

PANDUIT[®]

für

eco



Physical Infrastructure Manager™ (PIM™)
und
PanView iQ™ (PViQ™)

*im Rahmen des
eco Trialog #4, Hamburg, 13. Februar 2013
„Lassen sich mit DCIM Brücken bauen?“*

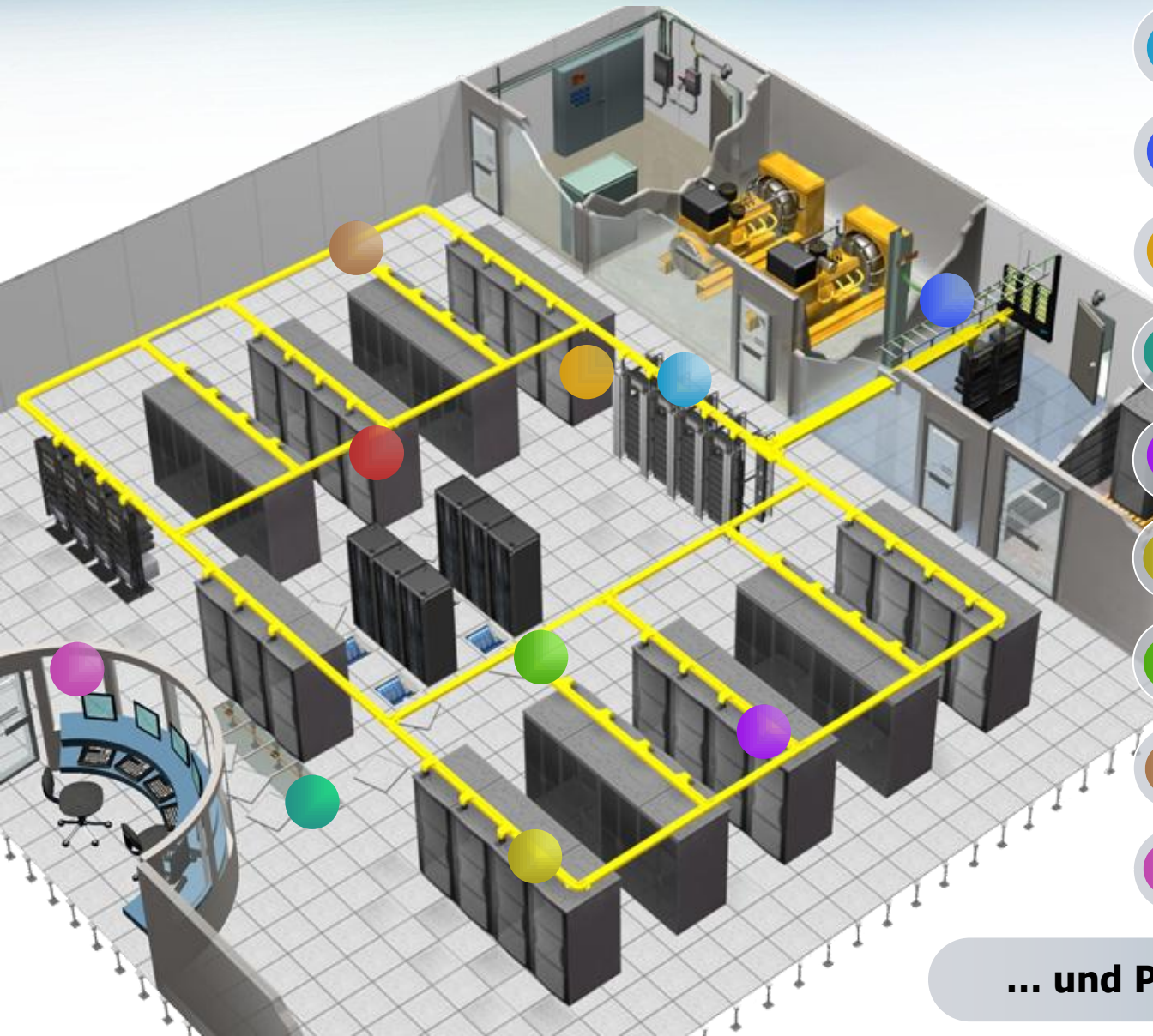
Unified Physical Infrastructure



building a smarter, unified business foundation
Connect. Manage. Automate.


