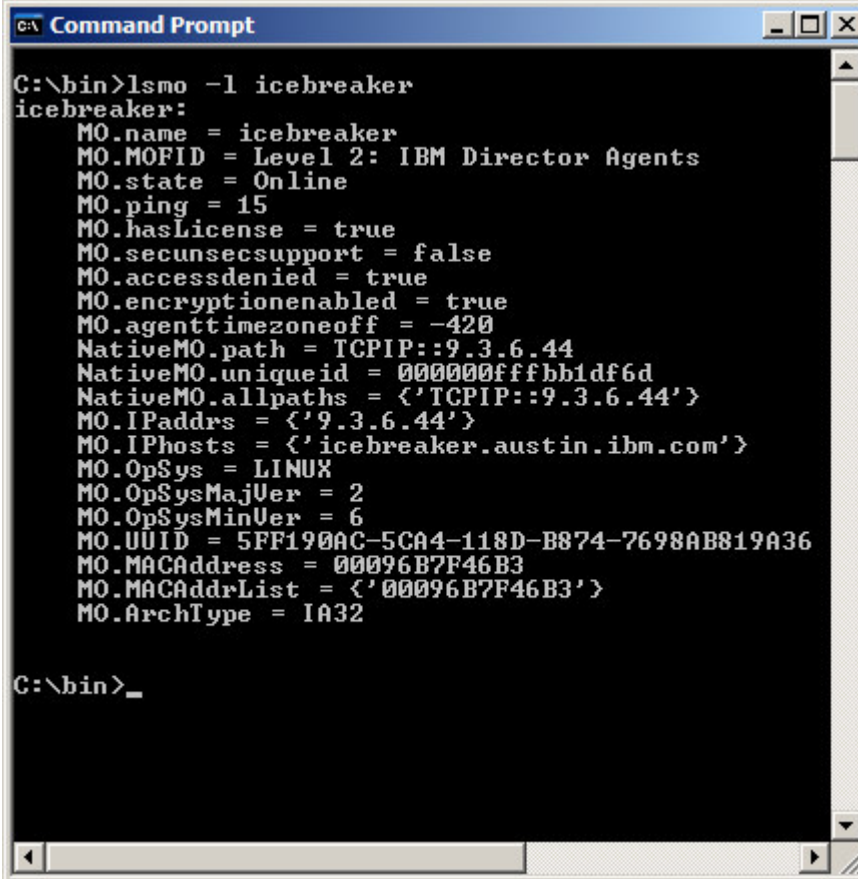
Common Command Line Interface (CLI)



Director Common Command Line Interface (CLI)

Topics to be covered

- Highlights of IBM Director CLI (dircli)
- Usability Enhancements
- dircli Commands Tables
- dircmd/dircli Co-Existence
- dircmd Command Tables
- dircmd to dircli Mapping Chart



```
C:\bin>lsmo -l icebreaker
icebreaker:
  MO.name = icebreaker
  MO.MOFID = Level 2: IBM Director Agents
  MO.state = Online
  MO.ping = 15
  MO.hasLicense = true
  MO.secunsecsupport = false
  MO.accessdenied = true
  MO.encryptionenabled = true
  MO.agenttimezoneoff = -420
  NativeMO.path = TCPIP:9.3.6.44
  NativeMO.uniqueid = 000000ffffbb1df6d
  NativeMO.allpaths = <'TCPIP:9.3.6.44'>
  MO.IPAddr = <'9.3.6.44'>
  MO.IPHosts = <'icebreaker.austin.ibm.com'>
  MO.OpSys = LINUX
  MO.OpSysMajVer = 2
  MO.OpSysMinVer = 6
  MO.UUID = 5FF190AC-5CA4-118D-B874-7698AB819A36
  MO.MACAddress = 00096B7F46B3
  MO.MACAddrList = <'00096B7F46B3'>
  MO.ArchType = IA32

C:\bin>_
```

Highlights for IBM Director CLI (dircli)

- **High performance through native C client interface**
 - Command execution time about .1 sec
 - Performance enhanced for scripts running large numbers of dircli commands
- **New command interfaces based on GNU/POSIX standards with interface convergence with CSM for enhanced usability**
- **Simple invocation**
 - Syntax: dircli command [options] [operands]
 - No userid/password required; runs under OS user and credentials
 - User needs to be in group dirsuper
 - No client prefix (dircli) needed on Unix platforms
- **Runs locally on the server. Remote access through established mechanisms like telnet, ssh**
- **More secure by using OS based authentication; not susceptible to brute force and directory attacks**

dircmd/dircli Co-Existence

- **dircmd is the CLI client used in Director 4.x**
- **It will still be available in Director 5.10 but not for the newly supported i, p and z-series platforms**
- **dircmd client will be deprecated and support unlikely beyond Director 5.10**
- **dircmd cannot execute the newer dircli commands**
- **dircli can run legacy client commands**

dircmd/dircli Command Mapping

Although both interface commands are shown here, the use of the dircli commands is highly encouraged. Aside from support and wide platform availability, dircli also has enhanced security

	dircmd	dircli
List commands	listobjects, listtaskactivations, listgroups	lsmo, lstask,Lsgp
Presence check command	pingobjects	pingmo
Access objects command	accessobjects	accessmo
Change objects command	renameobject	chmo
Create objects command	creategroups, createstaticgroup	mkmo, mkgp
Delete groups command	deleteobjects, deletegroups	rmmo, rmgp
Discovery objects command	discoverall	discover

