Capacity Optimization Tool:

What you should expect from a good capacity optimization tool and a surprising benefit of having a good tool

Presented to you by:

BEN DAVIES

We make heavy use of the comments section.
Download the presentation for that data.

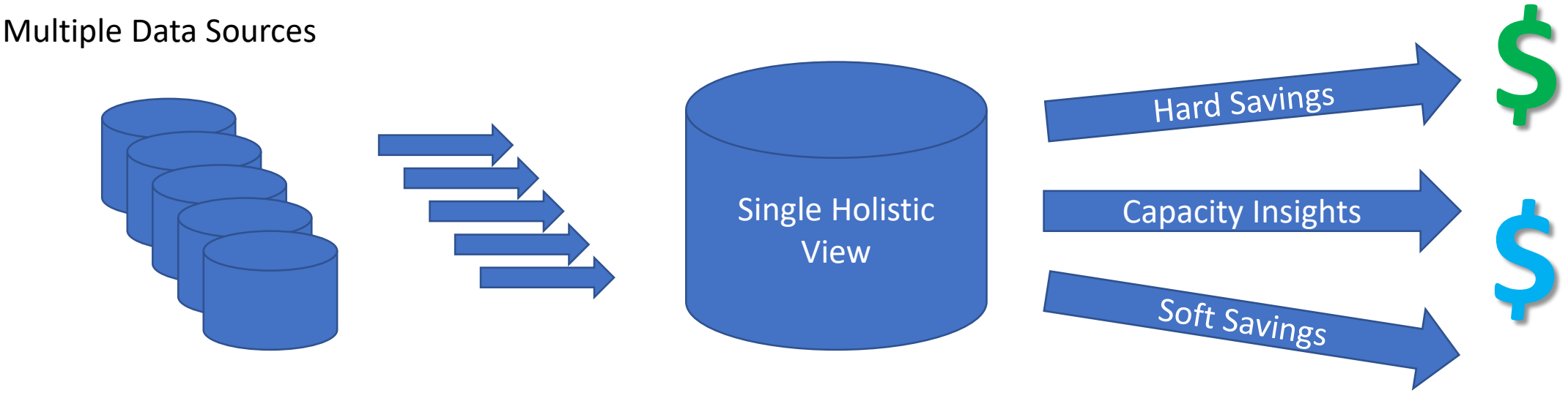
Agenda

- ❑ Define our Purpose/ Goal of Capacity Management
- ❑ Keys to achieving the Goal – A good tool
- ❑ A good tool delivers Reports and Actionable Intelligence
- ❑ Gestalt Psychology (yes it applies!)
- ❑ Summary and Capacity Management “Must Haves”
- ❑ Questions

