

BAM with Nagios



B u s i n e s s A c t i v i t y M o n i t o r i n g

Anders Håål, Ingengörsbyn AB

Intro

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Myself
- Sweden
- Presentation

Business activity monitoring

B u s i n e s s A c t i v i t y M o n i t o r i n g

*The goals of business activity monitoring are to provide **real time information** about the status and results of various business related operations, processes, and transactions.*

*The main benefits of BAM are to enable an enterprise to make better **informed business decisions**, **quickly address problem** areas, and **re-position organizations** to take full advantage of emerging opportunities.*

Wikipedia

Next step

B u s i n e s s A c t i v i t y M o n i t o r i n g

Network monitoring

IT infrastructure

Applications
&
Business processes

Not IT

B u s i n e s s A c t i v i t y M o n i t o r i n g

**If the number of orders drop
below my daily/weekly estimate**

*Warning if the delivery of
goods is lower then 80% of
ready to ship.*

**If the ratio between web and phone orders
are higher then ...**

*If the number of errors in
incoming EDI messages are
higher then 5% of total*

My route planning must
be least 90% of my
received orders

*If the number of international
shipment is above 10000 at 17:00
I need to give gateway a warning*

Nature of BAM

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Business events are **time dynamic** of its nature
- Business events has **dependencies** to other events
- Service capability **relates** to multiple events



BAM is not Business Intelligence - or is it?

Findings

- None-existing monitoring solutions
- Too late to fix problems
- It's not an IT-OPS problem
- Not a BI issue - lack of real-time
- Low surveillance maturity in the business OPs
- Applications lacks business surveillance
- Technical SLA

Lack of BAM

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Simple problems cause disaster
 - High cost
 - Decreasing quality of services
- Insecurity in business ops team
- Process correlation not understood
- IT resources utilization correlation to business operations

