

# check\_multi

Matthias Flacke

Nagios Workshop 26. Juni 2007

# Was ist check\_multi?

- check\_multi ist ein Wrapper-Plugin (Parent), das andere Plugins (Childs) aufruft.
- In einer Headerzeile wird eine Zusammenfassung gegeben
- Der Output der Child Plugins landet im long\_plugin\_output: pro Plugin eine Zeile.
- Der Returncode mit der groessten Severity ist auch der Returncode des Parent-Plugins.

# Motivation

- *Neues Feature*  
Nagios 3 bietet multiline plugin output
- *Performance*  
magische Grenze von 2000 Checks pro Nagios-Server
- *Vereinfachung*  
Konfiguration und Wartung einer verteilten Nagios-Umgebung aufwaendig
- *Delegierung*  
Trennung von Nagios-Konfiguration und Threshold-Tuning bei Checks

## ...more Details

- `check_multi` ist ein ganz normales Plugin  
gemaess den Plugin Development Guides
- Sequentieller Aufruf der Child-plugins
- Plugin laeuft innerhalb der ueblichen Timeout-  
Konventionen: 60s fuer den Service, 10s fuer  
den einzelnen Check
- Perl-Plugin
- Feld-Test auf 500 Unix-Servern laeuft gerade  
(Solaris, RHEL, HP-UX, AIX, True64)

# Konfiguration (ein normales Plugin...)

## Service:

```
define service {  
    use local-service  
  
    name check_multi  
  
    host_name localhost  
  
    service_description System_checks  
  
    check_command check_multi!/usr/local/nagios/etc/multi.cmd  
  
}
```

## Command:

```
define command {  
  
    command_name check_multi  
  
    command_line $USER1$/check_multi -f $ARG1$  
  
}
```

# Konfiguration (command file)

- NRPE-stylish config (keep it simple!)

```
# command [ tag ]           = plugin Aufruf

command[ system_load ]      = check_load -w 5,4,3 -c 10,8,6
command[ system_rootdisk ] = check_disk -w 5% -c 2% -p /
command[ system_swap ]      = check_swap -w 90 -c 80
command[ system_syslog ]    = check_file_age -f /var/log/messages -c 86400 -C 0
```

→ kleine Demo...

# Overall timeout vs. plugin timeout

- Das Parent plugin hat ein default timeout von 60s (vgl. `service_check_timeout` von Nagios)
- Wenn fuer Child plugin weniger Zeit ist als das global timeout: Abbruch und Status “Unknown”

```
thinkpad$ ./check_multi -f check_multi.cmd --timeout 2 --overall 2
```

```
MULTI OK - 3 plugins checked, 0 critical, 0 warning, 2 unknown  
(test_sleep,test_sleep), 1 ok
```

```
[ 1] OK test_sleep - SLEEP - OK: woken up after 1 seconds
```

```
[ 2] UNKNOWN test_sleep - UNKNOWN - execution cancelled after global timeout (2s)
```

```
[ 3] UNKNOWN test_sleep - UNKNOWN - execution cancelled after global timeout (2s)
```

# Service in der GUI

## Current Network Status

Last Updated: Sat Jun 23 14:05:44 CEST 2007  
Updated every 90 seconds  
Nagios® - [www.nagios.org](http://www.nagios.org)  
Logged in as *nagiosadmin*

[View History For This Host](#)

[View Notifications For This Host](#)

[View Service Status Detail For All Hosts](#)

## Host Status Totals

Up	Down	Unreachable	Pending
1	0	0	0
All Problems		All Types	
0		1	

## Service Status Totals

Ok	Warning	Unknown	Critical	Pending
0	0	0	2	0
All Problems		All Types		
2		2		

## Service Status Details For Host 'thinkpad'

Host ↑↓	Service ↑↓	Status ↑↓	Last Check ↑↓	Duration ↑↓	Attempt ↑↓	Status Information
<a href="#">thinkpad</a>	<a href="#">System</a>	CRITICAL	06-23-2007 14:04:55	0d 2h 12m 26s	1/1	SYSTEM CRITICAL - 32 plugins checked, 1 critical (test_sleep), 0 warning, 0 unknown, 31 ok
	<a href="#">System_nrpe</a>	CRITICAL	06-23-2007 14:04:55	0d 2h 12m 4s	1/1	SYSTEM CRITICAL - 32 plugins checked, 1 critical (test_sleep), 0 warning, 0 unknown, 31 ok

2 Matching Service Entries Displayed



**Service Information**  
 Last Updated: Sat Jun 23 14:11:18 CEST 2007  
 Updated every 90 seconds  
 Nagios® - [www.nagios.org](http://www.nagios.org)  
 Logged in as nagiosadmin

[View Information For This Host](#)  
[View Status Detail For This Host](#)  
[View Alert History For This Service](#)  
[View Availability Report For This Service](#)  
[View Notifications For This Service](#)

Service  
 System  
 On Host  
 thinkpad  
 (thinkpad)

Member of  
 No servicegroups.

