

KBSW191011 Win32 - Configure the network of robot

This document introduces the demo project of "configure_network_demo", including how to configure the network in AP or STA modes.

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IDE Preperation

- **Software**
 - Visual Studio 2010 SP1
 - Slamware Windows SDK:[Slamware Windows SDK](#)
 - RoboStudio(for map display):[Robostudio installer](#)
 - Sample Code:



Higher version of Visual Studio will cause errors. Sometime you will need to upgrade SP1 package to make your VS compatable with .Net Framework.

- **Hardware**

Either one of following

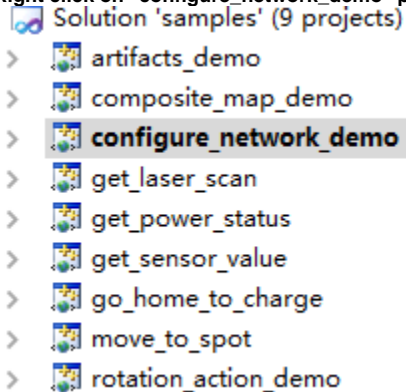
- Slamware SDP mini
- Slamware SDP
- Slamware Kit
- Zeus/Apollo robot base

Download

[Win32-Demo](#)

Compiling

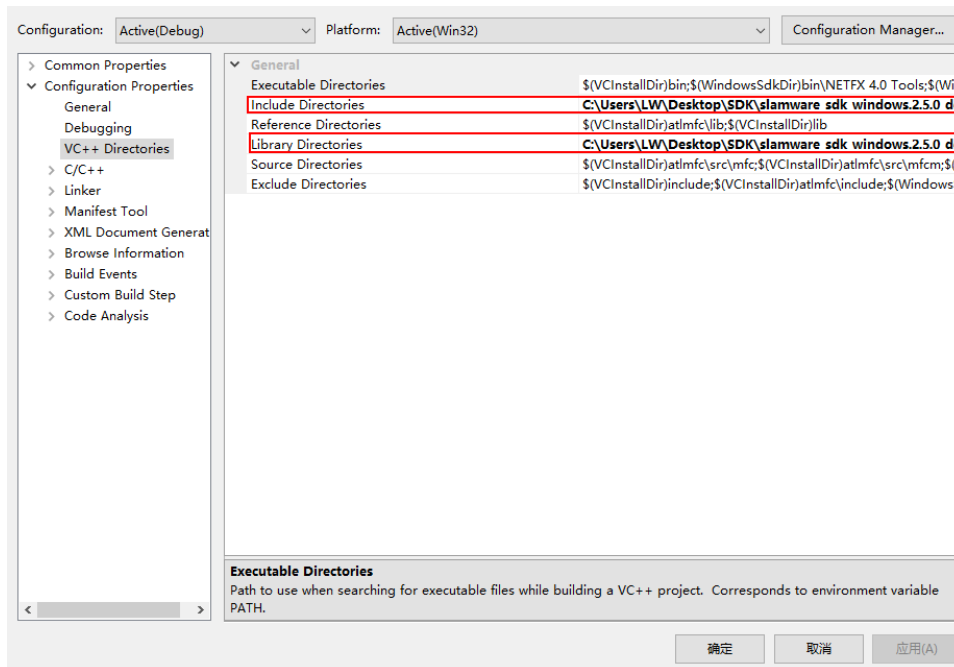
1. Right click on "configure_network_demo" project, set as StartUp project.



2. Right click on "configure_network_demo", then "Properties" configure "include" and "lib" directories to the corresponding folder path of Slamware SDK.



It's not necessary to copy files to the project directory, user will only need to configure the path of SDK.



3. Right click on " configure_network_demo ", then "properties"set "Command Arguments" as follows:

Syntax

configure_network_demo [OPTS] <SDP IP Address>

slamware_address The ip address string of the SLAMWARE SDP.

AP Configure network in AP mode.

