

WHEN PERFORMANCE METRICS AND USER EXPERIENCE COME TOGETHER

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ABOUT WÜRTH PHOENIX

- IT and Consulting Company of the Würth-Group
- Headquartered in Italy, Europe-wide presence, more than 160 highly skilled employees
- International experience in Business Software and IT Management
- Core competencies in trading processes, wholesale distribution and logistics
- Microsoft Gold Certified Partner, ITIL certified, OTRS Preferred Partner



We improve business productivity by delivering world class software solutions with a team of highly motivated and skilled IT experts



FACTS & FIGURES

- More than 1,000 customers worldwide
- Over 70 successfully implemented ERP and CRM projects
- 400 NetEye customers
- HQ in Italy



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BUSINESS CRITICAL APPLICATIONS AND PERFORMANCE PROBLEMS



PERFORMANCE MONITORING





Monitoring & Alarms

Subject-specific historical data



Expectation

- Time series
- Alarm thresholds

Population data

PERFORMANCE MONITORING



Percentage Processor Time





- Batch requests
- Transactions
- Memory
- SAN
- Network
- Side Processes
 - Etc.

Monitoring & Alarms

Machine/setting specific Historical data



Expectation

- Time series
- Alarm thresholds

Experience Data from similar machines/settings

A TIME SERIES IS NOT ALONE...



Etc.



- All time series are analyzed together
- Thresholds are calculated dynamically via baselining and anomaly detection
- AScore estimation in addition to a global alarm and specific alarms
- Relationships between time series are used to create more reliable alarms and risks
- Shape of time series data is **considered**

Motivations

- Common Data Source
- Grafana & InfluxDB
- Today we need to go beyond common practice
- Proactivity

PERFORMANCE MONITORING: NETEYE ITOA





USER EXPERIENCE

wüятнрноемїх "the overall experience of a person using a product such as a website or computer application,

especially in terms of how easy or pleasing it is to use."

How to monitor user experience?

VISUAL

Humans look at graphical interfaces and interact with them

SYNTHETIC

Solution should behave like a human

MONITORING

Solution should track transaction performance



http://www.alyvix.com/

345.96

Avg: 352.07

Max

432.72

USER EXPERIENCE: ALYVIX - ACTIVE END USER MONITORING



Detailed analysis & Troubleshooting



Cumulative test performance ordered by *test state*



Test performance ordered by *transaction name* and *transaction group*



WHEN PERFORMANCE METRICS AND USER EXPERIENCE COME TOGETHER



- Heterogeneous performance data in one single data source
- Multi-level dashboarding >> Faster troubleshooting
- Historic data on hand >> Easy effect quantification
- ML, Anomaly Detection, Forecasting



PERFORMANCE MONITORING & USER EXPERIENCE

PROD 'SERVER III (WIN)'

4%

PROD 'SERVER IX (AOS)'

4%

PROD SERVER XV ISQLT

16%

PROD 'SERVER II (WIN!'

41%

PROD 'SERVER VIII (AOS)'

4%

PROD 'SERVER XIV (WIN)'

3%





PROD 'SERVER IV IWINI'

17%

PROD 'SERVER X (AOS)'

5.0%

PROD 'SERVER XVI (WIN):

10%



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PROD SERVER I IWINT

1.5%

PROD SERVER VILLWINT

0.7%

PROD 'SERVER XIII (WIN)'

9%

... more than software

MULTI-LEVEL DASHBOARDS





TROUBLESHOOTING





MACHINE LEARNING – ANOMALY DETECTION – FORECASTING





WHAT DO WE EXPECT?



MACHINE LEARNING – ANOMALY DETECTION – FORECASTING





DESIREABLE FUTURE FEATURES

WÜRTHPHOENÏX

- LDAP folders
- Min/max values, as variables >> passable
- Use time series as annotation of other time series on mouse over















