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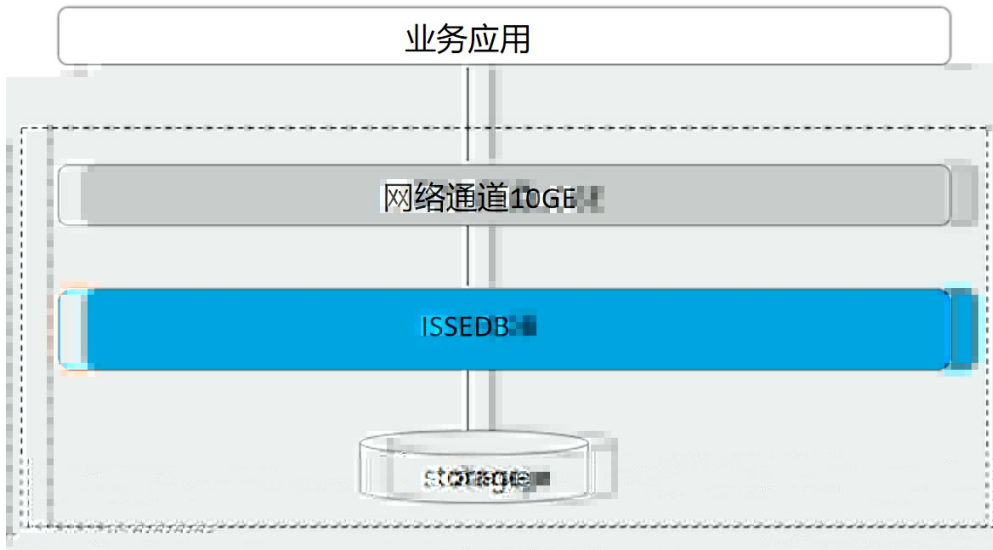
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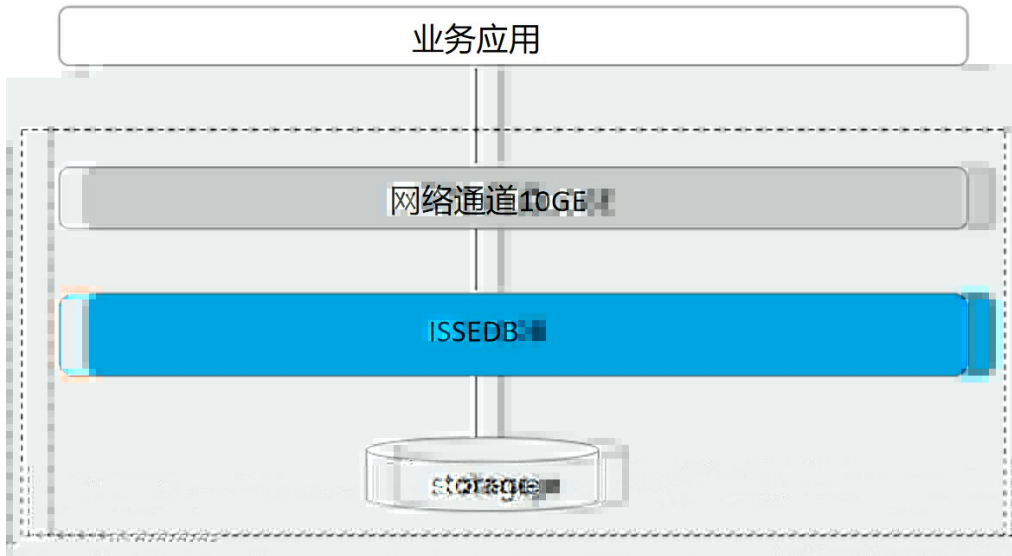


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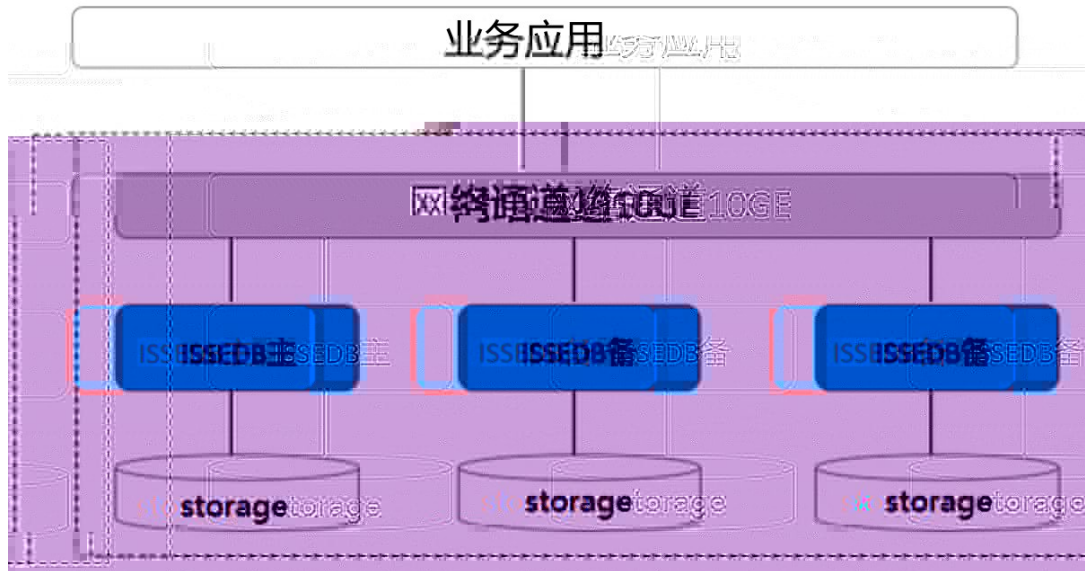
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.<c\$' Rgu#e 77p#eRFA<us#<b&' <p%th\$' 3.6.4 7e' able7sha#ed

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防火墙配置

```
sudo systemctl restart firewalld
sudo systemctl status firewalld
sudo systemctl enable firewalld
sudo systemctl start firewalld
sudo systemctl stop firewalld
sudo systemctl disable firewalld
sudo systemctl status firewalld
sudo firewall-cmd --state
sudo firewall-cmd --get-active-zones
sudo firewall-cmd --get-ports
sudo firewall-cmd --get-services
sudo firewall-cmd --get-rich-rules
sudo firewall-cmd --list-all
sudo firewall-cmd --list-ports
sudo firewall-cmd --list-services
sudo firewall-cmd --list-zones
```

```
sudo systemctl restart firewalld
sudo systemctl status firewalld
```

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```
sudo systemctl stop firewalld
```

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```
sudo systemctl disable firewalld
```

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```
sudo systemctl restart firewalld
sudo systemctl status firewalld
```

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```
sudo firewall-cmd --add-port=9/tcp
```

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```
sudo systemctl reload firewalld
```

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```
sudo firewall-cmd --list-ports
```

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	5433 { E1~	¢ \$ s ^ • ä
'tp	123	'tp ßä
G-S	55434	9: ä
	55435	9: O ä
	55436	9: ÄÄä
	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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cp /usr/share/.onein;o/> /> /etc/localtime
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date -s 29&9&-&8-&= *4:*%:&&2
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```
7um install -7 ntpd
```

```
@ent64 ed-at chron7d ntpd ! " #
```

```
chron7d$ntpd%& ' ( ) * +, - . / O
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```
@123 ntpd 4563 chron7d O
```

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@AAA
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```
s7stemctl disa8le chron7d BB s7stemctl stop chron7d
```

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AAA
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'tpÃÃ±ì óÃaz · § 9: ú ©<etc<'tp.c\$'ll !

