

Create a private Hotspot with DD-WRT

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***Network administration* - Knowledge of 'you have learned from kindergarten' is also valuable knowledge to share. It may even be good for businesses. However, sharing your wireless Internet access is another thing, it can cause many vulnerabilities and cannot control user actions .**

Whether you want to share with your family, neighbors, co-workers, or customers, a wireless hotspot can allow you to say how your wireless access is used and how long it will take to access it. how. You also have the opportunity to advertise products or services to wireless system visitors or in some other settings that may be used for the purpose of advertising the products or services you have.

Any wireless router typically 'shares' an Internet connection with many wireless users nearby, but if you want to adjust sharing, you need to have a hotspot. One way to create a hotspot is to use a free, open-source DD-WRT software program for compatible routers, such as the Linksys WRT54G.

Note on the version

Although DD-WRT provides a lot of advanced features for customer-level routers, users are easily confused while choosing the version that's right for them. Version V23 SP2 was released in 2006, followed by V24 and RC versions were released.

During the development of DD-WRT, V23 SP2 is a relatively stable version, so in this tutorial we will use DD-WRT V23 SP2 as the software for the router in the test.

Hotspot types

Many hotspots are known as "captive portal". Surely you once used a 'captive portal' at a certain café or hotel. After connecting to the wireless network, and you make a connection to the website, you are actually redirected (redirect) to a wireless landing page configured by the hotspot owner.



From here, there may be several things. The simplest type for the captive portal is to display information about your hotspot owner, such as "Welcome to the Coffee Cafe!", Or an advertisement. There will be a button to connect, this button will enable authentication and allow you to browse the web.

A more complex captive portal may enforce a number of usage policies for guests, such as connection times. For example, a coffee shop might advise customers to buy a cup of coffee and be allowed to surf the web for a period of three hours. On your side, if you are the owner of a captive portal, you can offer coffee cup prices and free Internet access.

Advanced captive portals can implement more policies, such as limiting the speed of connection and limiting the transmission and promotion of other services that you trade.

DD-WRT V23 SP2 supports three types of hotspots:

1. *NoCatSplash* : A simple captive portal with a custom landing page.
2. *ChilliSpot* : A captive portal client / server source, which can support the implementation of policies and promotion (illustrated in the image above).
3. *Sputnik* : A commercial captive portal client / server like ChilliSpot but supported by subscription costs and a nice, full-featured management interface.

To avoid confusion, keep in mind that you should only enable one of these hotspots in DD-WRT, leaving the other options in **Disabled** mode.

