

# Monitoring počítačové sítě

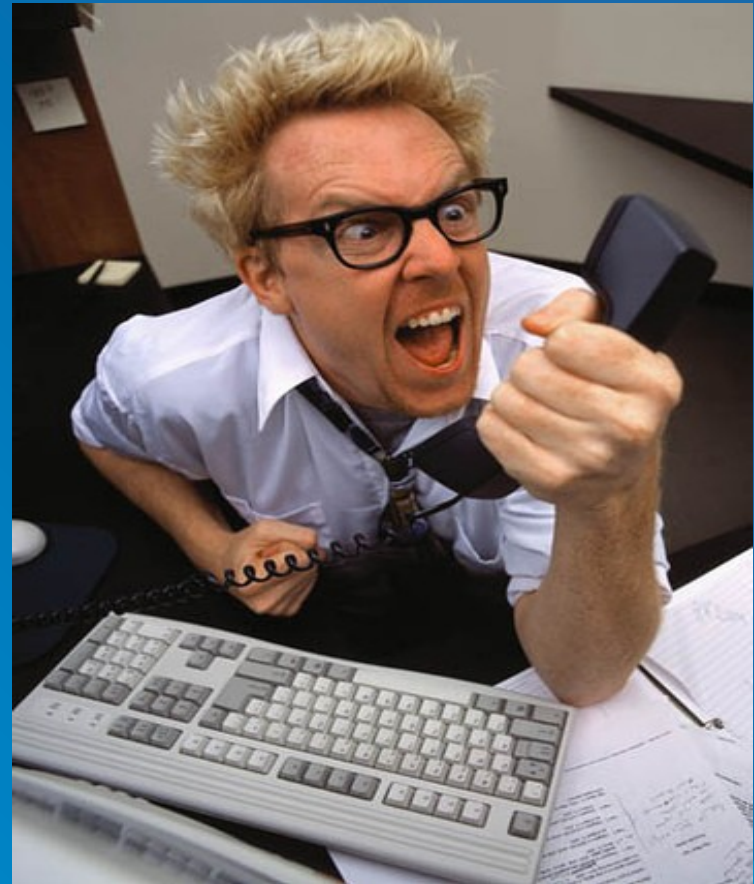
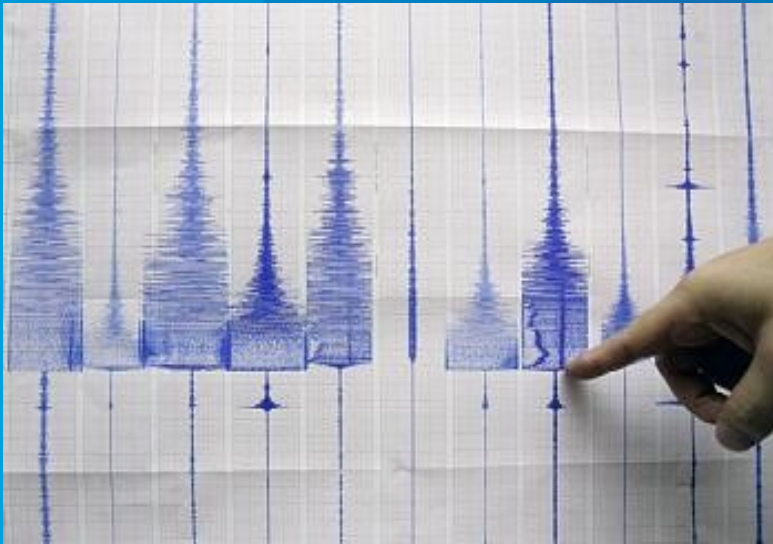
Ing. Michal Medvecký

Ing. Josef Hajas



# Proč monitoring?

- Proaktivita
- Historická data



# Internet Control Message Protocol



# Monitorovací systém

- Konfigurace
  - Popis toho co a jakým způsobem se monitoruje
- Plánovač
  - Je ten, který se stará o to, aby test probíhal v naplánovaných časech
- Úložiště informací
- Modul/plugin
  - Kus kódu, který umí monitorovat danou vlastnost