*See the Director publications for complete list of mapped commands

IBM Director 5.10 *SNMP Enhancements*



New SNMP Features

Topics to be covered are:

- MIB Compiled Data Storage
- MIB Compiler Prerequisite Loading
- MIB Data Loader
- MIB Compiler User Data Upgrade

MIB Compiled Data Storage

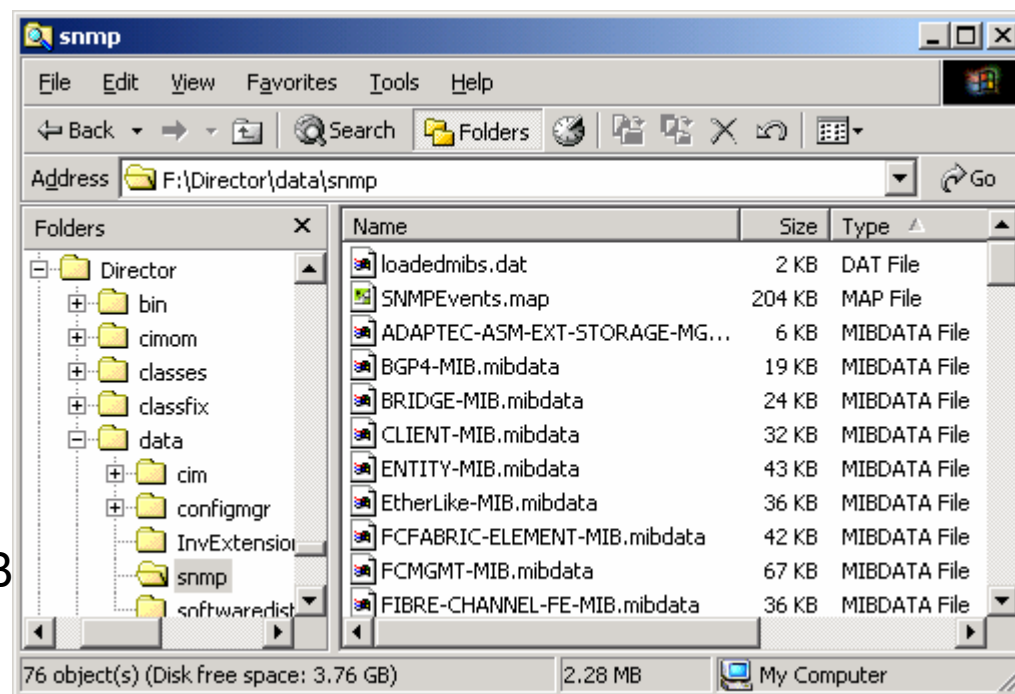
MIB (Management Information Base) data was loaded at server startup from the single file: data\snmpmib.dat

- **Problems**

- File size (3 MB)
- Inflexible
- Maintenance

- **Solution**

- One compiled file per MIB
- data\snmp*.mibdata



MIB Compiler Prerequisite Loader

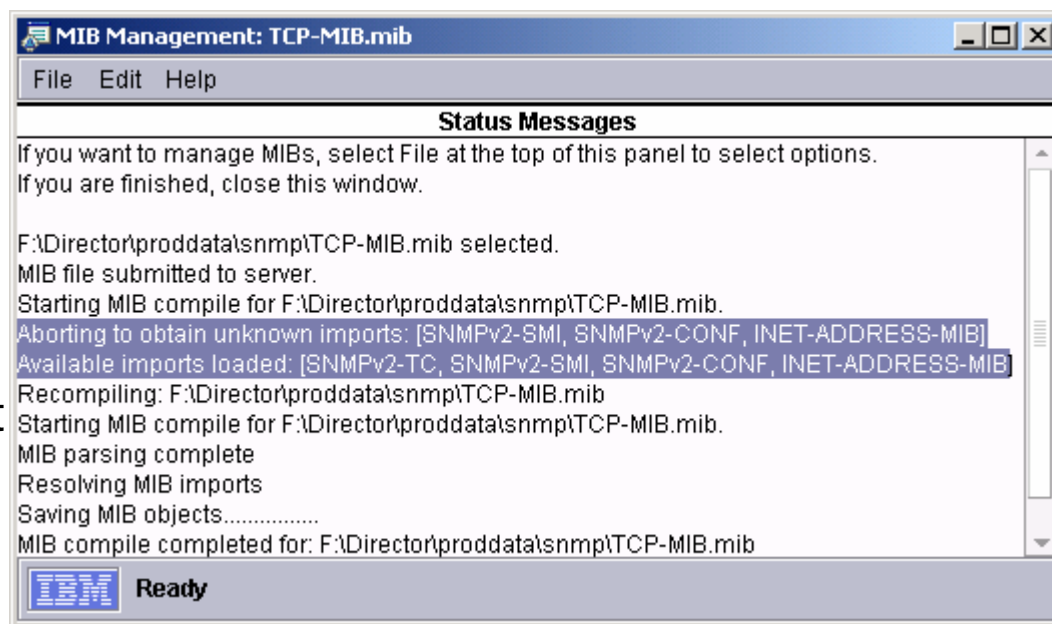
MIB data was loaded in a previously determined order