192.168.47.21

Extended info

Service State Information

Current Status: **CRITICAL** (for 0d 2h 18m 0s)  
 Status Information: SYSTEM CRITICAL - 32 plugins checked, 1 critical (test\_sleep), 1 warning (nagios\_system), 0 unknown, 30 ok  
 [ 1] OK network\_ping - PING OK - Packet loss = 0%, RTA = 0.06 ms  
 [ 2] OK network\_interfaces - OK: host 'localhost', interfaces up: 2, down: 0, dormant: 0, excluded: 0, unused: 0  
 [ 3] OK network\_if\_eth1 - OK: Interface eth1 (index 4) is up.  
 [ 4] OK network\_rsync - TCP OK - 0.001 second response time on port 873 [@RSYNCD: 29]  
 [ 5] CRITICAL test\_sleep - SLEEP - CRITICAL: woken up after 2 seconds  
 [ 6] OK proc\_acpid - PROCS OK: 1 process with command name 'acpid'  
 [ 7] OK proc\_automount - PROCS OK: 3 processes with command name 'automount'  
 [ 8] OK proc\_cron - PROCS OK: 1 process with command name 'cron'  
 [ 9] OK proc\_httpd - PROCS OK: 11 processes with command name 'httpd2-prefork'  
 [10] OK proc\_smartd - PROCS OK: 1 process with command name 'smartd'  
 [11] OK proc\_snmpd - PROCS OK: 1 process with command name 'snmpd'  
 [12] OK proc\_syslogd - PROCS OK: 1 process with command name 'syslog-ng'  
 [13] OK proc\_xinetd - PROCS OK: 1 process with command name 'xinetd'  
 [14] OK procs\_number - PROCS OK: 156 processes  
 [15] OK procs\_RSS - RSS OK: 154 processes  
 [16] OK procs\_zombie - PROCS OK: 1 process with STATE = Z  
 [17] OK system\_load - OK - load average: 0.51, 0.54, 0.44  
 [18] OK system\_mail - TCP OK - 0.001 second response time on port 25  
 [19] OK system\_mailqueue - OK: mailq is empty  
 [20] OK system\_mysql - Uptime: 284773 Threads: 1 Questions: 6381 Slow queries: 0 Opens: 11 Flush tables: 1 Open tables: 6 Queries per second avg: 0.022  
 [21] OK system\_ntp - NTP OK: Offset 10.80610522 secs  
 [22] OK system\_portmapper - OK: RPC program portmapper version 2 udp running  
 [23] OK system\_rootdisk - DISK OK - free space: / 5476 MB (47% inode=83%);  
 [24] OK system\_ssh - SSH OK - OpenSSH\_4.4 (protocol 1.99)  
 [25] OK system\_swap - SWAP OK - 100% free (2048 MB out of 2048 MB)  
 [26] OK system\_syslog - FILE\_AGE OK: /var/log/messages is 7 seconds old and 21595334 bytes  
 [27] OK system\_users - USERS OK - 4 users currently logged in  
 [28] WARNING nagios\_system - NAGIOS WARNING: 16 processes, status log updated 357 seconds ago  
 [29] OK nagios\_tac - HTTP OK HTTP/1.1 200 OK - 11987 bytes in 0.011 seconds  
 [30] OK nagios\_ping - PING OK - Packet loss = 0%, RTA = 125.65 ms  
 [31] OK nagios.org\_dns - DNS OK: 0.009 seconds response time. www.nagios.org returns 66.118.156.22  
 [32] OK nagios.org\_http - HTTP OK HTTP/1.1 200 OK - 27887 bytes in 0.661 seconds

Performance Data:  
 Current Attempt: 1/1 (HARD state)  
 Last Check Time: 06-23-2007 14:10:45  
 Check Type: ACTIVE  
 Check Latency / Duration: 0.265 / 12.474 seconds  
 Next Scheduled Check: 06-23-2007 14:11:05  
 Last State Change: 06-23-2007 11:53:18  
 Last Notification: 06-23-2007 14:04:05 (notification 14)  
 Is This Service Flapping? N/A  
 In Scheduled Downtime? **NO**  
 Last Update: 06-23-2007 14:11:11 ( 0d 0h 0m 7s ago)

