

March 17 - 20, 2008

**OSIsoft Developer
Conference 2008**

San Francisco, CA

Take It to the Limit

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The Palace Hotel • San Francisco, CA • March 17-20, 2008

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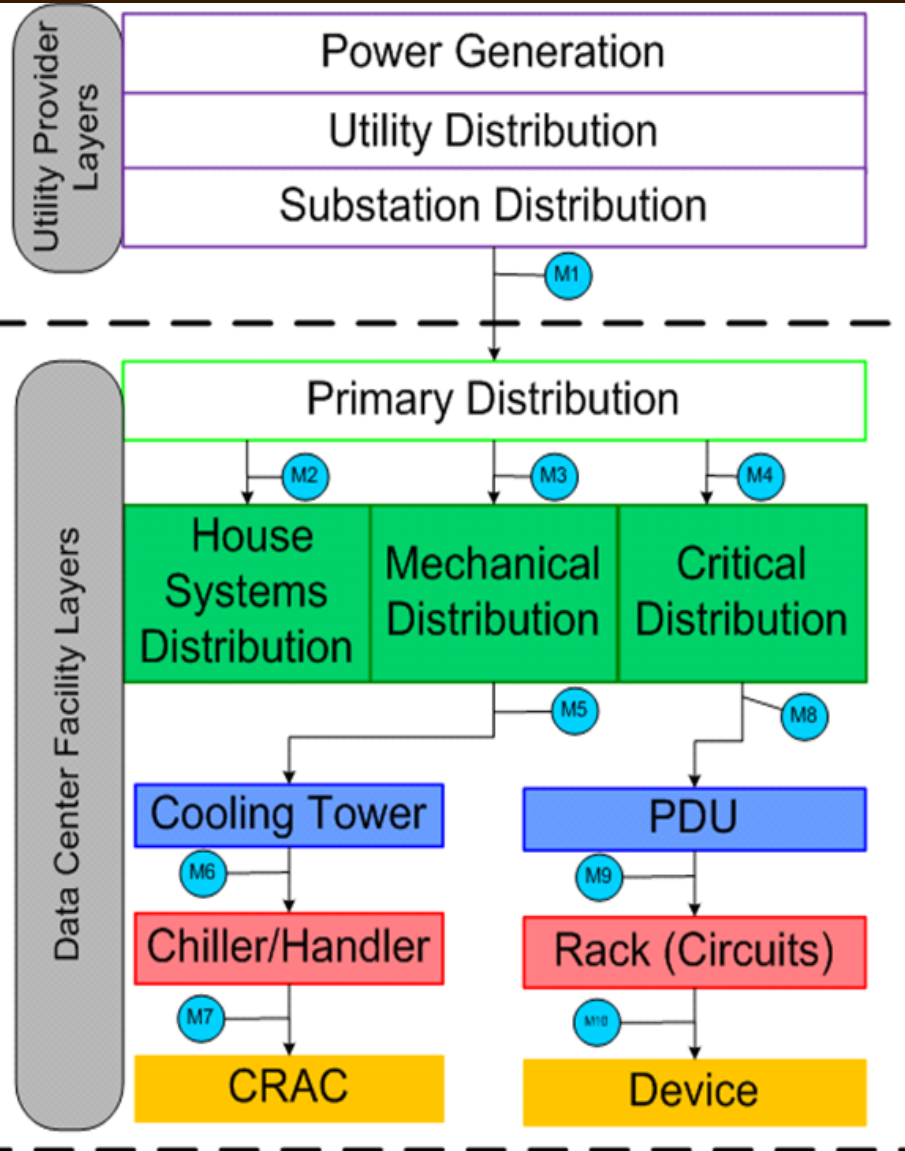
Take It to the Limit