- **Problems**

- Order defined manually
- Maintenance

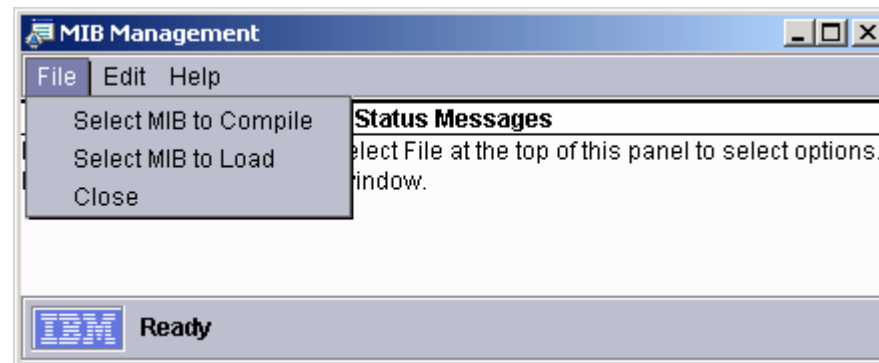
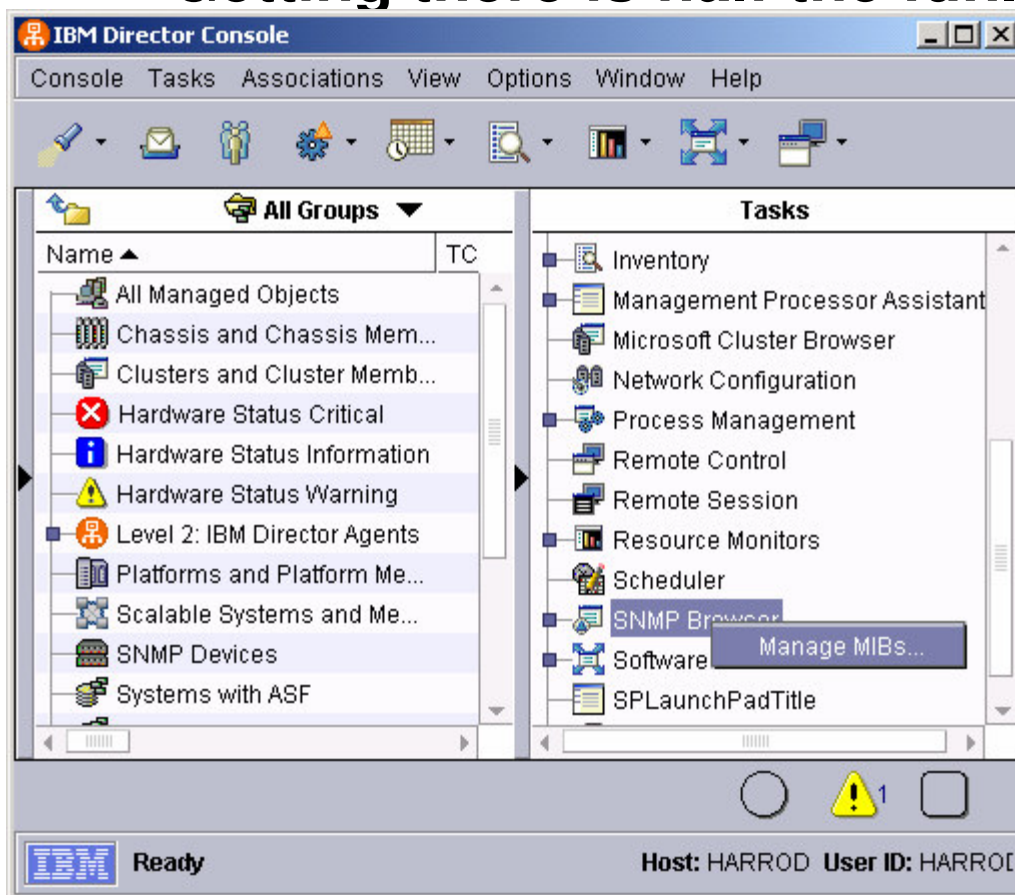
- **Solution**

Compile order is extracted dynamically from MIB import information and the compile proceeds in that order.

