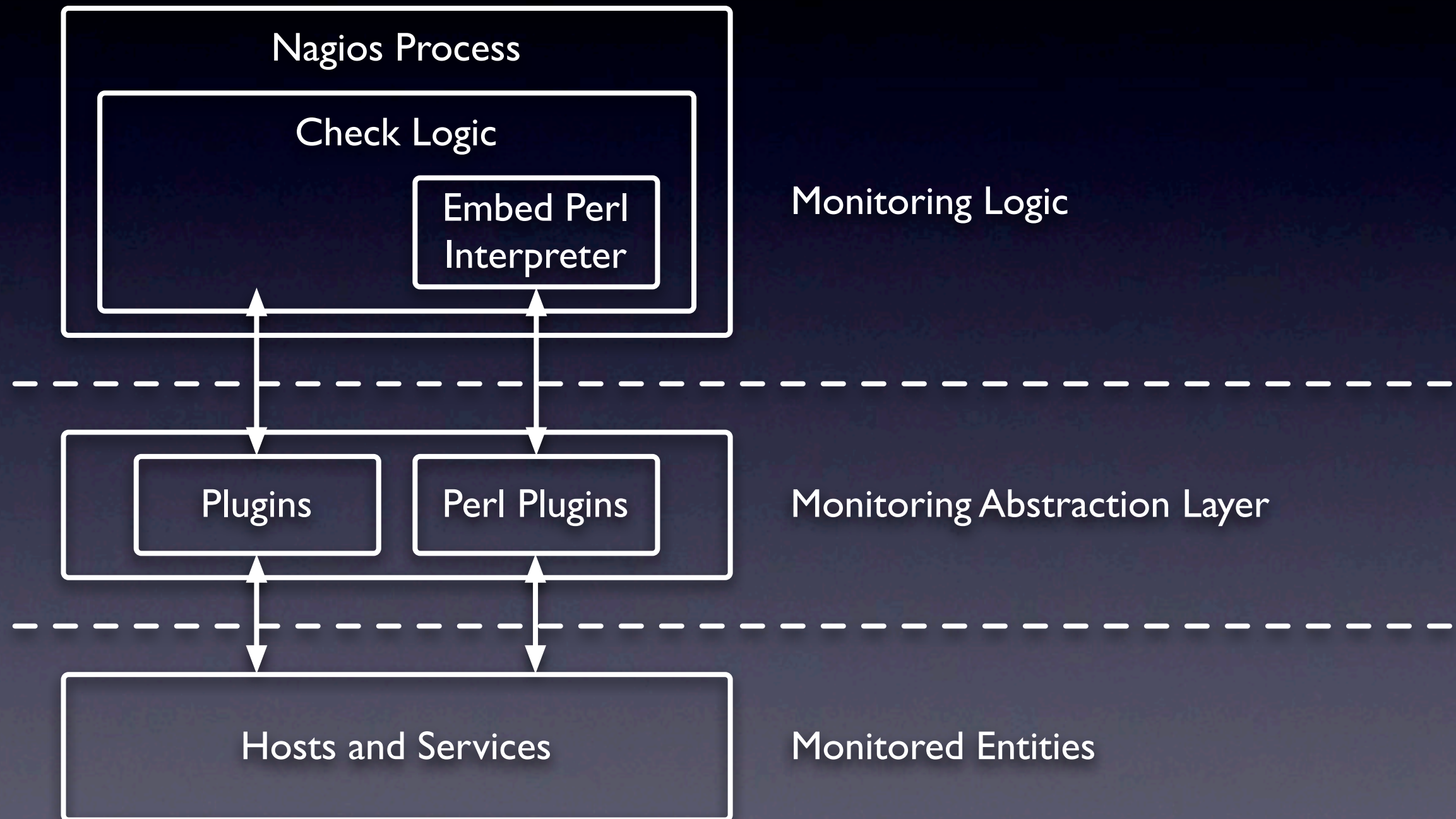


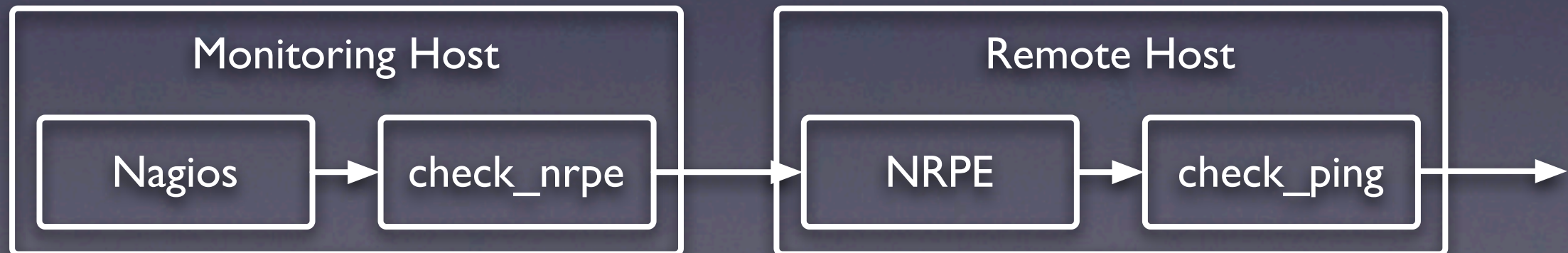
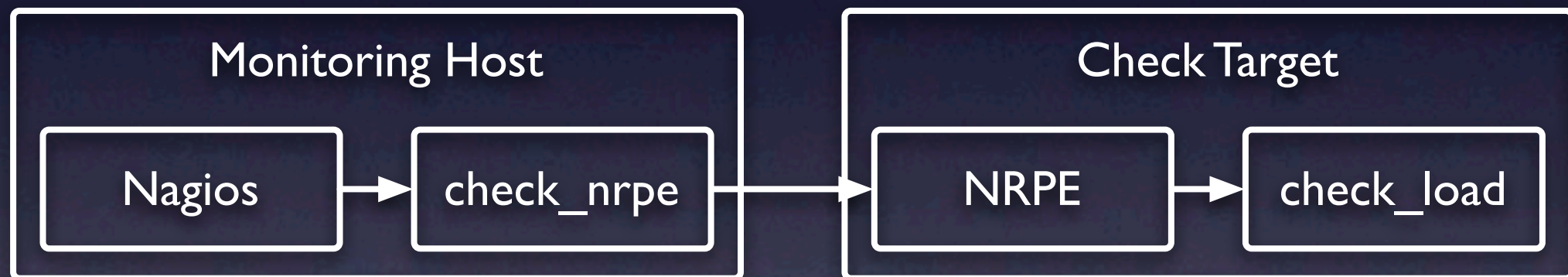
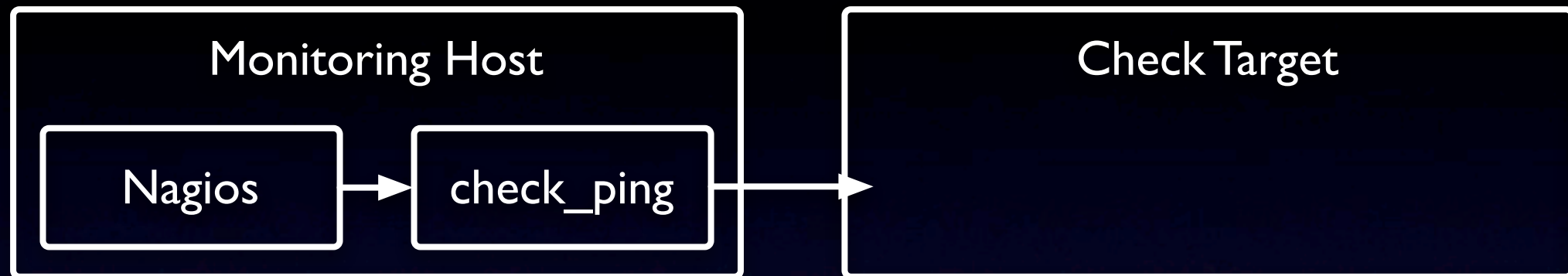
Nagios Plugin の作り方

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Nagios の概要



NRPE の概要



シンプルな Plugin

- 次の要件を満たす実行可能プログラム
or スクリプト
 - ❖ チェック結果に応じて 0..3 までの
終了コードを返す
 - ❖ 標準出力(STDOUT)に最低でも 1 行
の文字列を出力する

終了コード

Return Code	Service State	Host State
0	OK	UP
1	WARNING	UP or DOWN UNREACHABLE
2	CRITICAL	DOWN UNREACHABLE
3	UNKNOWN	DOWN UNREACHABLE

標準出力文字列

TEXT OUTPUT | OPTIONAL PERFDATA

LONG TEXT LINE 1

LONG TEXT LINE 2

...

LONG TEXT LINE N | PERFDATA LINE 2

PERFDATA LINE 3

...

PERFDATA LINE N

Plugin 実行例

```
[m-asama@nagios plugins]# ./check_ping -H 127.0.0.1 -w 100,40% -c 200,80%
PING OK - Packet loss = 0%, RTA = 0.08 ms|rta=0.081ms;100.0;200.0;0.0 pl=0%;40;80;0
[m-asama@nagios plugins]# echo $?
0
[m-asama@nagios plugins]# ./check_ping -H 10.0.0.1 -w 100,40% -c 200,80%
PING CRITICAL - Packet loss = 100%|rta=200.0ms;100.0;200.0;0.0 pl=100%;40;80;0
[m-asama@nagios plugins]# echo $?
2
[m-asama@nagios plugins]# ./check_ping -h
check_ping v1.4.14 (nagios-plugins 1.4.14)
Copyright (c) 1999 Ethan Galstad <nagios@nagios.org>
Copyright (c) 2000-2007 Nagios Plugin Development Team
<nagiosplug-devel@lists.sourceforge.net>
```

Use ping to check connection statistics for a remote host.

