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1.3 5
1.4 5

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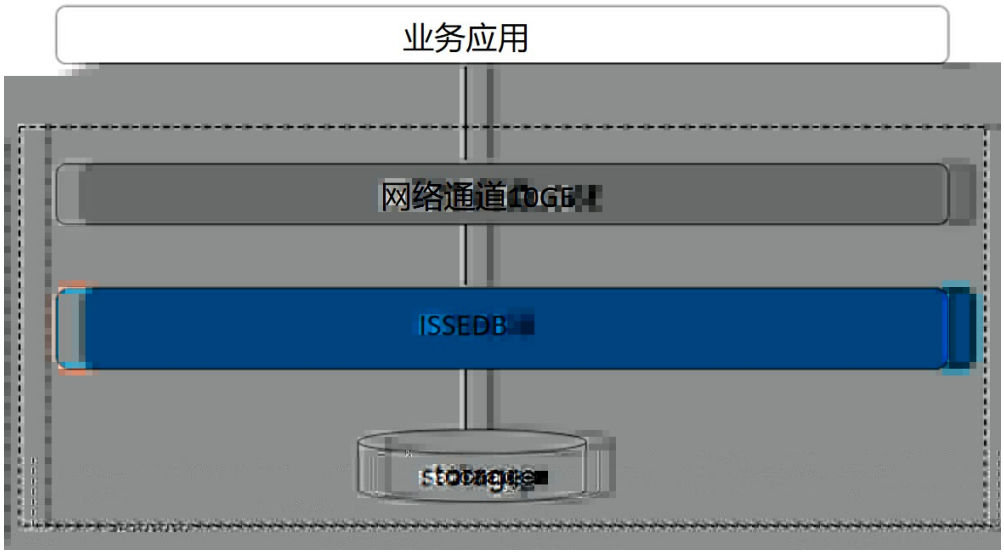

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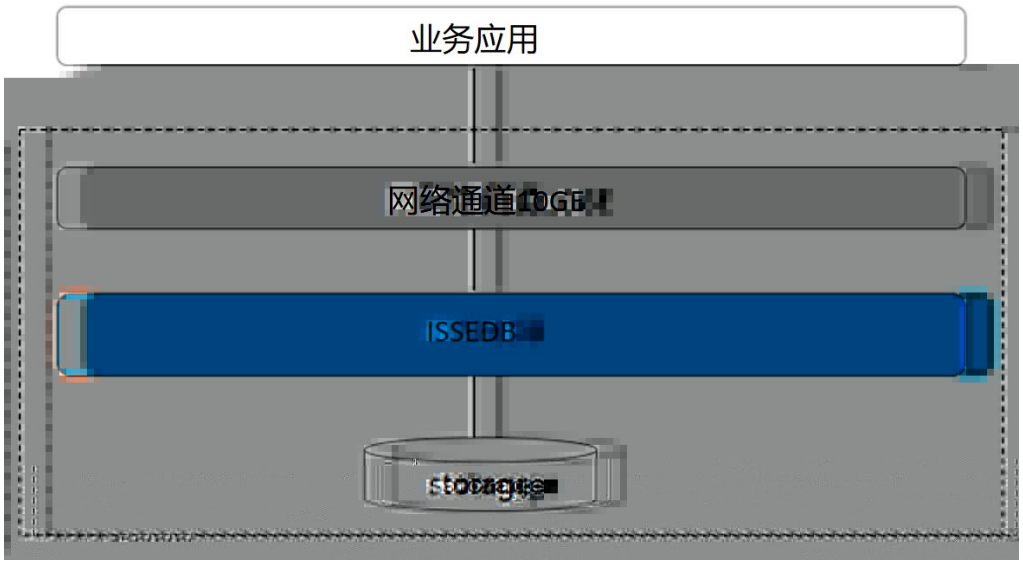

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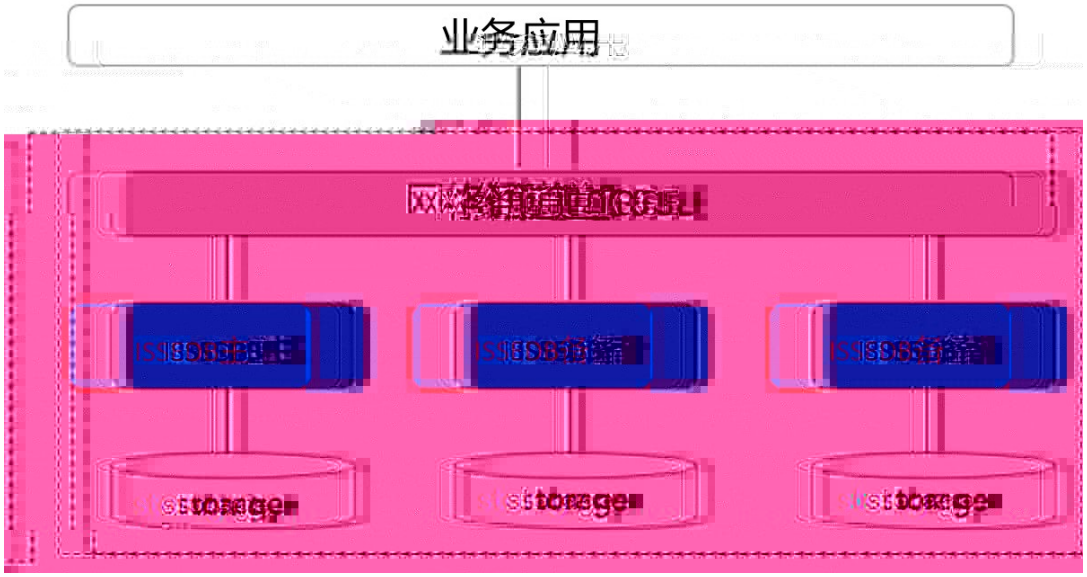

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Dget hNps0<<#ep$.huaDe&c!$ud.c$m<p%th$'<3.6.4<1%th$'73.6.4.tgM

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sudo ;ire<all-cmd --state
sudo s7stemctl status ;ire<alld+service
```

3 À Á Â

```
sudo s7stemctl stop ;ire<alld+service
```

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sudo s7stemctl disa8le ;ire<alld+service
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```
sudo ;ire<all-cmd --state
sudo s7stemctl status ;ire<alld+service
```

& ' ; ä.

1 , ä 5 Â

```
;ire<all-cmd --.one1pu8lic --permanent --add-port1%4=9/tcp
```

2 Ý 5 Â

```
;ire<all-cmd --reload
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```
;ire<all-cmd --list-port
```

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(SS)D*	5432	À Á ä
	5433 { À Á ä E1 ~	¢ $ s ˆ • ä
'tp	123	'tp ß ä
G-S	55434	9 : ä
	55435	9 : 0 ä
	55436	9 : À Á ä
	8008	9 : Ÿ ä
D5S	2379	D5S ó Ÿ ä
	2380	D5S ó Ÿ ä

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```
;ire<all-cmd --.one1pu8lic --permanent --add-port1%4=9/tcp
;ire<all-cmd -reload
;ire<all-cmd -list-ports
```

时间同步配置

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```
ll /etc/localtime
date
h<clock --sho<
```

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V ì ó v • 5 6 • § 9 : I m æ « ì ó Ò v §

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& – ý . @. © ì T. · Q Ò ì

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2 <us#<sha#e<M$'e&'U$< w x © ì ! · <etc<!$ca!8me ! v

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cp /usr/share/.onein;o/>      />       /etc/localtime
```

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1 î #$$t » x L M Â

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î T — ì ó · 2020708703 14Q15Q00 · Â

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```

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h<clock ?<
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• 'tpd À Á · Â

1 7 8 'tpd À Á Â

```
7um install -7 ntpd
@"ent64    ed-at              chron7d      ntpd      !   " #
chron7d $ ntpd % &   ' ( ) * + , - . /   0
@
@ 1 2 3 ntpd        4 5 6 3 chron7d     0
@
@AAA
s7stemctl disa8le chron7d BB s7stemctl stop chron7d
AAA
```

2 a z ! Â

X è 'tp À Á ± v · 192.168.100.100 v § î > Ä

'tp À Á ± ì ó Â a z • § 9 : ú ©<etc<'tp.c$'U !

L M w © ž 421 Se#/e# K £ æ « Ò Â

è <etc<'tp.c$'U ! © se#/e# Ö § ì v • !$ca! ì ó M · 'tp À

Á ˜ ¼ 'tp º » ä Â

```
server *C9+*68+*&&+*&& pre;er
dri;t;ile /var/li8/ntp/dri;t
8roadcastdela7 &+&&8
```

$ © ì ó À Á ± v § î 9 : © ú M · ì ó À Á ± Â

ý ú · 'tp À Á ± { î l 192.168.100.1 · ~ è ©

<etc<'tp.c$'Ü !

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server *9$+*9$+*+&
;ud:e *9$+*9$+*+& stratum *&
dri;t;ile /var/li8/ntp/dri;t
8roadcastdela7 &+&&8
```

a z • § 9 : ©<etc<'tp.c$'Ü !

```
server *C9+*68+*&&+* pre;er
dri;t;ile /var/li8/ntp/dri;t
8roadcastdela7 &+&&8
```

è 'tp À Á j k ì ö 'tpd.c$'Ü ! v j k 'tp À Á • ½ Â

3 2 © ° & } v j k @ 'tpd À Á

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s7stemctl start ntpd
s7stemctl ena8le ntpd
s7stemctl status ntpd
```

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Â

```
date
```

5 ì ó Ò v è @ ì ó b … ! ì ó Â

```
h<clock ?<
```

系统内核参数配置

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T •

```
s7sctl ;s+aio-max-nr1D*&48%$6D
```

‹ G x ÷ § î ; © ! Â
è L&'uF 6 K 7 v R!e7maF © † ¢ / • ‹ maF_R!es_pe#_p#$cess R Â
T •

```
s7sctl ;s+;ile-max1D$6$946&&D
```

‹ 4 ú ‹ { · S) 9 9 SL ¥ S) 9 9 4S ¥ S) 9 61 9 ¥ S) 9 9 4(~ Â
S) 9 9 SL ú • ƒ set • ƒ ú v 250 Â
S) 9 9 4S L&'uF • ƒ ú v 32000 v ®
S) 9 9 SLVS) 9 9 4(Â
S) 9 61 9 S) 9 61 © • ƒ ú v 100 = ®
S) 9 9 SL Â
S) 9 9 4(L&'uF • ƒ set ú v 128 Â
&pcs 7! ¡ &pcs 7u 4 f • ƒ Â
16 ú ý v • ƒ 17 ú • ƒ Â § ö "e#'e!.sem
Â
S) 9 9 SL G • ƒ v S) 9 9 4(G Â
T •

```
s7sctl kernel+sem1D4&C6 9&C$*%9&&& 4&C6 %*9&&&D
```

‹ ¨ Ü ¢ X v ® ¢ X { T · 80 J ~ <
1- ,)_S(.) v ‹ T § „ ø j k ê Â
5 b%te
• d ¢ X · 128 , * v 1- ,) · 4096 v
"e#'e!.shma!!A128V1024V1024V1024V0.8W<4096A26843545 Â
• getc$'U 1- ,)_S(.) ‰ Š 4 f page_s&Me Â
¢ X P b%tes Â
T •

```
s7sctl kernel+shmall1D9684=%4%D
```

‹ G 5 ú ¢ X [{ · sha#ed_buXe# ~ v › ®
¢ X V0.5 Â
5 b%tes
• d ¢ X · 128 , * v
"e#' e!.shmmaFA128V1024V1024V1024V0.5A68719476736 Â
¢ X P b%tes Â
T •

```
s7sctl kernel+shmmax1D68$*C4$6$=6D
```

‹ ¢ ¢ X [© ƒ Â
ß 4096 Â
ú (SS)D* 9 : 2 ú ¢ X [Â
T •