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

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ý ú · 'tp À Á ± { î l 192.168.100.1 · ~ è ©
<etc<' tp.c\$'ll !

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

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

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3 2 © ° &} v j k @ 'tpd À Á

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

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date

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系统内核参数配置

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S)994S L&' uF • f ú v 32000 v ®
S)99SLVS)994(Â
S)9619 S)961 © • f ú v 100 = ®
S)99SLÂ
S)994(L&' uF • f set ú v 128Â
&pcs 7! j &pcs 7u 4 f • f Â
16 ú ý v • f 17 ú • f Â S ö "e#" e!.sem
Â
S)99SL G • f v S)994(G Â
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s7sctI kernel+sem1D4&C6 9&C\$*%9&&& 4&C6 %*9&&&D

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"e#" e!.shma!!A128V1024V1024V1024V0.8W<4096A26843545Â
• getc\$' U 1-,)_S(.) %oŠ 4 f page_sWMe Â
¢ X P b%tesÂ
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s7sctI kernel+shma!l1D9684=%4%D

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"e#" el.shmmaFA128V1024V1024V1024V0.5A68719476736Ã

ΦX P b%tesÃ

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s7sctI kernel+shmmax1D68$*C4$6$=6D
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```
s7sctI kernel+shmmni1D8*C9&&D
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s7sctI net+core+netdev_max_8acklo:1D*&&&D
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s7sctI net+core+rmem_de;ault1D969*44D
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s7sctI net+core+rmem_max1D4*C4=&4D
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s7sctI net+core+<mem_de; ault1D969*44D
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s7sctI net+core+<mem_max1D4*C4=&4D
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s7sctI net+core+somaxconn1D4&C6D
```

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```
s7sctI net+ipv4+tcp_; in_timeout1D%D
```

< G < © f v Ã < å Â
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s7sctI vm+dirt7_8ack: round_87tes1D4&C6&&&&D
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< G ©Ã ì ó v Ã ì ó ÷ b å Â
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s7sctl vm+dirt7_ratio1D8&D
```

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dÃ

5 í ù ý ÐÃ

< T • 100 G 1Ðv %Š 50 G 0.5 ÐÃ

T •

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

< G ¢XÙ v § 0¥1¥2
0 G ¢/ 34ž ©§ ¢X¼ • v ©§
¢Xv¢X v¢X Ø vû êë Ã
1 G ¢/ ù ©• d¢Xv Öc —©¢Xg, Å
2 G ¢/ ù ã • d¢XK P ó. K©¢XÃ
èÙ ¢Xì

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

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T •

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

< G 5ú §Û © ! ÂR - RS{ G¥ ^ _ ¥ Æ¥
FK • ´ ^ _ ® ~ © 1\$stg#eSQL v T • 2000 Â

5 ú
T • 2000 Â

T •

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

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Ñ © 78\$%Â

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80Jv5 b%te~<1-,)_S(.) { getc\$'U1-,)_S(.) ~v < T

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< G 5ú ¢X [{ ·

sha#ed_buXe# ~v>® ¢XV0.5v5 b%teÂ

< ¢ ¢X [© f v ß 4096Â

< G < © f v Â < v

å v5 bt%eÂ

&} ý ýT ¢ / <

1î #\$\$t » xLM Â

2T ¢ / < { ýT ~v< < • ¢ / < Â

```
s7sctl ke71values
```

"e%G <

/alues G T ©< v< W Â

3 v• èÖ 6© ½Â

s7sctl -p

&} fT Ç/<

1î #\$\$t » xLM Â

2a Ç/< ! <etc<s%ct!.c\$'lv Ç/• €b... ! Â

• dÇX>08, î v U Ç/< T "e#' el.shma!! K

"e#' el.shmmaF © Â

î Ç/< ò¼< ÇEv ' T É< KË

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 MOM or hi:her
kernel+shmmx 1 68$*C4$6$=6 E 87tesF 8&G MOM 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... æX ‡ Â

:<H

4 v• èÖ 6© ½Â

s7sctl -p

1 4 f ž ; j S)L(4OK v ž ; j ž dlabled v ; j ž
e' U\$#c&' gÃ

```
: eten; orce
```

```
2 ì S)L(4OKÃ
```

```
seten; orce &
```

```
3 Ý Ã ö ! S)L(4OKÃ
```

```
1 ¥ a z ! Ã
```

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

```
2 ¥ S)L(4OKAe' U$#c&' g ö · S)L(4OKAd&sabledÃ
```

```
3 ¥ j Ã
```

```
re8oot
```

X

```
(SS)D* 7 8 ì #$$t » x Û' v S î Ý Ã T ·
```

```
#$$t » x Ã
```

```
1 î #$$t » x L M Ã
```

```
2 ö 1e#m&t3$$tL$g&' v » x Ã
```

```
1 ¥ ; sshd_c$' Rg !
```

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

```
2 ¥ ö v S î · î ° &} È Ì
```

```
1e#m&t3$$tL$g&' '$ Ã
```

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

```
1e#m&t3$$tL$g&' L · %esLÃ
```

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

```
3 ¥ Ã , 0D æXû † a z
```

```
3 j ssh · %oŠ ½Ã
```

```
service sshd restart
```

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" • €  
3em$/e(15A%esì v LM ÷ è » ‡ì v » © (15 {  
X [ K • f ~ v • (SS)D* Å Å ± • © (15 é dv § Å<  
6v î T 3em$/e(15< · '$Å
```

LM

```
1î #$$t » x LM Å  
2 ... <etc<s%stemd<!$g' d.c$' ll ! v 4 f ž T  
3em$/e(15A' $v Å , 3v Å Å
```

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

```
3è ! , 3em$/e(15A' $Å  
4 ...<us#!&b<s%stemd<s%stem<s%stemd7!$g' d.se#/tce ! v 4 f ž  
T 3em$/e(15A' $v T Å , 5v Å Å
```

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

```
5ö Ý 3em$/e(15A' $Å  
6 Ý < Å
```

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

```
734ö ž ½Å
```

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

T { S ~

```
@ K P6© 920 { 5 ~T · QÒ  
{ 920 1500~v 8192{ 920 S £, ö ~Å Ò  
P6ý ö { ö &- ĩ P6 ~Å
```

1 î #\$\$t » xLM Â
 2 Å, %ŠvT 920 Â
 a ŠÿÃ &a%Š4f Â

&- ý

```
Ei; con; i: mtu
i; con; i: eth& mtu 8*C9
```

&-

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

Ý V { S ~

!