Usage: check_ping -H <host_address> -w <wrta>,<wpl>% -c <crta>,<cpl>%
[-p packets] [-t timeout] [-4|-6]

Options:

-h, --help

Print detailed help screen

...

例) check_bgpPeerState

```
#!/bin/bash
while getopts "H:p:c:v:" flag; do
    case $flag in
        \?) OPT_ERROR=1; break;;
        H) opt_H="$OPTARG";;
        p) opt_p="$OPTARG";;
        c) opt_c="$OPTARG";;
        v) opt_v="$OPTARG";;
    esac
done
if [ $opt_H = "" -o $opt_p = "" -o $opt_c = "" -o $opt_v = "" ]; then
    echo "Usage:check_bgpPeerState -H <host_address> -p <peer_address>" ¥
    echo "      -c <community> -v <version>"
    exit 1
fi
( snmpget -c$opt_c -v$opt_v $opt_H .1.3.6.1.2.1.15.3.1.2.$opt_p | grep "INTEGER: 6" ) ¥
    > /dev/null 2>&1
if [ $? -eq 0 ]; then
    echo "OK"; exit 0
else
    echo "Critical"; exit 2
fi
```


例) check_openbgpd

```
#!/usr/bin/perl -w
use strict;
use Getopt::Long;
use vars qw($verbose $PROGNAME);
use lib "/usr/lib64/nagios/plugins";
use utils qw(%ERRORS &print_revision &support &usage);
...
GetOptions('help|h' => \$help, 'neighbor|n=s' => \$neighbor);
...
open(BGPCTL, "sudo bgpctl show neighbor $neighbor |");
{ local $/ = undef; $result = <BGPCTL>; }
close(BGPCTL);
if($result =~ m/\n BGP state = (.+)\n/) {
    my ($str) = ($1);
    if($str =~ m/^Established/) {
        print "OK - $str\n"; exit $ERRORS{OK};
    } else {
        print "Critical - $str\n"; exit $ERRORS{CRITICAL};
    }
} else {
    print "Unknown - $neighbor\n"; exit $ERRORS{UNKNOWN};
}
```

例) check_softraid

```
#!/usr/bin/perl -w
use strict;
use Getopt::Long;
use vars qw($verbose $PROGNAME);
use lib "/usr/lib64/nagios/plugins";
use utils qw(%ERRORS &print_revision &support &usage);
...
GetOptions('array|a=s' => \$array);
open(MDSTAT, "/proc/mdstat");
{ local $/ = undef; $result = <MDSTAT>; }
close(MDSTAT);
if($result =~ m/\n$array : (.+)\n\s+\d+ blocks \[(\d+)\]/(\d+)\] \[[^\]]+\]\n/) {
    my ($str, $t1, $t2) = ($1, $2, $3);
    if($t1 == $t2) {
        print "OK - $str\n"; exit $ERRORS{OK};
    } elsif(($t1 - $t2) == 1) {
        print "Warning - $str\n"; exit $ERRORS{WARNING};
    } else {
        print "Critical - $str\n"; exit $ERRORS{CRITICAL};
    }
} else {
    print "Unknown - $array\n"; exit $ERRORS{UNKNOWN};
}
```