PANDUIT[®]

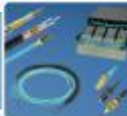
PANDUIT® Data Center Solution



 **Copper Cabling Systems**



 **Fiber Cabling Systems**



 **Cable Ties & Accessories**



 **Identification & Labelling**



 **Grounding & Bonding**



 **Cable Management**



 **Fiber & Cable Routing Systems**



 **Zone Cabling Systems**



 **Cabinet & Rack Systems**



 **DC Management Software**



... und Professional Services



Warum DCIM?

Unified Physical Infrastructure



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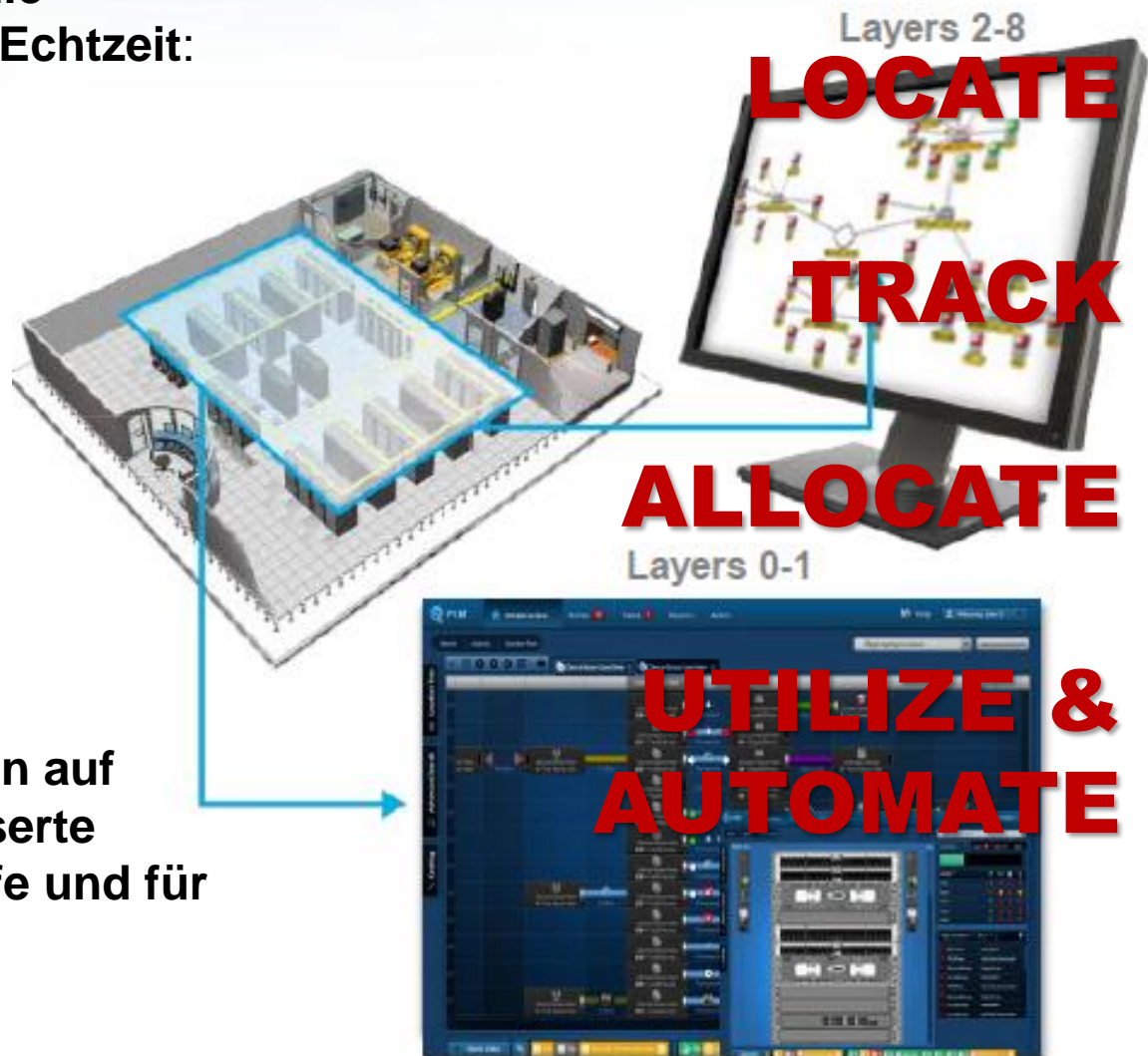


Worin liegt der Nutzen von PIM™?