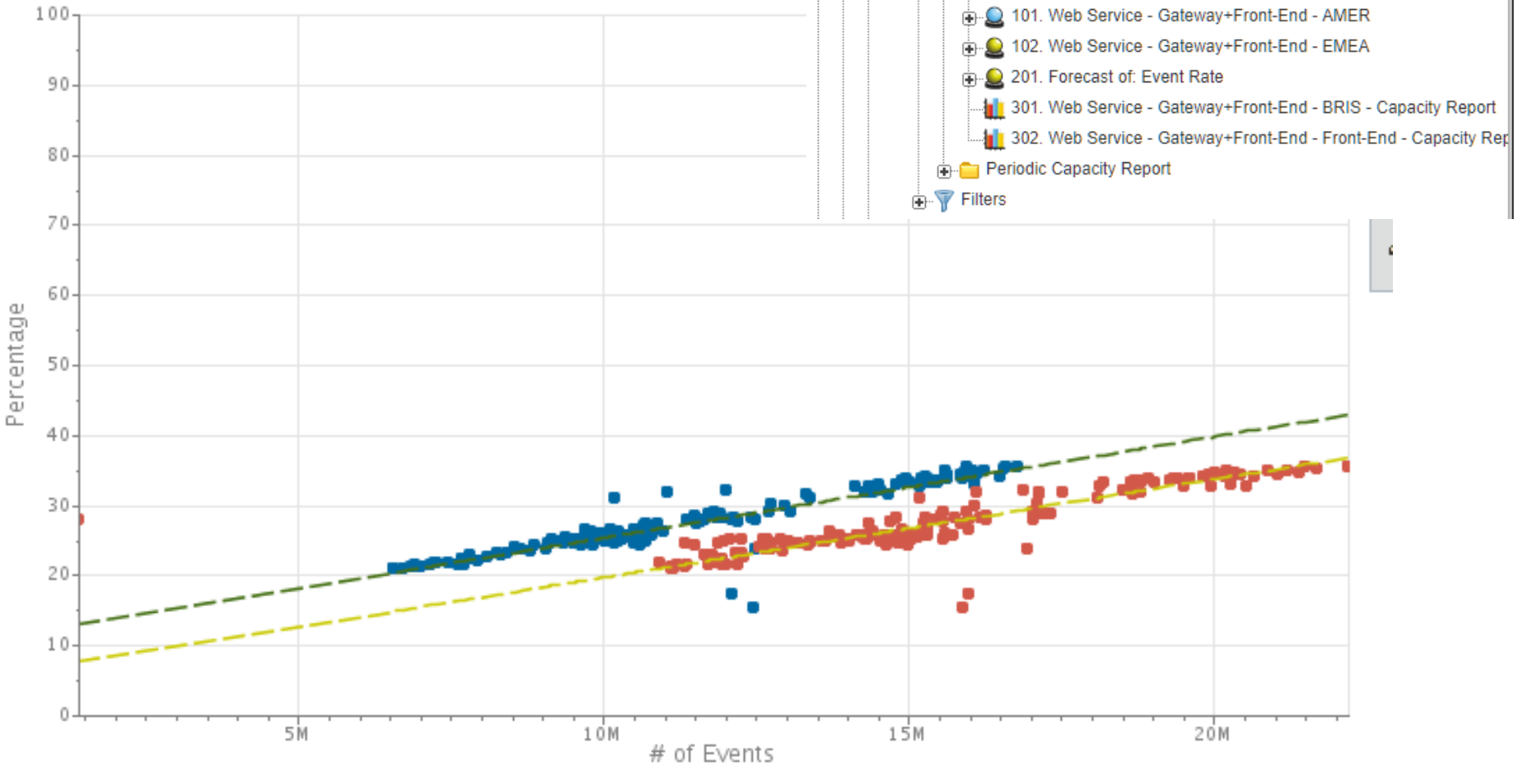
Purpose / Goal of Capacity Management

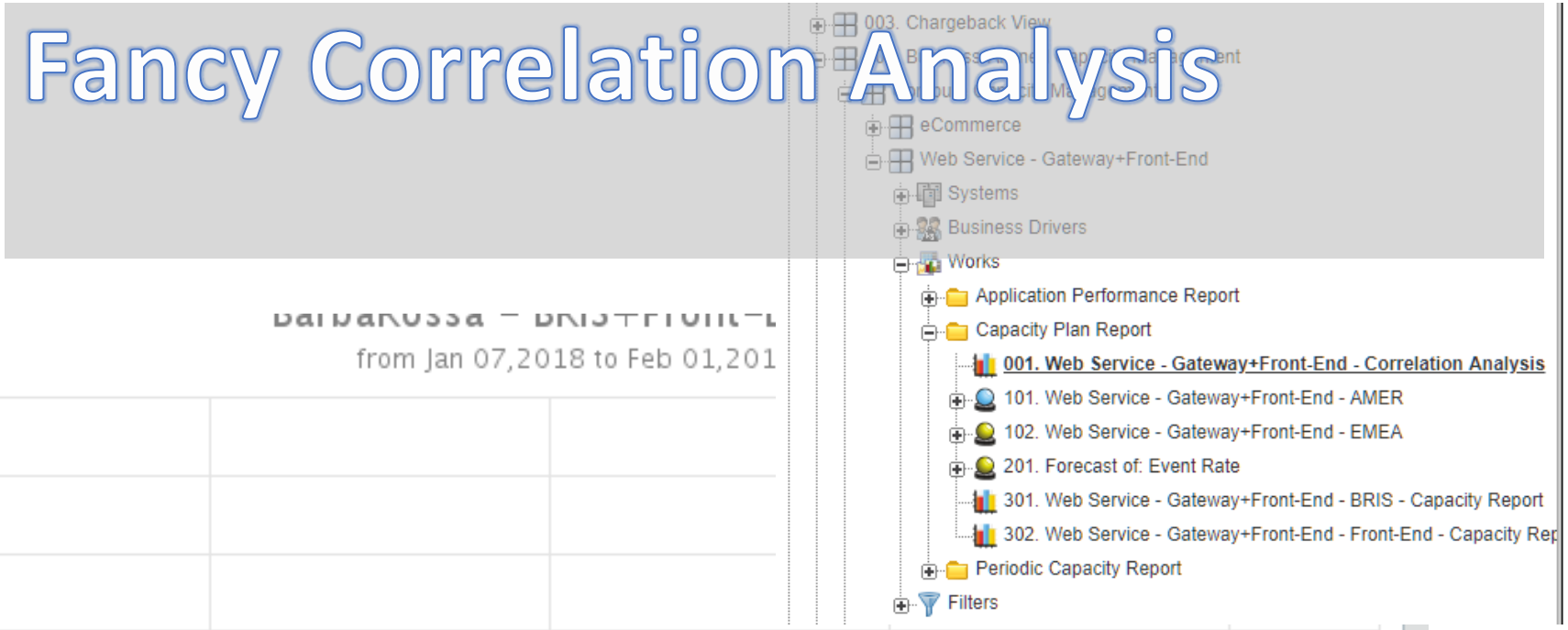
"Transparently and consistently arrive at useful capacity optimization insights, in a reasonable amount of time, with reasonable effort, and in enough time to effect a positive capacity management outcome."

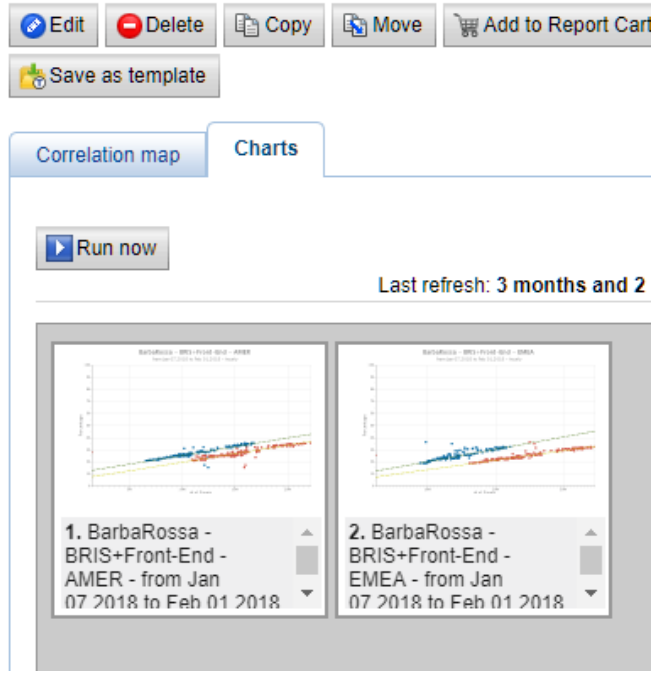
The goal is not 'Zero Waste' but Efficient Utilization