```
s7sctl kernel+shmmni1D8*C9&&D
```

‹ G å F © © w Â
&ptab!es G Q Â
T •

```
s7sctl net+core+netdev_max_8acklo:1D*&&&&D
```

‹ G © ¢ X ß Â
5 b%tes Â
T •

```
s7sctl net+core+rmem_de;ault1D969*44D
```

‹ G © ¢ X Â
5 b%tes Â
T •

```
s7sctl net+core+rmem_max1D4*C4=&4D
```

‹ G < © ¢ X ß Â

5 b%tes Â

T •

```
s7sctl net+core+<mem_de;ault1D969*44D
```

‹ G < © ¢ X Â

5 b%tes Â

T •

```
s7sctl net+core+<mem_max1D4*C4=&4D
```

‹ G s$c"et © bac"!$g { F ~ Â

ß 128

T •

```
s7sctl net+core+somaxconn1D4&C6D
```

‹ G >(4_ ; -(2_2 g , © ì ì Â

5 Ð Â

Ý Â

T •

```
s7sctl net+ipv4+tcp_;in_timeout1D%D
```

‹ G < © ƒ v Ã ‹ å Â

5 bt%es Â

T •

```
s7sctl vm+dirt7_8ack:round_87tes1D4&C6&&&&&D
```

‹ G © Ã ì ó v Ã ì ó ÷ b å Â

5 Í Ù ý Ð Â

/m.d&#t%_eFp&#e_ce'8secs © v é å Â

î ‰Š 3000 G 30 Đ Â

T •

```
s7sctl vm+dirt7_expire_centisecs1D=&&&D
```

‹ G Í Ù v Ã õ ú Í Ù v © (6 ÷ é v å é b Â

T •

```
s7sctl vm+dirt7_ratio1D8&D
```

‹ G ¯ ì ó v ÷ é ý v 3 4 ž X d Â

5 Í Ù ý Đ Â

‹ T · 100 G 1 Đ v ‰Š 50 G 0.5 Đ Â

T •

```
s7sctl vm+dirt7_<rite8ack_centisecs1D%&D
```

‹ G ¢ X Ù v § 0 ¥ 1 ¥ 2

0 G ¢ / 3 4 ž © § ¢ X ¼ • v © § ¢ X v ¢ X v ¢ X Ø v û ê ë Â

1 G ¢ / Ù © • d ¢ X v Ö c —© ¢ X g , Â

2 G ¢ / Ù Ã • d ¢ X K P ó . K © ¢ X Â

è Ù ¢ X ì /m.$/e#c$mm&t_mem$#1"h'OR13$/e"ÐP,

T •

```
s7sctl vm+s<appiness1D6&D
```

‹ § î T k , ä Ù v i ä Â

T •

```
s7sctl net+ipv4+ip_local_port_ran:e1D4&&&& 6%%=%D
```

‹ G 5 ú § Ù © ! Â R ¯ R S { G ¥ ^ _ ¥ Æ ¥ F K • ´ ^ _ ® ~ © 1$stg#eSQL v T · 2000 Â

5 ú

T · 2000 Â

T •

```
s7sctl ;s+nr_open1D9&&&&&&&D
```

T. ¢ / ‹

T ¢ / ‹ — ‹ Œ ¢ / ‹ v É Ë ‹ v ÷ Ñ © 7 8 $ % Â

Ê v » è ì

‹ ¨ Ü ¢ X v ® ¢ X { T ·

80 J v 5 b%te ~ <1- ,)_S(.) { getc$ ' U 1- ,)_S(.) ~ v ‹ T

§ „ ø j k ê Â

‹ G 5 ú ¢ X [{ ·

sha#ed_buXe# ~ v › ® ¢ X V0.5 v 5 b%te Â

‹ ¢ ¢ X [© ƒ v ß 4096 Â

‹ G < © ƒ v Ã ‹ v

å v 5 bt%e Â

& } ý ý T. ¢ / ‹

1 î #$$t » x L M Â

2 T ¢ / ‹ { ý T ~ v ‹ ‹ • ¢ / ‹ Â

```
s7sctl ke71values
```

"e% G ‹

/a!ues G T © ‹ v ‹ ™ Â

3 v • è Ö 6 © ½ Â

```
s7sctl -p
```

& } ƒ T. ¢ / ‹

1 î #$$t » x L M Â

2 a ¢ / ‹ ! <etc<s%sct!.c$'Ù v ¢ / • € b … ! Â

• d ¢ X ›0 8, ì v U ¢ / ‹ T "e#'e!.shma!! K

"e#'e!.shmmaF © Â

î ¢ / ‹ ò ¼ ‹ Œ v ´ T É ‹ K Ë ¸

T Â

```
;s+aio-max-nr1*&48%$6
;s+;ile-max1 $6$946&&
kernel+sem 1 4&C6 9&C$*%9&&& 4&C6 %*9&&&
kernel+shmall 1 9684=%4%         E pa:esF  8&G M0M or hi:her
kernel+shmmax 1 68$*C4$6$=6     E 87tesF  8&G M0M or hi:her
kernel+shmmni 1 8*C9&&
net+core+netdev_max_8acklo: 1 *&&&&
net+core+rmem_de;ault 1 969*44
net+core+rmem_max 1 4*C4=&4
net+core+<mem_de;ault 1 969*44
net+core+<mem_max 1 4*C4=&4
net+core+somaxconn 1 4&C6
net+ipv4+tcp_;in_timeout 1 %
vm+dirt7_8ack:round_87tes 1 4&C6&&&&&
vm+dirt7_expire_centisecs 1 =&&&
vm+dirt7_ratio 1 8&
vm+dirt7_<rite8ack_centisecs 1 %&
vm+overcommit_memor7 1 &
vm+s<appiness 1 &
net+ipv4+ip_local_port_ran:e 1 4&&&& 6%%=%
;s+nr_open 1 9&48&&&&
```

3 • € b … æ X ‡ Â

```
:<H
```

4 v • è Ö 6 © ½ Â

```
s7sctl -p
```

.

1 4 f ž ; j S)L(4OK v ž ; j ž d&ab!ed v ; j ž e'U$#c&'g Â

```
:eten;orce
```

2 ì S)L(4OK Â

```
seten;orce &
```

3 Ÿ Ã ö ! S)L(4OK Â

1 ¥ a z ! Â

```
vi /etc/selinux/con;i:
```

2 ¥ S)L(4OKAe'U$#c&'g ö · S)L(4OKAd&sab!ed Â

3 ¥ j Â

```
re8oot
```

. . **X** .

(SS)D* 7 8 ì #$$t » x Û ‘ v § î Ÿ Ã T • #$$t » x Â

1 î #$$t » x L M Â

2 ö 1e#m&t3$$tL$g&' v » x Â

1 ¥ ; sshd_c$'Rg !

```
vi /etc/ssh/sshd_con;i:
```

2 ¥ ö v § î • î ° & } Ë Ì

1e#m&t3$$tL$g&' '$ Â

```
E(ermit oot3o:in no
```

1e#m&t3$$tL$g&'L · %esL Â

```
(ermit oot3o:in 7es
```

3 ¥ Å ¸ ⁄D æ X û ‡ a z

3 j ssh • ‰ Š ½ Â

```
service sshd restart
```

‹ .

7 8 ì (15 ‹ Â

” • €

3em$/e(15A%es ì v L M ÷ è » ‡ ì v » © (15 {

¢ X [K • ƒ ~ v • (SS)D* À Á ± • © (15 é d v § Æ <

6 v î T 3em$/e(15 ‹ · '$Â

L M.

1 î #$$t » x L M Â

2 … <etc<s%stemd<!$g&'d.c$'U ! v 4 f ž T

3em$/e(15A'$ v Å ¸ 3 v Ã Â

```
vi /etc/s7stemd/lo:ind+con;
```

3 è ! , 3em$/e(15A'$Â

4 …<us#<!&b<s%stemd<s%stem<s%stemd7!$g&'d.se#/&ce ! v 4 f ž

T 3em$/e(15A'$ v T Å ¸ 5 v Ã Â

```
vi /usr/li8/s7stemd/s7stem/s7stemd-lo:ind+service
```

5 ö Ý 3em$/e(15A'$Â

6 Ý ‹ Â

```
s7stemctl daemon-reload
s7stemctl restart s7stemd-lo:ind
```

7 3 4 ö ž ½Â

```
lo:inctl sho<-session I :rep  emovel("
s7stemctl sho< s7stemd-lo:ind I :rep  emovel("
```

T. . { §. ~

@ K P 6 © 920 { 5 ~ T · Q Ò

{ 920 1500 ~ v 8192 { 920 § £ ¸ ö ~ Â Ò

P 6 ý ö { ö & – Ï P 6 ~ Â

1 î #$$t » x L M Â

2 Å ¸ ‰Š v T 920 Â

a § Ÿ Ã ℓp a‰Š 4 f Â

& – ý

```
Ei;con;i: • € • , mtu ƒ
i;con;i: eth& mtu 8*C9
```

& –

```
cat /s7s/class/net/ • € • , /mtu
echo 28*C92 @ /s7s/class/net/ • € • , /mtu
```

Ý . V { § . ~

".&." Z „ …

† ‡ ˆ t

!

(1 • € ä

项目名称	描述说明	备注
l 6	ℓs$+'$de2	l m l 6
(1	192.168.146.162	(1
ä	26000	D*'$de ä

» V W

项目名称	名称	所属类型	规划建议
3 7 8	9 : :	; <	= > ? @
A 8	BCDEF	; <	= > ? @

! w x V W

目录名称	对应名称	目录作用
G9FHGI9JHKLEMGNIIMBC	I9JHKLEM	O P Q R S T U V
G9FHGNIIMBCGNWIHLXXGLFF	YZZ[\]^FF_LH`	a b c O P U V
G9FHGNIIMBCGX9D	YZZ[\]d9D_LH`	e f U V
G9FHGNIIMBCGNWIHLXXGBLHLGBCg	BLHLh9BMg	i j a b S T U V
G9FHGNIIMBCGH:F	H:FkFFBC_LH`	l m R U V
G9FHGNIIMBCGNIIMBCH99XIG9:	YZZ[\]n99X_LH`	a b c o p U V
G9FHGNIIMBCGq9EMJNXM	q9EM_LH`	a b c q9EM m R U V

T @ l 6 •

1 Ù è @ Å ¸

```
5i /etc/hostname
hostnamectl set-hostname iso;tnode9 E I      ‰ Š 6 *C9+*68+*46+*69 ‹ : ;
```

2 T @ <etc<h$sts

```
vi /etc/hosts
*C9+*68+*46+*69 iso;tnode9
```

7 8 » K w x

1 î #$$t » x L M Â

2 7 8 » { § £ ~ v T Þ { q … 2

ü ¦ ý ø ~ Â

```
useradd -m omm
pass<d omm)9&9=
```

£ © L M » § 7 8 v ! K l ¸ Q

P Â

3 (SS)D* w x Â

```
mkdir -p /opt/so;t<are/issed8
chmod $%% -  /opt/so;t<are
```

ö Ü

1 { @ ~ î #$$t » x L M Â

2 Å ¸ ¡ /& <etc<secu#&t%<!&m&ts.c$'U v è ! Ý ¢ ³ v æ X ‡ Â

```
NIIMBC so;t nproc unlimited
NIIMBC hard nproc unlimited
NIIMBC so;t stack unlimited
NIIMBC hard stack unlimited
NIIMBC so;t core unlimited
NIIMBC hard core unlimited
NIIMBC so;t memlock unlimited
NIIMBC hard memlock unlimited
NIIMBC so;t no;ile *&94&&&&
NIIMBC hard no;ile *&94&&&&
```

...

— ~ ™ !

. . **† 1 2** .

$ Ù ¢ ³ R l m L M 1 2 ¸ v î L M •

#$$t » Å ¸ Â

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v ; j ä Â

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ì S)L(40K Â

ì ó Ò. .

j k 9 : — ¸ ý ì ó Ò Â

. . **x** .

T #$$t x Â

. . **¢ / ‹** .

1 2 Ë ¢ / ‹ Â

‹ T.

3em$/e(15 Â

8

7 8 Â

7 8