(1 • € ä

项目名称	描述说明	备注
l 6	&S+' \$de2	l ml 6
(1	192.168.146.162	(1
ä	26000	D*' \$de ä

» VW

项目名称	名称	所属类型	规划建议
378	9: :	; <	= > ? @
A8	BCDEF	; <	= > ? @

! wx VW

目录名称	对应名称	目录作用
G9FHGI9JHKLEMGNIIMBC	I9JHKLEM	OPQRSTUVWXYZ
G9FHGNIIMBCGNWIHLXXGLFF	YZZ[\]^_`FF_LH`	abcOPUV
G9FHGNIIMBCGX9D	YZZ[\]d9D_LH`	efUV
G9FHGNIIMBCGNWIHLXXGBLHLGBCg	BLHLh9BMg	ijabSTUV
G9FHGNIIMBCGH: F	H: Fk FFBC_LH`	lmRUV
G9FHGNIIMBCGNIIMBCH99XIG9:	YZZ[\]n99X_LH`	abcopUV
G9FHGNIIMBCGq9EMJNXM	q9EM_LH`	abcq9EMmRUV

T @ | 6 .
1 Û è@ Å,

```
5i /etc/hostname
hostnamectl set-hostname iso; tnode9 E *C9+*68+*46+*69
```

2 T @ <etc<h\$sts

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

78 » Kwx

1 î #\$\$t » xLM Â

2 78 » { \$£ ~vT Þ { q ... 2

ü | ýø ~Â

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

£ ©LM » § 78 v ! K I , Q

PÂ

3 (SS)D* wx Â

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

ö Ü

1 { @ ~î #\$\$t » xLM Â

2 Å, j /&<etc<secu#&t%<!&m&ts.c\$'Uvè ! Ý ¢³ v æX ‡ Â


```
tar -xvf; IIMBC-%&+&-"ent64-648it-all+tar+:.
tar -xvf; IIMBC-%&+&-"ent64-648it-om+tar+:.
```

!

K9L ! { I ~

H P

```
-- i j root 37
-- • /opt/so;t<are/issued8 UV , f cluster_con; i:+xml mR
-- z { ; < „
cat @ cluster_con; i:+xmlLL06M
LNxml version12*+&2 encodin: 12' #M-82N@
L 66#@
L0-- l440PQ...† ‡ ^ --@
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/issued8*/app2 /@
L(A AM name12l440PQ3o:(ath2 value12/opt/issued8*/lo:/issued82 /@
L(A AM name12l440PQ#ool(ath2 value12/opt/issued8*/tool2 /@
L(A AM name12core(ath2 value12/opt/issued8*/core; ile2/@
L(A AM name12cluster#7pe2 value12sin: le-inst2/@
L/"3' 4#0 @
L0-- %Š < Œ i j ‡ ^ --@
LP05I"03l4#@
L0-- node* Œ i j ‡ ^ --@
LP05I"0 sn12*#####*2@
L(A AM name12name2 value12iso; tnode92/@
L(A AM name12a./ame2 value12AR*2/@
L(A AM name12a.(riorit72 value12*2/@
L0-- „ • < , 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/@

L0--d8node--@
L(A AM name12data/um2 value12*2/@
L(A AM name12data(ortQase2 value1296###2/@
L(A AM name12data/ode*2 value12/opt/issued8*/data/d8*2/@
L/P05I"0@
L/P05I"03l4#@
L/ 66#@
06M
< œ
```

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```

Oe: 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*Fnode9FIIIIMBC-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+

-- ~> | OP©• ‡ ^ _ j - 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_$(uname -r)64bit
    Jop_masterK
    centos_$(uname -r)64bit
  A9+ J Vernel version status K : /ormal
    #he names about all kernel versions are same #he value is
2=$(uname -r)64bit
  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 about all time.ones are same #he value is
2W&8&&2
  A%+ J 4<ap memor7 status K :
Uarnin:
  Jop_slaveK
4<apMemor7 $(uname -r)64bit #otalMemor7 $(uname -r)64bit
  Jop_masterK
4<apMemor7 $(uname -r)64bit #otalMemor7 $(uname -r)64bit
  A6+ J 47stem control parameters status K : /ormal
    All values about s7stem control parameters are correct+
  A$+ 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 about TM4 mount parameters is correct+
  AC+ J (re-read 8lock si.e status K : /ormal
    #he value about 3o: ical 8lock si.e is correct+
  A**+J /et<ork card con; i:uration status K : Uarnin:
    Jop_slaveK
QondMode /ull

```



```

@ --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; ul17 checked preinstall on ever7 node+
"reatin: the 8ackup director7+
4uccess; ul17 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; ul17 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; ul17 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; ul17 installed application+
end deplo7+

```

DIBC ©Ã DIBC KR DIBC ÃÁ± ©12 dÃ
—™! i Ã
DIBC
1î 78 » \$mm x Ã

```
su - omm
```

```
2 ...78 è wx Ã
```

```
cd /opt/so; t<are/issed8/script
```

```
3 Å , %Š Ã
```

```
+/: s_uninstall
```

```
 v 78© DIBC { ï 78wx S(SS)D*G69) R wx ~
K DIBC Q 12 f é v òæ È Ã
```

78

```
î $%(SS)D* ý| ým9: · v $%12
```

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ÀÁ± f	2 • d6 6
LM	; < ÅŠ5Ã
! 12	QR 5Ã
! 12	ÄR 5Ã

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w •		m
l 6	4\$de1¥4\$de2	l ml 6
(1	192.168.146.130¥192.168.146.131	l ml 6 (1

w •		m
ä	5000¥26000	cm ä ¥D*' \$de ä

» VW

w •	•	AN	VW
»	\$mm	LM	<
	dbg#p	LM	<

! wx VW

wx •	R •	wx M
<\$pt<s\$+Da#e<ssedb	s\$+Da#e	78 ! X wx
<\$pt<ssedb<app	(SS)D*-pp1ath	78wx
<\$pt<ssedb<!\$g<ssedb	(SS)D*L\$g1ath	wx
<\$pt<ssedb<data<d1<	data4\$de1	l m X wx
<\$pt<ssedb<tmp	tmp9ppdb1ath	i ! wx
<\$pt<ssedb<t\$\$!	(SS)D*2\$\$!1ath	s ^ wx
<\$pt<ssedb<c\$#eR!e	c\$#e1ath	c\$#e ! wx
<\$pt<ssedb<cm	cmD#	59 wx

T @ | 6 •
1 Û è @ Å ,

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
```

78 » Kwx

```
1 î #$$t » x L M Â  
2 78 » { $ £ ~ v T P { q ... 2  
ü | ý ø ~ Â
```

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

```
ÅÆÇ ; < 3 7 8' 3ÈOPabc mRÉA" É 45µ{ ÊË  
PÂ  
3 { | ~ ! wx { $ £ ~
```

```
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 ç³ v æ X ‡ Â
```

```
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
```

•	(1	ß ä
l	192.168.146.157	5432ß5433ß26001ß26002ß26003
m	192.168.146.158	5432ß5433ß26001ß26002ß26003

— ~ TM!

† 1 2

\$Ûç³ R l m LM 1 2 , vî LM •
 #\$\$t » Ä, Æ

v ; j ä Æ

ì S)L(40KÆ

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j k 9: — , ý ì ó Ò Æ

x

T #\$\$t x Æ

ç / <

1 2 Ë ç / < Æ

< T

3em\$/e(15Æ

8

78 Æ

78

```
-- QRr
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 QRr F s t issed8-%+&+&-"ent64-648it-all+tar+:. u 4v w +sha9%6 mR
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+:.
```

!