The Value of AF 2.0 for the Data Center and IT

Martin Otterson & Christian Luckock

Data Center Power



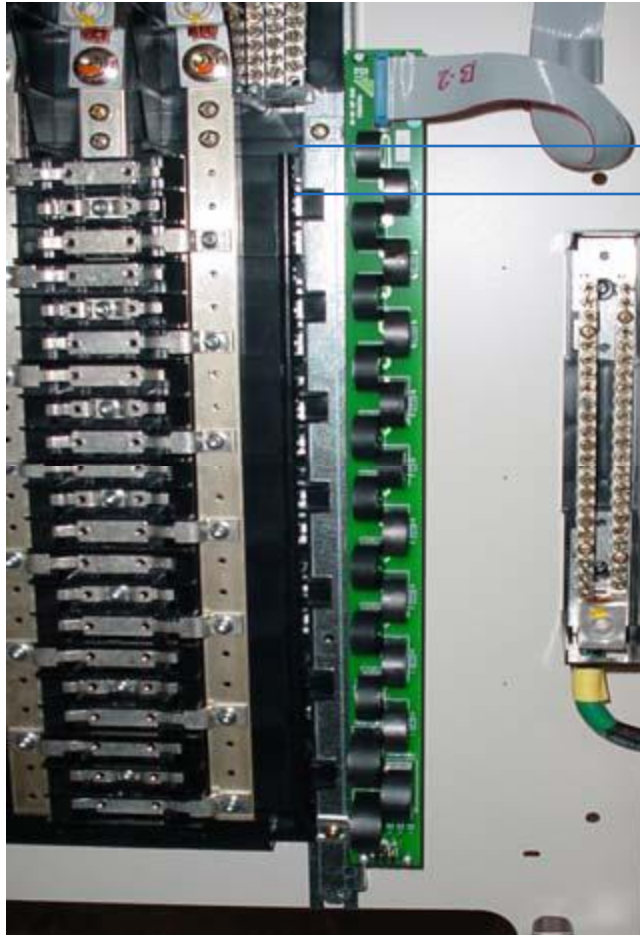
MeasurementID	Description
M1	Utility Provider Total Power Load Measurement
M2	Power Load for Non critical systems (lighting, offices, etc.)
M3	Power Load for HVAC and Other Mechanical Systems
M4	Total Power Load for Devices and Other Critical Systems
M5	Cooling Tower Load
M6	Chiller, Air Handler Load
M7	CRAC Unit Load
M8	UPS Load Measurements
M9	Branch Circuit Monitoring System
M10	Individual Device Load

- RPP Measurements
 - Voltage for all phases
 - Power factor
 - Phase current
 - Power: real, apparent and reactive
- Pole Measurements
 - Current
 - Rating
- Circuit and Rack Calculations
 - Current
 - Apparent power

BCM 101

Rack AA.101

RPP 1A1



← Pole
1A1.01

← Pole
1A1.03

Circuit
1A1.01.03



42 Rack
Units

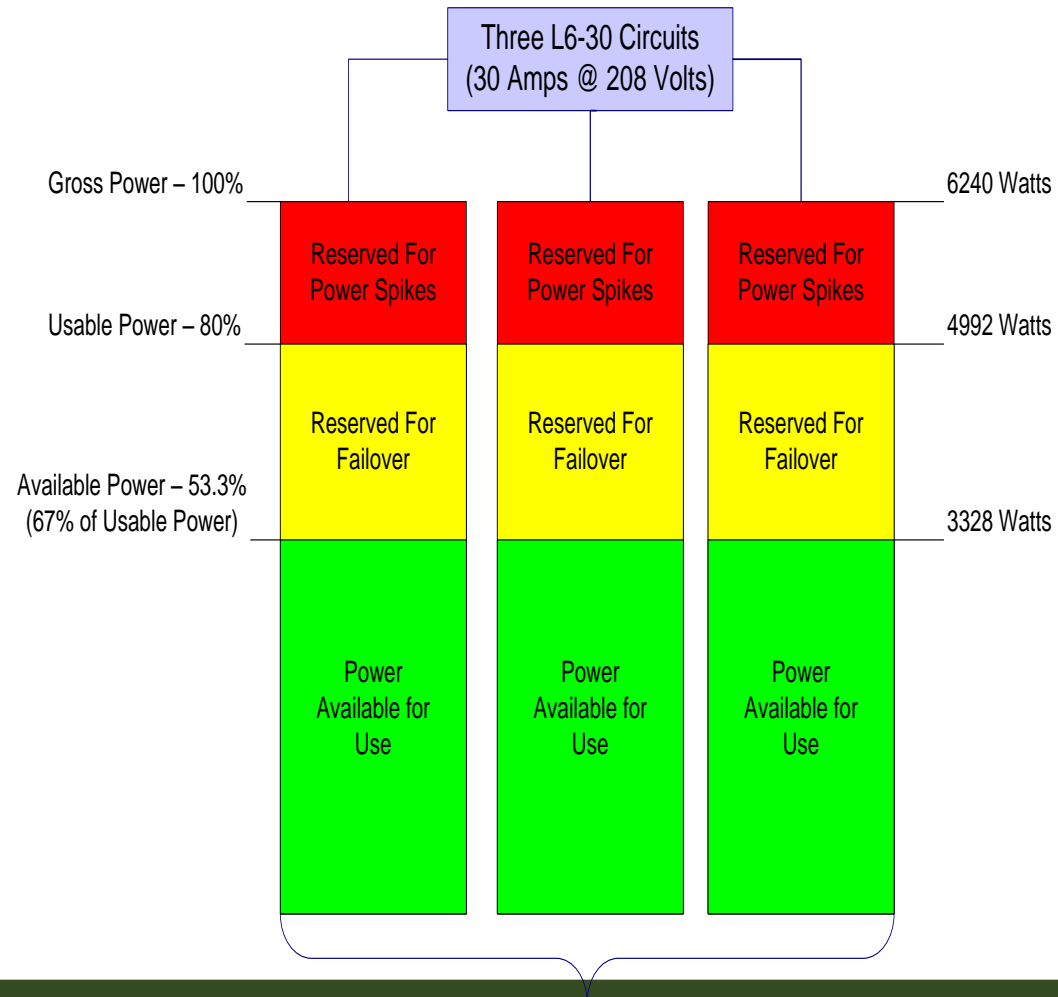
L6-30
Circuit L6-30
Circuit L6-30
Circuit