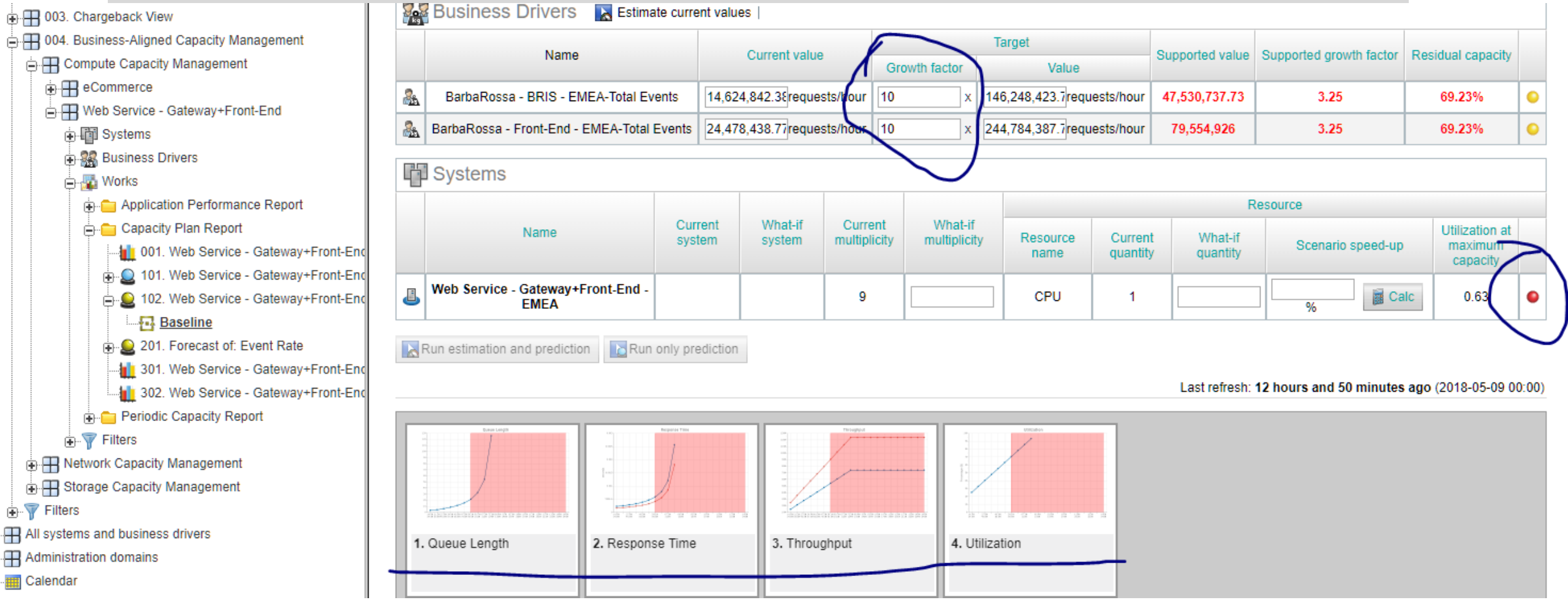
Fancy Correlation Analysis







Capacity Analysis and What IF Modeling



Threshold Violation Reporting

bmc TrueSight Capacity Optimization

bdavies Report Cart About Logout

Home | Administration | Workspace | Reports | Virtual Planner | Reservations | Chargeback | Search

Administration > RESOURCE MONITOR > Alert log > Alert entities

1-15 of 67 results | Page Size: 15

Navigation

- SYSTEM
- DATA WAREHOUSE
- ETL & SYSTEM TASKS
- COMPONENTS
- GATEWAY MANAGER
- USERS
- ADVANCED REPORTING
- RESOURCE MONITOR
  - Thresholds
  - Rules
  - Indicator Parameters
  - Alert log
- TAG MANAGEMENT
- TEMPLATE MANAGEMENT
- BENCHMARK MANAGEMENT
- EVENT MANAGER

Alert reason

This mail has been automatically sent by TrueSight Capacity Optimization.

System	Metric	Subresource	Resolution	Period	Severity	Value	Threshold	Description	Sample values	
mov-nen-asa-01-pri	Input Utilization by Network Interface	ADAPTIVE SECURITY APPLIANCE 'INTERNAL-DATA1/0' INTERFACE	HOUR	Last 10 days including the current day	Warning	47.33%	45%	The maximum value of hourly sample at hour 09:00 is greater than 45%	Average Minimum Maximum Sum # samples Good Warn Poor	43.14% 40.56% 47.33% 43.14% 10 0% 0% 0%
	Input Utilization by Network Interface	ADAPTIVE SECURITY APPLIANCE 'INTERNAL-DATA1/0' INTERFACE	HOUR	Last 10 days including the current day	Warning	56.3%	45%	The maximum value of hourly sample at hour 10:00 is greater than 45%	Average Minimum Maximum Sum # samples Good Warn Poor	54.34% 48.78% 56.3% 54.34% 10 0% 0% 0%
	Input Utilization by Network Interface	ADAPTIVE SECURITY APPLIANCE 'INTERNAL-DATA1/0' INTERFACE	HOUR	Last 10 days including the current	Warning	58.04%	45%	The maximum value of hourly sample at hour 11:00	Average Minimum Maximum	56.88% 54.62% 58.04%

So if these (preceding) studies take time,
what can I do right away??