K9L ! { I ~

H P

-- i j

```

L0--"MÍ Ž Ō Ō Í • i j 8ÀÑÒ ip--@
value12*C9+*68+*46+*%$F*C9+*68+*46+*%82 /@
L(A AM name12cm4erver3istenIp*2
value12op_masterFop_slave2 /@
L(A AM name12cm4erver elation2

L0--d8node--@
L(A AM name12data/um2 value12*2/@
L0--PQnode Ó → Ö--@
L(A AM name12data(ortQase2 value1296&&&2/@
L0--PQnode i j Œ a b UV À × a b UV--@
L(A AM name12data/ode*2
value12/opt/issed8/install/data/d8*Fop_slaveF/opt/issed8/install/data/
d8*2/@
L0--PQnode i j Œ • Æ ( ) Ø + i j a --@
L(A AM name12dataop_master_s7nc/um2 value12&2/@
L/P05I"0@

L0-- op_slave Œ i j ‡ ^ † ~ 2name2 Û Ú × 8Ì
(hostname! --@
LP05I"0 sn12*'&&&&&92@
L(A AM name12name2 value12op_slave2/@
L(A AM name12a./ame2 value12AR*2/@
L(A AM name12a.(riorit72 value12*2/@
L0-- „ • < , Ž • @•' 3 ' 8ackl(*" sshl(* " ( •
l( --@
L(A AM name128ackIp*2 value12*C9+*68+*46+*%82/@
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实例类型	参数
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-- | } ~z { ©• „
(arsin: the con;i:uration ;ile+
4uccess;ull7 parsed the con;i:uration ;ile+
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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+
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4uccess;ull7 distri8ute packa:e to tool path+
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(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+

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4access;ull7 installed the tools in the cluster+
"heckin: hostname mappin:+
4access;ull7 checked hostname mappin:+
"reatin: 44- trust ;or JommK user+
(lease enter pass<ord ;or current userJommK+
(ass<ord: -- ^ « omm - -
"heckin: net<ork in;ormation+
All nodes in the net<ork are /ormal+
4access;ull7 checked net<ork in;ormation+
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4access;ull7 created the local ke7 ;iles+
Appendin: local IP to authori.ed_ke7s+
4access;ull7 appended local IP to authori.ed_ke7s+
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4access;ull7 updated the kno<n_hosts ;ile+
Appendin: authori.ed_ke7 on the remote node+
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"heckin: common authentication ;ile content+
4access;ull7 checked common authentication content+
Pistri8utin: 44- trust ;ile to all node+
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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+
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4access;ull7 prepared " 6/ service+
4ettin: user environmental varia8les+
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Jroot)op_master scriptKE /opt/so; t<are/issed8/script/:s_checkos -i A -h
op_masterFop_slave --detail
"heckin: items:
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    centos_$(cat /etc/redhat-release | grep -oP '(?<=)^[0-9]+')_64bit
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    centos_$(cat /etc/redhat-release | grep -oP '(?<=)^[0-9]+')_64bit
  A9+ J Vernel version status K : /ormal
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2023707728 14056033.309 64c366a1.1 _u' "' \$D' a 140593643417856 _u' "' \$D' a 0
d' _6001_6002 01000 0 *_-5=)4Da ; -34(4, 0 >a&led 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#.

_SO55)SSa &s\$+' \$de4

2023707728 14056034.716 64c366a2.1 _u' "' \$D' a 140365746151680 _u' "' \$D' a 0
d' _6001_6002 01000 0 *_-5=)4Da ; -34(4, 0 c\$u!d ' \$t c#eate a' % G- 251<(1
s\$c"ets

2023707728 14056034.717 64c366a2.1 _u' "' \$D' a 140365746151680 _u' "' \$D' a 0
d' _6001_6002 01000 0 *_-5=)4Da ; -34(4, 0 >a&led 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#.

AA

Successlu!!% sta#ted.

j h

\$mm` &s\$+' \$de4 d4aS gs\$m 7t st\$P 7D <\$pt<&ssedb1<data<d4

St\$pp&' g cluste#.

AA

_, -OSS753606a0 5a' ' \$t st\$P the database, the cmd &s s\$u#ce
<h\$me<\$mm<.bash#cc p#th\$' 3 Y<\$pt<&ssedb1<t\$!<sc#&pt<!\$cal<St\$P(' sta' ce.p%l 70
\$mm 73 <\$pt<&ssedb1<app 7t 300 7D <\$pt<&ssedb1<data<d4 7m llastB)##\$#0

4f -9: l mg,
_ \$mm` &S+' \$de1 sc#&ptaS gs_ \$m 7t status 77deta!
_ 5!uste# State a

cluste#_state 0 4\$#ma!
#ed&st#&bu8' g 0 4\$
cu##e' t_aM 0 - . _-LL

_ Data' \$de State a

>>>>' \$de ' \$de_&p p\$#t &' sta' ce state
////////////////////////////////////
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!

4f m6g, ž šî nP
_ \$mm` &S+' \$de4 d4aS gs_ct! ue#% 7D <\$pt<&ssedb1<data<d4<
_2023707728 15015035.668a_19156a_a_gs_ct!a0 gs_ct! ue#% bdatad&# &S
<\$pt<&ssedb1<data<d4

>G- state0
>>>>>>>!\$ca!_#\$!e 0 Sta' db%
>>>>>>>sta8c_c\$' ' ec8\$' s 0 1
>>>>>>>db_state 0 4\$#ma!
>>>>>>>deta!_&' U\$#ma8\$' 0 4\$#ma!

>Se' de#s &' U\$0
4\$ &' U\$#ma8\$'
>3ece&/e# &' U\$0
>>>>>>>#ece&/e#_p&d 0 18494
>>>>>>>!\$ca!_#\$!e 0 Sta' db%

>>>>>>pee#_#\$!e 0 1#&ma#%
>>>>>>pee#_state 0 4\$#ma!
>>>>>>state 0 4\$#ma!
>>>>>>se' de#_se' t_!\$ca8\$' 0 0<4001*58
>>>>>>se' de#_D#lte_!\$ca8\$' 0 0<4001*58
>>>>>>se' de#_bush_!\$ca8\$' 0 0<4001*58
>>>>>>se' de#_#ep!a%_!\$ca8\$' 0 0<4001*58
>>>>>>#ece&/e#_#ece&/ed_!\$ca8\$' 0 0<4001*58
>>>>>>#ece&/e#_D#lte_!\$ca8\$' 0 0<4001*58
>>>>>>#ece&/e#_bush_!\$ca8\$' 0 0<4001*58
>>>>>>#ece&/e#_#ep!a%_!\$ca8\$' 0 0<4001*28
>>>>>>s%' c_pe#ce' t 0 100J
>>>>>>cha' ' e! 0 192.168.146.164047386@77192.168.146.16105433
m6 (§ î n P
l mn P
_ \$mm` &s\$+' \$de4 d4aS gs_ct! sD&tch\$/e# 7D <\$pt<&ssedb1<data<d4
_2023707728 15016055.469a_19198a_a_gs_ct!a0 gs_ct! sD&tch\$/e# bdatad# &s
<\$pt<&ssedb1<data<d4
_2023707728 15016055.469a_19198a_a_gs_ct!a0 sD&tch\$/e# te#m (1)
_2023707728 15016055.474a_19198a_a_gs_ct!a0 Da&8' g l\$# se#/e# t\$ sD&tch\$/e#.....
_2023707728 15017000.592a_19198a_a_gs_ct!a0 d\$' e
_2023707728 15017000.592a_19198a_a_gs_ct!a0 sD&tch\$/e# c\$mpleted
(<\$pt<&ssedb1<data<d4)

4 f 9: g,
_ \$mm` &s\$+' \$de1 dataaS gs_ \$m 7t status 77deta!
_ 5!uste# State a

cluste#_state 0 Deg#aded
#ed&st#bu8' g 0 4\$
cu##e' t_aM 0 - . _-LL

_ Data' \$de State a

>>>>' \$de ' \$de_&p p\$#t &' sta' ce state

////////////////////////////////////

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

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

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

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

\$mm` &\$+' \$de1 dataaS gs\$m 7t status 77deta!

_ 5!uste# State a

cluste#_state 0 4\$#ma!

#ed&st#&bu8' g 0 4\$

cu##e' t_aM 0 - . _ -LL

_ Data' \$de State a

>>>>' \$de ' \$de_&p p\$#t &' sta' ce state

////////////////////////////////////

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

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

nP

<\$pt<bac"up<bac"up.s !7p 26000 testdb 7> p
gs_dump_p\$#tA\26000\%a_testdba_2023707727 19053031a0 2he t\$ta! \$b\lects ' umbe# &s
432.
gs_dump_p\$#tA\26000\%a_testdba_2023707727 19053031a0 _100.00Ja 432 \$b\lects ha/e
bee' dumped.
gs_dump_p\$#tA\26000\%a_testdba_2023707727 19053031a0 dump database testdb
success!u!!%
gs_dump_p\$#tA\26000\%a_testdba_2023707727 19053031a0 t\$ta! 8me0 1563 ms

y z p q

>

77• » testv Å , gs_dump © s ! v p q å template1

_\$mm` &s\$+' \$de2 bac"upaS gs !7d template1 70 test 7; huaDe&` 1234 7p 26000

7l <\$pt<bac"up<bac"up.s !

S)2

S)2

S)2

S)2

S)2

S)2

S)2

53)-2) S5G) 9-

-L2)3 S5G) 9-

S)2

S)2

S)2

53)-2) 2- *L)

-L2)3 2- *L)

53)-2) 2- *L)

-L2)3 2- *L)

3)H6=)

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 mr )
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)