PIM™ Software überwacht die Physical-Layer-Attribute in Echtzeit:

- zum Verfolgen von IT Assets
- zum Vermindern von Risiken
- zur Einsparung von Kosten, OPEX und CAPEX
- zur Optimierung des Kapazitätsmanagements
- für zentralisiertes Remote Management

PIM liefert alle Informationen auf einen Blick für eine verbesserte Effizienz der Betriebsabläufe und für höchste Betriebssicherheit



Software-Struktur

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DCIM Software Marktsegmente

ASSET MANAGEMENT (inkl. IPLM*)

- Software for visualizing, tracking, monitoring IT assets
- Uses GUI to create architectural geometry, cooling / ventilation, power and IT configurations
- Gathering event-driven data, in real-time, from multiple sources across the plant and/or enterprise
 - Tracks and monitors any aspect of the physical IT infrastructure (Cabinets, servers, racks) and other IT aspects like virtualization
- Includes Connectivity -- Software providing visibility and control of cabling connections/management (IPLM)

KAPAZITÄTSPLANUNG

- Software focused on forecasting and scenario analysis
- Search and algorithmic compute for optimal placement of new equipment by specifying power, cooling, space, weight, network or power port availability
- Build models of future consumption based on planned equipment moves, adds, and changes
- Trending and thresholds indicate when the data center will run out of resources with trend lines on those resources
- Uses forecasting to determine and plan for future resource needs

DCIM Software

ENERGIEMANAGEMENT

- Software that focuses on energy/power management
- Hardware/software combination to collect power data from power strips or out-of-band processors
 - Managing power quality (voltage, harmonics, frequency) and ensuring uninterrupted supply
- Power/Energy reporting and analytics capabilities

UMWELT- und UMGEBUNGSBEDINGUNGEN

- Software that tracks temperature, cooling, humidity for real-time monitoring and analysis
- Provides visibility into thermal profiles, pressure, humidity and cooling monitoring and management across data centers
- Thermal, pressure differential, humidity and dew point mapping using real-time data

Module und Integration

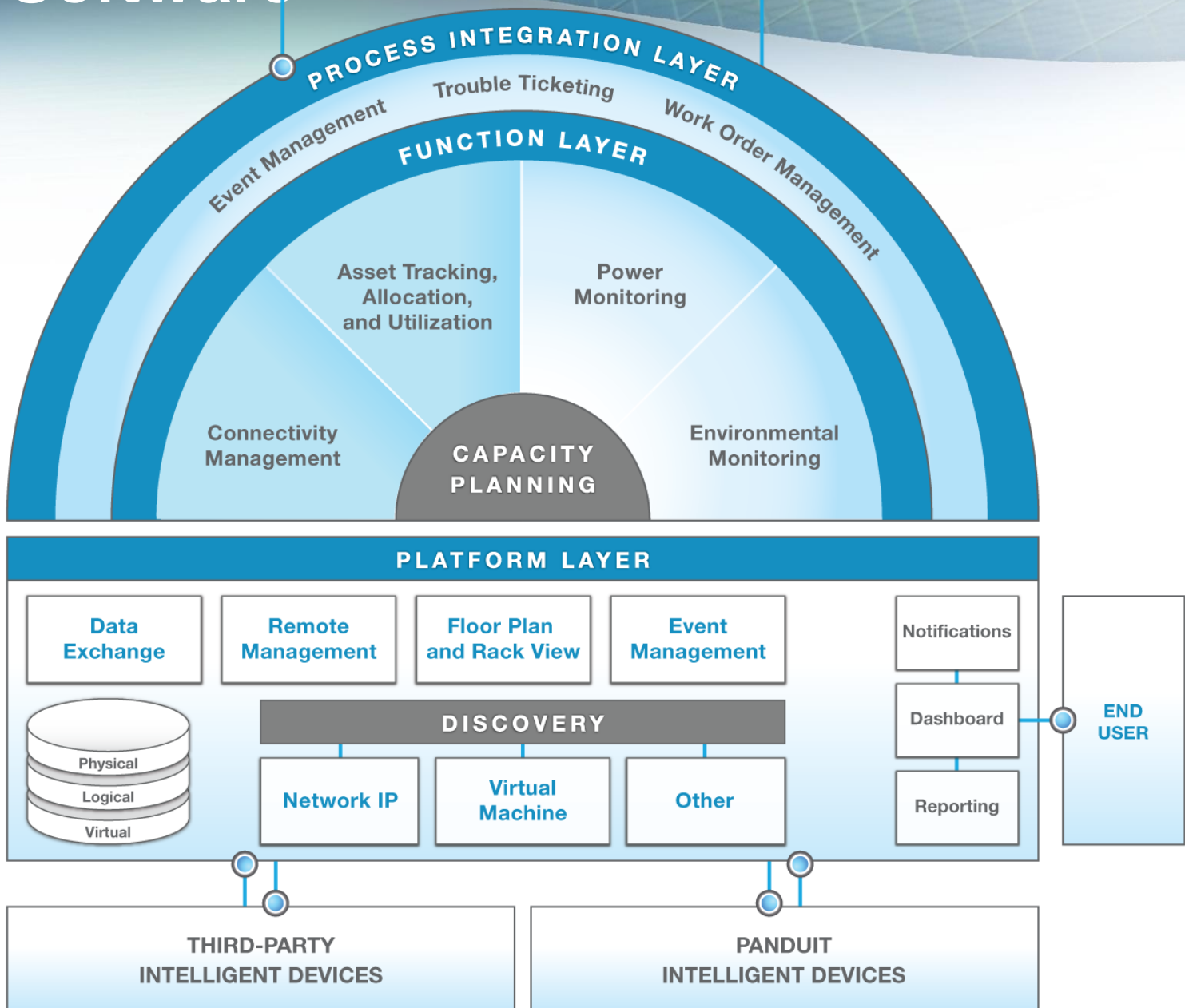
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EXISTING IT SYSTEMS