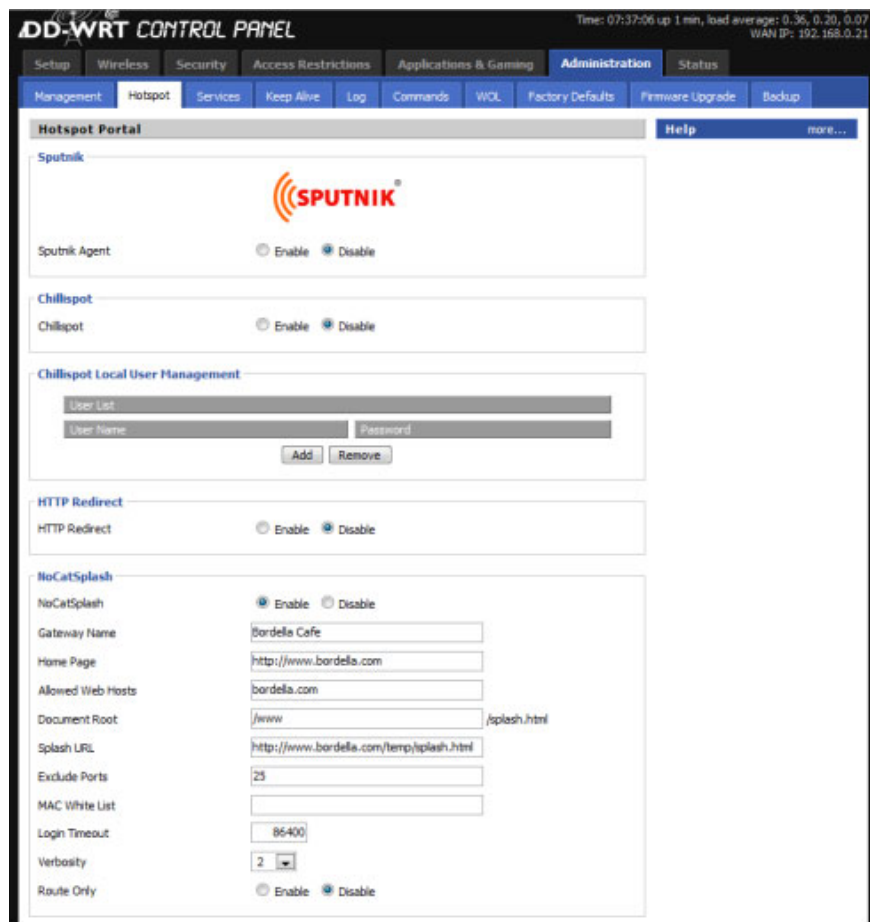
Simple Hotspot: NoCatSplash

When activating and configuring NoCatSplash, in this case when clients want to connect to your wireless network it will be redirected to the site you have already set up on your web server. This page includes a form that will return specific values ??to the router to authenticate the network client. Obviously, this page may also include other information, policies or ads that you want your visitors to see.

The first three steps below are the items you must set up, the remaining default options are good for most configurations (Steps 4, 6 and 7).

1. Open the browser and go to the router's DD-WRT administration page, the default address is <http://192.168.1.1> unless you have configured another LAN IP.

2. Click *Administration, Hotspot* to open the Hotspot configuration page.
3. Make sure you've disabled *Sputnik, Chillispot, and HTTP Redirect* , and scroll down to the *NoCatSplash* section.
4. Click *Enable* .
5. Enter the *Gateway Name* for your hotspot, such as "Coffee Cafe". In HTML for your landing page, you can insert $\$ GatewayName$ to display the value of this field.
6. Enter the *Home Page* URL so that visitors will be redirected after clicking through your landing page.
7. Enter domain names for *Allowed Web Hosts* so that visitors can access them without being redirected to your landing page. Separate domains with spaces. **Important: This field must have a domain name for the server hosting your landing page !**
8. Do not change *Document Root* . This field is used if you save the 'landing' page within the router's file system, rather than an external Web host. (Accessing the router's file system is only for advanced users and is not covered by this tutorial).
9. Enter the *Splash URL* where your landing page resides. Remember, this is a general access Web server and its domain name must be listed in step 7.
10. You can restrict network activity by using *Exclude Ports* . By default, NoCatSplash will prevent port 25 and SMTP ports to prevent visitors from sending spam. You can list other ports - separated by spaces - such as ports 21 and 23 to lock FTP and telnet.
11. You can use the *Mac White List* to allow wireless clients to access the network without redirecting to your landing page. Distinguish MAC addresses with spaces.



12. *Login Timeout* setting in seconds, a visitor needs to be authenticated before being taken back to the 'landing' page. The default value is 86400 equivalent to 24 hours. Value 3600 equals one hour.

13. The *Verbosity* menu will select the amount of NoCatSplash information written to the router's syslogd server. (Only useful if you use syslogd server).

14. Do not change *Route Only*, the option is disabled by default. The activation status will remove NAT on the hotspot, which can make your network vulnerable.

15. Click *Save* at the bottom of the configuration page. You will need to restart the router (click *Reboot*, at the bottom of the page) for NoCatSplash to take effect. However, before restarting, create your landing page as described below.

In step 9, you entered the URL for the 'landing' page. After that you need to create your landing page with everything you want, but first it must have the following HTML:

Note:

1. Tag's *action* attribute points to the router's IP address, noting when you configured it to be a different address than the default address.
2. The input field named *redirect* will be set up for any page you want your visitors to see when they click through to the 'landing' page. It will override step 6 in the router configuration. Even so, it seems to work better here.

Open source Hotspot: ChilliSpot

ChilliSpot is a hotspot that provides more management and authentication options than NoCatSplash. However, it is also more complicated during the installation process.

ChilliSpot requires a client and a server. Client is what you configure via DD-WRT. On the server side, you need both Web server and RADIUS authentication server.

You can create a ChilliSpot hotspot for free by installing ChilliSpot, plus a free Web server, such as Apache, and a free RADIUS server, like FreeRADIUS. These packages run on all major platforms, including Linux, Windows and OS X, but setting up the server is beyond the scope of this tutorial.

Another way you can set up a free ChilliSpot backend is to use a third-party ChilliSpot provider. One such provider is WorldSpot.net, which offers free limited ChilliSpot service and paid ChilliSpot hosting service.

In this tutorial, we will set up free ChilliSpot hosting through WorldSpot, but keep in mind that many other providers also provide you with such services.