Actionable Intelligence Based on Grouping

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Search

Workspace

Navigation

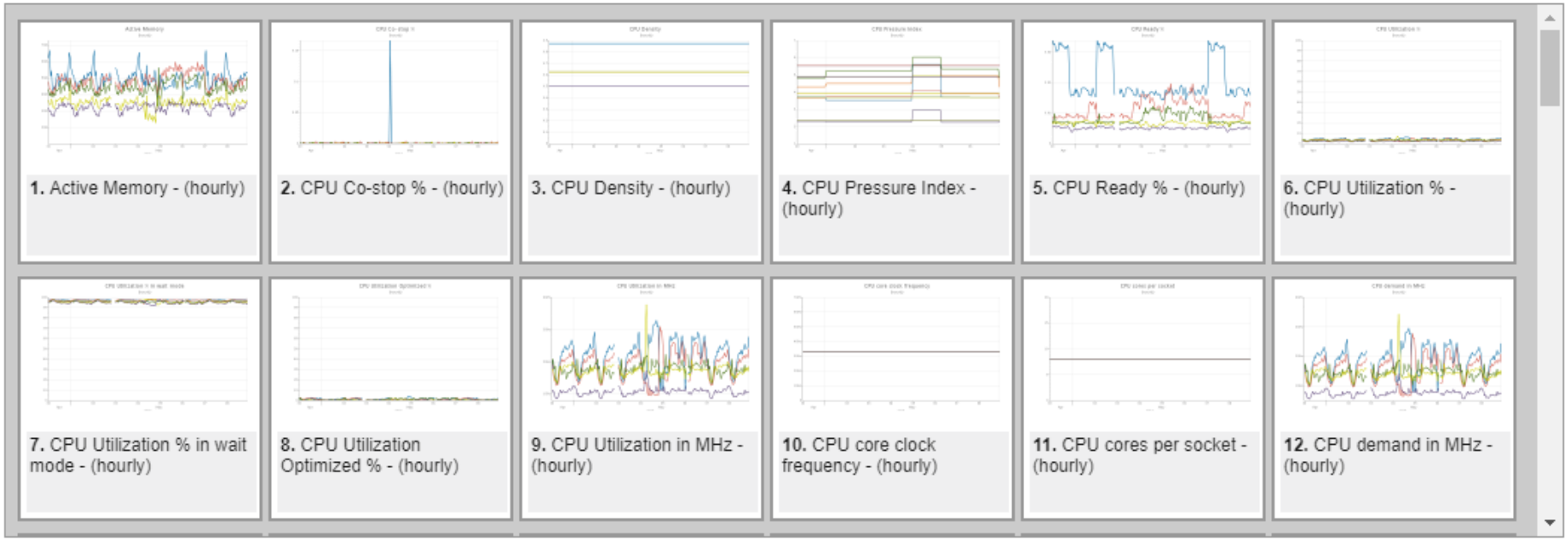
- All Domains
  - [Reporting Examples]
  - [Sandbox]
    - BNC - AppDynamics
    - FlyCastPartners.com
      - FCP B2CWeb Application
        - FCP B2CWeb Application - Dev
        - FCP B2CWeb Application - PreProd
        - FCP B2CWeb Application - Prod
          - Systems
          - Business Drivers
          - Works
            - Business vs Resource
              - By Metric Type
              - By Series With Ext. Loads
              - Estimated Utilization Over Time
              - Single Series
              - Utilization / Load Ratio Over Time
            - All Global Metrics By Device
            - All Global Metrics By Metric
            - CPU MEM Swap RunQueue by Device
            - CPU MEM Swap RunQueue by Metric
            - Disk by Device
            - Disk by Metric
            - FileSystem by Mount point
          - Forecast of: CPU Utilization %; Memory U

All Global Metrics By Metric

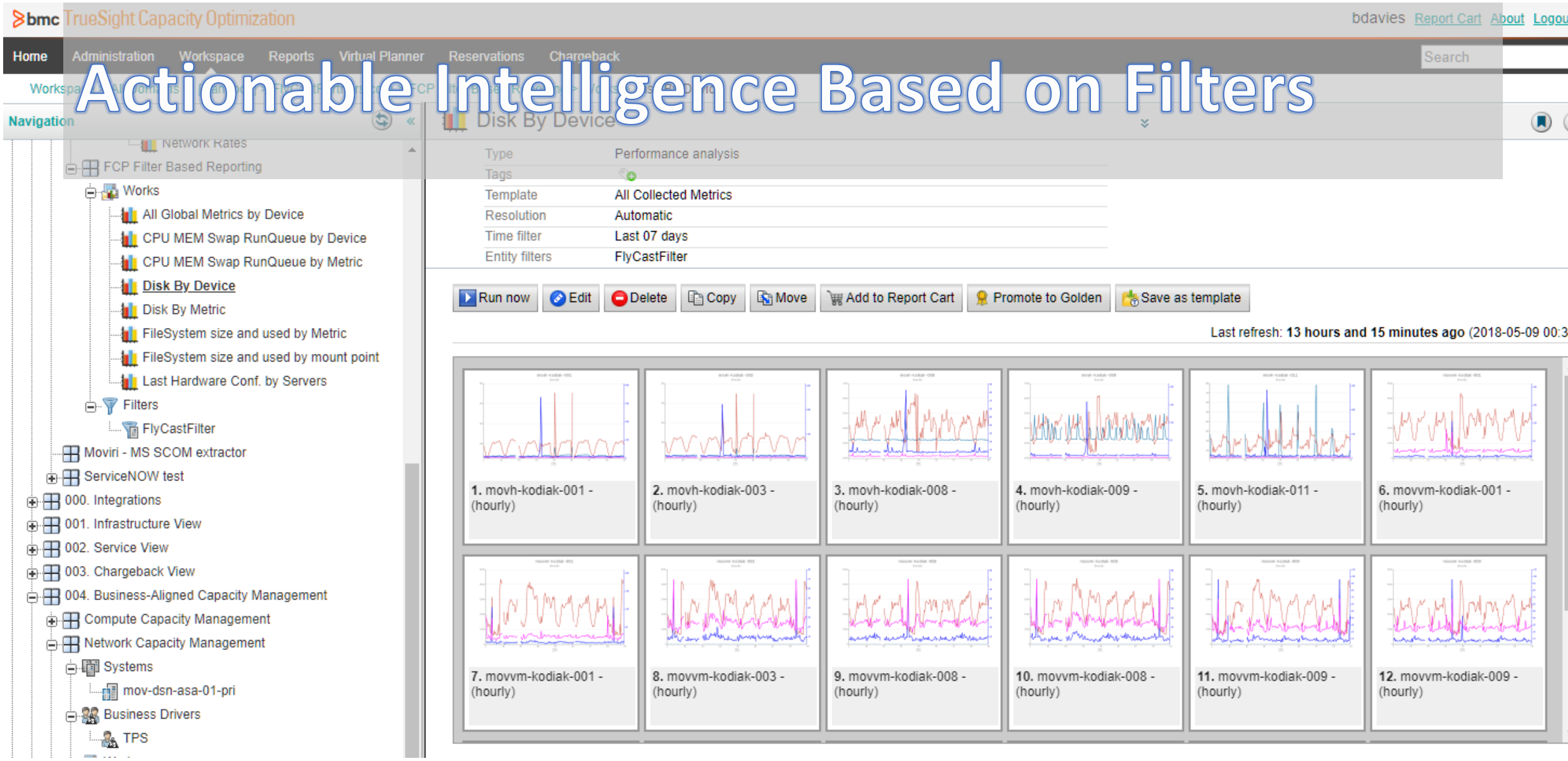
Type	Performance analysis
Tags	
Template	All Global Metrics
Resolution	Automatic
Time filter	Last 07 days
Entity filters	All entities in container domain and its subdomains