Ein paar bunte Bilder...

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PIM Infrastructure Events 14 Tasks 1 Reports Admin Help Welcome, John S.

World Atlanta Garden Park

Begin typing to search... Advanced Search

Device Name Goes Here

Device Name Here 19 - FastEthernet...	Permanent	Device Name Here 18 - GigabitEthernet...	PVQ Card	Device Name Here 1 - Port Name Here
Device Name Here 201 - FastEthernet...	Permanent	Device Name Here 11 - GigabitEthernet...		
Device Name Here 202 - FastEthernet...	Permanent	Device Name Here 12 - GigabitEthernet...	Patch Cord	Unknown Device 1 - Port Name Here
Device Name Here 203 - FastEthernet...	Permanent	Device Name Here 13 - GigabitEthernet...		
Device Name Here 204 - FastEthernet...	Permanent	Device Name Here 14 - GigabitEthernet...	Multimode Fiber...	Blade2 1 - Linecard 2 Port-1
Device Name Here 205 - FastEthernet...	Permanent	Device Name Here 15 - GigabitEthernet...		
Device Name Here 206 - FastEthernet...	Permanent	Device Name Here 16 - GigabitEthernet...		
Device Name Here 207 - FastEthernet...	Permanent	Device Name Here 17 - GigabitEthernet...		
Device Name Here 208 - FastEthernet...	Permanent	Device Name Here 18 - GigabitEthernet...		
Device Name Here 209 - FastEthernet...	Permanent	Device Name Here 19 - GigabitEthernet...	Multimode Fiber...	Blade2 9 - Linecard 2 Port-9
Device Name Here 300 - FastEthernet...	Permanent	Device Name Here 20 - GigabitEthernet...		
Device Name Here 301 - FastEthernet...	Permanent	Device Name Here 21 - GigabitEthernet...		

Quick Links My My My Dell Servers\Accoun

Refresh Data

Timestamp

- 07/27/2012 22:00
- 07/27/2012 12:17
- 07/27/2012 23:51

Infrastructure Events 14 Tasks 1 Reports Admin Help Welcome, John S.

Begin typing to search...

Overall Health

Location

- Atlanta Health
- Columbia Health
- London Health
- Mount Everest Health
- Ottawa Health
- Sydney Health

Highest Contributor

- ESXi 4.1 Server Internal failure
- PVQ PM Pane Power Device Disconnected
- PIM 4.0 in 2K8 Server Voltage Too Low
- Cisco 6509 Switch Internal failure
- PVQ PM Pane Power Device Disconnected
- PIM 4.0 in 2K8 Server Voltage Too Low
- Cisco 6509 Switch Internal failure
- Cisco 6509 Switch Power Device Disconnected

