

NanoBSD

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9 SZ è ° Ý n y NanoBSD ì Ý + Û 9 ì • à ¼ ã ñ à y ¶ á P • (T à • P
Ý FreeBSD • Û ì j | - D w Õ Compact Flash ~ (T - Æ)

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1 NanoBSD

NanoBSD is a Poul-Henning Kamp <phk@FreeBSD.org> GÑ3 s Ý x 4 ì , à ¼ ã ñ à y ¶ á P
• (T à • P Ý FreeBSD • Û ì j | - D w Õ Compact Flash ~ (T - Æ mass storage medium)
9 x ì ô • à ¼ Š % H „ ì j | • ; 7 ì E ¶ á P • Û (computer appliances) F Ý • Û H „ î
® ; ð N Í ¶ á P • Û ® ` K b § { › õ 8 › T ì ð Ž X b Ý T à • P K Î ï „ ?
Ý 9 ° ' n • à # w Õ ` b Ý Ç - , v (¿ { Î) ñ Ç , à
NanoBSD è ° Ý • ‘ À

• ò FreeBSD x ø , à Ports ò Packages X b Ý T à • K • 3 NanoBSD à # , à ,] P
FreeBSD x ø

• ™ m Î a 3 FreeBSD † Ý Ç ® K • 3 NanoBSD , à t & 3 ã ñ NanoBSD Ì
j ` b ¼ Š J * , Æ

X b ‹ — 3 ° • ` K Î ° \ Ý • | H 2 d * é Û æ • Û Ñ ð n ^ Ý • à p fsck(8)
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• D ê _ Ë Š • Æ C © m , à x Í shell script ò x Í ' j • | D ê µ m O ¼ - • † Ê à Ý
ì j

2.3.15 ~~2.3.15~~ NanoBSD ðìjjj

9 • Í NanoBSD t ¥Š !`ôî t Ž• ¶Ý• !` 3 s NanoBSD T à • P` 9 ô î
8 `ÝÄ•

Æ• ì « Ý ¼f Þ° nanobsd.sh \ ã ê GX3 ê Ý myconf.nano j Ý'

```
# sh nanobsd.sh -c myconf.nano
```

Š• ÆCÝø• ©mĚÍ M»

Š• ó 4

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2.3.16 ~~2.3.16~~ óó44

DÄÑ; ' •| ' à y NanoBSD ÆC Ä• buildworldõ installworld\$ ðÝ_Ě H„ ó 4
|C NanoBSD x Š ÆC Ä• Ýó 4 DÄ, à 9° ó 4 •| F 3 • ÛÝM , È w á 64 MB Ý
– Ä •| × MD Ä 9° ó 4 ¼F 3 FreeBSD à Œ,©' â kernel |C Ě ě Í userland j n c
' j n ' â à|, ĩ ' ÂÝ' ó 4 • + t ¥Š Ý ě 4' A ì

NANO_NAME Í g ÆCÝ(ì (X~ ñ ®ê Ý(ì)

NANO_SRC à| _Ě ÆC ì j Ý source tree Ý › H

NANO_KERNEL ' à ¼_Ě Ý kernel' jj (

CONF_BUILD à y buildworld ÆC\$ ðÝó 4

CONF_INSTALL à y installworld ÆC\$ ðÝó 4

CONF_WORLD à y buildworldõ installworld 9 Ě Í ÆC\$ ðÝó 4

FlashDevice L X à Ý¶ á P { › v l • š ø • FlashDevice.sub j

2.3.17 ~~2.3.17~~ •••

DÄ3 ' j n , à shell Ðó •| × MŠŸ NanoBSD Ü » 1 € xì Š• ÆC Ðó Ý Ä Íj P

```
cust_foo() {
echo "bar=topless" > \
${NANO_WORLDDIR}/etc/foo
}
customize_cmd cust_foo
```

ì « Ü? @j FÝ» , ° . ĩ ' Ý /etc ê 5MB Ÿ J 30MB

```
cust_etc_size() {
cd ${NANO_WORLDDIR}/conf
echo 30000 > default/etc/md_size
}
customize_cmd cust_etc_size
```

t h ² b ě Í ĩ ' Ý• L •|à ¼Š•

```

cust_comconsole    3 i ' VGA • ã î , à getty(8) (/dev/ttyv*) → @ à serial port Ý COM1 | ®
• Û console

cust_allow_ssh_root    . & sshd(8) • | à    root ò r r á

cust_install_files    nanobsd/Files ê    H „ j n 9 ‘ â x ° @ à Ý • Û Ñ § script