Circuits to different RPP's



Rack Calculations for a 3 Circuit Rack

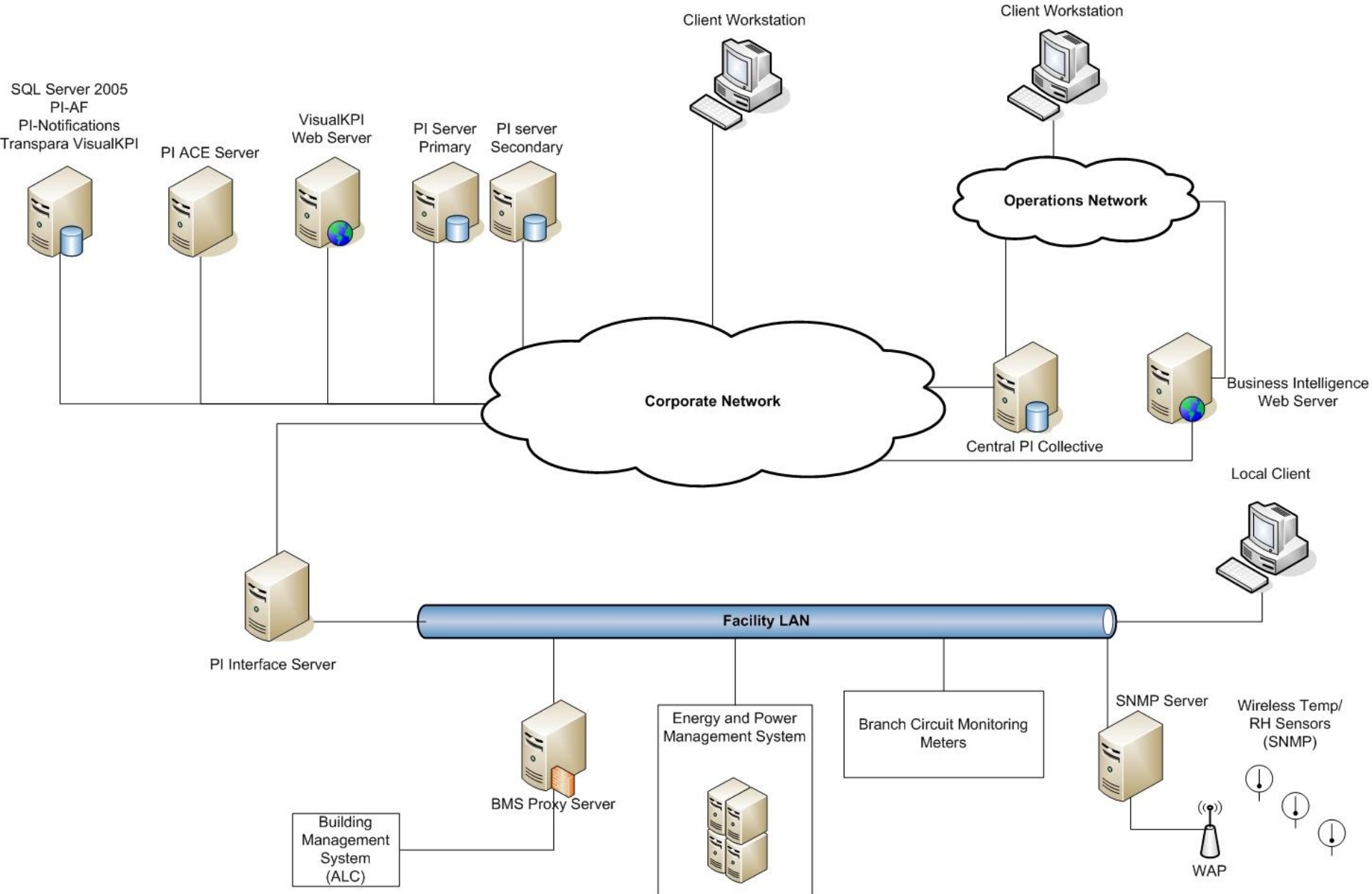
- Only 80% of a circuit's power can be used for sustained load. This is **usable power**.
- Assuming all devices are dual corded for redundancy, only 67% of each circuit's usable power capacity is available for server load. The rest is reserved for failover. This is **available power**.



Architecture Motives

- Why AF?
 - Scalability
 - Contextualization
 - Notifications
- Why Transpara – Visual KPI?
 - Lightweight web-based and mobile visualization
 - Integration with AF out of the box
 - Simple configuration, zero programming
 - Fast and easy for end-users

OSIsoft RtPM Architecture Diagram





Questions & Answers

Thank
You !