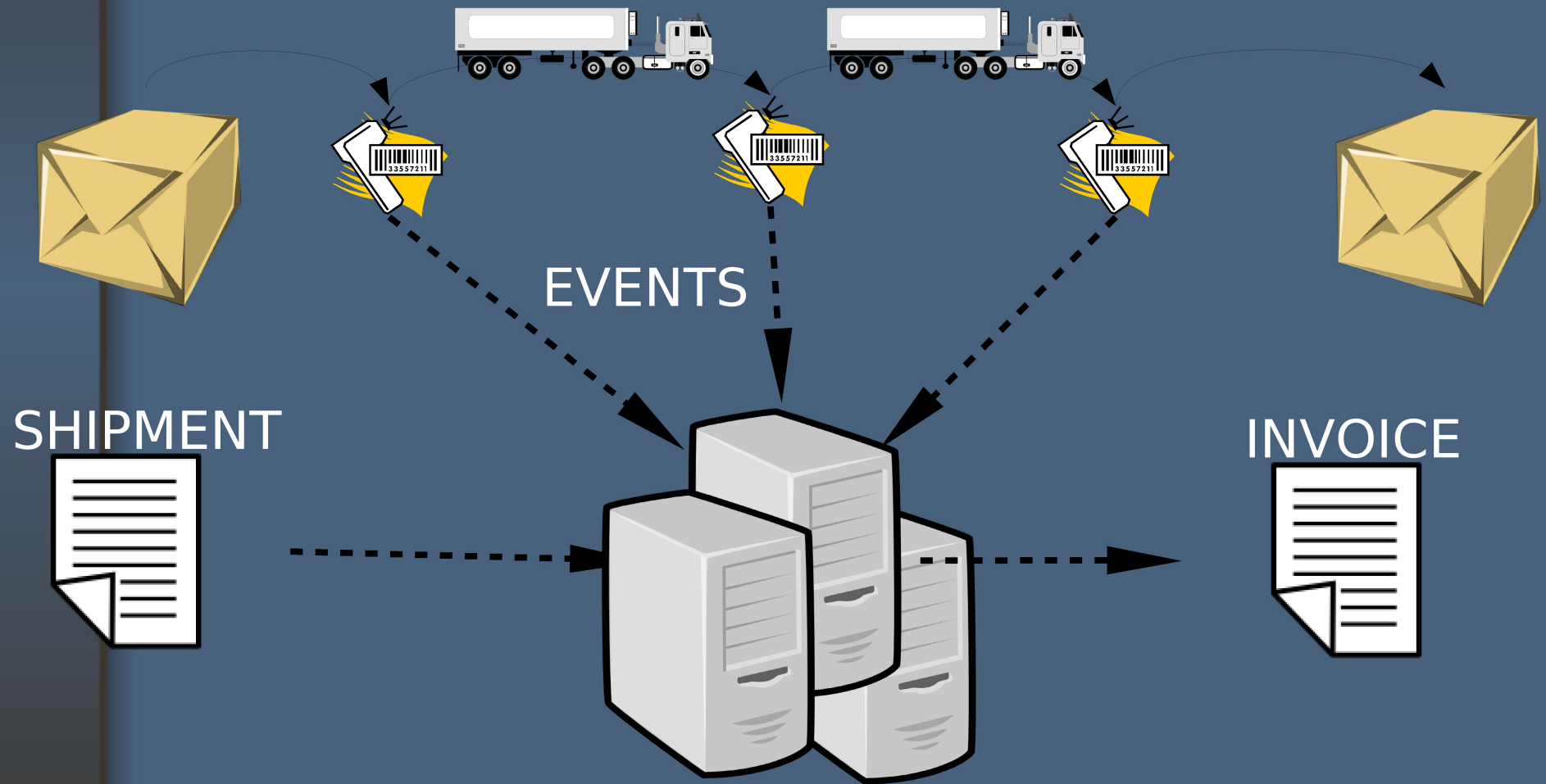
Different from IT ops

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Mature processes
- Organization
- Monitoring technical infrastructure environments
- Static thresholds

Shipping & forwarding example

B u s i n e s s A c t i v i t y M o n i t o r i n g



BAM boils down to

B u s i n e s s A c t i v i t y M o n i t o r i n g

Volumes

Rates

Errors

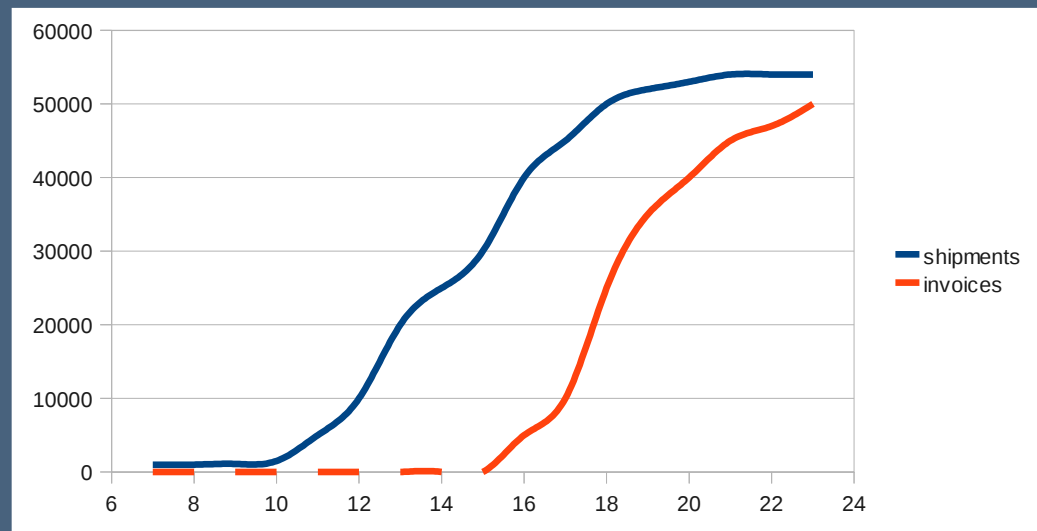
Source systems

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Business applications not written for monitoring
 - Legacy
 - Databases
 - Files
 - Email
 - Web services
- No standards, no models