Run now | Edit | Delete | Copy | Move | Add to Report Cart | Promote to Golden | Save as template

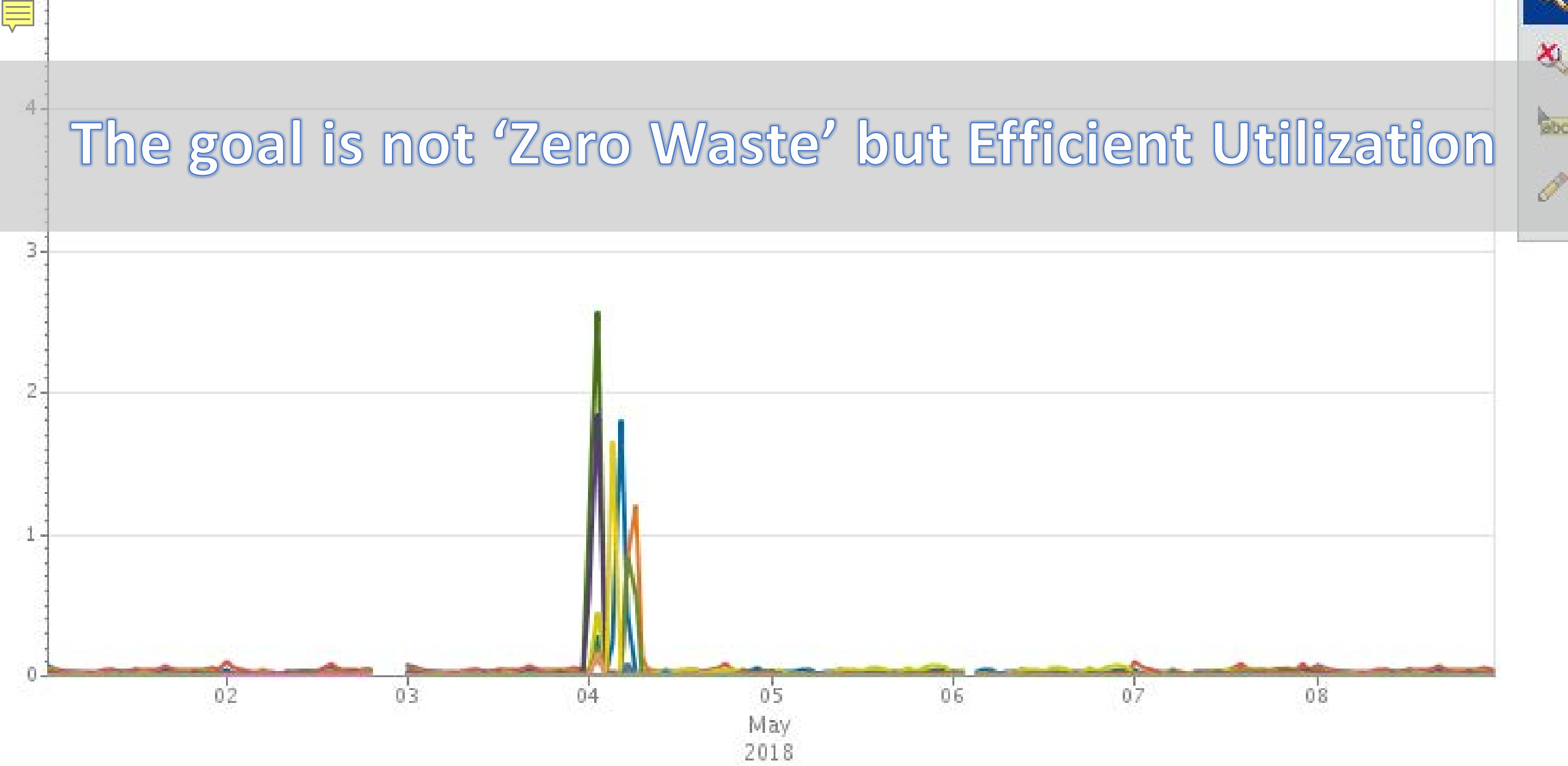
Last refresh: **15 hours and 27 minutes ago** (2018-05-08 22:23)