```
--    Q R r
cd /opt/so;t<are/issed8
<:et    https://issed8-%+o8s+cn-north-4+m7hua<eicloud+com/issed8/centos-
x86_64/issed8-%+&+&-"ent64-x86_64-A33+tar+:.
E s t Q R r v s t NIIMBC-%+&+&-"ent64-648it-all+tar+:. u 4 v w +sha9%6 m
R x y z { | } ~ • € J,A'44-%&9&*K : #he /opt/so;t<are/issed8/issed8-
9+&+&- ed-at-648it+sha9%6 does not exist+
```

```
tar -.xv; NIIMBC-%+&+&-"ent64-648it-all+tar+:.
tar -.xv; NIIMBC-%+&+&-"ent64-648it-om+tar+:.
```

. !

K9L ! { l ~

H P

```
-- i j   root 3 7
-- •/opt/so;t<are/issed8 U V  , ƒ cluster_con;i:+xml    m R
-- z { ; < „
cat @ cluster_con;i:+xmlLL06M
LNxml version12*+&2 encodin:12'#M-82N@
L 66#@
    LO-- l440PQ…† ‡ ˆ --@
    L"3'4#0 @
        L(A AM name12cluster/ame2 value12d8"luster2 /@
        L(A AM name12node/ames2 value12iso;tnode92 /@
        L(A AM name128acklp*s2 value12*C9+*68+*46+*692/@
        L(A AM name12l440PQApp(ath2 value12/opt/issed8*/app2 /@
        L(A AM name12l440PQ3o:(ath2 value12/opt/issed8*/lo:/issed82 /@
        L(A AM name12l440PQ#ool(ath2 value12/opt/issed8*/tool2 /@
        L(A AM name12core(ath2 value12/opt/issed8*/core;ile2/@
        L(A AM name12cluster#7pe2 value12sin:le-inst2/@
    L/"3'4#0 @
    LO-- ‰Š    ‹Œ  i j    ‡ ˆ --@
    LP05l"03l4#@
        LO-- node*Œ  i j    ‡ ˆ --@
        LP05l"0 sn12*&&&&&*2@
            L(A AM name12name2 value12iso;tnode92/@
            L(A AM name12a./ame2 value12AR*2/@
            L(A AM name12a.(riorit72 value12*2/@
            LO-- „ •    ‹ , Ž  •@• ‘ 3  ’ 8ackl(* “ sshl(*    ” (  •
l( --@
            L(A AM name128acklp*2 value12*C9+*68+*46+*692/@
            L(A AM name12sshlp*2 value12*C9+*68+*46+*692/@

            LO--d8node--@
            L(A AM name12data/um2 value12*2/@
            L(A AM name12data(ortQase2 value1296&&&2/@
            L(A AM name12data/ode*2 value12/opt/issed8*/data/d8*2/@
        L/P05l"0@
    L/P05l"03l4#@
L/ 66#@
06M
```

‹ œ

Ë A N	‹	
ù • €	'ame	l 6 •

Ë A N	‹	
aM4ame	> aM4ame { -/a&!ab!e .$'e 4ame ~ v H I J { Ö H I ~ v -.1¥-.2¥-.3Â	
aM1#&$#&t%	> aM1#&$#&t% © Ž Â	
bac"(p1	I 6 è ä X Y © (1 { ¢ (1 ~ Â (SS)D* I 6 • ä X Y Ÿ Â	
ssh(p1	T SSG § • Ÿ (1 { (1 ~ Â v § î Ö T = Ò bac"(p1 T Q Ò (1 Â	

´ 7 8 1 2

E root 3 7 i j ; <

• © ‡ q ~ • ~ -,-2 • ~ Wi 8 c ~ • ~ , 9 „ ‘ w U 5 %ï4 … # { ‰ S – # ‰ •
/issed8/script/I4p7li8/c

>3P_3I0

```
Qe:in to distri8ute packa:e to packa:e path+
4uccess;ull7 distri8ute packa:e to packa:e path+
4uccess;ull7 distri8uted packa:e+
Are 7ou sure 7ou <ant to create the userJommK and create trust ;or it
(7es/no!N 7es -- ª « 7es
(lease enter pass<ord ;or cluster user+
(ass<ord:  -- •   omm ¬ -
(lease enter pass<ord ;or cluster user a:ain+
(ass<ord:  -- ®  ª « omm ¬ -
,enerate cluster user pass<ord ;iles success;ull7+

4uccess;ull7 created JommK user on all nodes+
(reparin: 44- service+
4uccess;ull7 prepared 44- service+
Installin: the tools in the cluster+
4uccess;ull7 installed the tools in the cluster+
"heckin: hostname mappin:+
4uccess;ull7 checked hostname mappin:+
"reatin: 44- trust ;or JommK user+
(lease enter pass<ord ;or current userJommK+
(ass<ord:   -- ª « omm ¬ -
"heckin: net<ork in;ormation+
All nodes in the net<ork are /ormal+
4uccess;ull7 checked net<ork in;ormation+
"reatin: 44- trust+
"reatin: the local ke7 ;ile+
4uccess;ull7 created the local ke7 ;iles+
Appendin: local IP to authori.ed_ke7s+
4uccess;ull7 appended local IP to authori.ed_ke7s+
'pdatin: the kno<n_hosts ;ile+
4uccess;ull7 updated the kno<n_hosts ;ile+
Appendin: authori.ed_ke7 on the remote node+
4uccess;ull7 appended authori.ed_ke7 on all remote node+
"heckin: common authentication ;ile content+
4uccess;ull7 checked common authentication content+
Pistri8utin: 44- trust ;ile to all node+
Pistri8utin: trust ke7s ;ile to all node success;ull7+
4uccess;ull7 distri8uted 44- trust ;ile to all node+
5eri;7in: 44- trust on all hosts+
4uccess;ull7 veri;ied 44- trust on all hosts+
4uccess;ull7 created 44- trust+
4uccess;ull7 created 44- trust ;or JommK user+
"heckin: 64 so;t<are+
4uccess;ull7 check os so;t<are+
"heckin: 64 version+
4uccess;ull7 checked 64 version+
"reatin: clusterDs path+
4uccess;ull7 created clusterDs path+
4et and check 64 parameter+
4ettin: 64 parameters+
4uccess;ull7 set 64 parameters+
Uarnin:: Installation environment contains some <arnin: messa:es+
(lease :et more details 87 2/opt/so;t<are/issed8/script/:s_checkos -i A
-h node*Fnode9FNIIMBC-d8= --detail2+
4et and check 64 parameter completed+
```

```
(reparin: " 6/ service+
4uccess;ull7 prepared " 6/ service+
4ettin: user environmental varia8les+
4uccess;ull7 set user environmental varia8les+
4ettin: the d7namic link li8rar7+
4uccess;ull7 set the d7namic link li8rar7+
4ettin: "ore ;ile
4uccess;ull7 set core path+
4ettin: pssh path
4uccess;ull7 set pssh path+
4ettin: ":roup+
4uccess;ull7 set ":roup+
4et A M 6ptimi.ation+
/o need to set A M 6ptimi.ation+
Mixin: server packa:e o<ner+
4ettin: ;inish ;la:+
4uccess;ull7 set ;inish ;la:+
(reinstallation succeeded+

-- ~ › | O P © • ‡ ˆ ¡ ¯ b | } ~ ° … = a
Jroot)op_master scriptKE /opt/so;t<are/issed8/script/:s_checkos -i A -h
op_masterFop_slave --detail
"heckin: items:
   A*+ J 64 version status K                                  : /ormal
        Jop_slaveK
        centos_$+6+*8*&_648it
        Jop_masterK
        centos_$+6+*8*&_648it
   A9+ J Vernel version status K                              : /ormal
          #he names a8out all kernel versions are same+ #he value is
2=+*&+&-C%$+el$+x86_642+
   A=+ J 'nicode status K                                     : /ormal
      #he values o; all unicode are same+ #he value is 23A/,1en_'4+'#M-
82+
   A4+ J #ime .one status K                                   : /ormal
        #he in;ormations a8out all time.ones are same+ #he value is
2W&8&&2
    A%+ J 4<ap memor7 status K                                        :
Uarnin:
        Jop_slaveK
4<apMemor7 4*6&$4%4$9 #otalMemor7 4*9=&&C&94
        Jop_masterK
4<apMemor7 4*6&$4%4$9 #otalMemor7 4*9=&*$9*6
   A6+ J 47stem control parameters status K                   : /ormal
       All values a8out s7stem control  parameters are correct+
   A$+ J Mile s7stem con;i:uration status K                   : /ormal
       Qoth so;t no;ile and hard no;ile are correct+
   A8+ J Pisk con;i:uration status K                          : /ormal
        #he value a8out TM4 mount parameters is correct+
   AC+ J (re-read 8lock si.e status K                         : /ormal
       #he value a8out 3o:ical 8lock si.e is correct+
   A**+J /et<ork card con;i:uration status K                 : Uarnin:
        Jop_slaveK
QondMode /ull
```

```
             Uarnin:  reason:  net<ork  Dens==D  DmtuD   eal5alue  D*%&&D
0xpected5alue D8*C9D
        Jop_masterK
QondMode /ull
             Uarnin:  reason:  net<ork  Dens==D  DmtuD   eal5alue  D*%&&D
0xpected5alue D8*C9D
    A*9+J #ime consistenc7 status K                                    :
Uarnin:
        Jop_masterK
         #he /#(P not detected on machine and local time is 29&9=-&$-9%
*%:9=:442+
        Jop_slaveK
         #he /#(P not detected on machine and local time is 29&9=-&$-9%
*%:9=:442+
   A*=+J Mire<all service status K                              : /ormal
       #he ;ire<all service is stopped+
   A*4+J #-( service status K                                   : /ormal
       #he #-( service is stopped+
#otal num8ers:*=+ A8normal num8ers:&+ Uarnin: num8ers:=+

11111111111111111111111111111111111111111111111111111111111111111111111111
111111
--  ¯ b z { detail ± - © • ² | } ~ ³ ´ µ { º …
--  | } ~ – — ˜ ¶ Ÿ  · ¸ ‘ = >  u m  ¹ V   º
```

Å ¸ 7 8

ö l

```
--   » ¼ v ½ • i j   z { | } ~
-- root  3 7  i j   ; <
chmod -  $%% /opt/so;t<are/issed8/script/
cho<n -  omm:d8:rp /opt/so;t<are/issed8/script/
```

Å ¸ 7 8

```
--  i j  ¾ ¿ Ÿ omm 3 7 z {
su - omm
--  z { „  ± -
:s_install    -T    /opt/so;t<are/issed8/cluster_con;i:+xml    --l4init-
parameter12--encodin:1'#M82X
@ --dn-:uc12max_connections19&&&2 X
@ --dn-:uc12max_process_memor719,Q2 X
@ --dn-:uc12shared_8u;;ers1*98MQ2 X
@ --dn-:uc128ulk_<rite_rin:_si.e1*98MQ2 X
@ --dn-:uc12cstore_8u;;ers1*6MQ2


E    z  {  –  —  ‘  ~  ›  /opt/issed8*/lo:/issed8/omm/om  À  Á  i
j /opt/issed8*/lo:/issed8/omm/p:_lo:/   e f m R
E
Jomm)op_master           scriptK>           +/:s_install           -T
/opt/so;t<are/issed8/cluster_con;i:+xml X
@ --l4init-parameter12--encodin:1'#M82 X
@ --dn-:uc12max_connections19&&&2 X
@ --dn-:uc12max_process_memor719,Q2 X
```