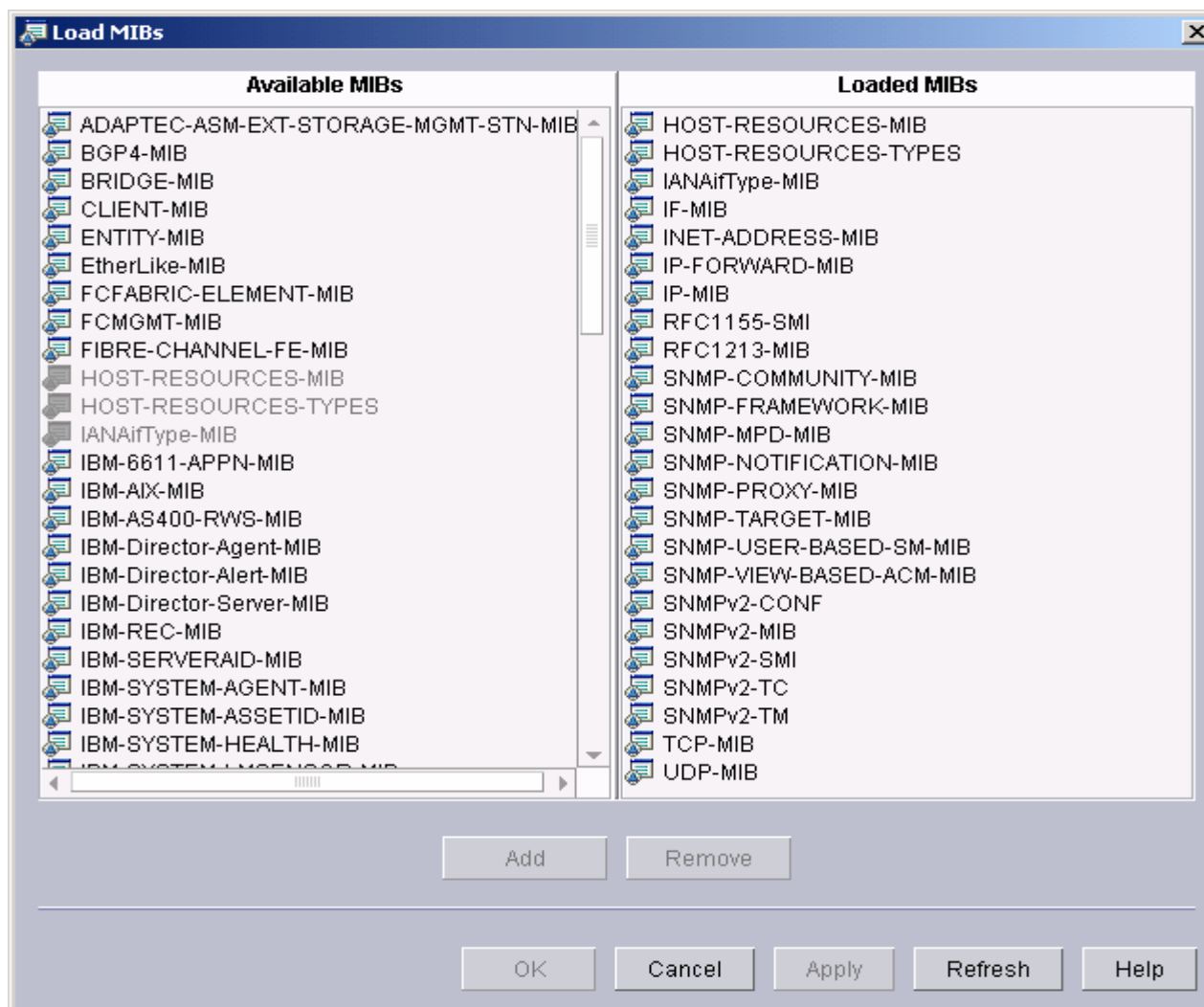


MIB Data Loader Access

Getting there is half the fun.