```

2.3.3 ' j j j m »»»

ì « î à y Š • Æ C Ý NanoBSD ì j Ý J »

```

NANO_NAME=custom
NANO_SRC=/usr/src
NANO_KERNEL=MYKERNEL
NANO_IMAGES=2

```

```

CONF_BUILD='
NO_KLDLOAD=YES
NO_NETGRAPH=YES
NO_PAM=YES
'

```

```

CONF_INSTALL='
NO_ACPI=YES
NO_BLUETOOTH=YES
NO_CVS=YES
NO_FORTRAN=YES
NO_HTML=YES
NO_LPR=YES
NO_MAN=YES
NO_SENMAIL=YES
NO_SHAREDOCS=YES
NO_EXAMPLES=YES
NO_INSTALLLIB=YES
NO_CALENDAR=YES
NO_MISC=YES
NO_SHARE=YES
'

```

```

CONF_WORLD='
NO_BIND=YES
NO_MODULES=YES
NO_KERBEROS=YES
NO_GAMES=YES
NO_RESCUE=YES
NO_LOCALES=YES
NO_SYSCONS=YES
NO_INFO=YES
'

```

```
FlashDevice SanDisk 1G
```

```
cust_nobeastie() (
```

```
touch ${NANO_WORLDDIR}/boot/loader.conf
echo "beastie_disable=\"YES\"" >> ${NANO_WORLDDIR}/boot/loader.conf
)

customize_cmd cust_comconsole
customize_cmd cust_install_files
customize_cmd cust_allow_ssh_root
customize_cmd cust_nobeastie
```

2.4.2.1 NanoBSD

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1. õ G × ø Æ C ± Ý NanoBSD Ì j
 2. Þ ± Ý Ì j w á Ñ ° • Ý NanoBSD Î à Ý 5 v x
G t H „ NanoBSD Ý M » 8 f 9 x M » t ¥ Š Ý ½ 3 y 9 g à _.disk.full j (‚ â
J í Å Å Ý Ì j) , T H „ _.disk.image Ì j (9 í j n © ‚ â x í • Ù 5 v)
 3. ¥ ± @ › ¬ ± H „ Ý 5 v @ › • Ù
 4. A Œ x 6 5 ¿ Ý • > ù ® µ W Ý
 5. A Œ s ß Ý ¢ ® Þ J • | G Ý 5 v @ › (í ‚ â Ý • Ý • à Ý Ì j) ¼ ¼ " ¬ Æ • Ù
• # ì ¼ • | Ñ Ñ ± _ Ë Ý Ì í D 3 Ý ® Þ ¬ ¥ • G – M »
- Š 3 Ñ 3 ° • Ý NanoBSD • Ù H „ ± Ý Ì j • | , à › y /root ê Ý update1 T update2 script
@ j î Š à ø x í script J ã X y Ñ 3 ° • Ý • Ù Î › y ø í 5 v ,
` è ° ± NanoBSD Ì j X è ° Ý † ™ | C 2 à Ý F í] ° Ý ! • | ¢ • ¬ , à ì ë Ë] P
x

2.4.2.1.1 ftp(1)

A Œ F í > — Î Ĩ x Š O Ý • š 2 à ì « »

```
# ftp myhost
get _.disk.image "| sh update1"
```

2.4.2.2 ssh(1)

A Œ • ? H Ý • T ¢ • ì « »

```
# ssh myhost cat _.disk.image.gz | zcat | sh update1
```

2.4.3 `nc(1)`

A `nc` (Netcat) is a tool for establishing connections to various services.

1. `nc -l -p 2222` @TCP listen on port 2222 for client

```
myhost# nc -l 2222 < _disk.image
```

Note: `nc` is a user-space daemon. It can be used to listen on a port or to connect to a remote host.

2. `nc myhost 2222 | sh update1` update1 script

```
# nc myhost 2222 | sh update1
```