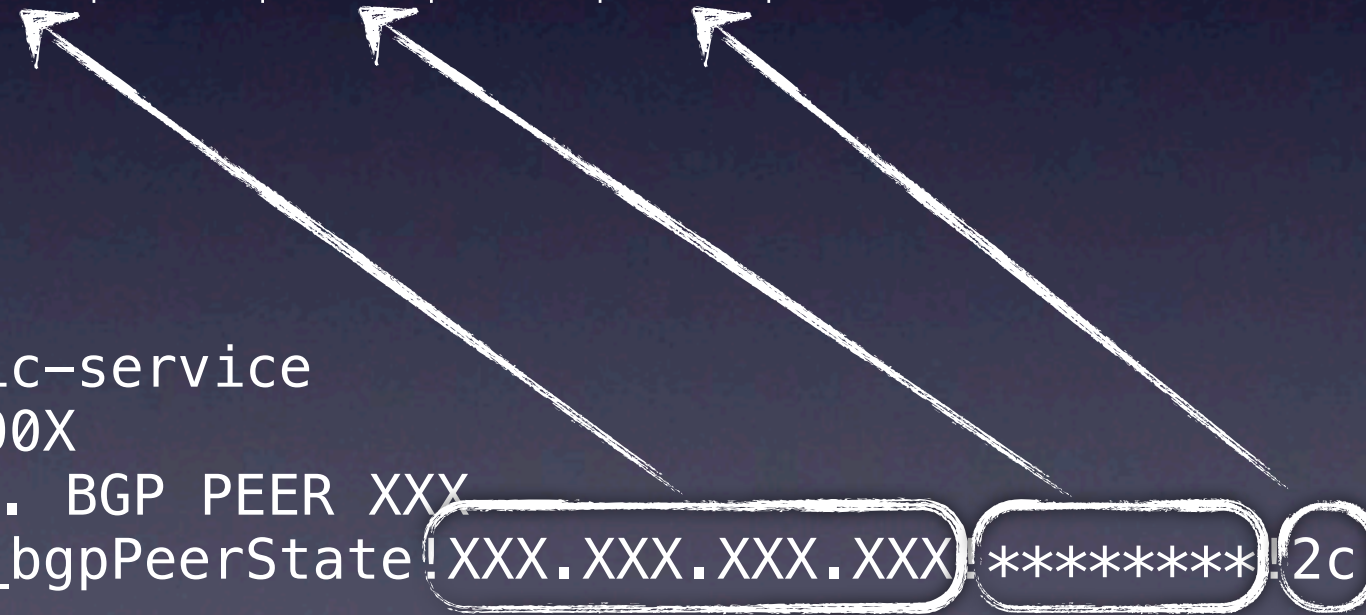

利用方法①

command の定義:

```
define command {  
    command_name    check_bgpPeerState  
    command_line    $USER1$/check_bgpPeerState -H $HOSTADDRESS$ ¥  
                    -p $ARG1$ -c $ARG2$ -v $ARG3$  
}
```

service の定義:

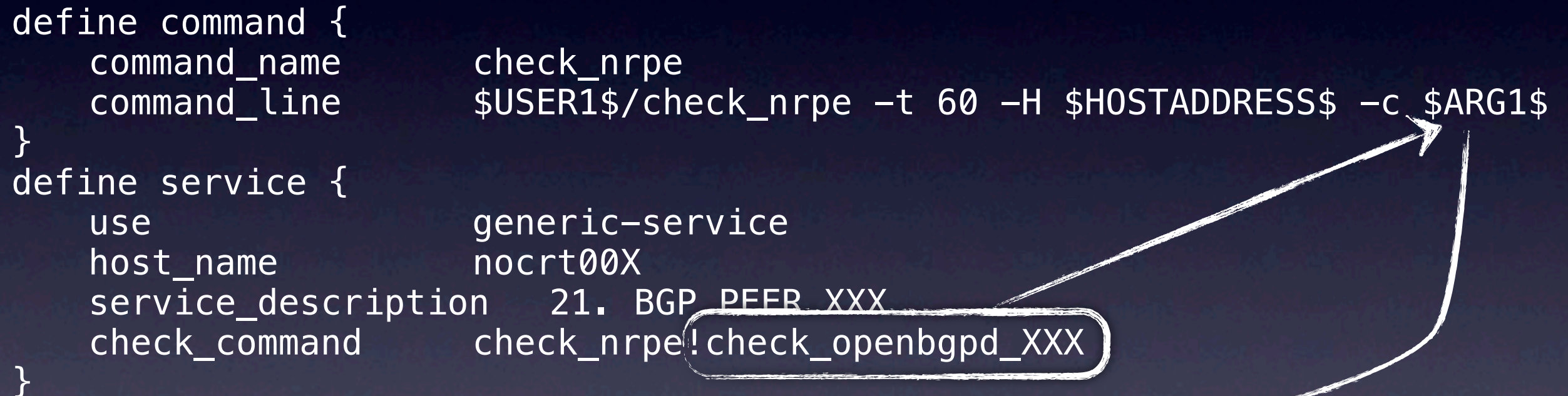
```
define service {  
    use                generic-service  
    host_name          nocrt00X  
    service_description 21. BGP PEER XX  
    check_command       check_bgpPeerState!XXX.XXX.XXX.XXX!*****2c  
}
```



利用方法②

Nagios 側の設定:

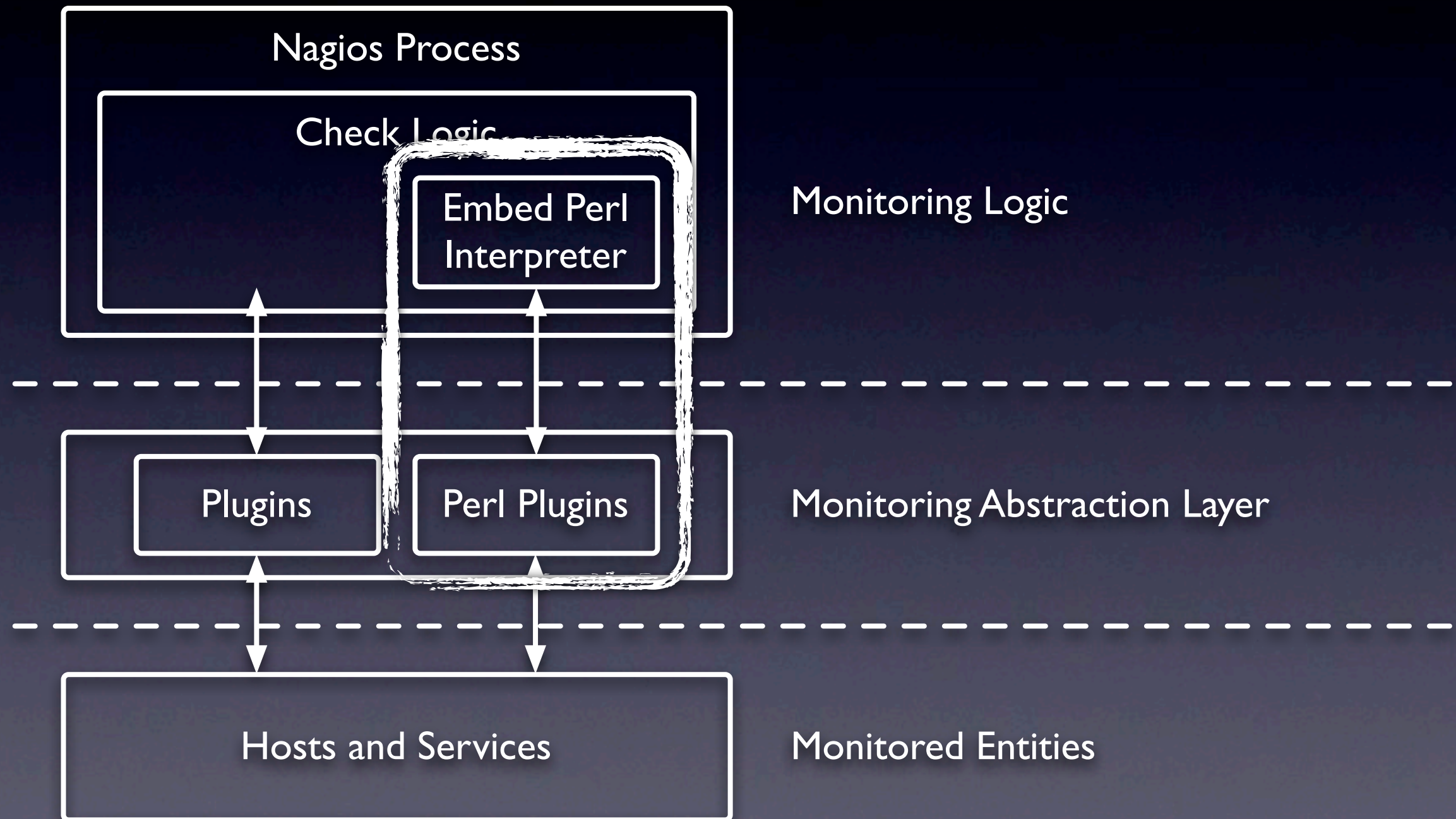
```
define command {  
    command_name      check_nrpe  
    command_line      $USER1$/check_nrpe -t 60 -H $HOSTADDRESS$ -c $ARG1$  
}  
define service {  
    use                generic-service  
    host_name          nocrt00X  
    service_description 21. BGP PEER XXX  
    check_command       check_nrpe!check_openbgpd_XXX  
}
```



NRPE 側の設定:

```
command[check_openbgpd_XXX]=/path/to/check_openbgpd -n 2001:db8::1
```

Embedded Perl Nagios(ePN)



