

## CN\_Network\_APROL 系统如何设置 DHCP 以及其它 必须的修改

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#### 问题

在实际的项目应用或者测试系统中,都有网络需要配置成动态 IP 地址(DHCP)的需求,那么在 APROL 系统里面如何去配置 DHCP、配置 DHCP 后如何解析主机名、项目里面 runtime 系统对应的 CC (Control Computer)里面的 Resources 部分的 IP 地址列如何填写等问题都需要解决。下面就 APROL 系统里面如何配置 DHCP 以及后续相应的调整事项进行说明。

 推荐

对于 APROL 系统,实际项目中还是推荐配置静态 IP 地址!

## · DHCP 设置和其它修改事项

#### 具体设置和修改步骤

对于 DHCP 的要求,首先需要相应在网络设置里面去配置,接下来还需要对主机名解析 hosts 文件、 DNS 客户机配置文件 resolve.conf 进行相应的修改,最后还需要对项目属性进行相应的设置才行。

2.1 Yast 里的 Network 设置

打开 Yast ,如下图去点击 Network Settings ,选择相应需要设置动态 IP 的网卡去编辑。

3	YaST Contr	rol Center @ cube05				~ ^ 😣
arch	System Keyboard Layout	-	Network Settings Global Options	2 Overview	Hostname/DNS	Routing
arch       Software       Hardware       System       Network Services       Security and Users       Virtualization       Support       Miscellaneous	System Keyboard Layout System System Control for the second Language Partitioner Hetwork Services HCP Server Hall Server Mail Server Mail Server Se	Boot Loader  Kernel Settings  Kernel Se	Restance         Started automatically at boot         Started automatically at boot         Started automatically at boot         Peddress assigned using DHC         Add       Edt       Delete	Cverview  P Address Device 192:168.1.228 eth 102:168.1.228 eth 102:168.1.228 eth 3  tion (Lewisville)	Hostnamo/DIS Note	Routing
	Wake, on J AN	Windows Domain Memb	hershin	V		

此处选择 Dynamic Address 然后点击 "Next"。

	YaST2 - Network Settings	
Network Card Setup		
General	Address	Hardware
Device Type	Configuration Name	
Ethernet	✓ eth0	
🔿 No Link and IP Setup (Bonding Slaves) 🥅 Use iBf	FT Values	
Dynamic Address DHCP      DH	ICP both version 4 and 6	
Statically Assigned IP Address		
IP Address (1) Subnet	Mask Host	name
Additional Addresses		
IPv4 Address Label ▼ IP Address Netr	nask	
Add Edit Delete		2
Add Edit Delete		2
Add Edit Delete		2

在 Network Settings 的 Global options 栏,需要如下图勾选相应的选项。

	YaST2 - Netw	vork Settings	~ ^ (
Network Settings			
Global Options	Overview	Hostname/DNS	Routing
General Network Settings			
Network Setup Method			
Wicked Service			•
Enable IPv6 Client Options DHCP Client Identifier Hostname to Send AUTO Change Default Route via	рнср 3		

n	YaST2	2 - Network Settings	~ ^
Network Settings			
Global Options Hostname and Domain Name Hostname cube05 X Assign Hostname to Loopback IP Set Hostname via DHCP no Y	Overview	Hostname/DNS Domain Name br-automation.com	Routing
Modify DNS Configuration Custom Policy R Use Default Policy V Name Servers and Domain Search List Name Server 1 Name Server 2	?ule ✓	Domain Search br-automation.com	
Help			Cancel OK
	100000 关 则;	对应主设置并在 <b>Device</b> 顶下却	访选择相应的网卡。如

work Settings			
Global Options	Overview	Hostname/DNS	Routing
Default IPv4 Gateway			Device
Default IP∨6 Gateway			Device
			- •
Destination 👻 Gateway	Netmask Device O	otions	
	Add	Edit Delete	
Enable IPv4 Forwarding Enable IPv6 Forwarding	Add	Edit Delete	
Enable IPv4 Forwarding Enable IPv6 Forwarding	Add	Edit Delete	

至此, Network Settings 里面的设置工作就完成了。

#### 2.2 resolv.conf 配置文件修改

在 Yast 里进行 Network Settings 相关设置后,接下来需要去编辑 /etc/resolve.conf 文件,可以在 konsole 里面以 su 权限使用 vi 编辑器去修改。

具体方法就是在 resolve.conf 文件的结尾分别把域名和域名解析服务器 IP 手动添加上去,最后保存 退出,如下图所示。

#### file in /etc

resolv.conf (used for DNS settings, nameserver settings, search domains)