Metrics

B u s i n e s s A c t i v i t y M o n i t o r i n g

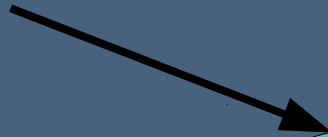


- Time
 - Day of week, day of month,
 - Calendar
- Processes related

Composite metrics

B u s i n e s s A c t i v i t y M o n i t o r i n g

#SHIPMENTS



#INVOICE

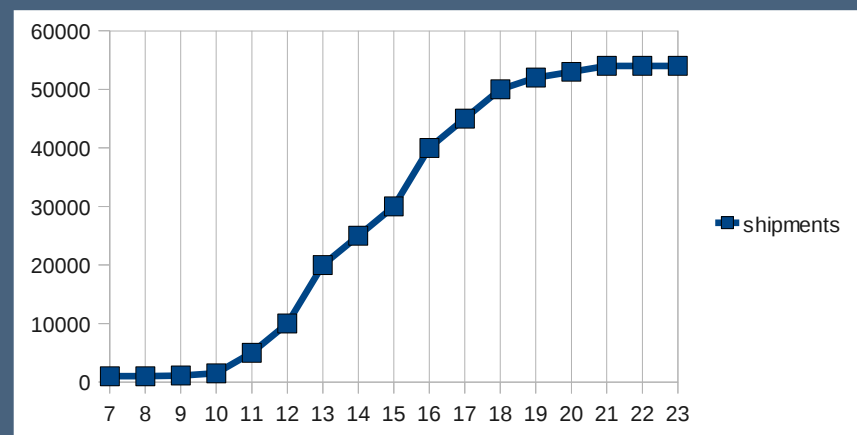


INVOICE RATE

Thresholds

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Day profiles
 - 24 hour granularity
 - Week, month, day of ...
- Process related threshold
 - $th_{geocode} = \int (0.8 * shipments)$
- Latency
 - $th_{geocode} = \int (0.8 * shipments[-30min])$





Business Activity Monitoring



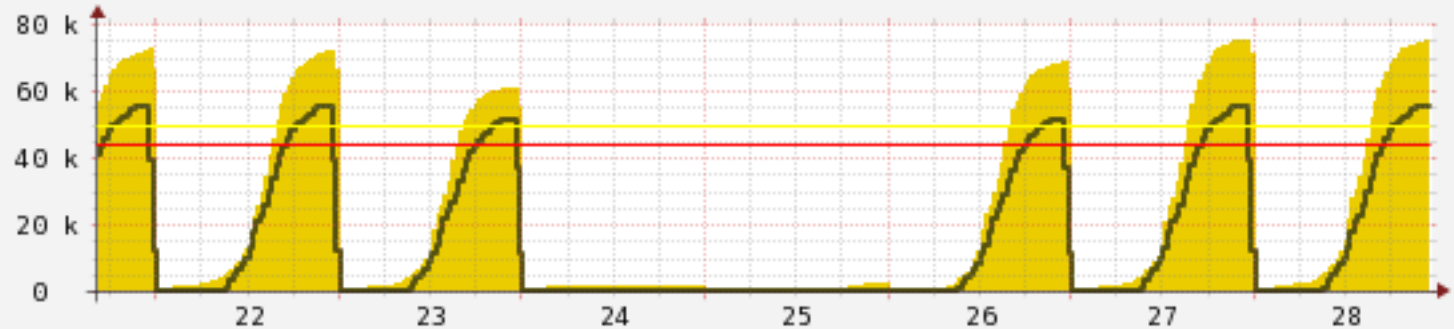
2011-09-28 22:55:35

3d 21h 58m 53s

1/3

OK [REDACTED] = 75194 (55000.0 > 49500.0 > W > 44000.0 > C >)

Datasource: [REDACTED]