Service Commands

[Disable active checks of this service](#)  
[Re-schedule the next check of this service](#)  
[Submit passive check result for this service](#)  
[Stop accepting passive checks for this service](#)  
[Stop obsessing over this service](#)  
[Acknowledge this service problem](#)  
[Disable notifications for this service](#)  
[Delay next service notification](#)  
[Schedule downtime for this service](#)  
[Disable event handler for this service](#)  
[Disable flap detection for this service](#)

Nagios service notification  
PROBLEM System WARNING  
Mon Jun 25 16:32:11 CEST 2007  
--- Host information ---

Name thinkpad  
IP address 127.0.0.1

--- Service information ---

Name System  
State WARNING  
State type HARD  
Output SYSTEM WARNING - 30 plugins checked, 0 critical, 1 warning (system\_ntp), 1 unknown (errorcheck), 28 ok

# Notification Mail

WARNING service output

[20] WARNING system\_ntp - NTP WARNING: Offset -77.4619415 secs

UNKNOWN service output

[30] UNKNOWN errorcheck - UNKNOWN - STDERR:Ich bin ein buggy Plugin: hier kommt eine Fehlermeldung ueber STDERR

OK service output

[ 1] OK network\_ping - PING OK - Packet loss = 0%, RTA = 0.06 ms  
[ 2] OK network\_interfaces - OK: host 'localhost', interfaces up: 2, down: 0, dormant: 0, excluded: 0, unused: 0  
[ 3] OK network\_rsync - TCP OK - 0.001 second response time on port 873 [@RSYNCD: 29]  
[ 4] OK test\_sleep - SLEEP - OK: woken up after 1 seconds  
[ 5] OK proc\_acpid - PROCS OK: 1 process with command name 'acpid'  
[ 6] OK proc\_automount - PROCS OK: 2 processes with command name 'automount'  
[ 7] OK proc\_cron - PROCS OK: 1 process with command name 'cron'  
[ 8] OK proc\_httpd - PROCS OK: 11 processes with command name 'httpd2-prefork'  
[ 9] OK proc\_smartd - PROCS OK: 1 process with command name 'smartd'  
[10] OK proc\_snmpd - PROCS OK: 1 process with command name 'snmpd'  
[11] OK proc\_syslogd - PROCS OK: 1 process with command name 'syslog-ng'  
[12] OK proc\_xinetd - PROCS OK: 1 process with command name 'xinetd'  
[13] OK procs\_number - PROCS OK: 136 processes  
[14] OK procs\_RSS - RSS OK: 137 processes  
[15] OK procs\_zombie - PROCS OK: 0 processes with STATE = Z  
[16] OK system\_load - OK - load average: 0.26, 0.27, 0.33  
[17] OK system\_mail - TCP OK - 0.001 second response time on port 25  
[18] OK system\_mailqueue - OK: mailq is empty  
[19] OK system\_mysql - Uptime: 32137 Threads: 1 Questions: 1898 Slow queries: 0 Opens: 11 Flush tables: 1 Open tables: 6 Queried  
second avg: 0.059  
[21] OK system\_portmapper - OK: RPC program portmapper version 2 udp running  
[22] OK system\_rootdisk - DISK OK - free space: / 5521 MB (48% inode=83%);  
[23] OK system\_ssh - SSH OK - OpenSSH\_4.4 (protocol 1.99)  
[24] OK system\_swap - SWAP OK - 100% free (2048 MB out of 2048 MB)  
[25] OK system\_syslog - FILE\_AGE OK: /var/log/messages is 6 seconds old and 3075712 bytes  
[26] OK system\_users - USERS OK - 2 users currently logged in  
[27] OK nagios\_system - NAGIOS OK: 10 processes, status log updated 10 seconds ago  
[28] OK nagios\_tac - HTTP OK HTTP/1.1 200 OK - 12010 bytes in 0.011 seconds  
[29] OK random5 - RAND OK - 77 -gt 5

# Vorteile

- Performance / Kosteneinsparung
- Verteiltes Monitoring nicht mehr noetig
- Die Konfiguration der Child-Plugins kann getrennt von der Nagios-Konfiguration erfolgen
- Flexibilitaet: Mischbetrieb moeglich
- Umfassende Informationen in der Notification
- Plugin eignet sich gut fuer Aufruf per NRPE / check\_by\_ssh: weniger Overhead

# Nachteile

- Settings nur fuer Parent-Plugin, wer differenzieren will, muss extra Check verwenden.
- Laenge des Plugin-Outputs momentan noch begrenzt auf 4096 Bytes (NRPE / SSL)
- Todo: Performance-Daten

Fragen, Kommentare...