Device Name Goes Here

Front

Back

This Port	Connected To
Port Name port13	port13
Port Number 13	13
Device Name KJFR PM(1)	KJFR PM(1)
IP Address 172.21.50.49	172.21.50.49
MAC Address 0A-1B-2C-3D-4E-5F	0A-1B-2C-3D-4E-5F
PVQ Offset/SW Blade 1	1
Rack Name KJFR Desktop Rack	KJFR Desktop Rack
Rack Position 2	2
Cord Type Double-Ended PVQ Cord	

DISMISS VIEW

Server 12

- 18-3 2%
- 18-4 13%
- 18-5 2%

Floor 3

Floor 4

Floor 5

Highest Contributor

- ESXi 4.1 Server Internal failure
- PVQ PM Pane Power Device Disconnected
- PIM 4.0 in 2K8 Server Voltage Too Low

PIM 4.0 in 2K8 Server Voltage Too Low

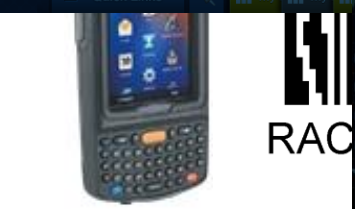
Cisco 6509 Switch Internal failure

Cisco 6509 Switch Power Device Disconnected

14

HP ProLiant - DL380 G7
8 GB RAM - 2.53 GHz

DISMISS VIEW



Der echte Wert – durch Integrationen!

Unified Physical Infrastructure

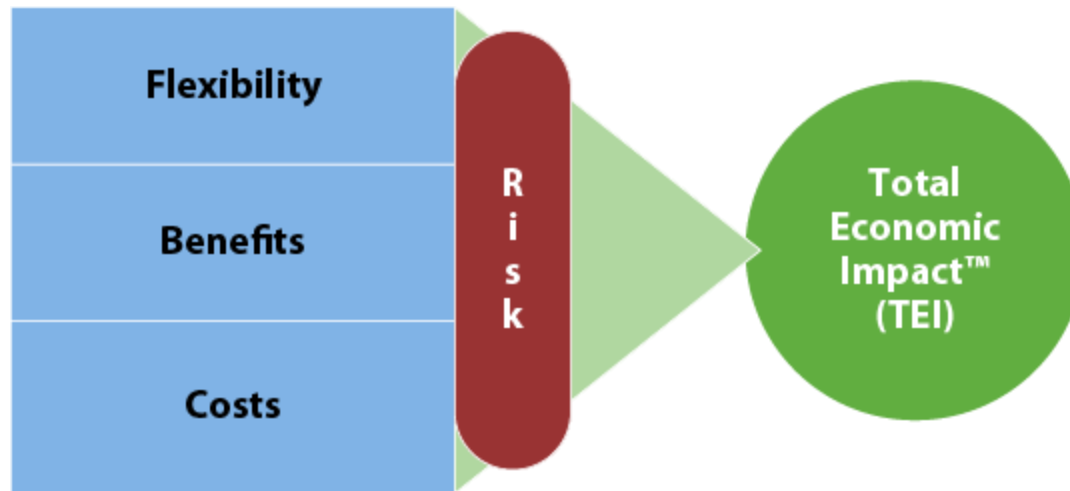


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Integration mit Unterstützung durch *Panduit Advisory Services*

	Cost	Benefit	Flexibility	Risk
Total cost of ownership (TCO)	X			
Return on investment (ROI)	X	X		
Total Economic Impact™ (TEI)	X	X	X	X



Total Economic Impact ist ein Trademark von

FORRESTER

IBM Tivoli Integration, Microsoft System Center Operations Manager 2007 und andere

- Enrich events in OMNIbus or SCOM with physical layer data from PIM™
- Alerts / notification of critical infrastructure events
- Root cause analysis
- Decrease MTTR
- Increase MTBF

Time	From	To	Operational State
4/30/2010 3:42 AM			
4/30/2010 3:36 AM			
4/29/2010 9:25 AM			


```

Context:
« DataItem type = "System.Event.LinkedData" time = "2010-04-30T08:36:22.5996975Z"
sourceHealthServiceId = "901ab09f-3ab4-e173-0b14-b475affed825" »
< EventOriginId > {25d70699-534f-42ac-b234-fbccc6ed2cb} </ EventOriginId >
< PublisherId > {2641d942-7c6d-2c12-6f11-fc0bce2563c} </ PublisherId >
< PublisherName > Panduit PIM </ PublisherName >
< EventSourceName > Panduit PIM </ EventSourceName >
PIM </ Channel >
< EventNumber >
< EventCategory >
« alert »
    
```