# Funkce monitorovacího systému

- Informace o aktuálním stavu
- Reporting incidentů
- Evidence historie incidentů
- Plánování odstávek
- Eskalace
- Zobrazování reportů

# Open-source monitorovací systémy

- Nagios – Icinga



- Zenoss



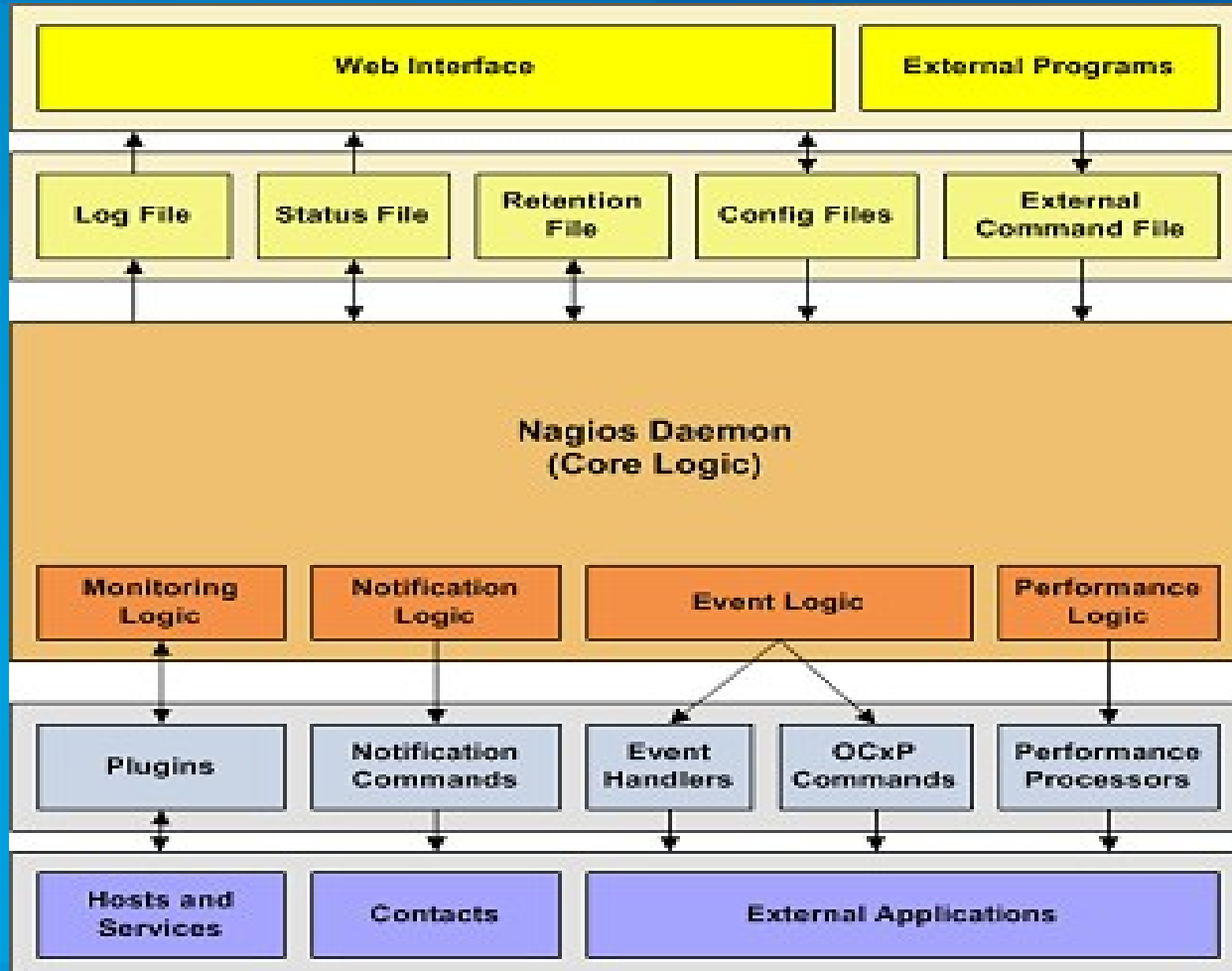
- Zabbix

**ZABBIX**

# OSS systém Nagios

- Vznik v roce 1999, Ethan Galstad
- Stabilní verze 3.2.0
- Dnes spíše komerční
- Nekomerční mutace – Icinga (vznik 2009)
- Používá různé protokoly