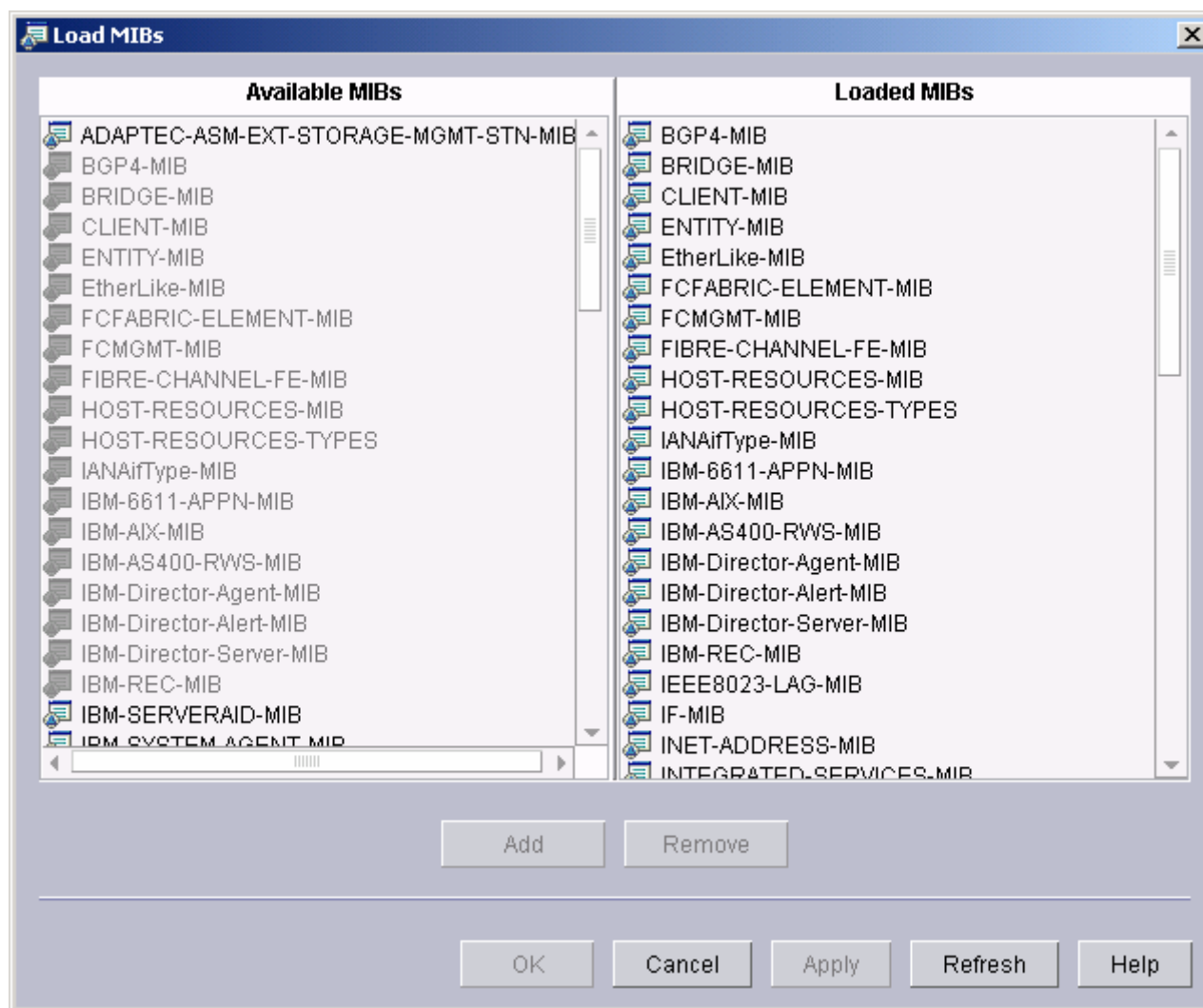
MIB Data Loader View



MIB Compiler User Data Upgrade

snmpcompiledmibs.dat
in the `\data\` directory
is the source file
used for user data.

The file is preserved with
a `.old` extension after
conversion.



IBM Director SDK



Director SDK – How it can be used:

- **Java Programming for Server / Console**

- Tasks
- Dialogs
- Inventory
- Events
- Managing new types of systems

- **C++ programming for agent**

- Director subagents
- New instrumentation

The screenshot shows the Director Console interface with three main panels:

- Groups:** A tree view showing various system groups. A red arrow points from the text "You can create new Groups" to the "dev_machines" group.
- Group Contents (2):** Shows the contents of the selected group, including "DWORMALD" and "WORMALD3". A red arrow points from the text "You can create new Child Tasks" to the "WORMALD3" group.
- Tasks:** A list of tasks such as "Capacity Manager", "CIM Browser", and "Event Action Plans". A red arrow points from the text "With the SDK you can create new Tasks" to the "Capacity Manager" task.

At the bottom of the console, the status bar shows: IBM Ready, Host: dwormald, User ID: Administrator, and 4:51 PM EDT.

IBM Director 5.10

Topic : MPCLI Integration (xSeries)



Basic Overview

- **The Management Processor Assistant and BladeCenter Assistant GUIs are no longer available in 5.10.**
- **A Launch point for Command line interface (MPCLI = Management Processor Command Line Interface) is provided for Chassis and Physical Platforms.**
- **Launch in context – MPCLI uses the director authentication to automatically log the user in.**

How to launch MPCLI

- **Right Click on the Physical Platform / Chassis and select the Launch Command Line Interface.**
 - MPCLI will use the Director's data store for the USERID/PASSWORD information of the Physical Platform, and automatically log you in to the endpoint.

- **Launch Remote Session from Console to the Server's Agent Object**
 - Manually type MPCLI
 - You will have to manually authenticate to the Physical Platform / Chassis (e.g. `logonip -h 9.44.2.123 -u USERID -p PASSWORD`)

- **Use Process Task Function to launch a batch file / script on the director server (.bat or .bsh, depending on your server OS)**
 - Example provided in following slides

Sample MPCLI script and execution

Writing the input Script

```

C:\WINDOWS\system32\cmd.exe
C:\Program Files\IBM\Director\bin>type scripts\vpd.script
outputfile scripts\vpd-script-output.txt

loginip -h 9.44.239.222 -u USERID -p PASSWORD

getmpid
getmpc lock
getvpd -postbios
getvpd -planariobackplane
getvpd -planarioicard
getvpd -planarfrontpanel
getvpd -planarmemorycard
getvpd -planarcpu
getvpd -mhardware
getvpd -mprom
getvpd -mpboot
getvpd -mpdevice driver
getvpd -dasd
getvpd -cpu
getvpd -vps
getvpd -powerbackplane
getvpd -vrm

logoff

resetoutput
exit

C:\Program Files\IBM\Director\bin>_
  