```

k

mo 9: ÜK < !

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

1a#s&' g c\$' Rgu#a8\$' Rles.

Successlu!!% pa#sed the c\$' Rgu#a8\$' Rle.

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

3em\$te bac"up succeeded.

Successlu!!% bac"ed up cluste# Rles.

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

t\$ta! 454084

7#D777777. 1 \$mm dbg#p 1355 ?u! 27 19053 bac"up.s !

7#D777777. 1 \$mm dbg#p 464916480 ?u! 28 09016 b&' a#%.ta#

7#D777777. 1 \$mm dbg#p 61440 ?u! 28 09016 pa#amete#.ta#

p q < !

_\$\$\$t` &\$\$+' \$de2 db1ad !! <\$pt<&ssedb1<data<db1<pg_hba.c\$' U
<\$pt<&ssedb1<data<db1<p\$stg#es !.c\$' U

7#D777777. 1 \$mm dbg#p 4587 ?u! 27 16023 <\$pt<&ssedb1<data<db1<pg_hba.c\$' U

7#D777777. 1 \$mm dbg#p 36085 ?u! 27 16023 <\$pt<&ssedb1<data<db1<p\$stg#es !.c\$' U

_\$\$\$t` &\$\$+' \$de2 db1ad m/ <\$pt<&ssedb1<data<db1<pg_hba.c\$' U
<\$pt<&ssedb1<data<db1<pg_hba.c\$' U_ba"

_\$\$\$t` &\$\$+' \$de2 db1ad m/ <\$pt<&ssedb1<data<db1<p\$stg#es !.c\$' U
<\$pt<&ssedb1<data<db1<p\$stg#es !.c\$' U_ba"

_\$\$\$t` &\$\$+' \$de2 db1ad !! <\$pt<&ssedb1<data<db1<pg_hba.c\$' U
<\$pt<&ssedb1<data<db1<p\$stg#es !.c\$' U

!s0 ca' ' \$t access <\$pt<&ssedb1<data<db1<pg_hba.c\$' U0 4\$ such R!e \$# d&#ect\$#%

!s0 ca' ' \$t access <\$pt<&ssedb1<data<db1<p\$stg#es !.c\$' U0 4\$ such R!e \$# d&#ect\$#%

_\$mm` &\$\$+' \$de2 bac"upaS gs_bac"up 7t #est\$#e 77bac"up7d&# <\$pt<bac"up< 7h
&\$\$+' \$de2 77pa#amete# 7! <\$pt<bac"up<bac"up.!\$g

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

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

1e#U\$#m&' g #em\$te #est\$#a8\$' .

Successlu!!% #est\$#ed c!uste# R!es.

_\$\$\$t` &\$\$+' \$de2 db1ad !! <\$pt<&ssedb1<data<db1<pg_hba.c\$' U
<\$pt<&ssedb1<data<db1<p\$stg#es !.c\$' U

7#D777777. 1 \$mm dbg#p 4587 ?u! 27 16023 <\$pt<&ssedb1<data<db1<pg_hba.c\$' U

7#D777777. 1 \$mm dbg#p 36085 ?u! 27 16023 <\$pt<&ssedb1<data<db1<p\$stg#es !.c\$' U

k

_\$mm` &\$\$+' \$de2 bac"aS gs_basebac"up 7D <\$pt<bac" 7p 26000

(4>60 2he sta#8' g p\$&8\$' \$U the F!\$g c\$P% \$U the lu!! bu!d &sl 0<7000028. 2he s!\$t
m&' &mum LS4 &sl 0<0. 2he d&saste# s!\$t m&' &mum LS4 &sl 0<0. 2he !\$g&ca! s!\$t

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

(4>60 *ac"up cata!\$g \<\$pt<p#\$bac"up\ successlu!!% &' &ted

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

t\$ta! 0

d#DF77777. 2 \$mm dbg#p 6 ?u! 28 10037 bac"ups

d#DF77777. 2 \$mm dbg#p 6 ?u! 28 10037 Da!

¥ , mo È

Ý ý ú ©mo È Æ gs_p#\$bac"up § î è Ò ý ú mo wx X - ú

È ©mo Æ wx · <\$pt<essedb1<data<db1 Æ

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

D <\$pt<essedb1<data<db1< 7&' sta' ce &' sta' ce_!\$ca!

(4>60 (' sta' ce %&' sta' ce_!\$ca!\ successlu!!% &' &ted

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

t\$ta! 0

d#DF77777. 3 \$mm dbg#p 45 ?u! 28 11044 &' sta' ce_!\$ca!

