



Linux 与 hypervisor 内存共享 Edit Subject (File Menu, Properties)

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Ⅰ 版本记录

Version	DATE	TEST	EDIT
1.0	2023 -11-15	王帅星	王帅星

Table 1: 版本记录

Ⅱ 分配

Name	Company, department	number	EDIT

Table 2: 分配

Ⅲ 安全提示说明

本软件的安全使用说明如下:

SafetyNotice	description
危险!	无视安全准则使用本产品可能危及生命!
警告!	无视安全准则使用本产品可能造成重大人身伤害和重大财产损失!
注意!	无视安全准则使用本产品可能造成人身伤害和财产损失!
提示:	防止产生故障必须注意的信息

Table 3: 安全提示说明

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1 Gcc 安装

测试之前需要保证 linux 和 hypervisor 双系统安装完成

```
进去 root terminal ,输入设置的密码
```



输入 sudo apt install build-essential 安装编译器,

安装完成后 输入 gcc -version 检查是否安装成功



2 As 配置

配置共享内存区

Name	Value	Unit	Description
Automation Runtime type	AR Embedded		
Contiguration ID	APC910_Conf		Unique configuration ID. Required format. Spaces at the beginning or end of t
Configuration version	1.0.0		Configuration version for conditional install. Required format X.Y.Z where X, Y
Module system on target			
Simulation			
Memory configuration			
⊕– 🚰 System			
🕀 📑 Reboot			
🕀 😁 Communication			
🖶 🚰 Timing			
₽-, Mesources			
🖶 🚰 File devices			
Time synchronization			
🖶 😁 Internet file system			
Ethernet parameters			
🖶 🚰 DNS parameters			
🖶 🚰 Online parameters			
🖶 🚰 FTP Server			
🕸 🖶 🚰 TFTP Server			
Additionally supported hardware			
🖶 🚰 Web Server			
Bystem diagnostics System diagnos			
🖶 😁 DTM Server			
🖶 🚰 OPC-UA System			
🖮 🚰 B&R Hypervisor configuration			
d→ a tivate B&R Hypervisor	on		
 	b 512	MiB	Size of DRAM in mebibyte (1MiB = 1048576 bytes) which is assigned to ARen
GPOS reboot during instal	allowed		
Shared memory partition 1			
⊢ _t ♥ Name	MK		Name of shared memory partition
Size	50	Bytes	Size of shared memory partition
🗄 🎬 Shared memory partition 2	2		
- * @ Name	TODO		Name of shared memory partition
Size	0	Bytes	Size of shared memory partition

找到共享内存例程添加下载



3 Linux 配置

在 hyperviosr USB 安装路径中找到需要的库和头文件

	. =	Extract	ISCDevelopment				
File	Home Share View	Compressed Folder Tools					
$\leftarrow \rightarrow$	\leftarrow \rightarrow \checkmark \uparrow 📜 \Rightarrow This PC \Rightarrow SYSTEM (E:) \Rightarrow BRHypervisor \Rightarrow ISCDevelopment \Rightarrow						
<u> </u>	Name	Da	ate modified	Туре	Size		
1	ARsim_Windows_1.7.0.2	zip 20	21/12/21 13:56	Compressed (zipp	92 KB		
1	Hypervisor_Linux_1.7.0.	tar.gz 20	21/12/21 13:56	GZ File	7 KB		
1	Hypervisor_Windows_1	.7.0.zip 20	21/12/21 13:56	Compressed (zipp	179 KB		
C 语言代码可以在帮助中找,有函数			:不支持,有ī	收动			
shms	shmsample.c New.7z						

将库文件,头文件,共享内存c语言放到一个文件夹内

🔽 🗸 💊 🚵 [/home/br/Desktop/New 🥼						
Places 🗸						
 Desktop Trash Can Applications Documents Music Pictures Videos Downloads 	brhypsrv.h	briscAtomic. h shm	briscEvent.h shmsample.c	briscSharedM emory.h	libbrhypsrv6 4.so	