```

Executing the Script

```

C:\WINDOWS\system32\cmd.exe
C:\Program Files\IBM\Director\bin>mpcli inputfile scripts\vpd.script_
  
```

Output from the Script

```

C:\WINDOWS\system32\cmd.exe
C:\Program Files\IBM\Director\bin>type scripts\vpd-script-output.txt
SUCCESS: loginip -h 9.44.239.222 -u USERID -p PASSWORD
SUCCESS: getmpid
SUCCESS: getmpid -text
Management Processor Text ID: UMN-1398799791
SUCCESS: getmpid -numeric
Management Processor Numeric ID: -1398799791
SUCCESS: getmpid -secretkey
Management Processor Asset Tag:
SUCCESS: getmpc lock
SUCCESS: getmpc lock -timeanddate
Date and Time: 02/01/2008 20:33
SUCCESS: getmpc lock -dut
File
SUCCESS: getmpc lock -gmtoffset
0.0
Post BIOS UPD:
  build ID: MPE1340C
  file name: 2005000.PLS
  revision: 10
  version: 1.1.0
  date: 7/20/2005
FAILURE: getvpd -planariobackplane failed
FAILURE: getvpd -planarioicard failed
FAILURE: getvpd -planarfrontpanel failed
FAILURE: getvpd -planarmemorycard failed
FAILURE: getvpd -planarcpu failed
Hardware Decision Level: 1
Firmware UPD:
  build ID: MPEP21A
  file name: P8E1PMS.PDT
  date: 8/25/2005
  revision: 10
  version: 1.1.7
  valid: true
Firmware UPD:
  build ID: MPEP21A
  file name: P8E1PMS.PDT
  date: 8/25/2005
  revision: 10
  version: 1.1.7
  valid: true
Device Driver: DIMM2 1.18
Memory UPD:
  block ID: 112
  pos ID: 10
  part number: 25K5120
  fru number: 24K4955
  serial number: J1M1 49R9XC
  manufacturer ID: M05
FAILURE: getvpd -cpu failed
FAILURE: getvpd -ps failed
FAILURE: getvpd -powerbackplane failed
FAILURE: getvpd -vrm failed
SUCCESS: logoff
C:\Program Files\IBM\Director\bin>
  
```

Create a new Process Task for the VPD Script

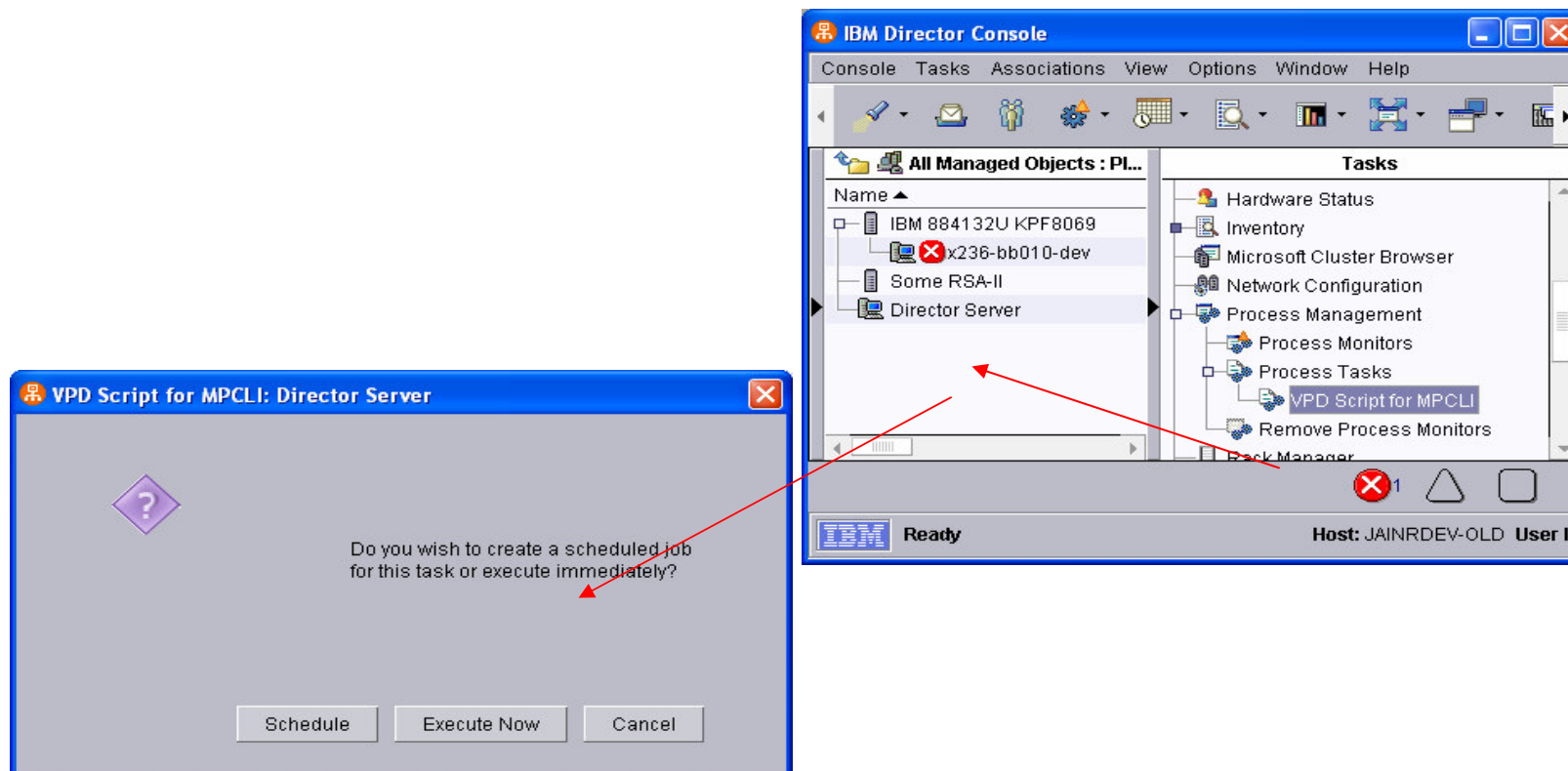
The screenshot displays the IBM Director Console interface. A dialog box titled "Process Task : VPD Script for MPCLI" is open, showing the configuration for a new process task. The "Command" field contains the path: "C:\Program Files\IBMDirector\bin\MPCLI.bat" inputfile scripts\vpd.script. The "Timeout (Seconds)" is set to 60, and the "Log" checkbox is checked. The "Login" section shows the "User ID" as "administrator" and the "Password" field is masked with asterisks.