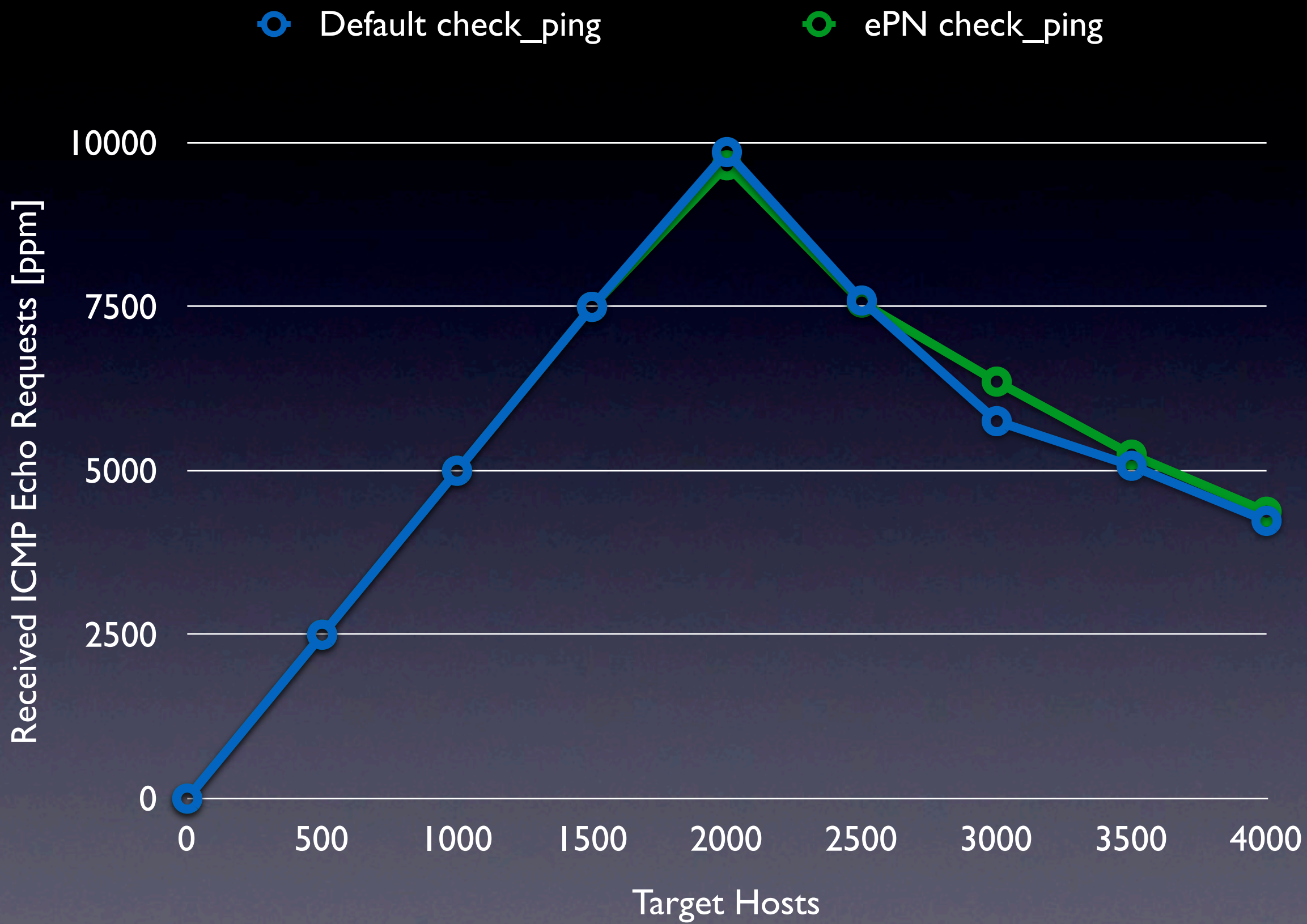
実行のされ方

ePN Plugin 以外の場合:

```
nagios 5345      1  0 15:32 ?  00:00:00 /usr/bin/nagios -d /etc/nagios/nagios.cfg
nagios 5530      1  0 15:33 ?  00:00:00 /usr/bin/nagios -d /etc/nagios/nagios.cfg
nagios 5531 5530  0 15:33 ?  00:00:00 /usr/lib64/nagios/plugins/check_ping ¥
                                     -H 172.31.2.17 -w 100,60% -c 500,80% -p 5
nagios 5532 5531  0 15:33 ?  00:00:00 /bin/ping -n -U -w 30 -c 5 172.31.2.17
nagios 5534      1  0 15:33 ?  00:00:00 /usr/bin/nagios -d /etc/nagios/nagios.cfg
nagios 5535 5534  0 15:33 ?  00:00:00 /usr/lib64/nagios/plugins/check_ping ¥
                                     -H 172.31.2.17 -w 100,60% -c 500,80% -p 5
nagios 5536 5535  0 15:33 ?  00:00:00 /bin/ping -n -U -w 30 -c 5 172.31.2.17
nagios 5538      1  0 15:33 ?  00:00:00 /usr/bin/nagios -d /etc/nagios/nagios.cfg
nagios 5539 5538  0 15:33 ?  00:00:00 /usr/lib64/nagios/plugins/check_ping ¥
                                     -H 172.31.2.17 -w 100,60% -c 500,80% -p 5
nagios 5540 5539  0 15:33 ?  00:00:00 /bin/ping -n -U -w 30 -c 5 172.31.2.17
...
```

ePN Plugin の場合:

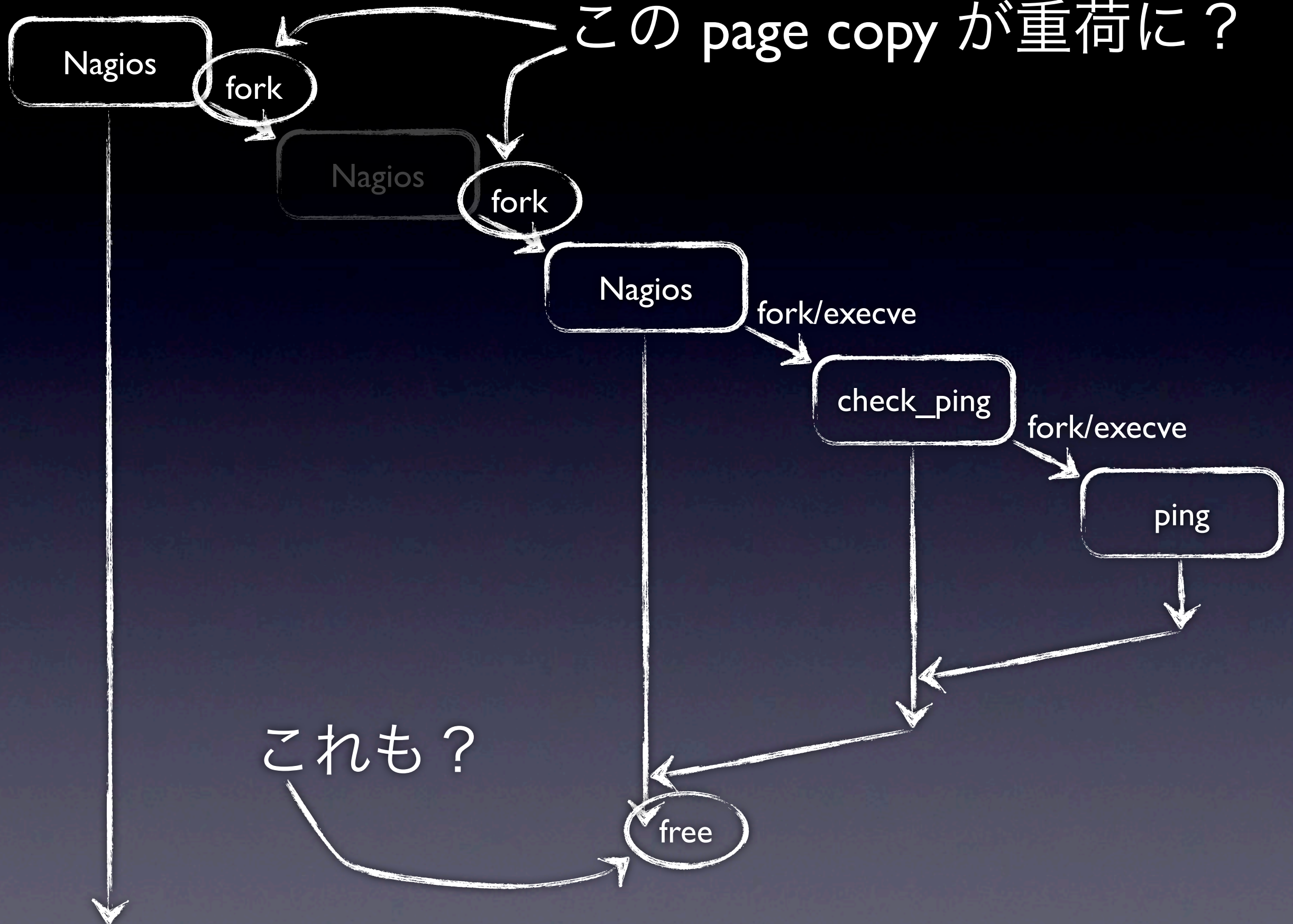
```
nagios 7078      1  5 Jun11 ?  00:56:56 /usr/bin/nagios -d /etc/nagios/nagios.cfg
nagios 9619      1  0 15:29 ?  00:00:00 /usr/bin/nagios -d /etc/nagios/nagios.cfg
nagios 9621      1  0 15:29 ?  00:00:00 /usr/bin/nagios -d /etc/nagios/nagios.cfg
nagios 9623      1  0 15:29 ?  00:00:00 /usr/bin/nagios -d /etc/nagios/nagios.cfg
...
```