Serial	TNumber	TicketStatus	LastOccurrence	Tally	Role	Summary	Device ID	Part ID	Location
87214		Unauthorized Double-End	11/3/10 12:40:23	2	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	5	Location_c
87252	1647	NER	11/3/10 11:54:59	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	3	Location_c
87229		Unauthorized Single-End	11/3/10 10:18:38	2	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	10	Location_c
87258		Unauthorized Double-End	11/3/10 12:40:14	1	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	4	Location_c
87328		Unauthorized Double-End	11/3/10 12:40:35	1	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	11	Location_c
87331		Unauthorized Single-End	11/3/10 12:41:41	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	8	Location_c
87334		Unauthorized Double-End	11/3/10 12:41:58	1	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	21	Location_c
87338		Unauthorized Double-End	11/3/10 12:41:58	1	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	20	Location_c
87340		Unauthorized Double-End	11/3/10 12:42:11	1	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	24	Location_c
87342		Unauthorized Double-End	11/3/10 12:42:16	1	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	32	Location_c
87347		Unauthorized Double-End	11/3/10 12:42:38	2	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	17	Location_c
87348		Unauthorized Double-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Double-End rack_je_479 rack_n...	3447	14	Location_c
87237		Link Down	11/3/10 12:00:15	1	192.166.75.1	Link Down rack_je_479 rack_name: Rack 3A...	3598	19	Location_c
87313		Link Down	11/3/10 12:42:32	4	192.168.75.1	Link Down rack_je_479 rack_name: Rack 3A...	3598	5	Location_c
87316		Unauthorized Single-End	11/3/10 12:42:34	1	192.168.75.1	Unauthorized Single-End rack_je_479 rack_n...	3447	35	Location_c
87324		Unauthorized Single-End	11/3/10 12:42:14	2	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	16	Location_c
87327		Unauthorized Single-End	11/3/10 12:42:32	2	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	15	Location_c
87329		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	16	Location_c
87330		Unauthorized Single-End	11/3/10 12:42:34	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	19	Location_c
87331		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	16	Location_c
87332		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	18	Location_c
87333		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	24	Location_c
87334		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	25	Location_c
87335		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	15	Location_c
87336		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	15	Location_c
87337		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	15	Location_c
87338		Unauthorized Single-End	11/3/10 12:42:32	1	192.168.75.20	Unauthorized Single-End rack_je_479 rack_n...	3447	15	Location_c

System Center Operations Manager 2007 R2 - MMS

Monitoring

- System
- Applications
- Task Status
- Univ/Lync/Series
- Univ/Lync/Service
- Virtualization
- Virtualization Collector Services
- Microsoft SQL Server
- Microsoft Windows Shared Libraries
- Microsoft Windows Service
- Network Device
- Orion Integration Service
- Panduit PIM
- PIM Computer State
- PIM Device State
- PIM Event State
- PIM Service State
- Network Diagram
- MM
- Synthetic Transaction
- Virtualization Manager 2008 R2
- Virtualization Manager 2008 R2 M...
- Web Application
- Windows Service / Process / Process...

Network Diagram

PIM Device State (11)

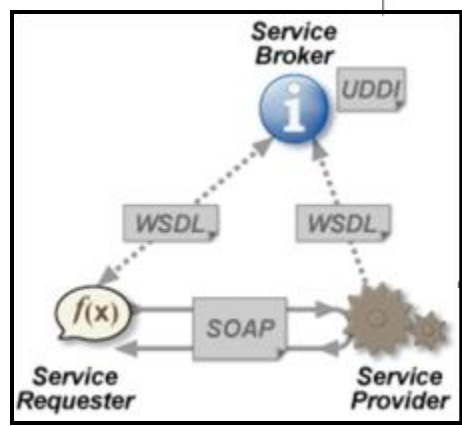
State	Name	Host	Host IP	Host	IP Address	MAC	Location
OK	PIM Button (1)	Archives & P&S	10	9	192.168.75.20		Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (2)	Archives & P&S	10	7	192.168.75.20		Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (3)	Archives & P&S	10	8	192.168.75.20		Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (4)	Archives & P&S	10	12	192.168.75.20		Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (5)	Archives & P&S	17	17	192.168.75.20	01:8C:01:00:00:00	Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (6)	Archives & P&S	10	13	192.168.75.20		Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (7)	Archives & P&S	10	1	192.168.75.20		Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (8)	Archives & P&S	10	24	192.168.75.20	01:8C:01:00:00:00	Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (9)	Archives & P&S	10	28	192.168.75.20		Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab
OK	PIM Button (10)	Archives & P&S	10	12	192.168.75.20		Country=USA;State=IL;City=Orion Park;Company=Panduit;Building=10;Street=Plow;CityStreet=TestLab