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ý | f mo Æ

\$mm` &S+' \$de2 &' sta' ce!\$calaS gs_

• €
Å, • è ! Ý • €
_ \$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>60 *ac"up sta#t& gs_p#\$bac"up /e#s&\$ 0 2.4.2& &' sta' ce0 &' sta' ce_!\$ca! bac"up (D0
3:G9); B bac"up m\$de0 >OLLB Da! m\$de0 S23)-9B #em\$te0 lla!seB c\$mp#ess7
alg\$#&thm0 '\$' eB c\$mp#ess7!e/e!0 1
L6, 0 *ac"up des8' a8\$' & s' &8a!Med
L6, 0 2h& &ssedb &' sta' ce Das &' &8a!Med D&th data b!\$c" chec"sums. Data b!\$c"
c\$##up8\$' D!! be detected
L6, 0 Database bac"up sta#t
L6, 0 sta#ted st#eam&' g ; -L at 0<9000000 (8me!&' e 1)
_2023707728 11044057a0 chec" &de' 8U% s%stem success
_2023707728 11044057a0 se' d S2- 32_3) 1L(5-2(64 0<9000000 success
_2023707728 11044057a0 "eepa!&/e message &s #ece&/ed
(4>60 1, D-2- s&Me0 6209*
(4>60 Sta#t t#a' sle##&' g data R!es
_2023707728 11044058a0 "eepa!&/e message &s #ece&/ed
L6, 0 5#ea8' g page heade# map
h<\$pt<p#\$bac"up<bac"ups<&' sta' ce_!\$ca!<3:G9); <page_heade#_maph
_2023707728 11045003a0 "eepa!&/e message &s #ece&/ed

_2023707728 11045008a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045013a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045018a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045023a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045028a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045033a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045038a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045044a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045049a0 "eepa!%/e message &s #ece%/ed
_2023707728 11045055a0 "eepa!%/e message &s #ece%/ed
_2023707728 11046001a0 "eepa!%/e message &s #ece%/ed
_2023707728 11046006a0 "eepa!%/e message &s #ece%/ed
_2023707728 11046011a0 "eepa!%/e message &s #ece%/ed
_2023707728 11046017a0 "eepa!%/e message &s #ece%/ed

(4>60 Data R!es a#e t#a' sle##edB 8me e!apsed0 1m020s

(4>60 Da&t U\$# pg_st\$p_bac"up()

(4>60 pg_st\$p bac"up() success!u!!% eFecuted

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

L6, 0 L\$'\$&' g U\$# LS4 0<9000308 &' segme' t0 000000010000000000000009

(4>60 ; a&t U\$# LS4 0<9000308 &' st#eamed ; -L segme' t

<\$pt<p#\$bac"up<bac"ups<&' sta' ce_!\$ca!<3: G9); <database<pg_F!\$g<00000001000
0000000000009

L6, 0 >\$u' d ; -L segme' t0

<\$pt<p#\$bac"up<bac"ups<&' sta' ce_!\$ca!<3: G9); <database<pg_F!\$g<00000001000
0000000000009

L6, 0 2h#ead _0a0 6pe' &' g ; -L segme' t

h<\$pt<p#\$bac"up<bac"ups<&' sta' ce_!\$ca!<3: G9); <database<pg_F!\$g<00000001000
0000000000009h

L6, 0 >\$u' d LS40 0<9000308

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

L6, 0 , eg' g the 3ec\$/e#% 2&me U#\$m ; -L

L6, 0 2h#ead _0a0 6pe' &' g ; -L segme' t
h<\$pt<p#\$bac"up<bac"ups<&' sta' ce_!\$ca!<3: G9); <database<pg_F!\$g<00000001000
0000000000009h

(4>60 \$%' c&' g bac"up R!es t\$ d&s"
(4>60 *ac"up R!es a#e s%' ced& 8me e!apsed 0
(4>60 Ha!&da8' g bac"up 3: G9);
(4>60 *ac"up 3: G9); data R!es a#e /a!&d
(4>60 *ac"up 3: G9); #es&de' t s!Me 6369*
(4>60 *ac"up 3: G9); c\$mp!eted

mo
4f mog, • €
_ \$mm` &s\$+' \$de2 &' sta' ce_!\$ca!aS gs_p#\$bac"up sh\$D 7* <\$pt<p#\$bac"up< 77
&' sta' ce &' sta' ce_!\$ca!

AA
AA
AAAAA

>(' 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

AA
AA
AAAAA

>&' sta' ce_!\$ca! 9.2 3:G4G7 2023707728 12007058E08 >OLL S23)-9 1<0 6s
6209* 169* 1.00 0<D000028 0<D0001)8 >(L) 6=

¥R LM

R , D9L L M , f mo
_ \$mm` &s\$+' \$de2 caS gs !7d testdb 7p 26000 7#
gs ! ((&ssedb 5.0.0 bu!d 4ec82cbe) c\$mp!ed at 2023707727 09058020 c\$mm&t 0 last
m#)
4\$' 7SSL c\$' ' ec8\$' (SSL c\$' ' ec8\$' &s #ec\$mme' ded Dhe' #e u&#&' g h&gh7secu#&t%)
2%pe hhe!ph U\$# help.

_2023707728 11058006a0 chec" &de' 8U% s%stem success
_2023707728 11058006a0 se' d S2-32_3)1L(5-2(64 0<*000000 success

_2023707728 11058006a0 "eepa!&/e message &s #ece&/ed

(4>60 1, D-2- sMe0 6209*

L6, 0 5u##e' t t!0 1

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

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

(4>60)Ft#ac8' g pagemap \$U cha' ged b!\$c"s

(4>60 cha' ge b&tmap sta#t !s' !\$ca8\$' &s 0<9000028

(4>60 cha' ge b&tmap e' d !s' !\$ca8\$' &s 00000000<0*000028

(4>60 1agemap successlu!!% eFt#acted0 8me elapsed0 0 sec

_2023707728 11058006a0 "eepa!&/e message &s #ece&/ed

(4>60 Sta#t t#a' sle##&' g data R!es

_2023707728 11058011a0 "eepa!&/e message &s #ece&/ed

_2023707728 11058016a0 "eepa!&/e message &s #ece&/ed

(4>60 Data R!es a#e t#a' sle##ed0 8me elapsed0 13s

(4>60 Da&t U\$# pg_st\$p_bac"up()

(4>60 pg_st\$p bac"up() successlu!!% eFecuted

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

L6, 0 L\$\$"&' g U\$# LS4 0<*0001)8 &' segme' t0 000000010000000000000000*

(4>60 ; a&t U\$# LS4 0<*0001)8 &' st#eamed ; -L segme' t

<58455ha0' up<bac"ups<&' sta' c&S!&!<3: G402<data03log_F!\$g<00000001000000) c%<s>60 000

000000000*

_2023707728 11058024a0 "eepa!&/e message &s #ece&/ed

LO4, 0 b@ac' up<bac"ups<&' sta' c&S!&!<3: G402<data03log_F!\$g<0000000100000

L6, 0 R' & shed st#eam&' g ; -L at 0<5000000 (8me!&' e 1)
L6, 0 , eg' g the 3ec\$/e#% 2&me l#\$m ; -L
L6, 0 2h#ead _0a0 6pe' &' g ; -L segme' t
h<\$pt<p#\$bac"up<bac"ups<&' sta' ce_!\$ca!<3: G402<database<pg_F!\$g<000000010000
00000000000*h
(4>60 S%' c&' g bac"up R!es t\$ d&s"
(4>60 *ac"up R!es a#e s%' cedB 8me e!apsed0 0
(4>60 Ha!&da8' g bac"up 3: G402
(4>60 *ac"up 3: G402 data R!es a#e /a!&d
(4>60 *ac"up 3: G402 #es&de' t s!Me0 2739*
(4>60 *ac"up 3: G402 c\$mp!eted
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!
AA
AA
AAAAA
>(' 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
AA
AA
AAAAA
>&' sta' ce_!\$ca! 9.2 3: G4(7 2023707728 12008032E08 123-5= S23)-9 1<1 6s
2579* 169* 1.00 0<>000028 0<>0001)8 >(L) 6=
>&' sta' ce_!\$ca! 9.2 3: G4G7 2023707728 12007058E08 >OLL S23)-9 1<0 6s
6209* 169* 1.00 0<D000028 0<D0001)8 >(L) 6=