# Jak funguje Nagios





# Ngios Tactical overview

## Tactical Monitoring Overview

Last Updated: Sat Mar 6 14:02:33 CET 2010  
 Updated every 90 seconds  
 Nagios® Core™ 3.2.0 - [www.nagios.org](http://www.nagios.org)  
 Logged in as *nagiosadmin*

## Monitoring Performance

**Service Check Execution Time:** 0.02 / 60.01 / 0.451 sec  
**Service Check Latency:** 0.00 / 17.59 / 2.193 sec  
**Host Check Execution Time:** 0.02 / 10.05 / 0.243 sec  
**Host Check Latency:** 0.00 / 12.78 / 2.749 sec  
**# Active Host / Service Checks:** 209 / 3646  
**# Passive Host / Service Checks:** 11 / 131



## Network Outages

**3 Outages**

**3 Blocking Outages**

## Network Health

Host Health:

Service Health:

## Hosts

**3 Down**    **3 Unreachable**    **214 Up**    **0 Pending**

**3 Unhandled Problems**

**3 Disabled**

**8 Disabled**

## Services

**68 Critical**    **82 Warning**    **2 Unknown**    **3625 Ok**    **0 Pending**

**56 Unhandled Problems**

**80 Unhandled Problems**

**2 Unhandled Problems**

**121 Disabled**

**7 on Problem Hosts**

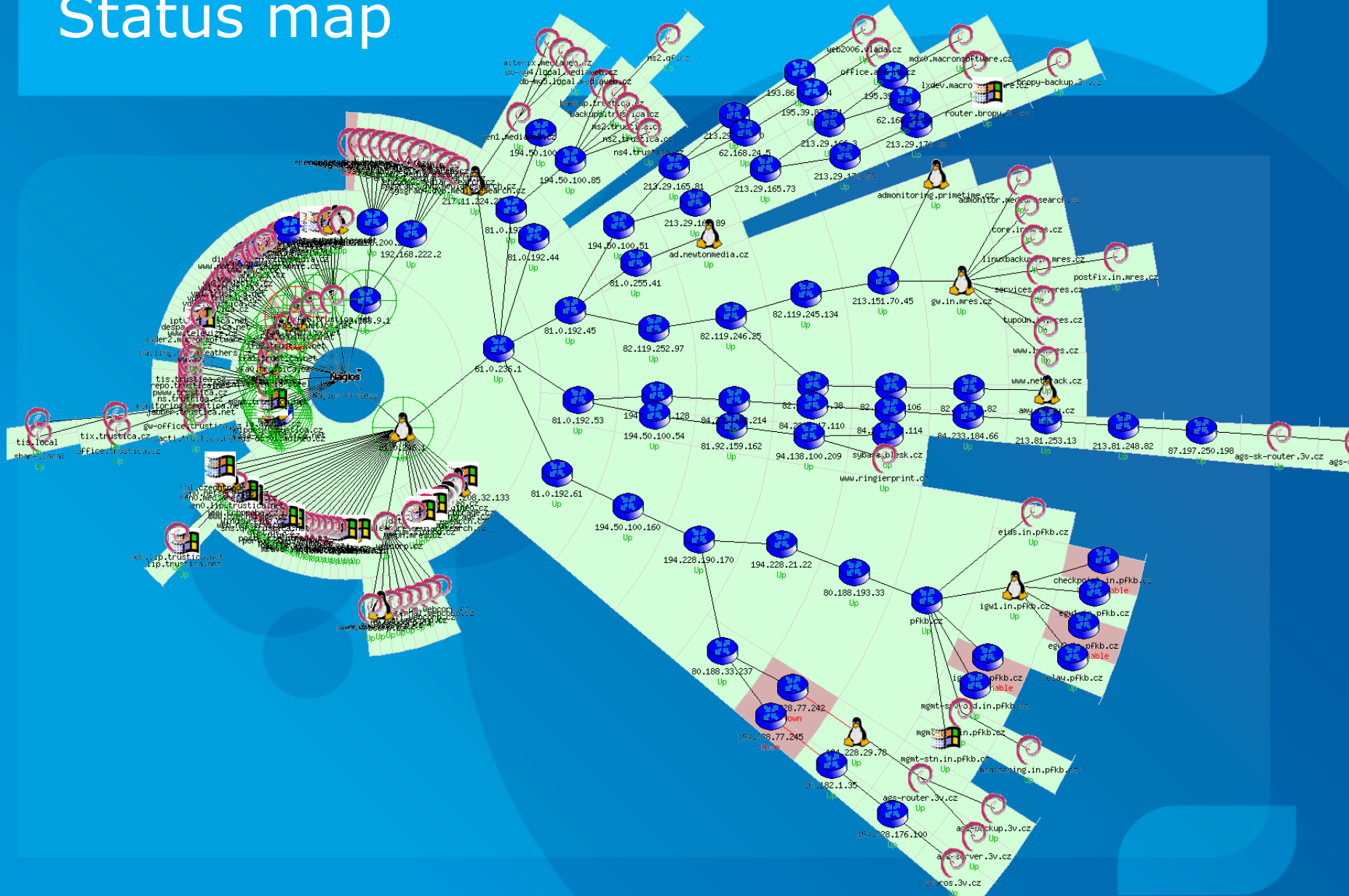
**2 Disabled**

**8 Disabled**

## Monitoring Features

	Flap Detection	Notifications	Event Handlers	Active Checks	Passive Checks
<b>Enabled</b>	All Services Enabled <b>8 Services Flapping</b> All Hosts Enabled No Hosts Flapping	<b>Enabled</b> <b>800 Services Disabled</b> <b>16 Hosts Disabled</b>	<b>Enabled</b> All Services Enabled All Hosts Enabled	<b>Enabled</b> <b>131 Services Disabled</b> <b>11 Hosts Disabled</b>	<b>Enabled</b> All Services Enabled All Hosts Enabled