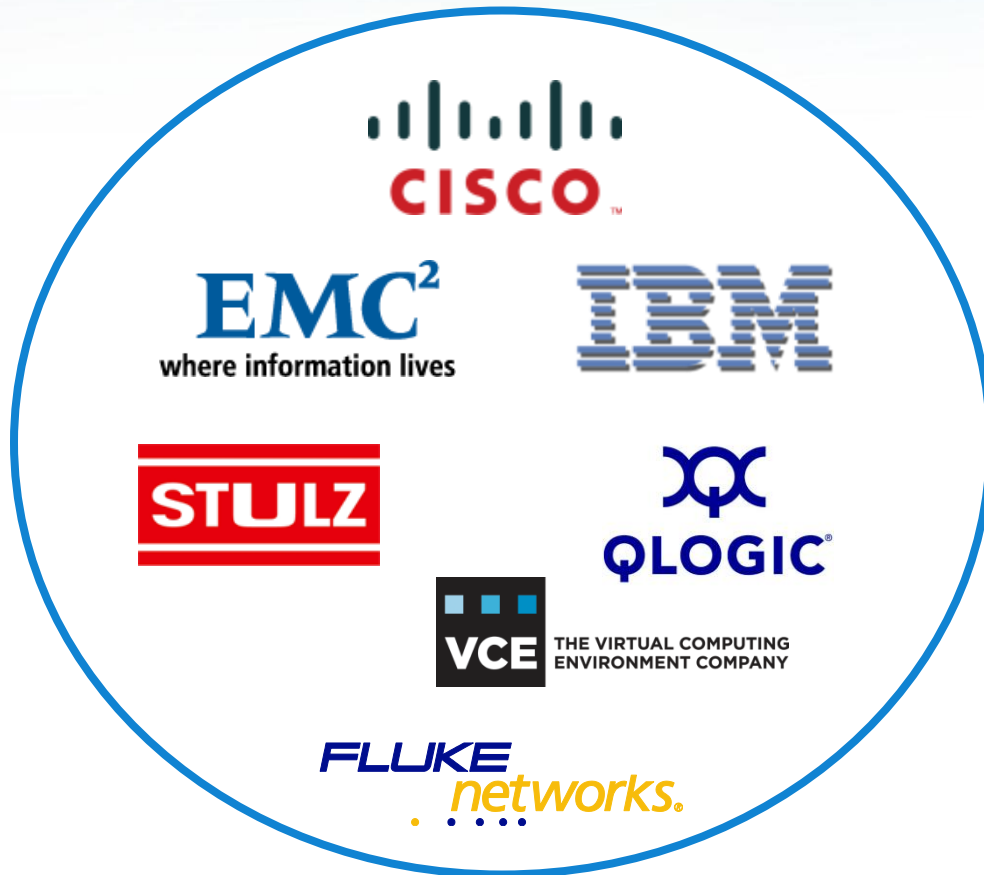
Application Programming Interfaces

Core APIs

- Location Information
- Device attributes
- Event data
- Connectivity management
- Asset tracking



Data Center Partnerstrategie



Panduit "Trusted Advisor" für Layer 0 und 1

- Partnerschaft mit Technologieführern
- Berücksichtigung mehrerer Faktoren bei der Partnerwahl
- Vertiefung der Partnerschaft durch die Zusammenarbeit vor Ort und beim Kunden
- Selektiv, ohne Ausschließlichkeit
- Technologiekollaboration fokussiert sich auf die Produkt-Neuentwicklung und die Forschung
- Go-to-market Zusammenarbeit fokussiert sich auf die Lösungspräsentation, gemeinsame Beratung und Partnerentwicklung sowie Endkundenbetreuung