1. Sign up for an account at <http://worldspot.net/wk/Register> .
2. Once your account is confirmed, you can log in to WorldSpot. Under "Manage my Hotspot", click *Hotspots*, *Display config info* . You will see a page with all the fields you need to enter in DD-WRT.
3. Open the browser and access the router's DD-WRT admin page, the default is <http://192.168.1.1> .
4. Click *Administration*, *Hotspot* to open the Hotspot's configuration page.



5. Click *Enable* for Chillispot.

6. Click *Enable* for "Separate Wifi from the LAN Bridge". This will isolate your wireless clients from wired clients.

7. Enter all the information exactly as provided in the WorldSpot configuration information page.

You will need the ISP's DNS address, which you can find on the *Status* page of DD-WRT.

8. Click *Save* at the bottom of the configuration page, then *Reboot the* router.

When connecting back to the Internet via the router, your browser will be redirected to the Worldspot site. Log in and under "Manage my Hotspot," click *Hotspots, Configure Hotspot*.

On this page, set up basic policies and a landing page for your hotspot. There are many restrictions on policies that you can choose by using a free account. Refer to WorldSpot's help page for more detailed information about configuration options.

At the bottom of the page, you must click on the link to *setup access profiles*. Without an access profile, your visitors will not receive an authentication button to click.

Access profiles allow you to further define usage restrictions, such as session time and traffic limits. At the bottom of the access profile page, be sure to click "Select which hotspots this profile applies on" to activate your hotspot.

You can now open a new browser to access the web. Like visitors, you will be directed to the landing page you have configured. You can click through to confirm your access.

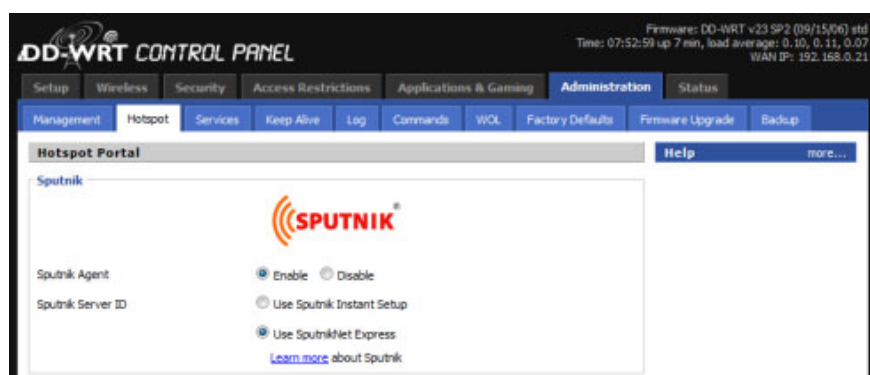
As a hotspot owner, you can log in to your WorldSpot account and view visitor activity by clicking *Hotspots*, *Display session history* .

To set up an advertising system for your visitors using WorldSpot, you must upgrade to get a premium account, in order to get this account you will have to pay to have access to ChilliSpot features. Advanced. If advertising is an important part of your business model, set up a separate ChilliSpot server as described above.

Commercial hotspot: Sputnik

Like ChilliSpot, Sputnik provides hotspot owners with a full set of management, authentication, advertising and recording features. Sputnik sells their services in a variety of packages, including wireless hardware, paid access to their hotspot centers and software to install on local servers.

The default DD-WRT user already has a wireless router with Sputnik feature. The company also offers another free hotspot management service called SputnikNet Express. Like WorldSpot's ChilliSpot free hotspot, SputnikNet Express provides an easy way to create a customizable landing page with limited user management.



Enabling SputnikNet Express in DD-WRT is simple, just a few clicks away. Everything is listed in easy steps to implement on Sputnik server.

1. Open the browser and access the router's DD-WRT admin page, the default address is *http://192.168.1.1* .
2. Click *Administration*, *Hotspot* to open the Hotspot configuration page.
3. Click *Enable* for the Sputnik Agent.
4. Click *Use SputnikNet Express* for Sputnik Server ID. If you do not see this option, save the settings from step 3 and restart the router. Alternatively, you can click *Use Sputnik Instant Setup* to install a premium account with Sputnik.
5. Click *Save* at the bottom of the configuration page, then *Reboot the* router.

When restarting and connecting to a website via the router, the browser will be redirected to Sputnik's installation wizard. From here you can configure your free or paid hotspot account.

Note:

Although DD-WRT V24 does not work properly with NoCatSplash and ChilliSpot, but you still have a reliable captive portal open source, Wifidog, the software has been greatly improved and supported by experts. a lot of.

Like ChilliSpot, it requires some software to be installed on an external server, but it may be easier than ChilliSpot.

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