```
@ --dn-:uc12shared_8u;;ers1*98MQ2 X
@ --dn-:uc128ulk_<rite_rin:_si.e1*98MQ2 X
@ --dn-:uc12cstore_8u;;ers1*6MQ2
(arsin: the con;i:uration ;ile+
"heck preinstall on ever7 node+
4uccess;ull7 checked preinstall on ever7 node+
"reatin: the 8ackup director7+
4uccess;ull7 created the 8ackup director7+
8e:in deplo7++
Installin: the cluster+
8e:in prepare Install "luster++
"heckin: the installation environment on all nodes+
8e:in install "luster++
Installin: applications on all nodes+
4uccess;ull7 installed A((+
8e:in init Instance++
encr7pt cipher and rand ;iles ;or data8ase+
(lease enter pass<ord ;or data8ase:
(lease repeat ;or data8ase:
J,A'44-%&=&6K : #he pass<ord o; data8ase is incorrect+#he t<o pass<ords
are di;;erentF please enter pass<ord a:ain+
(lease enter pass<ord ;or data8ase:
(lease repeat ;or data8ase:
8e:in to create "A cert ;iles
#he sslcert <ill 8e :enerated in
/opt/issed8/install/app/share/sslcert/om
"reate "A ;iles ;or cm 8e:innin:+
"reate "A ;iles on director7
J/opt/issed8/install/app_a&$d%$c=/share/sslcert/cmK+ ;ile list:
JDcacert+pemDF Dserver+ke7DF Dserver+crtDF Dclient+ke7DF Dclient+crtDF
Dserver+ke7+cipherDF Dserver+ke7+randDF Dclient+ke7+cipherDF
Dclient+ke7+randDK
/on-dss_ssl_ena8leF no need to create "A ;or P44
"luster installation is completed+
"on;i:urin:+
Peletin: instances ;rom all nodes+
4uccess;ull7 deleted instances ;rom all nodes+
"heckin: node con;i:uration on all nodes+
Initiali.in: instances on all nodes+
'pdatin: instance con;i:uration on all nodes+
"heck consistence o; mem"heck and cores"heck on data8ase nodes+
4uccess;ul check consistence o; mem"heck and cores"heck on all nodes+
"on;i:urin: p:_h8a on all nodes+
"on;i:uration is completed+
4uccess;ull7 installed application+
end deplo7+
```

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DIBC

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```
su - omm
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```
cd /opt/so;t<are/issed8/script
```

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```
+/:s_uninstall
```

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<$pt<s$+Da#e<&ssedb	s$+Da#e	7 8 ! X w x
<$pt<&ssedb<app	(SS)D*-pp1ath	7 8 w x
<$pt<&ssedb<!$g<&ssedb	(SS)D*L$g1ath	w x
<$pt<&ssedb<data<d1<	data4$de1	l m X w x
<$pt<&ssedb<tmp	tmp 9 ppdb1ath	ì ! w x
<$pt<&ssedb<t$$!	(SS)D*2$$!1ath	s ˆ w x
<$pt<&ssedb<c$#eR!e	c$#e1ath	c$#e ! w x
<$pt<&ssedb<cm	cmD&#	5 9 w x

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```
5i /etc/hostname
0/hostname
```

```
hostnamectl set-hostname node9  E • a b c   i j *C9+*68+*46+*=*   z {
```

2 T @ <etc<h$sts

```
vi /etc/hosts
*C9+*68+*46+*=& node*
*C9+*68+*46+*=* node9
```

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1 î #$$t » x L M Â

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```
useradd -m omm
pass<d omm)9&9=
```

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```
mkdir -p /opt/so;t<are/issed8/
chmod $%% -  /opt/so;t<are
```

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1 (@) î #$$t » x L M Â

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```
issed8 so;t nproc unlimited
issed8 hard nproc unlimited
issed8 so;t stack unlimited
issed8 hard stack unlimited
issed8 so;t core unlimited
issed8 hard core unlimited
issed8 so;t memlock unlimited
issed8 hard memlock unlimited
issed8
```

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l	192.168.146.157	5432⁄5433⁄26001⁄26002⁄26003
m	192.168.146.158	5432⁄5433⁄26001⁄26002⁄26003

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```
--     Q R r
cd /opt/so;t<are/issed8
<:et    https://issed8-%+o8s+cn-north-4+m7hua<eicloud+com/issed8/centos-
x86_64/issed8-%+&+&-"ent64-x86_64-A33+tar+:.
E s t Q R r F s t issed8-%+&+&-"ent64-648it-all+tar+:. u 4 v w +sha9%6 m R
x y z { | } ~   • € J,A'44-%&9&*K : #he /opt/so;t<are/issed8/issed8-
9+&+&- ed-at-648it+sha9%6 does not exist+

tar -.xv; issed8-%+&+&-"ent64-648it-all+tar+:.
tar -.xv; issed8-%+&+&-"ent64-648it-om+tar+:.
tar -.xv; issed8-%+&+&-"ent64-648it-cm+tar+:.
```

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```
      LO--"M Í Ž Ô Õ Í • i j 8 À Ñ Ò ip--@
                                        L(A AM   name12cm4erver3istenlp*2
value12*C9+*68+*46+*%$F*C9+*68+*46+*%82 /@
                                         L(A AM   name12cm4erver elation2
value12op_masterFop_slave2 /@

      LO--d8node--@
            L(A AM name12data/um2 value12*2/@
      LO--PQnode Ó ¬ Ö--@
            L(A AM name12data(ortQase2 value1296&&&2/@
      LO--PQnode   i j Œ a b U V   À   × a b U V--@
                                                L(A AM    name12data/ode*2
value12/opt/issed8/install/data/d8*Fop_slaveF/opt/issed8/install/data/
d8*2/@
      LO--PQnode i j Œ • Æ ( ) Ø +   i j a--@
            L(A AM name12dataop_master_s7nc/um2 value12&2/@
        L/P05l"0@

          LO-- op_slave Œ   i j     ‡ ˆ   ¢ ˜ 2name2   Ù     Ú   × 8 Ì
(hostname! --@
        LP05l"0 sn12*&&&&&92@
            L(A AM name12name2 value12op_slave2/@
            L(A AM name12a./ame2 value12AR*2/@
            L(A AM name12a.(riorit72 value12*2/@
            LO-- „ •    ‹ , Ž   • @ • ‘ 3   ’ 8ackl(* “ sshl(*    ” (   •
l( --@
            L(A AM name128acklp*2 value12*C9+*68+*46+*%82/@
            L(A AM name12sshlp*2 value12*C9+*68+*46+*%82/@
            L(A AM name12cmPir2 value12/opt/issed8/install/data/cm2 /@
        L/P05l"0@
    L/P05l"03l4#@
L/ 66#@
06M
```

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实例类型	参数
ù • €	'ame
aM4ame	> aM4ame { -/a&!ab!e .$'e 4ame ~ v H l J { Ö H l ~ v -.1 ¥ -.2 ¥ -.3 Â
aM1#&$#&t%	> aM1#&$#&t% © Ž Â
bac"(p1	l 6 è ä X Y © (1 { ¢ (1 ~ Â (SS)D* l 6 • ä X Y Ÿ Â
ssh(p1	T SSG ¡ / 1 U¦ â 1 H • ô ñ 0 G

实例类型	参数
	T = Ò bac"(p1 T Q Ò (1 Â

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```
E root 3 7 i j ; <

-- • li8 c
export 3P_3lQ A S_(A#-1/opt/so;t<are/issed8/script/l4p7li8/cli8:
>3P_3lQ A S_(A#-

-- z { | z {
p7thon= /opt/so;t<are/issed8/script/:s_preinstall -' omm -, d8:rp -T
/opt/so;t<are/issed8/cluster_con;i:+xml
E | z { — — ~ ™ e f š › œ • ž so;t<are U V m R å i j ' i j
scripts ssh-a:ent+sh œ • Ÿ /root/+ssh/ U V z { ¡ ' ¢ £ ¤ ,
ƒ ž omm 3 7 ‰ • i j /etc/pro;ile • ¥ ¦
E | z { § ¨ z { — — ‘ ~ › /opt/issed8/lo:/omm/om U V

E z { — — ‘ ~ › /opt/issed8/lo:/omm/om U V :s_preinstall e f m R
:s_preinstall_xxx+lo: m R

-- | } ~ z { © • „
(arsin: the con;i:uration ;ile+
4uccess;ull7 parsed the con;i:uration ;ile+
Installin: the tools on the local node+
4uccess;ull7 installed the tools on the local node+
Are 7ou sure 7ou <ant to create trust ;or root (7es/no!N7es -- ª « 7es
(lease enter pass<ord ;or root
(ass<ord: ª « root ¬ -
4uccess;ull7 created 44- trust ;or the root permission user+
4ettin: host ip env
4uccess;ull7 set host ip env+
Pistri8utin: packa:e+
Qe:in to distri8ute packa:e to tool path+
4uccess;ull7 distri8ute packa:e to tool path+
Qe:in to distri8ute packa:e to packa:e path+
4uccess;ull7 distri8ute packa:e to packa:e path+
4uccess;ull7 distri8uted packa:e+
Are 7ou sure 7ou <ant to create the userJommK and create trust ;or it
(7es/no!N 7es -- ª « 7es
(lease enter pass<ord ;or cluster user+
(ass<ord: -- • omm ¬ -
(lease enter pass<ord ;or cluster user a:ain+
(ass<ord: -- ® ª « omm ¬ -
,enerate cluster user pass<ord ;iles success;ull7+

4uccess;ull7 created JommK user on all nodes+
(reparin: 44- service+
4uccess;ull7 prepared 44- service+
Installin: the tools in the cluster+
```

```
4uccess;ull7 installed the tools in the cluster+
"heckin: hostname mappin:+
4uccess;ull7 checked hostname mappin:+
"reatin: 44- trust ;or JommK user+
(lease enter pass<ord ;or current userJommK+
(ass<ord:   -- ª « omm ¬ -
"heckin: net<ork in;ormation+
All nodes in the net<ork are /ormal+
4uccess;ull7 checked net<ork in;ormation+
"reatin: 44- trust+
"reatin: the local ke7 ;ile+
4uccess;ull7 created the local ke7 ;iles+
Appendin: local IP to authori.ed_ke7s+
4uccess;ull7 appended local IP to authori.ed_ke7s+
'pdatin: the kno<n_hosts ;ile+
4uccess;ull7 updated the kno<n_hosts ;ile+
Appendin: authori.ed_ke7 on the remote node+
4uccess;ull7 appended authori.ed_ke7 on all remote node+
"heckin: common authentication ;ile content+
4uccess;ull7 checked common authentication content+
Pistri8utin: 44- trust ;ile to all node+
Pistri8utin: trust ke7s ;ile to all node success;ull7+
4uccess;ull7 distri8uted 44- trust ;ile to all node+
5eri;7in: 44- trust on all hosts+
4uccess;ull7 veri;ied 44- trust on all hosts+
4uccess;ull7 created 44- trust+
4uccess;ull7 created 44- trust ;or JommK user+
"heckin: 64 so;t<are+
4uccess;ull7 check os so;t<are+
"heckin: 64 version+
4uccess;ull7 checked 64 version+
"reatin: clusterDs path+
4uccess;ull7 created clusterDs path+
4et and check 64 parameter+
4ettin: 64 parameters+
4uccess;ull7 set 64 parameters+
Uarnin:: Installation environment contains some <arnin: messa:es+
(lease :et more details 87 2/opt/so;t<are/issed8/script/:s_checkos -i A
-h node*Fnode9Fissed8-d8= --detail2+
4et and check 64 parameter completed+
(reparin: " 6/ service+
4uccess;ull7 prepared " 6/ service+
4ettin: user environmental varia8les+
4uccess;ull7 set user environmental varia8les+
4ettin: the d7namic link li8rar7+
4uccess;ull7 set the d7namic link li8rar7+
4ettin: "ore ;ile
4uccess;ull7 set core path+
4ettin: pssh path
4uccess;ull7 set pssh path+
4ettin: ":roup+
4uccess;ull7 set ":roup+
4et A M 6ptimi.ation+
/o need to set A M 6ptimi.ation+
Mixin: server packa:e o<ner+
```

```
4ettin: ;inish ;la:+
4uccess;ull7 set ;inish ;la:+
(reinstallation succeeded+

-- ~ › | O P © • ‡ ˆ   ¡ ¯ b | } ~ ° … = a
Jroot)op_master scriptKE /opt/so;t<are/issed8/script/:s_checkos -i A -h
op_masterFop_slave --detail
"heckin: items:
   A*+ J 64 version status K                                  : /ormal
        Jop_slaveK
        centos_$+6+*8*&_648it
        Jop_masterK
        centos_$+6+*8*&_648it
   A9+ J Vernel version status K                              : /ormal
           #he names a8out all kernel versions are same+ #he value is
2=+*&+&-C%$+el$+x86_642+
   A=+ J 'nicode status K                                     : /ormal
      #he values o; all unicode are same+ #he value is 23A/,1en_'4+'#M-
82+
   A4+ J #ime .one status K                                   : /ormal
         #he in;ormations a8out all time.ones are same+ #he value is
2W&8&&2
    A%+ J 4<ap memor7 status K                                        :
Uarnin:
        Jop_slaveK
4<apMemor7 4*6&$4%4$9 #otalMemor7 4*9=&&C&94
        Jop_masterK
4<apMemor7 4*6&$4%4$9 #otalMemor7 4*9=&*$9*6
   A6+ J 47stem control parameters status K                   : /ormal
       All values a8out s7stem control  parameters are correct+
   A$+ J Mile s7stem con;i:uration status K                   : /ormal
       Qoth so;t no;ile and hard no;ile are correct+
   A8+ J Pisk con;i:uration status K                          : /ormal
        #he value a8out TM4 mount parameters is correct+
   AC+ J (re-read 8lock si.e status K                         : /ormal
       #he value a8out 3o:ical 8lock si.e is correct+
   A**+J /et<ork card con;i:uration status K                 : Uarnin:
        Jop_slaveK
QondMode /ull
             Uarnin:  reason:  net<ork  Dens==D  DmtuD   eal5alue  D*%&&D
0xpected5alue D8*C9D
        Jop_masterK
QondMode /ull
             Uarnin:  reason:  net<ork  Dens==D  DmtuD   eal5alue  D*%&&D
0xpected5alue D8*C9D


    A*9+J #ime consistenc7 status K                                   :
Uarnin:
        Jop_masterK
         #he /#(P not detected on machine and local time is 29&9=-&$-9%
*%:9=:442+
        Jop_slaveK
         #he /#(P not detected on machine and local time is 29&9=-&$-9%
*%:9=:442+
```

```
   A*=+J Mire<all service status K                                : /ormal
       #he ;ire<all service is stopped+
   A*4+J #-( service status K                                     : /ormal
       #he #-( service is stopped+
        #he #-( service is stopped+
#otal num8ers:*=+ A8normal num8ers:&+ Uarnin: num8ers:=+

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--   » ¼ v ½ • i j   z { | } ~
-- root  3 7  i j   ; <
chmod -  $%% /opt/so;t<are/issed8/script/
cho<n -  omm:d8:rp /opt/so;t<are/issed8/script/
```