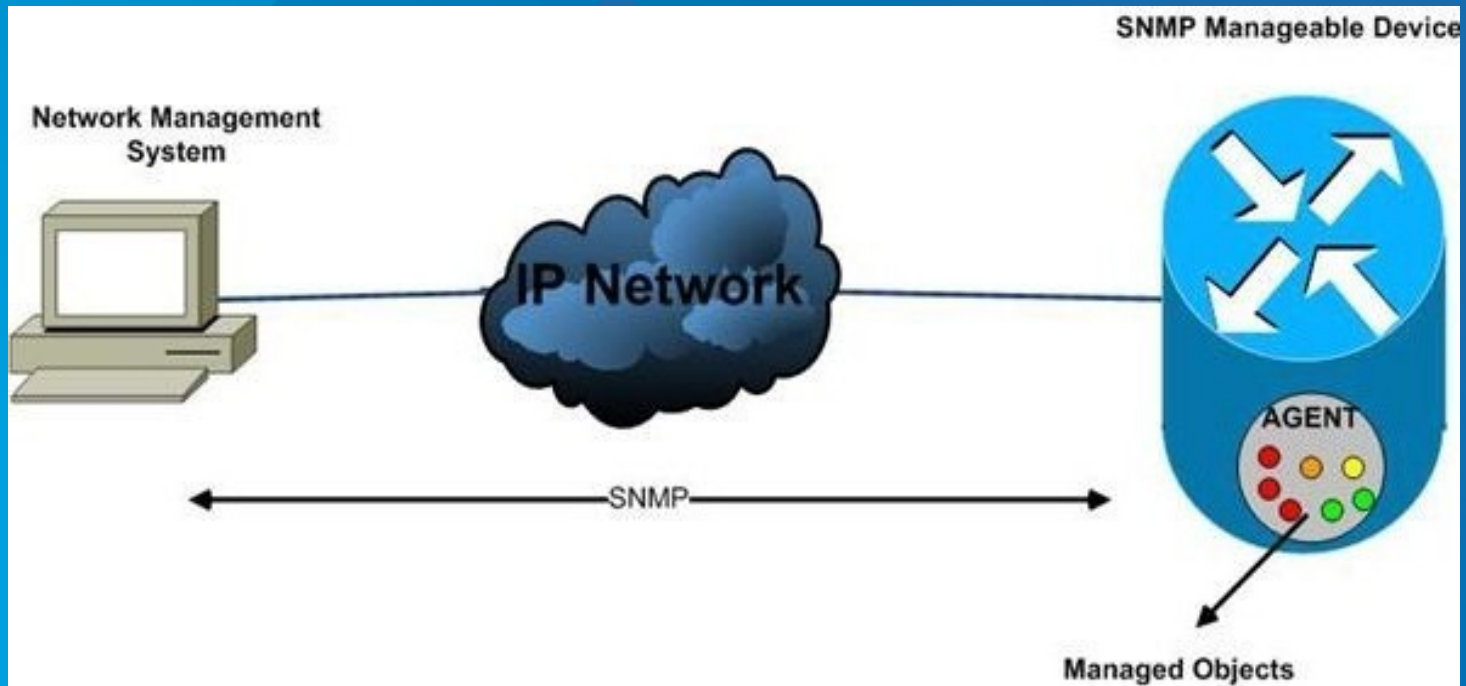
# Status map



# Nagios plug-in

- Aplikace napsaná v libovolném jazyce
- Nagiosu předává svůj návratový kód
  - 0 – OK
  - 1 – WARNING
  - 2 – CRITICAL
  - 3 – UNKNOWN
- ... a několik řádek výstupu
  - STATUS OK: 53% FREE SPACE

# Simple Network Management Protocol



## Windows

A fatal exception 0E has occurred at 0028:C0011E36 in UXD UMM(01) + 00010E36. The current application will be terminated.

- \* Press any key to terminate the current application.
- \* Press CTRL+ALT+DEL again to restart your computer. You will lose any unsaved information in all applications.

Press any key to continue \_

Windows

A fatal exception 0E has occurred at 0020:0000C000 In the window:  
000059F0. The current application will be terminated.