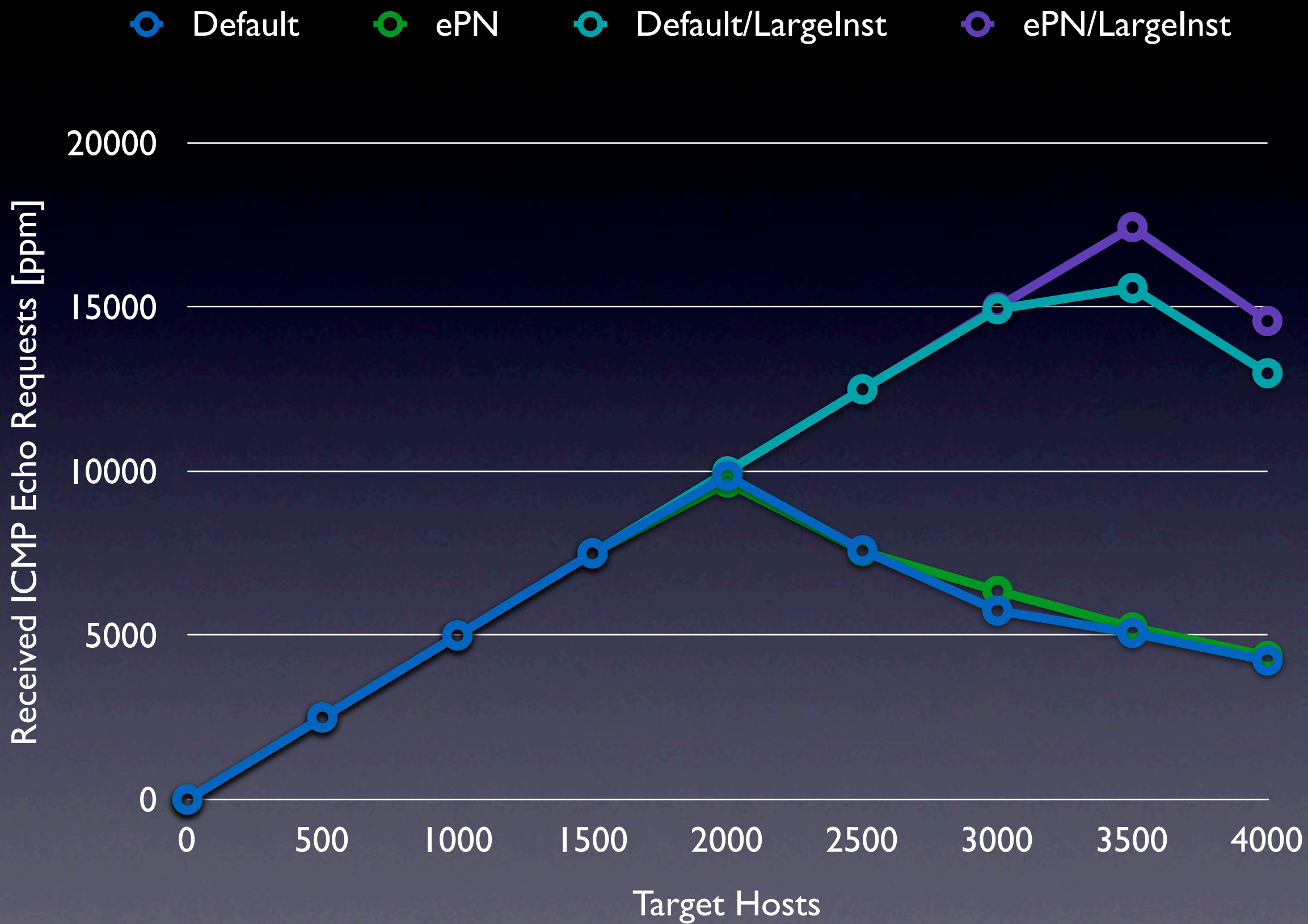



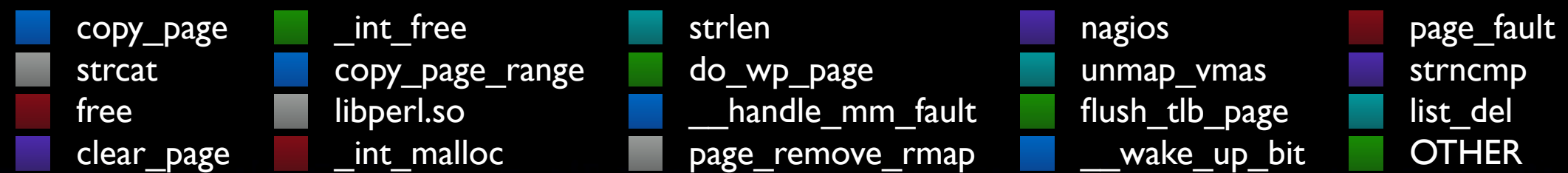
```
# LARGE INSTALLATION TWEAKS OPTION
# This option determines whether or not
# Nagios will take some shortcuts
# which can save on memory and CPU usage
# in large Nagios installations.
# Read the documentation for more
# information on the benefits/tradeoffs
# of enabling this option.
# Values: 1 - Enabled tweaks
#          0 - Disable tweaks (default)
```

```
use_large_installation_tweaks=1
```


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Oprofile Result @ Target Host I500