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```
--  i j   ¾ ¿ Ÿ omm 3 7 z {
su - omm
--  z { „   ± -
:s_install    -T    /opt/so;t<are/issed8/cluster_con;i:+xml    --l4init-
parameter12--encodin:1'#M82X
@ --dn-:uc12max_connections19&&&2 X
@ --dn-:uc12max_process_memor719,Q2 X
@ --dn-:uc12shared_8u;;ers1*98MQ2 X
@ --dn-:uc128ulk_<rite_rin:_si.e1*98MQ2 X
@ --dn-:uc12cstore_8u;;ers1*6MQ2


E  z { – — ‘ ~ › /opt/issed8/lo:/omm/om À Á i j /opt/issed8/lo:/omm/p:_lo:/
  e f m R
E
Jomm)op_master            scriptK>            +/:s_install            -T
/opt/so;t<are/issed8/cluster_con;i:+xml X
@ --l4init-parameter12--encodin:1'#M82 X
@ --dn-:uc12max_connections19&&&2 X
@ --dn-:uc12max_process_memor719,Q2 X
@ --dn-:uc12shared_8u;;ers1*98MQ2 X
@ --dn-:uc128ulk_<rite_rin:_si.e1*98MQ2 X
@ --dn-:uc12cstore_8u;;ers1*6MQ2
(arsin: the con;i:uration ;ile+
"heck preinstall on ever7 node+
4uccess;ull7 checked preinstall on ever7 node+
"reatin: the 8ackup director7+
4uccess;ull7 created the 8ackup director7+
8e:in deplo7++
Installin: the cluster+
8e:in prepare Install "luster++
"heckin: the installation environment on all nodes+
8e:in install "luster++
```

```
Installin: applications on all nodes+
4uccess;ull7 installed A((+
8e:in init Instance++
encr7pt cipher and rand ;iles ;or data8ase+
(lease enter pass<ord ;or data8ase:
(lease repeat ;or data8ase:
J,A'44-%&=&6K : #he pass<ord o; data8ase is incorrect+#he t<o pass<ords
are di;;erentF please enter pass<ord a:ain+
(lease enter pass<ord ;or data8ase:
(lease repeat ;or data8ase:
8e:in to create "A cert ;iles
#he         sslcert         <ill         8e         :enerated         in
/opt/issed8/install/app/share/sslcert/om
"reate "A ;iles ;or cm 8e:innin:+
"reate            "A            ;iles            on            director7
J/opt/issed8/install/app_a&$d%$c=/share/sslcert/cmK+     ;ile     list:
JDcacert+pemDF  Dserver+ke7DF  Dserver+crtDF  Dclient+ke7DF  Dclient+crtDF
Dserver+ke7+cipherDF       Dserver+ke7+randDF       Dclient+ke7+cipherDF
Dclient+ke7+randDK
/on-dss_ssl_ena8leF no need to create "A ;or P44
"luster installation is completed+
"on;i:urin:+
Peletin: instances ;rom all nodes+
4uccess;ull7 deleted instances ;rom all nodes+
"heckin: node con;i:uration on all nodes+
Initiali.in: instances on all nodes+
'pdatin: instance con;i:uration on all nodes+
"heck consistence o; mem"heck and cores"heck on data8ase nodes+
4uccess;ul check consistence o; mem"heck and cores"heck on all nodes+
"on;i:urin: p:_h8a on all nodes+
"on;i:uration is completed+
4tartin: cluster+
11111111111111111111111111111111111111111111111111111111111111111111111
4uccess;ull7 started primar7 instance+ Uait ;or stand87 instance+
11111111111111111111111111111111111111111111111111111111111111111111111
+
4uccess;ull7 started cluster+
11111111111111111111111111111111111111111111111111111111111111111111111
cluster_state      : /ormal
redistri8utin:     : /o
node_count         : 9
Patanode 4tate
    primar7           : *
    stand87           : *
    secondar7         : &
    cascade_stand87   : &
    8uildin:          : &
    a8normal          : &
    do<n              : &

4uccess;ull7 installed application+
end deplo7+
```

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#ed&st#&bu8'g Q 4$

cu##e't_aM Q -._-LL

_ Data'$de State a

›››› '$de '$de_&p p$#t &'sta'ce state

7777777777777777777777777777777777777777777777777777777777777777777777777777777777777777777777777777

1 &s$+'$de1 192.168.146.161 5432 6001 <$pt<&ssedb1<data<d1 1 1#&ma#% 4$#ma!

2 &s$+'$de4 192.168.146.164 5432 6002 <$pt<&ssedb1<data<d4 S D$D' 9a'ua!!% st$pped

_$mm ` &s$+'$de4 d4aS gs_$m 7t sta#t 7D <$pt<&ssedb1<data<d4

Sta#8'g c!uste#.

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_SO55)SSa &s$+'$de4

gs_$m M · À Á ä © s ˆ v ‡ © œ ý þ v gs_ct! M · ¢ $ s ˆ v ÷ ¢ $ © Ë © • € v î ¢ ³ ¯ v ñ ý þ Â

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4 f —9 : l m g ,

_$mm ` &s$+'$de1 sc#&ptaS gs_$m 7t status 77deta&!

_ 5!uste# State a

c!uste#_state Q 4$#ma!

#ed&st#&bu8'g Q 4$

cu##e't_aM Q -._-LL

_ Data'$de State a

›››› '$de '$de_&p p$#t &'sta'ce state

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1 &s$+'$de1 192.168.146.161 5432 6001 <$pt<&ssedb1<data<d1 1 1#&ma#% 4$#ma!

2 &s$+'$de4 192.168.146.164 5432 6002 <$pt<&ssedb1<data<d4 S Sta'db% 4$#ma!

4 f m 6 g , ž § î n P

_$mm ` &s$+'$de4 d4aS gs_ct! ue#% 7D <$pt<&ssedb1<data<d4<

_2023707728 15Q15Q35.668a_19156a_a_gs_ct!aQ gs_ct! ue#% BdatadB# &s <$pt<&ssedb1<data<d4

›G- stateQ

›››››››!$ca!_#$!e Q Sta'db%

›››››››sta8c_c$''ec8$'s Q 1

›››››››db_state Q 4$#ma!

›››››››deta&!_&'U$#ma8$' Q 4$#ma!

›Se'de#s &'U$Q

4$ &'U$#ma8$'

›3ece&/e# &'U$Q

›››››››#ece&/e#_p&d Q 18494

›››››››!$ca!_#$!e Q Sta'db%

›››››››››pee#_#$!e Q 1#&ma#%

›››››››››pee#_state Q 4$#ma!

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›››››››››se'de#_se't_!$ca8$' Q 0<4001*58

›››››››››se'de#_D#&te_!$ca8$' Q 0<4001*58

›››››››››se'de#_bush_!$ca8$' Q 0<4001*58

›››››››››se'de#_#ep!a%_!$ca8$' Q 0<4001*58

›››››››››#ece&/e#_#ece&/ed_!$ca8$' Q 0<4001*58

›››››››››#ece&/e#_D#&te_!$ca8$' Q 0<4001*58

›››››››››#ece&/e#_bush_!$ca8$' Q 0<4001*58

›››››››››#ece&/e#_#ep!a%_!$ca8$' Q 0<4001*28

›››››››››s%'c_pe#ce't Q 100 J

›››››››››cha''e! Q 192.168.146.164Q47386@77192.168.146.161Q5433

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_$mm ` &s$+'$de4 d4aS gs_ct! sD&tch$/e# 7D <$pt<&ssedb1<data<d4

_2023707728 15Q16Q55.469a_19198a_a_gs_ct!aQ gs_ct! sD&tch$/e# Bdatad&# &s <$pt<&ssedb1<data<d4

_2023707728 15Q16Q55.469a_19198a_a_gs_ct!aQ sD&tch$/e# te#m (1)

_2023707728 15Q16Q55.474a_19198a_a_gs_ct!aQ Da&8'g U$# se#/e# t$ sD&tch$/e#.....

_2023707728 15Q17Q00.592a_19198a_a_gs_ct!aQ d$'e

_2023707728 15Q17Q00.592a_19198a_a_gs_ct!aQ sD&tch$/e# c$mp!eted (<$pt<&ssedb1<data<d4)

4 f 9 : g ,

_$mm ` &s$+'$de1 dataaS gs_$m 7t status 77deta&!

_ 5!uste# State a

c!uste#_state Q Deg#aded

#ed&st#&bu8'g Q 4$

cu##e't_aM Q -._-LL

_ Data'$de State a

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1 &s$+'$de1 192.168.146.161 5432 6001 <$pt<&ssedb1<data<d1 1 1#&ma#%

4$#ma!

2 &s$+'$de4 192.168.146.164 5432 6002 <$pt<&ssedb1<data<d4 S D$D'

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_$mm ` &s$+'$de1 dataaS

_$mm ` &s$+'$de1 dataaS

_$mm ` &s$+'$de1 dataaS gs_$m 7t status 77deta&!

_ 5!uste# State a

c!uste#_state Q 4$#ma!

#ed&st#&bu8'g Q 4$

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_ Data'$de State a

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1 &s$+'$de1 192.168.146.161 5432 6001 <$pt<&ssedb1<data<d1 1 Sta'db%

4$#ma!

2 &s$+'$de4 192.168.146.164 5432 6002 <$pt<&ssedb1<data<d4 S 1#&ma#%

4$#ma!

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_$mm ` &s$+ ' $de2 caS m"d&# <$pt<bac"up

_$mm ` &s$+ ' $de2 caS cd <$pt<bac"up<

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&ssedbAd c#eate use# test (D) 42(>() D * : ¥huaDe& ` 1234¥ s%sadm&' ©

53) -2) 36L)

77 p q t u testdb

&ssedbAd53) -2) 2- *L)S1-5) test_tbs 3)L-2(H) L65-2(64 ¥tab!espace<test_tbs1¥©

53) -2) D-2- * -S) testdb ; (2G 2- *L)S1-5) A test_tbs©

53) -2) 2- *L)S1-5)

&ssedbAd 53) -2) D-2- * -S) testdb ; (2G 2- *L)S1-5) A test_tbs©

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testdbAd Wd

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›pub!&c ^ test1 ^ tab!e ^ $mm ^ e$#&e ' ta8$ ' A#DBcmp#ess&$ ' A ' $f

›pub!&c ^ test2 ^ tab!e ^ $mm ^ e$#&e ' ta8$ ' A#DBcmp#ess&$ ' A ' $f

(2 #$Ds)

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77 • test » v m o testdb

› _$mm ` &s$+ ' $de2 bac"upaS gs_dump 7O test 7 ; huaDe& ` 1234 7U

<$pt<bac"up<bac"up.s ! 7p 26000 testdb 7> p

gs_dump_p$#tA¥26000¥a_testdba_2023707727 19Q53Q31aQ 2he t$ta! $b\ects 'umbe# &s 432.

gs_dump_p$#tA¥26000¥a_testdba_2023707727 19Q53Q31aQ _100.00Ja 432 $b\ects ha/e bee' dumped.

gs_dump_p$#tA¥26000¥a_testdba_2023707727 19Q53Q31aQ dump database testdb successUu!!%

gs_dump_p$#tA¥26000¥a_testdba_2023707727 19Q53Q31aQ t$ta! 8meQ 1563 ms

y z p q

›

77 • » test v Å ¸ gs_dump © s ! v p q å temp!ate1

_$mm ` &s$+ '$de2 bac"upaS gs ! 7d temp!ate1 7O test 7 ; huaDe& ` 1234 7p 26000 7U <$pt<bac"up<bac"up.s !

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3)H6=)

,3-42

,3-42

t$ta! 8me0 14 ms

à y z m o p q