打开 LXminal



找到文件夹放置的目录

输入 cd /(路径),图中路径为/home/br/Desktop/New cd /home/br/Desktop/New



形成执行文件

输入 gcc -o shm shmsample.c libbrisc64.so

将 shmsample.c 生成执行文件 shm ,调用库 libbrisc64.so



运行完成后文件夹内自动生成 shm 文件, 输入./shm 开始运行 等待 AR 侧命令 AR 侧 start 置 1,开始数据交互

Logical View	★ # ×	ShmEcho::ShmEcho.pvm [Watch]	× ShmEcho::Va	riables.var	[Variable	Declaration] 1 5PC900_TS17_02 [Configuration] 🚽 Online Settings	₹
S = 5 🗞 🖉 🎘 🖉	34	🧳 🕲 🖌 😽 🚸 🔒 🔂 😤	🚯 🙀 o 💊				
Object Name	Description	Name	Туре	Scope	Force	Value	1^
😑 🐳 APC910		E 🖉 var	EchoDemo	local			_
🕮 😚 Global.typ	Global data types	- Ø start	BOOL			FALSE	
🖽 - 🧭 Global.var	Global variables	⊢⊘ done	BOOL			TRUE	
E- Ubraries	Global libraries	⊢⊘ step	EchoDemoE			IDLE	
operator	This library contains functio	-> shmInputData	STRING[256			'Hello GPOS!'	
E octimo	The As Time Library suppo	-> shmOutputData	STRING[256			'ISOPG olleH'	
AslacCon	This library contains functio	-> shmOutputDataReverse	STRING[256				
AdscShm	This library contains EBs fo	- errorStep	UINT			0	
AriscEvent	This library contains FBs fo	ArlscShmOpen_0	ArlscShmOp				
AsBrStr	The AsBrStr Library contair	Execute	BOOL			TRUE	
🗄 🛁 asstring	The AsString Library contai	Name	STRING[255				
🖻 – 🗐 Logical		- Ident	UDINT			127940912	
🖻 🖓 LibArlscShm_ST		Done Done	BOOL			TRUE	
🖻 🔂 ShmEcho		-→ Busy	BOOL			FALSE	
		Error	BOOL			FALSE	
		- → StatusID	DINT			0	
		Size	UDINT			1048576	
		Address	UDINT			2351165440	
		🗄 🧼 Internal	UDINT[031				
			ArlscShmClc				
			ArlscEventC				
			ArlscEventO				
		Execute	BOOL			TRUE	
		Name	STRING[255			'GPOS_Event'	
		- Ident	UDINT			211054704	
		Done Done	BOOL			TRUE	
		Busy	BOOL			FALSE	
		Error	BOOL			FALSE	
		StatusID	DINT			0	
		ida de la companya d	UDINT[031				
		- Internal[0]	UDINT			0	
		- Internal[1]	UDINT			228350164	
		- Internal[2]	UDINT			0	
		- Internal[3]	UDINT			228350166	
		- Internal[4]	UDINT			228350165	
		- Internal[5]	UDINT			228350167	
(>	- Internal[6]	UDINT			228350032	
🔂 Logical View 🛛 🍣 Configurat	tion View Physical View	- Internal [7]	UDINT			218029532	~

数据交互完成

File Edit Tabe LL	la	~/Desktop/il/ew	
brohr-linux-9-	ip d. the second		There are a second to be a present
br@br-linux-9:~/D	a /home/br/Desktop/N	ew	
shmsample.c: In f	nction 'shmSample':	n shmsample.c libbriso	:64.so
-function-declars	warning: implicit de	claration of function	'usleen' [.timlic
usleep(1000)	/* ms */		t winkere

br@br-linux-9:~/D	sktop/New\$ gcc -o shn	n shmsample.c li <mark>bbrisc</mark>	64.so
shmsample.c:90:5:	warning: implicit dec	laration of function	'usleen' [altimatic
-function-declara	ion]		asceep (-windered
usleep(1000)	/* ms */		
br@br-linux-9:~/D	sktop/New\$./shm		
Starting shared m	mory demo		
received: "Hello sent : "!SOPG	POS!" lleH"		
ShmSample donebr@	r-linux-9:~/Desktop/N	ew\$	

4 共享内存测试

5 Figure Index

Fehler! Es konnten keine Einträge für ein Abbildungsverzeichnis gefunden werden.

6 Table Index

Table 1: Versions	. Error! Bookmark not defined.
Table 2: Distribution	. Error! Bookmark not defined.
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7 Listing Index

Fehler! Es konnten keine Einträge für ein Abbildungsverzeichnis gefunden werden.

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