Actionable Intelligence Based on Filters



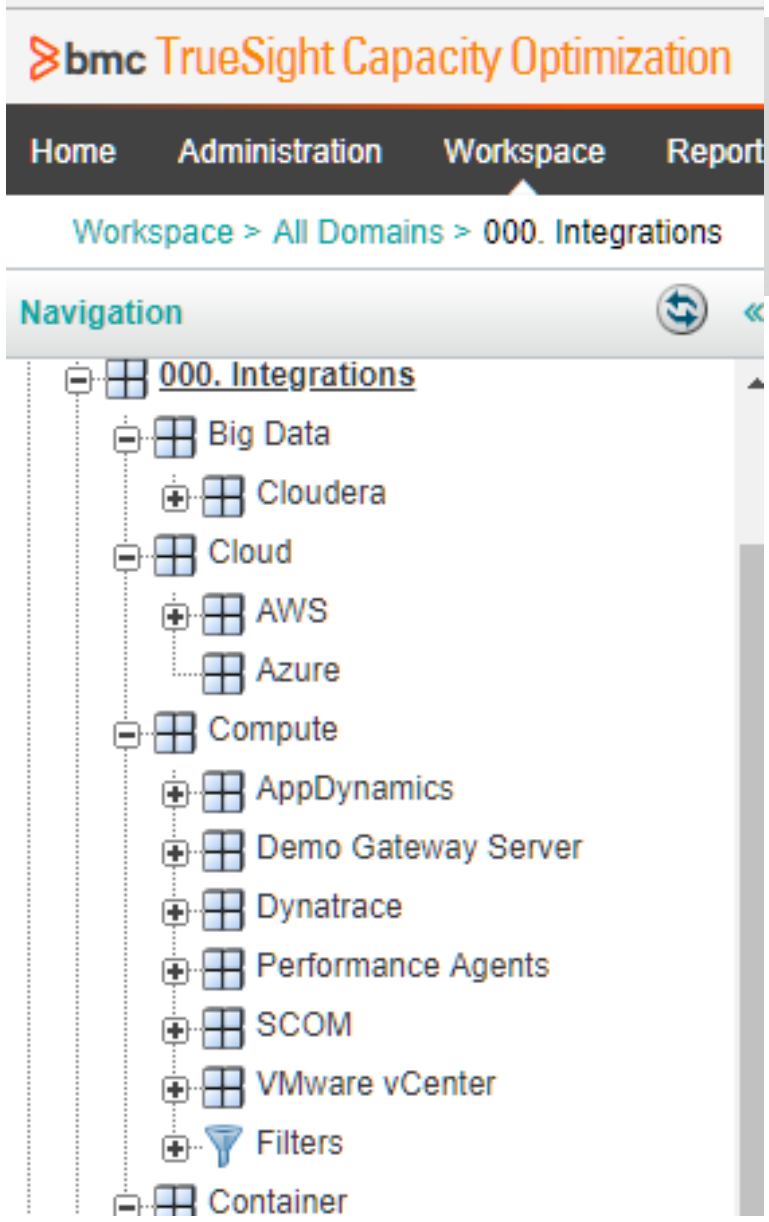
The goal is not ‘Zero Waste’ but Efficient Utilization

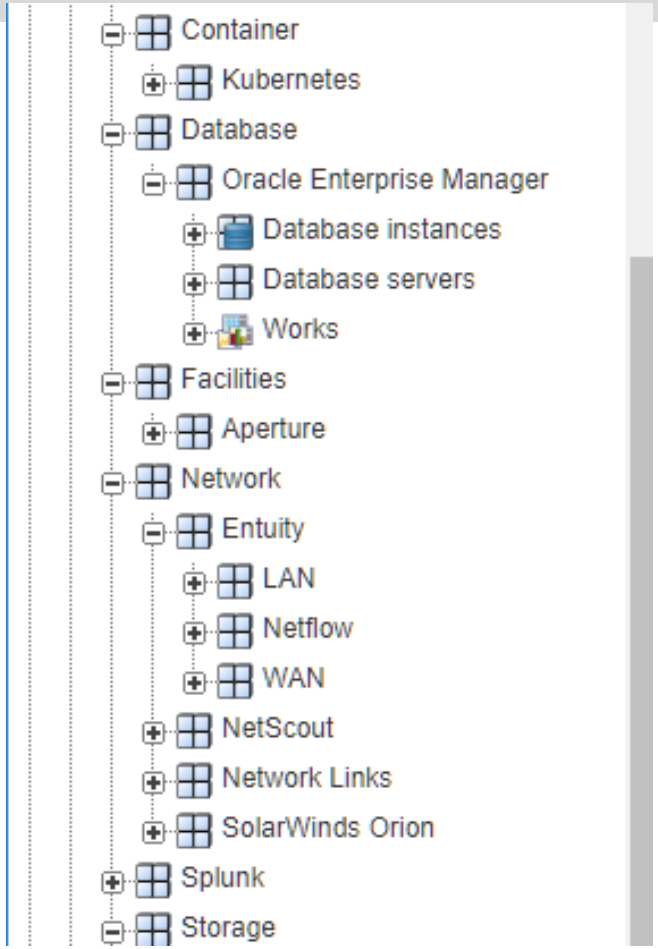


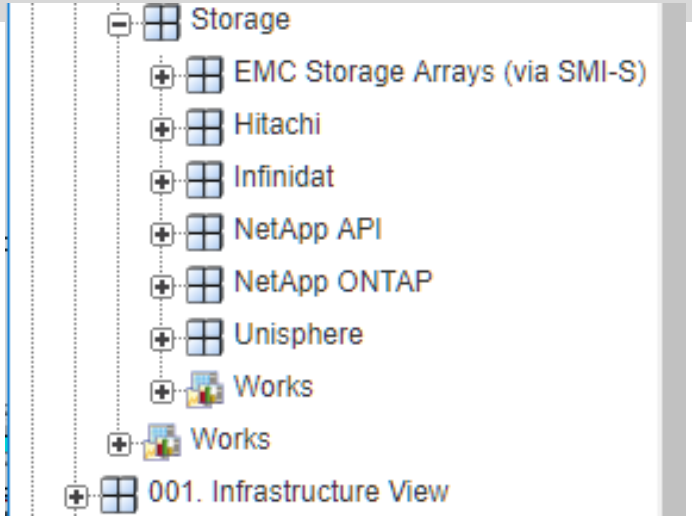
This is great! So where do I start??

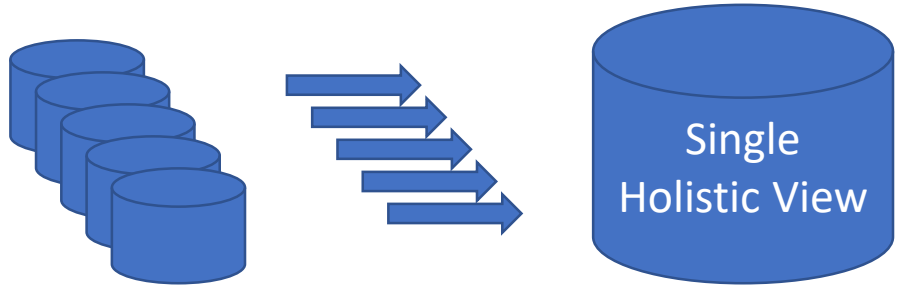
DATA. Data is where you start.