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\$mm` ' \$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>60 9e#ge sta#ted
(4>60 9e#g' g bac"up 3: G4(7 D'th pa#e' t cha'
(4>60 Ha!'date pa#e' t cha' !#\$# bac"up 3: G4(7
(4>60 Ha!'da8' g bac"up 3: G4G7
(4>60 *ac"up 3: G4G7 data R!es a#e /a!'d
(4>60 Ha!'da8' g bac"up 3: G4(7
(4>60 *ac"up 3: G4(7 data R!es a#e /a!'d
L6, 0 3est\$#e d#ect\$#les a' d s%#m!' "s... '
<\$pt<p#\$bac"up<bac"ups<' sta' ce_!\$ca!<3: G4G7<database
(4>60 Sta#t me#g' g bac"up R!es
L6, 0 5#ea8' g page heade# map
h<\$pt<p#\$bac"up<bac"ups<' sta' ce_!\$ca!<3: G4G7<page_heade#_map_tmph
(4>60 *ac"up R!es a#e success!u!!% me#ged! 8me elapsed! 8s
(4>60 De!ete! 3: G4(7 2023707728 12!08!32E08
L6, 0 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>60 3e' ame me#ged !u!! bac"up 3: G4G7 t\$ 3: G4(7
(4>60 Ha!'da8' g bac"up 3: G4(7
(4>60 *ac"up 3: G4(7 data R!es a#e /a!'d
(4>60 9e#ge \$! bac"up 3: G4(7 c\$#mpleted
\$mm` ' \$de2 ' sta' ce!\$ca!aS !!
t\$ta! 4
7#D777777. 1 \$mm dbg#p 159 ?u! 28 11!44 pg_p#\$bac"up.c\$' !
d#DF777777. 3 \$mm dbg#p 97 ?u! 28 12!10 3: G4(7

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_\$mm` ' \$de2 caS gs !7d p\$stg#es 7p 26000 7#
gs ! (('ssedb 5.0.0 bu!ld 4ec82cbe) c\$#mpled at 2023707727 09!58!20 c\$#mm't 0 last
m#)

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

&ssedbAd d#\$p database testdbf

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 %oŠ —v hi (SS)D* v ū db1 wx

_\$mm` &s\$+' \$de2 caS gs_ct! st\$p 7D <\$pt<&ssedb1<data<db1

_2023707728 12018057.916a_79294a_a_gs_ct!a0 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 â è —© 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, 0 3est\$#e beg&' .

L6, 0 chec" tab!espace d#ect\$#les \$U bac"up 3: G4(7

L6, 0 chec" eFte#' a! d#ect\$#les \$U bac"up 3: G4(7

(4>60 Ha!&da8' g bac"up 3: G4(7

(4>60 *ac"up 3: G4(7 data R!es a#e /a!&d

L6, 0 2h#ead _1a0 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>60 *ac"up 3: G4(7 ; -L segme' ts a#e /a!&d

(4>60 *ac"up 3: G4(7 &s /a!&d.

(4>60 3est\$#&' g the database U#\$m bac"up at 2023707728 12008031E08

L6, 0 3est\$#e d#ect\$#les a' d s%m!&' "s... &' <\$pt<&ssedb1<data<db1

(4>60 Sta#t #est\$#&' g bac"up R!es. 1, D-2- s!Me0 6369 *

L6, 0 Sta#t th#ead 1

(4>60 *ac"up R!es a#e #est\$#ed. 2#a' sle#ed b%tes0 10009 *B 8me elapsed0 28s

(4>60 3est\$#e &' c#eme' ta! #a8\$ (!ess &s beNe#)0 157J (10009 * <6369 *)

(4>60 S%' c&' g #est\$#ed R!es t\$ d&s"

(4>60 3est\$#ed bac"up R!es a#e s%' cedB 8me elapsed0 1s

(4>60 3est\$#e \$U bac"up 3: G4(7 c\$mp!eted.

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

_2023707728 12022008.206a_79316a_a_gs_ct!a0 gs_ct! sta#tedBdatad&# &s

<\$pt<&ssedb1<data<db1

_2023707728 12022012.404a_79316a_a_gs_ct!a0 Da&8' g U\$# se#/e# t\$ sta#t...

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

0 L6, 0 _-!a#m 9\$du!eaG\$st 4ame0 &s\$+' \$de2

0 L6, 0 _-!a#m 9\$du!eaG\$st (10 &s\$+' \$de2. 5\$P% h\$st' ame d!#ect!% &' case \$U ta"&' g

10s t\$ use \geth\$stb%' ameY Dhe' <etc<h\$sts d\$es '\$t c\$' ta&' @G6S2 (10

0 L6, 0 _-!a#m 9\$du!ea5!uste# 4ame0 db5!uste#

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

lla&edi !&' e0 57

0 ; -34(4, 0 lla&ed t\$ \$pe' leatu#e c\$' t#\$! R!eB please chec" Dhethe# &t eF&sts0

>!e4ameA(SS)D*./e#s&\$' B)##' \$A2B)##messageA4\$ such R!e \$# d!#ect\$#%.

0 ; -34(4, 0 lla&ed t\$ pa#se leatu#e c\$' t#\$! R!e0 &ssedb./e#s&\$' .

0 ; -34(4, 0 >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, 0 bb\$F_dump_path &s set t\$ <\$pt<&ssedb1<c\$#eR!e<

2023707728 12022013.187 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 D*010 0 _3)D6a L6, 0 3ec\$/e#% pa#a!!e!&smB cpu c\$u' t A 2B maF A 4B actual
A 2

2023707728 12022013.187 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 D*010 0 _3)D6a L6, 0 5\$' Rg3ec\$/e#%1a#a!!e!&smB
t#ue_maF_#ec\$/e#%_pa#a!!e!&sm04B maF_#ec\$/e#%_pa#a!!e!&sm04

2023707728 12022013.399 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 *_-5=)4Da L6, 0 _-!a#m 9\$duleaca' '\$t #ead
, -OSS_; -34(4, _2: 1) e' /.

2023707728 12022013.399 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 *_-5=)4Da L6, 0 _-!a#m 9\$duleaG\$st 4amel&s\$+' \$de2

2023707728 12022013.399 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 *_-5=)4Da L6, 0 _-!a#m 9\$duleaG\$st (10 &s\$+' \$de2. 5\$p%
h\$st' ame d#ect!% &' case \$l ta"&' g 10s t\$ use \geth\$stb%' amel' Dhe' <etc<h\$sts d\$es
' \$t c\$' ta&' @G6S2(10

2023707728 12022013.399 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 *_-5=)4Da L6, 0 _-!a#m 9\$dulea5!uste# 4amel db5!uste#

2023707728 12022013.399 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 *_-5=)4Da L6, 0 _-!a#m 9\$dulea(' /a!&d data &' -!a#m(tem Rlei
3ead a!a#m)' g!&sh ' ame lla&ledi !&' e0 57

.2023707728 12022013.416 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 *_-5=)4Da L6, 0 !\$aded !&b#a#% hsecu#&t%_p!ug&' h

2023707728 12022013.418 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 01000 0 *_-5=)4Da ; -34(4, 0 c\$u!d ' \$t c#eate a' % G- 251<(1 s\$c"ets

2023707728 12022013.418 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 01000 0 *_-5=)4Da ; -34(4, 0 c\$u!d ' \$t c#eate a' % G- 251<(1 s\$c"ets

2023707728 12022013.421 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 _*-5=)4Da L6, 0 (' &t4uma ' uma4\$de4um 1
' uma_d&st#bute_m\$de 0 ' \$' e &' he#&t2h#ead1\$\$! 0.