/etc/resolv.conf

```
### /etc/resolv.conf file autogenerated by netconfig!
# Before you change this file manually, consider to define the
# static DNS configuration using the following variables in the
# /etc/sysconfig/network/config file:
      NETCONFIG_DNS_STATIC_SEARCHLIST
#
     NETCONFIG_DNS_STATIC_SERVERS
     NETCONFIG_DNS_FORWARDER
# or disable DNS configuration updates via netconfig by setting:
     NETCONFIG_DNS_POLICY=''
# See also the netconfig(8) manual page and other documentation.
#
# Note: Manual change of this file disables netconfig too, but
# may get lost when this file contains comments or empty lines
# only, the netconfig settings are same with settings in this
# file and in case of a "netconfig update -f" call.
#
### Please remove (at least) this line when you modify the file!
search br-automation.com
nameserver 10.
nameserver 10.....5
```

#### 2.3 hosts 文件修改

再对 resolve.conf 文件进行修改后,还需要对 /etc/hosts 文件进行必要的修改。

具体是参照下图,主要是红色圈选位置,需要把当前的主机名和域名解析映射到 127.0.0.2 上,并对::1 这行做相应修改,其余部分参照以往对 hosts 文件的解析建议进行即可。

etc/hosts			
127.0.0.1	localhost ipv4-localh	host	
fe00::0	ipv6-localnet		
ff00::0	ipv6-mcastprefix		
ff02::1	ipv6-allnodes		
ff02::2	ipv6-allrouters		
ff02::3	ipv6-allhosts		
ff02::2 ff02::3	ipv6-allrouters ipv6-allhosts automation.com cube05 localho	ost ipv6-localhost	ipv6-loopback
:1 cube05.br			
::1 cube05.br	cube05.br-automation.com	cube05	
::1 cube05.br 127.0.0.2 # process bus	cube05.br-automation.com	cube05	
::1 cube05.br 127.0.0.2 # process bus 192.168.1.228	cube05.br-automation.com for controller network cube05pb.br-automation.com	cube05 cube05pb	# process bus, runtime
<pre>::1 cube05.br 127.0.0.2 # process bus 192.168.1.228 192.168.1.12</pre>	cube05.br-automation.com for controller network cube05pb.br-automation.com ctrl12.br-automation.com	cube05 cube05pb ctrl12	<pre># process bus, runtime # controller 12 from demo project</pre>

### 2.4 CaeManager 里面项目属性设置

在完成 Network Settings 设置、修改 resolve.conf 文件 和 hosts 文件后,还需要打开 CaeManager ,右键项目名,选择 "属性",然后如下图在 Network 栏去勾选 "Use DNS" 并添加 DNS server 的 IP 地址。

<b>1</b>		CaeManager - CaeManager (e	engin@cube05)	
<u>F</u> ile <u>E</u> dit <u>B</u> uild <u>V</u> iew E <u>x</u> tras Tools <u>Login</u> <u>R</u>	1×	Project properties - CaeManager	(engin@cube05)	~ ^ 😣
8 🕹 😓 🤣 🍓 😂 🗫 🌾	roject name: DemoProject		Version: V0.1.65+	Create version Version history
🥖 💋 💶 🛡 루 💄 💵 👔	Master data Engineering partner Libraries Engineering (1/2	) Engineering (2/2) Localization	Download Communication Parameter	rs Network Security Authentication
	_ Network			
Image: state       Image: state	Domain: [pr-automation com			

在对项目属性的 Network 栏如上图设置后,再打开创建的 runtime 系统的 Control Computer,此时 Resources 栏 hostname 列对应主机名这行 IP Address 处变成不是必填项了。如果这行的 IP 地址 之前已经填写了,也可以删除掉,然后退出保存即可,编译是不会报错的。

• <b>• • •</b>	Status Configuration	_Network re	sources		项目	属性设置	TDHCP后无	需填写			
Type / Name DemoProject (V0.1.65+	Basic data	Device	IP Address	Hostname	Default Control Bus	Default Process Bus	Default Synchronization Bus	Default Alternative Synchronization Bus	Domain	MAC Address	PCI Bu
🗄 🚍 0000_General # 🧰 0000_Features	AprolConfig	1 eth0		cube05	۲	0	۲	0	br-automation.com	00:13:95:2d:e3:72	
⊞ 📄 0000_GlobalMod ⊟ 📄 0000_Hardware		2 eth1	192.168.1.228	cube05pb	0	۲	0	۰	br-automation.com		