```
omm@isoftnode2 script]$ issql -d testdb -p 26000 -r
issql ((isoftDB 5.0.0 build 4ec82cbe) compiled at 2023-07-27 09:58:20 commit 0 last mr  )
Non-SSL connection (SSL connection is recommended when requiring high-security)
Type "help" for help.

testdb=# \d
                    List of relations
 Schema | Name  | Type  | Owner |            Storage
--------+-------+-------+-------+-----------------------------------
 public | test1 | table | omm   | {orientation=row,compression=no}
 public | test2 | table | omm   | {orientation=row,compression=no}
```

```
testdb=# \q
[omm@isoftnode2 script]$ issql -d template1 -p 26000 -r
issql ((isoftDB 5.0.0 build 4ec82cbe) compiled at 2023-07-27 09:58:20 commit 0 last m
Non-SSL connection (SSL connection is recommended when requiring high-security)
Type "help" for help.

template1=# \d
                    List of relations
 Schema | Name  | Type  | Owner |            Storage
--------+-------+-------+-------+-----------------------------------
 public | test1 | table | omm   | {orientation=row,compression=no}
 public | test2 | table | omm   | {orientation=row,compression=no}
(2 rows)
```

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_$mm ` &s$+ '$de2 caS gs_bac"up 7t bac"up 77bac"up7d&#A<$pt<bac"up 77a!!

1a#s&'g c$'Rgu#a8$' R!es.

SuccessUu!!% pa#sed the c$'Rgu#a8$' R!e.

1e#U$#m&'g #em$te bac"up.

3em$te bac"up succeeded.

SuccessUu!!% bac"ed up c!uste# R!es.

_$mm ` &s$+ '$de2 bac"upaS !!

t$ta! 454084

7#D7777777. 1 $mm dbg#p 1355 ?u! 27 190 53 bac"up.s !

7#D7777777. 1 $mm dbg#p 464916480 ?u! 28 090 16 b&'a#%.ta#

7#D7777777. 1 $mm dbg#p 61440 ?u! 28 090 16 pa#amete#.ta#

p q ‹ !

_#$$t `&s$+'$de2 db1ad !! <$pt<&ssedb1<data<db1<pg_hba.c$'U
<$pt<&ssedb1<data<db1<p$stg#es !.c$'U
7#D7777777. 1 $mm dbg#p 4587 ?u! 27 16Q23 <$pt<&ssedb1<data<db1<pg_hba.c$'U
7#D7777777. 1 $mm dbg#p 36085 ?u! 27 16Q23 <$pt<&ssedb1<data<db1<p$stg#es !.c$'U
_#$$t `&s$+'$de2 db1ad m/ <$pt<&ssedb1<data<db1<pg_hba.c$'U
<$pt<&ssedb1<data<db1<pg_hba.c$'U_ba"
_#$$t `&s$+'$de2 db1ad m/ <$pt<&ssedb1<data<db1<p$stg#es !.c$'U
<$pt<&ssedb1<data<db1<p$stg#es !.c$'U_ba"
_#$$t `&s$+'$de2 db1ad !! <$pt<&ssedb1<data<db1<pg_hba.c$'U
<$pt<&ssedb1<data<db1<p$stg#es !.c$'U
!sQ ca''$t access <$pt<&ssedb1<data<db1<pg_hba.c$'UQ 4$ such R!e $# d&#ect$#%
!sQ ca''$t access <$pt<&ssedb1<data<db1<p$stg#es !.c$'UQ 4$ such R!e $# d&#ect$#%
_$mm `&s$+'$de2 bac"upaS gs_bac"up 7t #est$#e 77bac"up7d&# <$pt<bac"up< 7h
&s$+'$de2 77pa#amete# 7! <$pt<bac"up<bac"up.!$g
1a#s&'g c$'Rgu#a8$' R!es.
SuccessUu!!% pa#sed the c$'Rgu#a8$' R!e.
1e#U$#m&'g #em$te #est$#a8$'.
SuccessUu!!% #est$#ed c!uste# R!es.

_#$$t `&s$+'$de2 db1ad !! <$pt<&ssedb1<data<db1<pg_hba.c$'U
<$pt<&ssedb1<data<db1<p$stg#es !.c$'U
7#D7777777. 1 $mm dbg#p 4587 ?u! 27 16Q23 <$pt<&ssedb1<data<db1<pg_hba.c$'U
7#D7777777. 1 $mm dbg#p 36085 ?u! 27 16Q23 <$pt<&ssedb1<data<db1<p$stg#es !.c$'U

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_$mm `&s$+'$de2 bac"aS gs_basebac"up 7D <$pt<bac" 7p 26000
(4>6Q 2he sta#8'g p$s&8$' $U the F!$g c$p% $U the Uu!! bu&!d &sQ 0<7000028. 2he s!$t m&'&mum LS4 &sQ 0<0. 2he d&saste# s!$t m&'&mum LS4 &sQ 0<0. 2he !$g&ca! s!$t

m&'&mum LS4 &sQ 0<0.

_2023707728 09Q43Q59aQbeg&' bu&!d tab!espace !&st

_2023707728 09Q43Q59aQR'&sh bu&!d tab!espace !&st

_2023707728 09Q43Q59aQbeg&' get F!$g b% F!$&st#eam

_2023707728 09Q43Q59aQ chec" &de'8U% s%stem success

_2023707728 09Q43Q59aQ se'd S2-32_3)1L(5-2(64 0<7000000 success

_2023707728 09Q43Q59aQ "eepa!&/e message &s #ece&/ed

_2023707728 09Q43Q59aQ "eepa!&/e message &s #ece&/ed

_2023707728 09Q44Q04aQgs_basebac"upQ base bac"up successUu!!%