Gather Data from Sources

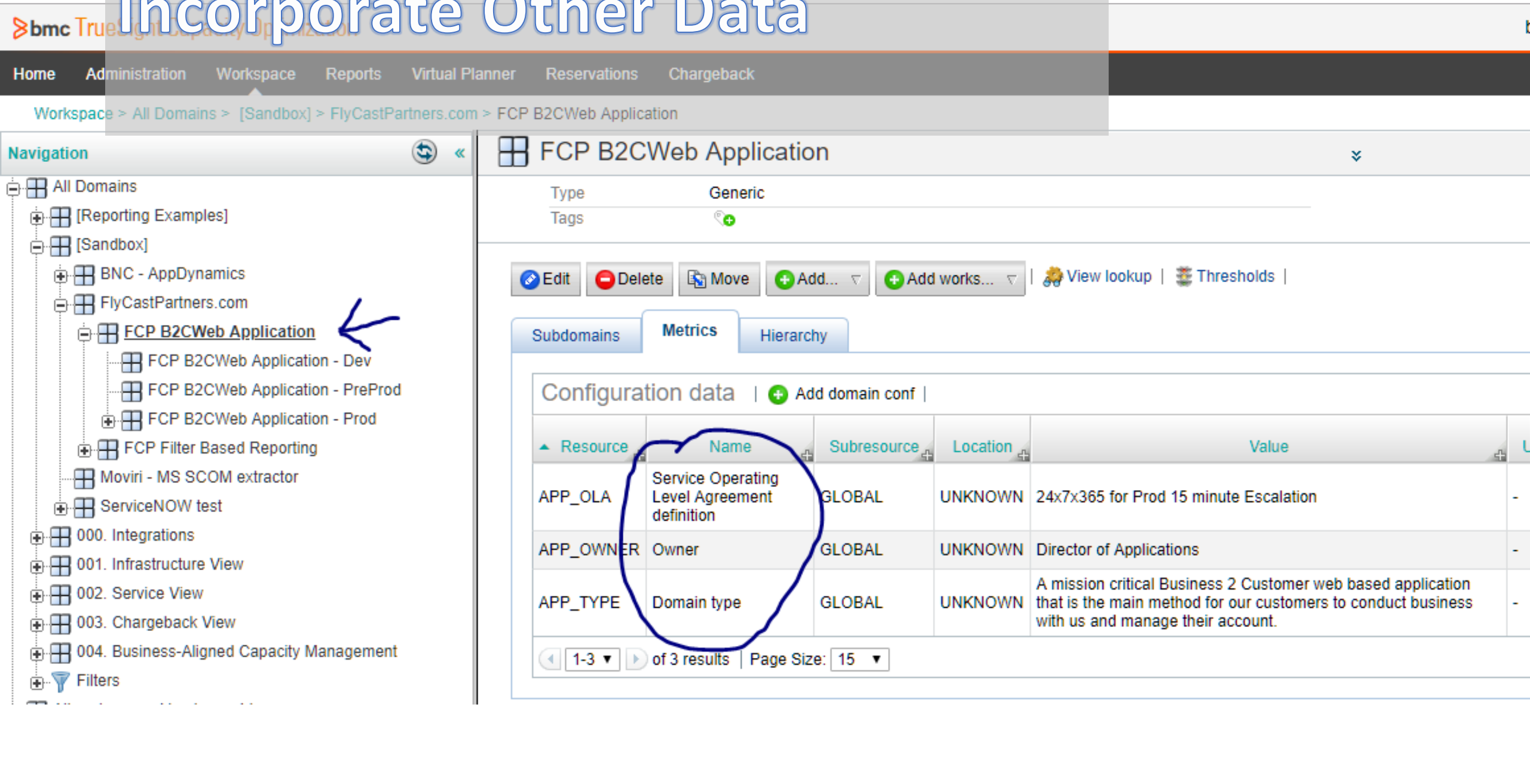




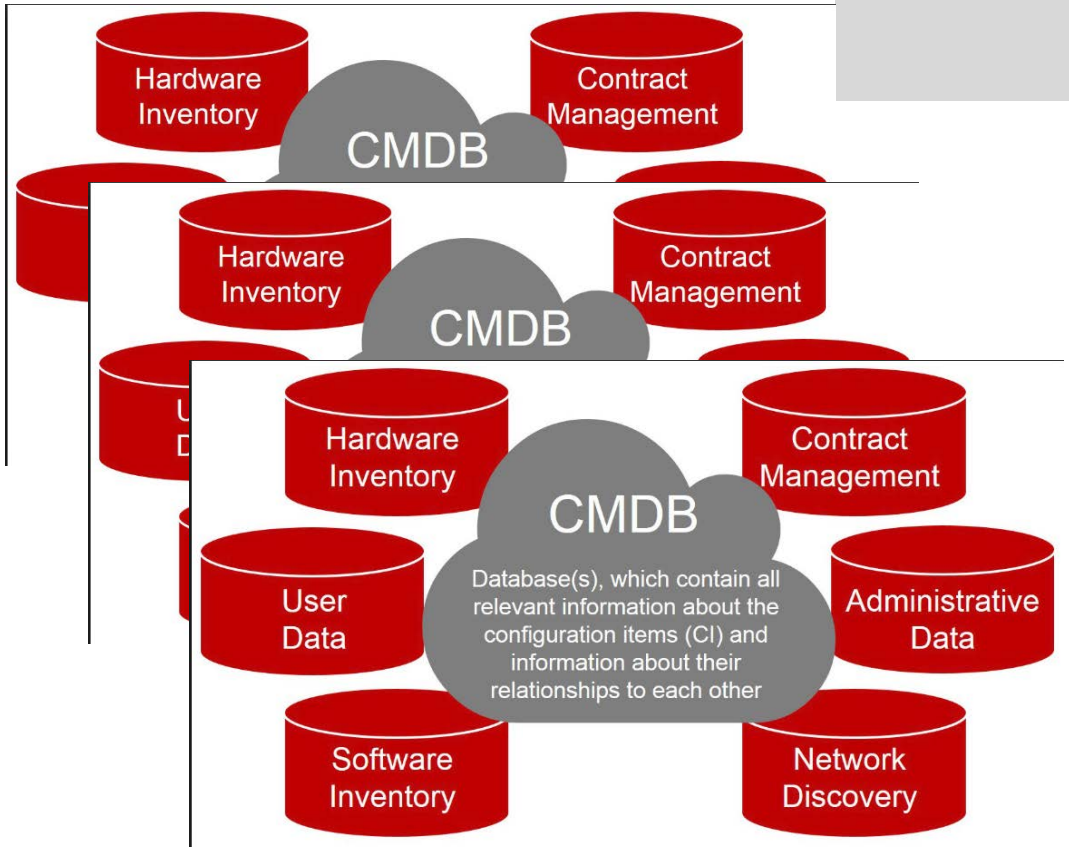


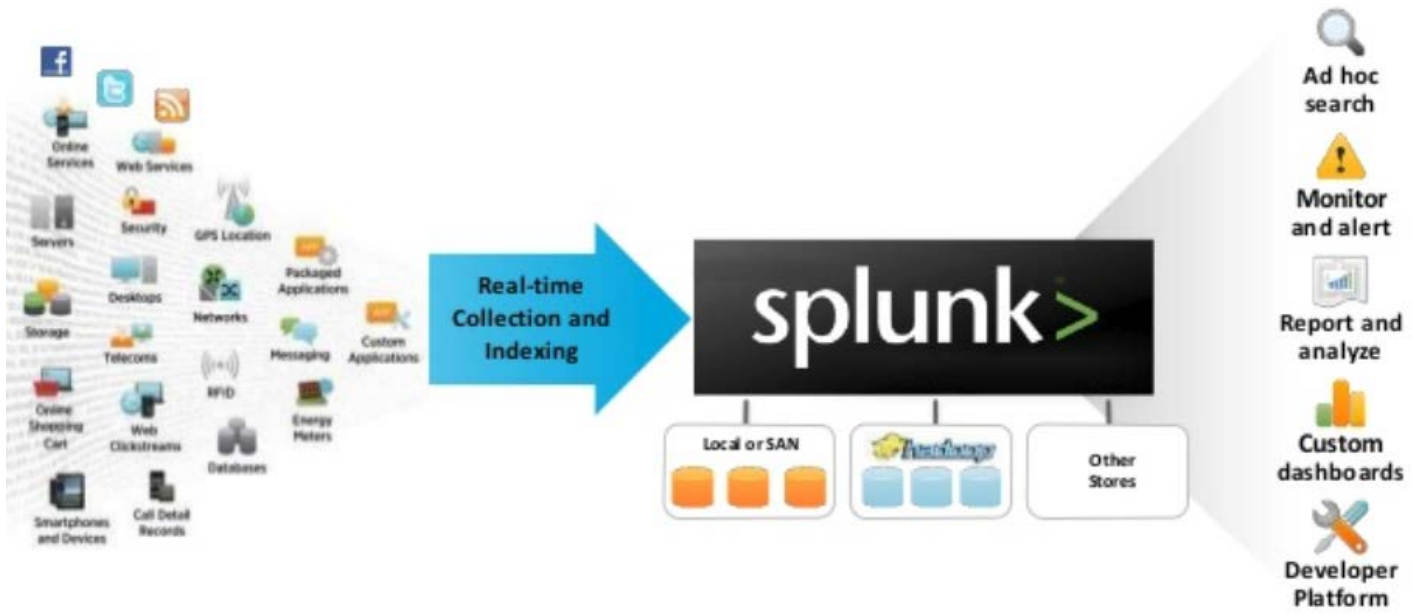


Incorporate Other Data



Indirect Data Sources





This context and association data is **disproportionately helpful** in maturing the capacity optimization effectiveness

Different and apart from the sum of its parts

- "the whole is something else than the sum of its parts"[2] is often incorrectly translated[3] as "The whole is greater than the sum of its parts", and thus used when explaining gestalt theory, and further incorrectly applied to systems theory.[4] Koffka did not like the translation. He firmly corrected students who replaced "other" with "greater". "This is not a principle of addition" he said.[5] The whole has an independent existence.

---https://en.wikipedia.org/wiki/Gestalt_psychology

Summary

“Transparently and consistently arrive at useful capacity optimization insights, in a reasonable amount of time with reasonable effort and in enough time to effect a positive capacity management outcome.”

- Consolidate data to one place.
- Eat the data you have from the sources you have
- Do the fancy correlation analysis and what if modeling
- Import other data – like from CMDBs
- Threshold violation reporting
- Group in ways that facilitate reporting (by application, service, location etc)
- Provide actionable intelligence with anomaly detection and ad-hock customer reporting
- Recognize goal is not ‘zero waste’ but rather Efficient Utilization

Mr. Ben Davies
Senior Consultant
www.Moviri.com
283 Franklin St, Floor 2, Boston MA 02110-3123
Office +1 (704) 819-7892
Ben.Davies@moviri.com

Contacts

Headquarters
Via Schiaffino 11C
20158 Milan Italy
T +39-024951-7001

USA East
283 Franklin Street
Boston, MA 02110
T: +1-617-936-0212

USA West
425 Broadway Street
Redwood City, CA 94063
T +1-650-226-4274

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Questions?

Why are my monitoring tools not enough?

I am not yet doing ‘anything’
with capacity management.
How should I get started?

I am doing capacity
management now. I do not wish
to throw it out and start over.

Why have I never heard of

- Co-Stop - VMWare
- Minimum idle workers - Apache
- CPU RunQueue
- file descriptors (ulimit)
- network port mismatch
- database locking

Why should pay attention to these, and
how did I miss them.

Download the presentation for the answers