In the background, the "Tasks" pane on the right shows a tree view of tasks. A red arrow points to the "Process Tasks" folder, which is expanded to show the "VPD Script for MPCLI" task being configured.

Name	TCP/IP Addresses	TCP/IP Hosts
IBM 884132U KPF8069	{ '9.44.239.131' '9.4... }	{ x236-bb010-de
x236-bb010-dev	9.44.239.131	x236-bb010-dev.
Some RSA-II	{ '9.44.239.222' }	

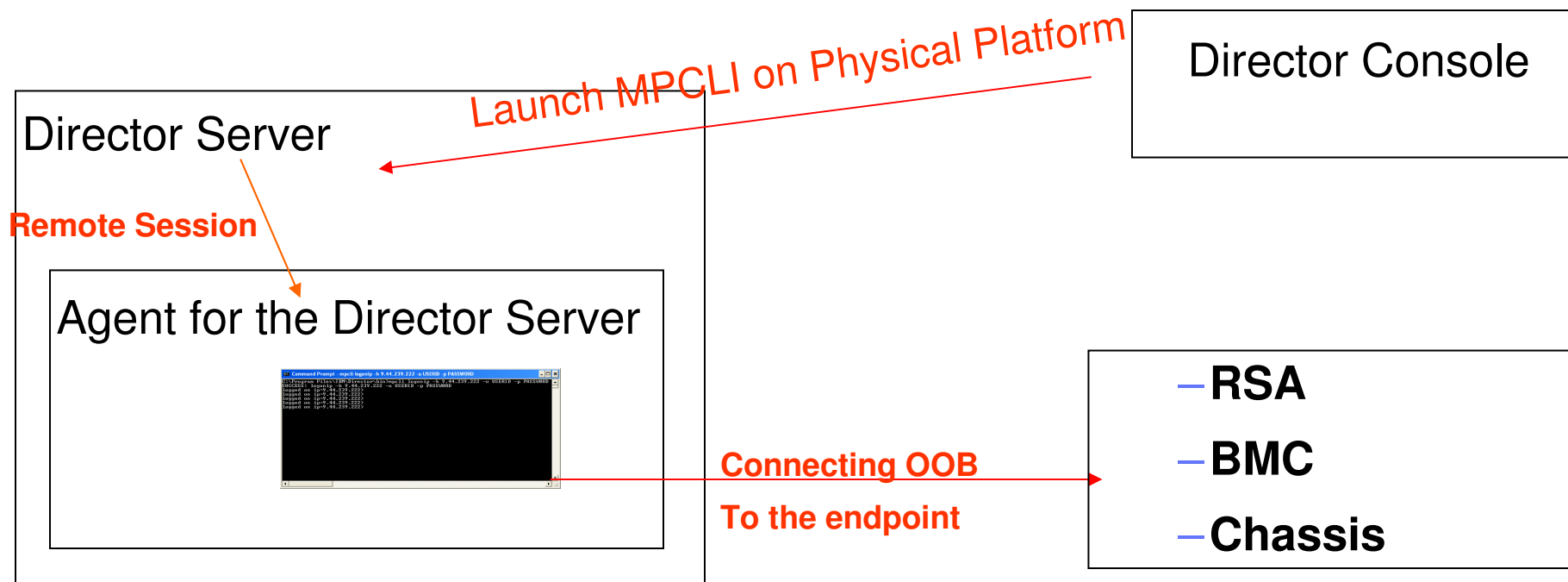
Host: JAINRDEV-OLD User ID: JAINRDEV-OLD\administrator 4 objects

Now Drag the Process Task to the Director Server and schedule it, or execute it right away