```
[omm@isoftnode2 back]$ ll
total 5008
-rw-------. 1 omm dbgrp     206 Jul 28 09:43 backup_label
drwx------. 5 omm dbgrp      41 Jul 28 09:44 base
-rw-------. 1 omm dbgrp    4399 Jul 28 09:44 cacert.pem
drwx------. 2 omm dbgrp    4096 Jul 28 09:44 global
-rw-------. 1 omm dbgrp 4915200 Jul 28 09:44 gswlm_userinfo.cfg
-rw-------. 1 omm dbgrp   21012 Jul 28 09:44 mot.conf
drwx------. 2 omm dbgrp      26 Jul 28 09:43 pg_clog
drwx------. 2 omm dbgrp      26 Jul 28 09:43 pg_csnlog
-rw-------. 1 omm dbgrp       0 Jul 28 09:44 pg_ctl.lock
drwx------. 2 omm dbgrp       6 Jul 28 09:44 pg_errorinfo
-rw-------. 1 omm dbgrp    4587 Jul 28 09:44 pg_hba.conf
-rw-------. 1 omm dbgrp    4587 Jul 28 09:44 pg_hba.conf_bak
-rw-------. 1 omm dbgrp    4587 Jul 28 09:44 pg_hba.conf.bak
-rw-------. 1 omm dbgrp    1024 Jul 28 09:44 pg_hba.conf.lock
-rw-------. 1 omm dbgrp    1636 Jul 28 09:44 pg_ident.conf
drwx------. 4 omm dbgrp      39 Jul 28 09:44 pg_llog
drwx------. 3 omm dbgrp      24 Jul 28 09:43 pg_location
drwx------. 2 omm dbgrp      35 Jul 28 09:44 pg_logical
drwx------. 4 omm dbgrp      36 Jul 28 09:43 pg_multixact
drwx------. 2 omm dbgrp      26 Jul 28 09:43 pg_notify
drwx------. 2 omm dbgrp       6 Jul 28 09:44 pg_replslot
drwx------. 2 omm dbgrp       6 Jul 28 09:43 pg_serial
drwx------. 2 omm dbgrp       6 Jul 28 09:43 pg_snapshots
drwx------. 2 omm dbgrp      25 Jul 28 09:44 pg_stat_tmp
drwx------. 2 omm dbgrp      58 Jul 28 09:44 pg_tblspc
drwx------. 2 omm dbgrp       6 Jul 28 09:43 pg_twophase
-rw-------. 1 omm dbgrp       4 Jul 28 09:44 PG_VERSION
```

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´ m o w x Â Å ¸ ‰ Š è > © w x bac"ups< K Da!< w x v Ù X m o ! K ; -L ! B > w x · <$pt<p#$bac"up<

_$mm ` &s$+ ' $de2 $ptaS gs_p#$bac"up & ' &t 7* <$pt<p#$bac"up

(4>6Q *ac"up cata!$g Y<$pt<p#$bac"upY successUu!!% & ' &ted

_$mm ` &s$+ ' $de2 p#$bac"upaS !!

t$ta! 0

d#DF777777. 2 $mm dbg#p 6 ?u! 28 10Q37 bac"ups

d#DF777777. 2 $mm dbg#p 6 ?u! 28 10Q37 Da!

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Ý ý ú © m o Ë Â gs_p#$bac"up § î è Ò ý ú m o w x X ¯ ú

Ë © m o Â w x · <$pt<&ssedb1<data<db1 Â

_$mm ` &s$+ ' $de2 p#$bac"upaS gs_p#$bac"up add7& ' sta ' ce 7* <$pt<p#$bac"up< 7

D <$pt<&ssedb1<data<db1< 77& ' sta ' ce & ' sta ' ce_!$ca!

(4>6Q (' sta ' ce Y& ' sta ' ce_!$ca!Y successUu!!% & ' &ted

_$mm ` &s$+ ' $de2 bac"upsaS !!

t$ta! 0

d#DF777777. 3 $mm dbg#p 45 ?u! 28 11Q44 & ' sta ' ce_!$ca!

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$mm `&s$+'$de2 &'sta'ce!$ca!aS gs_p#$bac"up set7c$'Rg 7* <$pt<p#$bac"up< 77 &'sta'ceA&'sta'ce_!$ca! 7d testdb 7p 26000

$mm `&s$+'$de2 &'sta'ce!$ca!aS cat pg_p#$bac"up.c$'U

d *ac"up &'sta'ce &'U$#ma8$'

pgdata A <$pt<&ssedb1<data<db1

s%stem7&de'8Re# A 3423299692713438

d 5$''ec8$' pa#amete#s

pgdatabase A testdb

pgp$#t A 26000

$mm `&s$+'$de2 &'sta'ce!$ca!aS gs_p#$bac"up bac"up 7* <$pt<p#$bac"up< 77 &'sta'ce &'sta'ce_!$ca! 7d testdb 7b >OLL

(4>6Q *ac"up sta#tB gs_p#$bac"up /e#s&$'Q 2.4.2B &'sta'ceQ &'sta'ce_!$ca!B bac"up (DQ 3:G9) ;B bac"up m$deQ >OLLB Da! m$deQ S23)-9B #em$teQ Ua!seB c$mp#ess7 a!g$#&thmQ '$'eB c$mp#ess7!e/e!Q 1

L6 ,Q *ac"up des8'a8$' &s&'&8a!&Med

L6 ,Q 2h&s &ssedb &'sta'ce Das &'&8a!&Med D&th data b!$c" chec"sums. Data b!$c" c$##up8$' D&!! be detected

L6 ,Q Database bac"up sta#t

L6 ,Q sta#ted st#eam&'g ; -L at 0<9000000 (8me!&'e 1)

_2023707728 11Q44Q57aQ chec" &de'8U% s%stem success

_2023707728 11Q44Q57aQ se'd S2-32_3)1L(5-2(64 0<9000000 success

_2023707728 11Q44Q57aQ "eepa!&/e message &s #ece&/ed

(4>6Q 1 ,D-2- s&MeQ 620 9 *

(4>6Q Sta#t t#a'sUe##&'g data R!es

_2023707728 11Q44Q58aQ "eepa!&/e message &s #ece&/ed

L6 ,Q 5#ea8'g page heade# map h<$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G9) ; <page_heade#_maph

_2023707728 11Q45Q03aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q08aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q13aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q18aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q23aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q28aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q33aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q38aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q44aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q49aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q45Q55aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q46Q01aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q46Q06aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q46Q11aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q46Q17aQ "eepa!&/e message &s #ece&/ed

(4>6Q Data R!es a#e t#a'sUe##edB 8me e!apsedQ 1mQ20s

(4>6Q Da&t U$# pg_st$p_bac"up()

(4>6Q pg_st$p bac"up() successUu!!% eFecuted

L6 ,Q st$p_!s'Q 0<9000308

L6 ,Q L$$"&'g U$# LS4 0<9000308 &' segme't Q 000000010000000000000009

(4>6Q ; a&t U$# LS4 0<9000308 &' st#eamed ; -L segme't <$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G 9) ; <database<pg_F!$g<00000001000 0000000000009

L6 ,Q >$u'd ; -L segme't Q <$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G 9) ; <database<pg_F!$g<00000001000 0000000000009

L6 ,Q 2h#ead _0aQ 6pe'&'g ; -L segme't h<$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G 9) ; <database<pg_F!$g<00000001000 0000000000009h

L6 ,Q >$u'd LS4Q 0<9000308

L6 ,Q R'&shed st#eam&'g ; -L at 0<-000000 (8me!&'e 1)

L6 ,Q , e g 'g the 3ec$/e#% 2&me U#$m ; -L

L6 , ▯ 2h#ead _0a▯ 6pe ' & ' g ; - L segme ' t h<$pt<p#$bac"up<bac"ups<& ' sta ' ce_!$ca!<3 : G 9) ; <database<pg_F!$g<00000001000 0000000000009h

(4>6▯ S% ' c& ' g bac"up R!es t$ d&s"

(4>6▯ *ac"up R!es a#e s% ' cedB 8me e!apsed▯ 0

(4>6▯ Ha!&da8 ' g bac"up 3 : G 9) ;

(4>6▯ *ac"up 3 : G 9) ; data R!es a#e /a!&d

(4>6▯ *ac"up 3 : G 9) ; #es&de ' t s&Me▯ 636 9 *

(4>6▯ *ac"up 3 : G 9) ; c$mp!eted

m o

4 f m o g , • €

$mm ` &s$+ ' $de2 & ' sta ' ce!$ca!aS gs_p#$bac"up sh$D 7* <$pt<p#$bac"up< 77 & ' sta ' ce & ' sta ' ce_!$ca!

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

>(' sta ' ce He#s&$ ' (D 3ec$/e#% 2&me 9 $de ; - L 9 $de 2L(2&me Data ; - L .#a8$ Sta#t LS4 St$p LS4 2%pe Status

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>& ' sta ' ce_!$ca! 9.2 3 : G4G7 2023707728 12▯07▯58E08 >0LL S23) - 9 1<0 6s 620 9 * 16 9 * 1.00 0<D000028 0<D0001)8 >(L) 6=

¥ R L M

R ¸ D 9 L L M , ƒ m o

_$mm ` &s$+ ' $de2 caS gs ! 7d testdb 7p 26000 7#

gs ! ((&ssedb 5.0.0 bu&!d 4ec82cbe) c$mp&!ed at 2023707727 09▯58▯20 c$mm&t 0 !ast m#)

4$ ' 7SSL c$ ' ' ec8$ ' (SSL c$ ' ' ec8$ ' &s #ec$mme ' ded Dhe ' #e u&#& ' g h&gh7secu#&t%)

2%pe hhe!ph U$# he!p.

testdbAd Wd

›››››››››››››››››››››››››L&st $U #e!a8$'s

›Schema ^ 4ame ^ 2%pe ^ 6D'e# ^ St$#age

7777777E7777777E7777777E7777777E7777777777777777777777777777777777

›pub!&c ^ test1 ^ tab!e ^ $mm ^ e$#&e'ta8$'A#$DBc$mp#ess&$'A'$f

›pub!&c ^ test2 ^ tab!e ^ $mm ^ e$#&e'ta8$'A#$DBc$mp#ess&$'A'$f

(2 #$Ds)

testdbAd Wd test1

›››››2ab!e hpub!&c.test1h

›5$!um' ^ 2%pe ^ 9 $d&Re#s

7777777E77777777E77777777777

›c$! ^ &'tege# ^

testdbAd &'se#t &'t$ test1 /a!ues(111)C

(4S)32 0 1

¥ , *f* m o

$mm `&s$+'$de2 &'sta'ce!$ca!aS gs_p#$bac"up bac"up 7* <$pt<p#$bac"up< 77 &'sta'ce &'sta'ce_!$ca! 7d testdb 7b 123-5=

(4>6Q *ac"up sta#tB gs_p#$bac"up /e#s&$'Q 2.4.2B &'sta'ceQ &'sta'ce_!$ca!B bac"up (DQ 3:G402B bac"up m$deQ 123-5=B Da! m$deQ S23)-9B #em$teQ Ua!seB c$mp#ess7 a!g$#&thmQ '$'eB c$mp#ess7!e/e!Q 1

L6 ,Q *ac"up des8'a8$' &s &'&8a!&Med

L6 ,Q 2h&s &ssedb &'sta'ce Das &'&8a!&Med D&th data b!$c" chec"sums. Data b!$c" c$##up8$' D&!! be detected

L6 ,Q Database bac"up sta#t

L6 ,Q Latest /a!&d >OLL bac"upQ 3:G 9) ;

(4>6Q 1a#e't bac"upQ 3:G 9) ;

L6 ,Q sta#ted st#eam&'g ; -L at 0<*000000 (8me!&'e 1)

_2023707728 11Q58Q06aQ chec" &de ' 8U% s%stem success

_2023707728 11Q58Q06aQ se ' d S2-32_3)1L(5-2(64 0<*000000 success

_2023707728 11Q58Q06aQ "eepa!&/e message &s #ece&/ed

(4>6Q 1 , D-2- s&MeQ 6209 *

L6 , Q 5u##e ' t t!&Q 1

L6 , Q 1a#e ' t sta#t_!s ' Q 0<9000028

L6 , Q sta#t_!s ' Q 0<*000028

(4>6Q)Ft#ac8 ' g pagemap $U cha ' ged b!$c"s

(4>6Q cha ' ge b&tmap sta#t !s ' !$ca8$ ' &s 0<9000028

(4>6Q cha ' ge b&tmap e ' d !s ' !$ca8$ ' &s 00000000<0*000028

(4>6Q 1agemap successUu!!% eFt#actedB 8me e!apsedQ 0 sec

_2023707728 11Q58Q06aQ "eepa!&/e message &s #ece&/ed

(4>6Q Sta#t t#a ' sUe##& ' g data R!es

_2023707728 11Q58Q11aQ "eepa!&/e message &s #ece&/ed

_2023707728 11Q58Q16aQ "eepa!&/e message &s #ece&/ed

(4>6Q Data R!es a#e t#a ' sUe##edB 8me e!apsedQ 13s

(4>6Q Da&t U$# pg_st$p_bac"up()

(4>6Q pg_st$p bac"up() successUu!!% eFecuted

L6 , Q st$p_!s ' Q 0<*0001)8

L6 , Q L$$"& ' g U$# LS4 0<*0001)8 & ' segme ' tQ 00000001000000000000000*

(4>6Q ; a&t U$# LS4 0<*0001)8 & ' st#eamed ; -L segme ' t <$pt<p#$bac"up<bac"ups<& ' sta ' ce_!$ca!<3:G402<database<pg_F!$g<0000000100000 0000000000*

_2023707728 11Q58Q24aQ "eepa!&/e message &s #ece&/ed

L6 , Q Q00.QL0bO sbg03t

L6 , R ' ished st#eami ' g ; - L at 0<5000000 (8me!i ' e 1)

L6 ,   , e g ' g the 3ec$/e#% 2ime U#$m ; - L