2023707728 12022013.421 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 01000 0 _*-5=)4Da ; -34(4, 0 >a&led 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 la#ge#.

2023707728 12022014.278 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0_5-5G)a L6, 0 set data cache s&Me(12582912)

2023707728 12022017.650 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0_S), 9)42_1-,)a L6, 0 Segme' t7page c\$' sta' ts 0 D>_9-1_S(.) 0
8156& D>_9-1_*(2_542 65248& D>_9-1_, 3601_)K2)42S 0 4175872&
(1*L65=_S(.) 0 8168&)K2)42S_1)3_(1*L65= 1021& (1*L65=_ , 3601_S(.) 0 4090&
*92_G)-D)3_L)H)LO_262-L_1-,)S 0 8323072& *t9ap)' t#%4umbe#1e#!\$c" 0
2038& *t9ap*!\$c" 4umbe# 25& *t* &t9aF9ap5' t 0 512

2023707728 12022018.419 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 _*-5=)4Da L6, 0 &ssedb 0 ls%' c R!e
h<\$pt<&ssedb1<data<db1<&ssedb.state.temph success

2023707728 12022018.419 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 _*-5=)4Da L6, 0 c#eate &ssedb state R!e success 0 db
state(S2-32(4, _S2-2))& se#/e# m\$de(4\$#ma!)& c\$' ' ec8\$' &' deF(1)

2023707728 12022018.443 64c34274.1 _u' "" \$D' a 139730238255360 _u' "" \$D' a 0
d' _6001 00000 0 _*-5=)4Da L6, 0 maF_salle_lds A 976& usable_lds A 1000&
a!#ead%_ \$pe' A 14

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

.

_2023707728 12022021.110a_79316a_a_gs_ct!a 0 d\$' e

_2023707728 12022021.110a_79316a_a_gs_ct!a 0 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&ld 4ec82cbe) c\$mp&led at 2023707727 09058020 c\$mm&t 0 last

m#)

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

2%pe hhe!ph U\$# help.

testdbAd select V U#\$m test1C

>c\$!

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>111

(1 #D)

p q

G „ ‡ á 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% (select 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 select V U#\$m test3C

>&d ^ /a!ue

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(0 # \$Ds)

testdbAd c\$p% test3 U#\$m Y<\$pt<data<testY D&th (de!&m&te# Y^YBU\$#mat Y2) K2Y)C

561: 2

testdbAd select V U#\$m test3C

>&d ^ /a!ue

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>>1 ^ 100

>>2 ^ 20

(2 # \$Ds)

>

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%Š £k	<p>(SS)D* • – V v gs !ª « • 2ab Ê , %Š © £k v</p> <p>a ì > 77D&th7#ead!&' ev ü ° » ä ì > 7#L< v</p> <p>é ; Â v c#ea Ê ... 2abv gs ! ÷ • c#eate Â</p> <p>a « SQL Ê H select ¥ c#eate ¥ table ® Â</p> <p>a « G ¥ ^ _ ® £ I © Â</p> <p>%Š YSY ¥ YEI Öª « £k Â</p> <p>RG , ì v — ž pg_L ÷ GÂ</p> <p>Öª « G ì H [AN © Â</p> <p>select Öª « Â</p> <p>Öª « (f † © £k Â</p> <p>select V U#\$m abb... Öª « ú ; G © £k B &' se#t &' t\$ t1 (c\$!1B</p> <p>c\$!2B ...) Öª « ú F © £k Â</p> <p>Öª « c#eate table space • D&th î D&th < © £k Â</p>

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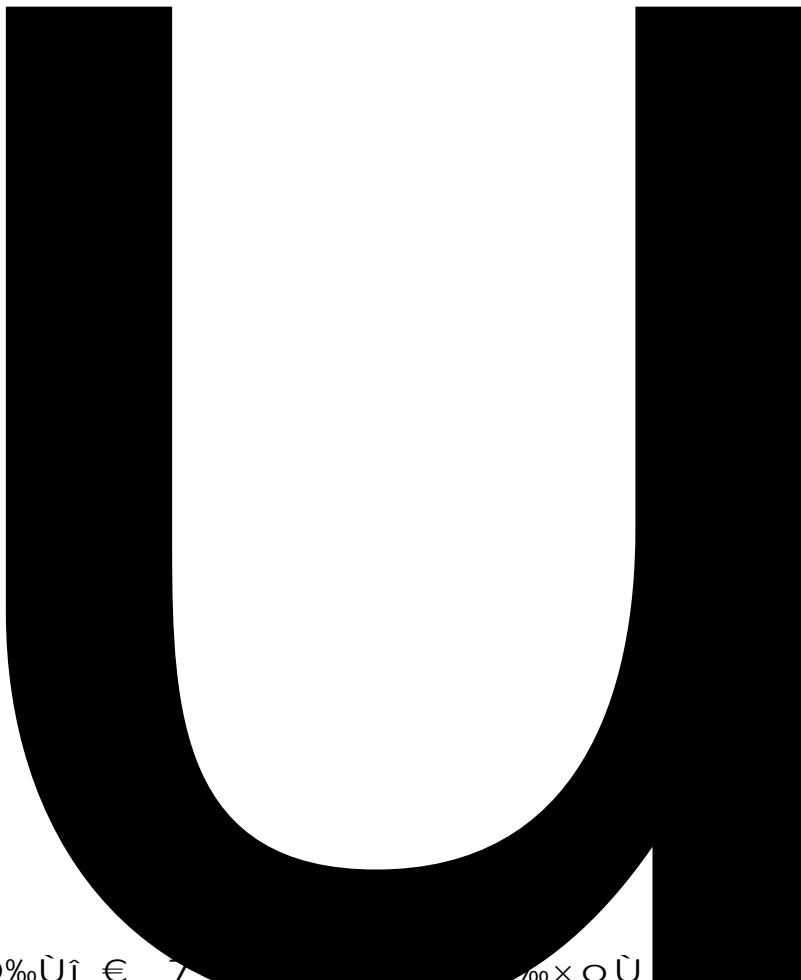
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{ 2~ gs !Q >-2-LQ (' /a!&d use#' ame<passD\$#d!\$g&' de' &ed.
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{ 3~ gs !Q >-2-LQ >\$#b&d #em\$te c\$' ' ec8\$' D&th t#ust meth\$di
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(6)gs !Q s%mb\$! !\$ \$"up e##\$#0 FFF<gs !Q u' deR' ed s%mb\$!Q !&bp He#s&\$' St##' g
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(s the se#/e# #u' ' &' g \$' h\$st kFF.FFF.FFFL a' d accep8' g 251<(1 c\$' ' ec8\$' s \$'

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gs_dump_612(64a..._D*4-9)a
gs_dump 7p p\$#t_' umbe# p\$stg#es 7l dump1.s !
=
eFp\$#t 1, D-2-* -S)Ap\$stg#es
>gs_dump 7p p\$#t_' umbe# 7l dump1.s !
1 2 f >1, D-2-* -S)

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gs_\$m 7t sta#t_7h G6S24-9)a_7D dataD#&a_778me7\$utAS)5Sa_77secu#&t%7
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