Kundenstimmen

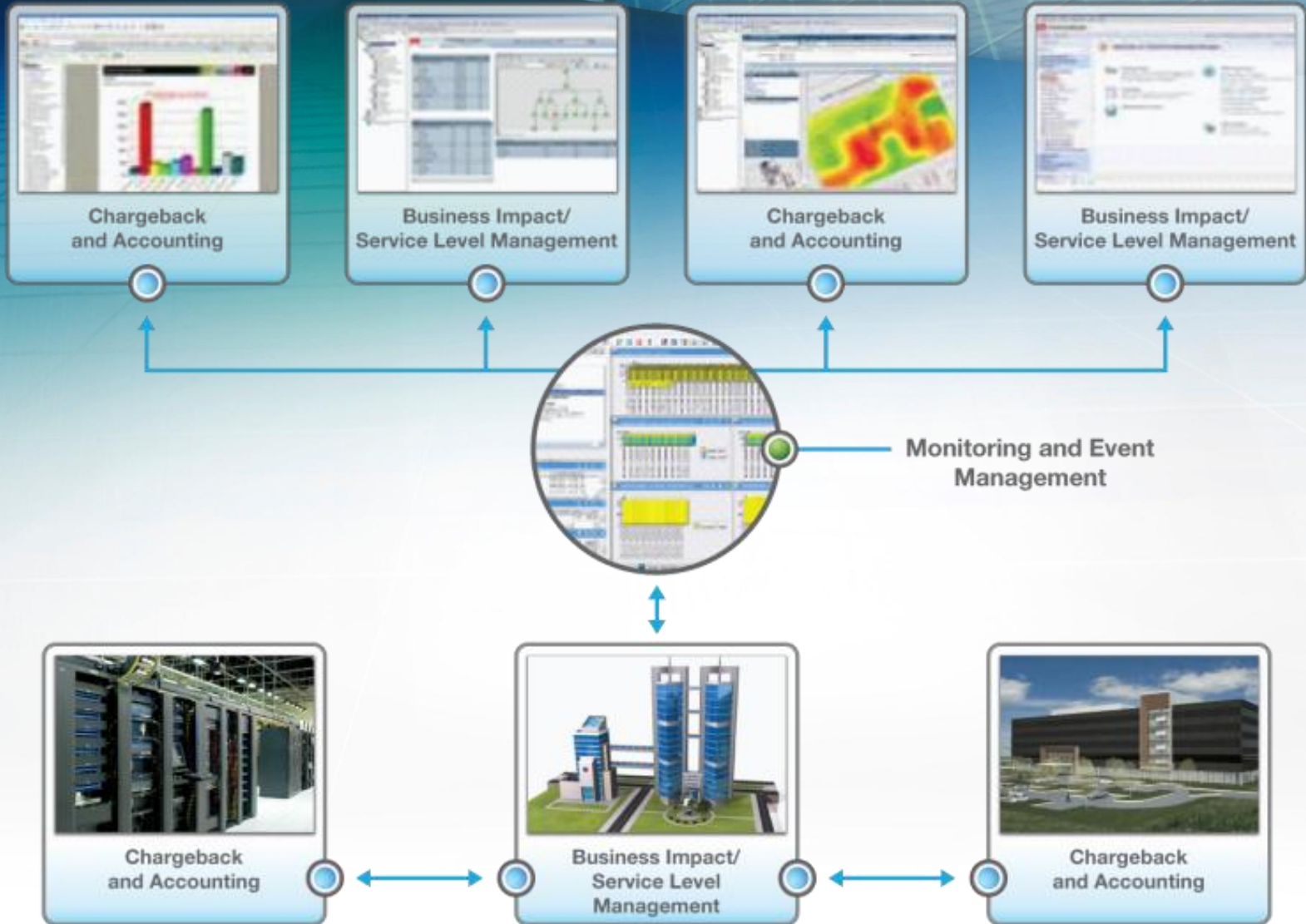
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Integration der Panduit-Lösung mit Systemsoftware




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**Endlich eine Plattform
die mir trotz nationaler
Standards eine weltweite
Steuerung und
Überwachung ermöglicht**

**Die Stromkosten
gingen um 30%
zurück**

**Die Diebstähle
konnten wir um 80%
reduzieren**

**Wir brauchen jetzt
keine manuelle Doku-
Pflege mehr, wir sind
fehlerfrei**

**Wir haben jederzeit vollen
Einblick in die Assets und
reduzieren unsere
Deployment-Planung von
fünf auf zwei Tage**



die Ausgangsfrage war:

***„Lassen sich mit DCIM
(sinnvolle) Brücken
bauen?“***



Fragen?

Wo?

Wer?

Antworten!

**Sehr
wohl!!!**



*zur Terminvereinbarung, für weitere Details:
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