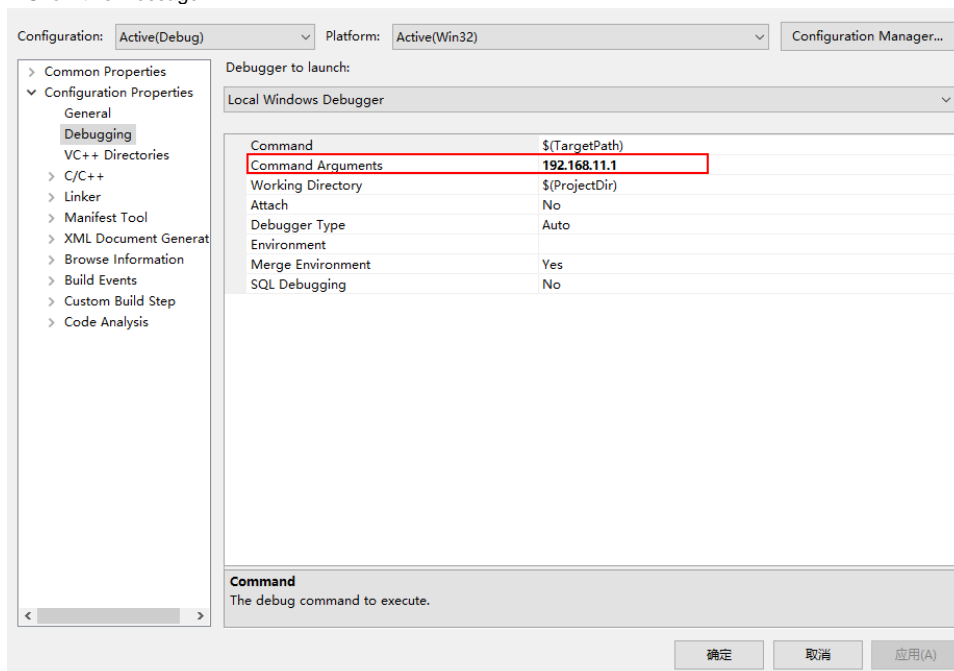
STA Configure network in STA mode.

--disable-dhcp disable dhcp.

--enable-dhcp enable dhcp.

--disable-wifi disable wifi

-h Show this message



4. Click " F5" to execute.

5. Configure in AP and STA modes

- **AP mode**

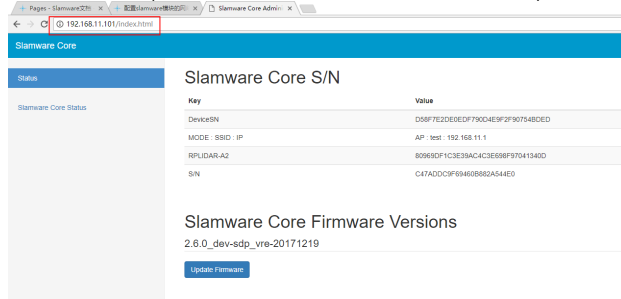
After configuration, the wifi name(SSID), password, IP address, channel will become the value set in the figure below.

```

PS C:\Users\LV\Desktop\SDK\samples\samples\Debug> .\configure_network_demo.exe 192.168.11.1 AP
Connecting SDP @ 192.168.11.1...
SDK Version: 2.5.0_dev
SDP Version: 2.6.0_dev-sdp_vre-20171219
Configure network in AP mode
ssid: test
password: 12345678
IP: 192.168.11.101
channel: 6
Configuring network, please use the new setting to connect the next time
PS C:\Users\LV\Desktop\SDK\samples\samples\Debug>

```

Verification: After reconnecting the slamware AP with SSID: test and password: 12345678, the slamware module can be connected with 192.168.11.101 (192.168.11.1 is still available as the default).



And the WiFi channel has been changed to 6:



- **STA mode**

Please input the SSID and password of the a available LAN. After completion, the robot will access the LAN and can be connected with the IP allocated by the robot.

```

PS C:\Users\LV\Desktop\SDK\samples\samples\Debug> .\configure_network_demo.exe 192.168.11.1 STA
Connecting SDP @ 192.168.11.1...
SDK Version: 2.5.0_dev
SDP Version: 2.6.0_dev-sdp_vre-20171219
Configure network in station mode
Please enter Wifi Name:
Slamtec-Test
Please enter Wifi password:
Configuring network, please use the new setting to connect the next time

```

Verification: The slamware module can be accessed by connecting the client to the same LAN. In the figure below, the IP address assigned by the robot is 10.0.129.75.



Similarly, you can use commands as described above to disable/enable DHCP, disable WIFI.

Code

- AP mode

AP mode

```
std::map<std::string, std::string> options;
options["ssid"] = "test";
options["password"] = "12345678"; // password length should surpass 8
options["ip"] = "192.168.11.101"; // do not use address from 192.168.11.1 to 192.168.11.100 (reserved
for internal usage)
options["channel"] = "6";
result = sdp.configurateNetwork(NetworkMode::NetworkModeAP, options);
```

- STA mode

STA mode

```
std::map<std::string, std::string> options;
options["ssid"] = ssid;
options["password"] = password;
result = sdp.configurateNetwork(NetworkMode::NetworkModeStation, options);
```

- Disable/enable DHCP

Disable/enable DHCP

```
if (opt_enable_dhcp == true) {
    std::cout << "enable DHCP" << std::endl;
    options.clear();
    result = sdp.configurateNetwork(NetworkModeDHCPEnabled, options);
}
if (opt_disable_dhcp == true) {
    std::cout << "disable DHCP" << std::endl;
    options.clear();
    result = sdp.configurateNetwork(NetworkModeDHCPEnabled, options);
}
```

- Disable WIFI

Disable wifi

```
if (opt_disable_wifi == true) {
    std::cout << "disable wifi" << std::endl;
    options.clear();
    result = sdp.configurateNetwork(NetworkMode::NetworkModeWifiDisabled,
options);
}
```