L6 , 2h#ead _0a 6pe ' i ' g ; - L segme ' t h<$pt<p#$bac"up<bac"ups<i ' sta ' ce_!$ca!<3 : G402<database<pg_F!$g<000000010000 00000000000*h

(4>6 S% ' ci ' g bac"up R!es t$ dis"

(4>6 *ac"up R!es a#e s% ' ced 8me e!apsed 0

(4>6 Ha!ida8 ' g bac"up 3 : G402

(4>6 *ac"up 3 : G402 data R!es a#e /a!id

(4>6 *ac"up 3 : G402 #eside ' t siMe 273 9 *

(4>6 *ac"up 3 : G402 c$mp!eted

4 f m o g ,

$mm ` is$+ ' $de2 i ' sta ' ce!$ca!aS gs_p#$bac"up sh$D 7* <$pt<p#$bac"up< 77 i ' sta ' ce i ' sta ' ce_!$ca!

AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

>(' sta ' ce He#si$ ' (D 3ec$/e#% 2ime 9 $de ; - L 9 $de 2L(2ime Data ; - L .#a8$ Sta#t LS4 St$p LS4 2%pe Status

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>i ' sta ' ce_!$ca! 9.2 3 : G4(7 2023707728 12 08 32E08 123 - 5= S23) - 9 1<1 6s 257 9 * 16 9 * 1.00 0<>000028 0<>0001) 8 >(L) 6=

>i ' sta ' ce_!$ca! 9.2 3 : G4G7 2023707728 12 07 58E08 >0LL S23) - 9 1<0 6s 620 9 * 16 9 * 1.00 0<D000028 0<D0001) 8 >(L) 6=

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> © , ƒ m o † ¦ m o ó © , ƒ m o É û å ¦ m o Â ¦ m o É û © v É û © , ƒ m o M · é Â

$mm `&s$+'$de2 &'sta'ce!$ca!aS gs_p#$bac"up me#ge 7* <$pt<p#$bac"up< 77 &'sta'ce &'sta'ce_!$ca! 7& 3:G4(7

(4>6Q 9 e#ge sta#ted

(4>6Q 9 e#g&'g bac"up 3:G4(7 D&th pa#e't cha&'

(4>6Q Ha!&date pa#e't cha&' U$# bac"up 3:G4(7

(4>6Q Ha!&da8'g bac"up 3:G4G7

(4>6Q *ac"up 3:G4G7 data R!es a#e /a!&d

(4>6Q Ha!&da8'g bac"up 3:G4(7

(4>6Q *ac"up 3:G4(7 data R!es a#e /a!&d

L6 ,Q 3est$#e d&#ect$#&es a'd s%m!&'"s... &' <$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G4G7<database

(4>6Q Sta#t me#g&'g bac"up R!es

L6 ,Q 5#ea8'g page heade# map h<$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G4G7<page_heade#_map_tmph

(4>6Q *ac"up R!es a#e successUu!!% me#gedB 8me e!apsedQ 8s

(4>6Q De!eteQ 3:G4(7 2023707728 12Q08Q32E08

L6 ,Q 3e'ame <$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G4G7 t$ <$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G4(7

(4>6Q 3e'ame me#ged Uu!! bac"up 3:G4G7 t$ 3:G4(7

(4>6Q Ha!&da8'g bac"up 3:G4(7

(4>6Q *ac"up 3:G4(7 data R!es a#e /a!&d

(4>6Q 9 e#ge $U bac"up 3:G4(7 c$mp!eted

$mm `&s$+'$de2 &'sta'ce!$ca!aS !!

t$ta! 4

7#D7777777. 1 $mm dbg#p 159 ?u! 28 11Q44 pg_p#$bac"up.c$'U

d#DF777777. 3 $mm dbg#p 97 ?u! 28 12Q10 3:G4(7

¥ û p q

_$mm `&s$+'$de2 caS gs ! 7d p$stg#es 7p 26000 7#

gs ! ((&ssedb 5.0.0 bu&!d 4ec82cbe) c$mp&!ed at 2023707727 09Q58Q20 c$mm&t 0 !ast m#)

4$'7SSL c$''ec8$' (SSL c$''ec8$' &s #ec$mme'ded Dhe' #e u&#&'g h&gh7secu#&t%)
2%pe hhe!ph U$# he!p.

&ssedbAd d#$p database testdbC
D361 D-2-*-S)
_$mm ` &s$+'$de2 caS gs ! 7d testdb 7p 26000 7#
gs !Q >-2-LQ database htestdbh d$es '$t eF&st
• #est$#e ‰Š— v h i (SS)D* v û db1 w x
_$mm ` &s$+'$de2 caS gs_ct! st$p 7D <$pt<&ssedb1<data<db1
_2023707728 12Q18Q57.916a_79294a_a_gs_ct!aQ gs_ct! st$pped Bdatad&# &s
<$pt<&ssedb1<data<db1
Da&8'g U$# se#/e# t$ shut d$D'..... d$'e
se#/e# st$pped
_#$$t ` &s$+'$de2 cad cd <$pt<&ssedb1<data
_#$$t ` &s$+'$de2 dataad m/ db1 db1_ba"

Å ¸ #est$#e p q å ë —© g ,
$mm ` &s$+'$de2 &'sta'ce!$ca!aS gs_p#$bac"up #est$#e 7* <$pt<p#$bac"up< 77
&'sta'ce &'sta'ce_!$ca! 7D <$pt<&ssedb1<data<db1 7& 3:G4(7
L6 ,Q 3est$#e beg&'.
L6 ,Q chec" tab!espace d&#ect$#&es $U bac"up 3:G4(7
L6 ,Q chec" eFte#'a! d&#ect$#&es $U bac"up 3:G4(7
(4>6Q Ha!&da8'g bac"up 3:G4(7
(4>6Q *ac"up 3:G4(7 data R!es a#e /a!&d
L6 ,Q 2h#ead _1aQ 6pe'&'g ;-L segme't
h<$pt<p#$bac"up<bac"ups<&'sta'ce_!$ca!<3:G4(7<database<pg_F!$g<000000010000
00000000000>h
(4>6Q *ac"up 3:G4(7 ;-L segme'ts a#e /a!&d
(4>6Q *ac"up 3:G4(7 &s /a!&d.
(4>6Q 3est$#&'g the database U#$m bac"up at 2023707728 12Q08Q31E08
L6 ,Q 3est$#e d&#ect$#&es a'd s%m!&'"s... &' <$pt<&ssedb1<data<db1

(4>6Q Sta#t #est$#&'g bac"up R!es. 1 , D-2- s&MeQ 636 9 *

L6 , Q Sta#t th#ead 1

(4>6Q *ac"up R!es a#e #est$#ed. 2#a'sUe#ed b%tesQ 1000 9 *B 8me e!apsedQ 28s

(4>6Q 3est$#e &'c#eme'ta! #a8$ (!ess &s beNe#)Q 157 J (1000 9 *<636 9 *)

(4>6Q S%'c&'g #est$#ed R!es t$ d&s"

(4>6Q 3est$#ed bac"up R!es a#e s%'cedB 8me e!apsedQ 1s

(4>6Q 3est$#e $U bac"up 3:G4(7 c$mp!eted.

j k û t u ž p q

_$mm ` &s$+'$de2 caS gs_ct! sta#t 7D <$pt<&ssedb1<data<db1

_2023707728 12Q22Q08.206a_79316a_a_gs_ct!aQ gs_ct! sta#tedBdatad&# &s <$pt<&ssedb1<data<db1

_2023707728 12Q22Q12.404a_79316a_a_gs_ct!aQ Da&8'g U$# se#/e# t$ sta#t...

.0 L6 , Q _-!a#m 9 $du!eaca' '$t #ead , -0SS_ ; -34(4 , _2:1) e'/.

0 L6 , Q _-!a#m 9 $du!eaG$st 4ameQ &s$+'$de2

0 L6 , Q _-!a#m 9 $du!eaG$st (1Q &s$+'$de2. 5$p% h$st'ame d&#ect!% &' case $U ta"&'g 10s t$ use Ygeth$stb%'ameY Dhe' <etc<h$sts d$es '$t c$'ta&' @G6S2 (1O

0 L6 , Q _-!a#m 9 $du!ea5!uste# 4ameQ db5!uste#

0 L6 , Q _-!a#m 9 $du!ea('/a!&d data &' -!a#m(tem R!ei 3ead a!a#m)'g!&sh 'ame Ua&!edi !&'eQ 57

0 ; -34(4 , Q Ua&!ed t$ $pe' Ueatu#e c$'t#$! R!eB p!ease chec" Dhethe# &t eF&stsQ >&!e4ameA(SS)D*./e#s&$'B)##'$A2B)##messageA4$ such R!e $# d&#ect$#%.

0 ; -34(4 , Q Ua&!ed t$ pa#se Ueatu#e c$'t#$! R!eQ &ssedb./e#s&$'.

0 ; -34(4 , Q >a&!ed t$!$ad the p#$duct c$'t#$! R!eB s$ &ssedb ca''$t d&s8'gu&sh p#$duct /e#s&$'.

0 L6 , Q bb$F_dump_path &s set t$ <$pt<&ssedb1<c$#eR!e<

2023707728 12Q22Q13.187 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 D*010 0 _3)D6a L6 ,Q 3ec$/e#% pa#a!!e!&smB cpu c$u't A 2B maF A 4B actua! A 2
2023707728 12Q22Q13.187 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 D*010 0 _3)D6a L6 ,Q 5$'Rg3ec$/e#%1a#a!!e!&smB t#ue_maF_#ec$/e#%_pa#a!!e!&smQ4B maF_#ec$/e#%_pa#a!!e!&smQ4
2023707728 12Q22Q13.399 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6 ,Q _-!a#m 9$du!eaca' '$t #ead ,-0SS_ ;-34(4,_2:1) e'/.

2023707728 12Q22Q13.399 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6 ,Q _-!a#m 9$du!eaG$st 4ameQ&s$+'$de2

2023707728 12Q22Q13.399 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6 ,Q _-!a#m 9$du!eaG$st (1Q &s$+'$de2. 5$p% h$st'ame d&#ect!%&' case $U ta"&'g 10s t$ use Ygeth$stb%'ameY Dhe' <etc<h$sts d$es '$t c$'ta&' @G6S2 (10

2023707728 12Q22Q13.399 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6 ,Q _-!a#m 9$du!ea5!uste# 4ameQ db5!uste#

2023707728 12Q22Q13.399 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6 ,Q _-!a#m 9$du!ea('/a!&d data &' -!a#m(tem R!ei 3ead a!a#m)'g!&sh 'ame Ua&!edi !&'eQ 57

.2023707728 12Q22Q13.416 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6 ,Q !$aded !&b#a#% hsecu#&t%_p!ug&'h
2023707728 12Q22Q13.418 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 01000 0 _*-5=)4Da ;-34(4,Q c$u!d '$t c#eate a'%G- 251<(1 s$c"ets
2023707728 12Q22Q13.418 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 01000 0 _*-5=)4Da ;-34(4,Q c$u!d '$t c#eate a'%G- 251<(1 s$c"ets

2023707728 12Q22Q13.421 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6,Q ('&t4uma 'uma4$de4umQ 1 'uma_d&st#&bute_m$deQ '$'e&'he#&t2h#ead1$$!Q 0.

2023707728 12Q22Q13.421 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 01000 0 _*-5=)4Da ;-34(4,Q >a&!ed t$&'&8a!&Me the mem$#% p#$tect U$# g_&'sta'ce.aN#.aN#_st$#age.cst$#e_buXe#s (16 9b%tes) $# sha#ed mem$#% (1188 9b%tes) &s !a#ge#.

2023707728 12Q22Q14.278 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _5-5G)a L6,Q set data cache s&Me(12582912)

2023707728 12Q22Q17.650 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _S),9)42_1-,)a L6,Q Segme't7page c$'sta'tsQ D>_9-1_S(.)Q 8156B D>_9-1_*(2_542Q 65248B D>_9-1_,3601_)K2)42SQ 4175872B (1*L65=_S(.)Q 8168B)K2)42S_1)3_(1*L65=Q 1021B (1*L65=_,3601_S(.)Q 4090B *92_G)-D)3_L)H)L0_262-L_1-,)SQ 8323072B *"t9ap)'t#%4umbe#1e#*!$c"Q 2038B *"t9ap*!$c"4umbe#Q 25B *"t*&t9aF9ap5'tQ 512

2023707728 12Q22Q18.419 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6,Q &ssedbQ Us%'c R!e h<$pt<&ssedb1<data<db1<&ssedb.state.temph success

2023707728 12Q22Q18.419 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6,Q c#eate &ssedb state R!e successQ db state(S2-32(4,_S2-2))B se#/e# m$de(4$#ma!)B c$''ec8$'&'deF(1)

2023707728 12Q22Q18.443 64c34274.1 _u'"'$D'a 139730238255360 _u'"'$D'a 0 d'_6001 00000 0 _*-5=)4Da L6,Q maF_saUe_Uds A 976B usab!e_Uds A 1000B a!#ead%_$pe' A 14

bb$F_dump_path &s set t$ <$pt<&ssedb1<c$#eR!e<

.

_2023707728 12Q22Q21.110a_79316a_a_gs_ct!aQ d$'e

_2023707728 12Q22Q21.110a_79316a_a_gs_ct!aQ se#/e# sta#ted (<$pt<&ssedb1<data<db1)

_$mm `&s$+'$de2 caS

_$mm `&s$+'$de2 caS gs !7d testdb 7p 26000 7#

gs ! ((&ssedb 5.0.0 bu&!d 4ec82cbe) c$mp&!ed at 2023707727 09Q58Q20 c$mm&t 0 !ast

m#)

4$'7SSL c$' 'ec8$' (SSL c$' 'ec8$' &s #ec$mme'ded Dhe' #e u&#&'g h&gh7secu#&t%)

2%pe hhe!ph U$# he!p.

testdbAd se!ect V U#$m test1C

›c$!

77777

›111

(1 #$D)

p q

).& u

•§¡¬

G „ ‡ å tFt !

testdbAd c$p% test t$ Y<$pt<data<testY D&th (de!&m&te# Y^YBU$#mat Y2)K2Y)C

561: 2

_$mm ` &s$+'$de2 dataaS cat test

1^100

2^20

testdbAd c$p% (se!ect V U#$m test Dhe#e &dA1) t$ Y<$pt<data<test_&dY D&th (de!&m&te# Y^YBU$#mat Y2)K2Y)C

561: 1

›_$mm ` &s$+'$de2 dataaS cat test_&d

1^100

„ …

testdbAd se!ect V U#$m test3C

›&d ^ /a!ue

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(0 #$Ds)

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