How is MPCLI executing

- The Director Console is doing a “Remote Session” on to the Director server, and then launching MPCLI.
- The MPCLI is actually executing on the Director server



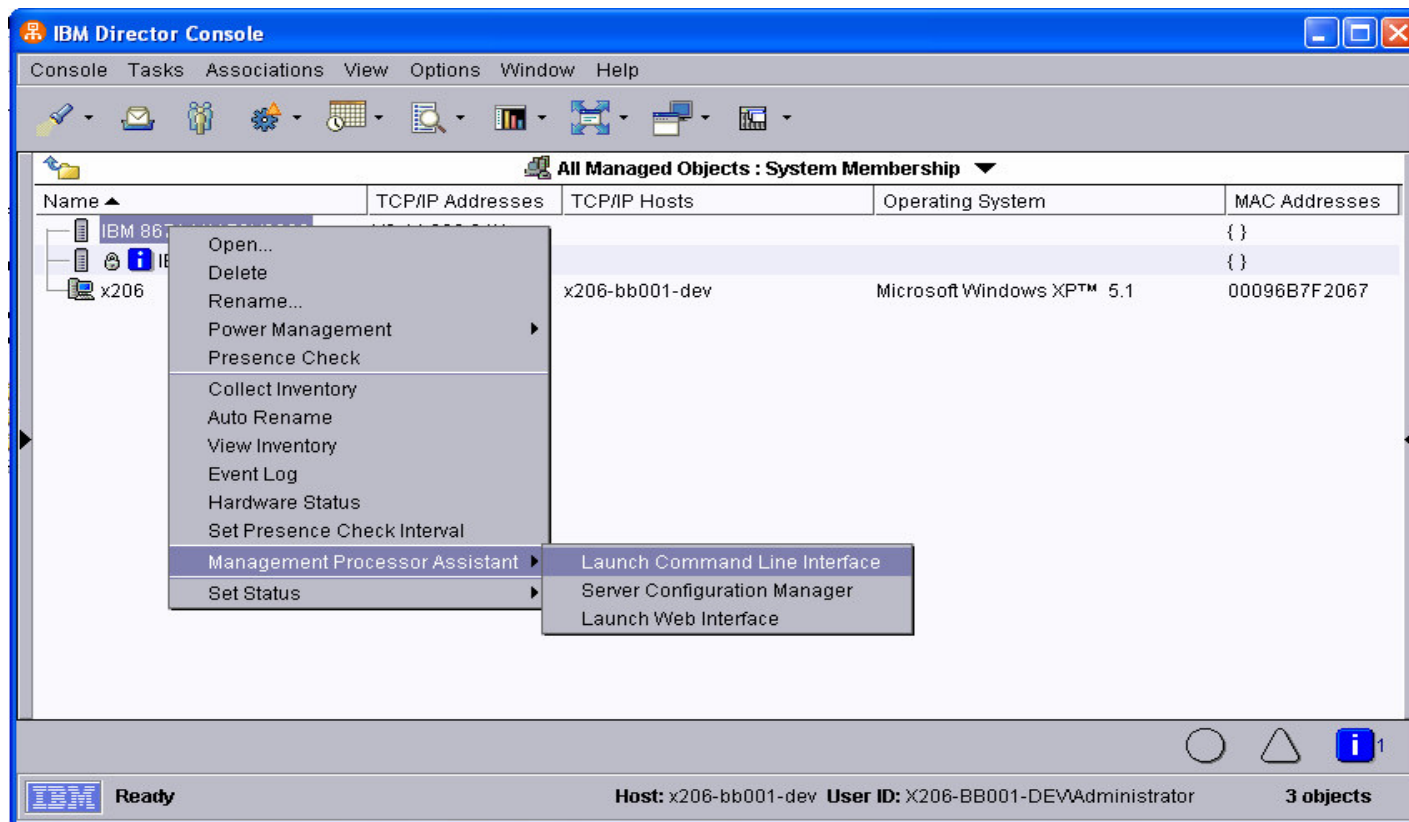
What endpoints can the CLI be used for ?

- **Only OOB support to the managed endpoint**
- **MM (BC-E, BC-T), ASMPA (Wiseman), RSA-I (Falcon/Condor), RSA-II (Raptor/Peregrine), BMC (IPMI) have ethernet interfaces, so direct point to point connection is possible in one hop.**
- **ISMP (H-8/Hawk), ASMP (Ranger) will have to be available on the system interconnect (RS-485) network. User will have to manually logonip to the gateway, then logonrs485 to the device.**

What can the MPCLI do ?

- **Scriptable –**
 - All commands are scriptable and launchable in a non-interactive manner. Output can also be redirected to a file, which can be parsed later.
- **Available Function**
 - SOL,KVM, Boot Options Configuration
 - Power Operations and Status
 - Switch Module configuration
 - Topology, VPD information
 - Network Settings, LDAP Configuration
 - Event Logs, Alert configuration and information
 - Environmental information
 - And more....
- **User's Guide is available for more detail on the commands and usage.**

Launching MPCLI on a Physical Platform



What do you get when you launch MPCLI