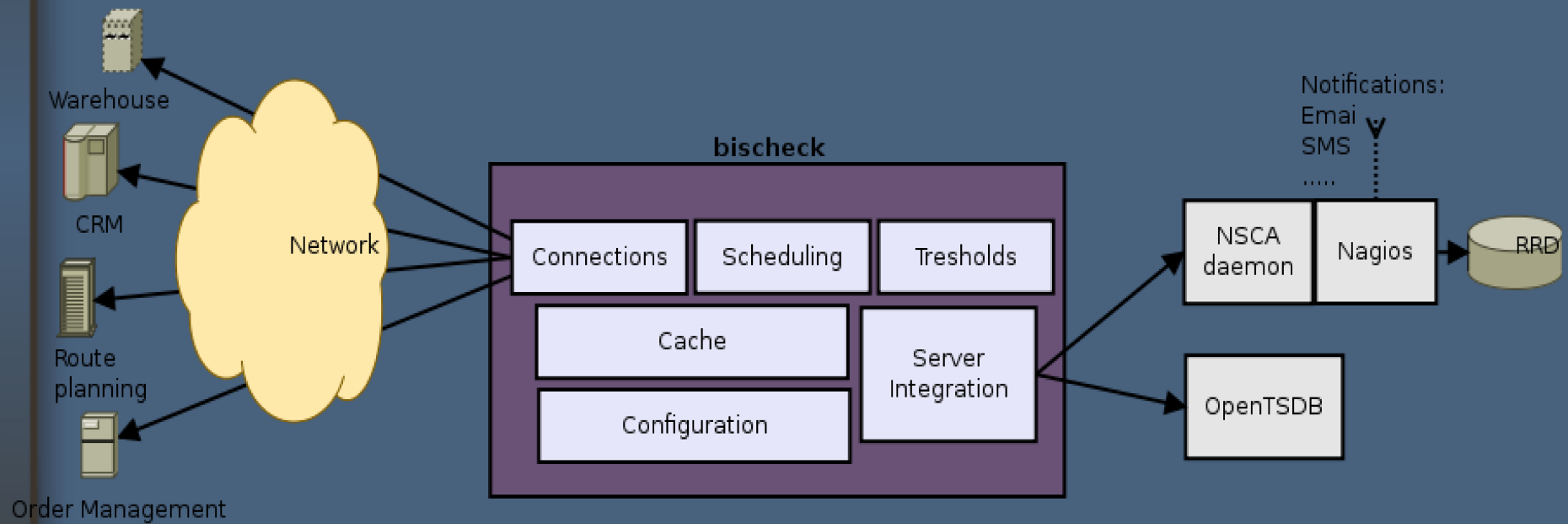


Measured	75147	Last	23083	Average	75402	Max
Threshold	55000	Last	15659	Average	55000	Max
Warning	49500.0					
Critical	44000.0					