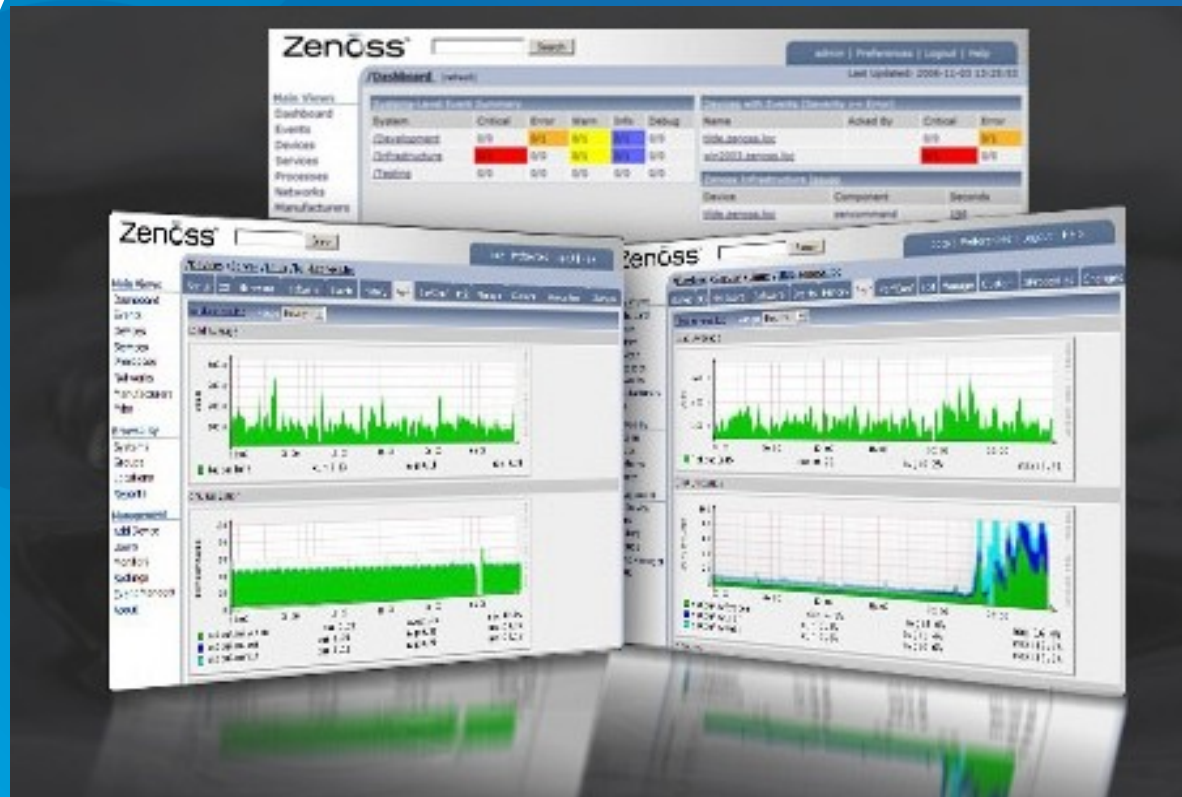
- Press any key to terminate the current application.
- Press CTRL+ALT+DEL to restart your computer. You will lose any unsaved information in all applications.

Press any key to continue -



# Zenoss

- Community
- Enterprise



# Zenoss Dashboard

The screenshot displays the Zenoss CORE dashboard. At the top left is the Zenoss CORE logo. On the top right, there is a search bar, user information (admin), and links for Preferences, Logout, and Help. Below the header, a navigation sidebar on the left lists various views and classes. The main content area is divided into three sections: Systems Summary, Device Issues, and Zenoss Issues. The Systems Summary table shows the status of various systems across different severity levels. The Device Issues table lists specific devices with their current critical and error counts. The Zenoss Issues table provides details on specific system components and their associated error counts.

**Zenoss CORE** | CORE

admin Preferences Logout Help

Last Updated: 2007-06-08 17:49:06

### Main Views

- Dashboard
- Event Console
- Device List
- Networks

### Classes

- Events
- Devices
- Services
- Processes
- Products

### Browse By

- Systems
- Groups

### Systems Summary

System	Critical	Error	Warn	Info	Debug
/BuildBot	0/1	0/2	0/0	0/0	0/0
/CRM	0/0	0/0	0/0	0/0	0/0
/Development	0/1	0/5	0/0	0/0	0/0
/Email	0/0	0/1	0/0	0/0	0/0
/Financials	0/0	0/0	0/0	0/0	0/0
/HR	0/0	0/0	0/0	0/0	0/0
/Intranet	0/0	0/0	0/0	0/0	0/0
/Management	0/0	1/2	0/0	0/0	0/0
/Network	0/0	0/0	0/0	0/0	0/0
/Services	0/0	0/0	0/0	0/0	0/0
/Testing	0/1	0/0	0/0	0/0	0/3
/Web	0/0	0/0	0/0	0/0	0/0

### Device Issues

Name	Acked By	Critical	Error
build.zenoss.loc		0/0	0/1
fc6.zenoss.loc		0/1	0/2
mail.zenoss.com		0/0	0/1
tlide.zenoss.loc		0/0	0/2
zenoss.zenoss.loc	edahl	0/0	1/2
zenoss2.zenoss.loc		0/0	0/2
sunny.zenoss.loc		0/1	0/2
vmw2k.zenoss.loc		0/1	0/0

### Zenoss Issues

Device	Component	Seconds
zenoss2.zenoss.loc	zenprocess	9208
zenoss2.zenoss.loc	zenwinmodeler	9141