Solution

Nagios + bischeck

B u s i n e s s A c t i v i t y M o n i t o r i n g



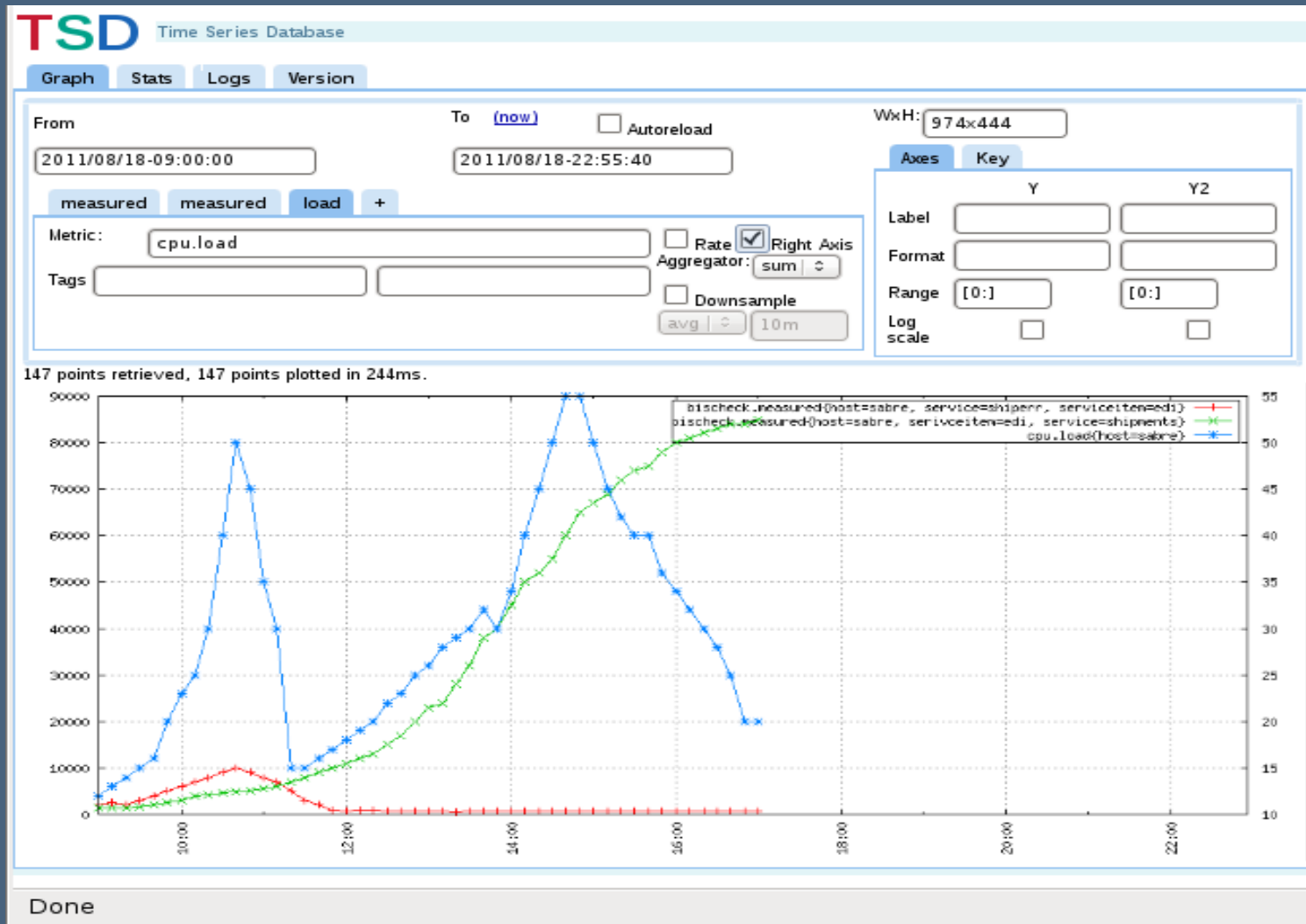
bischeck features

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Service connections
- Dynamic threshold management
 - _ Packaged – a 24 hour linear equation threshold
 - _ Custom threshold classes
- Multi-threaded, multi-scheduling schema per service.
- Caching of historical service data
 - _ Virtual services
 - _ Latency threshold
- Date macros in execution statements
- Open server integration
 - _ Nagios/NSCA passive check
- XML configuration
- GPL 2 license

Alternative dashboard

Business Activity Monitoring



Benefits

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Nagios
- Proactive vs reactive
- "IT-blindness"
- Correlate IT and business utilization
- Understand business dependencies
- Business trends in real time
- Meaningful SLA

Get things moving

B u s i n e s s A c t i v i t y M o n i t o r i n g

- Find the itch
- Start small
- Be tactical
- Find a sponsor in the business OPs
- Re-use all you that love with Nagios



Thank you for listening

B u s i n e s s A c t i v i t y M o n i t o r i n g

- bischeck is open source - get it from gforge.ingby.com/gf/project/bischeck
- Feedback is appreciated